

## Coastal Zone Management Program—Enhancement Grant Assessments and Strategies

## COASTAL HAZARDS

## State Assessment and Strategy Overview

The Coastal Zone Enhancement Program, authorized under the Coastal Zone Management Act (CZMA), encourages states and territories to conduct self-assessments of their Coastal Management Programs and develop strategies to improve management of the following areas: wetlands, coastal hazards, public access, marine debris, cumulative and secondary impacts, special area management planning, ocean/Great Lakes resources, energy and government facility siting, and aquaculture. Every five years, states assess their management of all nine areas and develop enhancement strategies for their highest priority issues. The assessments highlight past successes and identify needs that will help improve coastal resource management.

We hope these summaries will be used to generate discussion and new ideas, target existing products and services, guide new project development in NOAA and the states, and promote partnerships and information sharing. Please use the contact information at the end to follow up with any ideas or questions.

## Assessment Findings and Recent Trends

State programs ranked the relative level of threat presented by different types of coastal hazards. Flooding, erosion, and storm surge all ranked as the highest risks. Sea level rise was considered high risk by 8 programs and medium risk by 14. Other risks varied geographically; for

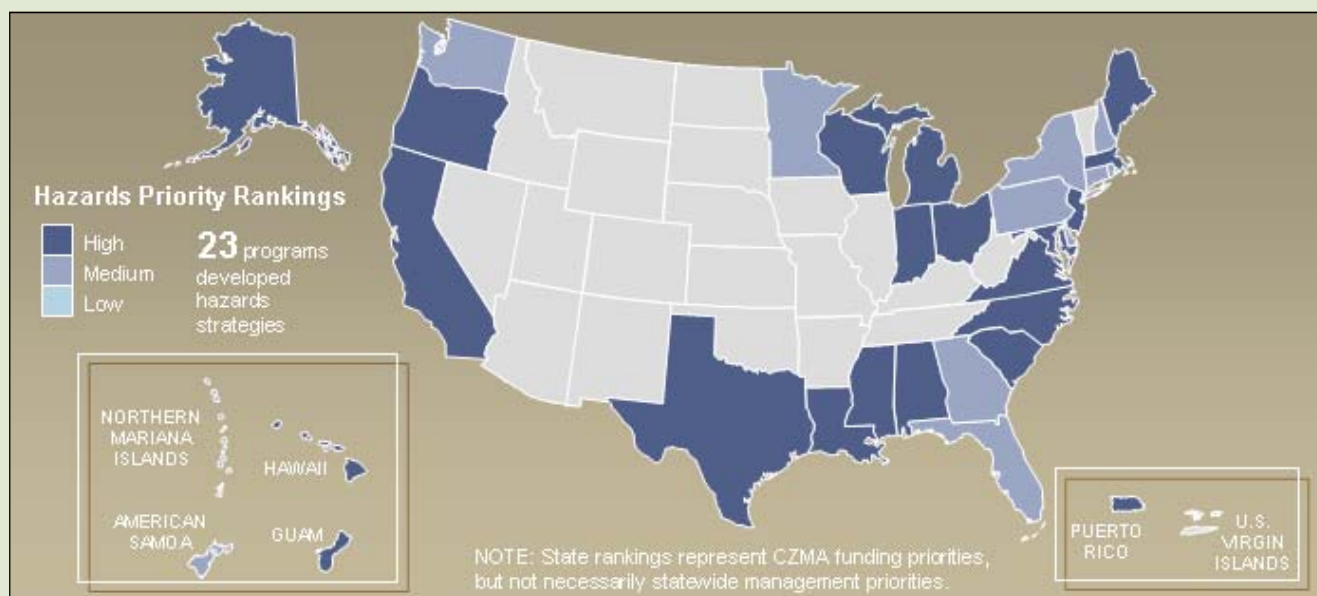
example, only west coast states and islands rated geologic hazards (earthquakes and tsunamis) as a high risk. States in the Gulf and Southeast, and the island programs, all ranked risks from hurricanes as high.

Since 2001, more programs made improvements to GIS and mapping, hazard mitigation plans, and education and outreach than other issues. Four of five Gulf of Mexico states changed policies for repair and rebuilding of damaged coastal structures. Island programs focused on permit compliance and local hazard mitigation planning.

