



ANNEX J: Environmental Response

ESF #10 – Environmental Response

Introduction

The purpose of Emergency Support Function 10 is to provide state support to local governments in response to an actual or potential discharge or release of hazardous materials resulting from a natural, manmade, or technological disaster and other environmental protection issues. The Department of Environmental Protection, Bureau of Emergency Response, has developed a detailed Emergency Response Plan to provide a framework for responding to the full range of a potential hazardous material incident and other emergencies. The **Emergency Response Plan** promotes coordination between federal, state and local governments and the private sector when responding to hazardous material incidents and other threats to the environment and the public health. This response is coordinated by the Florida Department of Environmental Protection, the U.S. Department of Environmental Protection, U.S. Coast Guard and federal, state and local partners. (Please refer to the **State of Florida Comprehensive Emergency Management Plan**, Appendix X: Emergency Support Function 10 – Environmental Protection, 2010)

Additionally, Emergency Support Function 10 acts as the initiator for activating other resources within the Department of Environmental Protection that provide authorization and guidance for environmental protection issues that are the responsibility of that agency. As emergency response to contamination from hazardous materials was discussed in other working groups, the Environmental Restoration focused on the more long-term restoration of natural communities and regional significant environmental resources.

Beaches and dunes play a multi-faceted role in storm recovery that would require additional analysis to adequately address the significance of this resource in catastrophic planning. Beaches and dunes do provide environmental services and support a coastal tourism economy. However, it is essential that restored beaches also be recognized as infrastructure and development projects.

Basic Environmental Restoration Functions and Responsibilities

A SWOT (Strengths, Weakness, Opportunities and Threats) analysis was conducted to determine the capabilities and gaps in the region for long-term environmental restoration.

Strengths of the existing entities, resources, infrastructure to deal with a catastrophe:

- Resiliency of natural systems in response to natural catastrophes
- There are fully documented maps of natural communities, bird rookeries and listed species habitat, sea turtle nest sites, so that damage can be assessed quickly
- Large areas in public ownership with existing management plans
- Expertise in habitat restoration that can advise on best techniques
- Local/State/Federal funding program in place for beach re-nourishment
- Existing beach re-nourishment programs and permitted projects
 - Sand sources identified for use in beach re-nourishment



- Ongoing beach profile monitoring to document loss

Weaknesses of the existing entities, resources, infrastructure to deal with a catastrophe:

- Large number of exotic species in the area (e.g. Melaleuca, Brazilian pepper, Cogon grass, Japanese climbing fern, air potato and the continuing addition of others) which are dispersed during high winds and into disturbed areas
- Lack of strong local regulations to control “emergency” seawall repair or replacement / coastal armoring
- Very little flexibility within local government land management agencies’ budgets or staffing to respond to catastrophes
- Beach re-nourishment permitting revision process is time-consuming
- Limited policies in place to incentivize private landowners to relocate landward from eroding high-risk shorelines
- Limited data on long-term beach nourishment needs based on future costs of dwindling sand resources, existing erosion rates, storm frequencies, and different sea level rise scenarios.

Opportunities for long-term mitigation that may arise from a catastrophe:

- Acquisition of areas for open space where development cannot/should not reoccur
- Volunteer involvement in exotics removal, rescuing hurt wildlife, monitoring damage and recovery of habitats and species
- If sufficient resources (funding and staffing) supplied to assist, can accomplish additional exotics removal to reduce future threat

Threats to recovery that may arise from a catastrophe:

- Potential public perception that it is of low priority to include natural resource recovery in the mix of post-disaster items
- Red mangroves, the first line of defense, can be killed in high winds by removal of the apical meristems. This may lead to sediment loss which increases coastal vulnerability.
- Low dissolved oxygen levels, high nutrient pollution loads, and big red tide events after severe, wet hurricane seasons
- Invasion by exotic species due to abundance of disturbed habitat, dispersal by wind and water
- Use of publicly-owned, managed native habitat for a variety of potentially negative impacts of post-recovery efforts (e.g. temporary landfills, temporary housing)
- Staff resources being diverted from exotics and erosion control to other tasks off-site
- Lack of strong state or local regulations to prevent permanent or harmful beach armoring
- Inability to restore beaches and dunes in a timely manner following a catastrophic storm event.
- Failure of the public to view beaches as infrastructure requiring long-term maintenance and restoration

Existing MOUs/MOAs

None identified

Suggested Support Partners:

Myriad of environmental protection partners (NGOs and governmental)



Federal Environmental Response Team - Provides specialized technical assistance to the On-Scene Coordinator (OSC). Areas include health and safety, environmental sampling, ecological assessment toxicology, air monitoring, waste treatment, and site decontamination and cleanup. EPA Duty Officer (732) 321-6660.

