2023 Annual Report for General Permit 3-9014 (2018) MS4

National Pollutant Discharge Elimination System (NPDES) Number: VTR040000 for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4)

Submitted April 1, 2024

Prepared for:

Patrick Leahy Burlington International Airport

1200 Airport Drive #1

South Burlington, Vermont

Prepared By:

EIV Technical Services

355 Main St. Suite 500

Winooski, VT 05404

Table of Contents

1.0 Annual Report for General Permit 3-9014 (2023) MS4

1.1 Introduction

The MS4 General Permit 3-9014 requires that the Patrick Leahy Burlington International Airport (BTV) submit an annual report that outlines the status of its compliance with respect to the permit conditions by April 1 of each year of the permit term. This report submitted April 1, 2024 outlines all work completed in the 2023 calendar year.

1.1.1 Background

In June 2003, April 2008, June 2013, January 2019, and on November 27, 2023, the Patrick Leahy Burlington International Airport (BTV) submitted a Notice of Intent (NOI) for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) to the Vermont Agency of Natural Resources to meet the regulations associated with the Environmental Protection Agency Phase II Stormwater Rule.

The Vermont Department of Environmental Conservation (VT DEC) issued General Permit 3-9014 (2012) for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) on December 5, 2012. Designed to address pollution from stormwater runoff, the updated MS4 permit had jurisdiction over twelve municipalities and three institutional entities in the Lake Champlain watershed. The General Permit 3-9014 (2012) included an additional condition to develop and submit a Flow Restoration Plan (FRP) for the portion of each stormwater–impaired watershed located within a permittee's boundaries.

BTV reapplied and received authorization under General Permit No. 3-9014 (2012) for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) on October 1, 2013. Per the re-authorized permit, BTV is required to submit a report on a semi-annual basis on the development and implementation of the FRP.

The VT DEC issued General Permit 3-9014 (2018) for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) on July 27, 2018. Designed to address pollution from stormwater runoff, the updated MS4 permit applies to thirteen municipalities and three institutional entities in the Lake Champlain watershed. Communities already subject to the 2003 MS4 General Permit include Burlington, Colchester, Essex, Essex Junction, Milton, Shelburne, South Burlington, Williston and Winooski. The three institutional entities include the Burlington International Airport, the University of Vermont, and the Vermont Agency of Transportation (VTrans) within the geographical boundaries of these municipalities. VT DEC has since authorized the TS4 Permit to address VTrans' responsibilities. An additional condition of General Permit 3-9014 (2018) is the requirement of a Phosphorus Control Plan (PCP) for developed lands in the

associated Total Maximum Daily Loads (TMDL) lake segments as applied to municipally owned, developed lands.

The VT DEC issued the most recent reauthorization of General Permit 3-9014(2023)on January 16, 2024. This MS4 permit applies to the same municipalities and institutional entities as the 2018 reauthorization. Flow restoration targets, as identified in approved FRP's are to be implemented no later than December 5, 2032. Full implementation of the PCP is to be completed no later than June 17, 2036. FRP and PCP reports are to be updated annually and presented in the annual report due April 1st.

To meet the requirements of the MS4 permit, BTV has developed and updated a Stormwater Management Program (SWMP) designed to reduce the discharge of pollutants from the airport, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. This is to be submitted by March 26, 2024 and will be reviewed annually.

The SWMP contains information on how BTV has implemented six minimum stormwater runoff control measures and BTV's compliance with the re-authorized MS4 permit Section 8.0 (TMDL Implementation) for the development and implementation of a Stormwater Flow Restoration Plan (FRP), Lake Champlain Phosphorus Control Plan (PCP) and Municipal Road Requirements.

The SWMP also contains the Stormwater Pollution Prevention Plan which describes the BTV facility and its operations, develops an inventory of potential pollutant sources, identifies controls and best management practices (BMPs) for reducing the discharge of pollutants in stormwater runoff, and outlines measures for implementation and review of this plan. The Stormwater Pollution Prevention Plan was developed as a requirement of the Multi-Sector General Permit 3-9003 (MSGP).

As noted above, BTV submitted an NOI for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) including updated SWMP for VT DEC review and approval on November 27, 2023. Permit No. 7021-9014.A2R1 was subsequently issued on January 16, 2024.

