EAST FLORIDA
ENVIRONMENTAL SENSITIVITY INDEX
METADATA

Prepared By:

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FILE DESCRIBES: Digital data for 1996 East Florida Environmental Sensitivity Index. Data were compiled and digitized at Research Planning, Inc., Columbia, South Carolina.

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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.

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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., 1121 Park Street, Post Office Box 328, Columbia, South Carolina 29202

1.1.2. PUBLICATION DATE:

199604

1.1.4. TITLE:

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: East 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:

East Florida

1.1.8. PUBLICATION INFORMATION

1.1.8.1. PUBLICATION PLACE:

St. Petersburg, Florida

1.1.8.2. PUBLISHER:

Florida Department of Environmental Protection (FDEP), Florida Marine Research Institute (FMRI)

1.1.9. OTHER CITATION DETAILS:

Prepared by Research Planning, Inc., Columbia, South Carolina for the Florida Department of Environmental Protection (FDEP), Florida Marine Research Institute (FMRI), St. Petersburg, Florida

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 East 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 in May, 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:

-81.75

1.5.1.2. EAST BOUNDING COORDINATE:

-80.00

1.5.1.3. NORTH BOUNDING COORDINATE:
30.75

1.5.1.4. SOUTH BOUNDING COORDINATE:
26.375

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:
Florida, to encompass the coastal areas from the Florida/ Georgia border to Boca Raton, 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. Mark White was the GIS coordinator and Lee Diveley, Kara Hastings, Christopher Locke, James Olsen, 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 and Laura Brown 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.dat.e00, birds.e00, esi.e00, habitats.e00, hydro.e00, index.e00, mgt.e00, m_mammals.e00, nests.e00, reptiles.e00, seasonality.dat.e00, shellfish.e00, socecon.dat.e00, socecon.e00, soceconp.e00, sources.dat.e00, species.dat.e00, t_mammals.e00, and turtles.dat.e00. The entire data set is approximately 55 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 socio-economic 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 our 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 East Florida were mapped during overflights conducted in May, 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 scale 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.DAT, SEASONALITY.DAT, SOURCES.DAT, SPECIES.DAT, and TURTLES.DAT, that are used to store the complex biological data (Fig. 1). Each biological coverage (BIRDS, HABITATS, M_MAMMALS, NESTS, REPTILES, and T_MAMMALS) is linked to the Biological Resources table (BIORES.DAT) using the item RARNUM. The biological coverage REPTILES is also linked to the turtle survey data table (TURTLES.DAT) using the item ID. TURTLES.DAT can also be linked to BIORES.DAT 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.DAT 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, or HIGH, 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 SEASONALITY.DAT table stores the monthly presence of each species and the characteristics of the presence (life history information). The BIORES.DAT table is linked to the SEASONALITY.DAT table using the SPECIES_ID, ELEMENT, and SEASON_ID items. The categories of the variables BREED1 through BREED4 for each ELEMENT are:

