

**Natural Resources Damage Assessment
Proposed Restoration Projects**
(to be conducted by Federal, State and Local Agencies)

1. Gulf Beach Nourishment

Escambia County beaches (Pensacola Beach and Perdido Key) have been subject to continual impacts from vehicular traffic and sand manipulation to locate and remove oil and tar that has washed ashore from the Deepwater Horizon Oil Spill. Continued national media has degraded the perceived aesthetic value of Escambia County beaches. This proposal is intended to restore the natural, functional, and aesthetic value of Escambia County beaches and establish a Beach Renourishment Trust Fund for Escambia County's cost share portion for future renourishment events.

2. Seagrass bed and sand dune monitoring and restoration

Seagrass beds (SAV – submerged aquatic vegetation) – Local seagrass meadows have been directly impacted from the Deepwater Horizon Oil Spill through decrease in ambient light penetration, increase in turbidity, prop scarring from response vessels, increase of nutrients, and boom deployment/anchoring. This proposal is intended to evaluate extent of seagrass damages and restore/create seagrass beds to mitigate these impacts.

Sand dunes – Sand dunes were directly impacted from the Deepwater Horizon Oil Spill from direct coating of oil mist, increased foot traffic in dune areas, vehicular traffic on seaward edge precluding pioneer species, and the creation of new access points utilizing a bulldozer through the dune system. This proposal is to evaluate the extent of sand dune damages and restore/enhance dune systems on Escambia County barrier islands.

3. Water quality and inland waters investigation, monitoring and restoration

In the days following the Deepwater Horizon Oil Spill, Escambia County established 34 pre-oil spill monitoring stations and collected water and sediment samples from each of these stations to document pre-oil spill baseline conditions. This proposal is to re-monitor these 34 stations bi-annually for five years to determine potential post-oil spill impacts to water and sediment quality.

4. Recreation Loss Projects

a. Land Acquisition

During the Deepwater Horizon Oil Spill response effort, all County public accesses on Perdido Key and one of three major parking areas on Pensacola Beach were utilized. This resulted in substantially less direct beach access in the form of available public parking as well as beach patrons having to periodically relocate to accommodate beach cleaning operations. Additionally, entire sections of beach were effectively closed for days at a time to facilitate heavy response equipment of large numbers of manual labor. With loss of recreational opportunity for both local residents and tourists, this proposal is made to offset that loss and provide for future public access through the purchase of additional public access areas and enhancement of current public access to the beaches.

b. Boat ramps

Escambia County public boat ramps provide local boaters with access to public waterways. Many public boat ramps were used to stage and deploy oil spill response resources during the Deepwater Horizon oil spill. This proposal seeks funding to repair two existing boat ramps, and construct a new boat ramp facility to restore the past condition of our ramps and to offset the lost opportunity of boating access.

c. Boardwalks and dune crossovers

During the Deepwater Horizon Oil Spill response effort, all County public accesses on Perdido Key and one of three major parking areas on Pensacola Beach were continuously utilized. On Pensacola Beach this resulted in unavoidable soiling of boardwalks with oil and tar from foot traffic. On Perdido Key, the greatly enhanced utilization of opportunistic unimproved access points by manual labor and response vehicles had degraded these areas. This proposal is to repair soiled crossovers increase the number of crossover points on both islands and restore/enhance the access points.

d. Transient Marina/Ferry Service

Escambia County boaters, marine dealers and water-dependent businesses were impacted by the loss of the 2010 boating season due to the Deepwater Horizon Oil Spill. This proposal seeks to mitigate those losses via construction of a transient marina to stimulate and support increased boating and boating tourism upon local waterways, and to provide non-boating public access to waterways and water-dependent businesses.

e. Mooring field

Escambia County boaters, marine dealers and water-dependent businesses were impacted by the loss of the 2010 boating season due to the Deepwater Horizon Oil Spill.

This proposal seeks to mitigate those losses via construction of a mooring field to stimulate and support increased boating and tourism on local waterways. Escambia County has conducted a preliminary analysis to establish a mooring field to provide safe mooring of vessels. This proposal seeks funding to construct a mooring field in Bayou Chico.

5. Benthic invertebrate impact investigation, monitoring and restoration

In the days following the Deepwater Horizon Oil Spill, Escambia County collected and analyzed tissue samples from benthic invertebrates to document pre-oil spill baseline conditions. This proposal is to collect and analyze benthic invertebrate tissue samples bi-annually to determine potential post-oil spill impacts to benthic invertebrates

6. In-fauna impact investigation, monitoring and restoration

In the days following the Deepwater Horizon Oil Spill, Escambia County collected and analyzed tissue samples from benthic in-fauna to document pre-oil spill baseline conditions. This proposal is to collect and analyze benthic in-fauna tissue samples bi-annually to determine potential post-oil spill impacts to benthic in-fauna.

