

Wetland Mitigation Bank

*Dennis Township
Cape May County, NJ*

Evergreen Environmental, LLC retained Princeton Hydro to provide scientific, engineering, permitting, invasive plant management, and construction oversight support to design and build a combined tidal and palustrine wetland mitigation bank.

Princeton Hydro integrated our ecological, hydrological, and engineering expertise to develop a thorough understanding of site characteristics. The lead-in investigations were an essential ingredient that, coupled with our extensive regulatory agency experience, led to the design of a wetland mitigation bank that will compensate for impacts to tidal and freshwater wetland disturbance near the Delaware Bay in southern New Jersey.

When confronted by opposition from members of the regulatory oversight commission, Princeton Hydro acquired additional technical information to overcome skepticism about the project outcome. Ultimately, the regulatory officials concurred that the project design offers a high-probability for success. Princeton Hydro applied its multi-faceted skill sets to deliver an approved wetland mitigation plan design that maximized credit opportunities for our client by transforming old farm fields into a mixture of tidal marshland, freshwater emergent marsh, and forested swamp.

The mitigation design plan includes removal of fill, elimination of a network of drainage ditches, and breach of barriers to tidal fluctuations — features that were installed in the past to support farming at the site. This project includes a treatment regimen to suppress invasive plants, especially common reed grass (*Phragmites australis*). The design is complex in that the plan spans wetland hydrology and plant community gradients by encompassing the entire habitat zone from tidal salt marsh through maritime forested swamp. Also, an area that could contain historic artifacts will be preserved as an upland “island” within an overall wetland matrix.

The project, implemented in 2009, expanded salt marsh habitat and extended an adjacent forested wetland. The site is expected to benefit estuarine ecological resources as well as improve forage and nesting opportunities for resident and migratory birds while providing a means to off-set wetland disturbances elsewhere.