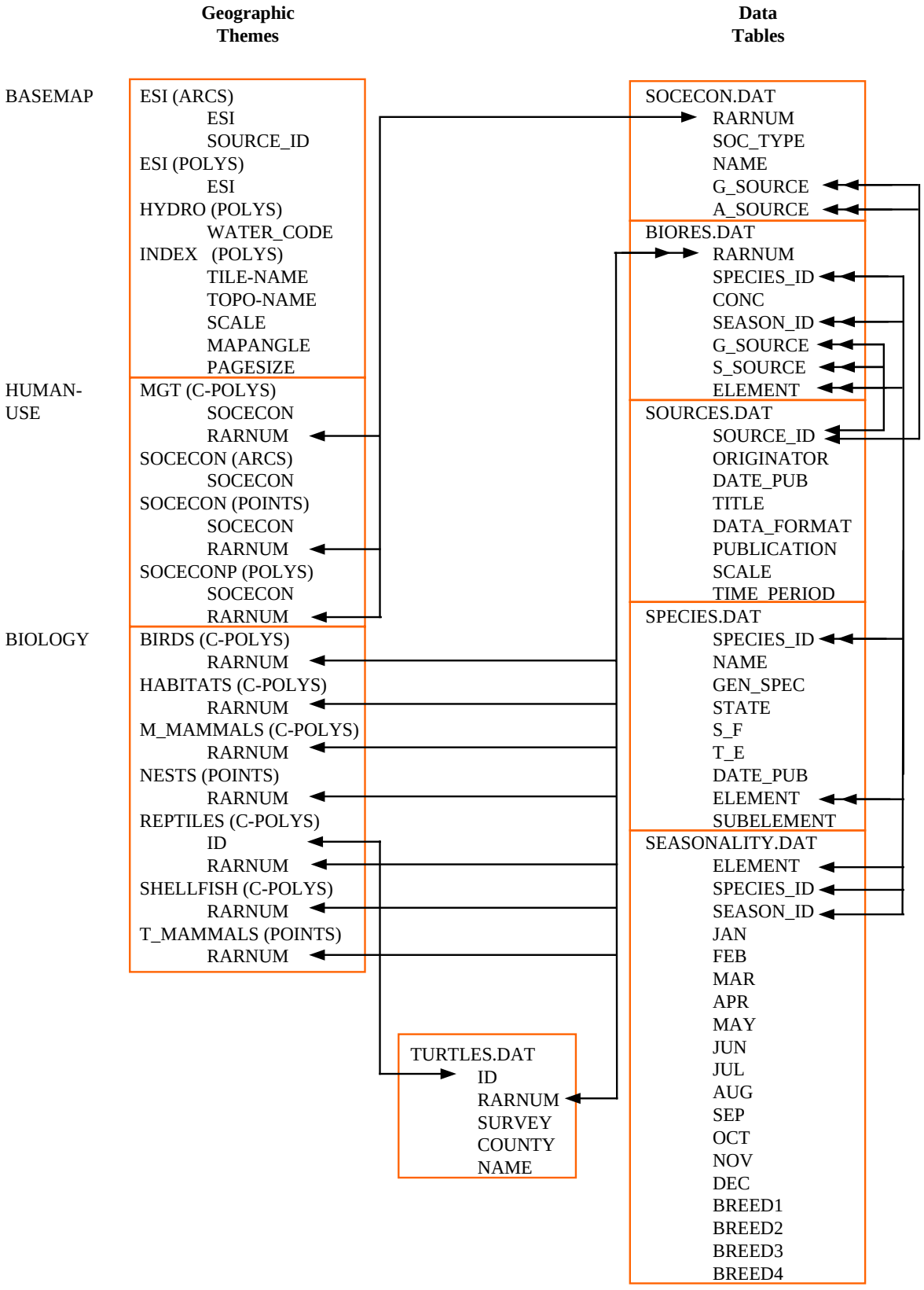

FIGURE 1. Relationships between biology coverages and attribute files.

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_MAMMALS.

The SPECIES.DAT 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
MARINE MAMMAL	manatee
	whale
HABITAT	sav
REPTILE	other reptiles (snakes)
	turtle
SHELLFISH	clam
	crab
	lobster
	oyster
	shrimp
TERRESTRIAL MAMMAL	small mammals

In response to a special request from the state of Florida, additional turtle data was collected and digitized into the TURTLES.DAT table. An identifier which links the TURTLES.DAT table to the REPTILES coverage is ID. The value of ID is unique for each region. The items in TURTLES.DAT are: ID, RARNUM, SURVEY, COUNTY, and, NAME. RARNUM is a link to the BIORES.DAT table and is identical to the values in REPTILES.DAT. 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.DAT 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 Florida ESI, aquaculture sites and archaeological/historical sites were collected and digitized as complex polygons (regions) in the coverage SOCECONP. All managed lands are digitized as complex polygons in the MGT coverage. The coverages are linked to the database SOCECON.DAT using the item RARNUM.

The table SOCECON.DAT contains the RARNUM, the feature type, 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 tables	Pineapple Press, Inc., Sarasota, Fla., 288 pp.	N/A	1990
U.S. Fish and Wildlife Service	1980	Atlantic Coast Ecological Inventory	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
Reynolds, G. FGFWFC (Tallahassee)	N/A	Distribution of Diving Birds for Florida's Atlantic Coast	Expert knowledge	N/A	N/A	1995
Hight, R. USFWS (Merritt Island)	N/A	Waterfowl Areas for Merritt Island NWR	Expert knowledge	N/A	N/A	1996
DuToit, C. FDEP (Ormond Beach)	N/A	Bird Species for the Tomoka Marsh Impoundment	Expert knowledge	N/A	N/A	1996

