



**Annual Report for National Pollutant Discharge Elimination System (NPDES)
General Permit 3-9007 for Stormwater Runoff from the State Transportation Separate Storm
Sewer System (TS4; 2017)**

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APPENDICES

**Appendix A: CHITTENDEN COUNTY REGIONAL STORMWATER EDUCATION PROGRAM
(RSEP)**

**Appendix B: CHITTENDEN COUNTY REGIONAL STORMWATER PUBLIC INVOLVEMENT AND
PARTICIPATION PROGRAM (“STREAM TEAM”)**

1.0 REGULATORY OVERVIEW

In November 2017, the Vermont Agency of Natural Resources (VT ANR) Department of Environmental Conservation (DEC) issued the National Pollutant Discharge Elimination System (NPDES) General Permit 3-9007 (GP 3-9007) for Stormwater Discharges from the State Transportation Separate Storm Sewer System (TS4; the Permit) for stormwater discharges from the Vermont Agency of Transportation (VTrans; the Agency) owned or controlled impervious surfaces. Per Part 1 of the Permit, the purpose of the Permit is to provide efficiencies in overall program management by combining post-construction operational stormwater requirements for VTrans that are associated with its designated regulated small municipal separate storm sewer systems (MS4s); industrial activities, commonly regulated under the Multi-Sector General Permit 3-9003 (MSGP 3-9003); and previously permitted, new, redeveloped, and/or expanded impervious surfaces, commonly regulated under State Operational Stormwater Permits (e.g., General Permit 3-9015, General Permit 3-9010, and Individual Stormwater Discharge Permit [INDS]). The Permit is issued pursuant to the Vermont Water Pollution Control statute, 10 V.S.A. Chapter 47, specifically §§ 1258 and 1264; the Vermont Water Pollution Control Permit Regulations (Environmental Protection Rules, Chapter 13), including the rule governing general permits in Section 13.12; the Vermont Stormwater Management Rule (Environmental Protection Rules, Chapter 18); the Vermont Stormwater Management Rule for Stormwater-Impaired Waters (Environmental Protection Rules, Chapter 22); the federal Clean Water Act (CWA), as amended, 33 U.S.C. § 1251 *et seq.*; and related regulations of the United States Environmental Protection Agency (U.S. EPA) at 40 C.F.R. 122.

1.1 BACKGROUND

In December 2017, VTrans filed a Notice of Intent (NOI) for General Permit 3-9007 to the VT ANR DEC. The NOI included a Stormwater Management Program (SWMP 2017), which includes a comprehensive plan to manage the quality of stormwater discharged from the TS4 in accordance with Part 5 of the Permit. Attachments with the SWMP include:

- Attachment A: List of Waters (Table 1 and Table 2)
- Attachment B: Chittenden County MS4 Stormwater Program Agreement (July 1, 2018)
- Attachment C: VTrans Bridge Washing Best Management Practices and VT ANR Vehicle Washing Policy
- Attachment D: VTrans Flow Restoration Plan
- Attachment E: VTrans Phosphorus Control Plan (to be provided by April 2020)
- Attachment F: Incorporation of Previously Permitted Stormwater Systems
- Attachment G: Stormwater Program Evaluation Top 13 Actions
- Attachment H: Gap Procedure

2.0 COVERAGE UNDER THIS PERMIT

As outlined in Part 2 of the Permit, the Permit applies to:

- VTrans-owned or controlled state highways, sidewalks, multi-use pedestrian paths, welcome centers, airports, gravel pits, mineral mining, maintenance facilities, park & rides, truck weigh stations, and VTrans-owned facilities leased to third parties, including welcome centers and airport facilities (hangars and terminals), and excludes rail lines, rail yards, public transit facilities, and rail trails.
- State highways and VTrans-owned or controlled non-road impervious surfaces in the urbanized areas and stormwater-impaired watersheds of Burlington, Colchester, Essex, Essex Junction, Milton, Shelburne, South Burlington, Williston, Winooski, the University of Vermont, the Burlington International Airport, Jericho, Underhill, St. Albans, the Town of St. Albans, the Town of Rutland, and the City of Rutland.
- VTrans-owned or controlled airport facilities and non-metallic mineral mining facilities.

3.0 ANNUAL REPORTING REQUIREMENTS

In accordance with Subpart 10.2 Annual Report of GP 3-9007, VTrans shall submit annual reports to the DEC Watershed Management Division, Stormwater Management Program by April 1st each year. Flow Restoration Plan (FRP) and Phosphorus Control Plan (PCP) reports may be included with the annual report when reporting deadlines coincide. In addition to FRP and PCP reporting requirements, the annual report shall include reporting requirements under Parts 4, 5, 6, and 7 of the Permit, as well as:

- A. The status of VTrans' compliance with permit conditions, an assessment of the appropriateness of the identified Best Management Practices (BMPs), progress towards achieving implementation of BMPs necessary to meet Total Maximum Daily Load (TMDL) requirements and progress towards achieving the statutory goal for the six minimum measures of reducing the discharge of pollutants to the Maximum Extent Practicable (MEP), and the measurable goals for each of the minimum control measures and TMDL implementation measures;
- B. An inspection report on the condition of VTrans' stormwater management systems that notes all problem areas and all measures taken to correct any problems and to prevent future problems;
- C. Results of information collected and analyzed, if any, during the reporting period, including monitoring data used to assess the success of the program at meeting TMDL requirements and the success of the six minimum measures;

- D. A summary of the stormwater activities VTrans plans to undertake during the next reporting cycle (including an implementation schedule);
- E. Proposed changes to VTrans' SWMP, including changes to any BMPs or any identified measurable goals that apply to the program elements; and
- F. Notice that VTrans is relying on another government entity to satisfy some of its permit obligations (if applicable).

