SOUTH FLORIDA
ENVIRONMENTAL SENSITIVITY INDEX
METADATA

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FILE DESCRIBES: Digital data for 1996 South Florida Environmental Sensitivity Index.

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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 Meta Data 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, ver. 03/92, was referenced to properly identify the geographic entities.

TABLE OF CONTENTS

Page

1.0. IDENTIFICATION INFORMATION....1
1.1. Citation....1
1.2. Description....2
1.3. Time Period of Content....2
1.4. Status....2
1.5. Spatial Domain....2
1.6. Keywords....3
1.7. Access Constraints....3
1.8. Use Constraints....3
1.11. Data Set Credit....3
1.13. Native Data Set Environment....4

2.0. DATA QUALITY INFORMATION....5
2.1. Attribute Accuracy....5
2.2. Logistical Consistency Report....5
2.3. Completeness Report....6
Shoreline Habitat Mapping....6
Sensitive Biological Resources....7
Human-Use Resources....10
2.4. Positional Accuracy....10
2.5. Lineage....11
2.5.1. Source Information: BIRDS....11
Source Information: ESI....12
Source Information: HABITATS....13
Source Information: HYDRO....13
Source Information: INDEX....14
Source Information: MGT....14
Source Information: M_MAMMAL....15
Source Information: NESTS....15
Source Information: REPTILES....16
Source Information: SHELLFSH....18
Source Information: SOCECON....19
Source Information: SOCECONP....21
Source Information: T_MAMPT....21
Source Information: T_MAMMAL....22

3.0. SPATIAL DATA ORGANIZATION INFORMATION....25
3.2. Direct Spatial Reference Method....25
3.3. Point and Vector Object Information....25

4.0. SPATIAL REFERENCE INFORMATION....27
4.1. Horizontal Coordinate System Definition....27

TABLE OF CONTENTS (continued)

Page

5.0. ENTITY AND ATTRIBUTE INFORMATION....29
5.1. Detailed Description: BIRDS....29
Detailed Description: ESI....33
Detailed Description: HABITATS....35
Detailed Description: HYDRO....37
Detailed Description: INDEX....41
Detailed Description: MGT....47
Detailed Description: M_MAMMAL....49
Detailed Description: NESTS....51
Detailed Description: REPTILES....55
Detailed Description: SHELLFSH....59
Detailed Description: SOCECON....61
Detailed Description: SOCECONP....63
Detailed Description: T_MAMPT....65
Detailed Description: T_MAMMAL....67

6.0. DISTRIBUTION INFORMATION....69
6.1. Distributor....69
6.2. Resource Description....69
6.3. Distribution Liability....69
6.5. Custom Order Process....69

7.0. METADATA REFERENCE INFORMATION....71
7.1. Metadata Date....71
7.2. Metadata Review Date....71
7.4. Metadata Contact....71
7.5. Metadata Standard Name....71
7.6. Metadata Standard Version....71

LIST OF FIGURES

1 Relationship between biology coverages and attribute files....8

1.0. IDENTIFICATION INFORMATION

1.1. CITATION

1.1.1. ORIGINATOR:

Florida Department of Environmental Protection (FDEP), Florida Marine Research Institute (FMRI), 100 Eighth Avenue S.E., St. Petersburg, Florida 33701; and Research Planning, Inc., 1200 Park Street, Post Office Box 328, Columbia, South Carolina 29202

1.1.2. PUBLICATION DATE:

199607

1.1.4. TITLE:

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida

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:

South Florida

1.1.8. PUBLICATION INFORMATION

1.1.8.1. PUBLICATION PLACE:

Seattle, Washington

1.1.8.2. PUBLISHER:

NOAA, Office of Ocean Resources Conservation and Assessment

1.1.9. OTHER CITATION DETAILS:

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

1.1.11. LARGER WORK CITATION:

None

1.2. DESCRIPTION

1.2.1. ABSTRACT:

This data set comprises the Environmental Sensitivity Index (ESI) maps for the shoreline of South Florida. 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 21-25 June 1993. The biological and human-use resources data were compiled by regional biologists in 1995. 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:

-83.0

1.5.1.2. EAST BOUNDING COORDINATE:

-80.0

1.5.1.3. NORTH BOUNDING COORDINATE:
26.375

1.5.1.4. SOUTH BOUNDING COORDINATE:
24.5

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:
South Florida, to encompass the coastal areas from Cape Sable to Boca Raton to Dry Tortugas, Florida

1.7. ACCESS CONSTRAINTS:
None

1.8. USE CONSTRAINTS:
DO NOT USE ESI MAPS FOR NAVIGATIONAL PURPOSES.
Besides the above warning, there are no use constraints on this data. Acknowledgment of the Florida Department of Environmental Protection and other contributing sources would be appreciated in products derived from these data

1.11. DATA SET CREDIT:
This project was supported by the Florida Department of Environmental Protection (FDEP), Florida Marine Research Institute (FMRI). Henry Norris with FMRI's Coastal and Marine Resource Assessment (CAMRA) section served as contract manager for the project. Henry Norris, Chris Friel, Bill Sargent, and Robert Warford of CAMRA contributed significantly to the project.

Much of the biological data included on the maps were provided by FDEP scientists and resource managers. Digital data for the shoreline and seagrasses were provide by FDEP. Digital point data for birds and terrestrial mammals were provided by the Florida Game and Fresh Water Fish Commission (FGFWFC) and the Florida Natural Areas Inventory (FNAI). Glenn Reynolds (FGFWFC) and Lance Peterson (FNAI) assisted with data transfer. Digital data for managed land boundaries were provided by FDEP and the Geoplan Center, Department of Urban and Regional Planning, University of Florida.

At Research Planning, Inc. (RPI), Joanne Halls and Scott Zengel were the project managers. Shoreline mapping was conducted by Miles O. Hayes, Jacqueline Michel, and Todd M. Montello under a previous contract. Biological and human-use resource data were collected and compiled by Scott Zengel. Lee Diveley was the GIS coordinator and Mark White, Kara Hastings, Christopher Locke, and William Holton entered the data and produced the final maps under the supervision of Joanne Halls. Systems administration was coordinated by William Holton. Graphics were provided by Joe Holmes and Rebecca Cox. Dot Zaino prepared the final text.

1.13. NATIVE DATA SET ENVIRONMENT:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO (version 7.0.3) and ORACLE RDBMS (version 6.0.36.1.1). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80 with 4 X-terminals) with unix operating system (HP-UX Release A.09.01). The following files are included in the data set: biores.e00, birds.e00, esi.e00, habitats.e00, hydro.e00, index.e00, mgt.e00, m_mammal.e00, nests.e00, reptiles.e00, seasonality.e00, shellfish.e00, socecon.e00, socecon.e00, soceconp.e00, sources.e00, species.e00, t_mampt.e00, t_mammal.e00, and turtles.e00. The entire data set is approximately 48 megabytes.

