

## FLORIDA

### **Apalachicola Bay Benthic Characterization—1999 to 2001**

[www.csc.noaa.gov/pagis/html/apa\\_act.htm](http://www.csc.noaa.gov/pagis/html/apa_act.htm)

The Center and the Apalachicola Bay National Estuarine Research Reserve used sediment profiling imagery (SPI), traditional benthic sampling, and single-beam acoustic sensing (RoxAnn) to map turbid water habitats in the bay. These maps are integrated with information about key physical processes, such as freshwater inflows, salinity distribution, and sediment transport, to establish baseline conditions. This information was gathered prior to expected changes in salinity and hydrodynamics from proposed upstream water flow modifications within the Apalachicola-Chattahoochee-Flint Basin.

### **Beach Nourishment on the Atlantic and Gulf Coasts of the U.S.—2002, 2003**

This project helps state and local governments along the Atlantic and Gulf coasts of the U.S. make informed decisions about the nourishment of beaches by consolidating the best scientific and technical information and tools for evaluating and understanding beach nourishment into one source. This resource is a user-friendly Web site that includes relevant information and tools from the fields of coastal geology, engineering, economics, law and policy, and the biological sciences.

### **Coastal Management Fellowship—1996 to 1998**

[www.csc.noaa.gov/cms/1996Fellows.html](http://www.csc.noaa.gov/cms/1996Fellows.html)

A Coastal Management Fellow worked with the Florida Coastal Management Program to improve hazard mitigation and redevelopment policies at the local level. This project provided local governments with the best available knowledge about hazards, risks, and vulnerability to ensure fact-based policy development.

### **Coastal Management Fellowship—2000 to 2002**

[www.csc.noaa.gov/cms/00\\_fellows.html](http://www.csc.noaa.gov/cms/00_fellows.html)

A Coastal Management Fellow worked with the Florida Coastal Management Program on a project entitled “An Evaluation of Management and Human Use Concerns in Coastal/Marine Ecosystems: A Contribution to Adaptive Coastal Management.” The project focused on implementation of the second phase of the Florida Coastal Management Program’s BlueWays initiative, an effort to promote adaptive coastal management.

### **Coastal Ocean Habitat: Florida Bay—1997 to 1999**

[www.csc.noaa.gov/crs/cohab/flbay/flbay.html](http://www.csc.noaa.gov/crs/cohab/flbay/flbay.html)

Satellite observations of turbidity from 1985 to 1998 are available on CD-ROM. These images are used to characterize water clarity in Florida Bay where seagrass die-offs are common.

### **Community-Based Habitat Restoration—2001 to 2003**

NOAA’s community-based restoration program helps community groups restore marine and estuarine habitat by providing funds and technical expertise. NOAA Fisheries leads the program. The Center has been a program partner since fiscal year 2001 and has co-funded several projects, including the Reef Medics program in southern Florida and a mangrove wetlands restoration project in eastern Florida.

### **Dry Tortugas, Essential Fish Habitat—2000, 2001**

[www.csc.noaa.gov/crs/bhm/torts.html](http://www.csc.noaa.gov/crs/bhm/torts.html)

This baseline information on benthic habitats and processes is being used to evaluate the success of various management approaches. The Dry Tortugas project was conducted in cooperation with the National Ocean Service’s Beaufort Lab, the Florida Fish and Wildlife Commission, and Florida International University.

### **Ecological Characterization of the Rookery Bay NERR—1999 to 2002**

[www.csc.noaa.gov/lcr/text/rookery.html](http://www.csc.noaa.gov/lcr/text/rookery.html)

The characterization of the Rookery Bay National Estuarine Research Reserve (NERR) provides a comprehensive interdisciplinary synthesis of current and historical information about this area, both environmental and cultural. The final product, a CD-ROM and Internet site, integrates geographic information system (GIS) data and information about key landscape processes. The Rookery Bay NERR developed the characterization through a cooperative agreement with the NOAA Coastal Services Center.

#### **Estero Bay, Benthic Data—1999**

[www.csc.noaa.gov/crs/bhm/ebay.html](http://www.csc.noaa.gov/crs/bhm/ebay.html)

This project documented the current benthic habitats of Estero Bay in this fast-growing area of southwest Florida. Aerial photography flown during 1999 was compared with an earlier photo data set to identify the changes that have taken place. The South Florida Water Management District and Florida Fish and Wildlife Commission were directly funded to complete this project.

