

# Marsh Restoration and Estuary Enhancement Southern New Jersey

## Project Characteristics:

- *Marsh Restoration Program*
- *Hydraulic Modeling*
- *Technical Oversight*
- *Resource Area Evaluations*

The Estuary Enhancement Program sponsored by Public Service Electric & Gas Company (PSE&G) is restoring over 10,000 acres of degraded salt marsh in southern New Jersey. The purpose of the project is to restore full function to the degraded salt marshes that include diked salt hay farms and open water marshes. The existing marshlands currently do not have functioning creek systems and are heavily infested with the reed *Phragmites australis*. Woods Hole Group has worked to perform a critical examination of the marsh restoration program through on-site visits and analytical analyses.

Preliminary diagnostic hydraulic modeling and resource area evaluations were performed to determine the feasibility of the restoration program. Woods Hole Group performed oversight and design review of the marsh channel and tidal inlet design portions of the project, to ensure that marsh hydraulics within the restored system have the proper hydro-period to support the restored marsh plan vegetation. The effects of the restoration project on ground water, septic systems, and private drinking wells also were investigated and quantified.



The successful implementation of this project requires close interaction between Woods Hole Group, New Jersey state environmental agencies, New Jersey Attorney Generals Office, National Fish and Wildlife, US Army Corps of Engineers, National Marine Fisheries, and concerned citizens.

Woods Hole Group is providing continuing technical advice to PSE&G through the construction and post-construction phases. The restoration design has incorporated the concepts of ecological engineering and adaptive management. Ecological engineering utilizes natural processes to complete marsh restoration. While adaptive management is the process of measuring restoration trajectory and benchmarking the trajectory to restoration goals. WHG is an integral part of the ongoing adaptive management team charged with ensuring the restoration design stays on track.

Location: Delaware Bay/New Jersey  
Client: Public Service Electric & Gas Co.  
End of Buttonwood Road  
Hancock's Bridge, NJ 08038  
Contact: Mr. Ken Strait  
Telephone: (856) 878-6929