2.0. DATA QUALITY INFORMATION

2.1. ATTRIBUTE ACCURACY

2.1.1. ATTRIBUTE ACCURACY REPORT:

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

2.2. LOGICAL CONSISTENCY REPORT:

The digitization of shoreline types, biological resources, and human-use resources is a complex and highly quality-controlled process. 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. The ESI digitization was completed under a previous contract. In this project, the ESI data were checked for completeness and topological and logical consistency. Any errors in the shoreline classification are updated prior to digitization of the biological and human-use 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. Concurrently, digital data sources are imported, projected, checked for quality control, and integrated into the spatial data structure. The hardcopy data are digitized, checked using both digital and on-screen procedures, integrated with existing data, 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 review the entire series of maps, check all data, and make 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 which test the files for missing or duplicate data, rules for proper coding, GIS topological

consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE to ARC/INFO consistencies. A final review is made by the GIS manager, where data is written to tape and metadata is written.

2.3. COMPLETENESS REPORT:

Shoreline Habitat Mapping:

The shoreline habitats of South Florida were mapped during overflights conducted 21-25 June 1993. The surveys were conducted at elevations of 300-500 feet and slow air speed. An experienced coastal geologist delineated the coastal types directly onto 1:24,000 USGS topographic maps, using a standardized classification scheme. Where appropriate, multiple habitats were delineated for each shoreline segment. Relatively simple changes to the shoreline position and shape were made during the overflights. Where there were complex changes in the shoreline, the most current aerial photographs were used to update the shoreline and habitats on the topographic maps, particularly where new canals and marinas were built.

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 compiled 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, habitats, marine mammals, reptiles, shellfish, and terrestrial mammals.

Each ELEMENT corresponds to a coverage or geographic theme. There are also five attribute tables, BIORES, SEASONAL, SOURCES, SPECIES, and TURTLES, that are used to store the complex biological data (Fig. 1). Each biological coverage (BIRDS, HABITATS, M_MAMMAL, NESTS, REPTILES, T_MAMPT, and T_MAMMAL) is linked to the Biological Resources table (BIORES) using the item RARNUM. The biological coverage REPTILES is also linked to the turtle survey data table (TURTLES) using the item ID. TURTLES can also be linked to BIORES using the item RARNUM. RARNUM is the resources at risk number and is determined for each unique combination of SPECIES_ID, SEASON_ID, CONC, and ELEMENT. The items in BIORES are: RARNUM, SPECIES_ID, CONC, SEASON_ID, G_SOURCE, S_SOURCE, and ELEMENT. 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 LOW, MEDIUM, HIGH, blank, or an actual count of the number of species present in the polygon. SEASON_ID contains a numeric value according to the monthly presence of the species. Usually, there is one seasonality per species, but occasionally the same species has different monthly presence or breeding activity. When this occurs, a new record with a different seasonality is referenced.

The SEASONAL table stores the monthly presence of each species and the characteristics of the presence (life history information). The BIORES table is linked to the SEASONAL table using the SPECIES_ID, ELEMENT, and SEASON_ID items. The categories of the variables BREED1 through BREED4 for each ELEMENT are:

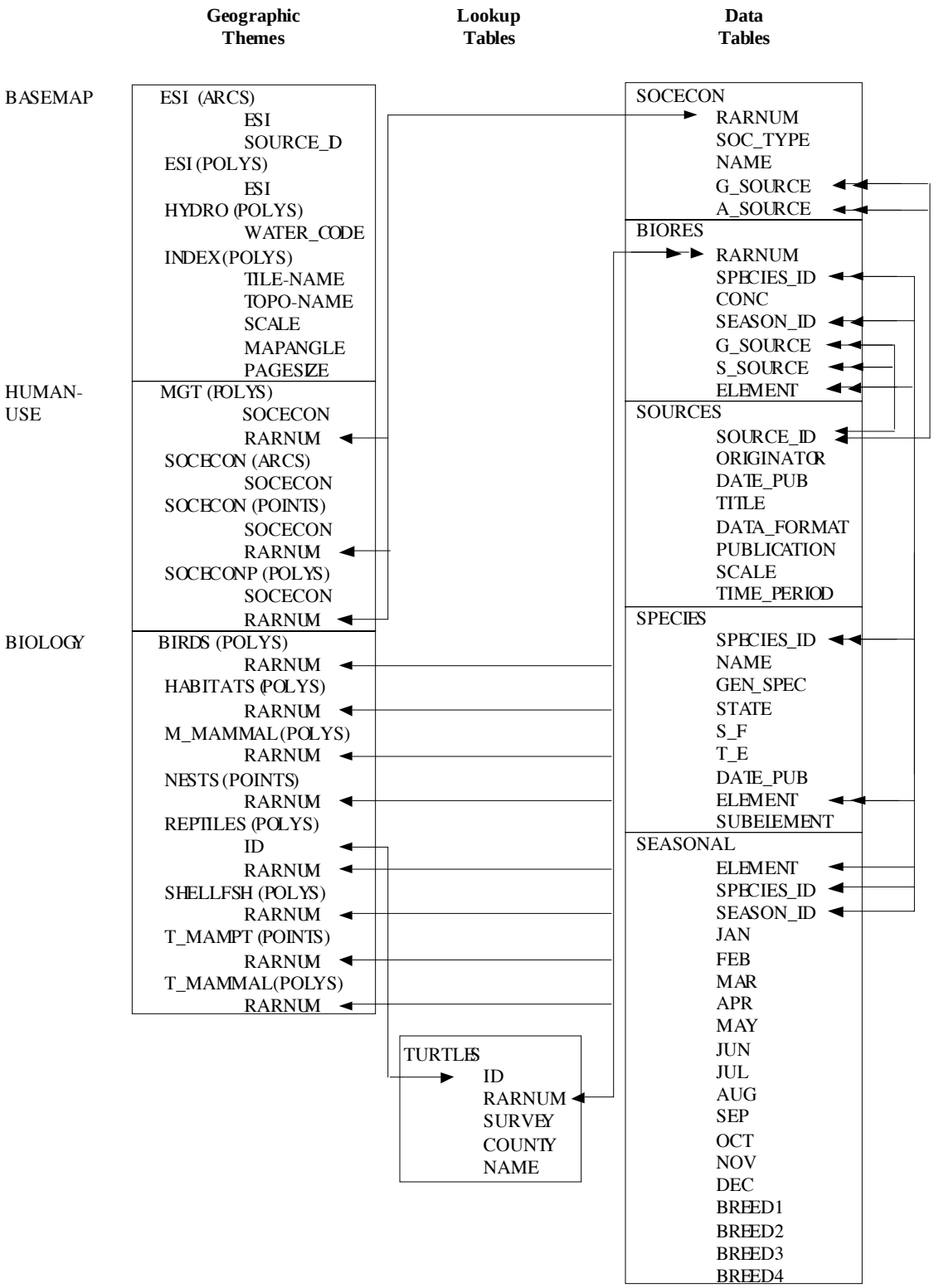

FIGURE 1. Relationships between biology coverages and attribute files.

ELEMENT	BREED 1	BREED 2	BREED 3	BREED 4
BIRD	nesting	laying	hatching	fledging
M_MAMMAL	calving	pupping	molting	
REPTILE	nesting	hatching		
SHELLFISH	spawning	juvenile		

NOTE: There are no BREED variables for HABITATS or T_MAMMAL.

