

James Farm Slough's Gut Restoration/Enhancement Project February 2009

Frequently Asked Questions

What is this project? Why is this project being done?

Located on the east side of the James Farm Ecological Preserve, this project involves the restoration/enhancement of approximately 24 acres of a smooth cordgrass (*Spartina alterniflora*) saltmarsh that was grid-ditched prior to the late-1930s for mosquito control purposes..

It is now recognized that the once common practice of installing parallel grid ditches in salt marshes for mosquito control alters habitat structure and diminishes ecological functions and values of coastal wetlands. After thorough review, it has been determined that the existing marsh lacks diversity of both plant and animal species normally found in the Inland Bays and would benefit from enhancement. The goal of this project is to restore a more natural flow of water into and over the marsh and to enhance the habitat by use of meandering channels and pools.

Why is this project on the CIB's managed land?

Since the late-1990s, the Center for the Inland Bays (CIB) has utilized the James Farm Ecological Preserve for a variety of projects including reforestation, warm-season native grass meadow establishment, non-tidal wetland creation, construction of a wildlife observation blind, eel grass restoration, oyster reef creation, and hard clam stock enhancement. Other projects have included nature trails, boardwalks, observation platforms, and interpretive signage. There is a strong educational component to this project and the CIB will assist in monitoring success and help promote this type of project where appropriate. Both Sussex County and the CIB were listed as co-applicants on the necessary state and federal wetlands permit application.

A number of restoration alternatives were evaluated, ultimately resulting in the selection of the James Farm parcel adjacent to Slough's Gut. This site was selected for several reasons including the opportunity to work with the CIB and its educational forum, its high visibility, and the fact that it was determined that this marsh would benefit from this kind of work.

What permits/approvals were received for this project?

The project received the needed permits including the U.S. Army Corps of Engineers Nationwide Permit 27 approval and a DNREC Wetlands and Subaqueous Lands Section (WSLS) permit.

When will the project be complete?

Construction is anticipated to be completed by early spring 2009 if not sooner. Until then, the area will remain closed until all work is completed for everyone's safety. Construction activities on the marsh can easily be viewed from the observation platform. For more project information, contact the Center for Inland Bay's Eric Buehl, Habitat Coordinator, or E.J. Chalabala, Wildlife Manager, at (302) 226-8105.

How long will it take for the marsh to grow again?

We will see growth as early as this spring.

What is the relationship between CIB, Conectiv Energy, & DNREC?

The James Farm project site was proposed to DNREC several years ago by Conectiv Energy/Delmarva Power & Light Company (DP&L). Conectiv Energy, an affiliate of DP&L, which was created as a competitive energy generation provider with the deregulation of the utility industry in Delaware, provided expertise and assistance to DP&L in satisfying the obligation to clean up the spill and provide appropriate compensation. DP&L currently focuses on the transmission and distribution of electricity and does not generate electricity.

In 2007, the fringing salt marsh impacted by the release was restored, leading the way to implementing the James Farm project. This project site was selected for several reasons including the continuing opportunity for Conectiv Energy to work with CIB, the project's positive impact on the environment and community, and because this marsh and surrounding area would benefit from this kind of work.

The James Farm marsh enhancement project is the final step in the natural resource damage assessment (NRDA) process to restore and compensate for environmental impacts resulting from a fuel oil release at the Indian River Power Plant (IRPP) owned at that time by DP&L, into the Indian River Estuary that occurred in early 2000.

As a Natural Resource Trustee, DNREC is authorized by law to recover damages for injuries to natural resources resulting from the fuel oil release. DNREC's Divisions of Air and Waste Management and Water Resources led the state's effort, with technical assistance, including design review, provided by the National Oceanic and Atmospheric Administration, the U.S. Fish and Wildlife Service (USFWS) and DNREC's Division of Fish & Wildlife.

The Division of Fish and Wildlife's Mosquito Control Section is constructing the project (in conjunction with logistical support from ENTRIX), given Mosquito Control's considerable ecological expertise in wetlands management, plus the Section's unique heavy marsh equipment and skilled equipment operators. ENTRIX, an environmental and natural resource management consulting company, was hired by Conectiv Energy/DP&L to assist with various aspects of the NRDA process, including the

planning, design, implementation and monitoring of the Slough's Gut marsh enhancement/restoration project.

Conectiv Energy and the Center have worked on projects for many years now and it was only natural that the relationship continue. Conectiv has assisted the Center with osprey nesting platforms, the diamondback terrapin rescue program, and donated materials for other projects.

Viewing the work – observation platform

For the safety of everyone involved, the upland area near the project site will be closed until the project is completed. For those wishing to view the work, the observation platform on the East side of the James Farm will remain open. Information and updates will be posted on the kiosk at the James Farm parking lot and on the Center's website at www.inlandbays.org.

What are the benefits of the project?

Pre-restoration monitoring data indicated the marsh is functioning and being used by various aquatic and avian wildlife species, but that ditching has likely degraded the quality of the marsh by altering its hydrology and decreasing the diversity important saltmarsh "micro-habitats" Such as shallow pools and tidal mudflats. The project is intended to enhance the habitat value of the salt marsh for invertebrates, fish, birds and plant life. Grid-ditching has altered the habitat structure and negatively affected the ecological functions and values of this wetland. The project will entail: (a) replacing the linear ditches with a network of meandering tidal creeks, and (b) creating pools and tidal mudflats, which are typical of interior portions of undisturbed coastal salt marsh. These actions will increase micro-habitat diversity; expand foraging opportunities for fish, birds and invertebrates; restore more natural hydrologic patterns; and stimulate plant growth.

Will this project create mosquito habitat or increase mosquitoes in the area?

After thorough evaluation, biologists working for DNREC's Mosquito Control Section have concluded that Slough's Gut does not presently contain significant mosquito breeding habitat and that the project will not create or increase mosquito breeding habitat on the site. They will continue to monitor this and other potential mosquito breeding sites throughout the state as part of their normal operations.

Will this project be monitored to ensure success?

The site will be monitored for a period of up to 5 years following completion of initial construction. Monitoring is an important component of restoration and enhancement process that provides information for evaluating whether project goals and objectives are being met. Additionally, following an adaptive management approach, information collected from monitoring is useful in determining the need for and type of site maintenance, management, and/or corrective action.

Will the work cause any temporary or permanent changes to the project site and adjacent areas.

No permanent adverse changes will be caused by this project. The project will result in the permanent filling of existing mosquito ditches and the creation of new pools, mudflats and meandering tidal channels.

Temporary adverse changes caused by this project may include reduced water quality within the project area during excavation and disturbance of vegetation by equipment transiting the marsh between excavation and fill areas. These potential temporary changes will be limited to the immediate project area. Measures that will be taken to minimize the extent of these effects include: using specialized tracked, low ground pressure equipment; using mats to further reduce equipment ground pressure in critical area; performing work outside of critical time periods (i.e., spawning, nesting and migration) for resident and migratory fish and birds; installing ditch plugs and coir logs to stabilize spoil backfilled into ditches; and maintaining full-time supervision by a wetland scientist.

What will be the effect on the local estuarine waters.

This project is anticipated to have an overall positive effect on estuarine waters. Localized improvements to the wetland habitat quality at the project site will include improved water quality within the marsh and surrounding portions of Indian River Bay, creation of foraging and nursery habitat for aquatic and avian species that utilize the larger estuary, food web support and nutrient cycling.