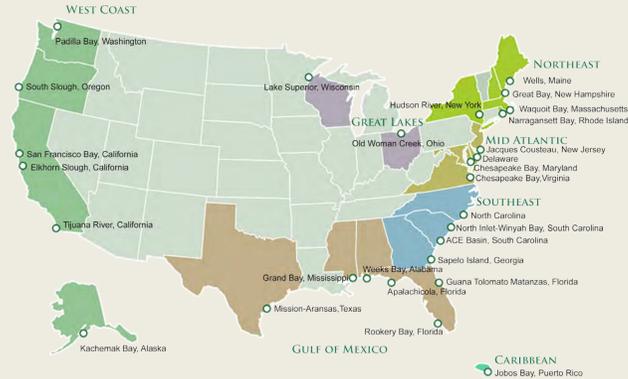


Building Resilience into Protected Coastal Landscapes: National Estuarine Research Reserve Disaster Response Planning

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NERRS: A national network of 28 protected places in the coastal United States



The National Estuarine Research Reserve System (NERRS) is a network of 28 coastal marine protected areas maintained through a unique federal-state partnership. Identified by NOAA's Damage Assessment Remediation and Restoration Program as a NOAA trust resource, the NERRS protect more than 1.5 million acres of vulnerable coastal habitats where research, monitoring, education, and stewardship of these areas improves the understanding and management of our nation's estuaries and coasts.



NERRS Disaster Response Planning (DRP), a retrospective view of federal, state, and local responses to the 2010 Deepwater Horizon oil spill, showed a need for a more coordinated disaster planning effort among the NERRS.

In 2013, in partnership with the Office of Response and Restoration, the Office of Ocean and Coastal Resource Management began investing resources into the development of disaster response plans for the NERRS. This resulted in a pilot effort to develop disaster response plans for each of the five Gulf of Mexico NERR sites and to serve as a model for the entire reserve system.

By 2014, six reserves have approved plans and three are developing plans. Reserves with approved plans are implementing response exercises of those plans with their emergency management community and associated staff member trainings in 2015.



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Historical View of NERRS and Disasters

Historically, the NERRS have experienced a range of disasters or hazards (i.e., Hurricane Katrina, Deepwater Horizon, MV New Carrisa, Mississippi Phosphates, Superstorm Sandy, and others). In each of these instances, NOAA-directed response or recovery plans either were not in place or were not enacted at these NOAA trust resources. Recognizing that previous events provide a valuable set of experiences that can guide future disaster responses, NOAA is supporting disaster response planning for the NERRS.



The NERRS have specific capabilities, resources, and data that the emergency response community could leverage during the different phases of the disaster management cycle (Response—Recovery—Mitigation—Preparation). Some of these include environmental monitoring data, detailed habitat maps, field equipment, facilities and laboratories, training capacity, and knowledgeable staff members. Reserves are well positioned to support their emergency management partners.

NERRS Disaster Response Plans ensure that emergency responders and managers have a clear understanding of a reserve's critical infrastructure, human resources, and equally important natural resources to protect in the event of a disaster. These plans also serve to improve reserve coordination and integration with the local emergency management community.

KEY CONSIDERATIONS FOR RESERVE DISASTER RESPONSE PLANS

Critical Infrastructure



People & Staff



Natural Resources

Building a Disaster Response Model for the NERRS

Plans are designed to guide reserve responses and coordinate response actions with partner agencies during disaster operations. The planning template developed for NERRS is a flexible framework for response and operational guidance to help protect a reserve's ecosystems and ensure the health and safety of all involved parties.

Each Reserve Response Plan:

- Identifies relevant hazards, their potential impacts, and relative risks using a Hazard Identification and Risk Assessment (HIRA) Tool
- Describes the resources at risk (people, infrastructure, and natural resources)
- Details actions to prepare for potential future disaster events
- Provides policy and guidance for operations, specifically detailing reserve capabilities
- Presents a concept of operations as well as actions, roles, and responsibilities for incident management



Capabilities Building Resilience within NERRS

- ✓ **LOCAL KNOWLEDGE:** Reserve scientists and managers are very knowledgeable about the local area, persons that use the area, and entities operating within the NERR boundaries that could expedite emergency actions during a disaster.
- ✓ **INFRASTRUCTURE:** Reserve scientists and managers have detailed information on site facilities, research and monitoring infrastructure, utilities, and other systems (e.g., information technology or communications) that can support prioritization of response efforts.
- ✓ **NATURAL RESOURCES:** Reserve staff members have significant knowledge and data on priority habitats to be protected, cultural and historic resources, economically important fisheries resources, endangered species and nesting areas, and related natural resource information that might not be known by the emergency management community during a response.
- ✓ **SHARING DATA:** Reserve staff members can share data on water quality, tides, water depth, telemetry, areas that present a wildfire risk, endangered or invasive species, appropriate safe areas for staging activities, access routes, and other NERR-specific information that can support the emergency response community before events as well as during post-emergency assessment and recovery.