The SPECIES table contains the common name (NAME), the scientific name (GEN_SPEC), the state abbreviation (STATE), the state and federal status (S_F), the threatened or endangered status (T_E), the date of the status list (DATE_PUB), the biological element (ELEMENT), and the biological subelement (SUBELEMENT). The item SUBELEMENT refers to the grouping of the species:

ELEMENT	SUBELEMENT
BIRD	diving
	gull_tern
	passerine
	pelagic
	raptor
	shorebird
	wading
	waterfowl
HABITAT	coral
	hardbottom
	sav
MARINE MAMMAL	manatee
REPTILE	alligator
	turtle
SHELLFISH	crab
	gastropod
	lobster
	scallop
	shrimp
TERRESTRIAL MAMMAL	deer
	mustelid
	rodent

In response to a special request from the state of Florida, additional turtle data was collected and digitized into the TURTLES table. An identifier which links the TURTLES table to the REPTILES coverage is ID. The value of ID is unique for each region. The items in TURTLES are: ID, RARNUM, SURVEY, COUNTY, and, NAME. RARNUM is a link to the BIORES table and is identical to the values in TURTLES. The SURVEY identifies the survey source code, with SURVEY = 1 indicating 1994 FDEP surveyed beaches, SURVEY = 2 indicating 1995 surveyed beaches, SURVEY = 3 indicating nonsurveyed beaches with nesting information provided by an expert source, and SURVEY = 4 indicating pre-1994 surveyed beaches. The COUNTY and (surveyed beach NAME) correspond to fields in the FDEP Statewide Sea Turtle Nesting Database, allowing for future updating of nesting information. For SURVEY = 3 (expert source), "unsurveyed" is listed under NAME. The data is stored in TURTLES and is linked to the REPTILES coverage using the item ID.

Human-Use Resources:

Several human-use, or socio-economic, features are included in ESI atlases. Entity points and complete chains are digitized into the coverage SOCECON. In the South Florida ESI, archaeological/historical sites were collected and digitized as polygons in the coverage SOCECONP. All managed lands are digitized as complex polygons (regions) in the MGT coverage. The coverages are linked to the database SOCECON using the item RARNUM.

The table SOCECON contains the RARNUM, the feature type, the name of the feature, and the geographic and attribute sources for the features. The RARNUM value is distinguished from the biology RARNUM values by an "H" preceding the unique number.

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

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
Kale, H.W. and D.S. Maehr	1990	Florida's Birds: A Handbook and Reference	Text	Pineapple Press, Inc., Sarasota, Fla., 288 pp.	N/A	N/A
U.S. Fish and Wildlife Service	1980	Atlantic Coast Ecological Inventory	Hardcopy maps	U.S. Geological Survey, Reston, Va.	250000	1980
Wood, D.A.	1994	Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida	Text	Florida Game and Fresh Water Fish Commission, Tallahassee, Fla., 22 pp.	N/A	1994
Brakhage, D. FGFWFC (Tallahassee)	N/A	Regional Waterfowl Concentration Areas	Expert knowledge	N/A	N/A	1995
Jodice, P.G.R.	1992	Distribution of Wintering Loons in the Northeastern Gulf of Mexico	Text	Final Performance Report, Bureau of Nongame Wildlife, FGFWFC, Tallahassee, Fla., 11 pp.	N/A	1991-1992

Everglades National Park	N/A	Nesting Sites for Bald Eagle, Osprey, and Colonial Waterbirds in Everglades National Park, Florida	Hardcopy maps	N/A	Varies	Historical -1995
Wilmers, T. USFWS (Big Pine Key)	N/A	Key Deer, Marsh Rabbit, Sea Turtle, and Bird Concentration Areas for the Lower Keys	Expert knowledge	N/A	N/A	1996
Boykin, C.S.	1995	Results of the 1995 Nest Success Evaluation of Loggerhead and Green Sea Turtle Nests in Dry Tortugas National Park	Text	N/A	N/A	1995

2.5.1. SOURCE INFORMATION:

Coverage or theme name: ESI

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 Denomi-nator	2.5.1.4 Source Time Period
Research Planning, Inc.	N/A	ESI Shoreline	Digital complete chains	N/A	24000	1996
FDEP, FMRI (St. Petersburg)	N/A	ESI Shoreline	Digital complete chains	FMRI, St. Petersburg, Fla.	24000	1994
Marine Spill Response Corporation	N/A	ESI Shoreline	Digital complete chains	N/A	24000	1994

Research Planning, Inc.	N/A	ESI Shoreline	Maps	N/A	24000	1993

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
FDEP, FMRI (St. Petersburg)	Unknown	Seagrass Distribution for Palm Beach County	Digital GT polygons	FMRI, St. Petersburg, Fla.	24000	Unknown
FDEP, FMRI (St. Petersburg)	N/A	South Florida Coral Reef Database	Digital GT polygons	FMRI, St. Petersburg, Fla.	40000	1982-1991
FDEP, FMRI (St. Petersburg)	1992-1993	Seagrass Distribution for South Florida	Digital GT polygons	FMRI, St. Petersburg, Fla.	40000	1982-1987
Davis, G.E.	Unknown	Graphical Map (non-georeferenced) of Benthic Habitats for the Dry Tortugas	Hardcopy map	N/A	N/A	Unknown

2.5.1. SOURCE INFORMATION:

Coverage or theme name: HYDRO

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
FDEP, FMRI (St. Petersburg)	1995	Shoreline	Digital GT polygons	N/A	24000	Varies

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.	1996	Index for South Florida ESI Maps	Digital GT polygons	Joanne Halls, GIS Manager	24000	1996

2.5.1. SOURCE INFORMATION:

Coverage or theme name: MGT

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
FDEP, FMRI (St. Petersburg)	N/A	FMRI's Revised GEOPLAN Greenways Database	Digital GT polygons	FMRI, St. Petersburg, Fla.	250000	1994-1995
FDEP, FMRI (St. Petersburg)	N/A	Florida Aquatic Preserves	Digital GT polygons	FMRI, St. Petersburg, Fla.	24000	Unknown
FDEP, FMRI (St. Petersburg)	N/A	Florida Keys National Marine Sanctuary Boundaries	Digital GT polygons	FMRI, St. Petersburg, Fla.	Unknown	1995
FDEP, Office of Park Planning (Tallahassee)	N/A	Updated Boundaries for Selected State Park Lands and Waters	Digital GT polygons	Kelly Krieg, Database Contact	Unknown	1996

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
Weigle, B., R. Flamm, and L. Ward FDEP, FMRI (St. Petersburg)	N/A	Interpolated Manatee Concentration Areas in Florida	Digital GT polygons	N/A	40000	1985-1993
Dade County Department of Environmental Resources Management (DERM)	N/A	Manatee Sightings for Biscayne Bay, Florida	Hardcopy map	Keven Mayo, Database Contact	~70000	1989-1994
Wood, D.A.	1994	Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida	Text	Florida Game and Fresh Water Fish Commission, Tallahassee, Fla., 22 pp.	N/A	1994
Everglades National Park	N/A	Manatee Aerial Surveys for Everglades National Park	Hardcopy maps	N/A	150000	1991-1992

