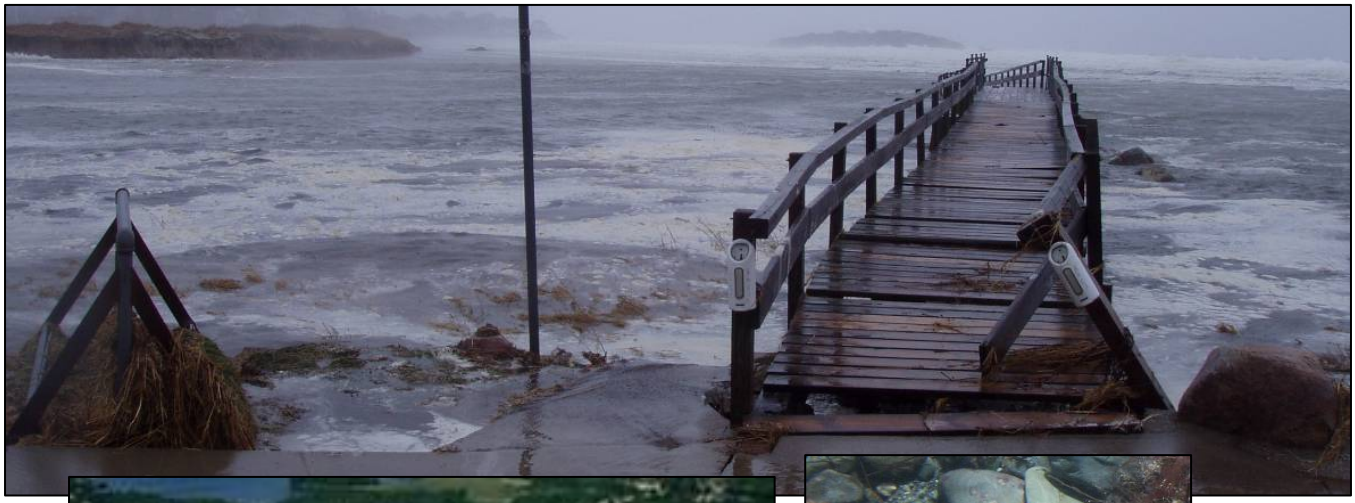


NEW ENGLAND GOVERNORS'

COAST AND OCEAN ACTION PLAN (2007)

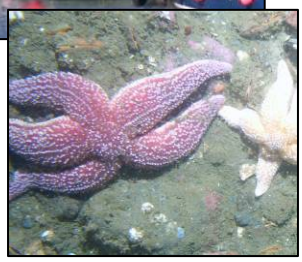
NORTHEAST
REGIONAL
OCEAN
COUNCIL

New England Governors

Governor	Governor	Governor	Governor	Governor	Governor
John Baldacci	**Deval Patrick**	**M. Jodi Rell**	**John Lynch**	**Donald L. Carcieri**	**Jim Douglas**
Maine	Massachusetts	Connecticut	New Hampshire	Rhode Island	Vermont
Chairman	*Vice Chairman*				

Cover Photos (left to right): Massachusetts Office of Coastal Zone Management (MACZM), Connecticut Department of Environmental Protection-Office of Long Island Sound Program, and U.S. Geological Survey/MACZM.

All Other Photos: MACZM unless otherwise noted



USGS and MACZM

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INTRODUCTION: REGIONAL COASTAL AND OCEAN GOVERNANCE

The voluntary establishment of regional ocean councils, developed through a process supported by the National Ocean Council, would facilitate the development of regional goals and priorities and improve responses to regional issues. Improved coordination of federal agencies at the regional level would complement the establishment of regional ocean councils, improving the federal response to state and local needs while furthering national goals and priorities. The development and dissemination of regionally significant research and information is imperative to meet the information needs of managers and support ecosystem-based decisions. - U.S. Commission on Ocean Policy, 2004

In December 2004, President Bush issued the 2004 U.S. Ocean Action Plan as a federal initiative to begin implementing the recommendations and strategies expressed in the U.S. Commission on Ocean Policy's final report, *An Ocean Blueprint for the 21st Century*. The Ocean Action Plan and the Ocean Blueprint emphasize the critical importance of developing new institutions and partnerships for regional coastal and ocean governance.