1.2 Vermont DEC MS4 2023 Annual Report Form

BTV is required to submit an annual report that outlines the status of compliance with permit conditions by April 1 of each year of the permit term. A completed Municipal Separate Storm Sewer System (MS4) 2023 Annual Report form as provided by VT DEC is presented on the following pages of this report.

2.0 Annual Reporting Summary for Incorporated Operational Stormwater Discharge Permits

2.1 Introduction

During the 2023 reporting year, BTV acquired three Operational Stormwater Discharge Permits. On January 16, 2024, eight of BTV's active Operational Stormwater Discharge Permits were incorporated into BTV's MS4 General Permit authorization. To date, twenty-two Operational Stormwater Discharge Permits have been incorporated. See below for a summary.

2.1.1 Current Status of Operational Stormwater Discharge Permits

BTV operational Stormwater Discharge Permits and their current status are listed as follows:

- Permit No. 3028-9010.A (BTV's Master Permit) – **Incorporated into MS4 in 2017**
- Permit No. 1-1391 (South Apron Expansion) – **Incorporated into MS4 in 2017.**
- Permit No. 1-0839 (Redirect Airfield Drainage to North Outfall) – **Incorporated into MS4 in 2017.**
- Permit Nos. 3028-9010.2 (Taxiways 'B', 'C', 'J', and 'G'); Muddy Brook watershed – **Incorporated into MS4 in 2017.**
- Permit No. 3028-INDS.AR (Taxiways 'B', 'C', 'J', and 'G'); Potash Brook watershed - **Incorporated into MS4 in 2017.**
- ~~Permit No. 3028-9010.1 (Reconstruct, Mark, and Groove Runway 15-33)~~ – **Terminated. Replaced by 3028-INDS.5 & 3028-INDS.7.**
- Permit No. 3845-9010 (Heritage Flight Aviation Campus Expansion) – **Incorporated into MS4 in 2017.**
- Permit No. 3028-9015.1 (Quarry Area Access Road) - **Incorporated into MS4 in 2017.**
- Permit No. 3028-INDS.3 (Aircraft Sewage Receiving Station) - **Incorporated into MS4 in 2017.**
- Permit No. 3845-9015.1 (Heritage Aviation Parking Lot) - **Incorporated into MS4 in 2017.**
- Permit No. 3028-9015.2 (Construct, Mark, and Light Taxiway 'G'/'K') – **Incorporated into MS4 in 2017.**
- Permit No. 3028-INDS.4 (BTV Consolidated Car Rental Facility) - **Incorporated into MS4 in 2017.**
- Permit No. 3028-9015.3 (Taxiway B Extension) – **Incorporated into MS4 in 2019**.
- Permit No. 3028-INDS.6A (Parallel Taxiway 'G', Phase 2) – **Incorporated into MS4 in 2019.**

- Permit No. 3028-INDS.7 (VT ANG Taxiway 'F' Widening and a portion of Reconstruct, Mark, and Groove Runway 15-33) – **Incorporated into MS4 in 2019.**
- ~~Permit No. 3028-9015.4 (BTV Hotel)~~ – **To be terminated. Replaced by 3028-9050.7 (see below).**
- ~~Permit No. 3028-INDS.8 (Heritage Flight Hangar Addition)~~ **Terminated.**
- ~~Permit No. 3028-INDS.9 (Remain Overnight Apron – Phase 7)~~ – **Terminated. Replaced by 3028-9050.5A.**
- Permit No. 3028-INDS.10 (BETA Hangar Site) – **Incorporated into MS4 in 2024.**
- Permit No. 3028-9050 (Taxiway K) – **Incorporated into MS4 in 2024.**
- Permit No. 3028-9050.1 (Terminal Integration) – **Incorporated into MS4 in 2024.**
- Permit No. 3028-9050.2 (Beta Technologies- BTV Assembly Facility) – **Active; construction expected to complete in 2024. Incorporated into MS4 in 2024.**
- Permit No. 3028-9050.3 (Beta Technologies General Aviation Hangar) – **Active; construction completed. Incorporated into MS4 in 2024.**
- Permit No. 3028-9050.6 (Heritage Aviation Fuel Farm Expansion) – **Active; construction completed in 2023.**

New Operational Stormwater Discharge Permits issued during the 2023 reporting period include:

