Manchester Urban Ponds Restoration Program

City of Manchester Environmental Protection Division
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Nutts Pond Stormwater Best Management Practices (BMP) Summary Completed by Comprehensive Environmental, Inc.

Tannery Brook Inlet Stormwater Engineering & Construction (2006): $150,000.00

Drainage and stormwater runoff from this area previously filled surrounding wetlands and Nutts Pond with sediment from parking areas and dense commercial and residential land uses located along South Willow Street. To help alleviate these issues, a sediment forebay with a gabion level spreader at the end of a 4ft by 6ft closed drainage culvert was installed. The sediment forebay and level spreader now provide a way to capture sediment and debris prior to discharge into the wetland area. The level spreader now allows stormwater to flow evenly through down-gradient wetland areas.

Nutts Pond Stormwater Improvements (2007): $228,000.00

A "first flush" stormwater diversion structure, stormwater forebay, and wet pond were installed to provide sediment and nutrient removal for stormwater runoff associated with large parking lot areas. The diversion structure was designed to divert first-flush flows to BMPs while allowing larger volume storms to pass through the existing drainage system. The sediment forebay and wet pond provides a way to capture sediment and debris prior to discharge into Nutts Pond in order to prevent the growth of a sediment delta. Stormwater was diverted from a 42 inch pipe using a precast structure and discharged water into a large riprap forebay. This wetland was converted to a wet pond, which was tied back into the 42 inch pipe using a precast concrete outlet structure and deep sump. This worked required construction in close proximity to sensitive wetland areas, which required specialized erosion control planning and temporary water handling techniques.

Tannery Brook Inlet Wetland Cleanup, Restoration & Replication Project (2007): $44,000.00

The wetland cleanup consisted of removing approximately 100 cubic yards of sediment from the wetlands as well as trash and debris associated with highly urbanized areas. The cleanup and wetland restoration and replication required very careful construction techniques and coordination to work around sensitive existing wetland plants and habitats. The proposed design consisted of restoring and replicating approximately 10,000 square feet of forested wetlands. The surrounding forested wetlands were replicated by maintaining existing mature vegetation when possible and constructing low-flow vegetated swales and hummocks that meandered around the existing vegetation. A combination of mature native woody vegetation with specialized wetland plant mixes was installed in the disturbed wetland areas and the use of woody and organic debris with hydric soils assisted in promoting natural organic decay.