

Final Report

**Workshops to Establish a Framework for Cooperative Studies
Between Gulf Coast State Surveys and the USGS**

Prime Assistance Award #03HQGR0072

**State Geological Surveys of
Alabama, Florida, Louisiana, Mississippi, and Texas**

GEOLOGICAL SURVEY OF ALABAMA

FLORIDA GEOLOGICAL SURVEY

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

LOUISIANA GEOLOGICAL SURVEY

LOUISIANA STATE UNIVERSITY

MISSISSIPPI OFFICE OF GEOLOGY

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

BUREAU OF ECONOMIC GEOLOGY

THE UNIVERSITY OF TEXAS AT AUSTIN

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Background

The Director of the U.S. Geological Survey (USGS), Dr. Charles Groat (recently retired), and the state geologists of the Gulf Coast States of Alabama, Florida, Louisiana, Mississippi, and Texas have long recognized that there are many common interests among the state and federal geologic surveys in this region. Coastal erosion, tropical storm effects and response, wetlands loss, coastal aquifers, subsidence, changes in sea level, sand resources, and the impacts of development on the coastal zone are a few of the many issues. The individual state agencies and the USGS each have their own defined areas of responsibility, but the commonalities are overlapping and differences do not preclude collaboration. The collaborative studies envisioned by the USGS and the surveys would be consistent with the USGS Plan for a Comprehensive National Coastal Program and the Coastal Zone Program in the Gulf Coast.

Meetings among the states began in 2001, and a formal consortium of all Gulf Coast Geological Surveys was formed. Limited funding made it difficult for states to continue their collaborative efforts at an adequate level of activity, and the USGS was asked to provide funding to encourage these promising beginnings to a more integrated approach to studies of the Gulf of Mexico coastal zone.

In 2002 it was agreed that the USGS would provide modest support to the geological surveys of the Gulf Coast states to hold a series of workshops that would facilitate improved interstate communication and collaboration, with the objective of future collaborative studies among the states and potentially between the states and the USGS. With the support of the Director of the USGS, this project was established. For the purposes of accounting and project administration of the grant, the Texas geological survey, the Bureau of Economic Geology, agreed to be the recipient of the prime assistance award (#03HQGR0072) and to provide subrecipient awards to the other state surveys. The purpose of the funding was to enable the State Geologists or their representatives to meet in several workshops (described below). The project was awarded in February 2003 to the Bureau of Economic Geology, and subrecipient agreements were soon in place with the other Gulf state surveys.

Workshops and Other Meetings

The overall objective of the workshops was to establish a framework for cooperative studies. In order to establish this framework, discussions were held regarding technical priorities, capabilities, and approaches and avenues for funding that would support collaborative work. The USGS participated in one of these workshops in Mobile, Alabama and in other informal meetings in Washington, D.C. The state surveys also had individual meetings with representatives of the USGS that were very helpful, as well as episodic and on-going discussions with other state and federal agencies such as the Minerals Management Service and the U.S. Army Corps of Engineers. Representatives of the state surveys also met among themselves or with the USGS during biannual meetings of the Association of American State Geologists (AASG). Although the AASG-related meetings are not directly part of this project, the discussions of common Gulf Coast issues were stimulated by this project.

Early in the discussions, it was agreed that Dr. Don Oltz, the Director of the Alabama Geological Survey, would be the leader of the workshops. The workshops were all held at a meeting facility in Mobile, Alabama. Upon the retirement of Dr. Oltz, the Gulf Coast state representatives asked that the new Director of the Alabama Geological Survey, Dr. Nick Tew, be the leader of the workshops. All of the participants in these workshops very much appreciate the many courtesies, workshop coordination, and logistical support provided by the Alabama Geological Survey. Key accomplishments of the workshops and other meetings are described in the following pages.

Gulf Coast Geological Surveys Consortium White Paper

The Gulf Coast states issued a “white paper” that laid out the common issues facing the states and the need to conduct collaborative studies. This paper captured in summary form the main points raised in many of our discussions. The white paper pointed out that the Gulf Coast states share:

- A common set of coastal and near-shore environments, processes, and natural resources that know no political boundaries.
- A burgeoning coastal zone population
- Intensive land and resource development
- Threats due to tropical storms and other natural processes
- Issues related to management and protection of critical habitats

It was posited that the “Consortium of Gulf State Geological Surveys provides a vehicle to link programs from all five state surveys, a platform for joint cooperative investigations, and a mechanism to facilitate exchange of geological and other scientific data.” An active integrated consortium would facilitate sharing of technical expertise and experience. “Coordination, collaboration on technical studies, and outreach are principal goals of the consortium.”