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 Denominator	2.5.1.4 Source Time Period
Research Planning, Inc.	N/A	ESI Shoreline	Digital complete chains	N/A	24000	1996
FDEP-FMRI	N/A	ESI Shoreline	Digital complete chains	N/A	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	1994	Seagrass Distribution for Palm Beach County	Digital complex polygons	FMRI, St. Petersburg, Fla., 813/896-8626	24000	1990
FDEP	1994	Seagrass Distribution for Hobe Sound	Digital complex polygons	FMRI, St. Petersburg, Fla., 813/896-8626	24000	1990-1994
FDEP	1994	Seagrass Distribution for Indian River Lagoon	Digital complex polygons	FMRI, St. Petersburg, Fla., 813/896-8626	24000	1989
FDEP	1994	Seagrass Distribution for Mosquito Lagoon	Digital complex polygons	FMRI, St. Petersburg, Fla., 813/896-8626	40000	1986

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
Norris, H. FMRI, FDEP, St. Pete., Fla.	1995	Shoreline	Digital complete chains	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 East Florida ESI Maps	Digital complex 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
U. of Fla., Dept. of Urban and Regional Planning, Geoplan Center	1994	Florida Greenways Conservation Lands Database	Digital complex polygons	Database Manager: David Lambert, 904/392-2056	250000	1994
FDEP	N/A	Florida Aquatic Preserves	Digital complex polygons	FMRI, St. Petersburg, Fla., 813/896-8626	24000	Unknown
USFWS, Division of Realty (Atlanta)	1977	Hobe Sound NWR Map	Maps	USFWS, Division of Realty, Atlanta, Ga., 2 pp.	1 in = 4000 ft	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
Fla. Dept. of Community Affairs	1995	Coastal and Aquatic Managed Areas Brochure	Text	Bureau of Coastal and Aquatic Managed Areas, Tallahassee, Fla.	N/A	1995
Sebastian Inlet SRA, FDEP	Unknown	Sebastian Inlet SRA Brochure Map	Map	N/A	Unknown	Unknown
FDEP Division of Recreation and Parks	Unknown	Tomoka Basin GEO Park Map	Map	N/A	24000	1996
FDEP Division of Recreation and Parks	Unknown	Talbot Islands GEO Park Map	Map	N/A	1 in = 4500 ft	1996

2.5.1. SOURCE INFORMATION:

Coverage or theme name: M_MAMMALS

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
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
NMFS, NOAA	1994	Designated Critical Habitat: Northern Right Whale	Text, Maps	Federal Register 59(106): 28793-28808	N/A	1994
Brown, J. NMFS (St. Pete)	N/A	Juvenile Humpback Whale Concentrations	Expert knowledge	N/A	N/A	1995

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 (St. Pete)	N/A	Interpolated Manatee Concentration Areas in Florida	Maps	N/A	40000	1985-1993

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), Glenn Reynolds, Database Mgr.	N/A	Wildlife Observation Database	Digital ASCII tables	N/A	Unknown	1994
Fla. Natural Areas Inventory (Tallahassee), Lance Peterson, Database Mgr.	N/A	Rare and Endangered Element Occurrence Database	Digital ASCII tables	N/A	Unknown	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
Meylan, A., B. Schroeder, and A. Mosier	1995	Sea Turtle Nesting Activity in the State of Fla., 1979-1992	Text and tables	FMRI, Publication No. 52, FDEP, FMRI, St. Petersburg, Fla., 51 pp.	N/A	1979-1995