In the following sections of this annual report, as well as the accompanying Annual Report Workbook, VTrans is providing a summary of activities as they are associated with the annual reporting requirements listed above. In addition to the information provided in this annual report, the accompanying Annual Report Workbook includes the following tabs with relevant updates:

- Tab 4.0: Discharge Requirements Annual Reporting
- Tab 6.0: Minimum Control Measure (MCM) Annual Reporting
- Tab 6.1: Trainings Summary
- Tab 6.3.a: Facilities Updates
- Tab 7.0: Industrial Activities Summary
- Tab 8.0: Operational Stormwater Management System Annual Inspections Summary
- Tab 9.1: Flow Restoration Plan (FRP) Implementation Summary
- Tab 9.2: Phosphorus Control Plan (PCP) Development Reporting

4.0 DISCHARGE REQUIREMENTS

Impaired waters are those waters that VT ANR has identified pursuant to Section 303(d) of the Clean Water Act (CWA) as not meeting the Vermont Water Quality Standards (VWQS). Impaired waters encompass both those with approved TMDLs or Water Quality Restoration Plans (WQRPs), and those for which TMDL development is necessary but has not yet been approved by the U.S. EPA. Per the Permit, except for Part 9, a VTrans project is considered to discharge to an impaired water if the first water of the State to which runoff discharges is identified as an impaired water. For discharges that enter a separate storm sewer system prior to discharge, the first water of the State to which runoff is discharged is the waterbody that receives the stormwater discharge from the storm sewer system. To address this requirement, VTrans has developed and provided a complete list of first waters to which designated MS4/TS4 areas discharge; included as Table 1 in Attachment A of the SWMP (2018).

4.1 DISCHARGES TO IMPAIRED WATERS WITH AN APPROVED TOTAL MAXIMUM DAILY LOAD WITH WASTELOAD ALLOCATION

Discharges from the TS4 to impaired waters with an approved TMDL and wasteload allocation, including descriptions of the measures being used to address requirements where applicable, are listed in Tables 1 and 2 in Attachment A of the SWMP (2018). Progress on measures VTrans is implementing can be found in Tab 4.0 of the Annual Report Workbook.

4.2 DISCHARGES TO IMPAIRED WATERS WITH AN APPROVED TOTAL MAXIMUM DAILY LOAD WITHOUT WASTELOAD ALLOCATION

Discharges from the TS4 to impaired waters with approved TMDLs, where the TMDL does not specify a WLA or other requirements for the TS4 discharge, are listed in Tables 1 and 2 in Attachment A of the SWMP (2018). These tables include a summary of VT ANR-approved measures that VTrans is implementing to address the pollutant(s) of concern addressed by the TMDL. Progress on measures VTrans is implementing can be found in Tab 4.0 of the Annual Report Workbook.

4.3 DISCHARGES TO IMPAIRED WATERS WITHOUT AN APPROVED TOTAL MAXIMUM DAILY LOAD

Identified and mapped discharges from the TS4 to impaired waters that are listed on the "State of Vermont 303(d) List of Impaired Waters, Part A – Impaired Surface Waters in Need of TMDL" are listed in Tables 1 and 2 in Attachment A of the SWMP (2018). These tables include a summary of measures that VTrans is implementing to ensure compliance with the VWQS. Progress on measures VTrans is implementing can be found in Tab 4.0 of the Annual Report Workbook.

5.0 STORMWATER MANAGEMENT PROGRAM

Per Subpart 5.1 of the Permit, VTrans has developed a written SWMP (2018) to include information required, as necessary, under Part 3 of the Permit; the information required under Part 4 of the Permit to address discharges to impaired waters; the required elements under the six minimum control measures in Part 6 of the Permit; the industrial control measures in Part 7 of the Permit, including the Stormwater Pollution Prevention Plan (SWPPP); the operational stormwater requirements under Part 8 of the Permit; and the Flow Restoration Plan (FRP) and Phosphorus Control Plan (PCP) developed in accordance with Part 9 of the Permit.

To meet requirements of Subpart 5.2 of the Permit, VTrans has performed an annual review of the SWMP and has no changes for this reporting period.

6.0 MINIMUM CONTROL MEASURES

Per Part 6 of the Permit, VTrans has developed and is implementing and enforcing a SWMP (2018), which includes the six minimum control measures that are designed to reduce the discharge of pollutants from the TS4 to the MEP, to protect water quality, and to satisfy the appropriate water quality requirements of the CWA. For purposes of the six minimum control measures, implementation of BMPs consistent with the provisions of the SWMP constitute compliance with the standard of reducing pollutants to the MEP. The six minimum control measures include:

1. Public Education and Outreach on Stormwater Impacts (MCM 6.A)
2. Public Involvement and Participation (MCM 6.B)
3. Illicit Discharge Detection and Elimination (MCM 6.C)
4. Construction Site Stormwater Runoff Control (MCM 6.D)
5. Post-Construction Stormwater Management for New Development and Redevelopment (MCM 6.E)
6. Pollution Prevention and Good Housekeeping for VTrans' Operations (MCM 6.F)

The BMPs that are being implemented by VTrans to address these six minimum control measures are included in Part 6.0 of the SWMP (2018). A summary of annual reporting requirements and progress for each MCM is provided in Tabs 6.0, 6.1, and 6.3.a of the Annual Report Workbook.

7.0 INDUSTRIAL ACTIVITY CONTROL MEASURES

Per Part 7 of the Permit, VTrans has developed and is implementing Stormwater Pollution Prevention Plans (SWPPPs) for its airport transportation facilities and facilities that conduct non-metallic mineral mining and dressing as the primary activity on site and that have the SIC Codes listed in the Permit. VTrans has selected, designed, installed, and implemented control measures, including BMPs, to minimize pollutant discharges that address the selection and design considerations, meet the nonnumeric effluent limits, meet limits contained in applicable effluent limitations, and meet the water quality-based effluent limitations per the relevant subparts of Part 7 of the Permit. A table that lists airport transportation facilities and non-metallic mineral mining and dressing facilities that are included in the VTrans TS4 and that were previously issued an MSGP 3-9003 by VT ANR is provided in Part 7.0 of the SWMP (2018). A link to the SWPPPs that have been prepared for these facilities can be found at:

<https://outside.vermont.gov/agency/VTRANS/external/docs/stormwater/Forms/AllItems.aspx>

A summary of trainings, inspections, monitoring, and any corrective actions taken is provided on Tab 7.0 of the Annual Report Workbook.

