SOUTHERN CALIFORNIA ENVIRONMENTAL SENSITIVITY INDEX METADATA

April 2000

Prepared By:

National Oceanic and Atmospheric Administration
National Ocean Service
Office of Response and Restoration
Hazardous Materials Response Division
7600 Sand Point Way N.E.
Seattle, Washington 98115-6349
and
State of California
Department of Fish and Game
Office of Spill Prevention and Response
Sacramento, California

FILE DESCRIBES: Digital data for 1995 Southern California Environmental Sensitivity Index.

FILE CREATED BY: NOAA Office of Response and Restoration
7600 Sand Point Way N.E.
Seattle, WA 98115-6349
Phone: 206-526-6317
Fax: 206-526-6329
email: library@hazmat.noaa.gov

FILE CREATED ON: 20000420

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

TABLE OF CONTENTS

Page

TABLE OF CONTENTS (continued)

Page

LIST OF FIGURES

Page

1.0. IDENTIFICATION INFORMATION

1.1. CITATION

1.1.1. ORIGINATOR:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and the State of California, Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California

1.1.2. PUBLICATION DATE:

200004

1.1.4. TITLE:

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California

1.1.5. EDITION:

First

1.1.6. GEOSPATIAL DATA PRESENTATION FORM:

Atlas

1.1.7. SERIES INFORMATION

1.1.7.1. SERIES NAME:

None

1.1.7.2. ISSUE IDENTIFICATION:

Southern California

1.1.8. PUBLICATION INFORMATION

1.1.8.1. PUBLICATION PLACE:

Seattle, Washington

1.1.8.2. PUBLISHER:

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

1.1.9. OTHER CITATION DETAILS:

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

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

1.1.10. ONLINE LINKAGE:

Not available

1.1.11. LARGER WORK CITATION:

None

1.2. DESCRIPTION

1.2.1. ABSTRACT:

This data set comprises the Environmental Sensitivity Index (ESI) maps for the shoreline of southern California. ESI data characterize coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources

1.2.2. PURPOSE:

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

1.3. TIME PERIOD OF CONTENT

1.3.1. TIME PERIOD INFORMATION

1.3.1.3. RANGE OF DATES/TIMES:

The intertidal habitats were mapped during aerial and ground surveys conducted from 12-14 October 1993. The biological and human-use resources data were compiled by regional biologists in 1994. The dates for these data vary and are documented in Section 2.5.1

1.4. STATUS

1.4.1. PROGRESS:

Complete

1.4.2. MAINTENANCE AND UPDATE FREQUENCY:

None planned

1.5. SPATIAL DOMAIN

1.5.1. BOUNDING COORDINATES

1.5.1.1. WEST BOUNDING COORDINATE:

-120.50°

1.5.1.2. EAST BOUNDING COORDINATE:

-117.04°

1.5.1.3. NORTH BOUNDING COORDINATE:

34.50°

1.5.1.4. SOUTH BOUNDING COORDINATE:

32.50°

1.6 KEYWORDS

1.6.1. THEME

1.6.1.1. THEME KEYWORD THESAURUS:

None

1.6.1.2. THEME KEYWORD:

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

1.6.2. PLACE

1.6.2.1. THESAURUS:

None

1.6.2.2. PLACE KEYWORD:

Southern California: from the U.S./Mexico border to Point Conception

1.7. ACCESS CONSTRAINTS:

None

1.8. USE CONSTRAINTS:

DO NOT USE ESI MAPS FOR NAVIGATIONAL PURPOSES.
Besides the above warning, there are no use constraints on these data. Acknowledgment of the publishers and contributing sources listed in 1.11. would be appreciated in products derived from these data.

1.11. DATA SET CREDIT:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and the State of California, Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California

1.13. NATIVE DATA SET ENVIRONMENT:

The software packages used to develop the atlas are Environmental Systems Research Institute's Arc/INFO (version 7.0 pre-release) and Oracle RDBMS (version 6.0.36.1.1). The hardware configuration is Hewlett Packard work-stations (models 715/50 and 712/80 with 4 X-terminals) with UNIX operating system (HP-UX Release A.09.01). The following files are included in the data set:

bio_lut.e00	biofile.e00	biores.e00
birds.e00	breed.e00	breed_dt.e00
esi.e00	experts.e00	fish.e00
fishl.e00	habitats.e00	hydro.e00
index.e00	invert.e00	mgt.e00
m_mammal.e00	nests.e00	reptiles.e00
seasonal.e00	soc_dat.e00	soc_lut.e00
socecon.e00	species.e00	status.e00
wetlands.e00		

The entire data set is approximately 45 megabytes.

2.0. DATA QUALITY INFORMATION

2.1. ATTRIBUTE ACCURACY

2.1.1. ATTRIBUTE ACCURACY REPORT:

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

2.1.2. QUANTITATIVE ATTRIBUTE ACCURACY ASSESSMENT

Not available at this time; however, an assessment is planned

2.2. LOGICAL CONSISTENCY REPORT:

The digitization of shoreline types, biological resources, and human-use resources is a complex and highly quality-controlled process. In order to facilitate digitizing, the entire study area is split into individual quadrangles using the INDEX coverage. The first layer of information digitized is the ESI shoreline classification. Upon completion of digitization, the data are checked for completeness and topological and logical consistency, and then plotted and checked by the mapping geologists. Any errors in the shoreline classification are updated prior to digitization of the biological and socioeconomic layers. All layers use the shoreline as the geographic reference so that there are no slivers in the geographic coordinates. The hardcopy biological information is compiled onto 1:24,000 USGS topographic quadrangles by a biological expert using data from regional specialists in the form of maps, tables, charts, and written descriptions of wildlife distributions. The data are digitized, checked (using both digital and on-screen procedures), plotted, and sent out for review by the regional specialists. The edited maps are updated, checked once again, and the final product plotted (at approximately 1:50,000 scale). A team of specialists reviews the entire series of maps, checks all data, and makes final edits. The data are then merged to form the study-wide layers. The data-merging includes a final quality control check where labels, chains, and polygons are checked for attribute accuracy.

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

ARC/INFO® consistencies. A final review is made by the GIS manager and programs are run to generate the unique IDs and associated lookup tables.

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 IDs and RARNUMs are also generated. The new IDs 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 RARNUMs are also modified to include the atlas number, so multiple atlases can be combined and RARNUMs remain unique. RARNUMs are redefined on an element basis, so resource at risk groupings will contain only a single element.

ESI data are also 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 a MARPLOT ESI product are also included on the CDs for ease of use of the ESI data. The database files are also 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. Section 3.0, outlining Spatial Data Organization, refers to the source files in ARC export format only.

2.3. COMPLETENESS REPORT:

Shoreline Habitat Mapping:

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

1) Shoreline type (substrate, grain size, tidal elevation, origin)
2) Exposure to wave and tidal energy

3) Biological productivity and sensitivity
4) Ease of cleanup

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

These concepts have been used in the development of the ESI, which ranks shoreline environments as to their relative sensitivity to oil spills, potential biological injury, and ease of cleanup. Generally speaking, areas exposed to high levels of physical energy, such as wave action and tidal currents, and low biological activity rank low on the scale, whereas sheltered areas with associated high biological activity have the highest ranking.

Sensitive Biological Resources:

Regional biologists contributed the biological data. These data denote the key biological resources that are most likely at risk in the event of an oil spill. Six major categories, or ELEMENTS, of biological resources were considered during data compilation: birds, fish, habitats/rare plants, invertebrates, marine mammals, and reptiles/amphibians.

The ELEMENTs generally correspond to the coverage or geographic data layer names. There are also six attribute or data tables, BIORES, BREED, SEASONAL, EXPERTS, SPECIES, and STATUS, that are used to store the complex biological data (Fig. 1). Each biological coverage 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 Southern California this is 9), an element specific number (birds are layer 1, fish are layer 2, etc.), and a unique record number. The items in BIORES include: RARNUM, SPECIES_ID, CONC, SEASON_ID, G_SOURCE, S_SOURCE, ELEMENT, EL_SPE, and EL_SPE_SEA. SPECIES_ID is the numeric identifier of each species and is unique within each ELEMENT. CONC is the concentration of the species and can be descriptive (LOW, MEDIUM, HIGH, etc.) or an actual

count of the number of individuals or nests associated with a polygon or point. SEASON_ID contains a numeric identifier for the unique monthly presence and life history characteristics of each species at a given location. There can be one seasonality record per species, or the same species can have different monthly presence or breeding activities at different sites. When this occurs, a new record with a different SEASON_ID is referenced.

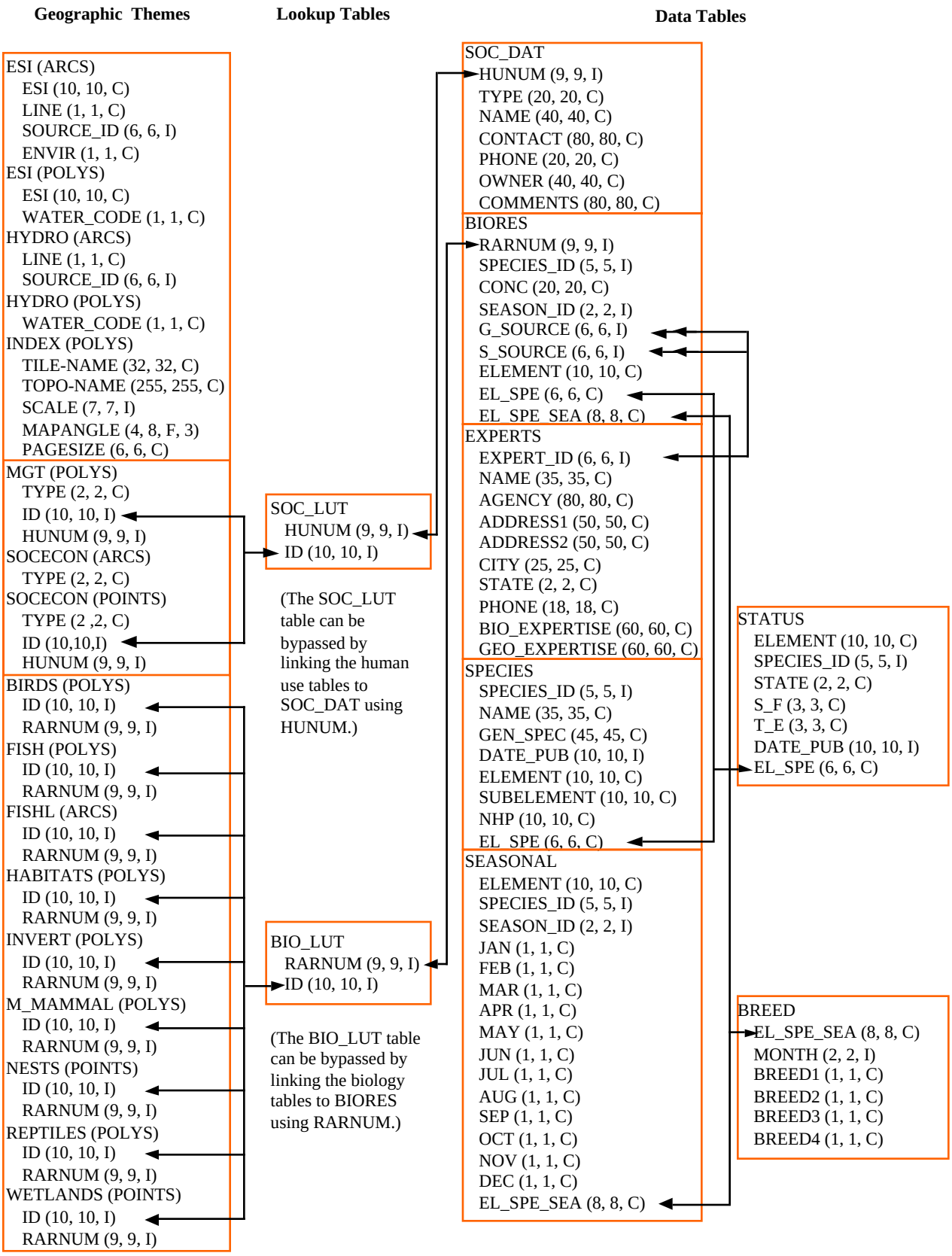

FIGURE 1. Relationship between biology data layers and attribute files.

G_SOURCE and S_SOURCE both hold the link to the EXPERTS data table. These items are duplicated with the G_SOURCE and S_SOURCE naming convention to mimic the current relational data structure. EL_SPE is a concatenation of ELEMENT and SPECIES_ID, and links to the SPECIES and STATUS tables. EL_SPE-SEA is a concatenation of ELEMENT, SPECIES_ID, and SEASON_ID, and links to the SEASONAL and BREED data tables.

The SPECIES data table contains the SPECIES_ID (described above), common name (NAME), scientific name (GEN_SPEC), date the list of Natural Heritage Program (NHP) ranks was published (DATE_PUB), biological element (ELEMENT), biological subelement (SUBELEMENT), and the NHP global conservation status rank. The item SUBELEMENT refers to the grouping of the species:

ELEMENT	SUBELEMENT
BIRD	Alcid
	Diving Coastal Bird
	Gull/Tern
	Passerine
	Pelagic
	Raptor
	Shorebird
	Wading Bird
	Waterfowl
FISH	Anadromous
	Beach Spawner
	Kelp Spawner
	Reef Fish
	Special Concentration
HABITAT	Marsh
	Submerged aquatic vegetation (sav)
	Shrub

ELEMENT	SUBELEMENT
INVERT	Abalone
	Cephalopod
	Clam
	Conch / Whelk
	Echinoderm
	Gastropod
	Mussel
	Oyster
	Scallop
	Squid / Octopus
	Crab
	Lobster
	Shrimp
MARINE MAMMAL	Dolphin
	Manatee
	Sea Lion
	Sea Otter
	Seal
	Whale
REPTILE	Alligator / Crocodile
	Sea Turtle

The STATUS data table contains records for each species that is threatened or endangered on state or federal lists. The items include: ELEMENT, SPECIES_ID, STATE (two-letter state abbreviations), S_F (state or federal status), T_E (threatened or endangered status), DATE_PUB, and EL_SPE.

