Gulf of Mexico Hydrological Restoration Identification and Prioritization Project

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Abstract

The NOAA Restoration Center and Gulf of Mexico Sea Grant College Programs are collaborating to address community-based hydrological restoration needs throughout the Gulf of Mexico. The definition of hydrological restoration for this partnership is:

*"**to remove or modify anthropogenic barriers to restore historic tidal estuarine and freshwater exchange to benefit coastal and marine fisheries habitat**."*

The primary objectives for the first year are to:

- Identify and prioritize up to 150 hydrological restoration sites in the region,
- Develop monitoring criteria for assessment of hydrological restoration sites and
- Identify hydrological restoration projects for funding.

This partnership focuses on developing the inventory in year one. A panel of representatives from state agencies, federal agencies, NGOs and other organizations developed criteria to collect consistent and comparable information for each project. Candidate projects will be five acres or larger and cost up to $5 million. During 2011, Sea Grant extension agents from each Gulf of Mexico state met with communities, non-governmental organizations, state agencies and others to identify and describe hydrological restoration projects using the criteria. This allows projects to be prioritized based on the different specifications of restoration sponsors. This information will be incorporated into a GIS interface so that projects can be easily viewed and searched.

A request for letters of intent was released for community-based hydrological restoration projects. Funded projects will address some of the restoration needs identified in the inventory. A monitoring panel will develop criteria to evaluate the effectiveness of hydrological restoration projects in the Gulf of Mexico and will be used for projects funded through this effort.

Figure 1. Distribution of hydrological restoration projects to date described in the inventory. Projects for the western Gulf of Mexico will be entered into the inventory in the near future. (Image created in Google Earth)

Inventory of Hydrological Restoration Projects

Figure 2. Map of a barrier to tidal flow and potential restoration site in Ocean Springs, Mississippi. (Image created in Google Earth)

Figure 3. Undersized culvert (barrier) and the habitat (impact area) behind the barrier that would benefit from increased tidal flow as identified in Figure 2.

Monitoring Parameters

- A 14-person monitoring panel is made up of representatives from federal agencies, state agencies, academia, private sector and NGOs located throughout the region.
- They are identifying minimum parameters that are required to assess the status of hydrological restoration projects and additional parameters that will enhance scientific discovery.
- The parameters are divided into four categories: **Hydrology, Vegetation, Soil, Nekton**

The inventory is being shared with and used by multiple restoration funding agencies and organizations so they can support these on-the-ground restoration projects. Some of these projects will be funded through the NOAA Restoration Center/Gulf of Mexico Sea Grant restoration funding competition, which will begin funding on-the-ground restoration projects in January 2012.

Table 1. Agencies and organizations that fund restoration projects and will receive the inventory.

NOAA Restoration Center Partners	Other Agencies and Organizations
Gulf of Mexico Sea Grant	Natural Resource Damage Assessment
Ducks Unlimited	Estuary Restoration Act Funds
Gulf of Mexico Foundation	U.S. Fish and Wildlife Coastal Programs
Fish America Foundation	National Fish and Wildlife Foundation
The Nature Conservancy	Coastal Wetlands Planning, Protection and Restoration Act, Louisiana
Southeast Aquatic Resources Partnership	Mississippi Department of Marine Resources, Coastal Preserves Program

Contacts

If you would like to add potential hydrological restoration projects to the inventory or would like to learn more about this effort, please contact the appropriate person listed below.

Table 2. Contacts for the hydrological restoration partnership.

State	Sea Grant	NOAA Restoration Center
Gulf-wide	Steve Sempier (stephen.sempier@usm.edu)	Meg Goecker (meg.goecker@noaa.gov)
Texas	Logan Respess (l-respess@tamu.edu)	Jamie Schubert (jamie.schubert@noaa.gov)
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