

STUDY TITLE: Florida Gulfwide Information System: A Multi-State Database Development Project

REPORT TITLE: Environmental Sensitivity Index Mapping of the West Coast of Florida

CONTRACT NUMBER: 1435-01-97-CA-30838

SPONSORING OCS REGION: Gulf of Mexico

APPLICABLE PLANNING AREA: Eastern

FISCAL YEARS OF PROJECT FUNDING: 1997, 1998

COMPLETION DATE OF REPORT: November 1998

COSTS: FY 1997 \$94,003; FY 1998 \$205,087; **CUMULATIVE PROJECT COST:** \$299,091

PROJECT MANAGER: Henry Norris

AFFILIATION: Florida Department of Environmental Protection, Division of Marine Resources, Florida Marine Research Institute

ADDRESS: 100 8th Ave. NE, St. Petersburg, FL 33701

PRINCIPAL INVESTIGATORS*: Chris Friel, Henry Norris, and David Capaz

KEY WORDS: Geographic Information System, GIS, Environmental Sensitivity Index, ESI, oil, spill, planning, response

BACKGROUND: The current practice of using disparate data sources for oil spill planning and response fosters inconsistent inter-pretations and contention among the involved parties. MMS, in order to develop a consensus-based database, established the G-WIS Program. A steering committee made up of members from industry, federal agencies, and each Gulf state was set up to design the G-WIS database. Following design each state set about acquiring and providing G-WIS data to MMS.

OBJECTIVES: To develop an authoritative GIS database (as mandated by the Oil Spill Act of 1990) for oil spill contingency planning in the Gulf of Mexico region. The database will be used by MMS, industry and other regulatory and resource protection agencies for oil spill planning and response activities.

DESCRIPTION: The core study area, for which all data were provided, consists of 106 USGS 7.5' quadrangles (Attachment 1) extending from Perdido Bay, at the western end of the Florida Panhandle, to the southern end of Sarasota Bay, on the central west coast of the Florida Peninsula. Selected land-based data such as roads, demographics and land-use extend landward beyond the quad boundaries for a distance of 10 statute miles. Selected biological data such as marine habitat and certain species distributions

extend beyond the quads to their "natural" boundaries, some as far as the Exclusive Economic Zone demarcation line.

Data sources, scales, extents, etc. are all contained in an FGDC-compliant metadata report that was created by Research Planning, Inc. (RPI). The final G-WIS-concordant GIS database was also assembled by RPI.

SIGNIFICANT CONCLUSIONS: The G-WIS project has led to the creation of a spill planning and response GIS database that is consistent across the five Gulf states. Previously, the data were either non-existent or else in different formats, ranging from outdated paper atlases to proprietary digital databases.

STUDY RESULTS: The data have been provided to MMS as part of this agreement; they will also be provided to other agencies that request them. The data are served as both Arc/Info coverages and ArcView shapefiles.

The Florida Department of Environmental Protection (FDEP) has modified The Florida Marine Spill Analysis System (FMSAS), a sophisticated spill-response GIS, to incorporate G-WIS data as the primary database for determining "Resources at Risk". The FMSAS is deployed on Pentium laptop PCs at each of the Department's Bureau of Emergency Response field offices as well as on a UNIX server at the Florida Marine Research Institute. At the request of MMS, the FMSAS was delivered to the MMS office in New Orleans for evaluation.

In the near future, G-WIS data will be served over the web through FDEP's ArcView Internet map server, Statewide Ocean Resource Inventory (SORI). The Internet address for SORI is <http://www.fmri.usf.edu/sori>.

FDEP, using state funds, is extending the G-WIS database beyond Sarasota Bay down to Cape Sable, located on the southwest corner of the peninsula. This new work would cover an additional 51 USGS quadrangles. The contract is being made with RPI and should be in place by the start of December, 1998. It is anticipated that over the next two years FDEP will continue developing G-WIS databases to cover the Florida Keys and the east coast.

STUDY PRODUCTS: Friel, C., H. Norris, and D. Capaz. 1998. Environmental Sensitivity Index Mapping of the West Coast of Florida. A final report by the Florida Department of Environmental Protection, Division of Marine Resources, Florida Marine Research Institute for the U.S. Department of the Interior, Minerals Management Service Gulf of Mexico OCS Region, New Orleans, LA. Contract No. 1435-01-97-CA-30838.

An FGDC-compliant metadata report and Arc/Info coverages with the following parameters: Projection, "Geographic"; Coordinate System, Latitude/Longitude expressed as decimal degrees; Datum, NAD27.

ATTACHMENT 1

USGS 7.5' Quads defining extent of G-WIS data

Orange Beach	Indian Pass	Tarpon Springs
Lillian	Beverly	Elfers
Perdido Bay	West Pass	Dundedin
West Pensacola	Cape St. George	Oldsmar
Fort Barranacas	Apalachicola	Clearwater
Pace	New Inlet	Safety Harbor
Pensacola	Green point	Gandy Bridge
Gulf Breeze	Goose Island	Tampa
Milton South	Carrabelle	Seminole
Garcon Point	Sugar Hill	Saint Petersburg
Oriole Beach	McIntyre	Port Tampa
Ward Basin	Dog Island	Gibsonton
Holley	Sopchoppy	Pass"A"Grille Beach
South of Holley	St. Teresa Beach	Cockroach Bay
Navarre	Spring Creek	Ruskin
Mary Esther	Lighthouse Point	Egmont Key
Fort Walton Beach	St. Marks	Anna Maria
Niceville	Sprague Island	Palmetto
Destin	Cobb Rocks	Bradenton Beach
Choctaw Beach	Snipe Island	Bradenton
Miramar Beach	Manlin Hammock	Sarasota
Freeport	Rock Islands	
Grayton Beach	Okeefenokee Slough	
Bunker	Keaton Beach	
Point Washington	Crooked Point	
Seminole Hills	Steinhatchee	
Laguna Beach	Steinhatchee SW	
West Bay	Horseshoe Beach	
Panama City Beach	Shired Island	
South Port	Suwanee	
Panama City	East Pass	
Beacon Beach	Cedar Key	
Bayhead	Seahorse Key	
Springfield	Sumner	
Long Point	Waccasassa Bay	
Crooked Island	Withlacoochee Bay	
Allanton	Yankeetown	
Beacon Hill	Red Level	
Saint Joseph Point	Ozello	
Saint Joseph Peninsula	Chassahowitzka Bay	
Overstreet	Bayport	
Port St. Joe	Aripeka	
Cape San Blas	Port Richey	

*P.I.'s affiliation may be different than that listed for Project Managers.