The SEASONAL data table stores the monthly presence of each species where each species is defined as three-character monthly abbreviations. The BIORES table is linked to the SEASONAL table using either the combination of SPECIES_ID, ELEMENT, and SEASON_ID items, or the item EL_SPE_SEA, which contains the concatenation of these items.

The BREED data table contains the life stage or life history data for each unique combination of ELEMENT, SPECIES_ID, and SEASON_ID (or EL_SPE_SEA), and up to 12 records (corresponding to each month of the year) can have different attributes and therefore separate records. The categories for each element of the items BREED1 through BREED4 are:

ELEMENT	BREED 1	BREED 2	BREED 3	BREED 4
BIRD	nesting	laying	hatching	fledging
FISH	spawning	outmigration	larvae/ juveniles	
INVERT	spawning	larvae		
M_MAMMAL	mating	calving	pupping	molting
REPTILE	nesting	hatching		

NOTE: There are no BREED variables for HABITATS.

The EXPERTS data table contains detailed contact and source information for many of the entries in BIORES and the flat BIOFILE (see Fig. 2 below). The EXPERTS table is linked to these tables through EXPERT_ID from either the G_SOURCE or S_SOURCE item. If there is no expert information available, G_SOURCE and S_SOURCE will be set to zero (0). The items in EXPERTS are: EXPERT_ID, NAME (primary expert and/or contact for the resource), AGENCY (affiliation of the listed expert), ADDRESS1, ADDRESS2, CITY, STATE, PHONE, BIO_EXPERTISE (biological expertise of the expert), and GEO_EXPERTISE (geographic extent of expert's expertise).

Due to the complexity of the relational database model, the biological data items are post processed into a flat file format. This file is entitled BIOFILE and it may be used in place of the relational files to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, RARNUM, G_SOURCE, S_SOURCE and BREED. All of these items are the same as their counterparts in the individual files described above, except the item BREED and the BREED1–BREED4 items. BREED is a newly generated variable used to link to the BREED_DT file, a modified, more compact version of the aforementioned BREED file. Breed1–Breed4 give a text summary of when each life stage occurs within that polygon. The life stages referred to are the same as those listed in the previous table. The link to the BIOFILE may be made through BIO_LUT using ID to link to RARNUM, or it may be linked directly to the RARNUM in each of the biology cover's attribute files. As mentioned, BREED_DT is an auxiliary support file 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 file is EXPERTS. This is the same as the EXPERTS 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 files.

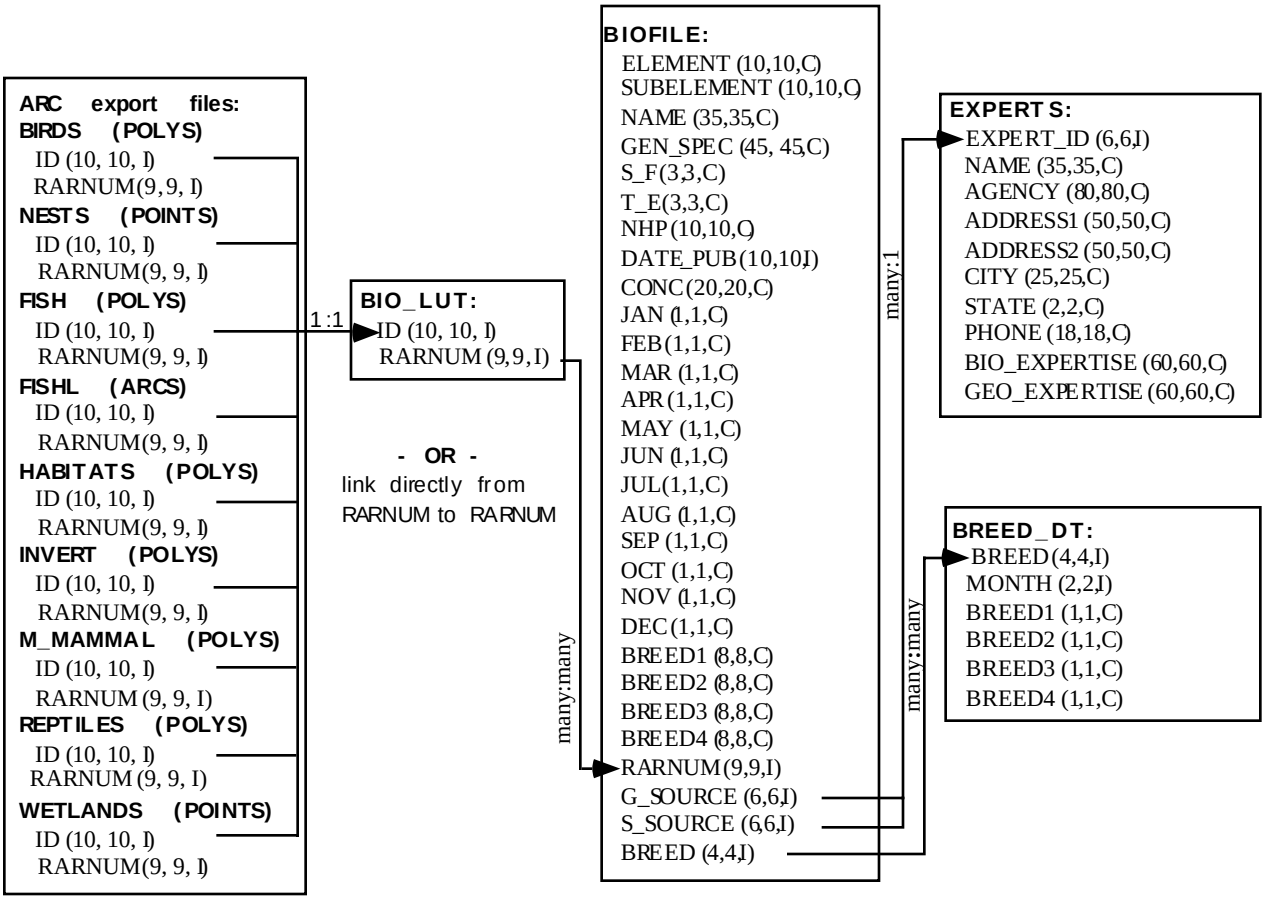

FIGURE 2. Relationship of the BIOFILE to the biological covers and the supplementary BREED_DT and EXPERTS data tables.

Human-Use Resources:

Several human-use, or socio-economic, features are included in ESI atlases. Entity points and complete chains (arcs) are digitized into the data layer SOCECON and managed area polygonal data are stored in the MGT data layer.

Both data sets are linked to the data table SOC_DAT using the SOC_LUT lookup table and the items HUNUM and ID. ID is a concatenation of atlas number (9), element number (SOCECON = 10 and MGT = 11), and unique record number.

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

Entity Points		**Polygons**	
Feature	**TYPE**	**Feature**	**TYPE**
Access	A2	Marine Sanctuary	MS
Airport	A	National Park	NP
Aquaculture	AQ	Park	P
Archaeological Site	AS	Recreational Beach	B
Boat Ramp	BR	Wildlife Refuge	WR
Coast Guard	CG		
Commercial Fishing	CF		
Marina	M		
Recreational Beach	RB		
Recreational Fishing	RF		
Water Intake	WI		
Complete Chains			
Feature	**TYPE**		
International Boundary	IB		

The table SOC_DAT contains the human-use number (HUNUM), feature type (TYPE), name of the facility (NAME), contact person (CONTACT), telephone number (PHONE), the owner of the facility (OWNER), and any comments regarding the site (COMMENTS).

2.4. POSITIONAL ACCURACY

2.4.1. HORIZONTAL POSITIONAL ACCURACY

2.4.1.1. HORIZONTAL POSITIONAL ACCURACY REPORT:

The ESI data uses USGS 1:24,000 topographic quadrangles as the base map. It is estimated that the ESI has a minimum mapping unit of 50 feet. The biological data sets are developed primarily using regional experts who estimate concentration areas. Unlike shorelines, which maintain relative spatial stability through time, the biological data by nature migrate across the landscape. Therefore, the 1:24,000 USGS

quadrangles are used as a base map in gathering the data but the data have "fuzzy" boundaries, which must be understood when utilizing this information.

2.5. LINEAGE

2.5.1. SOURCE INFORMATION:

Coverage or theme name: BIRDS and NESTS

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
UC Davis, Dan Anderson, 916/752-3576	1990	Brown Pelican Roosting Areas	Digital, Point	None	Unknown	Unknown
Eric Kauffman, State of California, State Land Commission	1993	Seabird Colonies of the California Coast	Digital, Entity Points	None	24,000	1989-1990
California Department of Fish and Game	1980	Atlas of California Coastal Marine Resources	Map	Unknown	24,000	1970's
U.S. Fish and Wildlife Service	1993	Western Snowy Plover Distribution	Map	Unknown	24,000	Unknown
A.D. Beccasio *et al*., Dames & Moore	1981	Pacific Coast Ecological Inventory Maps–Los Angeles, Calif., - Long Beach and Santa Ana, Calif.	3 Maps; a report accompanies the map series	Biological Services Program, U.S. Fish and Wildlife Service, Slidell, La., Report No. FWS/OBS-81/30, 159 pp.	250,000	Data for map series compiled from many sources 1921-1981.
A.D. Beccasio *et al*., Dames & Moore	1981	Pacific Coast Ecological Inventory - San Luis Obispo, California	Map, a report accompanies the map series	Biological Services Program, U.S. Fish and Wildlife Service, Slidell, La., Report No. FWS/OBS-81/30, 159 pp.	250,000	Data for map series compiled from many sources 1921-1981.

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
William S. Leet, Christopher Dewees, and Charles Haugen	1992	California Living Marine Resources and Their Utilization	Book	Unknown	None	Unknown
California Department of Fish and Game, Natural Heritage Division	1993	State and Federal Endangered and Threatened Animals of California	Book	Unknown	None	1993
David Zeiner	1990	California's Wildlife: Vol. 2, Birds	Book	Unknown	None	1980's
U.S. Fish and Wildlife Service	Unknown	Report on the Critical Habitat of the Western Snowy Plover	Report	Unknown	None	Unknown
Bruce Elliott, California Department of Fish and Game, Wildlife Division	None	Locations of bird rookeries and sensitive nesting sites	Personal Knowledge	None	None	1994
Mickey Rivera, U.S. Fish and Wildlife Service	None	Various coastal and marine birds	Personal Knowledge	None	None	1994
Melissa Milander, San Diego Unified Port District	None	Various coastal and marine birds, San Diego Bay	Personal Knowledge	None	None	1994
Mike Wells, California Department of Parks and Recreation	None	Coastal and marine birds, San Diego Co.	Personal Knowledge	None	None	1994
Dave Pryor, California Department of Parks and Recreation	None	Various coastal & marine birds	Personal Knowledge	None	None	1994

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
Jan Larson, U.S. Navy	None	Various coastal and marine birds, San Clemente Island	Personal Knowledge	None	None	1994
D. Boyer, USMC	None	Birds, Camp Pendleton	Personal Knowledge	None	None	1994
J. Kerbavaz, California Department of Parks and Recreation	None	Birds, Tijuana Estuary	Personal Knowledge	None	None	1994
M. Hoffman-Nelson, U.S. Fish and Wildlife Service	None	Birds, Tijuana Estuary	Personal Knowledge	None	None	1994
J. Zedler, San Diego State University	None	Light-footed clapper rails	Personal Knowledge	None	None	1995
George Gross, California Department of Fish and Game	None	Birds, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994
Dr. Jack Engle, University of California at Santa Barbara	None	Least tern, Santa Barbara Area and North Channel Islands	Personal Knowledge	None	None	1994
Dave Coon, University of California at Santa Barbara	None	Birds, Devereaux Slough	Personal Knowledge	None	None	1994
Heidi Togstad, California Department of Fish and Game–OSPR	None	Seabirds and Shorebirds	Personal Knowledge	None	None	1994
Kerry Phillips, U.S. Fish and Wildlife Service	None	W. snowy plover, So. Calif.	Personal Knowledge	None	None	1994
Paul Lehman, Audubon Society	None	Birds, Southern California	Personal Knowledge	None	None	1994

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
M. Bouche, California Department of Fish and Game	None	Least Tern, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994
Virginia Gardner-Johnson, California State Parks Department	None	Birds, San Luis Obispo, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994
Wayne Ferren, University of California at Santa Barbara	None	Birds, Southern California	Personal Knowledge	None	None	1994
Rob Klinger, The Nature Conservancy	None	Birds, Santa Cruz Island	Personal Knowledge	None	None	1994
L. Laughrin, University of California at Santa Barbara	None	Birds, Santa Cruz Island	Personal Knowledge	None	None	1994
D. Richards, NPS	None	Birds, Channel Islands National Park	Personal Knowledge	None	None	1994

2.5.1. SOURCE INFORMATION:

Coverage or theme name: FISH and FISHL

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
California Department of Fish and Game	1980	Atlas of California Coastal Marine Resources	Map	Unknown	24,000	1970's