2.5.1. SOURCE INFORMATION:

Coverage or theme name: 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
FGFWFC, Nongame Wildlife Program, (Tallahassee)	N/A	Wildlife Observation Database	Digital ASCII tables	Glenn Reynolds, Database Manager	Unknown	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
Florida Natural Areas Inventory (Tallahassee)	N/A	Rare and Endangered Element Occurrence Database	Digital ASCII tables	Lance Peterson, Database Manager	Unknown	1995
Kale, H.W. and D.S. Maehr	1990	Florida's Birds: A Handbook and Reference	Text	Pineapple Press, Inc., Sarasota, Fla., 288 pp.	N/A	N/A
Everglades National Park	N/A	Nesting Sites for Bald Eagle, Osprey, and Colonial Waterbirds in Everglades National Park, Florida	Hardcopy maps	N/A	Varies	Historical -1995
Kale, H. Florida Audubon Society	N/A	Coastal Bird Rookery Locations for South Florida	Hardcopy maps	N/A	24000	1981
Wood, D.A.	1994	Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida	Text	Florida Game and Fresh Water Fish Commission, Tallahassee, Fla., 22 pp.	N/A	1994

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 Denomi-nator	2.5.1.4 Source Time Period

Meylan, A., B. Schroeder, and A. Mosier	1995	Sea Turtle Nesting Activity in the State of Florida, 1979-1992	Text and hardcopy tables	FMRI, Publication No. 52, FDEP, FMRI, St. Petersburg, Fla., 51 pp.	N/A	1979-1995
Wood, D.A.	1994	Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida	Text	Florida Game and Fresh Water Fish Commission, Tallahassee, Fla., 22 pp.	N/A	1994
Foley, A. FDEP, FMRI (St. Petersburg)	N/A	Sea Turtle In-water Concentrations for Northeast Florida Bay	Expert knowledge	N/A	N/A	1996
Mazzotti, F. UF-IFAS (Davie)	N/A	American Crocodile Concentration and Nesting Areas for South Florida	Expert knowledge	N/A	N/A	1977-1996
Moler, P. FGFWFC (Gainesville)	N/A	American Crocodile Concentration and Nesting Areas for the Blackwater, Barnes, and Card Sound Vicinity	Expert knowledge	N/A	N/A	1996
Snow, S. Everglades National Park (Homestead)	N/A	Unsurveyed Sea Turtle Nesting Beaches for Everglades National Park and 10,000 Islands	Expert knowledge	N/A	N/A	1996
Davis, G.E. and M.C. Whiting	1977	Loggerhead Sea Turtle Nesting in Everglades National Park, Florida, USA	Text	Herpetologica 33:18-28	N/A	1964-1973

Schroeder, B., T. Wilmers, P. Wells, and B. Witherington	N/A	Sea Turtle In-water Distributions for South Florida	Expert knowledge	N/A	N/A	1995
Wilmers, T. USFWS (Big Pine Key)	N/A	Key Deer, Marsh Rabbit, Sea Turtle, and Bird Concentration Areas for the Lower Keys	Expert knowledge	N/A	N/A	1996
Wood, R. Stockton State College, New Jersey	N/A	Mangrove Terrapin Distribution for Key West NWR	Expert knowledge	N/A	N/A	1996
Boykins, C.S.	1995	Results of the 1995 Nest Success Evaluation of Loggerhead and Green Sea Turtle Nests in Dry Tortugas National Park	Text	N/A	N/A	1995

2.5.1. SOURCE INFORMATION:

Coverage or theme name: SHELLFSH

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 Denomi-nator	2.5.1.4 Source Time Period
Steele, P. FDEP, FMRI (St. Petersburg)	N/A	Shrimp and Blue Crab Distributions for Florida	Expert knowledge	N/A	N/A	1995
Glazer, B. FDEP, FMRI (Marathon)	N/A	Queen Conch Spawning Reefs and Concentration Areas	Hardcopy maps	N/A	Varies	1990-1996

NOAA, Strategic Environmental Assessment Division (Silver Spring, Md.)	1991-1992	Estuarine Living Marine Resources (ELMR) Database	Text	Mark Monaco, Database Contact	N/A	1989-1991
Arnold, W. FDEP, FMRI (St. Petersburg)	N/A	Bay Scallop Locations for Florida Bay	Expert knowledge	N/A	N/A	1996
Guillory, V., H.M. Perry, and R.L. Leard	1995	A Profile of the Western Gulf Stone Crab of the Gulf of Mexico	Text	Gulf States Marine Fisheries Commission, Ocean Springs, Miss.	N/A	1994
Matthews, T. FDEP, FMRI (Marathon)	N/A	Spiny Lobster Concentration Areas for South Florida	Expert knowledge	N/A	N/A	1995

2.5.1. SOURCE INFORMATION:

Coverage or theme name: SOCECON

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
Delorme Mapping Company	1989	Florida Atlas and Gazetteer	Hardcopy maps	Delorme Mapping, Freeport, Maine, 127 pp.	150000	Unknown
U.S. Geological Survey	Varies	USGS 7.5-minute Topographic Quadrangles	Hardcopy maps	USGS, Reston, Va.	24000	Varies
Deloach, N.	1993	Diving Guide to Under-water Florida	Text and hardcopy maps	New World Publications, Jacksonville, Fla., 324 pp.	N/A	1993
Research Planning, Inc.	N/A	Boat Ramps and Marinas from Over-flight Maps	Hardcopy maps	N/A	24000	1993

Coakley, L. Florida Power and Light (North Palm Beach)	N/A	Locations of Water Intakes for Florida Power and Light Power Plants	Hardcopy maps	N/A	Varies	1996
FMRI and Environmental Systems Research Institute (ESRI)	N/A	Keys Facilities, Including Boat Ramps and Marinas	Digital points	FMRI, St. Petersburg, Fla.	Unknown	Unknown
Research Planning, Inc.	N/A	Boat Ramps and Marina for South Florida	Digital points	N/A	24000	1980
FDEP, FMRI (St. Petersburg)	N/A	Shipwrecks Database (wrecksutm)	Digital points	FMRI, St. Petersburg, Fla.	Unknown	1991
Research Planning, Inc.	N/A	Boat Ramps and Marinas from Overflight Maps	Hardcopy maps	N/A	24000	1980
The Nature Conservancy and FDEP	1993	Dive Boat Concentration Surveys and Locations of Mooring Buoys in the Florida Keys National Marine Sanctuary	Hardcopy maps	FMRI, St. Petersburg, Fla.	Unknown	1992
Planer, T. Florida Keys Electric Cooperative (Marathon)	N/A	Water Intakes for the Florida Keys Electric Generating Plant	Expert knowledge	N/A	N/A	1996
Sargent, W. FDEP, FMRI (St. Petersburg)	N/A	Various Socioeconomic Features for South Florida	Expert knowledge	N/A	N/A	1996
Snow, S. Everglades National Park (Homestead)	N/A	Everglades National Park Campsites Used as Recreational Beaches	Expert knowledge	N/A	N/A	1996

2.5.1. SOURCE INFORMATION:

Coverage or theme name: SOCECONP

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
Florida Bureau of Archaeological Research (Tallahassee)	N/A	Florida Archaeological Site File	Hardcopy maps	Fla. Dept. of State, Bureau of Archaeological Research, Tallahassee	24000	1995

