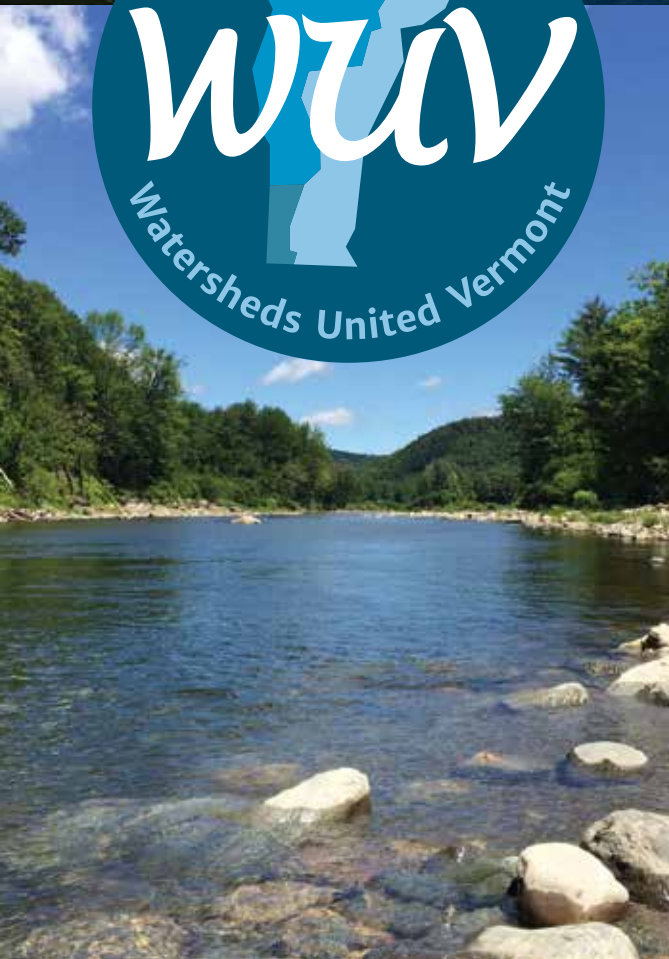




# Accomplishments of Vermont's Watershed Groups 2019





Friends of the Mad River - Brad Long

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*A publication of Watersheds United Vermont*

This report highlights the accomplishments and impact of watershed groups across Vermont in 2019.

**Watershed groups** are community-based organizations working to protect and restore Vermont's rivers, streams, and lakes. These groups work on watershed protection and restoration activities that are critical for clean water and healthy watersheds.

**Watersheds United Vermont's mission is to empower community-based watershed groups to protect and restore Vermont's waters.**

## A Glimpse of Watershed Groups' Efforts

Watershed groups are formed at the community level out of an interest in protecting and restoring waters within their watershed. Watershed groups range from all-volunteer groups to small, staffed non-profit organizations. All watershed groups work with individuals and communities in their local watersheds to monitor and assess the health of their rivers, streams and lakes; to protect and improve water quality, fish and wildlife habitat, and flood resilience; and to connect people to Vermont's waters.

### Highlights of watershed groups' work across Vermont in 2019:

#### Planting Buffers Along Our Rivers and Streams

Every spring and fall, Vermont's watershed groups plant thousands of native trees and shrubs along our rivers and streams to restore riparian buffers. Watershed groups work with partners to develop these riparian buffer restoration projects on private, state, and federal lands, and engage community volunteers and work crews to plant the trees.

##### Impact in 2019

**1,096** volunteers along with staff and work crews planted

**13,902** trees creating

**43** acres of riparian buffers

##### Benefits

- Protects stream banks from excessive erosion
- Reduces nutrient runoff into streams and rivers
- Keeps water temperatures cool for fish and other aquatic organisms
- Mitigates impacts on communities from flood events
- Restores natural river conditions and movement

#### Friends of the Winooski is Planting Trees to Restore Vermont's Rivers

Restoring and enhancing the woody vegetation growing along streambanks is critical for keeping Vermont rivers and streams clean and healthy. The Friends of the Winooski River (FWR) brings volunteers together every spring to plant thousands of trees along the Winooski River and its tributaries. By early March each year, FWR has landowners on board, trees ordered, and volunteer crews lined up to plant! Planting teams include local businesses, community groups, and students.

In 2019, FWR coordinated the planting of 1,665 trees and shrubs on seven sites along the Winooski and its tributaries. Planting is an activity that brings together people of all ages in shared stewardship of our rivers. FWR worked with local business crews from TimberHomes of Montpelier and SunCommon of Waterbury to plant riparian buffers.