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 Endan-gered and Potentially Endangered Fauna and Flora in Florida	Text	Florida Game and Fresh Water Fish Commission, Tallahassee, Fla., 22 pp.	N/A	1994
Ogren, L. NMFS (Panama City)	N/A	Marine Turtle In-Water Areas for Cape Canaveral	Expert knowledge	N/A	N/A	1995
Moler, P. FGFWFC (Gainesville)	N/A	Distribution of Atlantic Salt Marsh Snake in Florida	Expert knowledge	N/A	N/A	1996
Brooks, W.B. FDEP (Jacksonville)	N/A	Sea Turtle In-water Areas for NE Florida	Expert knowledge	N/A	N/A	1995
Ehrhart, L.M. UCF (Orlando)	N/A	Sea Turtle In-water Areas for Central East and SE Coast of Florida	Expert knowledge	N/A	N/A	1995
Witherington, B. FDEP (Tequesta)	N/A	Sea Turtle In-water Areas for SE Florida	Expert knowledge	N/A	N/A	1995
Ehrhart, L.M. and R.E. Martin	N/A	Sea Turtle In-water Areas for SE Florida	Expert knowledge	N/A	N/A	1995
Martin R.E. Ecological Associates, Inc.	N/A	Sea Turtle In-water Areas for SE Fla.	Expert knowledge	N/A	N/A	1995
Moody, K. FDEP (St. Pete)	N/A	Sea Turtle Areas Based on STSSN Strandings Database	Expert knowledge	N/A	N/A	1995
Stay, W. City of Vero Beach, Fla.	N/A	Sea Turtle Nesting Areas for Vero Beach	Expert knowledge	N/A	N/A	1995

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
Leach, A. Cape Canaveral AFS	N/A	Nesting Turtles for Brevard County	Expert knowledge	N/A	N/A	1996
Schmidt, J.S.	1995	Marine Turtle Populations on the East Central Coast of Fla.: Results of Tagging Studies at Cape Canaveral, Florida 1986-1991	Text	Fishery Bulletin 93:139-151	N/A	1995

2.5.1. SOURCE INFORMATION:

Coverage or theme name: SHELLFISH

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
Steele, P. FDEP-FMRI (St. Pete)	N/A	Shrimp and Blue Crab Distributions for Florida	Expert knowledge	N/A	Unknown	1995
NOAA, Strategic Assessment Branch	1985	Gulf of Mexico Coastal and Ocean Zones Strategic Assessment Data Atlas	Maps	NOAA, Strategic Assessment Branch, Ocean Assessment Division, Rockville, Md.	4000000	1981-1983
Nelson, D.M., E.A. Irlandi, L.R. Settle, M.E. Monaco, and L. Coston-Clements	1991	Distribution and Abundance of Fishes and Invertebrates in Southeast Estuaries	Text	ELMR Report No. 9, NOAA/NOS/SEA, Rockville, Md., 167 pp.	Unknown	1989-1991

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
Berrigan, M., FDEP, Bureau of Marine Resource Regulation and Development (Tallahassee)	N/A	Statewide Aquaculture and Oyster Concentration Areas for NE Florida	Expert knowledge, maps	N/A	Unknown	1995
Arnold, W., FDEP-FMRI (St. Pete)	N/A	Hard Clam Concentration Areas	Expert knowledge	N/A	Unknown	1980-1995
South Atlantic Fishery Management Council	1996	Amendment I to the Fishery Management Plan for the Shrimp Fish-eries of the South Atlan-tic Region (Rock Shrimp)	Text, Maps	South Atlantic Fishery Management Council Publication, Charleston, S.C., 118 pp.	N/A	1950-1993
Little, E.J.	1977	Observations on the Recruit-ment of Post-larval Spiny Lobsters to the South Florida Coast	Text	Florida Marine Publication No. 29, FDEP, FMRI, St. Pete, Fla., 35 p.	N/A	1964-1971
Grizzle, R.E.	1990	Distribution and Abundance of Crassostrea virginica (Gmelin, 1791) (Eastern Oys-ter) and Mercenaria spp. (quahogs) in a Coastal Lagoon	Maps	Journal of Shellfish Research 9(2):347-358	Unknown	1987

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 Denomi-nator	2.5.1.4 Source Time Period
Delorme Mapping Company	1989	Florida Atlas and Gazetteer	Maps	Delorme Mapping, Freeport, Maine, 127 pp.	150000	Unknown
U.S. Geological Survey	Varies	USGS 7.5-minute Topographic Quadrangles	Maps	USGS, Reston, Va.	24000	Varies
Jacksonville Electric Authority	N/A	Location of Water Intakes for Power Plants	Expert Knowledge	N/A	N/A	1995
Florida Power and Light Corporation	N/A	Location of Water Intakes for Power Plants	Expert Knowledge	N/A	N/A	1995
Sargent, W. FDEP (St. Pete)	N/A	Locations of Boat Ramps, Marinas, Water Intakes, Aquaculture Sites, etc.	Expert Knowledge	N/A	N/A	1995
Zengel, S. Research Planning, Inc.	N/A	Additional Boat Ramps at Kennedy Space Center	Expert Knowledge	N/A	N/A	1996
Deloach, N.	1993	Diving Guide to Underwater Florida	Text	New World Publications, Jacksonville, Fla., 324 pp.	Unknown	1993
Research Planning, Inc.	N/A	Marinas and Boat Ramps	Maps	N/A	24000	1982-1993
Berrigan, M., FDEP, Bureau of Marine Resource Regulation and Development (Tallahassee)	N/A	Statewide Aquaculture and Oyster Concentration Areas for NE Florida	Expert knowledge, maps	N/A	Unknown	1995