2.5.1. SOURCE INFORMATION:

Coverage or theme name: T_MAMPT

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
FGFWFC, Nongame Wildlife Program, (Tallahassee)	N/A	Wildlife Observation Database	Digital ASCII tables	Glenn Reynolds, Database Manager	N/A	1994
Florida Natural Areas Inventory (Tallahassee)	N/A	Rare and Endangered Element Occurrence Database	Digital ASCII tables	Lance Peterson, Database Manager	N/A	1995
Humphrey, S.R. (Ed.)	1992	Rare and Endangered Biota of Florida, Volume I, Mammals	Text	University Press of Florida, Gainesville, Fla., 392 pp.	N/A	1992
Wood, D.A.	1994	Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida	Text	Florida Game and Fresh Water Fish Commission, Tallahassee, Fla., 22 pp.	N/A	1994

2.5.1. SOURCE INFORMATION:

Coverage or theme name: T_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 Denomi-nator	2.5.1.4 Source Time Period
Wood, D.A.	1994	Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida	Text	Florida Game and Fresh Water Fish Commission, Tallahassee, Fla., 22 pp.	N/A	1994
Wilmers, T. USFWS (Big Pine Key)	N/A	Key Deer, Marsh Rabbit, Sea Turtle, and Bird Concentration Areas for the Lower Keys	Expert knowledge	N/A	N/A	1996

2.5.2. PROCESS STEP

2.5.2.1. PROCESS DESCRIPTION:

The digitization of ESI, biological resources, and human-use resources is a complex and highly quality controlled process. In order to facilitate digitizing, the entire study area was split into individual quadrangles using a map index coverage. The first layer of information digitized is the shoreline with ESI classification. This layer was obtained from the Florida Marine Research Institute. The data were checked for completeness, and topological and logical consistency. Any errors were corrected prior to digitization of the biological and human-use layers. All data use the shoreline as the geographic reference so that there are no slivers in the geographic layers. The biological information was compiled onto 1:24,000 USGS topographic quadrangles by an in-house biological expert using the data from regional specialists in the form of maps, tables, charts, and written descriptions of

wildlife distributions. Concurrently, all digital data was imported, merged into the spatial data structure, and checked for completeness. The hardcopy data were digitized, merged with existing digital data, checked using both digital and on-screen procedures, plotted, checked by the biological expert, edited to remove any errors, and plotted for review by the regional specialists. The reviewed maps were updated on the computer, checked once again, and plotted at final map scale. A team of specialists reviewed the entire series of maps, checked all data, and made final edits. The data were merged to form the study-wide layers which are described in this document. The data merging included a final quality control check where topological consistency, rules for geography, and database to geography were checked and validated for all relationships.

2.5.2.3. PROCESS DATE:
199608

2.5.2.6. PROCESS CONTACT

2.5.2.6.1. CONTACT PERSON PRIMARY

2.5.2.6.1.1. CONTACT PERSON:
Jill Petersen

2.5.2.6.1.2. CONTACT ORGANIZATION:
NOAA HMRAD

2.5.2.6.3. CONTACT POSITION:
GIS Manager

2.5.2.6.4. CONTACT ADDRESS

2.5.2.6.4.1. ADDRESS TYPE:
Physical Address

2.5.2.6.4.2. ADDRESS:
7600 Sand Point Way, N.E.
Bin C15700

2.5.2.6.4.3. CITY:
Seattle

2.5.2.6.4.4. STATE OR PROVINCE:
W A

2.5.2.6.4.5. POSTAL CODE:
98115

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

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

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

3.0. SPATIAL DATA ORGANIZATION INFORMATION

3.2. DIRECT SPATIAL REFERENCE METHOD:

Vector

3.3. POINT AND VECTOR OBJECT INFORMATION

3.3.1. SDTS TERMS DESCRIPTION:

3.3.1.1. SDTS POINT AND VECTOR OBJECT TYPE, and

3.3.1.2. POINT AND VECTOR OBJECT COUNT:

Theme	Universe Polygon	Complex Polygons	GT-Polygons	Area Points	Complete Chains	Line Segments	Label Points	Entity Points	Nodes
BIRDS	1	70	2,676	2,676	2,990	142,747			2,775
ESI	1		2,551	2,551	5,668	117,643			5,471
HABITATS	1	4	6,518	6,518	7,840	319,628			7,136
HYDRO	1		2,680	2,680	2,995	136,320	495		2,783
INDEX	1		54	54	149	149			97
MGT	1	27	1,856	1,856	2,357	56,796			1,928
M_MAMMAL	1	6	337	337	438	52,921			429
NESTS								578	
REPTILES	1	91	2,065	2,065	2,729	191,847			2,338
SHELLFSH	1	29	2,168	2,168	2,766	237,247			2,556
SOCECON					140	183		445	280
SOCECONP	1		227	227	249	27,763			347
T_MAMPT								42	
T_MAMMAL	1	8	253	253	270	13,598			239

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4.0. SPATIAL REFERENCE INFORMATION

4.1. HORIZONTAL COORDINATE SYSTEM DEFINITION

4.1.1. GEOGRAPHIC

4.1.1.1. LATITUDE RESOLUTION:
0.00005

4.1.1.2. LONGITUDE RESOLUTION:
0.00005

4.1.1.3. GEOGRAPHIC COORDINATE UNITS:
Decimal Degrees

4.1.4. GEODETIC MODEL

4.1.4.1. HORIZONTAL DATUM NAME:
North American Datum of 1983

4.1.4.2. ELLIPSOID NAME:
GRS 1980

4.1.4.3. SEMI-MAJOR AXIS:
6,378,206.4

4.1.4.4. DENOMINATOR OF FLATTENING RATIO:
294.98

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5.0. ENTITY AND ATTRIBUTE INFORMATION

5.1. DETAILED DESCRIPTION: BIRDS

The coverage BIRDS contains the polygons and regions with bird species.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Complex Polygon	RARNUM	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier which links to the BIORES table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES are: RARNUM, SPECIES_ID, CONC, SEASON_ID, G_SOURCE, S_SOURCE, and ELEMENT. SPECIES_ID is the numeric identifier of each species and is unique within each ELEMENT. CONC is the concentration of the species and can either be LOW, MEDIUM, HIGH, VERY HIGH, or an actual count of the numbers of species present in the polygon. Where counts were not available, the concentration is blank. SEASON_ID contains a numeric value according to the monthly presence of the species. Usually, there is one seasonality per species, but occasionally the same species has different monthly presence or breeding activity. When this occurs, a new record with a different seasonality is referenced. G_SOURCE is a variable which links to the SOURCES table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES table and references the source for seasonality information.