## Monitoring Water Quality

Watershed groups play a critical role in the health of Vermont's waters by monitoring water quality in their local rivers, streams, and lakes. Groups collect data that informs the public about the safety of local swimming holes and helps direct management decisions to improve water quality across the state. Most groups monitor phosphorus, nitrogen, *E. coli* bacteria, and turbidity and some groups monitor pH, chloride, nitrates/nitrites, conductivity, and temperature.

### Impact in 2019

**206** volunteers across Vermont spent more than

**1590** hours helping to monitor water quality at

**333** sites in **1723** sampling events

### Benefits

- Identifies water quality "hot spots" in need of improvement
- Informs the public about the health of local water bodies, including swimming spots
- Measures the clean water impacts of restoration projects
- Monitors progress towards clean water goals



Friends of the Mad River - Suze Edwards

## Cleaning up Vermont's Rivers

Every year, volunteers organize river cleanups that remove tons of trash from our rivers, streams, and lakes. September is Vermont's River Cleanup Month as rivers are relatively warm and low, making it ideal for finding and removing trash at the end of the recreation season.

### Impact in 2019

**529** volunteers assisted with cleanups at

**50** river sites across Vermont, removing more than

**15,000** pounds of trash from our rivers

### Benefits

- Improves health and safety for those recreating on and in the rivers
- Reduces potential pollutants leaching into our waters
- Removes trash harmful to fish and wildlife
- Increases the aesthetic beauty of Vermont's waters



White River, WRP

## Improving Habitat Connectivity

Watershed groups develop and implement a variety of projects that reconnect vital aquatic habitats, including removing old dams, and replacing and retrofitting culverts. In addition to improving the ecological function of rivers and streams and opening up miles of streams to fish and other aquatic organisms, these large-scale construction projects also invest hundreds of thousands of dollars into the local economy.

### Impact in 2019

**4** dams removed and **3** culverts replaced to open

**120** miles of river to aquatic organism passage

### Benefits

- Removes barriers to reconnect habitat for fish and other aquatic organism passage
- Restores the natural flow of rivers and streams
- Reduces erosion along rivers and streams and improves flood resiliency
- Improves water quality by allowing sediment to move naturally

## Connecticut River Conservancy is Reconnecting Habitat for Fish

The Connecticut River Conservancy is working with partners and funders to restore streams to improve fish passage and flood resiliency at pinch points in our rivers. These obstacles include old “deadbeat” dams with no useful purpose and undersized culverts, which block or hinder fish and other aquatic animals from accessing their entire watershed. Since 2014, CRC and their project partners have opened 322 miles of habitat via 14 dam removals and 3 culvert projects in Vermont.

In 2019, CRC removed two Vermont dams; one in Grafton on the South Branch of the Saxtons River, and the other in Dummerston on the impaired Crosby Brook. CRC partnered with the Windham Regional Commission to remove the Crosby Brook dam (pictured). This removal was supported by grants from the Vermont Department of Environmental Conservation (DEC), VT Fish & Wildlife, the US Fish & Wildlife

Service, and Trout Unlimited.

The CRC’s dam removal efforts in Vermont will continue to focus on flood resiliency and aquatic organism passage projects; with nine projects in process in Barnet, Guilford, Londonderry, Newfane, Thetford, Weathersfield, Westminster, Wilmington, and Windham.



*Crosby Brook flows freely again after the removal of the Crosby Brook Dam (left).*

## Managing Stormwater and Restoring Floodplains

Green stormwater management and the restoration of wetlands and floodplains are key actions for slowing down runoff into our rivers, streams, and lakes.

Watershed groups develop, design, and implement stormwater improvements and floodplain restoration projects that improve water quality, habitats, and flood resilience.



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### Impact in 2019

**38** stormwater project designs were completed, and

**9** stormwater and restoration projects were implemented

### Benefits

- Improves water quality by reducing nutrients and contaminants from urban and rural landscapes
- Reduces erosion of streambanks and lakeshores
- Replenishes groundwater, which is the drinking water source for many Vermonters
- Improves flood resiliency in our communities by slowing down flood waters

### Lewis Creek Association Restores the Functions of a Floodplain in Hinesburg

**T**he Beecher Hill Brook floodplain restoration project is part of the Lewis Creek Association's (LCA) Ahead of the Storm Program, which showcases conservation practices that mitigate stormwater and slow the flow of waters.

LCA worked in partnership with the Town of Hinesburg, engineers at Milone & MacBroom, Inc., and a local excavation contractor to remove a berm and earthfill and to install rocks and logs to raise the channel bed. This project improves the connection between the channel and floodplain and provides an

area for water to slow, sediment to be deposited, and nutrients to be taken up by vegetation. The removal of fill will reduce future erosion and avoid destabilizing town culverts upstream. LCA will plant trees to complete the restoration in 2020. The project was funded through a grant from the Vermont DEC.