8.0 STORMWATER DISCHARGES FROM IMPERVIOUS SURFACES

Per Part 8 of the Permit, permit coverage is provided for: (1) previously permitted stormwater runoff discharges and proposed new stormwater runoff discharges from impervious surfaces that trigger jurisdiction as outlined in Subpart 8.1.A of the Permit, (2) stormwater discharges to waters of the State that are not impaired by stormwater and to waters of the State that are listed as principally impaired due to stormwater runoff with a stormwater WQRP or TMDL on the EPA-approved State of Vermont List of Priority Surface Waters (Part D, Impaired Surface Waters with Completed and Approved TMDLs) and that have an approved FRP or other approved implementation plan.

A list of projects in the TS4 with VTANR operational coverage including status, inspections, and corrective actions needed or taken is provided on Tab 8.0 of the Annual Report Workbook.

9.0 TOTAL MAXIMUM DAILY LOAD IMPLEMENTATION

9.1 FLOW RESTORATION PLAN

VTrans maintains infrastructure within the watersheds of the following stormwater-impaired waters: Allen, Bartlett, Centennial, Indian, Moon, Munroe, Potash, Rugg, Stevens, and Sunderland Brooks. Per Subpart 9.1 of the Permit, VTrans submitted an FRP to VT ANR in October 2016 (FRP 2016) to address requirements of General Permit 3-9014 for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (2012) associated with these watersheds; see Attachment D of the SWMP (2018). Upon approval by VT ANR, the FRP will become a part of the SWMP (2018).

Supporting information per annual reporting requirements of the TS4 are provided in Tab 9.1 of the Annual Report Workbook.

Per Subpart 9.1 of the Permit, VTrans, along with other MS4s, funds a Flow Monitoring Program to address flow and precipitation monitoring in its respective stormwater-impaired watersheds. Stream flow and precipitation monitoring data that are collected through this program are available at the following links:

- Flow monitoring data: <http://vt-ms4-flow.stone-env.com/FlowDev/index.html>
- Precipitation data: <http://vt-ms4-flow.stone-env.com/Precip/index.html>

VTrans spent \$16,590.00 this year on the Flow Monitoring Program.

9.2 PHOSPHORUS CONTROL PLAN

VTrans maintains infrastructure in all 13 lake segments within the Lake Champlain Basin. Per Subpart 9.2 of the Permit, VTrans will develop and implement a comprehensive PCP for the TS4 within the Lake Champlain Basin in phases, beginning with the establishment of baseline phosphorus loading and calculation of the phosphorus load reductions needed to achieve its percent reduction from the TS4 for each Lake segment. Development and implementation of the remaining phases of the PCP, and submittal to VT ANR, will be conducted per the schedule outlined in Subpart 9.2.C of the Permit.

A summary of progress towards meeting the milestones established for phosphorus control planning is provided in Tab 9.2 of the Annual Report Workbook.

10.0 RECORD KEEPING AND REPORTING

Per subpart 10.1 of the Permit, VTrans is retaining records of monitoring information, copies of reports required by the Permit, copies of Discharge Monitoring Reports (DRMs), a copy of its authorization and amended authorizations under this Permit, and records of data used to complete the NOI for this Permit, for a period of at least three years from the date of the sample, measurement, report or application, or for the term of this Permit, whichever is longer. VTrans is retaining copies of written records relating to the stormwater collection, treatment, and control systems, and BMPs, including calculations used to size STPs, authorized under this Permit. VTrans is submitting its records to VT ANR when specifically asked to do so. VTrans is retaining a copy of the SWMP and a copy of the Permit language at a location accessible to VT ANR. VTrans is making its records, including the NOI and SWMP, available to the public, if requested to do so in writing.

Per subpart 10.2 of the Permit, VTrans is submitting its annual reports to the VT DEC, Watershed Management Division, Stormwater Management Program by April 1st each year. FRP and PCP reports may be included with the annual report when reporting deadlines coincide.

APPENDICES

**Appendix A CHITTENDEN COUNTY REGIONAL STORMWATER
EDUCATION PROGRAM (RSEP)**

Minimum Control Measure #1:
Public Education & Outreach
REGIONAL STORMWATER EDUCATION PROGRAM
RETHINK RUNOFF

JANUARY–DECEMBER 2020
ANNUAL REPORT

Prepared by:

Pluck

Introduction

Since 2003, Chittenden County's twelve MS4s have worked to pool resources to professionally engage the public in a one message, one outreach effort known as the Regional Stormwater Education Program. Through regular spring and summer advertisements to drive people to the program's website, www.smartwaterways.org, this cooperative approach to fulfilling its NPDES Permit Minimum Control Measure #1 (Public Education & Outreach) requirements has built a regional awareness among the public of the need for individual action to assist in fighting stormwater problems.

In the summer of 2016, the MS4s contracted with Tally Ho through their Lead Agency, the Chittenden County Regional Planning Commission, to rebrand the Smart Waterways campaign into a combined effort with the MS4's Minimum Measure #2 regional effort known as the Chittenden County Stream Team. The goal was to create one cohesive organization and outreach effort to both educate the public about stormwater and boost public participation in implementation of projects to combat the negative impacts of stormwater. In spring of 2017, Rethink Runoff was publicly launched, including a new website and revised creative.

Pluck has been responsible for the creative, administration, and management of Rethink Runoff since late 2017 .

This 2020 calendar year report recaps the work done primarily related to Minimum Control Measure #1.

2020 Initiatives

In January, we continued our year-round approach to advertising by introducing a small winter-based campaign on reducing salt use, to run alongside our winter pet waste ads.

We re-organized the Rethink Runoff site, updating the theme and adjusting messaging throughout.

In Spring 2020, we introduced an additional advertising push focusing on conservation and environmental impacts of stormwater runoff by featuring animals within the Lake Champlain ecosystem: one bird, one amphibian and one fish.

A new campaign, Ms. Drop's Tip of the Month was initiated. We create a :30 second animation that could be updated each month with a tip for reducing stormwater runoff. Animations were posted to social media channels (FB and Instagram) and promoted each month to a target audience within MS-4 locations.

In addition, we used the same creative for an additional set of ads, to work as a general awareness ad set for Rethink Runoff. As part of that, we introduced a test HTML5 ad (one size) to gauge effectiveness. Overall the change in metrics was minimal when looking at engagement.