The following bird species are found in the BIRDS coverage of the South Florida atlas:

SPECIES ID	NAME
1	Common loon
8	Double-crested cormorant
23	Lesser scaup
26	Bufflehead
33	Red-breasted merganser
54	Great blue heron
55	Whimbrel
64	Short-billed dowitcher
66	Western sandpiper
67	Sanderling
69	Semipalmated plover
71	Black-bellied plover
73	Ruddy turnstone
76	Bald eagle
77	Osprey
86	Least tern
87	Little blue heron
88	Great egret
94	Tricolored heron
95	Roseate tern
97	Green-backed heron
98	Laughing gull
107	Peregrine falcon
115	White ibis
116	Roseate spoonbill
117	Great white heron
118	Brown pelican
119	Magnificent frigatebird
120	Yellow-crowned night heron
124	Redhead
126	Brown noddy
127	Sooty tern
128	Blue-faced booby (masked)
137	Royal tern
142	Black-necked stilt
153	Piping plover
155	Willet
163	Reddish egret
167	Northern gannet
181	Northern harrier
219	Sharp-shinned hawk

252	White-tailed tropicbird
261	Brown booby
267	Fulvous whistling-duck
297	White-crowned pigeon
304	Mangrove clapper rail
1,001	Gulls
1,002	Shorebirds
1,004	Wading birds
1,005	Raptors
1,006	Diving birds
1,0008	Terns

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal

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5.1. DETAILED DESCRIPTION: ESI

The coverage ESI contains arc (Complete Chain) and polygon (GT-Polygon) features for the ESI shoreline classification. The classification of the features is based upon *Guidelines for Developing Digital Environmental Sensitivity Index Atlases and Data-bases* (Michel, J. and J. Dahlin, 1993, Hazardous Materials Response and Assessment Division, NOAA). The ESI classification was performed in June, 1993.

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
GT-Polygon	ESI	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ESI

5.1.2.2. ATTRIBUTE DEFINITION:

The item ESI contains values according to the ESI ranking of the shorelines and polygons. The ESI rankings progress from low to high susceptibility to oil spills. In many cases, the shorelines are also ranked with multiple codes such as 10A/5. The first number is the most landward shoreline type, fringing wetlands, with mixed sand and gravel beaches being the shoreline type closest to the water. The South Florida shoreline types are listed below.

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	Exposed Vertical Rocky Shores/Seawalls
1/4	Exposed Vertical Rocky Shores/Seawalls/Coarse-grained Sand Beaches
1/6	Exposed Vertical Rocky Shores/Seawalls/Gravel Beaches/Riprap
2	Exposed Rocky Platforms

ENUMERATED DOMAIN VALUE:	ENUMERATED DOMAIN VALUE DEFINITION:
2/5	Exposed Rocky Platforms/Mixed Sand and Gravel Beaches/Fill
3	Fine-grained Sand Beaches
3/6	Fine-grained Sand Beaches/Gravel Beaches/Riprap
4	Coarse-grained Sand Beaches
4/2	Coarse-grained Sand Beaches/Exposed Rocky Platforms
4/7	Coarse-grained Sand Beaches/Exposed Tidal Flats
5	Mixed Sand and Gravel Beaches/Fill
5/2	Mixed Sand and Gravel Beaches/Fill/Exposed Rocky Platforms
5/10E	Mixed Sand and Gravel Beaches/Fill/Sheltered Marshes and/or Mangroves
6	Gravel Beaches/Riprap
6/2	Gravel Beaches/Riprap/Exposed Rocky Platforms
6/3	Gravel Beaches/Riprap/Fine-grained Sand Beaches
6/8	Gravel Beaches/Riprap/Sheltered Rocky Shores/Seawalls/Vegetated Banks
7	Exposed Tidal Flats
8	Sheltered Rocky Shores/Seawalls/Vegetated Banks
8/6	Sheltered Rocky Shores/Seawalls/Vegetated Banks/Gravel Beaches/Riprap
9	Sheltered Tidal Flats
10A	Exposed Marshes and/or Mangroves
10A/2	Exposed Marshes and/or Mangroves/Exposed Rocky Platforms
10A/3	Exposed Marshes and/or Mangroves/Fine-grained Sand Beaches
10A/4	Exposed Marshes and/or Mangroves/Coarse-grained Sand Beaches
10A/5	Exposed Marshes and/or Mangroves/Mixed Sand and Gravel Beaches/Fill
10A/6	Exposed Marshes and/or Mangroves/Gravel Beaches/Riprap
10A/7	Exposed Marshes and/or Mangroves/Exposed Tidal Flats
10E	Sheltered Marshes and/or Mangroves
10E/5	Sheltered Marshes and/or Mangroves/Mixed Sand and Gravel Beaches/Fill
10E/6	Sheltered Marshes and/or Mangroves/Gravel Beaches/Riprap
10E/7	Sheltered Marshes and/or Mangroves/Exposed Tidal Flats
10E/8	Sheltered Marshes and/or Mangroves/Sheltered Rocky Shores/Seawalls/Vegetated Banks
U	Unranked

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 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:
0	Digital

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

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: HABITATS

The coverage HABITATS contains the polygons with plant species.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Complex Polygon	RARNUM	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier which links to the BIORES table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES are: RARNUM, SPECIES_ID, CONC, SEASON_ID, G_SOURCE, S_SOURCE, and ELEMENT. SPECIES_ID is the numeric identifier of each species and is unique within each ELEMENT. CONC is the concentration of the species and is blank. SEASON_ID contains a numeric value according to the monthly presence of the species. Usually, there is one seasonality per species, but occasionally the same species has different monthly presence or breeding activity. When this occurs, a new record with a different seasonality is referenced. G_SOURCE is a variable which links to the SOURCES table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES table and references the source for seasonality information.

The following species are found in the HABITATS coverage of the South Florida atlas:

SPECIES ID	NAME
85	Seagrass
147	Coral community
148	Hardbottom community
149	

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

5.1.2.4. Research Planning, Inc.

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

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal

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5.1. DETAILED DESCRIPTION: HYDRO

The coverage HYDRO contains polygonal water and land features. This coverage was created using the digital shoreline provided by the Florida Department of Environmental Protection. This coverage contains all annotation used in producing the atlas. The annotation features are categorized into three subclasses in order to simplify the mapping and quality control procedures: geog or geographic features, soc or socio-economic features, and hydro or water features.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygon	WATER_CODE	character

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:
L	Land
W	Water

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

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal

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5.1. DETAILED DESCRIPTION: INDEX

The coverage 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-Polygon	TILE-NAME	character
	TOPO-NAME	character
	SCALE	integer
	MAPANGLE	fraction
	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 54.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:ordered

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:

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

ARSENICKER KEYS, FLA. (1988)
BAY KEYS, FLA. (1972)
BIG PINE KEY, FLA. (1972)
BLACKWATER SOUND, FLA. (1973)
BOCA CHICA KEY, FLA. (1971)
BOCA RATON, FLA. (1983)
BUCHANAN KEYS, FLA. (1972)
CALUSA KEYS, FLA. (1972)
CARD SOUND, FLA. (1988)
CLIVE KEY, FLA. (1972)
CONTENT KEYS, FLA. (1972)
COTTRELL KEY, FLA. (1972)
CRAWL KEY, FLA. (1971)
DRY TORTUGAS, FLA. (1971)
EAST BAHIA HONDA KEY, FLA. (1972)
ELLIOTT KEY, FLA. (1988)
FLAMINGO, FLA. (1990)
FORT LAUDERDALE SOUTH, FLA. (1983)
GARDEN COVE, FLA. (1969)
GLADES, FLA. (1988)
GRASSY KEY, FLA. (1990)
HORSESHOE KEYS, FLA. (1972)
JOE BAY, FLA. (1972)
KEY BISCAYNE, FLA. (1988)
KEY WEST, FLA. (1971)
LAKE INGRAHAM EAST, FLA. (1972)
LOGGERHEAD KEY, FLA. (1972)
LONG KEY, FLA. (1971)
LOWER MATECUMBE KEY, FLA. (1971)
MADEIRA BAY, FLA. (1972)
MARATHON, FLA. (1971)
MARQUESAS KEYS EAST, FLA. (1971)
MARQUESAS KEYS WEST, FLA. (1971)
MIAMI, FLA. (1990)
NORTH MIAMI, FLA. (1988)
PACIFIC REEF, FLA. (1988)
PELICAN KEYS, FLA. (1972)
PERRINE, FLA. (1988)
PLANTATION KEY, FLA. (1971)