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
A.D. Beccasio, *et al*., Dames & Moore	1981	Pacific Coast Ecological Inventory - San Luis Obispo, California	Map, a report accompanies the map series	Biological Services Program, U.S. Fish and Wildlife Service, Slidell, La., Report No. FWS/OBS-81/30, 159 pp.	250,000	Data for map series compiled from many sources 1921-1981
W.S. Leet, C.M. Dewees, and C.W. Haugen (Eds.)	1992	California's Living Marine Resources and Their Utilization	Book	Unknown	None	Unknown
Peter Moyle, Jack Williams, and Eric Wikramanayake	1989	Fish Species of Special Concern of California	Book	Unknown	None	Unknown
C.C. Swift, J.L. Nelson, C. Maslow, and T. Stein	1989	Biology and Distribution of the Tidewater Goby, *Eucyclogobius newberryi*: (*Pisces*; *Gobiidae*) of California	Book	Unknown	None	1970-1977 1980-1982
C.C. Swift, T. Haglund, and M. Ruiz	1990	Status of Freshwater Fishes of Southern California with Recommendations for Preserves to Maintain Their Existence	Book	Unknown	None	1970-1989
William S. Leet, Christopher Dewees, and Charles Haugen	1992	California Living Marine Resources and Their Utilization	Book	Unknown	None	Unknown

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
California Department of Fish and Game, Natural Heritage Division	1993	State and Federal Endangered and Threatened Animals of California	Book	Unknown	None	Unknown
R.L. Emmett, S.L. Stone, S.A. Hintor, and M.E. Monaco	1991	Distribution and Abundance of Fishes and Invertebrates in West Coast Estuaries - Volume II: Species Life History Summaries	Book	ELMR Rep. No. 8 NOAA/NOS Strategic Environmental Assessments Division, Rockville, MD, 329 pp.	None	Info compiled from the historical and current literature and expert personal comm. and knowledge
U.S. Fish and Wildlife Service and California Department of Fish and Game	1976	The Natural Resources of Mugu Lagoon	Report/ paper?	Unknown	None	Unknown
Susan McBride, CA Sea Grant, 707-443-8369	None	Locations of commercial species	Personal Knowledge	None	None	1994
John Grant, California Department of Fish and Game–OSPR	None	So. California grunion, fishes of LA/LB Harbor	Personal Knowledge	None	None	1994
Dave Parker, California Department of Fish and Game, Marine Resources Division	None	So. California grunion, fishes of LA/LB Harbor	Personal Knowledge	None	None	1994
Paul Gregory, California Department of Fish and Game, Marine Resources Division	None	Southern California Grunion	Personal Knowledge	None	None	1994

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
Steve Crooke, California Department of Fish and Game, Marine Resources Division	None	Southern California grunion, halibut, sand bass, rock-fish, surf perch, steel-head trout, etc.	Personal Knowledge	None	None	1994
Chuck Valle, California Department of Fish and Game	None	Southern California corbina, croaker, mullet, halibut	Personal Knowledge	None	None	1994
Robin Lewis, California Department of Fish and Game–OSPR	None	grunion	Personal Knowledge	None	None	1994
D. Boyer, USMC.	None	Fish, Camp Pendleton	Personal Knowledge	None	None	1994
Slater Buck, USMC	None	Tidewater goby, Camp Pendleton	Personal Knowledge	None	None	1994
J. Kerbavaz, California Department of Parks and Recreation	None	Fish, Tijuana Estuary	Personal Knowledge	None	None	1994
M. Hoffman-Nelson, U.S. Fish and Wildlife Service	None	Fish, Tijuana Estuary	Personal Knowledge	None	None	1994
George Gross, California Department of Fish and Game	None	Fish, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994
Ronald Takayama, California Department of Fish and Game	None	Fish, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
Ken Sasaki, California Department of Fish and Game	None	Fish, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994
Dave Coon, University of California at Santa Barbara	None	Fish, Devereaux Slough	Personal Knowledge	None	None	1994
Maurice Cardenaz, California Department of Fish and Game	None	Tidewater goby and steelhead trout, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994
Dr. Richard Ambrose, University of California–Los Angeles	None	Tidewater goby, So. California	Personal Knowledge	None	None	1994
D. Richards, National Park Service	None	Fish, Channel Islands National Park	Personal Knowledge	None	None	1994

2.5.1. SOURCE INFORMATION:

Coverage or theme name: HABITATS

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
A.D. Beccasio, et al., Dames & Moore	1981	Pacific Coast Ecological Inventory - San Luis Obispo, California	Map, a report accompanies the map series	Biological Services Program, U.S. Fish and Wildlife Service, Slidell, La., Report No. FWS/OBS-81/30, 159 pp.	250,000	Data for map series compiled from many sources 1921-81.

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
William S. Leet, Christopher Dewees, and Charles Haugen	1992	California Living Marine Resources and Their Utilization	Book	Unknown	None	Unknown
Chuck Valle, California Department of Fish and Game	None	So. California eelgrass	Personal Knowledge	None	None	1994
Melissa Milander, San Diego Unified Port District	None	Eelgrass locations, San Diego Bay	Personal Knowledge	None	None	1994
Robin Lewis, California Department of Fish and Game–OSPR	None	Kelp locations	Personal Knowledge	None	None	1994
J. Kerbavaz, California Department of Parks and Recreation	None	Plants, Tijuana Estuary	Personal Knowledge	None	None	1994
M. Hoffman-Nelson, U.S. Fish and Wildlife Service	None	Plants, Tijuana Estuary	Personal Knowledge	None	None	1994
George Gross, California Department of Fish and Game	None	Surfgrass and eelgrass, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994
Dr. Jack Engle, University of California at Santa Barbara	None	Surf grass, Santa Barbara area and No. Channel Islands	Personal Knowledge	None	None	1994
Wayne Ferren, University of California at Santa Barbara	None	Threatened/ Endangered Plants, So. California	Personal Knowledge	None	None	1994

2.5.1. SOURCE INFORMATION:

Coverage or theme name: INDEX

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
Research Planning, Inc.		Map Index	Complex polygons	NOAA	24000	1998

2.5.1. SOURCE INFORMATION:

Coverage or theme name: INVERT

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
California Department of Fish and Game	1980	Atlas of California Coastal Marine Resources	Map	Unknown	24,000	1970's
A.D. Beccasio, et al., Dames & Moore	1981	Pacific Coast Ecological Inventory - San Luis Obispo, California	Map, a report accompanies the map series	Biological Services Program, U.S. Fish and Wildlife Service, Slidell, La., Report No. FWS/OBS-81/30, 159 pp.	250,000	Data for map series compiled from many sources 1921-81
U.S. Fish and Wildlife Service and California Department of Fish and Game	1976	The Natural Resources of Mugu Lagoon	Report/paper ?	Unknown	None	Unknown
William S. Leet, Christopher Dewees, and Charles Haugen	1992	California Living Marine Resources and Their Utilization	Book	Unknown	None	Unknown

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
R.L. Emmett, S.L. Stone, S.A. Hintor, and M.E. Monaco	1991	Distribution and Abun-dance of Fishes and Invertebrates in West Coast Estuaries - Volume II: Species Life History Summaries	Book	ELMR Rep. No. 8, NOAA/NOS Strategic Environmental Assessments Division, Rockville, Md., 329 pp.	None	Info compiled from the historical and current literature and expert personal comm. and knowledge
Susan McBride, California Sea Grant	None	Commercial Fisheries, Locations by species	Personal Knowledge	None	None	1994
John Grant, California Department of Fish and Game–OSPR	None	Southern California scallops, sea urchins, lobster, abalone, clams, octopus	Personal Knowledge	None	None	1994
Dave Parker, California Department of Fish and Game, Marine Resources Division	None	Southern California squid, sea urchin, lobster, abalone, clams, scallops, crabs, octopus	Personal Knowledge	None	None	1994
Steve Crooke, California Department of Fish and Game, Marine Resources Division	None	Southern California squid	Personal Knowledge	None	None	1994
Robin Lewis, California Department of Fish and Game–OSPR	None	Various clams and scallops	Personal Knowledge	None	None	1994

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
George Gross, California Department of Fish and Game	None	Shellfish, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994
Ronald Takayama, California Department of Fish and Game	None	Shellfish, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994
Dr. Jack Engle, University of California at Santa Barbara	None	Clams and abalone, Santa Barbara area and No. Channel Islands	Personal Knowledge	None	None	1994
Rob Klinger, The Nature Conservancy	None	Shellfish, Santa Cruz Island	Personal Knowledge	None	None	1994
L. Laughrin, University of California at Santa Barbara	None	Shellfish, Santa Cruz Island	Personal Knowledge	None	None	1994
D. Richards, National Park Service	None	Shellfish, Channel Islands National Park	Personal Knowledge	None	None	1994
P.L. Haaker, California Department of Fish and Game	None	Abalone and Lobster, San Nicolas Island	Personal Knowledge	None	None	1995

2.5.1. SOURCE INFORMATION:

Coverage or theme name: MGT, SOCECON, and WETLANDS

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
State Water Resources Control Board	1976	Areas of special biological significance	Map	Unknown	2-5" = 1 mile	Unknown
Emil Smith and Thom Johnson	1974	The Marine Life Refuges and Reserves of California	Map	Unknown	1" = 2 miles	Unknown
Research Planning, Inc.	1980	Sensitivity of Coastal Environments to Spilled Oil, Southern California Atlas	Map	Prepared for: NOAA, Office of Oceanography and Marine Assessment, Seattle, Wash.	1:24,000	1980
California Coastal Commission	1987	California coastal resource guide	Book	Unknown	None	1980's
California Coastal Commission	1991	California coastal access guide	Book	Unknown	None	1980's
Rob Collins, CDF&G–Marine Resources Division	1993	State Aquaculture Leases	Book	Unknown	None	Unknown
California State Water Resources Control Board, Division of Planning and Research, Surveillance and Monitoring Section (used for ASBS boundary)	1979	California Marine Waters ASBS Reconnaissance Survey Report, Santa Catalina Island Subarea One	Book	Water Quality Monitoring Report No. 79-6, 192 pp.	None	~1970-1978

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
Ted Kuipen, Kuipen Mariculture	None	Locations off-the-ground culture of commercial oyster aquaculture	Personal Knowledge	None	None	1994
Susan McBride, California Sea Grant	None	Commercial Fisheries, Locations by species	Personal Knowledge	None	None	1994
Craig Codd, Coast Oyster	None	Locations on-the-ground culture of commercial oyster aquaculture	Personal Knowledge	None	None	1994
David VenTresca, CDF&G-Marine Resources Division, 408-649-2881	None	Marine fisheries and resources, locations of ecological reserves	Personal Knowledge	None	None	1994
John Grant, California Department of Fish and Game–OSPR	None	So. California Areas of Special Biological Significance (ASBS)	Personal Knowledge	None	None	1994
Dave Parker, California Department of Fish and Game, Marine Resources Division	None	So. California Sportfishing Areas	Personal Knowledge	None	None	1994
Steve Crooke, California Department of Fish and Game, Marine Resources Division	None	So. California sport fishing pier, sport fishing areas, live-bait fishing areas	Personal Knowledge	None	None	1994

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
K. McKee-Lewis and Lt. Mike Castleton, California Department of Fish and Game	None	Recreational and commercial fishing areas	Personal Knowledge	None	None	1994
Robin Lewis, California Department of Fish and Game–OSPR	None	Various human-use resources	Personal Knowledge	None	None	1994
Mickey Rivera, U.S. Fish and Wildlife Service	None	So. California National Park Location	Personal Knowledge	None	None	1994
Melissa Milander, San Diego Unified Port District	None	Various human-use resources, San Diego Bay	Personal Knowledge	None	None	1994
Mike Wells, California Department of Parks and Recreation	None	State Beaches, San Diego Co.	Personal Knowledge	None	None	1994
Jim Antrim, Seaworld	None	Water intake	Personal Knowledge	None	None	1994
Dave Pryor, California Department of Parks and Recreation	None	Various human-use resources (RB, SB, Arch, RF, A)	Personal Knowledge	None	None	1994
L. John, San Diego Gas and Electric	None	Water intakes, San Diego Bay	Personal Knowledge	None	None	1994
George Gross, California Department of Fish and Game	None	Fishing areas, recreational beaches, access, wetlands, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
Ronald Takayama, California Department of Fish and Game	None	Recreational and commerical fishing areas, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994
Dave Coon, University of California at Santa Barbara	None	Access and wetland, Devereaux Slough	Personal Knowledge	None	None	1994
Maurice Cardenaz, California Department of Fish and Game	None	Wetlands, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994
Dr. Richard Ambrose, University of California–Los Angeles	None	Wetlands, So. California	Personal Knowledge	None	None	1994
N. Lohmus, California Department of Fish and Game	None	Access, wetlands, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994
Heidi Togstad, California Department of Fish and Game–OSPR	None	Various soc-econ resources	Personal Knowledge	None	None	1994
Virginia Gardner-Johnson, California State Parks Depart-ment	None	Wetlands, San Luis Obispo, Santa Barbara and Ventura Cos.	Personal Knowledge	None	None	1994
Wayne Ferren, University of California at Santa Barbara	None	Wetlands, So. California	Personal Knowledge	None	None	1994
Rob Klinger, The Nature Conservancy	None	Wetlands, Santa Cruz Island	Personal Knowledge	None	None	1994

