Stormwater Master Planning in Montpelier, Vermont

STONE ENVIRONMENTAL

Services / Expertise
Vermont Water Quality
Stormwater Management Design
GIS Spatial Analysis
Public Outreach

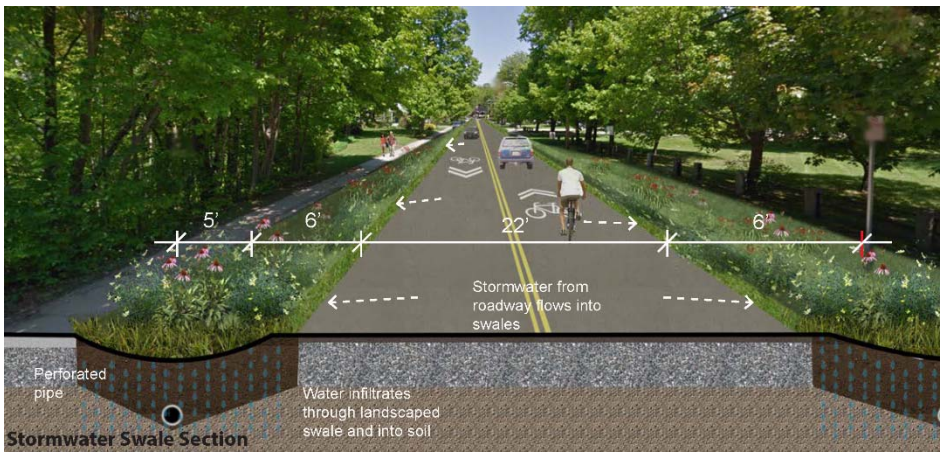
Markets
State and Local Government
Watershed Associations
Non-Profit Organizations

Project Location
Montpelier, Vermont

Date Completed
2015-2016

Project Owner
City of Montpelier, Vermont

Project ID#
15-097



Concept design for stormwater swale retrofits to a wide section of College Street in Montpelier.

STONE provided support to the City of Montpelier in developing a city-wide stormwater master plan. After collecting data from existing plans, models, and other available sources pertaining to the City's watersheds, surface waters, stormwater infrastructure, and land use planning, existing drainage problems were identified through a combination of GIS-based analysis of physical watershed characteristics, windshield and walking surveys with photo-documentation, and interviews with key local officials. Wherever a potential stormwater management need existed, the location was documented and information about the need was consistently recorded. A total of 58 potential problem areas were identified throughout the City. Each problem area was given an initial classification with the intent of assessing severity and providing general guidance on the relative order in which needs should be addressed when considered citywide.

The stormwater problem areas identified through the screening were carried through an examination and prioritization process that considered possible regulatory changes, future growth, and the suitability of different types of best management practices to each identified problem area. Some of the criteria used for prioritization included severity of the problem, water quality or infrastructure impacts of the problem (and thus benefits of the solution), ease of taking action (including site access, ownership, and ease of maintenance), municipal needs and priorities (for instance, integration of the solution with upcoming capital improvements or co-benefits for combined sewer overflow control), availability of funding to fix the problem, and potential for a demonstration project or educational component. The prioritization resulted in 22 of the problem areas being "short-listed". In consultation with City staff, this list was narrowed to ten highest-priority projects, seven of which were advanced to concept design. In addition to the seven concept designs, three sites were chosen as models for illustrative concepts for integrating green stormwater management practices into other City infrastructure (such as roadways and parking lots) in the future.