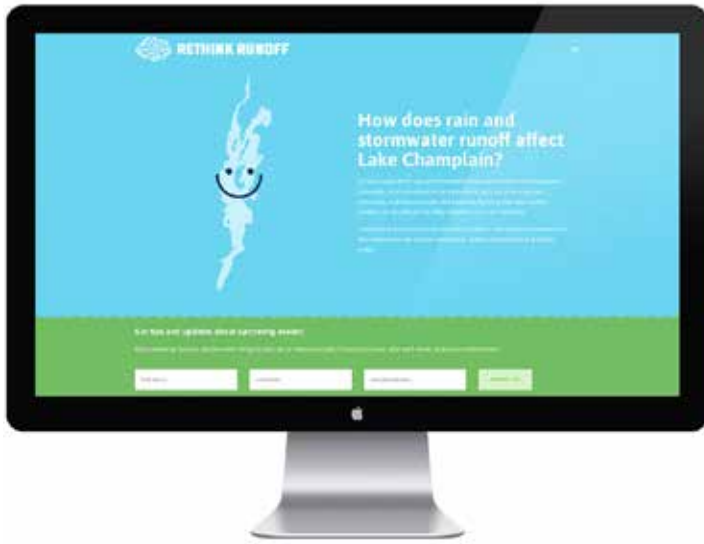
We updated the rack cards for Stream Team outreach from a creative and messaging standpoint to tie it with the messaging on the website.

When COVID prevented in-person workshops for Stream Team, we created a digital template for Google Sheets for Kristen Balschunat to use for digital/virtual events.

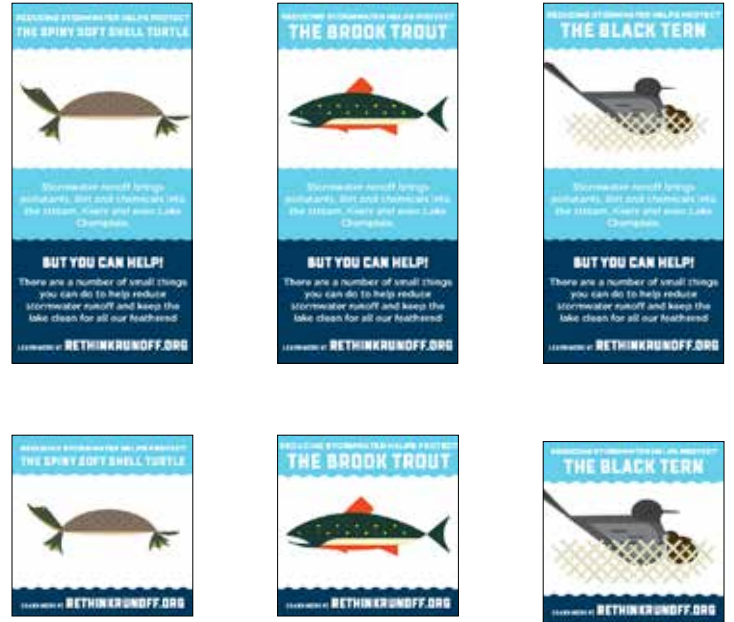
We introduced tracking onto the websites for conversions (or actions our visitors take while visiting the website). Our first conversion to be tracked is for a downloadable pdf with instructions on How to Build a Rain Barrel. These events often book to capacity and are also restricted by city or town, so including a downloadable pdf on the site allows us to determine to measure interest in visitors doing DIY stormwater-related projects.

2020 Creative

UPDATED WEBSITE



ECO-BASED CAMPAIGN - SAMPLE ADS

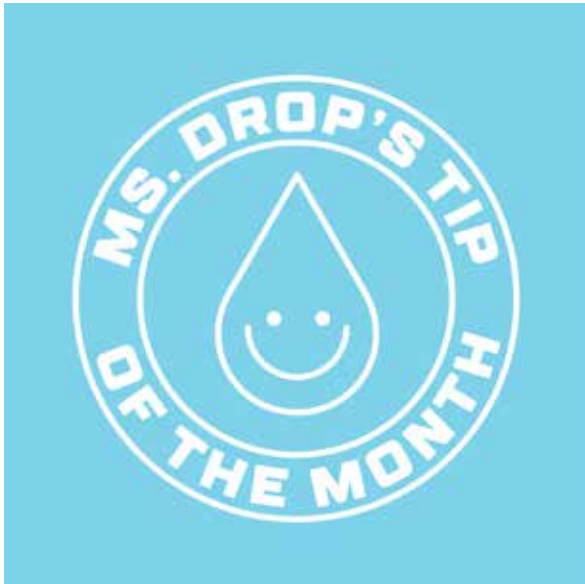


REVISED RACK CARDS



2020 Creative

TIP OF THE MONTH ANIMATION



Sample animation:

<https://www.facebook.com/131159566895612/videos/955827985225631>

GOOGLE SHEETS WEBINAR TEMPLATE



RAIN BARREL PDF

HOW TO BUILD A RAIN BARREL

WHAT IS A RAIN BARREL?
A rain barrel is a container that collects rain water from rooftops (this is called stormwater runoff). Rain barrels come in several different shapes and sizes, but they all do the same thing: they save water and decrease stormwater runoff. Placed at the base of a downspout, a typical rain barrel can hold 55.75 gallons of water at one time.

- Make sure the rain barrel remains securely screened to prevent mosquito entry.
- You can attach a hose to the spigot to fill a watering can.

MATERIALS

- 1 55 gallon plastic barrel
- 1 Bolser Drain Spigot—Heavy Duty, Brass male threaded, 1"
- 2 Rubber Garden Hose Washers
- 1 Locking Nut, Rigid Conduit Locknut Steel 1/2"
- 1 Hose Barb for a sump pump 1 1/4" (Adapter Insert Poly, 125 MPT)
- 1 Sump Pump Hose: 1 1/4" x 8' Discharge hose
- 1 Soffit Vent: Maurice Franklin RLW-100 4" round aluminum screen lower
- Plumber's Tape
- Caulk (clear acrylic)
- Tools
- Drill
- Hack saw
- Flashlight
- Drill Bits: 1/2" wing bit
- 1 1/4" hole saw
- 4" hole saw

HOW CAN I USE THE WATER COLLECTED IN MY RAIN BARREL?
Water collected in a rain barrel should NOT be used for drinking or cooking. We also do not recommend using this water to irrigate vegetable garden beds. So what can you use it for?