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
L. Laughrin, University of California at Santa Barbara	None	Wetlands, Santa Cruz Island	Personal Knowledge	None	None	1994
F. Wendell, California Department of Fish and Game	None	San Nicholas Island Translocation Zone (sea otter mgmt. area)	Personal Knowledge	None	None	1995

2.5.1. SOURCE INFORMATION:

Coverage or theme name: M_MAMMAL

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
Dan Anderson, University of California at Davis	1991	Sea Otter sightings by aerial survey	Digital, Point	None	Unknown	1990
California Department of Fish and Game	1980	Atlas of California Coastal Marine Resources	Map	Unknown	24,000	1970s
A.D. Beccasio, et al., Dames & Moore	1981	Pacific Coast Ecological Inventory - San Luis Obispo, California	Map, a report accompanies the map series	Biological Services Program, U.S. Fish and Wildlife Service, Slidell, La., Report No. FWS/OBS-81/30, 159 pp.	250,000	Data for map series compiled from many sources 1921-81
William S. Leet, Christopher Dewees, and Charles Haugen	1992	California Living Marine Resources and Their Utilization	Book	Unknown	None	Unknown

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
David Zeiner	1990	California's Wildlife: Vol. 3, Mammals	Book	Unknown	None	1980s
Brian Hatfield, U.S. Fish and Wildlife Service	None	Sea otters, elephant seals and other marine mammal densities and distributions	Personal Knowledge	None	None	1994
Fred Wendell, California Department of Fish and Game	None	Sea otters	Personal Knowledge	None	None	1994
Robin Lewis, California Department of Fish and Game–OSPR	None	Marine mammals	Personal Knowledge	None	None	1994
Dave Pryor, California Department of Parks and Recreation	None	Various marine mammals	Personal Knowledge	None	None	1994
Jan Larson, U.S. Navy	None	Various marine mammals, San Clemente Island	Personal Knowledge	None	None	1994
C. Woodhouse, Santa Barbara Museum of Natural History	None	Marine mammals, Santa Barbara area	Personal Knowledge	None	None	1994
Doyle Hanan, California Department of Fish and Game	None	Marine mammals, S. Cal.	Personal Knowledge	None	None	1994
Rob Klinger, The Nature Conservancy	None	Marine mammals, Santa Cruz Island	Personal Knowledge	None	None	1994

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
L. Laughrin, University of California at Santa Barbara	None	Marine mammals, Santa Cruz Island	Personal Knowledge	None	None	1994
D. Richards, National Park Service	None	Marine mammals, Channel Islands National Park	Personal Knowledge	None	None	1994
F. Wendell, California Department of Fish and Game	None	Sea otters, San Nicholas Island Translocation Zone	Personal Knowledge	None	None	1995

2.5.1. SOURCE INFORMATION:

Coverage or theme name: REPTILES

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
Melissa Milander, San Diego Unified Port District	None	Sea Turtles, San Diego Bay	Personal Knowledge	None	None	1994

2.5.2. PROCESS STEP

2.5.2.1. PROCESS DESCRIPTION:

The digitization of shoreline types, biological resources, and human-use resources is a complex and highly quality-controlled process. In order to facilitate digitizing, the entire study area is split into individual quadrangles using the INDEX data layer. The first layer of information digitized is the ESI shoreline classification. Upon completion of digitization, the data are checked for completeness and topological and logical consistency, and are then plotted and checked by the overflight/field specialists. Any errors in the

shoreline classification are updated prior to digitization of the biological and socioeconomic layers. All data use the shoreline as the geographic reference so that there are no slivers in the geographic layers. The biological information is compiled onto 1:24,000 USGS topographic quadrangles by an in-house biological and GIS expert using the data from regional specialists in the form of maps, tables, charts, and written descriptions of wildlife distributions. The data are digitized, checked using both digital and on-screen procedures, plotted, and sent out for review by the regional specialists. The edited maps are updated on the computer, checked once again, and plotted at final map scale. A team of specialists reviews the entire series of maps, checks all data, and makes final edits. The data are merged to form the study-wide layers that are described in this document. The data-merging includes a final quality control check where topological consistency, rules for geography, and database to geography are checked and reported to the GIS manager.

2.5.2.3. PROCESS DATE:

199409

2.5.2.6. PROCESS CONTACT

2.5.2.6.1. CONTACT PERSON PRIMARY

2.5.2.6.1.1. CONTACT PERSON:

Jill Petersen

2.5.2.6.1.2. CONTACT ORGANIZATION:

NOAA, Office of Response and Restoration

2.5.2.6.3. CONTACT POSITION:

GIS Manager

2.5.2.6.4. CONTACT ADDRESS

2.5.2.6.4.1. ADDRESS TYPE:

Physical Address

2.5.2.6.4.2. ADDRESS:

7600 Sand Point Way N.E.

2.5.2.6.4.3. CITY:

Seattle

2.5.2.6.4.4. STATE OR PROVINCE:
W A

2.5.2.6.4.5. POSTAL CODE:
98115-6349

2.5.2.6.5. CONTACT VOICE TELEPHONE:
(206) 526-6944

2.5.2.6.7. CONTACT FACSIMILE TELEPHONE:
(206) 526-6329

2.5.2.6.8. CONTACT ELECTRONIC MAIL ADDRESS:
jill_petersen@hazmat.noaa.gov.us

This page intentionally left blank

3.0. SPATIAL DATA ORGANIZATION INFORMATION

3.2. DIRECT SPATIAL REFERENCE METHOD:

Vector

3.3. POINT AND VECTOR OBJECT INFORMATION

3.3.1. SDTS TERMS DESCRIPTION:

3.3.1.1. SDTS POINT AND VECTOR OBJECT TYPE, and

3.3.1.2. POINT AND VECTOR OBJECT COUNT:

Theme	Universe Polygon	GT-Polygons	Area Points	Complete Chains	Line Segments	Label Points	Entity Points	Nodes
BIRDS	1	371	371	928	199,296			741
ESI	1	627	627	3,362	80,520			3,303
FISH	1	163	163	357	90,941			317
FISHL				16	1,447			311
HABITATS	1	336	336	704	198,791			687
HYDRO	1	899	899	1,185	90,321	644		1,173
INDEX	1	54	54	141	231			93
INVERT	1	676	676	931	125,361			884
MGT	1	112	112	226	42,553			198
M_MAMMAL	1	183	183	420	109,024			393
NESTS							38	
REPTILES	1	1	1	1	98			1
SOCECON				1	1		314	2
WETLANDS							27	

This page intentionally left blank

4.0. SPATIAL REFERENCE INFORMATION

4.1. HORIZONTAL COORDINATE SYSTEM DEFINITION

4.1.1. GEOGRAPHIC

4.1.1.1. LATITUDE RESOLUTION:

0.00005

4.1.1.2. LONGITUDE RESOLUTION:

0.00005

4.1.1.3. GEOGRAPHIC COORDINATE UNITS:

Decimal Degrees

4.1.4. GEODETIC MODEL

4.1.4.1. HORIZONTAL DATUM NAME:

North American Datum of 1927

4.1.4.2. ELLIPSOID NAME:

Clarke, 1866

This page intentionally left blank

5.0. ENTITY AND ATTRIBUTE INFORMATION

5.1. DETAILED DESCRIPTION: BIO_LUT

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

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	integer	RARNUM
	integer	ID

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:
RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:
An identifier that links the BIO_LUT table to the BIORES table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
ID

5.1.2.2. ATTRIBUTE DEFINITION:
An identifier that links the biology coverages to the BIO_LUT table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

This page intentionally left blank

5.1. DETAILED DESCRIPTION: BIOFILE

The data table BIOFILE is a flat file format that provides all of the biology attributes contained in the relational data tables when used in conjunction with the supplementary tables BREED_DT and EXPERTS

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	ELEMENT	character
	SUBELEMENT	character
	NAME	character
	GEN_SPEC	character
	S_F	character
	T_E	character
	NHP	character
	DATE_PUB	integer
	CONC	character
	JAN	character
	FEB	character
	MAR	character
	APR	character
	MAY	character
	JUN	character
	JUL	character
	AUG	character
	SEP	character
	OCT	character
	NOV	character
	DEC	character
	BREED1	character
	BREED2	character
	BREED3	character
	BREED4	character
	RARNUM	integer
	G_SOURCE	integer
	S_SOURCE	integer
	BREED	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:

Major categories of biological data

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
BIRD	Birds
FISH	Fish
HABITAT	Habitats and Rare Plants
INVERT	Invertebrates
M_MAMMAL	Marine Mammals
REPTILE	Reptiles and Amphibians

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

SUBELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:

Species subgroup

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

abalone
alcid
alligator / crocodile
anadromous
beach spawner
cephalopod
clam
conch / whelk
crab

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

diving coastal bird
dolphin
echinoderm
gastropod
gull/tern
kelp spawner
lobster
manatee
marsh
mussel
oyster
passerine
pelagic
raptor
reef fish
scallop
sea lion
sea otter
sea turtle
seal
shorebird
shrimp
shrub
special concentration
squid/octopus
submerged aquatic vegetation
wading Bird
waterfowl
whale

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

NAME

5.1.2.2. ATTRIBUTE DEFINITION:

Species common name

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Abalone
American coot
American wigeon
Ashy storm-petrel
Barred sand bass
Black abalone
Black brant
Black oystercatcher
Black rail
Black skimmer
Black storm-petrel
Black-crowned night heron
Bottlenose dolphin
Brandt's cormorant
Brown pelican
Cabezon
California barracuda
California black rail
California corbina
California grunion
California halibut
California jackknife clam
California least tern
California mussel
California sea lion
California spiny lobster
Canvasback
Caspian tern
Cassin's auklet
C-O sole
Coho salmon (silver)
Common dolphin
Common loon
Common murre

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Common Pacific littleneck clam
Cormorant
Crabs
Diving birds
Double-crested cormorant
Eelgrass
Elegant tern
Flounder
Forster's tern
Gaper clam
Giant kelp
Gray whale
Greater scaup
Green abalone
Green-winged teal
Guadalupe fur seal
Gulls
Harbor seal
Intermittent coastal wetlands
Kelp bass
Leach's storm-petrel
Lesser scaup
Light-footed clapper rail
Mallard
Northern elephant seal
Northern fur seal
Nuttall's cockle (basket, heart)
Octopus
Opaleye
Pacific coast squid
Pacific green sea turtle
Pacific razor clam
Pelagic cormorant
Peregrine falcon
Pigeon guillemot
Pink abalone
Pintail
Pismo clam
Rainbow trout (steelhead)

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Raptors
Red abalone
Red sea urchin
Red-breasted merganser
Rhinoceros auklet
Risso's dolphin
Rock crab
Rock scallop
Rockfish
Royal tern
Salt marsh bird's-beak
Sanddab
Sanderling
Sea otter
Shorebirds
Snow goose
Sole
Speckled scallop
Spotfin croaker
Spotted sand bass
Squid
Starry flounder
Striped mullet
Sunset clam
Surf scoter
Surf smelt
Surfgrass
Surfperch
Terns
Tidewater goby
Topsmelt
Tufted puffin
Wading birds
Washington butter clam
Waterfowl
Western grebe
Western gull
Western snowy plover
White seabass

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Willet
Xantus' murrelet
Yellowfin croaker
Yellowtail rockfish

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

GEN_SPEC

5.1.2.2. ATTRIBUTE DEFINITION:

Species scientific name

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Aechmophorus occidentalis
Anas acuta
Anas americana
Anas crecca
Anas platyrhynchos
Arctocephalus townsendi
Argopectin circularis
Atherinops affinis
Atractoscion nobilis
Aythya affinis
Aythya marila
Aythya valisineria
Branta bernicla
Calidris alba
Callorhinus ursinus
Cancer sp.
Catoptrophorus semipalmatus
Cepphus columba
Cerorhinca monocerata
Charadrius alexandrinus nivosus

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Chelonia mydas agassizi
Chen caerulescens
Citharichthys sp.
Clinocardium nuttallii
Cordylantus maritimus maritimus
Delphinus delphis
Embiotocidae
Endomychura hypoleuca
Enhydra lutris
Eschrichtius robustus
Eucyclogobius newberryi
Falco peregrinus
Fulica americana
Gari californica
Gavia immer
Girella nigricans
Grampus griseus
Haematopus bachmani
Haliotis corrugata
Haliotis cracherodii
Haliotis fulgens
Haliotis rufescens
Haliotis sp.
Hinnites multirugosus
Hypomesus pretiosus
Larus occidentalis
Laterallus jamaicensis
Laterallus jamaicensis coturniculus
Leuresthes tenuis
Loligo opalescens
Loligo sp.
Lunda cirrhata
Macrocystis pyrifera
Melanitta perspicillata
Menticirrhus undulatus
Mergus serrator
Mirounga angustirostris
Mugil cephalus
Mytilus californianus

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Nycticorax nycticorax
Oceanodroma homochroa
Oceanodroma leucorhoa
Oceanodroma melania
Octopus sp.
Oncorhynchus kisutch
Oncorhynchus mykiss
Panulirus interruptus
Paralabrax clathratus
Paralabrax maculatofasciatus
Paralabrax nebulifer
Paralichthys californicus
Paralichthys sp.
Pelecanus occidentalis
Phalacrocorax auritus
Phalacrocorax pelagicus
Phalacrocorax penicillatus
Phalacrocorax sp.
Phoca vitulina
Phyllospadix sp.
Platichthys stellatus
Pleuronichthys coenosus
Prothothaca staminea
Ptychoramphus aleuticus
Rallus longirostris levipes
Roncador stearnsii
Rynchops niger
Saxidomus nuttallii
Scorpaenichthys marmoratus
Sebastes flavidus
Sebastes spp.
Siliqua patula
Sphyraena argentea
Sterna antillarum browni
Sterna caspia
Sterna elegans
Sterna fosteri
Sterna maxima
Strongylocentrotus franciscanus

