Coastal Connections:
The Toolbox for Moving Forward

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NOAA Coastal Strategy

Purpose: Focus future NOAA investments by integrating existing efforts and leveraging skills across the agency to effectively address the highest priority issues identified by coastal managers.

Goal: Increase the resilience of coastal environments and communities by protecting and restoring coastal ecosystems and their services and ensuring sustainable coastal communities.
Drivers for Development of NOAA Coastal Strategy

• OMB in FY08 and FY09 called for:
  • the development of a "NOAA strategic plan for its coastal mission" to address NOAA’s "lack of cohesive and collective strategic mission and management structure" among NOAA’s ocean and coastal programs.

• NOAA Executive Council and Executive Panel request for near-term deliverables

• SES Summit endorsed the Coastal focus

• NOAA’s Priorities in Addressing National Challenges (developed as briefing materials for the transition to the Obama Administration)
NOAA Role: Coastal Mandates

- Coastal Zone Management Act, including the Coastal and Estuarine Land Conservation Program
- National Sea Grant College Program Act
- National Marine Sanctuary Act
- Coral Reef Conservation Act
- Harmful Algal Bloom and Hypoxia Research and Control Act
- Magnuson-Stevens Reauthorization Act
- America COMPETES Act
- Estuary Restoration Act
- Inland Flood Forecasting and Warning System Act
- Marine Protected Areas Executive Order
- Coast & Geodetic Survey Act
- National Weather Service Organic Act
- Hydrographic Service Improvement Act
- Ocean and Coastal Mapping Integration Act
- Coast Guard Carriage Requirements
- International Hydrographic Organization S-57, S-52, and upcoming S-100 Standards
NOAA Coastal Strategy

Developed by 5 key NOAA coastal offices

- NOS Office of Ocean and Coastal Resource Management
- NOS Coastal Services Center
- OAR National Sea Grant College Program
- NOS National Centers for Coastal and Ocean Science
- NMFS Office of Habitat Conservation
- Effort now includes NESDIS, NWS
Addressing the Crisis on the Coast: NOAA’s Coastal Strategy

Priorities:

• Reduce vulnerability of coastal communities and ecosystems to hazards and climate change

• Protect and restore coastal ecosystems in the face of competing uses

• Protect and restore water quality and quantity to sustain ecosystem services and avert human health threats

“Because global warming may result in a substantial sea level rise with serious adverse effects in the coastal zone, coastal states must anticipate and plan for such an occurrence.”

Coastal Zone Management Act, 16 U.S.C. § 1451(I)
Coastal Communities: Vital to U.S. and International Economies

- 57 percent of the U.S. national gross domestic product is contributed by coastal watershed counties.
- Coastal counties contain 53 percent of the nation’s population—but account for only 17 percent of U.S. land area (excludes Alaska).
- Coastal habitats help reduce impacts of floods, storms, and climate change on coastal communities by absorbing water, wave energy, and other stressors.
>$1 Billion Weather Disasters
1980 – 2007

Dollar amounts shown are approximate damages/costs in $ billions.
Location shown is the general area for the regional event. Several hurricanes made multiple landfalls.
Additional information for those events is available at NCDC WWW site
www.ncdc.noaa.gov/of/reports/billionz.html

The U.S. has sustained 78 weather related disasters over the last 28 years
with overall damages/costs exceeding $1.0 billion for each event. 66 of the
disasters occurred during or after 1990. Total costs for the 78 events were
000 billion using a GNP inflation index.
Capabilities and Partnerships

**Capabilities**
- Living marine resource management
- Data and Information
- Land acquisition and restoration
- Support direct resource management and policy development
- Training, outreach, capacity building
- Value-added tools and assessments
- Fundamental geospatial infrastructure

**Partners**
- Government cooperation: Local, State, Federal, Tribal, Territories
- Regional Governors’ Associations/Alliances
- Academia
- Coastal mapping community
- U.S. Integrated Ocean Observing System (IOOS) Regional Associations
- Non-governmental organizations
- Trade associations
- Chambers of Commerce
- Regional Climate Centers
Demand for NOAA Products and Services

- Increase forecast and predictive capability (e.g., sea level rise, HAB/hypoxia/pathogen forecasts, economic forecasts) and communicate uncertainties
- Increase accessibility to authoritative information and data
- Transition research results to operational applications and services
- Increase capacity building (e.g., planning tools and decision support services, targeted training for state, local, and other decision makers)
- Foster education and outreach for an environmentally literate society
- Coordinate planning and management (e.g., habitat protection/restoration, land acquisition)
- Offer incentives for partners and customers to use science-based tools and information to make better decisions (e.g., national goals/policy; program evaluation; management assistance; competitive grants)
Gaps

• **Science**
  • Predictive capability (sea level rise; Great Lakes level fluctuation; HABs/hypoxic/pathogen events)
  • Integrated ecosystem assessments
  • Social science – social and economic

• **Capacity Building**
  • Address land use and adaptation to climate change
  • Assess and implement regional priorities for habitat protection and restoration
Gaps

- **Education and Extension**
  - Expand the scope of education and extension

- **Management**
  - National coastal policies and incentives for states
  - Regional governance
  - Landscape level protection
  - Coastal habitat restoration
  - Review of coastal development projects for fisheries habitat impacts
Toolbox: Marine Spatial Planning

• Marine Spatial Planning:
  *Process by which marine space is allocated to achieve multiple objectives*

• NOAA’s Role:
  • Support to states and ROCs
  • Provide ecosystem, observations, and human use data
  • Develop decision support tools and models
  • Regional demonstrations
  • Training and capacity building
  • Interagency coordination
  • Stay tuned- future roles will be shaped by CEQ Ocean Policy and MSP Taskforce
Toolbox: Marine Spatial Planning

Coastal Strategy Examples

• Coastal Use Atlas
  • OCRM/MPAC
• Multipurpose Marine Cadastre
  • CSC/MMS
• Integration of NOAA data, tools, and training for MSP
FY09 Deliverable
Sea Level Rise Visualization Tools

• Coordination between NOAA, USGS, State of Delaware and other stakeholders
• Develop Adaptation Strategy to address sea level rise in Delaware
• Visualization tool developed for Wilmington
• Expanding the tool to the entire state
Broadening Strategy beyond 5 core coastal offices with expertise or geographic interest in the management of coastal areas.

10 Strategic Deliverables to focus near-term delivery towards achieving priority objectives.
Coastal Connections: How You Can Play

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