- Water house plants
- Water flower gardens
- Clean your tools
- Wash your car
- Water lawns and trees

CONSIDERATIONS BEFORE YOU BUILD:

- Your rain barrel must have an overflow to a safe discharge point away from your home and foundation. Details about installing an overflow are included in the instructions.
- If you use a moss control product on your roof, be sure to use a product that is garden-safe.
- The rain barrel must be located at the base of one of the downspouts draining your roof. You may want to install your rain barrel nearest to where you will use the water in your yard.
- Keep the lid secure so children or animals cannot fall in.
- Elevate your rain barrel slightly on a secure raised foundation (a full rain barrel may weigh over 400lbs!) to make access to the spigot easier. A few stacked cinder blocks work well, or you can build a stand from lumber.
- Empty your rain barrel often so that it has room to catch water from the next rainfall!

RETHINK RUNOFF

2. INSTALL THE OVERFLOW

Drill a hole about 6" from the top of the barrel. The hole should be at a 30° angle from the spigot location.

Use the 1" hole saw to drill a hole about 6" from the top of the barrel. The hole should be at a 30° angle from the spigot location.

Screw the sump pump hose barb into the hole; it should be a snug fit.

Attach an 8' section of the sump pump hose over the hose barb.

3. INSTALL SCREEN

Use the 4" hole saw to drill a hole in the lid of the barrel. Drill slowly and with caution, as a 4" hole saw creates lots of torque—drilling too quickly could cause damage to the barrel or to you.

RETHINK RUNOFF

TO LEARN MORE ABOUT REDUCING STORMWATER RUNOFF, VISIT RETHINKRUNOFF.ORG

Media Buy Breakdown

Below is a cost breakdown of media buys, compared with previous years. We continued our Winter Campaign with a focus on both pet waste and reducing salt use. Similar to our past efforts to shift outreach year-round, our Winter Campaign ran in January and February, traditionally a quieter time from an advertising standpoint.

In addition, our Facebook animated posts were boosted each month (starting in May), providing a secondary touchpoint for year-round advertising.

For 2017 and 2018, Summer was initially planned as part of the spring 2018 budget. However, since 2019, the spring media buy includes all purchases made through 6/30. The Summer media buy will include any media buys made from 7/1 to 9/1, and Fall media will span from 9/1–11/1. We typically do not run in December, except for our monthly Facebook ad boost.

2016 – MEDIA BUY			
SOURCE	SPRING	SUMMER	FALL
RADIO	\$4,500	-	\$3,258
DIGITAL	\$7,500	-	\$4,985
TV	\$5,500	-	\$2,379
PRINT	\$2,500	-	
TOTAL	\$20,000	-	\$10,622

2017 – MEDIA BUY			
SOURCE	SPRING	SUMMER* 05/28–08/02	FALL
RADIO	\$3,088	-	\$1,080
DIGITAL	\$3,600	\$3,826	\$4,582
TV	\$2,015	-	\$1,833
PRINT	\$1,755	\$585	\$1,170
TOTAL	\$13,191	\$4,235	\$8,666

2018 – MEDIA BUY			
SOURCE	SPRING	SUMMER* 6/16–08/27	FALL
RADIO	\$2,675	-	\$1,044
DIGITAL	\$3,394	\$7,534	\$2,987
TV	\$3,710	-	\$2,472
PRINT	\$1,755	-	\$1,006
TOTAL	\$11,534	\$7,534	\$7,509

Advertising Click-through Rates, 2020

SOURCE	IMPRESSIONS	ENGAGEMENT	COST	COST PER ENGAGEMENT
DISPLAY ADS	4,550,215	3,079	4329.18	\$1.40
VIDEO (YOUTUBE)	326,839	181,417	2663.48	\$0.01
WCAX DIGITAL	99,120	37	\$800	\$21.62
FACEBOOK/SOCIAL MEDIA	137,219	195 CLICKS 39,240 ENGAGEMENT	\$1,345.08	\$6.89

2019 – MEDIA BUY				
SOURCE	WINTER	SPRING	SUMMER* 5/27–09/2	FALL
RADIO	\$360	\$1,008		\$1,025
DIGITAL	\$1,800	\$2,320	\$5,830	\$3,000
TV		\$5,830		\$3,306
PRINT	\$503	\$2,012		\$1,006
TOTAL	\$2,663	\$11,170	\$5,830	\$7,509

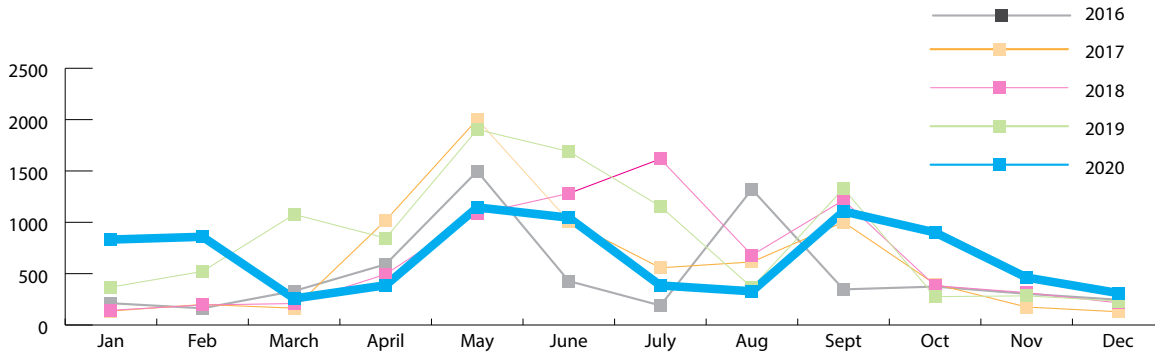
2020 – MEDIA BUY				
SOURCE	WINTER	SPRING	SUMMER 7/1–9/1	FALL
RADIO		\$375		\$375
DIGITAL	\$1,800	\$4,557.51	\$400	\$3,430.33
TV		\$5,788.75		\$2,063.83
PRINT		\$1,579.50		\$1,053
TOTAL	\$1,800	\$12,301	\$400	\$6,922

Digital media buys include Google Ads, Facebook Ads and WCAX.

