

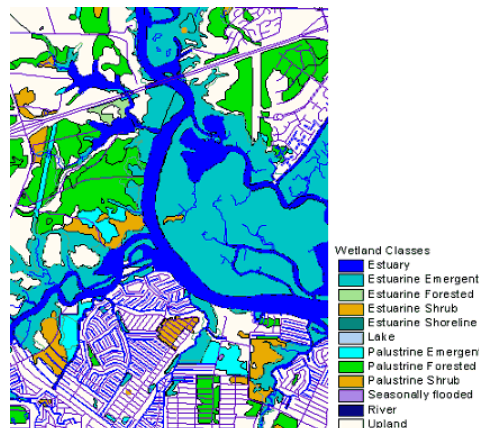
SERVICES

- Needs Assessment
- Data Development
- Data Integration
- Spatial Analysis
- Watershed Assessment
- Change Detection Analysis
- Wetland Impact Modeling
- Wetland Restoration Mitigation

 U.S. General Services Administration

The Problem:

Mississippi Department of Marine Resources has responsibility for reviewing and issuing permits to fill and develop wetlands in the coastal areas within its jurisdiction. Development pressures are accelerating and program staff faces the challenge of approving permits without knowing the cumulative impacts of development on important wetland functions.



The Solution:

GDM developed a watershed assessment for coastal counties to identify key resources and wetland functions that are impacted or in danger of being impacted by cumulative effects of development.

Approach

- Needs Assessment to determine data requirements for base mapping and GIS applications.
- Developed 1:24,000-scale USGS Digital Line Graph hydrography, transportation, and boundary data for DMR's GIS base map needs and for input to the watershed assessment.
- Applied EPA Synoptic Approach for prioritizing limited agency resources among subwatersheds.
- Developed wetland delineations based on a preliminary assessment of wetland functions.
- Integrated DMR permit data with land use from recent satellite imagery, water quality monitoring data, protected resource areas (oysters, coastal preserves, sensitive habitats, reefs), land use zoning, growth projections, and water use.
- Prioritized watersheds based on cumulative impacts, habitat values, habitat fragmentation, optimal sites for restoration and improvement, water quality values, and storm water mitigation values.
- Developed spatial models of the wetlands assessment that can be adapted to new data and permit priorities.
- Developed graphics and maps to assist with stakeholder involvement, public education, and communication

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