

CASE STUDY: Reducing CSOs and Localized Flooding with Green Infrastructure

Bath, Maine maintains a combined sewer system with occasional CSOs. Through EPA's Green Infrastructure Community Partners Project, Tetra Tech completed an evaluation of the Willow Street drainage area to identify green infrastructure opportunities to help reduce the frequency and volume of CSOs and localized flooding concerns. This area of town is in economic distress with homes abandoned due to flooding issues and is located adjacent to a railroad and a Federally-recognized historic district. Due to its low-lying location, gravity-fed stormwater discharges were not an option. Tetra Tech investigated a variety of green and gray infrastructure options. For the areas where green infrastructure was feasible, potential sites were evaluated for retrofit with bioretention planter boxes. Given the constraints of this older neighborhood, 12 recommended locations were identified within the Willow Street drainage area and a conceptual design was developed to illustrate the design solution.



CASE STUDY: Green Infrastructure Tree Filters to Reduce CSOs and Improve Tree Cover

The Birch Street Catchment in the City of Fall River, Massachusetts was developed in the early 1900s and the combined sewer system discharges overflows to Mount Hope Bay, which is impaired for bacteria. The city has both a CSO discharge problem and a goal to increase the tree canopy throughout the city to reduce energy use. Tetra Tech developed a tree filter standard design to implement in rights-of-way throughout the City that will be used to replace catch



basins. Concept designs were also developed for 12 feasible catch basin retrofits in the Birch Street catchment to include tree filters. Some factors that were included in the feasibility determination included overhead utility lines, conflicting vertical infrastructure (e.g. existing trees, utility poles), existing structures, cross-walks, sufficient space to accommodate a tree and maintain compliance with the Americans with Disabilities Act.

GREEN INFRASTRUCTURE EXAMPLES

Pervious Pavement



Bioretention



Rain Barrels and Cisterns



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