Basic Planning Assumptions – Environmental Restoration¹

1. The nature and scope of a catastrophic incident like Hurricane Phoenix will have significant environmental impacts from expected surge inundation, freshwater flooding, severe winds, hazardous material/ contamination.
2. Immediate needs will focus on the clean up of contaminants in relation to public safety and welfare and reconstruction of infrastructure and housing. The environment restoration will typically take a “back seat” until the community is stabilized.
3. The assets outlined in response strategies may not be available at the time of a catastrophic event due to needs at their home institution, family requirements, etc.
4. A catastrophic incident will present a dynamic response and recovery situation requiring that response plans and strategies be flexible enough to effectively address emerging or transforming needs and requirements.
5. Environmental impacts will have long-term health and economic impacts to the region.

Additional Issue Points²

- Refer to SWOT analysis above.

Operations: Roles and Responsibilities for Environmental Restoration

| Level | Primary Agency | Support Agencies |
|----------|--|---|
| National | U.S. Environmental Protection Agency Department of Homeland Security/ U.S. Coast Guard | Department of Agriculture Department of Commerce Department of Defense Department of Energy Department of Health and Human Services Department of Homeland Security Department of the Interior Department of Justice Department of Labor Department of State Department of Transportation General Services Administration Nuclear Regulatory Commission |

¹ Catastrophic Incident Supplement to the National Response Plan (2005)

² **Failure of Initiative: Final Report of the Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 2007** and the **Florida Catastrophic Plan (Draft) 2008**



| Level | Primary Agency | Support Agencies |
|--------------|---|---|
| State | Florida Department of Environmental Protection (FDEP) | FDEM, FDOT, FDHSMV, FDLE, Florida Fish and Wildlife Conservation, DOH, Department of Agriculture and Consumer Services, Dept. of Financial Services, Division of State Fire Marshal, Florida Rural Water Association, Florida Fire Chiefs Association, Florida's Water/Waste Water Agency Response Network |
| Regional | | Water Management Districts Agency for Bay Management (ABM), Tampa Bay National Estuary Program (NEP) and NGO partners |
| Citrus | Citrus County Fire Rescue Special Operations | Citrus County Health Department Citrus County Sheriff's Office Citrus County Department of Public Works Florida Division of Emergency Management Florida Department of Environmental Protection Florida Department of Health Florida Department of Transportation Florida Department of Law Enforcement Florida Fish and Wildlife Commission Florida Department of Agriculture and Consumer Service Nuclear Regulatory Commission Citrus County Extension Services |
| Hardee | Hardee County Fire Rescue Hardee County Hazmat Team | Hardee County Emergency Management Hardee County Health Department Hardee County Sheriff's Office Hardee County Public Works Bowling Green Volunteer Fire Department LEPC |
| Hernando | Hernando County Hazardous Materials Response Team | Hernando County Sheriff's Office Spring Hill Fire Rescue Hernando Beach Volunteer Fire Department Tri-County Volunteer Fire Department Brooksville Fire Department Hernando County Utilities Hernando County Department of Public Works Hernando County Fire Rescue High Point Volunteer Fire Department |
| Hillsborough | Hillsborough County Fire Rescue Municipal fire/fire rescue departments | Sheriff's Office Municipal police departments Health Department |
| Manatee | Manatee County Hazmat Division | Manatee County Fire Chiefs Association Manatee County Sheriff's Office Manatee County Public Health Manatee County Department of Agricultural and Natural Resources Municipal Police Departments in Manatee County Bradenton/Sarasota Airport Authority Manatee County Solid Waste Division Port Manatee Fire Brigade |



| Level | Primary Agency | Support Agencies |
|----------|---|---|
| Pasco | Pasco County Office of Emergency Management | Pasco County Emergency Services Pasco County Health Department Pasco County Sheriff Office Pasco County Code Enforcement Commercial Industry Partners Pasco County Utilities Services Branch |
| Pinellas | Local fire departments and fire districts County's Hazardous Material Response Team | Division of Environmental Protection |
| Polk | Public Safety Department (Fire Services Division) (Emergency Management Division) (Emergency Medical Service) | Public Safety Department (Emergency Management Division) (Emergency Medical Service) Polk County Sheriff's Office Polk County Health Department Infrastructure/Growth Management Group Public Works Department (Solid Waste Division) |

Long-Term Tasks

State Reconstruction Office (Long-Term Recovery Office)

The Governor's Authorized Representative may establish a State Reconstruction Office within the disaster area. This office may be established at the Disaster/Joint Field Office or another suitable location, and will serve as the focal point for the coordination of long-term recovery activities. The Department of Environmental Protection Division of Environmental Resources Permitting shall provide a representative for this function.

Hazard Mitigation

The State Hazard Mitigation Officer is responsible for coordinating the preparation and implementation of the State Hazard Mitigation Grant Plan (pursuant to Section 409 of the Stafford Act), and the Hazard Mitigation Grant Program (pursuant to Section 404 of the Stafford Act). The State Hazard Mitigation Grant Plan will coordinate the State Hazard Mitigation and Recovery Team, who are responsible for development of a hazard mitigation plan. The team consists of representatives from key state agencies, local governments, and other public and private sector organizations that influence development and hazards management policies within the state. The Department of Environmental Protection Division of Environmental Resources Permitting, from the impacted district office provides personnel for the team.