Integrated Water Quality Management Planning, Burlington, Vermont

STONE ENVIRONMENTAL
100% EMPLOYEE-OWNED

Services / Expertise
Water Quality
Watershed Planning
Stormwater Planning
Stormwater System Management
Stormwater Retrofit Identification & Design
Urban Retrofit Planning
Geospatial Data & Solutions
Urban Retrofit Planning
Spatial Analysis & Mapping
MS4 Permit Compliance
TMDL Compliance & Modeling
Municipal System Improvements
Phosphorus Control Plan

Markets
Municipal Clients
Regional Planning Commissions

Project Location
Burlington, Vermont

Date Timeline
2018–present

Project Owner
City of Burlington
Public Works Department

Funding Partners
VTDEC ERP/Clean Water SRF Loan

Project ID#
16-025

Project Manager
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Project Water Quality Specialist
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Project Team
Dave Braun, Branden Martin, PE

Draft BIP Runoff Reduction Opportunities Map, displaying locations of potential runoff reduction opportunities.

STONE is part of a consulting team selected by the City of Burlington Department of Public Works to develop an Integrated Water Quality Management Plan for the entire city. The plan will serve as a roadmap for how Burlington cost-effectively addresses complex water and infrastructure issues, including meeting requirements for Lake Champlain phosphorus clean up, mitigating combined sewer overflows, and complying with stormwater flow TMDL requirements—ideally under a single Integrated Permit from Vermont ANR.

Stone's professionals are leading stormwater-related aspects of Integrated Plan assessment and development. We comprehensively identified opportunities for improved stormwater management throughout the city, at both site and neighborhood scales. A GIS inventory of existing conditions and planned projects provided a baseline for assessing stormwater management opportunities on both city-owned and private residential or commercial properties (http://arcg.is/1rjmnW). Stone refined the "opportunities map" through field screening, identification, and confirmation of over 200—and counting—specific Best Management Practices (BMPs), with results available via a working map at http://arcg.is/0y89fK.

Once the MS4 permit was finalized in 2018 and municipal Phosphorus Control Plan (PCP) requirements came into focus, Stone developed P load information for review and concurrence by Vermont DEC and incorporated structural BMPs into a spreadsheet model to determine Burlington's progress towards meeting P reduction targets. PCP development proceeded in tandem with evaluating stormwater alternatives across a comprehensive suite of measures, including incentive programs for retrofits on private property and non-structural standards.

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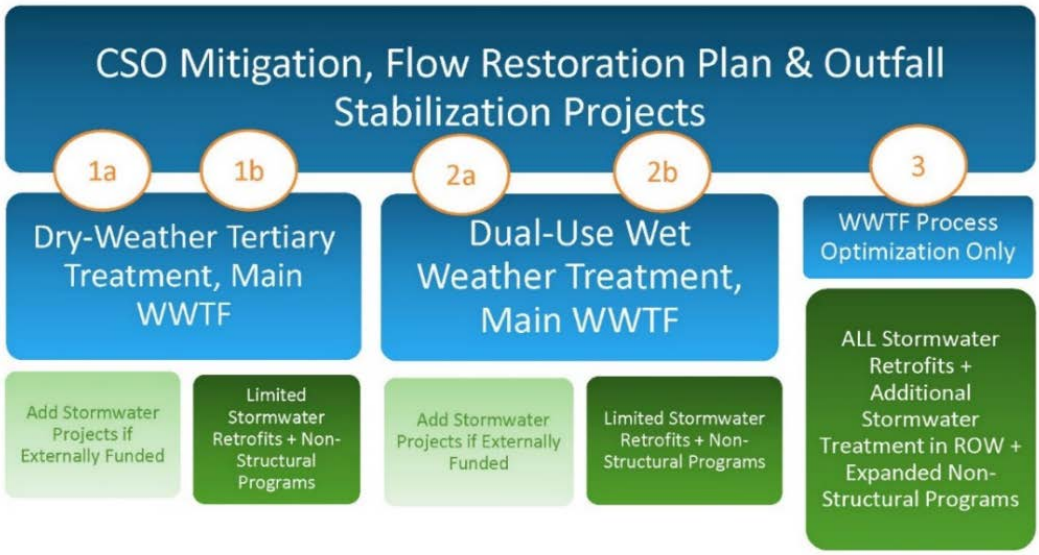

Conceptual rendering of the project portfolios assembled for evaluation and ranking in the development of Burlington's draft Integrated Plan.