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Tagelus californianus
Tivela stultorum
Tresus nuttallii
Tursiops truncatus
Umbrina roncador
Uria aalge
Zalophus californianus
Zostera marina

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

S_F

5.1.2.2. ATTRIBUTE DEFINITION:

State and Federal status

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
F	Federally listed
S	State listed
S/F	State and Federally listed

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

USFWS, CDFG

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

T_E

5.1.2.2. ATTRIBUTE DEFINITION:

Threatened and endangered status

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
E	Endangered
E/E	Endangered on Federal and State lists
T	Threatened
T/T	Threatened on Federal and State lists

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

USFWS, CDFG

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

NHP

5.1.2.2. ATTRIBUTE DEFINITION:

This field is blank because no NHP information was gathered when this atlas was published. The field is included here to maintain consistency with the latest ESI data structure.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
	Not supplied with this atlas

5.1.2.1. ATTRIBUTE LABEL:

DATE_PUB

5.1.2.2. ATTRIBUTE DEFINITION:

This field is blank because no NHP information was gathered when this atlas was published. The field is included here to maintain consistency with the latest ESI data structure.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
	Not supplied with this atlas

5.1.2.1. ATTRIBUTE LABEL:
CONC

5.1.2.2. ATTRIBUTE DEFINITION:
Relative or actual count of a species concentration at a specific location. Field is blank if no data are available

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
JAN

5.1.2.2. ATTRIBUTE DEFINITION:
Present in January

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
FEB

5.1.2.2. ATTRIBUTE DEFINITION:
Present in February

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

MAR

5.1.2.2. ATTRIBUTE DEFINITION:

Present in March

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

APR

5.1.2.2. ATTRIBUTE DEFINITION:

Present in April

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

MAY

5.1.2.2. ATTRIBUTE DEFINITION:

Present in May

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

JUN

5.1.2.2. ATTRIBUTE DEFINITION:

Present in June

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

JUL

5.1.2.2. ATTRIBUTE DEFINITION:

Present in July

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

AUG

5.1.2.2. ATTRIBUTE DEFINITION:

Present in August

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
SEP

5.1.2.2. ATTRIBUTE DEFINITION:
Present in September

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
OCT

5.1.2.2. ATTRIBUTE DEFINITION:
Present in October

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

NOV

5.1.2.2. ATTRIBUTE DEFINITION:

Present in November

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

DEC

5.1.2.2. ATTRIBUTE DEFINITION:

Present in December

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED1

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage textual summary where:
if ELEMENT = BIRD then BREED1 = nesting;
if ELEMENT = FISH then BREED1 = spawning;
if ELEMENT = INVERT then BREED1 = spawning;
if ELEMENT = REPTILE then BREED1 = nesting;
if ELEMENT = M_MAMMAL then BREED1 = mating

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
JUL-DEC	3 character abbreviation of start and end month of breed1 activities
-	Not Occurring
N/A	No breed1 activities for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED2

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage textual summary where:
if ELEMENT = BIRD then BREED2 = laying;
if ELEMENT = FISH then BREED2 = outmigration;
if ELEMENT = INVERT then BREED2 = larvae;
if ELEMENT = REPTILE then BREED2 = hatching;
if ELEMENT = M_MAMMAL then BREED2 = calving

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
JUL-DEC	3 character abbreviation of start and end month of breed2 activities
-	Not Occurring
N/A	No breed2 activities for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED3

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage textual summary where:
if ELEMENT = BIRD then BREED3 = hatching;
if ELEMENT = FISH then BREED3 = larvae/juveniles;
if ELEMENT = M_MAMMAL then BREED3 = pupping

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
JUL-DEC	3 character abbreviation of start and end month of breed3 activities
-	Not Occurring
N/A	No breed3 activities for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED4

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage textual summary where:
if ELEMENT = BIRD then BREED4 = fledging;
if ELEMENT = M_MAMMAL then BREED4 = molting

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
JUL-DEC	3 character abbreviation of start and end month of breed4 activities
-	Not Occurring
N/A	No breed4 activities for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:
An identifier that links directly back to the biological data layers or to the BIO_LUT lookup table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
G_SOURCE

5.1.2.2. ATTRIBUTE DEFINITION:
A link to EXPERT_ID in the supplementary data table EXPERTS. Formerly called EXPERT_ID. Item name has been changed to G_SOURCE to maintain consistency with the latest ESI data structure.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
S_SOURCE

5.1.2.2. ATTRIBUTE DEFINITION:
A duplicate link to EXPERT_ID in the supplementary data table EXPERTS. The S_SOURCE field has been added to maintain consistency with the latest ESI data structure.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
BREED

5.1.2.2. ATTRIBUTE DEFINITION:
Breed identifier that links to the flat file's supplementary data table BREED_DT that allows searches of breeding activities by month.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1. DETAILED DESCRIPTION: BIORES

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

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	RARNUM	integer
	SPECIES_ID	integer
	CONC	character
	SEASON_ID	integer
	G_SOURCE	integer
	S_SOURCE	integer
	ELEMENT	character
	EL_SPE	character
	EL_SPE_SEA	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links to the BIO_LUT table and directly back to the biology coverages

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:
SPECIES_ID

5.1.2.2. ATTRIBUTE DEFINITION:
Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained by NOAA

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
CONC

5.1.2.2. ATTRIBUTE DEFINITION:
Relative or actual count of a species concentration at a specific location. Field is blank if no data are available.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
SEASON_ID

5.1.2.2. ATTRIBUTE DEFINITION:
A link from the BIORES table to the seasonality table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

G_SOURCE

5.1.2.2. ATTRIBUTE DEFINITION:

A link to EXPERT_ID in the supplementary data table EXPERTS. Formerly called EXPERT_ID. Item name has been changed to G_SOURCE to maintain consistency with the latest ESI data structure.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

S_SOURCE

5.1.2.2. ATTRIBUTE DEFINITION:

A duplicate link to EXPERT_ID in the supplementary data table EXPERTS. The S_SOURCE field has been added to maintain consistency with the latest ESI data structure.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

ELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:

Major categories of biological data

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
BIRD	Birds
FISH	Fish
HABITAT	Habitats and Rare Plants
INVERT	Invertebrates
M_MAMMAL	Marine Mammals
REPTILE	Reptiles and Amphibians

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

EL_SPE

5.1.2.2. ATTRIBUTE DEFINITION:

Concatenation of the first character of the ELEMENT and the SPECIES_ID that provides a link to the species table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

EL_SPE_SEA

5.1.2.2. ATTRIBUTE DEFINITION:

Concatenation of the first character of the ELEMENT, the SPECIES_ID, and the SEASON_ID that provides a link to the seasonality table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

This page intentionally left blank

5.1. DETAILED DESCRIPTION: BIRDS

The data layer BIRDS contains the polygons with bird species.

The following BIRDS species are found in the Southern California ESI data set:

SPECIES ID	NAME
1	Common loon
7	Western grebe
8	Double-crested cormorant
9	Brandt's cormorant
10	Pelagic cormorant
13	Black brant
15	Snow goose
16	Mallard
17	Pintail
18	Green-winged teal
21	Canvasback
22	Greater scaup
23	Lesser scaup
30	Surf scoter
33	Red-breasted merganser
34	American coot
37	Western gull
46	Common murre
47	Pigeon guillemot
49	Cassin's auklet
50	Rhinoceros auklet
51	Tufted puffin
67	Sanderling
68	Black oystercatcher
79	Cormorant
85	California least tern
90	Black-crowned night heron
96	Leach's storm-petrel
107	Peregrine falcon
118	Brown pelican
133	Black skimmer
136	Caspian tern
137	Royal tern
138	Forster's tern
143	Xantus' murrelet
144	Ashy storm-petrel
145	Elegant tern
146	Black storm-petrel
150	Black rail

SPECIES ID	NAME
155	Willet
169	American wigeon
205	Light-footed clapper rail
206	California black rail
270	Western snowy plover
1,001	Gulls
1,002	Shorebirds
1,003	Waterfowl
1,004	Wading birds
1,005	Raptors
1,006	Diving birds
1,008	Terns

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (9), element number (1), and record number. ID values of 9999 are holes in polygons and do not contain information.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

This page intentionally left blank

5.1. DETAILED DESCRIPTION: BREED

The data table BREED identifies the life stages and abundances, by month, for each species. (There are no breeding activities for the HABITAT element.)

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	EL_SPE_SEA	character
	MONTH	integer
	BREED1	character
	BREED2	character
	BREED3	character
	BREED4	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

EL_SPE_SEA

5.1.2.2. ATTRIBUTE DEFINITION:

Concatenation of the first character of the ELEMENT, the SPECIES_ID, and the SEASON_ID. Links to BIORES and SEASONAL data tables. If a species has any different monthly presence or breeding activity, a new seasonality record is used to accommodate the variable nature of the species across the study area

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

MONTH

5.1.2.2. ATTRIBUTE DEFINITION:

Two-digit integer corresponding to the calendar month. Can have up to 12 records to account for each month of the year

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1	January
2	February
3	March
4	April
5	May
6	June
7	July
8	August
9	September
10	October
11	November
12	December

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED1

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED1 = nesting;
if EL_SPE_SEA contains "F" then BREED1 = spawning;
if EL_SPE_SEA contains "I" then BREED1 = spawning;
if EL_SPE_SEA contains "R" then BREED1 = nesting;
if EL_SPE_SEA contains "M" then BREED1 = mating

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
BREED2

5.1.2.2. ATTRIBUTE DEFINITION:
Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED2 = laying;
if EL_SPE_SEA contains "F" then BREED2 = outmigration;
if EL_SPE_SEA contains "I" then BREED2 = larvae;
if EL_SPE_SEA contains "R" then BREED2 = hatching;
if EL_SPE_SEA contains "M" then BREED2 = calving

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
BREED3

5.1.2.2. ATTRIBUTE DEFINITION:
Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED3 = hatching;
if EL_SPE_SEA contains "F" then BREED3 = larvae/juveniles;
if EL_SPE_SEA contains "M" then BREED3 = pupping

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED4

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED4 = fledging;
if EL_SPE_SEA contains "M" then BREED4 = molting

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: BREED_DT

The data table BREED _DT is a supplement to the flat format BIOFILE that allows searches to be conducted for life stage activities by month. This is a condensed version of the BREED table where multiple species of the same element may link to the same BREED_DT records. (There are no breeding activities for the HABITAT element.)

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	BREED	integer
	MONTH	integer
	BREED1	character
	BREED2	character
	BREED3	character
	BREED4	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

BREED

5.1.2.2. ATTRIBUTE DEFINITION:

An integer value that links from the BIOFILE to the BREED_DT table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

MONTH

5.1.2.2. ATTRIBUTE DEFINITION:

Two-digit integer corresponding to the calendar month. Each month is listed whether any special life activity is occurring or not.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1	January
2	February
3	March
4	April
5	May
6	June
7	July
8	August
9	September
10	October
11	November
12	December

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED1

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED1 = nesting;
if EL_SPE_SEA contains "F" then BREED1 = spawning;
if EL_SPE_SEA contains "I" then BREED1 = spawning;
if EL_SPE_SEA contains "R" then BREED1 = nesting;
if EL_SPE_SEA contains "M" then BREED1 = mating

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring
-	No Breed1 activity for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED2

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED2 = laying;
if EL_SPE_SEA contains "F" then BREED2 = outmigration;
if EL_SPE_SEA contains "I" then BREED2 = larvae;
if EL_SPE_SEA contains "R" then BREED2 = hatching;
if EL_SPE_SEA contains "M" then BREED2 = calving

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring
-	No Breed2 activity for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED3

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:

if EL_SPE_SEA contains “B” then BREED3 = hatching;
if EL_SPE_SEA contains “F” then BREED3 = larvae/juveniles;
if EL_SPE_SEA contains “M” then BREED3 = pupping

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring
-	No Breed3 activity for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
BREED4

5.1.2.2. ATTRIBUTE DEFINITION:
Species’ breeding or life stage information where:
if EL_SPE_SEA contains “B” then BREED4 = fledging;
if EL_SPE_SEA contains “M” then BREED4 = molting

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring
-	No Breed4 activity for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1. DETAILED DESCRIPTION: ESI

The data layer ESI contains arc (Complete Chains) and polygonal (GT-Polygons) features for the ESI shoreline classification. The classification of the features is based upon *Guidelines for Developing Digital Environmental Sensitivity Index Atlases and Databases* (Michel, J. and J. Dahlin, 1993, Hazardous Materials Response and Assessment Division, NOAA). The ESI classification was performed 20-26 October 1992.

