

Gulf of Mexico Integrated Science - Tampa Bay Study Data Information Management System (DIMS)



<http://gulfsci.usgs.gov>

Overview

The Tampa Bay Integrated Science Study is an effort by the U.S. Geological Survey (USGS) that combines the expertise of federal, state and local partners to address some of the most pressing ecological problems of the Tampa Bay estuary. This project serves as a template for the application of integrated research projects in other estuaries in the Gulf of Mexico. Efficient information and data distribution for the Tampa Bay Study has required the development of a Data Information Management System (DIMS). This information system is being used as an outreach management tool, providing information to scientists, decision makers and the public on the coastal resources of the Gulf of Mexico.

Components

The data information management system consists of a Web site, which contains a wide range of information and also houses the project's interactive mapping system and its digital library. By making use of an Internet-based system, wide-scale distribution of information is possible. Data sets, reports, maps and presentations are available for downloading. Using these tools, scientists can eliminate repetition of work and time-consuming outside searches, while providing uniform data among partners.



Homepages: Gulf of Mexico Integrated Science Web site, Tampa Bay Study, Suwannee River Basin and Estuary Initiative, Mobile Bay Digital Library, Atchafalaya & Mississippi River Deltas and Galveston Bay Wetlands Inventory Project.

Web Site

The Gulf of Mexico Integrated Science Web site (<http://gulfsci.usgs.gov>) plays a key role in providing information to managers, scientists and the general public about the progress of the Tampa Bay Study. The site provides details on the Tampa Bay Integrated Science Study, along with information on research under way in other coastal areas along the Gulf of Mexico. The Tampa Bay portion of the Web site contains reports, posters, presentations by scientists involved in the study, water-chemistry maps, information about outreach activities, and details about meetings and conferences. The site is also the backbone of the data information management system, serving as the location for the Tampa Bay Interactive Mapping System (IMS) and the Tampa Bay Digital Library.

The three components of the DIMS provide:

- A Web-based multimedia mechanism to provide simplified data and information to decision makers and the general public;
- A geographic information system and modeling component to manage and manipulate spatial data, including an interactive mapping system;
- A database to manage, manipulate, and catalog non-spatial data;
- A Web-enabled query system for display and delivery of USGS integrated science program efforts and information on research study sites.

Digital Library

The Tampa Bay Digital Library was developed by the USGS National Wetlands Research Center (NWRC) as a Web-based clearinghouse for scientific data related to the assessment and management of Tampa Bay. When monitoring the health of the bay, natural resource managers make use of a variety of data, such as historical depictions of the estuary, habitat analysis, shoreline change, and biological processes. The digital library centralizes this information on the project Web site for scientists, natural resource managers, and the public. Users can access comprehensive geological, ecological, and water-quality data that are required to make decisions about the future health of the estuary. Information is indexed by keyword and data type, allowing visitors to locate resource materials quickly. The digital library contains data, reports, and images tracing the history of Tampa Bay. The following types of information can be viewed and downloaded:

- documents
- maps
- spatial data
- tabular data
- Web resources
- presentations
- photographs
- posters
- metadata
- aerial photographs
- animations



Tampa Bay Digital Library search pages and results page.

Interactive Mapping System

The Tampa Bay Interactive Mapping System (IMS) is a Web-based geographic information system (GIS) used to store, analyze, and display spatial data pertaining to Tampa Bay. Spatial data contain geographic information that can be mapped. Because GIS on the Internet provides a much more dynamic tool than a static map display, Web users can navigate around maps, overlay different data, query the database, and print maps. When users access the IMS, they will see a map that provides an overview of the project area. Users can choose from the four study sites and zoom in to see details on segments of the study, such as habitats and land-use patterns. Data from different aspects of the integrated science study can be layered on top of each other so users can create their own maps. In addition, they can download information and do their own analysis.



Tampa Bay Interactive Mapping System (IMS) portal page.

Goals

The key goal of the DIMS is to provide tools and resources to assist scientists and managers who work directly in Tampa Bay. This Web site provides the foundation for access to knowledge and information from all USGS Gulf of Mexico estuary programs and other efforts pertaining to the Gulf of Mexico and its coastal zone. The information system will expand and evolve as information from other Gulf of Mexico projects is compiled.

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