At the 2005 Annual Meeting of the New England Governors and Eastern Canadian Premiers, Rhode Island Governor Donald L. Carcieri proposed the creation of a regional ocean partnership for New England. Resolution 29-03 (2005) emerged from this meeting establishing the Northeast Regional Ocean Council (NROC), consisting of delegates from the six New England States and ex-officio members from U.S. federal agencies. In 2006, the New England Governors and Eastern Canadian Premiers issued Resolution 30-1 calling for the creation of the Oceans Working Committee (OWC) to "foster international cooperation and collaboration on all aspects of marine and oceans-related research and development, education, exploration, observation, and oceans management." The OWC is comprised of representatives from NROC and Canadian federal and provincial officials working on regional issues. The Canadian Co-Chair of OWC, Mike Warren of Newfoundland/Labrador, attended the NROC Ocean Congress (discussed below) in May 2007 and has been working with the U.S. OWC Co-Chair, Ames Colt of Rhode Island, to establish the OWC agenda for bi-national collaboration between the northeast U. S. and Atlantic Canada on regional coastal and ocean governance.

Northeast Regional Ocean Council

NROC facilitates the development and implementation of coordinated and collaborative regional goals and priorities. Coordinated and collaborative regional coastal and ocean management goals and priorities will improve governmental and socio-economic responses to issues and challenges that are inherently regional and to increase accountability of governmental actions. Siting of renewable ocean energy facilities (wind, wave, and current) and energy infrastructure (e.g., cables and pipelines), maritime transportation and security, marine mammal protection, integrated ocean observing systems, coastal habitat restoration, and coastal and ocean mapping all benefit from improved coordination or development of regional best practices.

NROC partners directly with the President's Ocean Policy Committee and its Subcommittee on the Integrated Management of Ocean Resources (SIMOR) to communicate and collaborate on the northeast region's needs to the U.S. federal government. Together they address issues of national scope in the northeast such as implementation of the 2004 U.S. Ocean Action Plan.

SIMOR's 2006 work plan cites the following desired actions for the New England region:

- Support the establishment of place-based activities and collaborative decision making in the New England region with the development of best practices and lessons learned.

- Support the . . . establishment of a Northeast Regional Ocean Council — a state-led effort proposed by Rhode Island — by identifying possible geographic areas that could benefit from improved federal coordination and working with states and local government, as well as non-governmental entities.

SIMOR has designated the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of the Interior to be the lead federal agencies to NROC.

The New England Governors each appoint two delegates to NROC. In the fall of 2007, the Council agreed to add six seats for federal agencies in order for NROC to be a true federal – state partnership in ocean management (see appendix).

Governors' Coast and Ocean Action Plan

NROC identified the following four priority issue areas:

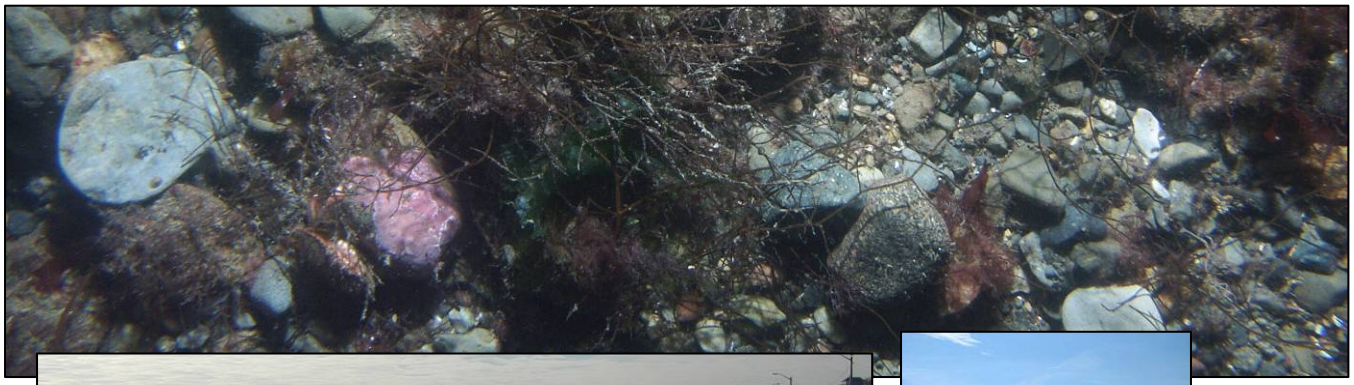
- Ocean and coastal ecosystem health;
- Render New England a "Coastal Hazards Ready" Region;
- Ocean energy planning and management; and
- Maritime security.

