

SV Farming Wetland Restoration: Mine Revegetation, Coastal Plain Wetland Restoration & Swamp Pink Protection

*Waste Management
Quinton Township, NJ*

In consultation with the US Army Corps of Engineers, US Fish and Wildlife Service, the New Jersey Department of Environmental Protection and SV Farming, a clay mining company, Princeton Hydro staff developed a design for the re-vegetation of the mine and the restoration of a 25-acre Coastal Plain wetland in Salem County, NJ. Of the 25 acres of wetland to be restored, 17 acres were mined for over 20 years and an estimated 4 million cubic yards of gravel and clay were removed. The remaining eight acres of wetland supported a population of swamp pink (*Helonias bullata*), a Federally listed threatened herbaceous wetland plant, which was impacted by mining activities.

The initial phase of this restoration project required the implementation of an interim corrective measures plan to protect any swamp pink that remained within the mine. The measures implemented included the removal and transfer of plants situated in precarious locations to Rutgers University for storage and study, and an invasive species control program. Concurrently, a detailed ecological study of off-site populations of swamp pink located in undisturbed wetlands was initiated to provide data necessary to develop a viable restoration plan.

The goal of the restoration plan was to facilitate the reestablishment of those plants that were removed for temporary storage at Rutgers University. To attain this goal, hummocks were constructed in three locations within the swamp pink wetland and planted with woody vegetation. By the fall of 1994, approximately 80% of the plants removed were replanted on the site. As of 1998, the re-planted swamp pink were thriving in the restored wetlands. This restoration effort was complicated by high soil acidity due to the presence of acid producing clays. Subsequent to completion of grading and soil remediation more than 20,000 herbaceous and woody plants were installed. By the summer of 1998, the once barren site had been replaced by a complex landscape of ponds, streams, young woodlands and emergent wetlands. The NJ Department of Fish and Wildlife acquired the site as open space in 2005.

Princeton Hydro received an award for Ecological Excellence in 2001 from the Soil and Water Conservation Society.