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
Fla. Bureau of Archaeological Research (Tallahassee)	None	Florida Archaeolog-ical Site File	Maps	Fla. Dept. of State, Bureau of Archaeological Research, Tallahassee	24000	1995
Berrigan, M., FDEP, Bureau of Marine Resource Regulation and Development (Tallahassee)	N/A	Statewide Aquaculture and Oyster Concentration Areas for NE Florida	Expert knowledge, maps	N/A	Unknown	1995

2.5.1. SOURCE INFORMATION:

Coverage or theme name: T_MAMMALS

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 Wild-life Program, (Tallahassee), Glenn Reynolds, Database Mgr.	N/A	Wildlife Observation Database	Digital ASCII tables	N/A	Unknown	1994
Fla. Natural Areas Inventory (Tallahassee), Lance Peterson, Database Mgr.	N/A	Rare and Endangered Element Occurrence Database	Digital ASCII tables	N/A	Unknown	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

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 Endan-gered and Potentially Endangered Fauna and Flora in Florida	Text	Florida Game and Fresh Water Fish Commission, Tallahassee, Fla., 22 pp.	N/A	1994

2.5.2. 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, topological and logical consistency, and edited for any error using the original overflight maps. Any errors in the shoreline classification were updated 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:
199603

2.5.2.6. PROCESS CONTACT

2.5.2.6.1. CONTACT PERSON PRIMARY

2.5.2.6.1.1. CONTACT PERSON:
Joanne Halls

2.5.2.6.1.2. CONTACT ORGANIZATION:
Research Planning, Inc.

2.5.2.6.3. CONTACT POSITION:
Director, GIS Department

2.5.2.6.4. CONTACT ADDRESS

2.5.2.6.4.1. ADDRESS TYPE:
Physical Address

2.5.2.6.4.2. ADDRESS:
1121 Park Street

2.5.2.6.4.3. CITY:
Columbia

2.5.2.6.4.4. STATE OR PROVINCE:
SC

2.5.2.6.4.5. POSTAL CODE:
29201

2.5.2.6.5. CONTACT VOICE TELEPHONE:
(803) 256-7322

2.5.2.6.7. CONTACT FACSIMILE TELEPHONE:
(803) 254-6445

2.5.2.6.8. CONTACT ELECTRONIC MAIL ADDRESS:
jhalls@researchplanning.com

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	G-Polygons	Area Points	Complete Chains	Line Segments	Label Points	Entity Points	Nodes
BIRDS	1	12	2080	2080	2762	298,333			2,598
ESI	1		2,416	2,416	9,679	275,836			10,054
HABITATS	1	1	2,344	2,344	2,707	142,915			2,275
HYDRO	1		2,045	2,045	2,544	269,203	414		2,459
INDEX	1		59	59	173	173			115
MGT	1	47	786	786	1,189	107,178			1,019
M_MAMMALS	1	4	260	260	345	63,427			340
NESTS								442	
REPTILES	1	78	1,475	1,475	2,484	191,718			1,960
SHELLFISH	1	14	2,022	2,022	2,802	274,113			2,576
SOCECON					144	469		479	427
SOCECONP	1		622	622	738	148,325			736
T_MAMMALS								12	

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4.0. SPATIAL REFERENCE INFORMATION

