

## Minimum Control Measure #2: Public Involvement & Participation Rethink Runoff Stream Team Summary of Activities



### Prepared by Winooski Natural Resources Conservation District 2021 Calendar Year

#### Overview

Although the pandemic continued to present challenges for the Stream Team in 2021 the Winooski Natural Resources Conservation District (WNRCD) was able to engage many residents in meaningful actions to improve stormwater in their community. We organized a watershed field-day for students in the Winooski Middle School summer school program, reinstated our volunteer water quality monitoring program, explored new opportunities for remote community engagement with the Adopt-a-Drain program and recruited volunteers to install a new rain garden at the Milton Municipal building.

#### RRST Estimated Impact by Municipality

The table below depicts the estimated number of individuals engaged in each RRST municipality in 2021. This table reflects **in-person** interactions where it was possible to log participants' town of residence. For information about residents reached through digital efforts on the website and social media outlets, see final report from Pluck.

Municipality	# of people reached in-person in 2021
Burlington	4
Colchester	0
Town of Essex	0
Village of Essex Junction	2
Milton	3
Shelburne	0
South Burlington	14
Williston	3
Winooski	16

TOTAL	42
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Table 1: Interaction with the Stream Team by municipality

## Organizational Partnerships

The Rethink Runoff Stream Team partnered with **2** non-municipal organizations in 2021:

1. **Hamline University:** Created the Adopt-a-Drain website based on social science research to engage more volunteers in maintaining the health of storm drains in MS4 communities across the country. This year RRSST municipalities engaged in a discussion about joining the Adopt-a-Drain program. See "Projects" section for more details
2. **Winooski Middle School:** A summer school teacher at Winooski Middle School asked if RRSST could present a hands-on watershed lesson to students. See "Outreach Events" section for more details.

## Outreach -----

### Social Media

The Stream Team coordinator periodically updated the Facebook and Instagram pages with information about upcoming outreach events or volunteer opportunities.

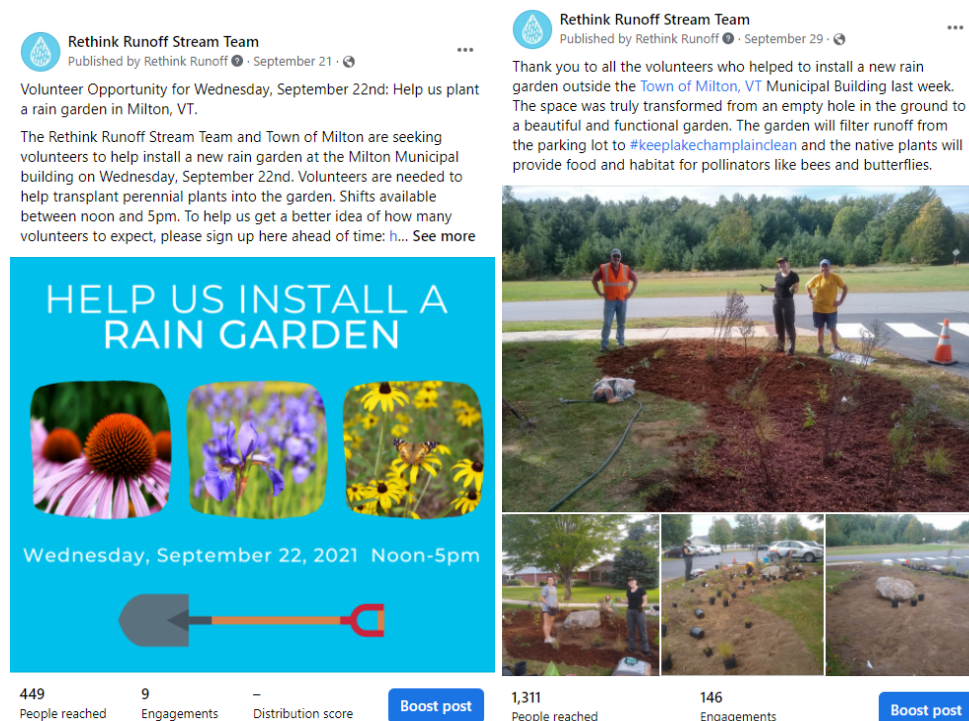


Figure 1: Two Facebook posts from 2021 related to the Milton Municipal Rain Garden installation project

## RRST Website

We maintained the "events" section of the website and occasionally helped to develop ideas for new web content in collaboration with Pluck Design.

