

Enchantment Villas Vernal Pool Mitigation

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The Enchantment Villas vernal pool mitigation was required by the New Jersey Department of Environmental Protection (NJDEP) as compensatory mitigation for impacting vernal pools on a development site located in Hamilton Township, Mercer County, New Jersey. The mitigation involved compensating for the loss of approximately 0.15 acre of vernal pool and 0.10 acre of vernal habitat (wetlands adjacent to a vernal pool). To fully compensate for these impacts, two locations within Mercer County were identified for mitigation: Sourlands Greenway in East Amwell Township and a site owned by the client in East Windsor, New Jersey.

The first phase in gaining approval for these mitigation sites was to assess the extent, suitability and functional value of existing vernal pools and determine where, if any, vernal pools could be created to expand the habitat. The Sourlands Greenway site was suitable for the enhancement of existing vernal pools and the East Windsor site was determined to be suitable primarily for the creation of additional pools and enhancing one small pool that existed.

To survey existing pools, the extent and approximate water catchment area of the pools were GPS located and plotted on site maps. Suitability of the pools and functional value were assessed through the presence of vernal pool obligate herpetofauna (primarily *Rana sylvatica*—Wood Frog and *Ambystoma maculatum*—Spotted Salamander) and the persistence of surface water for a duration long enough during the spring months to support successful breeding populations of those species.

The conceptual design was based on the GPS locations and the topography on the site as well as potential water catchment area. NJDEP conceptual approval was received in early 2009; the project is expected to also be implemented in 2009.