#### **Estuarine Habitat Project—1998 to 2001**

[www.csc.noaa.gov/crs/ehab/](http://www.csc.noaa.gov/crs/ehab/)

The Estuarine Habitat project investigated remote sensing and modeling approaches for studying oceanic and terrestrial processes. This project focused on building new, useful methodologies and applications to aid coastal managers in assessing estuarine habitat quality.

#### **Extension and Capacity-Building for the St. Johns Watershed, CSI Pilot—2002, 2003**

[www.csc.noaa.gov/csi/](http://www.csc.noaa.gov/csi/)

The overall purpose of this pilot project for the Coastal Storms Initiative (CSI) is to assist local and state officials in improving decision-making regarding coastal storm impacts. This effort is a compilation of nine projects that address specific hazards-related issues. Taken together, the projects result in a large suite of new and improved tools, data, information, forecast models, and training for the coastal communities in the pilot study area. Partners for the project are the Florida Sea Grant Extension, Florida Coastal Zone Management, the National Weather Service Regional Office, and the NOAA Coastal Services Center.

#### **Florida Bay Benthic Data—1991, 1995**

[www.csc.noaa.gov/crs/bhm/flbay.html](http://www.csc.noaa.gov/crs/bhm/flbay.html)

Significant losses of submerged aquatic vegetation (SAV) meadows occurred in Florida Bay during the late 1980s. This study was initiated to provide a comprehensive benthic habitat map of Florida Bay so that future gains or losses of SAV could be documented and monitored. The project was directly funded by NOAA and accomplished by the Florida Marine Research Institute and the NOAA Coastal Services Center.

#### **Harmful Algal Bloom Project—1997 to 2003**

[www.csc.noaa.gov/crs/habf/](http://www.csc.noaa.gov/crs/habf/)

This project is developing information systems to help coastal resource managers control shellfish harvesting closures and issue public health alerts. A harmful algal bloom e-mail bulletin and a near real-time information system on the Internet are available to managers.

#### **Hurricane Storm Surge Visualization—2002, 2003**

[www.csc.noaa.gov/csi/projects/stjohnCirculation.html](http://www.csc.noaa.gov/csi/projects/stjohnCirculation.html)

As part of the Coastal Storms Initiative, the Center is developing a risk and vulnerability assessment of the St. Johns River area using a three-dimensional visualization model to display predicted storm surge levels for various hurricane categories.

#### **Indian River Lagoon Benthic Data—1996**

[www.csc.noaa.gov/crs/bhm/ir\\_fl.html](http://www.csc.noaa.gov/crs/bhm/ir_fl.html)

Seagrass is used as an indicator of overall water quality, so water quality management practices are designed to support healthy seagrass in the Indian River Lagoon. For this project, seagrass beds were mapped from 1996 aerial photography.

### **Marine Spill Analysis System—1999, 2000**

This multiagency effort worked to pool resources and expertise to highlight a geographic information system (GIS) to be used by the marine spill and resource management community. The Marine Spill Analysis System (MSAS) is a specialized ArcView® GIS application that allows managers, biologists, and technicians to load, view, analyze, and publish spatial data sets that are unique to coastal and marine management and protection scenarios. Specialized tools have been created that allow users to study or respond to a spill, such as oil or gasoline, “from cradle to grave.”

### **National Estuarine Research Reserve System Data Rescue—1997 to 1999**

[www.csc.noaa.gov/pagis/html/esdimindex.htm](http://www.csc.noaa.gov/pagis/html/esdimindex.htm)

Data formerly in a hard copy format were digitized for this project. Priority was given to those data sets in danger of immediate loss due to media deterioration. Rescued data sets are accessible through the Internet via a geographic information system, and selected data and metadata were published on a CD-ROM.

### **Needs Assessment Training—2000**

Rookery Bay National Estuarine Research Reserve (NERR) served as local host to a workshop entitled “How to Conduct a Training Needs Assessment.” Participants in the two-day training included staff from the NERR system, Sea Grant, the National Estuary Program, National Marine Sanctuaries, and the Florida Coastal Management Program, as well as local partners. The participants learned about the methodology and tools available to assess the needs of their target audiences.

### **New Technologies for Emergency Response—1999**

Center staff collaborated with researchers from the Florida Marine Research Institute to test a new system for field data collection and response. This project, funded by NOAA’s High Performance Computing and Communications (HPCC) Program, addressed the need of NOAA and other agencies to rapidly gather, integrate, and disseminate information about impacted areas after disasters such as oil spills and hurricanes. The system featured lightweight computers equipped with geographic information system (GIS) software, Global Positioning System (GPS) receivers, a wireless local area network (WLAN), and video cameras. The project was awarded the Best Use of Leading Edge Technologies award from HPCC at the NOAA Tech 2000 workshop.