5.1.1. ENTITY TYPES:

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

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ESI

5.1.2.2. ATTRIBUTE DEFINITION:

The item ESI contains values according to the ESI ranking of the shorelines and polygons. The ESI rankings progress from low to high susceptibility to oil spills. The southern California shoreline types are listed below. In many cases, the shorelines are also ranked with multiple codes such as 10/7. The first number is the most landward shoreline type, salt marsh, with exposed tidal flats being the shoreline type closest to the water.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1A	Exposed Rocky Cliffs
1A/3	Exposed Rocky Cliffs/Fine- to Medium-Grained Sand Beaches

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1B	Exposed Seawall
1B/2	Exposed Seawalls/Wave Cut Rocky Platforms
1B/3	Exposed Seawalls/Fine- to Medium-Grained Sand Beaches
1B/3/2	Exposed Seawalls/Fine- to Medium-Grained Sand Beaches/Wave Cut Rocky Platforms
1B/4	Exposed Seawalls/Coarse-Grained Sand to Granule Beaches
1B/5	Exposed Seawall/Mixed Sand and Gravel Beaches
1B/6A	Exposed Seawall/Gravel Beaches
1B/6A/3	Exposed Seawall/Gravel Beaches/Fine- to Medium-Grained Sand Beaches
2	Wave Cut Rocky Platforms
2/3	Wave Cut Rocky Platforms/Fine- to Medium-Grained Sand Beaches
3	Fine- to Medium-Grained Sand Beaches
3/2	Fine- to Medium-Grained Sand Beaches/Wave Cut Rocky Platforms
4	Coarse-Grained Sand to Granule Beaches
4/1A	Coarse-Grained Sand to Granule Beaches/Exposed Rocky Cliffs
4/2	Coarse-Grained Sand to Granule Beaches/Wave Cut Rocky Platforms
5	Mixed Sand and Gravel Beaches
5/2	Mixed Sand and Gravel Beaches/Wave Cut Rocky Platforms
5/3	Mixed Sand and Gravel Beaches/Fine- to Medium-Grained Sand Beaches
5/3/2	Mixed Sand and Gravel Beaches/Fine- to Medium-Grained Sand Beaches/Wave Cut Rocky Platforms
6A	Gravel Beaches
6A/2	Gravel Beaches/Wave Cut Rocky Platforms
6A/3	Gravel Beaches/Fine- to Medium-Grained Sand Beaches
6A/3/2	Gravel Beaches/Fine- to Medium-Grained Sand Beaches/Wave Cut Rocky Platforms
6A/4	Gravel Beaches/Coarse-Grained Sand to Granule Beaches
6A/5	Gravel Beaches/Mixed Sand and Gravel Beaches
6A/9	Gravel Beaches/Sheltered Tidal Flats
6B	Riprap
6B/2	Riprap/Wave Cut Rocky Platforms
6B/3	Riprap/Fine- to Medium-Grained Sand Beaches
6B/3/2	Riprap/Fine- to Medium-Grained Sand Beaches/Wave Cut Rocky Platforms
6B/4	Riprap/Coarse-Grained Sand to Granule Beaches
6B/5	Riprap/Mixed Sand and Gravel Beaches/

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
6B/6A	Riprap/Gravel Beaches
6B/6A/3	Riprap/Exposed Tidal Flats
7	Exposed Tidal Flats
8A	Sheltered Rocky Shores
8B	Sheltered Man-Made Structures
9	Sheltered Tidal Flats
9/10	Sheltered Tidal Flats/Salt Marshes
10	Salt Marsh
10/7	Salt Marsh/Exposed Tidal Flats
10/9	Salt Marsh/Sheltered Tidal Flats
U	Unclassified

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

ordinal

5.1.2.1. ATTRIBUTE LABEL:

LINE

5.1.2.2. ATTRIBUTE DEFINITION:

Type of geographic feature

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
B	Breakwater
H	Hydrography or stream features
I	Index for map/quad boundary
S	Shoreline

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

SOURCE_ID

5.1.2.2. ATTRIBUTE DEFINITION:

Data source for the ESI

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
0	Digital
1	Overflight
3	Table Digitization from USGS Quadrangle
4	Edgematching
5	Digitized Off Scanned USGS Topos

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Randy Imai, California Department of Fish and Game

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

ENVIR

5.1.2.2. ATTRIBUTE DEFINITION:

Regional environment

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
	This field added to maintain consistency with the latest ESI data structure. Not assigned for this atlas.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

WATER_CODE

5.1.2.2. ATTRIBUTE DEFINITION:

Specifies a polygon as either water or land

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
W	Water
L	Land

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

This page intentionally left blank

5.1. DETAILED DESCRIPTION: EXPERTS

The data table EXPERTS contains the primary contacts for resources included in the ESI atlas.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	EXPERT_ID	integer
	NAME	character
	AGENCY	character
	ADDRESS1	character
	ADDRESS2	character
	CITY	character
	STATE	character
	PHONE	character
	BIO_EXPERTISE	character
	GEO_EXPERTISE	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

EXPERT_ID

5.1.2.2. ATTRIBUTE DEFINITION:

Expert identifier that links to G_SOURCE and S_SOURCE in the BIORES and BIOFILE tables.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

NAME

5.1.2.2. ATTRIBUTE DEFINITION:

Primary expert and/or contact for resource

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Ambrose, Dr. Richard
Anderson, Shane
Bayer, Dave
Beede, Ben
Boucke, Ms. Morgan
Cardenaz, Mr. Maurice
Carpenteria State Beach
Castleton, Lt. Mike
Coon, Dave
Cordero, Joe
Craig, Richard
Crooke, Steve
Devine, Diane
Dow, Ron
Duska, Dr. Al and Ratcliffe, Bob
Engle, Dr. Jack
Engle, Jack
Ferren, Wayne
Fitzgerald, Jack
Gardner-Johnson, Virginia
Glassow, Mike
Grant, John
Gregory, Paul
Gross, Mr. George
Hanan, Doyle
Hoffman-Nelson, Mari
Holmgrin, Mark
James, Steve
Johnson, Gary
Kerbavaz, Joanne
Klinger, Rob

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Larson, Jan
Laughrin, Lyndal
Leckle, Jim
Lehman, Paul
Lewis, Robin D.
Lohmus, Natasha
Lunsford, Mike
Machuzak, Micheal
Mariculture, Neushul
Mckee-Lewis, Kimberly
Meek, Bob
Mezey, Justin
Milander, Melissa
Miller, John
Parker, Dave
Phillips, Kerry
Point Reyes Bird Observatory
Pryor, Dave
Ratcliffe, Bob
Richards, Dan
Rivera, Mic
Rivera, Mickey
Santa Barbara Co. Parks
Sasaki, Mr. Ken
Shaver, Mack
Smith, Grace
Stoltz, Dave
Swift, Dr. Cam
Takayama, Mr. Ronald
Togstad, Heidi
U.S.Fish and Wildlife Service
Ventura County Parks Dept.
Wellborn, Dave
Wells, Mike
White, Gary
Woodhouse, Dr. Charles
Young, Jeffery

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

AGENCY

5.1.2.2. ATTRIBUTE DEFINITION:

Affiliation of the listed expert

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

AB Lab Aquaculture
AB Tec
Audubon
California Department of Fish and Game
California Department of Fish and Game MRD
California Department of Fish and Game OSPR
California Department of Fish and Game : Retired
California State Parks
Channel Island National Park
Channel Islands National Marine Sanctuary NOAA
Conception Bay Abalone Co.
Cultured Abalone, The
Ecomar
National Marine Fishery Service
Nature Conservancy, The
Neushul Mariculture
Pacific Seafood
Point Mugu Naval Air Station
Point Reyes Bird Observatory
San Diego California Port District
San Marino Environmental
Santa Barbara County
Santa Barbara Museum of Natural History
SEA Farms
Sea Ventures Inc.
U. S. Fish and Wildlife Service
U. S. Marine Corps
U. S. Navy
University at California Santa Barbara
University of California - Los Angeles
University of California - Santa Barbara

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
ADDRESS1

5.1.2.2. ATTRIBUTE DEFINITION:
Primary address of the expert

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

1350 Front Street
158 Stafelicia Drive
18331 Enterprise Lane
1901 Spinnaker Drive
1933 Cliff Drive Suite 27
2559 Puesta Del Sol Road
2680 Carlsbad Ave.
2730 Locker Ave.
2730 Loker Ave. West
2932 Cliff Drive
301 Caspian Way
3165 Pacific Hwy.
320 Golden Shore #310
330 Golden Shore #50
475 Kellogg Way
4990 Shoreline Highway
503 E. Montecito Street, Rm.104
6 Harbor Way
9580 Dos Pueblos Canyon Road
Marine Science Institute - UCSB
P.O.Box 2544
P.O.Box 4171
School of Public Health, UCLA
Stearns Wharf
U. S. Marine Corps Base Box 555008
UCSB Anthropology Department

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

UCSB Marine Science Institute
USCB Vertebrate Museum
University of California - Santa Barbara
c/o NCEL Bldg#573

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

ADDRESS2

5.1.2.2. ATTRIBUTE DEFINITION:

Continuation of first address of expert

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

10833 La Conte Ave.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

CITY

5.1.2.2. ATTRIBUTE DEFINITION:

City of expert's address

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Camp Pendleton
Carlsbad
Goleta
Huntington Beach
Imperial Beach
Long Beach
Los Angeles
Port Hueneme
San Diego
Santa Barbara
Stinson Beach
Ventura

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
STATE
5.1.2.2. ATTRIBUTE DEFINITION:
State of expert's address
5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.
5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:
CA
5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
PHONE
5.1.2.2. ATTRIBUTE DEFINITION:
Phone number of expert
5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.
5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
BIO_EXPERTISE
5.1.2.2. ATTRIBUTE DEFINITION:
Biological expertise of expert
5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.
5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:
Abalone
Abalone Culture
Access and Logistics
Aquaculture
Archaeological Data
Birds
Birds, Sea turtles

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Birds; Coastal Southern California
Chief Ranger
Coastal Marine
Coastal Marine Resources
Coastal Resources
Coastal Wildlife
Coastal Wildlife and Plants
Coordinator : Santa Barbara Office
Culture of Oysters, Abalone and Rock Scallops
Culture of Oysters, Abalone, Mussels and Scallops
Devereaux Slough
Ecologist
Ecologist - General Island Resident
ES III
Federally Listed Species
Fish and Wildlife Biologist
Fisheries
Harbor Seals
HAZMAT Coordinator
Inland Fish and Wetlands
Inland Fisheries
Lifeguard
Macrocystis Culture
Marine Biologist
Marine Mammals
Marine Mammals, Waterfowl, Seabirds, Shorebirds
Marine Res. Manag., Subtidal, Intertidal, Birds, Mar. Mammals
Marine Resources: Subtidal and Intertidal
Nearshore Marine Resources and Wetlands
Park Superintendent
Ranch Manager
Ranger
Recreational and Logistics
Red Abalone Culture
Safety Officer
Sanctuary Manager
Senior Marine Biologist

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Subtidal, Intertidal Organisms
Western Snowy Plovers
Wetlands: Esp. Carpenteria and Goleta Sloughs
Wildlife Biologist, Least Tern

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

GEO_EXPERTISE

5.1.2.2. ATTRIBUTE DEFINITION:

Geographic extent of expert's expertise

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

All 5 Channal Islands
California
Camp Pendleton
Carpenteria
Devereaux Slough
Dos Pueblos
Gaviota Park Area
Gaviota State Park
Goleta
Mugu Lagoon
Point Conception and Cojo Bay
Port Hueneme
San Clemente Island
San Diego Bay Area
San Diego County Coast
San Luis Obispo, Santa Barbara and Ventura
Santa Barbara
Santa Barbara - Ventura
Santa Barbara County
Santa Barbara and Northern Channel Islands
Santa Barbara and Ventura
Santa Cruz Island
Southern California
Southern California Coastal Area

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Summerland Area Santa Barbara Channel
Tijuana Estuary
Ventura

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: FISH

The data layer FISH contains the polygons with fish species.

The following FISH species are found in the Southern California ESI atlas:

SPECIES ID	NAME
12	Starry flounder
13	C-O sole
28	Yellowtail rockfish
53	Cabezon
69	Coho salmon (silver)
74	Rainbow trout (steelhead)
75	Surf smelt
79	White seabass
96	Sanddab
106	California grunion
116	Striped mullet
192	Topsmelt
223	Rockfish
224	Surfperch
225	California halibut
226	Tidewater goby
260	Barred sand bass
261	Spotted sand bass
262	California corbina
264	Yellowfin croaker
265	Spotfin croaker
266	Kelp bass
267	Opaleye
284	Flounder
285	California barracuda
286	Sole

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (9), element number (2), and record number. ID values of 9999 are holes in polygons and do not contain information.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: FISHL

The data layer FISHL contains arcs for fish species.

The following FISH species (arcs) are found in the Southern California ESI atlas:

SPECIES ID	NAME
74	Rainbow trout (steelhead)
226	Tidewater goby

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Complete Chains	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (9), element number (2+20, to indicate line data 22), and record number.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the BIORES table or the flat format BIOFILE table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: HABITATS (formerly PLANTS)

The data layer HABITATS contains the polygons with plant species.

The following HABITATS species are found in the Southern California ESI atlas:

SPECIES ID	NAME
1	Eelgrass
5	Salt marsh bird's-beak
7	Surfgrass
9	Giant kelp
77	Intermittent coastal wetlands

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (9), element number (3), and record number. ID values of 9999 are holes in polygons and do not contain information.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: HYDRO

The data layer HYDRO contains polygonal water and land features, as well as linear features for rivers/streams that are tidally influenced. This data layer was created using the digital shoreline provided by the California State Land Office.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	WATER_CODE	character
Complete Chains	LINE	character
	SOURCE_ID	integer

The LINE, SOURCE_ID, and WATER_CODE attributes are the same as in the ESI data layer. The HYDRO data layer contains all annotation used in producing the atlas. The annotation features are categorized into three subclasses in order to simplify the mapping and quality control procedures: geog or geographic features, soc or socioeconomic features, and hydro or water features.