## Newsletter

At the end of 2021 there were **799** subscribers to the RRST newsletter (an increase from 770 in 2020). One newsletter was published this year in December.

## Outreach Events

One "outreach" event was held in 2021. A total of **16** people participated.. The event is described in more details below:

1. **Winooski Middle School Watershed Field Day:** The Stream Team Coordinator delivered a 2-hour hands-on lesson to 12 students and 4 teachers at Winooski Middle School as part of their summer school program. Students met the coordinator at Landry Park in Winooski. The focus of the lesson was watersheds and community. Students looked at a map of watersheds that drain to Lake Champlain, built their own 3D watershed model, explored Morehouse Brook and played a game about ecological connections. Two WNRCD summer interns helped to facilitate small-group activities for students. Teachers provided positive feedback after the event and expressed an interest in continued partnership for the 2021/22 school year. Total # of people reached in-person in Winooski = 16



*Figure 2: Students at Winooski Middle School participate in hands-on watershed activities at Morehouse Brook in Landry Park.*

## Projects -----

Three in-person "project" events were held in 2021 and planning for a fourth initiative (Adopt-A-Drain) began. A total of **29** people participated in hands-on volunteer events in their communities. The projects are described in detail below:

1. Milton Rain Garden Installation
2. Stream Team Water Quality Sampling
3. Adopt-a-Rain Garden Program
4. Planning for Regional Adopt-a-Drain Program

## Milton Project: Rain Garden Planning and Installation

**Summary:** RRST assisted staff at the Town of Milton with the design and installation of a new rain garden at the Municipal Building on Bombardier Road. The Stream Team Coordinator provided municipal staff with a tailored list of recommended plants for the project. All project supplies were paid for by the town, but the Stream Team Coordinator did harvest about 30 perennial transplants from other over-crowded gardens to add to the planting plan. 5 community volunteers assisted with planting & mulching the garden on installation day.

**Advertising:** Advertising was completed through direct email outreach to our list of active volunteers, posting on social media and inviting community members to share a post on Front Porch Forum.

**Impact:** 5 community volunteers and three staff members participated in two planting shifts throughout the day. Volunteers learned more about the function of the rain garden and the pollinator and wildlife benefits of the plants that were selected. The area was quickly transformed from an empty hole to a beautifully planted and mulched stormwater feature. Most participants accepted a Stream Team t-shirt and sticker as thanks for assisting. The Stream Team Coordinator is currently working with town staff to design an educational sign to accompany the garden since it is in a location with high foot-traffic.



Fig 3: Community volunteers, Milton municipal staff and WNRCD communications intern help to install perennial plants in a new rain garden at the Milton Municipal Building.

## Water Quality Monitoring

**Summary:** The Stream Team has maintained an ongoing water quality monitoring program since 2012. Community science volunteers collect water samples in urban or suburban streams that are impacted by excessive nutrient loading, high chloride and other pollution.

This year VT DEC's LaRosa Program provided financial support for analysis of the water samples at the Vermont Agriculture and Environmental Laboratory (VAEL), wrote the Quality Assurance Project Plan (QAPP), transported samples from partners' offices to the lab, and took on the responsibility of analyzing data from all state-wide partners. This change allowed us to focus more on volunteer recruitment and engagement and less on behind-the-scenes paperwork. Of note, the state-wide data analysis has not been published yet, so a Stream Team



Data Analysis document is not available with this report.

Fourteen Stream Team volunteers collected biweekly water quality samples at fourteen sites on eight streams in 2021. Volunteers collected biweekly grab samples from June 2 - August 11. Grab samples were analyzed for total phosphorus, chloride, and at some sites, nitrogen. These parameters were also sampled at all sites after two rain events. Eight of the sites were new this year and some required special equipment for sampling like a throw-bucket or dipper stick. Appropriate tools were purchased and/or created to assist with sampling while maintaining volunteer safety around swift waters.