The white paper also emphasized that the Gulf Coast is a critically important part of the nation's economy and the nation's environmental resources:

- The region is experiencing rapid population growth and is already home to about one-sixth of the nation's population; populations in coastal counties will increase on an average of more than 20% in the next 20 years.
- Gulf Coast ports handle about 45% of all export-import tonnage, which includes the majority of the nation's crude oil imports.
- Gulf of Mexico Outer Continental Shelf oil and gas leases produce 72% of U.S. offshore oil and 97% of U.S. offshore natural gas.
- Gulf Coast wetlands make up about half of the nation's wetland area, and 75% of the migratory waterfowl in the U.S. utilize Gulf Coast wetlands.
- Gulf Coast production of shell and finfish accounts for approximately 40% of the total U.S. commercial fisheries.

Consortium members reviewed the USGS' Gulf of Mexico Integrated Coastal Science Program elements, values, and problems, and it was clear that many of the goals of this program are consistent with the goals of the consortium. Therefore, the Consortium of Gulf State Geological Surveys proposed a collaborative effort with the USGS that "recognizes the continuity of the natural systems of the Gulf, the technical and economic benefits of improved coordination and communication, and the common issues of the Gulf of Mexico that all five states and the USGS must address."

The white paper recognized the uniqueness each survey, but also the many common interests and needs that transcend state boundaries. Responsibilities such as provision of data and analysis related to the impacts of tropical storms, long-term shoreline change, status and trends of wetlands, impacts of sea-level rise, coastal zone energy and mineral resources, and coastal zone aquifers were identified as being common to all or most of the state surveys. Because of this, regional cooperation in the development of consistent Gulf-wide data was identified as a priority. Among issues the states hoped to address collaboratively were:

- Geologic framework studies of sand resource availability and economics.
- Coastal zone and shoreline maps illustrating key criteria (e.g., shoreline types, hurricane vulnerability, coastal geohazards, etc.).
- Characterization of coastal ground water resources.
- Geologic controls of wetland change and habitat distribution.
- Sediment budgets, processes, and sediment distribution in bays, estuaries, and near-shore environments.

Federal Support for Gulf Coast Collaborative Studies

Each of the state surveys has a somewhat different organizational structure and funding model, but it was recognized that collaborative studies among the states and between the states and the USGS requires federal support to enable meaningful integration and substantive results. The state survey- USGS collaboration is important because it brings together the strengths of the state and federal entities. Since the responsibility of

regulating land use and allocating water resources resides primarily with the states, the collaborative efforts, will help not only in understanding human impacts, but also in the management of natural resources, the mitigation of impacts, and the development of decision support systems. State surveys each have somewhat unique responsibilities to respond to state-specific needs and issues, but all have a long history of collaboration with the USGS. The state surveys are an essential bridge to the needs of State agencies, local communities, NGOs, academia, and the private sector. It was felt that a collaborative effort is justified because:

- Gulf Coast natural systems, hazards, and environments extend across political and jurisdictional boundaries,
- The economies of the Gulf States and the Nation depend on the facilities and resources of the Gulf Coast region,
- Limited state finances and diverse needs require better utilization of available technical and staff resources to develop consistent, coherent data and analyses for responsible development, environmental management, and hazard mitigation,
- Improved coordination and communication on common issues will save money, jobs, and resources, promote efficiencies, and preclude duplication of effort, and
- Data on this dynamic coastal environment needs to be frequently updated to evaluate and respond to changing conditions.

At workshops and other meetings in 2003, representatives of the state surveys began to describe the key elements of legislation that could provide the necessary support to a federal-state partnership to better address natural hazards, and the environment and natural resources of the Gulf Coast. Some state survey representatives began discussions with their federal Congressmen, and there was considerable interest and support for the concept. There also, however, was the guidance that the current political climate and budgetary realities were such that the program we envisioned was unlikely to be successful in the near-term.

Summary

The state geologic surveys of the Gulf Coast, Alabama, Florida, Louisiana, Mississippi, and Texas, very much appreciate the support of the USGS and Director Charles Groat. The workshops were very useful in enabling the states to meet to discuss common issues and needs. We have formed a consortium and have begun building a closer relationship that may lead to collaboration on specific projects of common interest. We have also laid the groundwork for establishing a Gulf Coast-wide program if opportunities for federal funding should arise. The workshops reinforced our desire to work collaboratively, and emphasized the need for a collective approach to issues that transcend political boundaries.