4.1. HORIZONTAL COORDINATE SYSTEM DEFINITION

4.1.2. PLANAR

4.1.2.1. MAP PROJECTION

4.1.2.1.1. MAP PROJECTION NAME:
ALBERS

4.1.2.1.2. MAP PROJECTION PARAMETERS :

4.1.2.1.2.1. 1ST STANDARD PARALLEL:
24.0

4.1.2.1.2.2. 2ND STANDARD PARALLEL:
31.5

4.1.2.1.2.3. CENTRAL MERIDIAN:
-84.0

4.1.2.1.2.4. LATITUDE OF PROJECTION ORIGIN:
24.0

4.1.2.1.2.5. FALSE EASTING:
400,000

4.1.2.1.2.6. FALSE NORTHING:
0

4.1.2.1.2.7. SCALE FACTOR AT CENTRAL MERIDIAN:
Unknown

4.1.2.4. PLANAR COORDINATE INFORMATION

4.1.2.4.1. PLANAR COORDINATE ENCODING METHOD:
Coordinate Pair

4.1.2.4.2. COORDINATE REPRESENTATION:

4.1.2.4.2.1. ABSCISSA RESOLUTION:
50 feet

4.1.2.4.2.2. ORDINATE RESOLUTION:
50 feet

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:

Unknown

4.1.4.4. DENOMINATOR OF FLATTENING RATIO:

Unknown

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:	
GT-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.DAT table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES.DAT 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, or 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.DAT table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES.DAT table and references the source for seasonality information.

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

SPECIES ID	NAME
1	Common loon
8	Double-crested cormorant
17	Northern pintail
18	Green-winged teal
23	Lesser scaup
24	Common goldeneye
26	Bufflehead
33	Red-breasted merganser
34	American coot
118	Brown pelican
124	Redhead
132	Wood stork
167	Northern gannet
180	Ring-necked duck
190	Blue-winged teal
191	Wood duck
192	Common moorhen
198	Hooded merganser
211	Mottled duck
1,002	Shorebirds
1,003	Waterfowl
1,004	Wading birds
1,013	Dabbling ducks
1,014	Diving ducks

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

floating point number

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 May, 1993.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Complete Chain	ESI	character
	SOURCE_ID	binary
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 East 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:
-9	Polygon hole or arcs with no classification
1	Exposed Vertical Rocky Shores/Seawalls
1/3	Exposed Vertical Rocky Shores/Seawalls/Fine-grained Sand Beaches
1/4	Exposed Vertical Rocky Shores/Seawalls/Coarse-grained Sand Beaches
1/6	Exposed Vertical Rocky Shores/Seawalls/Gravel Beaches/Riprap

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

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:
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

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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:	
GT-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.DAT table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES.DAT 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, or HIGH, 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.DAT table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES.DAT table and references the source for seasonality information.

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

SPECIES ID	NAME
85	Seagrass

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:

floating point number

5.1. DETAILED DESCRIPTION: HYDRO

The coverage HYDRO contains polygonal water and land features as well as linear features for rivers/streams that are tidally influenced. This coverage was created using the digital shoreline provided by the Florida Department of Environmental Protection.

5.1.1. ENTITY TYPES:

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

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.

5.1.2. 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:

ordered

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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 59.

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.

AMELIA CITY, FLA. (1992)
ANKONA, FLA. (1983)
ARIEL, FLA. (1970)
ARLINGTON, FLA. (1992)
BEVERLY, FLA. (1992)
CAPE CANAVERAL, FLA. (1976)
COCOA BEACH, FLA. (1976)
COCOA, FLA. (1984)
COURTENAY, FLA. (1976)
DAYTONA BEACH, FLA. (1993)
DELRAY BEACH, FLA. (1983)
EASTPORT, FLA. (1992)
EAU GALLIE, FLA. (1988)
EDEN, FLA. (1983)
EDGEWATER, FLA. (1970)
FALSE CAPE, FLA. (1984)
FERNANDINA BEACH, FLA.-GA. (1992)
FLAGLER BEACH EAST, FLA. (1993)
FLAGLER BEACH WEST, FLA. (1993)
FORT PIERCE, FLA. (1983)
GOMEZ, FLA. (1983)
GRANT, FLA. (1970)
HEDGES, FLA. (1992)
HOBE SOUND, FLA. (1983)
INDRIO, FLA. (1983)
JACKSONVILLE BEACH, FLA. (1992)
JACKSONVILLE, FLA. (1992)
JUPITER, FLA. (1983
LAKE WORTH, FLA. (1983)
MATANZAS INLET, FLA. (1992)
MAYPORT, FLA. (1992)
MELBOURNE EAST, FLA. (1980)
MICKLER LANDING, FLA. (1992)
MIMS, FLA. (1989)
NEW SMYRNA BEACH, FLA. (1993)
OAK HILL, FLA. (1992)
ORMOND BEACH, FLA. (1993)
ORSINO, FLA. (1976)
PALM BEACH, FLA. (1983)
PALM CITY, FLA. (1983)
PALM VALLEY, FLA. (1992)
PARDON ISLAND, FLA. (1992)