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

WATER_CODE

5.1.2.2. ATTRIBUTE DEFINITION:

Specifies a polygon as either water or land

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
W	Water
L	Land

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

LINE

5.1.2.2. ATTRIBUTE DEFINITION:

Type of geographic feature

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
B	Breakwater or pier
H	Hydrography or stream features
I	Index for map/quad boundary
S	Shoreline

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

SOURCE_ID

5.1.2.2. ATTRIBUTE DEFINITION:

Data source for the ESI

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
0	Digital
1	Overflight
3	Table Digitization from USGS Quadrangle
4	Edgematching
5	Digitized Off Scanned USGS Topos

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: INDEX

The data layer INDEX contains the map boundaries for each quad/map in the atlas.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	TILE-NAME	character
	TOPO-NAME	character
	SCALE	integer
	MAPANGLE	floating point
	PAGESIZE	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

TILE-NAME

5.1.2.2. ATTRIBUTE DEFINITION:

The TILE-NAME contains the map number according to the specified layout of the atlas. During the map production process the value of TILE-NAME is plotted on the map product to order the maps in a coherent manner. The values for each polygon are unique and range from 1 through 51.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

TOPO-NAME

5.1.2.2. ATTRIBUTE DEFINITION:

USGS 1:24,000 topographic map name. Some polygons straddle two or more maps and all map names are included in this attribute. The date (latest/revised) of the USGS maps are also included in this field.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

ANACAPA ISLAND, CALIF. (1973)
CARPINTERIA, CALIF. (1988)
DANA POINT, CALIF. (1975)

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

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 LOMA, CALIF. (1975)

POINT MUGU, CALIF. (1967)

REDONDO BEACH, CALIF. (1981)

SACATE, CALIF. (1953)

SAN CLEMENTE, CALIF. (1975)

SAN CLEMENTE ISLAND CENTRAL, CALIF. (1980)

SAN CLEMENTE ISLAND NORTH, CALIF. (1980)

SAN CLEMENTE ISLAND SOUTH, CALIF. (1980)

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)

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

SAN ONOFRE BLUFF, CALIF. (1975)
SAN PEDRO, CALIF. (1981)
SANTA BARBARA, CALIF. (1988)
SANTA BARBARA ISLAND, CALIF. (1973)
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)

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

SCALE

5.1.2.2. ATTRIBUTE DEFINITION:

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

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

46,500
50,000

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

MAPANGLE

5.1.2.2. ATTRIBUTE DEFINITION:

MAPANGLE contains a value (usually negative) to rotate the final map product so that it is situated straight up and down.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

-1.75
-1.70
-1.55
-1.35
-1.20
-1.05
-1.00
-0.95
-0.91
-0.90
-0.85
-0.80
-0.70
-0.60
-0.44
-0.40
-0.30
-0.21
-0.20
-0.13
-0.10

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

-0.05
0.00
0.04
0.075
0.11
0.135
0.19
0.25
0.29

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

PAGESIZE

5.1.2.2. ATTRIBUTE DEFINITION:

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

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

11,17
17,11

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

This page intentionally left blank

5.1. DETAILED DESCRIPTION: INVERT (formerly SHELLFISH)

The data layer INVERT contains the polygons with invertebrate species.

The following INVERT species are found in the Southern California ESI atlas:

SPECIES ID	NAME
18	Pismo clam
20	California mussel
21	Washington butter clam
24	Gaper clam
28	Pacific razor clam
29	Common Pacific littleneck clam
30	Octopus
35	Rock scallop
37	Pacific coast squid
54	California spiny lobster
58	Sunset clam
60	Abalone
61	Red abalone
62	Black abalone
63	Green abalone
65	Pink abalone
66	California jackknife clam
73	Squid
76	Nuttall's cockle (basket, heart)
86	Red sea urchin
89	Speckled scallop
91	Rock crab
1,001	Crabs

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (9), element number (7), and record number. ID values of 9999 are holes in polygons and do not contain information.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: MGT

The data layer MGT contains the managed area polygons.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	TYPE	character
	ID	integer
	HUNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

TYPE

5.1.2.2. ATTRIBUTE DEFINITION:

Identifies polygons with a socio-economic, or human-use, feature. This attribute allows direct access to the type of feature instead of linking to the more detailed SOC_DAT table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
MS	Marine Sanctuary
NP	National Park
P	Park
B	Recreational Beach
WR	Wildlife Refuge

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the SOC_LUT table. ID is a concatenation of atlas number (9), element number (11), and record number

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

HUNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the SOC_DAT table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: M_MAMMAL

The data layer M_MAMMAL contains the polygons with mammal species.

The following M_MAMMAL species are found in the Southern California ESI atlas:

SPECIES ID	NAME
2	Harbor seal
3	Northern fur seal
7	Sea otter
17	Bottlenose dolphin
22	California sea lion
23	Guadalupe fur seal
24	Northern elephant seal
26	Gray whale
46	Risso's dolphin
60	Common dolphin

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (9), element number (4), and record number. ID values of 9999 are holes in polygons and do not contain information.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:
An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1. DETAILED DESCRIPTION: NESTS

The data layer NESTS contains entity points representing nesting sites.

The following species are found in the NESTS data layer of the Southern California ESI atlas:

SPECIES ID	NAME
8	Double-crested cormorant
9	Brandt's cormorant
10	Pelagic cormorant
37	Western gull
47	Pigeon guillemot
49	Cassin's auklet
68	Black oystercatcher
85	California least tern
96	Leach's storm-petrel
107	Peregrine falcon
118	Brown pelican
133	Black skimmer
136	Caspian tern
137	Royal tern
138	Forster's tern
143	Xantus' murrelet
144	Ashy storm-petrel
145	Elegant tern
270	Western snowy plover

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Entity Points	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (9), element number (5), and record number.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:
An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1. DETAILED DESCRIPTION: REPTILES

The data layer REPTILES contains the polygons with reptile species.

The following REPTILES species are found in the Southern California ESI atlas:

SPECIES ID	NAME
8	Pacific green sea turtle

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:
ID

5.1.2.2. ATTRIBUTE DEFINITION:
A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (9), element number (6), and record number. ID values of 9999 are holes in polygons and do not contain information.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:
An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: SEASONAL

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

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	ELEMENT	character
	SPECIES_ID	integer
	SEASON_ID	integer
	JAN	character
	FEB	character
	MAR	character
	APR	character
	MAY	character
	JUN	character
	JUL	character
	AUG	character
	SEP	character
	OCT	character
	NOV	character
	DEC	character
	EL_SPE_SEA	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:

Major categories of biological data

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
BIRD	Birds
FISH	Fish
HABITAT	Habitats and Rare Plants
INVERT	Invertebrates
M_MAMMAL	Marine Mammals
REPTILE	Reptiles and Amphibians

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
SPECIES_ID

5.1.2.2. ATTRIBUTE DEFINITION:
Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained by NOAA.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
SEASON_ID

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

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
JAN

5.1.2.2. ATTRIBUTE DEFINITION:
Present in January

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
FEB

5.1.2.2. ATTRIBUTE DEFINITION:
Present in February

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

MAR

5.1.2.2. ATTRIBUTE DEFINITION:

Present in March

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

APR

5.1.2.2. ATTRIBUTE DEFINITION:

Present in April

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

MAY

5.1.2.2. ATTRIBUTE DEFINITION:

Present in May

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

JUN

5.1.2.2. ATTRIBUTE DEFINITION:

Present in June

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
JUL

5.1.2.2. ATTRIBUTE DEFINITION:
Present in July

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
AUG

5.1.2.2. ATTRIBUTE DEFINITION:
Present in August

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
SEP

5.1.2.2. ATTRIBUTE DEFINITION:
Present in September

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
OCT

5.1.2.2. ATTRIBUTE DEFINITION:
Present in October

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
NOV

5.1.2.2. ATTRIBUTE DEFINITION:
Present in November

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
DEC

5.1.2.2. ATTRIBUTE DEFINITION:
Present in December

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
EL_SPE_SEA

5.1.2.2. ATTRIBUTE DEFINITION:
Concatenation of the first character of the ELEMENT, the SPECIES_ID, and the SEASON_ID that provides a link from the BIORES table to the BREED table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

This page intentionally left blank

5.1. DETAILED DESCRIPTION: SOC_DAT

The data table SOC_DAT contains the human-use attributes and links to the data layers MGT and SOCECON either directly using HUNUM or through the unique ID using SOC_LUT.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	HUNUM	integer
	TYPE	character
	NAME	character
	CONTACT	character
	PHONE	character
	OWNER	character
	COMMENTS	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

HUNUM

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the SOC_LUT lookup table or directly back to the MGT and SOCECON coverages

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique link

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

TYPE

5.1.2.2. ATTRIBUTE DEFINITION:

Identifies the feature type

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
ACCESS	Access
AIRPORT	Airport
AQUACULTURE	Aquaculture
ARCHAEOLOGICAL SITE	Archaeological Site
BOAT RAMP	Boat Ramp
COAST GUARD	Coast Guard
COMMERCIAL FISHING	Commercial Fishing
MARINA	Marina
MARINE SANCTUARY	Marine Sanctuary
NATIONAL PARK	National Park
PARK	Park
RECREATIONAL BEACH	Recreational Beach
RECREATIONAL FISHING	Recreational Fishing
WATER INTAKE	Water Intake
WILDLIFE REFUGE	Wildlife Refuge

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

NAME

5.1.2.2. ATTRIBUTE DEFINITION:

The feature name

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

ABALONE COVE ECOLOGICAL RESERVE
ACCESS
AIRPORT
AQUACULTURE
ARCHAEOLOGICAL SITE
AREA OF SPECIAL BIOLOGICAL SIGNIFICANCE

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

ARROYO BURRO BEACH PARK
BOAT RAMP
BOLSA CHICA BEACH STATE PARK
BOLSA CHICA ECOLOGICAL RESERVE
BUENA VISTA ECOLOGICAL RESERVE
CABRILLO BEACH
CABRILLO NATIONAL MONUMENT
CAPISTRANO AIRPORT
CARDIFF STATE BEACH
CARLSBAD STATE BEACH
CARPINTERIA STATE BEACH
CATALINA AIRFIELD
CHANNEL ISLANDS NATIONAL MARINE SANCT.
CHANNEL ISLANDS NATIONAL MONUMENT
CHANNEL ISLANDS NATIONAL PARK
CHULA VISTA MARINA
CHULA VISTA WILDLIFE REFUGE
COAST GUARD
COMMERCIAL FISHING
CORONADA CAYS MARINA
DANA POINT HARBOR
DANA POINT MARINE LIFE REFUGE
DOCKWEILER BEACH STATE PARK
DOHENY BEACH MARINE LIFE REFUGE
DOHENY STATE BEACH
EAST BASIN MARINA
EAST BEACH
EL CAPITAN BEACH STATE PARK
EMORY COVE WILDLIFE PRESERVE
GLORIETTA BAY MARINA
HELIPORT
HOLLYWOOD BEACH
HUGHES AIRPORT
HUNTINGTON BEACH STATE PARK
IMPERIAL BEACH NAVAL AIR STATION
IRVINE COAST MARINE LIFE REFUGE
JOHN WAYNE AIRPORT (ORANGE COUNTY)
KENDALL-FROST STATE ECOLOGICAL RESERVE
KING HARBOR
LAGUNA BEACH MARINE LIFE REFUGE
LANDING FIELD
LEO CARRILLO STATE BEACH
LONG BEACH AIRPORT (DAUGHERTY FIELD)
LOS ANGELES INTERNATIONAL AIRPORT
LOS PENASQUITOS LAGOON ECO. RESERVE

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

LOVERS COVE RESERVE
MANDALAY STATE BEACH
MANHATTAN BEACH STATE PARK
MARINA
MARINA DEL REY
MCGRATH STATE BEACH
MEADOWLARK AIRPORT
MOONLIGHT STATE BEACH
NEUSHUL MARICULTURE
NEUSHUL MARICULTURE
NEWPORT BAY MARINA AREA
NEWPORT BEACH MARINE LIFE REFUGE
NIGUEL MARINE LIFE REFUGE
OCEANSIDE AIRPORT
ORMOND BEACH
OXNARD STATE BEACH
PACIFIC BEACH
PACIFIC MISSILE RANGE
PACIFIC SEAFOOD
PALOMAR AIRPORT
POINT FERMIN MARINE LIFE REFUGE
POINT MEDANOS
PONTO STATE BEACH
QUIVIRA BASIN MARINA
RECREATIONAL BEACH
RECREATIONAL FISHING
REDONDO BEACH STATE PARK
REFUGIO BEACH STATE PARK
SAN BUENAVENTURA STATE BEACH
SAN CLEMENTE STATE BEACH
SAN DIEGO INTERNATIONAL AIRPORT
SAN DIEGO MARINE LIFE REFUGE
SAN DIEGO-LAJOLLA ECOLOGICAL RESERVE
SAN ELIJO ECOLOGICAL PRESERVE
SAN ELIJO STATE BEACH
SAN ONOFRE BEACH
SANTA BARBARA AIRPORT
SANTA BARBARA MARINA
SANTA CATALINA ISLAND ASBA SUBAREA 4
SANTA CATALINA ISLAND ASBS SUBAREA 1
SANTA CATALINA ISLAND ASBS SUBAREA 1
SANTA MONICA BEACH STATE PARK
SANTA MONICA MUNICIPAL AIRPORT
SEA FARMS
SEA VENTURES