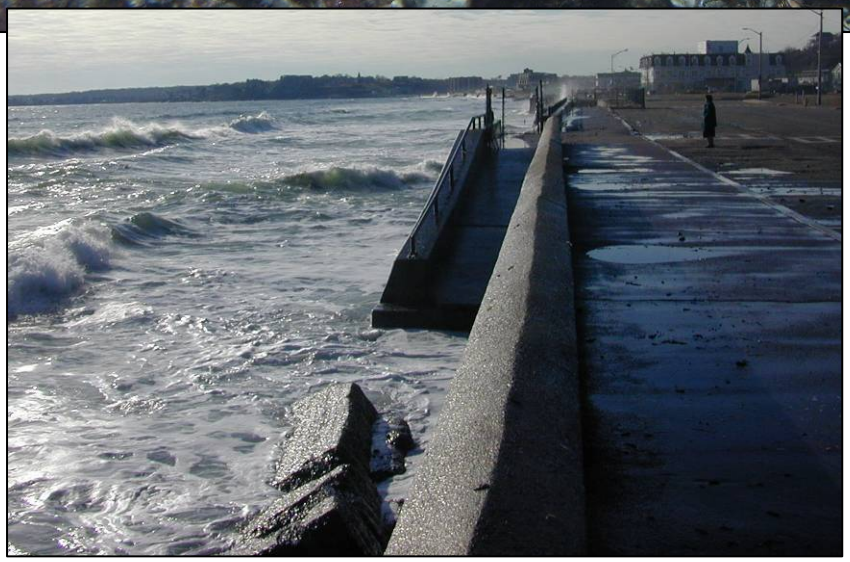
On May 24, 2007, NROC held an Ocean Congress to solicit input about actions to accomplish within the four priority areas. Over 60 representatives of U.S. and Canadian organizations attended this highly successful workshop including:

- Federal agencies;
- State agencies, including all of the New England Coastal Management Programs as well as natural resources, ocean energy planning, and public safety agencies;
- Regional ocean programs representing the interests of ocean observing systems, subregional ocean councils, and ocean science;
- Nonprofit organizations; and
- Universities.

Input from the Ocean Congress and recommendations of the Council are the foundation of the Governor's Coast and Ocean Action Plan. The following sections describe the goal, context, key issues, and possible responses for each of the priority areas. NROC has identified a state and federal agency lead for each of the priority areas. Standing Committees will be created and each committee will develop annual work plans, priorities, and schedules.

PRIORITY AREAS OF THE NORTHEAST REGIONAL OCEAN COUNCIL





Cape Wind Associates

Ocean and Coastal Ecosystem Health

Goal:
The importance of ocean and coastal ecosystem health is recognized as critical to the long-term sustainability of our region, and all levels of government have access to and utilize comprehensive information to manage ocean and coastal resources.

Context:
The Northeastern U.S. coast is a rich and diverse place, from the shallow sea of Long Island Sound to the beaches of Cape Cod, and the rocky shores and complex circulatory patterns of the Gulf of Maine. These ecosystems have abundant resources and have supported coastal communities for generations; for example, fish landings and associated activities contribute over $800 million annually to the regional economy. These valuable ecosystems are vulnerable. The impacts of increasing human uses including many new industrial uses, and the effects of fractured management are showing in degraded water quality, depleted fish stocks, and damaged habitat, as evidenced by documented "dead zones" in the Long Island Sound and decreased anadromous fisheries in the Gulf of Maine. The New England States have also identified the links between human activity on the land with the health of our coasts and estuaries with each state having a NOAA-approved coastal non-point source pollution plan.