### **Ocean Color Applications Project—1999, 2000**

Through this project, processing and classification techniques were developed to evaluate coastal water quality and biological and geologic variables based on remote sensing data from satellite or aircraft. Data on the bio-optical characteristics of diverse U.S. coastal waters were collected. These data are used to validate satellite measurements used for ocean color data products.

### **Ocean Planning Information System (OPIS)—1997 to 2003**

[www.csc.noaa.gov/opis/](http://www.csc.noaa.gov/opis/)

OPIS is the first system to provide the coastal management community in the southeastern U.S. with access to regional georeferenced spatial data and legal information. Major features of the OPIS Web site include an interactive mapping application, marine and coastal spatial data, data and metadata download tools, Federal Geographic Data Committee (FGDC)-compliant metadata, and legislative summary pages, all designed to support regional ocean management. In 2001, OPIS received a Hammer Award, a vice-presidential acknowledgment of projects and people that help government operate more efficiently and effectively.

### **Protected Areas GIS (PAGIS)**

[www.csc.noaa.gov/pagis/](http://www.csc.noaa.gov/pagis/)

The PAGIS project brought compatible geographic information systems (GIS), geographic data management, and Internet capabilities to each of the nation’s 25 Estuarine Research Reserves and 13 Marine Sanctuaries. Through PAGIS, the reserves and sanctuaries also developed

advanced data sets, underwent extensive training, and found innovative ways to make the most effective use of their new data and technological capabilities.

#### **Public Issues and Conflict Management—2001**

The Florida Sea Grant College Program hosted a three-day Public Issues and Conflict Management workshop in April 2001. Aimed at Sea Grant extension agents and coastal resource managers, the workshop was designed to build skills in public issues management, including meeting management and planning, collaborative processes and decision making, and media relations.

#### **Risk and Vulnerability Assessment Tools—2002, 2003**

[www.csc.noaa.gov/csi/projects/assessment-tool.html](http://www.csc.noaa.gov/csi/projects/assessment-tool.html)

As part of the NOAA Coastal Storms Initiative, the Center is developing risk and vulnerability assessment tools for the Florida and Pacific Northwest pilot projects. Local planners within the St. Johns River Watershed in Florida and the Columbia River Watershed in Washington and Oregon use this information to develop coastal hazard mitigation strategies. This project helps protect coastal communities from storm impacts by providing new and improved hazard and weather-related services and data.

#### **Shoreline Data Rescue—1997 to 2001**

[www.csc.noaa.gov/products/shorelines/](http://www.csc.noaa.gov/products/shorelines/)

GIS-compatible shoreline data sets that include high-resolution contemporary and historic shorelines are available from the Center's Web site. The source of the historic shoreline data is NOAA t-sheet charts dating from the 1800s. This information is most frequently used to measure shoreline change.

#### **Southeast Coast and Ocean Margin Program (SEACOM)—2002, 2003**

The Center is leading an effort to enhance understanding of the significant natural resources in the South Atlantic Bight, a region extending from Cape Hatteras, North Carolina, to Cape Canaveral, Florida, out to the edge of the continental margin. The program is investigating significant natural resource areas, compiling this information into a spatial data framework, and working to inform and educate the public about the importance of discovery and management of these resources. The long-term goal is to provide an information foundation that allows managers to maintain economic vitality in the region while sustaining natural resources for future generations.

#### **Topographic Change Mapping—1998, 1999**

[www.csc.noaa.gov/lidar/](http://www.csc.noaa.gov/lidar/)

High-resolution Light Detection and Ranging (LIDAR) measurements of coastal beach topography were made during 1998 and 1999. These measurements can be used for beach change studies and are available to the public.

#### **Tortugas—2000**

The Center provided facilitation services to the Tortugas 2000 Working Group for the Florida Keys National Marine Sanctuary. Center staff designed and facilitated a series of meetings that focused on identifying significant concerns and key interests related to establishing an ecological reserve in the Tortugas area and on developing criteria to be used in evaluating various boundary options for the reserve.

#### **West Continental Shelf, Essential Fish Habitat—1999**

[www.csc.noaa.gov/crs/bhm/wsfl.html](http://www.csc.noaa.gov/crs/bhm/wsfl.html)

This cooperative project examined the nature, distribution, and function of deepwater seagrasses off the west coast of Florida, which represents one of the most extensive seagrass resources in the United States. Towed videography, single-beam acoustics, dive observation, stable-isotope analysis, and benthic sampling were some of the analyses used in this project.

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