## Primary Needs and Information Gaps

State Coastal Zone Management Programs were asked to identify their primary needs and information gaps for coastal hazards. The following is a list of the most commonly identified needs:

- **State and Local Hazard Planning:** Needs include post-disaster recovery plans, proactive local mitigation plans, guidance and training to local officials for shoreline protection ordinances, and clarification of interagency coastal hazards
- **Shoreline Change Studies:** States in all regions identified a need for shoreline change research and monitoring; two areas with very different coastlines (*California/BCDC and Indiana*) identified a need to establish geodetic and water level benchmarks to monitor shoreline change



- **Mapping:** Updated Flood Insurance Rate Maps (FIRMs), identification of high vulnerability areas, GIS maps of levees (LA) and evacuation routes (MS), integration of map data into building codes, local plans, etc.

## Recent Successes

For most state coastal management programs, 2005-2006 was the fourth cycle of self assessments and strategy development. Below are some past examples that demonstrate successes in managing coastal hazards:

- **Maryland** developed *Shoreline Changes Online*, an update of digital shoreline positions and calculations of linear rates of shoreline erosion. The State now analyzes site-specific erosion rate information in its review of shoreline stabilization applications. Counties use the data to calculate erosion-based setbacks, and to determine the suitability of non-structural shoreline erosion control methods in lieu of requested structural projects. Additionally, the data is used to develop local government hazard mitigation plans required by the Disaster Mitigation Act of 2000.
- **Washington** initiated the Coastal Erosion Management Study to address Puget Sound coastal erosion, the impacts of shoreline armoring, and policy alternatives to minimize the adverse effects. The study recommended policy alternatives, including alternatives to traditional shoreline armoring, which were incorporated into the Shoreline Master Program Guidelines Rule adopted in 2003.
- **Hawaii** and all four counties within the State have completed and adopted multi-hazard mitigation plans, which cover potential hazards from hurricanes, earthquakes, tsunamis, floods, wildfires and lava flows. The plans for the Counties of Hawaii and Kauai were informed by risk and vulnerability assessments conducted with CZMA funding.

## Promising Strategies for 2006–2010

As part of the State Enhancement Grant Program, state coastal management programs are asked to develop strategies to address their high priority resource management issues identified in the assessment. Overall, 11 programs will focus on hazard mitigation planning over the next five years and 10 programs will enhance beach and dune protections. Below are a few examples of strategies proposed for coastal hazards:

- **Michigan** will adopt new guidelines for protecting certain Critical Dune Areas. The State will complete a Critical Dune Decision Support Tool that will enable field inspectors to consistently assess development impacts on gently sloping dunes. The coastal program

will also adopt new guidelines to incorporate the impact assessments into dune management procedures.

- The **San Francisco Bay Conservation and Development Commission (BCDC)** plans to conduct research on human-induced climate change and identify the major impacts on the Bay. The commission will inform stakeholders of the potential impacts of and approaches to planning for climate change and develop a regional planning approach to address impacts. The Bay Plan policies will be updated to account for the impacts of climate change on the Bay.
- **Texas** is initiating a natural hazard vulnerability analysis and will examine the adequacy of its framework for mitigating natural hazards. The coastal management program will review relevant plans (e.g. the state Mitigation Plan and Coastal Management Program) and analyze the geographic relationship between program boundaries and potential hurricane impact areas; assess regulatory regimes; and look at physical and social vulnerabilities of coastal populations. Project results will be presented to the Coastal Coordination Council for action, including possible legislation to allow coastal counties to establish erosion-based development setbacks.
- The **Ohio Coastal Management Program** will be developing a Lake Erie Shore Erosion Management Plan to aid local communities and individual property owners in addressing Lake-based erosion and flooding concerns, while also supporting the restoration of the shore and nearshore habitats and resources along Ohio's Lake Erie Coast. This plan will be used to update the Shore Structure Permitting and Coastal Erosion Area regulatory processes and to support local planning efforts.



Damage from Hurricane Katrina in Plaquemines Parish, Louisiana

Questions, ideas or for more information:  
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