The training day for volunteer samplers took place in late May. This year two sessions were offered - one in person at the stream adjacent to the WNRCD Williston Office and one online - to accommodate volunteers' schedules and comfort with gathering in-person. During both trainings the Stream Team coordinator demonstrated sampling procedures, described the data collection sheets, explained how the collected data would be used and answered questions. Throughout the season, volunteers returned their samples through a contactless dropoff system to the WNRCD office. The Stream Team coordinator ensured all samples were properly checked-in and prepared for delivery to the lab. The Stream Team coordinator sent bi-weekly emails to WQ volunteers to check in about sampling procedure and share interesting local water tidbits, and other ways to get involved.

**Advertising:** Advertising was completed through direct email outreach to our list of active volunteers. Recognizing that covid-restrictions may make a fully in-person training impossible, we targeted samplers with prior experience. Next year we look forward to adding new volunteers to the team.

**Impact:** In total volunteers collected 250 individual samples. This data provides information about long term trends that may help towns analyze effectiveness of stormwater BMPs or identify new opportunities for action. Perhaps more importantly, we believe that engaging community members directly in clean-water work creates greater public understanding of the issues VT watersheds are facing and creates greater public support for clean-water initiatives like GSI installation or wastewater treatment plant improvements. In 2022 we plan to add data from this sampling season to the Stream Storytelling online map and use it as an educational tool during outreach events.



*Figure 4: Stream Team volunteers collect water samples at sites at various sites across the RRST service area*

Stream Team Volunteers 2021	
Municipality	# of Volunteers
Burlington	3
Colchester	0
Village of Essex Junction	2
Town of Essex	0
Milton	1
South Burlington	6
Shelburne	0
Williston	1
Winooski	0
Non -RRST Municipalities	1
<b>TOTAL</b>	<b>14</b>

*Table 2: Stream Team Water Quality Sampling Volunteers by town*



Fig 5: Stream Team Water Quality Sampling sites map. See interactive online version here: [https://www.google.com/maps/d/u/0/edit?mid=1SP\\_lsNKpOTLeedEOuaGgRXeEcyNGrGrO&usp=sharing](https://www.google.com/maps/d/u/0/edit?mid=1SP_lsNKpOTLeedEOuaGgRXeEcyNGrGrO&usp=sharing)

## Adopt-a Rain Garden Program Summary

The Stream Team's Adopt-a-Rain Garden program is an opportunity for individuals to assist in keeping public rain gardens in their community functional and attractive. This involves basic maintenance activities like picking up trash, pruning, pulling weeds, installing new mulch, and informing the coordinator of non-functioning gardens. There are currently seven public rain gardens managed by Stream Team. In 2021 all seven gardens were cared for by approximately 10 volunteers. The gardens that have been removed from this list are either now cared for by municipal staff or hired landscaping crews, so it is no longer appropriate to recruit community volunteers. We plan to add 1-4 new gardens for adoption in 2022. See table below for more details.

Rain Garden Volunteers 2021	
Location	Adopter Name
Williston Annex	Rita D.
Callahan Park, Burlington	Brad K.

Chamberlin School, South Burlington	Chris P.
Coast Guard Station, Burlington	Larry K.
Farrell Park, South Burlington	Roan O.
South Burlington Fire Station	Cub Scouts 678
South Burlington Library	Cub Scouts 678

*Table 3: 2021 Rain Garden Adopters 2021*

## Regional: Adopt-a-Drain Launch

**Summary:** This year we completed significant behind-the-scenes research and coordination to launch a robust Adopt-a-Storm-Drain program similar to Adopt-a-Rain-Garden. Based on early interest from the Village of Essex Junction and the City of Burlington in improving and/or starting new storm drain steward programs and based on the success of a small pilot program in 2020 (see 2020 RRST Annual Report) we began to explore options for offering "Adopt a Drain" as a rotating program for interested municipalities. The goal of the program would be to recruit volunteers to care for storm drains in their neighborhood by clearing trash, sediment, salt and other pollutants on a regular basis.