The U.S. Commission on Ocean Policy identified ecosystem-based management (EBM) as necessary to protecting the ecological and economic value of coastal ecosystems. This management approach emphasizes ecological rather than political boundaries, since fish and pollutants do not recognize different jurisdictions, and seeks to incorporate scientific information, adaptive management, protecting biodiversity, and participatory, understandable governance into public sector and eventually private sector, decision-making. As our oceans come under increasing stress from the effects of climate change, it is essential to move towards an EBM approach that can utilize regional information and better protect intact, healthy marine ecosystems. The keys to successful EBM are: possessing adequate information to understand the interrelated nature of ocean and coastal systems, linking that information through modeling and analysis to management and policy decisions, and creating the governance structures to carry-out and sustain those decisions.

Literally thousands of people are working to protect and restore ocean and coastal ecosystem health in the Northeastern U.S. As such, we are uniquely positioned to take a regional ecosystem approach by applying experience from the Long Island Sound Study, Gulf of Maine Council, and the region's scientific and policy expertise. The issues surrounding ocean and coastal ecosystem health are pervasive across all the ocean management issues identified as NROC priorities. Since there are so many people, agencies, and organizations already working on ocean and coastal ecosystem health, NROC's role should be to enhance communication and collaboration among these parties, advocate for what is collectively determined to be the highest priority regional actions, and to help articulate a common vision for management and restoration.

The states have identified three areas of focus within ocean and coastal ecosystem health: (1) linking observations to management decision-making, (2) enhanced data collection, integration, and dissemination, and (3) better governance, coordination, and communication. NROC should lead efforts that improve regional data and information gathering, apply regional data and information to management decisions, and improve regional governance and coordination.

Key Issues:

- There is a strong connection between land uses and ocean and coastal ecosystem health.
- EBM is a key to resource management.
- Governance over resources and uses is fragmented making coordination difficult.
- Integrated assessment of ecosystem status is needed to better react and understand potential impacts and changes.
- Spatial and spatially-organized databases are central to ocean and coastal management and require an integrated and accessible framework for data collection, organization, and analysis across sectors.

Possible NROC Responses:

- Promote existing regional ocean and coastal ecosystem health initiatives.
- Advocate for enhanced federal-state partnerships by maintaining critical federal programs such as the National Coastal Assessment, and federal support for coastal and marine planning and science, watershed monitoring, and coastal non-point source controls.
- Identify ways to better share data and mapping products and leverage federal resources for seafloor mapping, near-shore and estuary mapping, undersea habitat mapping and classification, and make a request to SIMOR and the White House Committee on Ocean Policy for assistance in this area.
- Participate in a forum to build a conceptual framework representing the key foundational elements of an EBM model for NROC partners.
- Support current mapping and ocean observation initiatives so that a functional, integrated ocean observing system for the Northeast U.S. will emerge expeditiously and cost-effectively. (This response would cut across all NROC priority issue areas.)
- Assist in operationalizing EBM for Northeast coasts and oceans, beginning with development of a statement for adoption by the New England Governors Conference.

Other Regional Responses:

- Expand the Gulf of Maine Ocean Data Partnership to the rest of New England.
- Agree upon ways to measure and report sea-level rise throughout New England.
- Work with state agencies to convene a group to create a mechanism for tracking “environmental events” to better understand coastal dynamics.
- Identify ecologically significant habitats on the basis of habitat mapping programs.
- Coordinate efforts on ocean literacy and education and consider launching a “thankyouocean.com” style campaign.

Render New England a "Coastal Hazards Ready" Region

Goal:

Render New England a "Coastal Hazards Ready" region by providing existing federal, state, and municipal programs with state-of-the-art data and tools to advance planning and response to storms, shoreline erosion, and coastal inundation due to projected sea-level rise from global warming.