TV includes WCAX and Xfinity media buys.

Website Metrics for 2016–2020

Web visits as a whole were down compared to 2019. We attribute this to COVID-19. Our digital ad spend was also down, reflecting a general downturn across the board. Fall visits and ad spends began to rise in September and October, still down from the previous year, but much less drastic than the downturn in Spring and Summer. We did also notice an uptick in desktop visits, again due to COVID-19 and more people being at home.



2020 vs. 2019 Users

-8%
7,861 vs. 8,534

New Users

-8%
7,860 vs 8,529

Pageviews

-17%
13,112 vs 15,769

Total Sessions/Visits (1/1–12/31)

TOTAL	TIME PERIOD
8,908	2020
10,111	2019
7,832	2018
7,407	2017
6,004	2016
4,659	2015
7,728	2014
3,541	2013
2,787	2012

Website Visits by Device

DEVICE	2020	2019	2018	2017	2016
DESKTOP	51.25%	40.2%	50.1%	52.8%	65.7%
MOBILE	41.28%	44%	40.6%	36.4%	24.5%
TABLET	7.47%	15.8%	9.3%	10.8%	9.8%

Most Visited Pages

PAGE	TOTAL
HOMEPAGE	3,162
/EDUCATIONAL-RESOURCES/FOR-KIDS/CREATE-YOUR-OWN-WATER-CYCLE/	960
/EDUCATIONAL-RESOURCES/REDUCE-ROAD-SALT/INDEX.HTML	767
/EDUCATIONAL-RESOURCES/	745
/VERMONT-ENDANGERED-ANIMALS/	568
/EDUCATIONAL-RESOURCES/PICK-UP-DOG-POOP/INDEX.HTML	540
/EDUCATIONAL-RESOURCES/FOR-KIDS/WHAT-IS-A-WATERSHED/	436
/EDUCATIONAL-RESOURCES/INSTALL-A-RAIN-BARREL/	406
/THE-STREAM-TEAM/	401

Top Vermont Cities and Towns

TOTAL	SESSIONS
BURLINGTON*	962
SOUTH BURLINGTON*	582
COLCHESTER*	525
ESSEX*	465
SHELBURNE*	187
STOWE*	118
MIDDLEBURY*	50
JERICHO	39
WILLISTON	37
MONTPELIER	35

MILTON: 20
WINOOSKI 13

* SAME POSITION AS LAST YEAR

Website Event Tracking

DEVICE	2020
MAILCHIMP FORM	61
RAIN BARREL PDF	8
SOIL TEST CTA	5

**Appendix B CHITTENDEN COUNTY REGIONAL STORMWATER
PUBLIC INVOLVEMENT AND PARTICIPATION
PROGRAM (“STREAM TEAM”)**

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

Summary of Activities



2020 Calendar Year

Overview

Although the pandemic created challenges for the Stream Team in 2020 we were still able to engage many residents in meaningful actions to improve stormwater in their community. We hosted a contactless rain barrel kit pickup and two in-person riparian tree planting events. In the digital realm, we presented online lectures, participated in remote radio and TV interviews and launched the Clean Water Challenge to inspire people to clean out their neighborhood storm drains. For the first time in the history of the program we were unable to collect water quality samples for chemical analysis due to state budget cuts, so we re-worked the program by asking volunteers to collect photographs, drawings and stories. The portfolio of presentations, handouts and new programs that were created this year will serve as a resource for member municipalities and residents for years to come.

RRST Estimated Impact by Municipality

The table below depicts the estimated number of individuals engaged in each RRST municipality in 2020. This table reflects both digital and in-person interactions where it was possible to log participants' town of residence.

Municipality	# of people reached in 2020
Burlington	17
Colchester	9
Town of Essex	31
Village of Essex Junction	10
Milton	4
Shelburne	21
Williston	13
South Burlington	16
Winooski	2
TOTAL	123

Table 1: Interaction with the Stream Team by municipality

Organizational Partnerships

The Rethink Runoff Stream Team partnered with **10** organizations in 2020:

1. **Essex Free Library:** Hosted our Watershed Explorers public program and helped create posters for advertising materials for the event.
2. **Essex Conservation & Trails Committee:** Invited us to their meeting to share about RRST program, discuss water quality data and partner on rain barrel outreach.
3. **Shelburne Natural Resources and Conservation Committee:** Invited us to join their meeting to share info about the RRST program and describe findings of Stream Team data results per request of the committee.
4. **Williston Conservation Commission** Invited us to join their meeting to share about the RRST program and describe changes homeowners can make to become more "stormwater friendly."
5. **ECHO:** Provided a digital platform for us to host a talk in a Zoom event called "Change Your Stormwater Footprint" Helped with advertising and technical issues.
6. **UVM Sea Grant:** Hosted a training about best practices for citizen science projects during the pandemic. This presentation helped us decide how to restructure the Stream Team summer volunteer program with safety in mind.
7. **Colchester Scouts:** Planned to volunteer for a catch basin painting day. Event deferred to 2021 due to concerns around covid safety.
8. **Lake Champlain Chocolates:** Donated 25 bars of chocolate to provide incentive for our Clean Water Challenge program.
9. **Winooski Valley Parks District:** Provided land and staff time to support the riparian tree planting project in Colchester.
10. **Meach Cove Farm:** Provided land and staff time to support the riparian tree planting project in Shelburne.

Outreach -----

Media Rethink Runoff Stream Team had **6** media appearances in 2020:

1. **Positively VT** Invited us to participate in a 20-minute Zoom interview for Positively VT on Channel 17. Watch it [here](#).
2. **WDEV** Invited us to participate in a 30 min Radio Interview on Vermont Viewpoint Segment Listen [here](#).
3. Posts were published on **Front Porch Forum** in Essex to advertise the Rain Barrel Kit Pickup event.
4. Posts were published on **Front Porch Forum** in South Burlington to advertise the Clean Water Challenge.
5. Posts were published on **Front Porch Forum** in Shelburne to advertise the Clean Water Challenge.
6. A press release about how individuals in South Burlington can make a difference for clean water was sent to **The Other Paper**, but was not published. The same article was shared with South Burlington Municipal staff to add to the quarterly SoBu newsletter, but printing of the publication was stopped due to covid-related budget cuts.