POMPANO BEACH, FLA. (1983)
PORT EVERGLADES, FLA. (1983)
ROCK HARBOR, FLA. (1990)
SADDLEBUNCH KEYS, FLA. (1972)
SANDY KEY, FLA. (1972)
SAWYER KEY, FLA. (1972)
SEVENMILE BRIDGE, FLA. (1979)
SNIPE KEYS, FLA. (1972)
SOLDIER KEY, FLA. (1988)
SOUTH MIAMI, FLA. (1988)
SUGARLOAF KEY, FLA. (1972)
SUMMERLAND KEY, FLA. (1972)
TAVERNIER, FLA. (1971)
UPPER MATECUMBE KEY, FLA. (1971)
WEST LAKE, FLA. (1972)

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:

50,000
55,000

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:
MAPANGLE

5.1.2.2. ATTRIBUTE DEFINITION:

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

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

-1.831
-1.773
-1.714
-1.656
-1.598
-1.540
-1.482
-1.424
-1.365
-1.307
-1.249
-1.191
-1.133
-1.075
-1.017
-0.958
-0.900
-0.842
-0.527

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:ordered

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

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal

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5.1. DETAILED DESCRIPTION: MGT

The coverage MGT contains the polygons for the managed lands data.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Complex Polygons	SOCECON	character
	RARNUM	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

SOCECON

5.1.2.2. ATTRIBUTE DEFINITION:

Identifies a region with a type of managed land. This attribute allows direct access to the type of feature instead of linking to the more detailed SOCECON 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	State Park
W R	Wildlife Refuge

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier which links to the SOCECON table. The table SOCECON contains the feature type, the name of the feature, the geographic source, and the attribute source. The RARNUM value is distinguished from the biology RARNUM values by an "H" preceding the unique number.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

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

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal

5.1. DETAILED DESCRIPTION: M_MAMMAL

The coverage M_MAMMAL contains the polygons with marine mammal species.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Complex Polygon	RARNUM	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier which links to the BIORES table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES are: RARNUM, SPECIES_ID, CONC, SEASON_ID, G_SOURCE, S_SOURCE, and ELEMENT. SPECIES_ID is the numeric identifier of each species and is unique within each ELEMENT. CONC is the concentration of the species and can either be LOW, MEDIUM, or HIGH. SEASON_ID contains a numeric value according to the monthly presence of the species. Usually, there is one seasonality per species, but occasionally the same species has different monthly presence or breeding activity. When this occurs, a new record with a different seasonality is referenced. G_SOURCE is a variable which links to the SOURCES table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES table and references the source for seasonality information.

The following species are found in the M_MAMMAL coverage of the South Florida atlas:

SPECIES ID	NAME
10	West Indian manatee

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: NESTS

The coverage NESTS contains entity points representing nesting sites.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Entity Point	RARNUM	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier which links to the BIORES table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES are: RARNUM, SPECIES_ID, CONC, SEASON_ID, G_SOURCE, S_SOURCE, and ELEMENT. SPECIES_ID is the numeric identifier of each species and is unique within each ELEMENT. CONC is the concentration of the species and can either be HIGH, BLANK, or an actual count of the numbers of species present in the polygon. SEASON_ID contains a numeric value according to the monthly presence of the species. Usually, there is one seasonality per species, but occasionally the same species has different monthly presence or breeding activity. When this occurs, a new record with a different seasonality is referenced. G_SOURCE is a variable which links to the SOURCES table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES table and references the source for seasonality information.

The following bird species are found in the NESTS coverage of the South Florida atlas:

SPECIES ID	NAME
1	Common loon
8	Double-crested cormorant

SPECIES ID	NAME
33	Red-breasted merganser
40	Ring-billed gull
54	Great blue heron
55	Whimbrel
56	Spotted sandpiper
58	Greater yellowlegs
59	Lesser yellowlegs
60	Red knot
61	Pectoral sandpiper
62	Least sandpiper
63	Dunlin
64	Short-billed dowitcher
65	Long-billed dowitcher
66	Western sandpiper
67	Sanderling
69	Semipalmated plover
70	Killdeer
71	Black-bellied plover
73	Ruddy turnstone
76	Bald eagle
77	Osprey
86	Least tern
87	Little blue heron
88	Great egret
89	Snowy egret
90	Black-crowned night heron
93	Cattle egret
94	Tricolored heron
95	Roseate tern
97	Green-backed heron
98	Laughing gull
107	Peregrine falcon
115	White ibis
116	Roseate spoonbill
117	Great white heron
118	Brown pelican
119	Magnificent frigatebird
120	Yellow-crowned night heron
121	Anhinga
127	Sooty tern
132	Wood stork
133	Black skimmer
136	Caspian tern
137	Royal tern

139	Snowy plover
142	Black-necked stilt
153	Piping plover
154	Wilson's plover
155	Willet
156	Semipalmated sandpiper
163	Reddish egret
209	Long-billed curlew
210	Marbled godwit
213	Stilt sandpiper
214	Solitary sandpiper
234	Purple sandpiper
283	Bridled tern
286	Dowitcher
290	Peep
297	White-crowned pigeon
1,001	Gulls
1,002	Shorebirds
1,004	Wading birds
1,006	Diving birds
1,008	Terns

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal

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5.1. DETAILED DESCRIPTION: REPTILES

The coverage REPTILES contains the regions (polygons) with reptile species.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Complex Polygon	ID	character
	RARNUM	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier which links to the TURTLES table. The value of ID is unique for each region. The items in TURTLES are: ID, RARNUM, SURVEY, COUNTY, and NAME. RARNUM is a link to the BIORES table and is identical to the values in TURTLES. The SURVEY identifies the survey source code, with SURVEY = 1 indicating 1994 FDEP surveyed beaches, SURVEY = 2 indicating 1995 surveyed beaches, SURVEY = 3 indicating nonsurveyed beaches with nesting information provided by an expert source, and SURVEY = 4 indicating pre-1994 surveyed beaches. The COUNTY and (surveyed beach NAME) correspond to fields in the FDEP Statewide Sea Turtle Nesting Database, allowing for future updating of nesting information. For SURVEY = 3 (expert source), "unsurveyed" is listed under NAME.

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:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier which links to the BIORES table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES are: RARNUM, SPECIES_ID, CONC, SEASON_ID, G_SOURCE, S_SOURCE, and ELEMENT. SPECIES_ID is the numeric identifier of each species and is unique within each ELEMENT. CONC is the concentration of the species and can either be LOW, MEDIUM, HIGH, BLANK, or an actual count of the numbers of species present in the polygon. SEASON_ID contains a numeric value according to the monthly presence of the species. Usually, there is one seasonality per species, but occasionally the same species has different monthly presence or breeding activity. When this occurs, a new record with a different seasonality is referenced. G_SOURCE is a variable which links to the SOURCES table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES table and references the source for seasonality information.