Context:

Rising populations and poorly planned development in coastal areas are increasing the vulnerability of people and property to storms, hurricanes, flooding, shoreline erosion, tornadoes, tsunamis, and earthquakes. In addition, climate change may lead to more frequent storms and sea-level rise, both of which increase coastal susceptibility. Not only can natural hazards have devastating impacts on people and property, but they may also have deleterious effects on the environment, particularly sensitive habitats. – U.S. Commission on Ocean Policy, 2004

Sea-level rise is altering New England's coastal shorelines through inundation and shoreline erosion. While erosion rates are reported as an annual rate of change, these annual rates actually map changes caused by periodic storms such as nor'easters and hurricanes. The region has been free of devastating hurricanes since the 1950's. If a hurricane equivalent to the 1938 hurricane struck the New England coast in 2007, it would rank as the sixth costliest hurricane in U.S. history. A number of scientists project that global climate change will increase the severity, if not the frequency, of hurricanes. Recent polls demonstrate that coastal residents are unprepared for hurricanes and underestimate the risks they pose.

New England hurricanes are often accompanied by significant rainfall and riverine flooding that has led to the construction of flood control dikes and levees. The level or protection afforded by these structures is expected to decrease and drainage problems behind dikes should increase as groundwater tables rise because of accelerated sea-level rise.

Science-based forecasts for accelerated sea-level rise over the next 100 years due to global warming are as high as 1.5 meters. Additional sea-level rise is expected due to the melting of land-based glaciers in Greenland and Antarctica with suggestions that a 4-meter rise by 2100 is plausible unless significant steps are taken to reduce greenhouse gases. As sea-level rise accelerates, shoreline erosion rates will accelerate.

Several New England states have experienced significant abnormal inland flooding events (climate change forecasters predicted these types of changes for the region) that have lead to river flooding, loss of life, and major damage to infrastructure. Backwater flooding from undersized culverts under roads causes some of this damage. In addition to roads, undersized culverts connecting embayments to the ocean through barrier beaches are locations where breaching may occur and induce inlet formation, inlet migration, and an ensuing loss of property and structures.

Data such as detailed topographic contours, shallow water bathymetry, and mean high water positions, are universally needed throughout the region to support planning for storm surge, erosion, and inundation due to climate change. A companion to data is the need to develop user-friendly tools to access and analyze data and support management decisions and recommendations. Regional sediment management plans are lacking. Better models exist that would improve surge and storm forecasting (e.g., high resolution atmospheric) and the integration of atmospheric and ocean models/data will yield the most accurate forecasting.

Key Issues:

- The region lacks sufficient data and models to adequately anticipate and respond to storm surge and inundation.
- Data collection efforts should take advantage of potential synergies and economies of scale through a federal-state partnership to acquire such data on a regional basis.
- Infrastructure of tremendous importance to all of the New England region such as highways, rail, and ports are threatened by coastal storms and inundation whose damage would have major and long-term implications for the New England economy and New England's coastal residents.

Possible NROC Responses:

- Identify data acquisition priorities and user-friendly tools needed to support planning for and responses to coastal hazards, including a federal-state approach to leveraging funding. The goal is to acquire the best data and tools for existing federal, state, and municipal agencies to plan and respond to coastal hazards and to become a storm and inundation "ready region".
- Partner with academia, industry, and public agencies to develop a plan for an Integrated Ocean Observing System (IOOS) that supports storm, storm surge, and inundation forecasting and response.
- Promote regional dialogue on broad-scale adaptation strategies for responding to the effects of sea-level rise.
- Encourage the Administration to add the Federal Emergency Management Agency (FEMA) as a SIMOR co-chair or to include FEMA in the federal workgroup for the New England region.
- Collaborate on mitigation strategies for multiple hazards scenarios, including potential for liquefaction from moderate to large earthquakes.
- In consultation with the federal work group, evaluate the need for partnering on a regional basis to implement inventories of coastal structures (e.g., U.S. Army Corps of Engineers beach erosion control studies) and culverts (to identify potential levee breach areas), and the need for regional sediment management plans (to identify sand sources for beach nourishment).