LCA works with partners and landowners to implement these types of practices across the landscape with the goal of improving flood resilience and water quality. Climate change has increasingly become an impetus for this work.



Both photos: Jessica Louiso, MM1

*Berm and building removed and channel restored to allow the floodplain to slow flood waters on Beecher Hill Brook.*

## Engaging Students and Communities in Our Watersheds

Raising public awareness and understanding about water quality and watershed health and our role in protecting and restoring it is critical to our future. Watershed groups lead educational programs to

connect students, town officials, landowners, and community members with their local rivers and lakes and to garner support for clean water projects and programs.

### Benefits

- Connecting people to Vermont's rivers, streams, and lakes
- Raising awareness about clean water issues and opportunities
- Engaging landowners and other community members to adopt land use practices beneficial to our waters
- Garnering community support for investing in clean water and healthy watersheds

### Impact in 2019

**74** school education programs with

**2,950** students as well as

**Hundreds** of conversations with landowners and communities about local waters and watersheds!

### White River Partnership Gets Students Outside and in the River

**T**he White River Partnership's (WRP) School-based watershed education programs get students outside and in the river. Programs include sampling and identifying crayfish, "Trout in the Classroom" in collaboration with Trout Unlimited, assessing stream-crossing culverts, monitoring waterbugs, finding wildlife tracks and signs along the river in winter, and more!

In 2019 the WRP and the Green Mountain National Forest coordinated the third annual freshwater snorkeling program. 300 students had a chance to squeeze into wetsuits, masks and snorkels and jump in the river to find evidence of aquatic biodiversity in a successful habitat restoration project area on the National Forest.



Both photos: White River, WRP

*Freshwater Snorkeling participants explore life under the surface of the White River's West Branch.*

## Developing and Implementing Watershed Priorities

With local knowledge and deep connections in their communities, watershed groups play a critical role in the development and implementation of DEC's Tactical Basin Plans and other watershed-focused strategic assessments and plans. Groups apply their expertise to identify needs within a watershed and prioritize projects that improve water quality and watershed health.

### Benefits

- Provide critical information to partners on watershed issues and opportunities
- Support DEC to ensure Tactical Basin Plans are robust and reflective of community concerns and watershed needs.
- Collaborate with other watershed partners such as consultants, towns, Natural Resources Conservation Districts, and Regional Planning Commissions to develop plans and implement projects.

**Watersheds United Vermont** is an association of community-based watershed groups across Vermont. WUV provides information, resources and training to watershed groups; encourages collaborations and connections between watershed groups and with partner organizations; and acts as a voice and a representative for watershed groups at the state level.

### Snapshot of WUV's Work Connecting, Informing, and Representing Watershed Groups.

- Provides weekly updates on funding opportunities, events, trainings, and relevant resources to keep watershed groups and partner organizations informed, engaged and connected
- Convenes an annual conference for watershed groups and partner organizations to learn from each other and outside experts and to share best practices and ideas for common challenges
- Holds trainings and collaborative conversations for watershed groups on topics such as stormwater management, riparian buffer planting, landowner outreach, stormwater property assessments, and more
- Administers subgrants to watershed groups for project development, riparian buffer plantings, water quality data analysis support, and water quality improvement project design and implementation
- Supports Watershed Resilience Teams, funded by the High Meadows Fund, to make watershed connections across communities
- Represents watershed groups at both the state agency level and also at the legislature to foster engagement between policy makers and community-based groups
- Connects watershed groups with each other and partner organizations to help groups share expertise and resources and expand our collective impact.

### Vermont Watershed Groups Represented in this Report:

Addison County River Watch Collaborative  
Battenkill Conservancy  
Black River Action Team  
Connecticut River Conservancy  
Friends of the Mad River  
Friends of Northern Lake Champlain  
Friends of the Winooski River  
Green River Watershed Alliance  
Hoosic River Watershed Association  
Lewis Creek Association  
Memphremagog Watershed Association  
Missisquoi River Basin Association  
Ottawaquechee River Group  
Rock River Science and Education Inc.  
Southeastern Vermont Watershed Alliance  
Saxtons River Watershed Alliance  
St. Albans Area Watershed Association  
White River Partnership

Watershed groups are part of a complex set of organizations working at the community level on the protection and restoration of water and watersheds including Natural Resources Conservation Districts, Lake Associations, Farmers' Alliances, Trout Unlimited groups and municipalities. WUV and watershed groups also partner with regional and statewide Technical/Service partners, including state and federal agencies, land trusts, Regional Planning Commissions, and water advocacy organizations.

**[www.watershedsunitedvt.org](http://www.watershedsunitedvt.org)**

Lyn Munno, *Director*

802-586-9625

[watershedsunited@gmail.com](mailto:watershedsunited@gmail.com)