7. Infrastructure to offset water quality impacts

a. Stormwater upgrade retrofits

Stormwater runoff is one of the major sources of water quality impairment in Pensacola Bay and Perdido Bay. Restoring water quality is necessary to improve fishery habitat and improve estuary stability so that these water bodies are better able to withstand and recover from future accidents, spills, and other water quality impacts. To offset water quality impacts resulting from the Deepwater Horizon Oil Spill, this proposal is for the design and construction of major stormwater retrofit projects in Pensacola Bay and Perdido Bay

b. Stream and shoreline restoration

Stream and shoreline restoration projects improve water quality and wildlife/fishery habitat by reducing turbidity, improving water clarity, increasing dissolved oxygen, and reducing excess nutrients. To offset water quality impacts resulting from the Deepwater Horizon Oil Spill, this proposal is for the design and construction of stream and shoreline restoration projects in the Pensacola Bay and Perdido Bay Watersheds.

c. Wetland restoration for water quality improvement

Wetland restoration projects improve water quality and wildlife/fishery habitat by reducing turbidity, improving water clarity, increasing dissolved oxygen, and reducing excess nutrients. To offset water quality impacts from the Deepwater Horizon Oil Spill,

this proposal is for the design and construction of wetland restoration projects in the Pensacola and Perdido Bay Watersheds.

8. Marine turtle monitoring and population restoration

As a direct impact resulting from the Deepwater Horizon Oil Spill, all marine turtle nests on Escambia beaches (Gulf of Mexico) were relocated to east coast Florida beaches (Atlantic Ocean) resulting in the entire loss of 2010 recruitment for those marine turtle species. This proposal is to enhance monitoring, education, and night lighting reduction programs for marine turtles.

9. Seabird and barrier island nesting species monitoring and restoration of nesting areas and population.

As a direct impact resulting from the Deepwater Horizon Oil Spill response, nearly all documented shorebird nests failed to produce offspring due to the enhanced level of activity on our beaches, including lighted night operations. This has resulted in the near loss of the local 2010 recruitment for those shorebird species. This proposal is to acquire, restore, enhance and monitor habitat and to provide education programs for shorebirds.

10. Oyster reef monitoring and restoration

Oysters are keystone species in Escambia County estuaries, and support important recreational and commercial fisheries. Moreover, the ability of oysters to improve water quality makes oyster reef construction an important component of a successful restoration plan to mitigate impacts from the Deepwater Horizon Oil Spill. This proposal seeks funding to monitor existing oyster reefs and to construct new oyster reefs within Pensacola Bay and Escambia Bay.

11. Gulf Water quality, near shore and pelagic species monitoring and restoration

Escambia County has conducted Gulf water quality and marine life species monitoring for nearly a decade prior to the Deepwater Horizon Oil Spill. Escambia County presently monitors marine life species in an established partnership with Florida Fish and Wildlife Conservation Commission (FWC). These data, combined with other data obtained via FWC-funded research, are an important baseline upon which potential impacts of the recent oil spill may be measured. This proposal seeks funding to conduct additional monitoring for four years, and can be paired with enhanced artificial reef construction (see item #12, below) to document restoration of water quality and marine/estuarine species.

12. Offshore and inshore artificial reef construction

Escambia County's Artificial Reef Program is presently permitted (by US Army Corps of Engineers and Florida Department of Environmental Protection) to provide habitat for estuarine and marine life species across approximately 130 square miles of seafloor. Although nearly 200 artificial reefs have been constructed, much of the permitted sites remain open for new reef construction. Many species impacted, and presumed to have been impacted, by the Deepwater Horizon Oil Spill will benefit from construction of new artificial reefs. Moreover, existing data documenting the economic benefits of artificial reefs to the local economy strongly validates this proposal to construct new artificial reefs as a means to accelerate ecological and economic recovery from the Deepwater Horizon Oil Spill. This proposal seeks funding to construct twenty new artificial reefs.

13. Human health studies examining impacts to edible marine species and their consumption

Due to the Deepwater Horizon Oil Spill, human health concerns pertaining to the consumption of Florida seafood species have been devastating to the Florida seafood industry. To restore the integrity and health of the Florida seafood brand, this proposal is to conduct human health studies to ensure the public that there are no detrimental effects associated with Florida seafood consumption.

TOTAL ESTIMATED RECOVERY COST
\$200,810,000

PROJECT	ESTIMATED RECOVERY COST (\$)
Beach Nourishment (Pensacola Beach & Perdido Key)	56,000,000
Water Quality/Marine Species Monitoring	2,000,000
Artificial Reef Projects	10,000,000
Oyster Reef Restoration (Pensacola Bay)	4,000,000
Wetland Restoration Projects	20,000,000
Marine Turtle Protection	500,000
Dune Restoration (Pensacola Beach & Perdido Key)	3,000,000
Perdido Key Dune Crossovers	210,000
Benthic Organisms Restoration Projects	20,000,000
Stormwater Retrofit Projects	20,000,000
Stream Restoration Projects	20,000,000
Shorebird Habitat Restoration Projects	2,000,000
Public Boat Ramps (Escambia & Perdido Bays)	2,500,000
Passenger Ferry Service (City/NAS/Beach)	4,000,000
Boat Mooring Field	100,000
Municipal Marina	2,500,000
Perdido Key Land Acquisition (Public Access)	34,000,000