In early conversations we discussed the feasibility of municipal staff creating and maintaining in-house interactive maps where volunteers could view "adoptable" drains and sign up to help. After discussing the idea with GIS specialists in multiple towns (including Burlington where a pilot platform had already been developed, but experienced technical difficulties), the [Adopt-a-Storm-Drain](#) initiative developed by Hamline University was brought to our attention.

Adopt-a-Storm-Drain is a model developed by staff at Hamline University based on research about best practices for community engagement around stormwater. Their website offers a template for towns to input available drains and for volunteers to sign up and find training resources easily. Their interface is supported by technical staff at the university, which means we can spend more time engaging people in our communities and less time working on coding and data management.

**Challenges:** The main challenge of this project was that the Adopt-A-Storm-Drain package comes at an additional cost to current MS4 dues. With most MS4 staff and the Stream Team Coordinator working and meeting remotely, the process of discussing this opportunity was lengthy. Gauging the level of interest from each municipality and assessing which funding options would be most feasible took many months, but we have now determined the cohort of municipalities that would like to participate and plan to move forward with a project launch in 2022.

**Impact:** With the Chittenden County RPC as the administrative partner, the five MS4 communities entered into an MOU with Hamline University (effective Jan 2022) to gain access to the web platform and volunteer training resources. The Stream Team Coordinator will help to



launch the program by taking the lead on volunteer recruitment as a core goal for 2022. We believe launching the Adopt-a-Storm-Drain program is a great fit for these communities in a year that will still be impacted by COVID restrictions. We anticipate that this program will engage hundreds of community volunteers in a project that can be completed without requiring any in-person interaction. Adopting a storm drain is a small and simple action that may inspire community members to participate in other Rethink Runoff activities in the years to come and consider the ways water flows through their neighborhood.

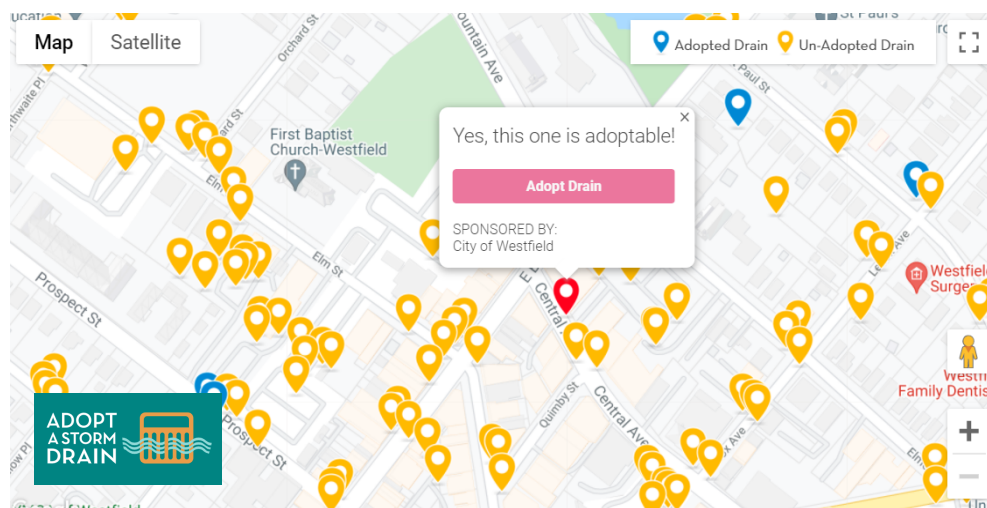


Figure 6: Screenshot from Adopt-a-Drain Website illustrating volunteer sign-up map format

## Volunteer Appreciation Summary

Due to covid we were not able to host an in-person volunteer event. All volunteers were offered Stream Team t-shirts and stickers at the time of the event and many accepted one or both. We are planning to send handwritten thank-you notes and a small gift in the mail to our most dedicated volunteers in early 2022.



This document was prepared by the Winooski Natural Resources Conservation District, which is contracted by Chittenden County's MS4 Committee to run the RRSST program.