

**Wallkill National Wildlife Refuge**  
**Stream Restoration and Permitting**  
*Sussex County Municipal Utilities Authority*  
*Wallkill River Watershed*  
*Vernon and Wantage Townships, NJ*

In an effort to provide access to and stabilize the eroded stream bank of the Wallkill River in Vernon and Wantage, New Jersey, Princeton Hydro was contracted to:

(i) evaluate potential wetland impacts; (ii) assess in-stream/bank habitat and design appropriate restoration; (iii) develop/coordinate a permitting strategy with oversight agencies; and, (iv) implement bank stabilization and access activities.

The Wallkill River is the main river of the Wallkill River Watershed and is located in the Wallkill River National Wildlife Refuge.

Princeton Hydro was retained by Wallkill River Watershed branch of the Sussex County Municipal Utility Authority to assist with permitting, design, and implementation of the bank stabilization and stream access within a landscape dominated by the refuge and residential neighborhoods.

Princeton Hydro's Natural Resources group conducted a wetland delineation of the restoration corridor in preparation for a joint state and federal permit application. Princeton Hydro's Aquatics group and Water Resources Engineers collaborated to design the stabilization of eroding stream banks and an access path in manners that would improve general aquatic habitat. Moreover, our Natural Resources scientists developed a riparian corridor revegetation approach that will facilitate stream stabilization, ameliorate extreme summer temperatures, and augment in-stream habitat quality.

Our comprehensive landscape-based approach to stream bank stabilization design at this site provided the Wallkill Watershed with the means to cost-effectively reduce