PORT ORANGE, FLA. (1993)
RIOMAR, FLA. (1992)
RIVIERA BEACH, FLA. (1983)
ROOD, FLA. (1983)
SEBASTIAN NW, FLA. (1992)
SEBASTIAN, FLA. (1970)
SHARPES, FLA. (1992)
SOUTH PONTE VEDRA BEACH, FLA. (1988)
ST. AUGUSTINE BEACH, FLA. (1992)
ST. AUGUSTINE, FLA. (1992)
ST. LUCIE INLET, FLA. (1983)
ST. MARYS, FLA.-GA. (1988)
TITUSVILLE, FLA. (1988)
TROPIC, FLA. (1988)
TROUT RIVER, FLA. (1992)
VERO BEACH, FLA. (1983)
WILSON, FLA. (1979)

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
52,000
56,000

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

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:

MAPANGLE

5.1.2.2. ATTRIBUTE DEFINITION:

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

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

-0.726
-0.668
-0.610
-0.552
-0.494
-0.436
-0.378
-0.319

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

-0.261
-0.203
-0.145
0

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

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: 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:	
GT-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.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:
P	State Park
NP	National Park
WR	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.DAT table. The table SOCECON.DAT 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.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

floating point number

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:
NP	National Park
P	State Park
WR	Wildlife Refuge

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: M_MAMMALS

The coverage M_MAMMALS 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:	
GT-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.DAT table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES.DAT 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, or HIGH, 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.DAT table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES.DAT table and references the source for seasonality information.

The following species are found in the M_MAMMALS coverage of the East Florida atlas:

SPECIES ID	NAME
10	West Indian manatee
13	Humpback whale
81	Northern right whale

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

floating point number

5.1. DETAILED DESCRIPTION: NESTS

The coverage NEST 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.DAT table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES.DAT 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, or HIGH, 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.DAT table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES.DAT table and references the source for seasonality information.

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

SPECIES ID	NAME
17	Northern pintail
18	Green-winged teal

SPECIES ID	NAME
20	Northern shovler
33	Red-breasted merganser
34	American coot
40	Ring-billed gull
42	Bonaparte's gull
45	Common tern
52	Wilson's phalarope
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
86	Least tern
87	Little blue heron
88	Great egret
89	Snowy egret
90	Black-crowned night heron
91	Glossy ibis
92	Great black-backed gull
93	Cattle egret
94	Tricolored heron
97	Green-backed heron
98	Laughing gull
107	Peregrine falcon
115	White ibis
116	Roseate spoonbill
119	Magnificent frigatebird
120	Yellow-crowned night heron
121	Anhinga
132	Wood stork
133	Black skimmer
134	Gull-billed tern
135	Sandwich tern
137	Royal tern
138	Forster's tern

SPECIES ID	NAME
142	Black-necked stilt
152	American oystercatcher
153	Piping plover
154	Wilson's plover
155	Willet
156	Semipalmated sandpiper
163	Reddish egret
164	Lesser-golden plover
169	American wigeon
179	Pied-billed grebe
180	Ring-necked duck
181	Northern harrier
190	Blue-winged teal
192	Common moorhen
193	Black tern
196	Common snipe
210	Marbled godwit
213	Stilt sandpiper
214	Solitary sandpiper
223	Upland sandpiper
234	Purple sandpiper
238	White-rumped sandpiper
284	Buff-breasted sandpiper
289	Hudsonian godwit
290	Peep
292	Sharp-tailed sandpiper
293	Yellowlegs
295	Florida scrub jay
296	Snail kite
1,002	Shorebirds
1,004	Wading birds

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:

floating point number

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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:	
GT-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.DAT table. The value of ID is unique for each region. The items in TURTLES.DAT are: ID, RARNUM, SURVEY, COUNTY, and NAME. RARNUM is a link to the BIORES.DAT table and is identical to the values in REPTILES.DAT. 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.DAT table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES.DAT 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, or 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.DAT table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES.DAT table and references the source for seasonality information.