Social Media

Facebook

- Total Posts = 32
- 283 page "likes"
- 340 "follows"

Instagram

- Total Posts = 14
- 272 total "followers"



Figure 1: Two instagram posts from 2020

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 including:

- How to Build a Rain Barrel PDF
- "Book A Speaker" website text
- "What is a Watershed" infographic

Newsletter

At the end of 2020 there were **770** subscribers to the RRST newsletter (an increase from 629 in 2019). Three newsletters were published this year in March, May and July.

Outreach Events

Six "outreach" events were held in 2020. A total of **37** people participated in presentations or engaged with digital initiatives. Each outreach event is described in more details below:

1. **Essex Library Event** [January] Hosted a 1-hour workshop for families titled "Clean Water Explorers." Participants looked at a map of the Champlain Valley to determine which subwatershed they live in and then constructed a watershed model using tinfoil. The watershed model was used to discuss the way pollutants travel across the landscape through runoff and was used to discuss potential solutions. 6 participants
2. **Essex Conservation & Trails Committee** [February] asked us to share about the resources and programs offered by RRST and offered to help with rain barrel workshop outreach. Reached 9 people.
3. **Shelburne Natural Resources and Conservation Committee** [February] asked us to describe the results of Stream Team data to inform their understanding of water quality

issues in the town. We also discussed general resources and programs offered by RRST. Reached 8 people.

4. **ECHO Zoom Presentation** [May] This 30 -minute presentation for all ages, titled "Change Your Stormwater Footprint" discussed 8 actions individuals can take to improve stormwater quality in their communities. Topics covered included picking up pet waste, diverting gutters to permeable surfaces and using less salt in the winter. 3 participants
5. **Williston Conservation Commission** [July] asked us to present about actions that individual homeowners can take to improve water quality. We also discussed the Rethink Runoff program goals and brainstormed ways that commission can help spread the word about programs and resources. Reached 6 people.
6. **Clean Water Challenge** [July] In an effort to engage people in hands-on stormwater projects through a digital platform, we launched the Clean Water Challenge online contest in July. Members of the public were invited to clean a storm drain in their neighborhood and submit before and after pictures to be entered into a drawing for a prize. The contest was advertised in our newsletter, Facebook, Instagram and shared on Front Porch Forum by some Stream Team volunteers. The contest was open to residents of all nine RRST municipalities. In total, 5 people participated. All 5 were awarded with Stream Team t-shirts, stickers and Lake Champlain Chocolates. (4 from S. Burlington, one from Essex Junction)



Figure 2: Participants in the Clean Water Challenge clear debris from storm drains in their neighborhood.

Projects -----

Five "project" events were held in 2020. A total of **86** people participated in hands-on events in their communities. The following projects are described in more details below:

1. Colchester Riparian Tree Planting
2. Shelburne Riparian Tree Planting
3. Rain Barrel Kit Pickup in Essex
4. Stream Team Water Quality Monitoring
5. Rain Garden Maintenance

Colchester Project: Tree Planting along the Winooski River

Summary: RRST helped to advertise and recruit volunteers for a tree planting project at Macrae Farm Park in Colchester that was planned by the Winooski NRCD and co-funded by the Lake Champlain Basin Program and Partners for Fish and Wildlife.

Advertising: Advertising was mainly achieved through email outreach to our list of existing volunteers, posting on social media and inviting community members to share a post on Front Porch Forum.

Challenges: Completing the event in a covid-safe manner was the biggest challenge. We required each participant to sign a volunteer waiver that included a covid checklist. Participants were asked to wear masks and maintain social distance. Many participants shared a feeling of gratitude to be able to complete hands-on work to improve their community even amidst a pandemic. A secondary challenge was weather. We postponed the original planting day due to predicted thunderstorms, but were able to maintain enough volunteers for a successful event on the rain date.

Impact: 10 Volunteers participated in two shifts throughout the day. 450 trees were planted at this site. These trees will help to decrease erosion, improve water quality and provide wildlife habitat for years to come. We have recruited a community volunteer to check in on the trees throughout 2021 which should help to ensure greater survival rates. Furthermore, the social impact of engaging people in a meaningful and safe in-person event amidst a pandemic cannot be overestimated. Building a sense of community around watershed conservation gave volunteers joy and a sense of purpose. Most participants accepted a Stream Team t-shirt and sticker as thanks for assisting. Finally, about 50 people opted to join our email list after expressing interest in the tree planting. We hope to engage folks who were not able to attend the planting, but chose to connect to our newsletter in activities in 2021.



Figure 3: Volunteers plant saplings along the Winooski River at the Colchester tree planting

Shelburne Project: Tree Planting along McCabe's Brook

Summary: RRST helped advertise and recruit volunteers for a tree planting project at Meach Cove Farm Park along McCabe's Brook in Shelburne that was planned by the Winooski NRCDC and co-funded by the PUR Project and Partners for Fish and Wildlife.

Advertising: Advertising was mainly achieved through email outreach to our list of existing volunteers, posting on social media and inviting community members to share a post on Front Porch Forum. Staff at Meach Cove Farm also helped to recruit community members through a variety of local connections.

Challenges: Similarly to the Colchester tree planting, completing the event in a covid-safe manner was the biggest challenge. We required each participant to sign a volunteer waiver that included a covid checklist. Participants were asked to maintain social distance. Again, many participants shared a feeling of gratitude to be able to complete hands-on work to improve their community even amidst a pandemic. At this site a secondary challenge was also weather. We postponed the original planting day due to predicted rainstorms, but were able to maintain enough volunteers for a successful event on the rain date.

Impact: 16 Volunteers participated in two shifts throughout the day. 250 trees were planted at this site. These trees will help to decrease erosion, improve water quality and provide wildlife habitat for years to come. Finally, about 30 people opted to join our email list after expressing interest in the tree planting. We hope to engage folks who were not able to attend the planting, but chose to connect to our newsletter in activities in 2021.



Figure 4: Volunteers of all ages plant saplings along McCabe's Brook at the Shelburne tree planting event.