Other Regional Responses:

- Identify infrastructure that is critical to the economy of the region and directly threatened by storms and coastal inundation. (This response would cut across all NROC priority issue areas.)
- Explore approaches to developing and implementing regional sediment management plans, especially where they cross jurisdictions. (This response would cut across all NROC priority issue areas.)

Ocean Energy Planning and Management

Goal:

The planning, siting, authorization, and operation of coastal and ocean energy generation and distribution facilities will be made within a regional strategic context via improved coordination, communication, and responsible stewardship of the public trust, so that these facilities help to meet the region's energy needs as part of a diverse portfolio of energy sources. NROC should recognize and emphasize the states' primary role in approving, denying, or regulating energy or other facilities within state waters.

Context:

As addressed in the 2005 New England Governors' Conference report on the region's future natural gas needs, energy demands in the Northeast continue to grow, and many are concerned that supplies and infrastructure are inadequate to handle them in the future. Over the past several years, a multitude of new projects have been proposed for traditional and non-traditional (renewable and non-renewable) energy facilities in state and federal waters. At this point, planners, managers, and regulators lack the complete information base required to evaluate these projects regionally and, most importantly, they lack an interstate regulatory and governance framework. As a result, the policy framework that has emerged tends to be project specific, and reactive, stemming largely from federal law and federal agency Outer Continental Shelf programs. The siting, construction, and operation of coastal and ocean energy infrastructure in federal and state waters will continue to be fragmented and contentious without better information on the resources and ecosystems that will be impacted and a collaborative strategic management approach among local, state, and federal entities.

NROC recognizes that important distinctions exist between offshore renewable electric generation facilities (wind and tidal), and fossil fuel terminals/transmission facilities such as liquid natural gas or oil terminals, cables, and pipelines. Oil and gas terminals and transmission facilities (including electric cables), by contrast, can be overbuilt or improperly sited, and thus should be allowed to impact coastal and ocean resources only to the extent that they are necessary components of a regional energy strategy. Such a strategy must include an allocation of supply and transmission facilities that meet regional energy needs and appropriately incorporate environmental and climate change considerations.

Adding to the complexity of the regional energy picture are uncertainties concerning the states' role in decisions and investments regarding energy projects in federal waters (e.g., preemption in Energy Policy Act of 2005). Additionally, controversy remains strong regarding how to assess environmental impacts, use conflicts, and safety concerns when siting and designing future coastal and ocean energy facilities.

Because of magnified national and international concerns about the effects of climate change, interest in renewable ocean energy sources continues to grow. The Northeast U.S. has demonstrated strong leadership through the establishment and implementation of the Regional Greenhouse Gas Initiative and other climate change mitigation efforts within each jurisdiction. Renewable ocean energy technologies are still evolving, and there are few commercial-scale installations in the U.S. to evaluate. In addition to details on the short and long-term effects of energy technologies based upon wind, wave, and current, there is a critical need for baseline information on the coastal and ocean environment for which they are proposed, or may be proposed. Core data on bathymetry, seafloor geology and biota, current and hydrodynamics, wind patterns, distribution of natural resources, and current and future uses will fuel the strategic thinking on the siting of facilities where the renewable sources have the greatest potential and so that adverse effects can be minimized or eliminated. Finally, energy facility siting should be conducted on a

regional basis in order to facilitate the selection of commercially viable areas and ensure the protection of significant habitats and uses.

Key Issues:

- Planners, managers, and regulators lack the context and information base to evaluate the impacts of energy projects on the coastal and marine environment and traditional uses.
- The *de facto* policy framework that has emerged in the region is "first come, first served", project-by-project, and reactive.
- Jurisdictional and regulatory tensions exist regarding, for example, the role of the states in reviewing and influencing with projects proposed for federal waters and the limits placed upon states' oversight of projects located in state waters due to Federal Energy Regulatory Commission (FERC) preemption.