The following species are found in the REPTILES coverage of the South Florida atlas:

SPECIES ID	NAME
1	American crocodile
2	Green sea turtle
4	Kemp's ridley sea turtle
5	Leatherback sea turtle
6	Loggerhead sea turtle
9	Hawksbill sea turtle
20	Mangrove terrapin

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

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

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal

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5.1. DETAILED DESCRIPTION: SHELLFSH

The coverage SHELLFSH contains the regions (polygons) with shellfish species.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Complex Polygon	RARNUM	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier which links to the BIORES table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES are: RARNUM, SPECIES_ID, CONC, SEASON_ID, G_SOURCE, S_SOURCE, and ELEMENT. SPECIES_ID is the numeric identifier of each species and is unique within each ELEMENT. CONC is the concentration of the species and can either be LOW, MEDIUM, HIGH, VERY HIGH, BLANK, or an actual count of the numbers of species present in the polygon. SEASON_ID contains a numeric value according to the monthly presence of the species. Usually, there is one seasonality per species, but occasionally the same species has different monthly presence or breeding activity. When this occurs, a new record with a different seasonality is referenced. G_SOURCE is a variable which links to the SOURCES table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES table and references the source for seasonality information.

The following species are found in the SHELLFISH coverage of the South Florida atlas:

SPECIES ID	NAME
4	Pink shrimp
41	Atlantic bay scallop
49	Blue crab
51	Brown shrimp
72	Spiny lobster
74	Stone crab
101	Queen conch

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: SOCECON

The coverage 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 Chain	SOCECON	character
Entity Point	SOCECON	character
	RARNUM	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

SOCECON

5.1.2.2. ATTRIBUTE DEFINITION:

Identifies a line or point with a socio-economic, or human-use, feature. This attribute defines all feature types in the coverage.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
A	Airport – Points
AS	Archaeological Site - Points
B	Beach – Points
BR	Boat Ramp – Points
CG	Coast Guard – Points
DV	Diving – Points
HS	Historical Site - Points
M	Marina – Points
WI	Water Intake – Points

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal

5.1.2.1. ATTRIBUTE LABEL:
RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:
An identifier which links to the SOCECON table. The table SOCECON contains the RARNUM, the feature type (SOC_TYPE), the facility name (NAME), the geographic source (G_SOURCE), and the attribute source (A_SOURCE). The RARNUM value is distinguished from the biology RARNUM values by an "H" preceding the unique number.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

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

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal

5.1. DETAILED DESCRIPTION: SOCECONP

The coverage SOCECONP contains polygons for archaeological/historical and aquaculture sites.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygon	SOCECON	character
	RARNUM	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

SOCECON

5.1.2.2. ATTRIBUTE DEFINITION:

Identifies polygons with a socio-economic, or human-use, feature. This attribute defines all feature types in the coverage.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
AS	Archaeological/ Historical Site – Polygons

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier which links to the SOCECON table. The table SOCECON contains the RARNUM, the feature type (SOC_TYPE), the facility name (NAME), the geographic source (G_SOURCE), and the attribute source (A_SOURCE).

The RARNUM value is distinguished from the biology RARNUM values by an "H" preceding the unique number.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

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

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal

5.1. DETAILED DESCRIPTION: T_MAMPT

The coverage T_MAMPT contains points with terrestrial mammal species.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Entity Point	RARNUM	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier which links to the BIORES table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES are: RARNUM, SPECIES_ID, CONC, SEASON_ID, G_SOURCE, S_SOURCE, and ELEMENT. SPECIES_ID is the numeric identifier of each species and is unique within each ELEMENT. CONC is the concentration of the species and can either be blank or an actual count of the numbers of species present in the polygon. SEASON_ID contains a numeric value according to the monthly presence of the species. Usually, there is one seasonality per species, but occasionally the same species has different monthly presence or breeding activity. When this occurs, a new record with a different seasonality is referenced. G_SOURCE is a variable which links to the SOURCES table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES table and references the source for seasonality information.

The following species are found in the T_MAMPT coverage of the South Florida atlas:

SPECIES ID	NAME
8	River otter
25	Florida key deer
71	Key Largo cotton mouse
72	Key Largo woodrat
73	Lower Keys marsh rabbit
77	Silver rice rat

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: T_MAMMAL

The coverage T_MAMMAL contains the polygons with terrestrial mammal species.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Complex Polygon	RARNUM	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier which links to the BIORES table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES are: RARNUM, SPECIES_ID, CONC, SEASON_ID, G_SOURCE, S_SOURCE, and ELEMENT. SPECIES_ID is the numeric identifier of each species and is unique within each ELEMENT. CONC is the concentration of the species and can either be LOW, MEDIUM, HIGH, or TRANSIENT. SEASON_ID contains a numeric value according to the monthly presence of the species. Usually, there is one seasonality per species, but occasionally the same species has different monthly presence or breeding activity. When this occurs, a new record with a different seasonality is referenced. G_SOURCE is a variable which links to the SOURCES table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES table and references the source for seasonality information.

The following species are found in the T_MAMMAL coverage of the South Florida atlas:

SPECIES ID	NAME
25	Florida key deer
73	Lower Keys marsh rabbit

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

6.0. DISTRIBUTION INFORMATION

6.1. DISTRIBUTOR

6.1.1. CONTACT PERSON PRIMARY

6.1.1.1. CONTACT PERSON:
John Kaperick

6.1.1.2. CONTACT ORGANIZATION:
NOAA

6.1.4. CONTACT ADDRESS

6.1.4.1. ADDRESS TYPE:
Physical Address

6.1.4.2. ADDRESS:
7600 Sand Point Way N.E., Bin C15700

6.1.4.3. CITY:
Seattle

6.1.4.4. STATE OR PROVINCE:
W A

6.1.4.5. POSTAL CODE:
98115

6.1.5. CONTACT VOICE TELEPHONE:
(206) 526-6400

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

6.2. RESOURCE DESCRIPTION:
ESI Atlas for South Florida

6.3. DISTRIBUTION LIABILITY:
Although this data has been processed successfully on a computer system at Research Planning, Inc., no warranty, expressed or implied, is made by Research Planning, Inc. regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. Research Planning, Inc. 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 Research Planning, Inc. for distribution options (see 6.1.1.).

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7.0. METADATA REFERENCE INFORMATION

7.1. METADATA DATE:
19960814

7.2. METADATA REVIEW DATE:
19941115

7.4. METADATA CONTACT

7.4.1. CONTACT PERSON PRIMARY

7.4.1.1. CONTACT PERSON:
Jill Petersen

7.4.1.2. CONTACT ORGANIZATION:
NOAA HMRAD

7.4.3. CONTACT POSITION:
GIS Manager

7.4.4. CONTACT ADDRESS

7.4.4.1. ADDRESS TYPE:
Physical Address

7.4.4.2. ADDRESS:
7600 Sand Point Way, N.E., Bin C15700

7.4.4.3. CITY:
Seattle

7.4.4.4. STATE OR PROVINCE:
Washington

7.4.4.5. POSTAL CODE:
98115

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

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

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

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

7.6. METADATA STANDARD VERSION:
19940608

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