Town of Essex Project: Rain Barrel Kit Pickup

Summary: We hosted a rain barrel kit pickup event in the Town of Essex that was covid-compliant and enabled us to share rain barrel supplies with 39 residents of RRST municipalities. We created a new instructional PDF and video about rain barrel construction.

Challenges: When our original plans of hosting an in-person rain barrel workshop in April came to a halt due to covid restrictions we decided to pivot and host a contactless rain barrel kit pickup day instead. We washed the barrels, pre-drilled holes and created hardware kits so that participants could assemble their barrels at home without specialized tools. On August 15th, we set up a tent at the Essex Fire Department and distributed kits to 39 people.

Advertising: This event was advertised on the RRST website, newsletter and social media pages. Municipal staff and members of the Essex Conservation and Trails Committee also helped to spread the message on Front Porch Forum.

Impact: Once the rain barrels are installed, they will help to decrease stormwater runoff volume in member municipalities. All participants were given educational handouts about the Stream Team and many elected to join our newsletter mailing list. Additionally, we produced an informational [VIDEO](#) about how to build a rain barrel and worked with Pluck Design to create a [PDF](#) handout about how to build a rain barrel. Both the video and PDF will serve as excellent resources to share with residents in the years to come.

Cost: The cost of materials was fully covered by the registration fee (\$40), so the only expense for this program was staff time.



Figure 5: Left to right: Hardware kits with Rethink Runoff handouts ready to be distributed, rain barrels with pre-drilled holes wait to be picked up by participants, Kristen masked and ready for a covid-safe distribution day

Water Quality Monitoring

RRST has maintained an ongoing water quality monitoring program since 2012. Historically, citizen science volunteers have collected water samples in urban or suburban streams that are impacted by sedimentation, excessive nutrient loading, high temperatures, bacteria, and other pollution. This data provides information to towns about long term trends and may help towns identify good locations for stormwater BMPs.

In 2020 the program was forced to adapt since funding from VT DEC's LaRosa program was unavailable due to COVID-19 related budget cuts. Instead of collecting water samples for chemical analysis, volunteers were recruited to collect pictures and stories of our urban streams.

The RRST coordinator sent seven weekly emails to Stream Storytelling volunteers to share prompts for reflection. The weekly prompts included:

1. Get to Know Your Stream
2. Macroinvertebrates
3. Bird Identification
4. Using iNaturalist to record species diversity
5. Nature Journaling
6. Soil Analysis
7. Opportunities for Action



Figure 6: Stream Team volunteer story submissions including (left to right) macroinvertebrate monitoring, iNaturalist observations, baby snapping turtle in Alder Brook, nature journaling

In total, this program collected about 50 stories, 65 pictures and 15 illustrations. The findings have been compiled and posted in a Google Earth Tour, which can be accessed at the link below. It will be posted on the Rethink Runoff website shortly.

<https://earth.google.com/web/data=MicKJQojCiExMmcyVUVyZTNpVFhvN2ptcExKMS1PeEiwUVdxZDVlb3M6AwoBMA?authuser=0>

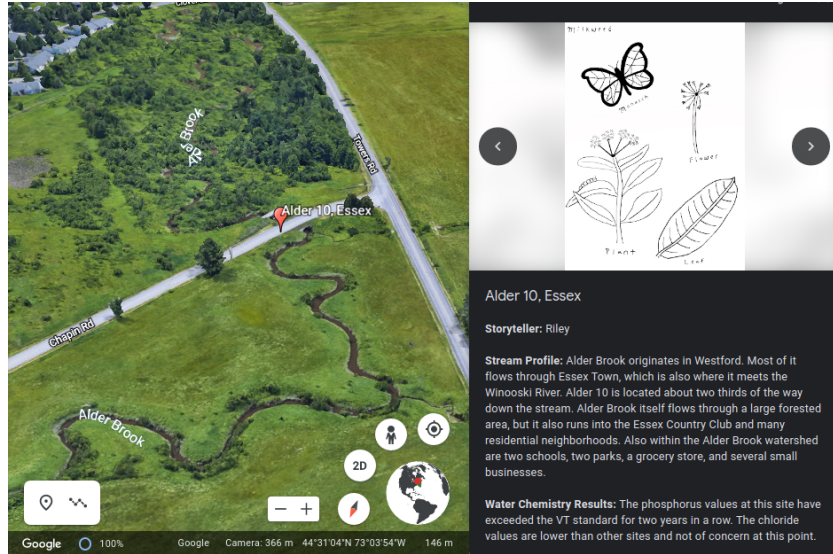


Figure 7: Screenshot of the Google Earth Stream Storytellers Tour

Although this program shifted significantly from years past, many volunteers enjoyed the new format. One volunteer shared, "Thanks so much for your creative and valuable ways to keep us involved and to show us how to build a deeper connection to our stream. You went way above and beyond any expectation I may have had for stream sampling this summer."

Town	# of Volunteers
Burlington	3
Colchester	2
Village of Essex Junction	1
Town of Essex	1
Milton	0
South Burlington	5
Williston	2
Winooski	1
Non -RRST Municipalities	1
TOTAL	16

Table 2: Stream Team Water Quality Sampling Volunteers by town

Adopt-a Rain Garden Program Summary

The Stream Team's Adopt-a-Rain Garden program is an opportunity for individuals to assist in keeping Chittenden County's public rain gardens 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 eight public rain gardens managed by RRST. In 2020 all eight gardens were cared for by volunteers. See table 2 for more details.

Rain Garden	Adopter 2020
Chamberlin School, South Burlington	Chris P.
Coast Guard Station, Burlington	Larry K.
Williston Annex	Rita D.
Williston Town Library	Library grounds staff
Callahan Park, Burlington	Brad K.
Farrell Park, South Burlington	Roan O.
South Burlington Fire Station	Cub Scouts 678
South Burlington Library	Cub Scouts 678

Table 3: 2020 Rain Garden Adopters

Volunteer Appreciation Summary

Due to covid we were not able to host an in-person volunteer event, so we sent a small gift to each volunteer on the Stream Team. Each volunteer was invited to choose a pocket field guide (\$5-\$7 each). Field guides were mailed to volunteers with handwritten thank you notes.



Figure 8: A sample of field guides selected by Stream Team Volunteers as gifts.



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