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

SPECIES ID	NAME
2	Green sea turtle
4	Kemp's ridley sea turtle
5	Leatherback sea turtle
6	Loggerhead sea turtle
9	Hawksbill sea turtle
11	Atlantic salt marsh snake

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:
floating point number

5.1. DETAILED DESCRIPTION: SHELLFISH

The coverage SHELLFISH 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:	
GT-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.DAT table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES.DAT 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, or HIGH, 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.DAT table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES.DAT table and references the source for seasonality information.

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

SPECIES ID	NAME
4	Pink shrimp
43	American oyster (eastern)
49	Blue crab
50	White shrimp
51	Brown shrimp
71	Rock shrimp
72	Spiny lobster
74	Stone crab
100	Quahog spp. (hard clam)

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

floating point number

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
AQ	Aquaculture Site - Points
AS	Archaeological/ Historical Site - Points
B	Beach – Points
BR	Boat Ramp – Points
CG	Coast Guard – Points
DV	Diving – Points
M	Marina – Points
R	Bridges - Chains
RB	Recreational Beach - Points
SB	State Border - Chains
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.DAT table. The table SOCECON.DAT contains the RARNUM, the feature type (SOC_TYPE), the facility name (NAME), the geographic source (G_SOURCE), and the attribute source (A_SOURCE). The only features in SOCECON which link to the SOCECON.DAT table are water intakes. 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.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
floating point number

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:	
Complex 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
AQ	Aquaculture 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.DAT table. The table SOCECON.DAT contains the RARNUM, the feature type (SOC_TYPE), the facility name (NAME), the geographic source (G_SOURCE), and the attribute source (A_SOURCE). The only

features in SOCECON which link to the SOCECON.DAT table are aquaculture sites. 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.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

floating point number

5.1. DETAILED DESCRIPTION: T_MAMMALS

The coverage T_MAMMALS 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.DAT table. The value of RARNUM is determined for each unique combination of SPECIES_ID, SEASON_ID, and CONC. The items in BIORES.DAT 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, or HIGH 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.DAT table and references the source for geographic information. S_SOURCE is a variable which also links to the SOURCES.DAT table and references the source for seasonality information.

The following species are found in the T_MAMMALS coverage of the East Florida atlas:

SPECIES ID	NAME
8	River otter
68	Anastasia Island beach mouse
78	Southeastern beach mouse

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:

floating point number

6.0. DISTRIBUTION INFORMATION

6.1. DISTRIBUTOR

6.1.1. CONTACT PERSON PRIMARY

6.1.1.1. CONTACT PERSON:

Joanne Halls

6.1.1.2. CONTACT ORGANIZATION:

Research Planning, Inc.

6.1.4. CONTACT ADDRESS

6.1.4.1. ADDRESS TYPE:

Physical Address

6.1.4.2. ADDRESS:

1121 Park Street

6.1.4.3. CITY:

Columbia

6.1.4.4. STATE OR PROVINCE:

SC

6.1.4.5. POSTAL CODE:

29201

6.1.5. CONTACT VOICE TELEPHONE:

(803) 256-7322

6.1.7. CONTACT FACSIMILE TELEPHONE:

(803) 254-6445

6.2. RESOURCE DESCRIPTION:

ESI Atlas for East 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:
19960422

7.2. METADATA REVIEW DATE:
19941115

7.4. METADATA CONTACT

7.4.1. CONTACT PERSON PRIMARY

7.4.1.1. CONTACT PERSON:
Joanne Halls

7.4.1.2. CONTACT ORGANIZATION:
Research Planning, Inc.

7.4.3. CONTACT POSITION:
Director, GIS Department

7.4.4. CONTACT ADDRESS

7.4.4.1. ADDRESS TYPE:
Physical Address

7.4.4.2. ADDRESS:
1121 Park Street

7.4.4.3. CITY:
Columbia

7.4.4.4. STATE OR PROVINCE:
South Carolina

7.4.4.5. POSTAL CODE:
29201

7.4.5. CONTACT VOICE TELEPHONE:
(803) 256-7322

7.4.7. CONTACT FACSIMILE TELEPHONE:
(803) 254-6445

7.4.8. CONTACT ELECTRONIC MAIL ADDRESS:
jhalls@researchplanning.com

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

7.6. METADATA STANDARD VERSION:
19940608

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