

# Integrated Water Quality Management Planning, Burlington, Vermont



## 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 Completed

2018–present

## Project Owner

City of Burlington  
Public Works Department

## Project ID#

16-025

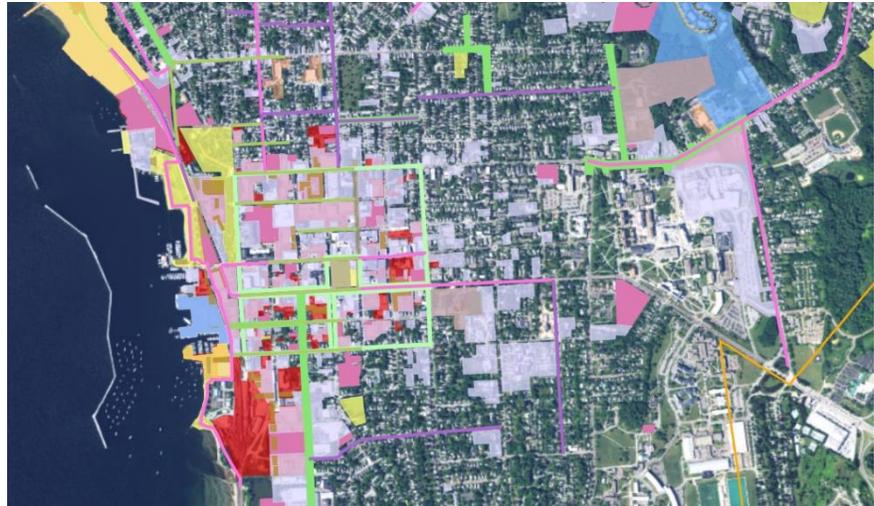
## Project Manager

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## External Links

Draft Burlington Integrated Planning  
Runoff Reduction Opportunities Map:  
<http://arcg.is/1rjmnW>

Burlington Integrated Planning Runoff  
Reduction Opportunities Map:  
<http://arcg.is/0y89fK>



*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 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 specific BMPs (and counting), with results available via a working map at <http://arcg.is/0y89fK>.

Once the MS4 permit was finalized in 2018 and municipal 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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Ultimately, stormwater aspects are only one portion of the Integrated Planning framework. The costs and benefits of improved stormwater measures were balanced with other clean water needs, including wastewater treatment plant (WWTP) upgrades, CSO storage and treatment alternatives, and collection system improvements, in developing a draft Integrated Plan document. The city submitted the draft Integrated Plan for review by Vermont DEC in May 2021.



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