Possible NROC Responses:

- Examine and communicate the states' interest in their role in federal authorizations of energy projects in state and federal waters (e.g., FERC, Minerals Management Service Alternative Energy, and Coastal Zone Management Act federal consistency).
- Provide a platform for coordination of data and information acquisition and dissemination for offshore energy planning (e.g., airborne and ship-based remote sensing, habitat classification, and renewable technology).
- Enhance public communications regarding the role of renewable ocean energy sources in a responsible regional energy strategy.

Other Regional Responses:

- Develop marine jurisdictional maps (i.e., cadastres) to clarify in legal and spatial terms, jurisdictional issues. Incorporate current and future coastal and marine uses.
- Coordinate state, federal and other resources to generate or disseminate information critical to an informed regional energy strategy regarding:
  - Seafloors and habitats;
  - Living resources, including fisheries, marine mammals, and avifauna; and
  - Emerging ocean energy technologies.
- Encourage pilot project and research and development zones and collaborative funding of test installations of new technologies.

Maritime Security

Goal:

Create a cohesive, effective, enhanced regional maritime security regime and posture utilizing the resources of the state and federal entities located within New England.

Context:

Maritime security is of major importance to New England and encompasses a number of issues: port and transportation security, food security, vessel and navigation security, and threats to energy infrastructure, existing and proposed. Threats to maritime security have increased dramatically since 9/11/01, and will grow with increased ocean resource depletion, and projected sea-level rise and increased storm damage potential. Attacks and environmental changes that occur will not be confined to individual states or cities but are likely to have major regional effects. Maintaining the integrity of key infrastructure before, during and after a security threat, natural or man-made, is critical to sustaining economic viability for the region.

Within New England, with its vast coastline and attractive terrorist targets such as Boston, Portland, New London, Portsmouth, and Newport, there is an imperative need for better communications, partnership and actual structure to some existing relationships. We need a unified, robust communications system that will effectively serve first responders, military, law enforcement, and decision makers. Such a system remains elusive on the federal front, but employing or testing such systems regionally will better and more rapidly achieve the needs of all involved in responding to security threats. There is also a need for a comprehensive, ocean-planning scheme that addresses specific security concerns for energy facilities and their operation, natural resource extraction, and port, harbor, and vessel operations.

Key Issues:

- A robust regional maritime security structure will promote inter-operability and resilience once an attack occurs. Further, it will promote deterrence if it is known and understood that a strong security plan is in place.
- An expanded, unified communications system will benefit first responders, military, law enforcement, and decision makers in responding to either natural coastal hazards or maritime security threats or incidents.
- Security risks also emerge from global climate change, ocean resource depletion, and other environmental concerns. Any security regime needs to be broad-based, not simply an anti-terror structure.

Possible NROC Responses:

- Convene a regional maritime security action team to examine existing structures and recommend strategy to improve regional security issues, including federal/state/local interaction dialogue.
- Use the Northeast states as "test" environments for piloting better maritime communications equipment and systems.
- Highlight and address navigation concerns with regard to funding for small ports, and developing better regional dredging and sediment management structures. (This response would cut across all NROC priority issue areas.)

Other Regional Responses:

- Identify and map all nearshore at-risk targets (e.g., power plants, ports, energy storage, and hazardous material sites).
- Develop regional response plans for at-risk sites. For example, if regional natural gas infrastructure is destroyed or damaged in one state, how will the region as a whole continue to be supplied with natural gas?

APPENDIX
NORTHEAST REGIONAL OCEAN COUNCIL DELEGATES

State Council Member Agencies:

Connecticut Department of Environmental Protection
U.S. Coast Guard Academy, New London, CT
Maine State Planning Office
Maine Department of Marine Resources
Massachusetts Office of Coastal Zone Management
Massachusetts Executive Office of Energy and Environmental Affairs
New Hampshire Department of Environmental Services Coastal Program
Rhode Island Department of Environmental Management
Rhode Island Bays, Rivers, and Watersheds Coordination Team
Vermont Department of Natural Resources

Federal Council Member Agencies:

Army Corps of Engineers
Department of Agriculture
Department of Interior
Environmental Protection Agency
Homeland Security
National Oceanic and Atmospheric Administration