

Grant Work

Water Quality Enhancement Projects

Clean Water Act, Non-Point Source 319 Grants

The District installed several water quality treatment systems under the Section 319 non-point source program, including two stormwater projects. Nearly completed during this fiscal year was the installation of a hydrodynamic separator on Adams Street in Manchester to treat stormwater discharging to Bigelow Brook, a tributary of the Hockanum River.

We also began work a large stormwater project on West Middle Turnpike in Manchester. The project involves reconfiguring two large stormwater pipes that drain the Manchester Parkade plaza and discharge to Bigelow Brook, and reconstructing the associated stormwater basin, which was too small and eroded.

Lastly, District staff was fully engaged in a 319 project involving construction and planting of a bioretention area within an elementary school parking lot. That project, "Lake Street School, Vernon" is discussed below.



Hydrodynamic separator being moved and lowered into the ground within the roadway on Adams Street, Manchester.



Pre-construction photos of the stormwater outfalls and basin, in Manchester prior to being reconstructed as part of a 319 grant.



Laurel Marsh Invasive Plant Removal

The District has been implementing a plan to remove invasive plants from Laurel Marsh in Manchester, funded through the competitive *Long Island Sound Fund*. The project targets *Phragmites australis*, an invasive aquatic plant that has formed a monoculture throughout much of the marsh. The District has completed one year of a three year treatment plan, including both mowing and application of an aquatic herbicide. The treatment is intended to allow native plants to re-inhabit the area and better support wildlife.



Laurel Marsh following one year of mowing and spraying.

Lake Street School, Vernon

The conceptual plan to construct a Bioretention area within the parking lot of Lake Street School in Vernon was originally included within the Tankerhoosen River Watershed Management Plan, completed by Fuss and O'Neil, commissioned by the Friends of the Hockanum River Linear Park of Vernon, Inc., along with various partner organizations, including the District. The District applied for funding through the 319 program to implement the plan, which would both improve water quality within the Tankerhoosen River watershed (within the larger Hockanum River watershed) by treating parking lot runoff, as well as serve as a public demonstration site of low impact development (LID) techniques for stormwater. District staff took an active role in every portion of implementation, including construction management/inspections, landscape design, and physical planting of hundreds of grass plugs, potted perennials, shrubs, and trees.



Pre-existing Conditions: Lake Street School's grassed and paved parking lot island and stormwater outfall, pre-construction.



District Staff planting grass plugs



Post-Construction: Lake Street School's parking lot area, with span bridge.

Landscape Design Projects

The District's landscape design capability adds a valuable component to the services provided by the District. Over the past year, the District provided *planting instruction* as well as formalized *concept designs*, to many individuals and organizations. The drawing to the left is a planting plan designed by District staff for a homeowner in Manchester.

Conservation Technical Assistance (CTA) Grant

All five Conservation Districts in Connecticut, working in conjunction with the Council on Soil and Water, are assisting the Natural Resources Conservation Service (NRCS) with a broad scope of Farm Bill work. The work includes preparation of Comprehensive Nutrient Management Plans, Irrigation Management Plans, conducting workshops to promote USDA programs, and assisting NRCS staff with moving implementation projects forward. NCCD is also working with horse owners to expand the use of Best Management Practices for manure management. To this end, NCCD has purchased a manure composting system that produces bedding as an end product. The composter will be used at a large horse farm in East Windsor, CT.

