

# Phosphorus Control Plans for Essex Junction and Essex Town, Vermont



## Services / Expertise

Water Quality and Watershed Planning  
Stormwater System Management  
Stormwater Retrofit Identification & Design  
Urban Retrofit Planning  
Spatial Analysis & Mapping  
MS4 Permit Compliance  
TMDL Compliance & Modeling  
Municipal System Improvements  
Phosphorus Control Plan

## Market

Municipal Clients

## Project Location

Essex, Vermont

## Date Completed

2018-2021

## Project Owner

Village of Essex Junction

## Stone Project No.

18-123

## VTrans Project No.

STP MM18(2)

## Project Manager

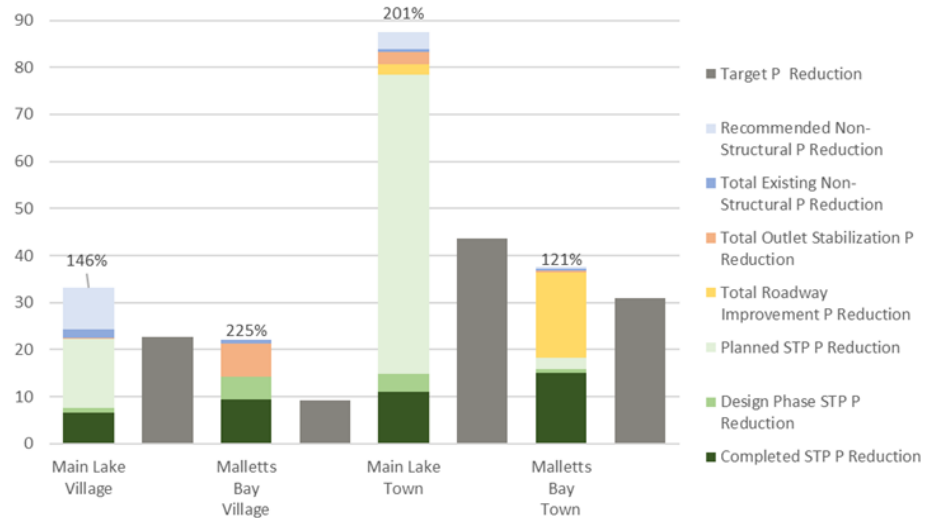
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## Project Team

Warren Rich, Heather Cox

## Subconsultants

Stantec  
Horsley Witten Group



Phosphorus load reductions (kg/yr) credited to existing, design-phase, and projected structural STPs, existing and required road segment and outlet improvements, and existing and recommended non-structural controls, Essex Junction and Essex Town.

STONE led a team of consultants and engineers selected by the Essex Junction and Essex Town MS4s to develop a Phosphorus Control Plan (PCP) including both municipalities. The Plan serves as a roadmap for how each organization will cost-effectively address requirements for Lake Champlain phosphorus clean-up.

The Phosphorus Control Plan first documents the areas and resulting phosphorus base load subject to the conditions of the PCPs. It describes progress towards target P reductions achieved by the Essex Junction and Essex Town MS4s through implementation of structural stormwater treatment practices owned, controlled, or maintained by the MS4s via inspection/maintenance agreements, through improvements to hydrologically connected road segments and culvert outlets, and through application of non-structural practices such as street sweeping and catch basin cleaning within the PCP areas from 2010-2020.

The PCP then provides a menu of structural STPs, municipal road segment and culvert outlet repairs, enhanced non-structural controls (particularly street sweeping), and implementation of enhanced ordinances or regulations to address sub-jurisdictional impervious surfaces that the Essex Junction and Essex Town MS4s may use to achieve required P reductions from municipally-owned developed lands. Despite challenges posed by delays to Vermont DEC's issuance of crediting guidelines for certain stormwater management measures, and by COVID-19 impacts to municipal and State government operations and functions, Stone's team delivered the Phosphorus Control Plans on time and under budget.