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

SEAL BEACH NAT. WILDLIFE REFUGE
SILVER STRAND BEACH
SILVER STRAND BEACH
SILVER STRAND STATE BEACH
SOLANA BEACH COUNTY PARK
SOUTH CARLSBAD STATE BEACH
SWEETWATER RIVER NATIONAL WILDLIFE REF.
THE CULTURED ABALONE
TIJUANA ESTUARY ECOLOGICAL RESERVE
TORRANCE COUNTY BEACH
TORREY PINES STATE BEACH
TORREY PINES STATE RESERVE
U.S. COAST GUARD
U.S. COAST GUARD RESERVATION
U.S. NAVAL AIR STATION
VENTURA COUNTY AIRPORT
VENTURA MARINA
WATER INTAKE
WEST BEACH
WILL ROGERS BEACH STATE PARK

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

CONTACT

5.1.2.2. ATTRIBUTE DEFINITION:

Contact person

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

PHONE

5.1.2.2. ATTRIBUTE DEFINITION:

Telephone number

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
OWNER

5.1.2.2. ATTRIBUTE DEFINITION:
Contains owner or responsible party, if applicable

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique link

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
COMMENTS

5.1.2.2. ATTRIBUTE DEFINITION:
Lists any special comments about the feature

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique link

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

This page intentionally left blank

5.1. DETAILED DESCRIPTION: SOC_LUT

Lookup table to link SOC_DAT to SOCECON and MGT data layers.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	HUNUM	integer
	ID	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:
HUNUM

5.1.2.2. ATTRIBUTE DEFINITION:
A unique identifier that links SOCECON and MGT to the SOC_DAT data table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
ID

5.1.2.2. ATTRIBUTE DEFINITION:
A unique identifier that links SOC_LUT to the SOCECON and MGT data layers

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

This page intentionally left blank

5.1. DETAILED DESCRIPTION: SOCECON

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

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Complete Chains	TYPE	character
Entity Points	TYPE	character
	ID	integer
	HUNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

TYPE

5.1.2.2. ATTRIBUTE DEFINITION:

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

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
A2	Access
A	Airport
AQ	Aquaculture
AS	Archaeological Site
BR	Boat Ramp
CG	Coast Guard
CF	Commercial Fishing
M	Marina
RB	Recreational Beach
RF	Recreational Fishing
WI	Water Intake
IB	International Boundary

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
ID

5.1.2.2. ATTRIBUTE DEFINITION:
A unique identifier that links to the SOC_LUT table. ID is a concatenation of atlas number (9), element number (10), and record number.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
HUNUM

5.1.2.2. ATTRIBUTE DEFINITION:
An identifier that links directly to the SOC_DAT table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1. DETAILED DESCRIPTION: SPECIES

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

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	SPECIES_ID	integer
	NAME	character
	GEN_SPEC	character
	ELEMENT	character
	SUBELEMENT	character
	NHP	character
	DATE_PUB	integer
	EL_SPE	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

SPECIES_ID

5.1.2.2. ATTRIBUTE DEFINITION:

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

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

NAME

5.1.2.2. ATTRIBUTE DEFINITION:

Species common name

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Abalone
American coot
American wigeon
Ashy storm-petrel
Barred sand bass
Black abalone
Black brant
Black oystercatcher
Black rail
Black skimmer
Black storm-petrel
Black-crowned night heron
Bottlenose dolphin
Brandt's cormorant
Brown pelican
Cabezon
California barracuda
California black rail
California corbina
California grunion
California halibut
California jackknife clam
California least tern
California mussel
California sea lion
California spiny lobster
Canvasback
Caspian tern
Cassin's auklet
C-O sole
Coho salmon (silver)
Common dolphin

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Common loon
Common murre
Common Pacific littleneck clam
Cormorant
Crabs
Diving birds
Double-crested cormorant
Eelgrass
Elegant tern
Flounder
Forster's tern
Gaper clam
Giant kelp
Gray whale
Greater scaup
Green abalone
Green-winged teal
Guadalupe fur seal
Gulls
Harbor seal
Intermittent coastal wetlands
Kelp bass
Leach's storm-petrel
Lesser scaup
Light-footed clapper rail
Mallard
Northern elephant seal
Northern fur seal
Nuttall's cockle (basket, heart)
Octopus
Opaleye
Pacific coast squid
Pacific green sea turtle
Pacific razor clam
Pelagic cormorant
Peregrine falcon
Pigeon guillemot
Pink abalone
Pintail

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Pismo clam
Rainbow trout (steelhead)
Raptors
Red abalone
Red sea urchin
Red-breasted merganser
Rhinoceros auklet
Risso's dolphin
Rock crab
Rock scallop
Rockfish
Royal tern
Salt marsh bird's-beak
Sanddab
Sanderling
Sea otter
Shorebirds
Snow goose
Sole
Speckled scallop
Spotfin croaker
Spotted sand bass
Squid
Starry flounder
Striped mullet
Sunset clam
Surf scoter
Surf smelt
Surfgrass
Surfperch
Terns
Tidewater goby
Topsmelt
Tufted puffin
Wading birds
Washington butter clam
Waterfowl
Western grebe
Western gull

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Western snowy plover
White seabass
Willet
Xantus' murrelet
Yellowfin croaker
Yellowtail rockfish

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

GEN_SPEC

5.1.2.2. ATTRIBUTE DEFINITION:

Species scientific name

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Aechmophorus occidentalis
Anas acuta
Anas americana
Anas crecca
Anas platyrhynchos
Arctocephalus townsendi
Argopectin circularis
Atherinops affinis
Atractoscion nobilis
Aythya affinis
Aythya marila
Aythya valisineria
Branta bernicla
Calidris alba
Callorhinus ursinus
Cancer sp.
Catoptrophorus semipalmatus
Cepphus columba
Cerorhinca monocerata

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Charadrius alexandrinus nivosus
Chelonia mydas agassizi
Chen caerulescens
Citharichthys sp.
Clinocardium nuttallii
Cordylantus maritimus maritimus
Delphinus delphis
Embiotocidae
Endomychura hypoleuca
Enhydra lutris
Eschrichtius robustus
Eucyclogobius newberryi
Falco peregrinus
Fulica americana
Gari californica
Gavia immer
Girella nigricans
Grampus griseus
Haematopus bachmani
Haliotis corrugata
Haliotis cracherodii
Haliotis fulgens
Haliotis rufescens
Haliotis sp.
Hinnites multirugosus
Hypomesus pretiosus
Larus occidentalis
Laterallus jamaicensis
Laterallus jamaicensis coturniculus
Leuresthes tenuis
Loligo opalescens
Loligo sp.
Lunda cirrhata
Macrocystis pyrifera
Melanitta perspicillata
Menticirrhus undulatus
Mergus serrator
Mirounga angustirostris
Mugil cephalus

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Mytilus californianus
Nycticorax nycticorax
Oceanodroma homochroa
Oceanodroma leucorhoa
Oceanodroma melania
Octopus sp.
Oncorhynchus kisutch
Oncorhynchus mykiss
Panulirus interruptus
Paralabrax clathratus
Paralabrax maculatofasciatus
Paralabrax nebulifer
Paralichthys californicus
Paralichthys sp.
Pelecanus occidentalis
Phalacrocorax auritus
Phalacrocorax pelagicus
Phalacrocorax penicillatus
Phalacrocorax sp.
Phoca vitulina
Phyllospadix sp.
Platichthys stellatus
Pleuronichthys coenosus
Protothaca staminea
Ptychoramphus aleuticus
Rallus longirostris levipes
Roncador stearnsii
Rynchops niger
Saxidomus nuttallii
Scorpaenichthys marmoratus
Sebastes flavidus
Sebastes spp.
Siliqua patula
Sphyraena argentea
Sterna antillarum browni
Sterna caspia
Sterna elegans
Sterna fosteri
Sterna maxima

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Strongylocentrotus franciscanus
Tagelus californianus
Tivela stultorum
Tresus nuttallii
Tursiops truncatus
Umbrina roncador
Uria aalge
Zalophus californianus
Zostera marina

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

ELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:

Biological element

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
BIRD	Birds
FISH	Fish
HABITAT	Habitats and Rare Plants
INVERT	Invertebrates
M_MAMMAL	Marine Mammals
REPTILE	Reptiles and Amphibians

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

SUBELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:

Species subgroup

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

abalone
alcid
alligator/crocodile
anadromous
beach spawner
cephalopod
clam
conch/whelk
crab
diving coastal bird
dolphin
echinoderm
gastropod
gull/tern
kelp spawner
lobster
manatee
marsh
mussel
oyster
passerine
pelagic
raptor
reef fish
scallop
sea lion
sea otter
sea turtle
seal
shorebird
shrimp
shrub
special concentration
squid/octopus

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

submerged aquatic vegetation
wading Bird
waterfowl
whale

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

NHP

5.1.2.2. ATTRIBUTE DEFINITION:

This field is blank because no NHP information was gathered when this atlas was published. The field is included here to maintain consistency with the latest ESI data structure.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
	Not supplied with this atlas

5.1.2.1. ATTRIBUTE LABEL:

DATE_PUB

5.1.2.2. ATTRIBUTE DEFINITION:

This field is blank because no NHP information was gathered when this atlas was published. The field is included here to maintain consistency with the latest ESI data structure.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
	Not supplied with this atlas

5.1.2.1. ATTRIBUTE LABEL:

EL_SPE

5.1.2.2. ATTRIBUTE DEFINITION:

Concatenation of the first character of the ELEMENT and the SPECIES_ID, which provides the link from the BIORES table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

This page intentionally left blank

5.1. DETAILED DESCRIPTION: STATUS

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

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	ELEMENT	character
	SPECIES_ID	integer
	STATE	character
	S_F	character
	T_E	character
	DATE_PUB	integer
	EL_SPE	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:

Major categories of biological data

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
BIRD	Birds
FISH	Fish
HABITAT	Habitats and Rare Plants
INVERT	Invertebrates
M_MAMMAL	Marine Mammals
REPTILE	Reptiles and Amphibians

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:
SPECIES_ID

5.1.2.2. ATTRIBUTE DEFINITION:
Numeric identifier for each species and is unique within each element and refers to a nationwide ESI species list maintained by NOAA

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
STATE

5.1.2.2. ATTRIBUTE DEFINITION:
Two-letter state abbreviation

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
CA	California

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:

S_F

5.1.2.2. ATTRIBUTE DEFINITION:

State and Federal status

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
F	Federally listed
S	State listed
S/F	State and Federally listed

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

USFWS, CDFG

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

T_E

5.1.2.2. ATTRIBUTE DEFINITION:

Threatened and endangered status

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
E	Endangered
E/E	Endangered on Federal and State lists
T	Threatened
T/T	Threatened on Federal and State lists

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

USFWS, CDFG

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

DATE_PUB

5.1.2.2. ATTRIBUTE DEFINITION:

This is the date the atlas was published when the given state and federal listings were in effect. In some of the earlier atlases, no date may be given because this was not a data item at the time of original publication.

5.1.2.1. ATTRIBUTE LABEL:

EL_SPE

5.1.2.2. ATTRIBUTE DEFINITION:

Concatenation of the first character of the ELEMENT and the SPECIES_ID, which provides the link from the BIORES and SPECIES tables.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: WETLANDS

The WETLANDS data layer is unique to the Southern California atlas. It contains point information about the following habitats:

SPECIES ID	NAME
77	Intermittent coastal wetlands

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Entity Points	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (9), element number (8), and record number.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

6.0. DISTRIBUTION INFORMATION

6.1. DISTRIBUTOR

6.1.1. CONTACT PERSON PRIMARY

6.1.1.1. CONTACT PERSON:

John Kaperick

6.1.1.2. CONTACT ORGANIZATION:

NOAA, Office of Response and Restoration

6.1.4. CONTACT ADDRESS

6.1.4.1. ADDRESS TYPE:

Physical Address

6.1.4.2. ADDRESS:

7600 Sand Point Way N.E.

6.1.4.3. CITY:

Seattle

6.1.4.4. STATE OR PROVINCE:

W A

6.1.4.5. POSTAL CODE:

98115-6349

6.1.5. CONTACT VOICE TELEPHONE:

(206) 526-6944

6.1.7. CONTACT FACSIMILE TELEPHONE:

(206) 526-6329

6.2. RESOURCE DESCRIPTION:

ESI Atlas for Southern California

6.3. DISTRIBUTION LIABILITY:

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

6.5. CUSTOM ORDER PROCESS

Contact NOAA for distribution options (see 6.1.1.).

This page intentionally left blank

7.0. METADATA REFERENCE INFORMATION

7.1. METADATA DATE:
20000420

7.2. METADATA REVIEW DATE:
20000420

7.4. METADATA CONTACT

7.4.1. CONTACT PERSON PRIMARY

7.4.1.1. CONTACT PERSON:
Jill Petersen

7.4.1.2. CONTACT ORGANIZATION:
NOAA, Office of Response and Restoration

7.4.3. CONTACT POSITION:
GIS Manager

7.4.4. CONTACT ADDRESS

7.4.4.1. ADDRESS TYPE:
Physical Address

7.4.4.2. ADDRESS:
7600 Sand Point Way N.E.

7.4.4.3. CITY:
Seattle

7.4.4.4. STATE OR PROVINCE:
Washington

7.4.4.5. POSTAL CODE:
98115-6349

7.4.5. CONTACT VOICE TELEPHONE:
(206) 526-6944

7.4.7. CONTACT FACSIMILE TELEPHONE:
(206) 526-6329

7.4.8. CONTACT ELECTRONIC MAIL ADDRESS:
jill_petersen@hazmat.noaa.gov.us

7.5. METADATA STANDARD NAME:
Content Standards for Digital Geospatial Metadata

7.6. METADATA STANDARD VERSION:
19940608

This page intentionally left blank