- Permit No. 3028-9050.5A (BTV Rehabilitate Taxiway A) – **Active; construction expected to complete in 2024. Incorporated into MS4 in 2024.**
- Permit No. 3028-9050.7 (BTV Hotel) – **Active; not constructed. Incorporated into MS4 in 2024.**
- Permit No. 3028-9050.8 (Extend Taxiway G and Construct New General Aviation South Apron) – **Active, construction expected to complete in 2024. Incorporated into MS4 in 2024.**

2.1.2 Inspection Summary

MS4 Permit Nos. 3028-9010.A, 1-1391, 3028-9010.2, 3028-INDS.AR, 3845-9010, 3845-9015.1, 3028-9015.2, 3028-INDS.3, 3028-INDS.4, 3028-INDS.6A, 3028-9015.3, 3028-9050 and 3028-9050.1 each require an annual inspection to evaluate and document the operation, maintenance, and condition of the stormwater collection, treatment, and control systems. EIV personnel performed these annual on-site inspections in April, May, and June of 2023. See **Appendix H** for a listing of Field Inspection Maintenance Recommendations. For reference, a complete in-depth summary of all inspection reports can be found in Appendix B of BTV's MSGP Annual Report for 2023 dated April 1, 2024.

MS4 Permit No. 1-0839 outfalls are currently both covered by separate permits 3028-9010.A and 3028-9010.2 which were inspected on June 15, 2023.

MS4 Permit No. 3028-9015.1 requires an annual inspections to be performed. However, this site is part of the construction zone for BETA Manufacturing Facility and could not be inspected.

MS4 Permit No. 3028-INDS.7 (VT ANG Taxiway 'F' Widening and a portion of Reconstruct, Mark, and Groove Runway 15-33) requires an annual inspection and report. S/N 003 is the responsibility of the Vermont Air National Guard. Remaining S/N 004 and 006 were inspected on June 12, 2023.

2.1.3 ANR Online Annual Reporting Forms

An ANR Online Annual Reporting Form was completed and submitted to VT DEC for all the active Operational Stormwater Discharge Permits except noted below:

- MS4 Permit No. 3028-9050.2 (BETA Technologies – BTV Assembly Facility) was under construction at the end of the 2023 season and will not be inspected for the 2023 reporting period.
- MS4 Permit No. 3028-9050.5A (BTV Rehabilitate Taxiway A) was under construction at the end of the 2023 season and will not be inspected for the 2023 reporting period.
- MS4 Permit No. 3028-9050.7 (BTV Hotel) has not been constructed to date and will not be inspected for the 2023 reporting period.
- MS4 Permit No. 3028-9050.8 (Extend Taxiway G and Construct New General Aviation South Apron) was under construction at the end of the 2023 season and will not be inspected for the 2023 reporting period.

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
STORMWATER PROGRAM

Municipal Separate Storm Sewer System (MS4) 2023 Annual Report

A. Permittee Information

1. Name of MS4: Patrick Leahy Burlington International Airport

2. Permit Number: 7021 - 9014A2R

B. Attached Documents

The following documents have been prepared and submitted with this Annual Report:

- [x] Annual Report Workbook (.xlsx)
- [x] BMP Tracking Table (.xlsx)

C. Certification of STPs constructed to comply with the FRP or PCP

The following BMPs were built or implemented within the past calendar year and were constructed in compliance with the approved Flow Restoration Plan (FRP) or Phosphorus Control Plan (PCP).

Name of System	Location
BETA General Aviation Hangar	1200 Airport Drive, South Burlington

Jason Waysville P.E.
Name of Qualified Designer

EIV Director of Engineering
Title

Signature

03-27-2024
Date

D. MS4 Operator Certification

This Annual Report shall be signed by a principal executive officer, ranking elected official or other duly authorized employee consistent with 40 CFR §122.22(b) and certified as follows:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Nic Longo
Print Name

BTV Director of Aviation
Title

Signature

3/22/24
Date

PATRICK LEAHY BURLINGTON INTERNATIONAL AIRPORT

Annual Report for General Permit 3-9014 (MS4)

Including Annual Reporting Summary for MS4-Incorporated Operational Stormwater Discharge Permits

April 1, 2024

Appendix A

BTV Annual Report Workbook

Patrick Leahy Burlington International Airport (BTV)
2023 MS4 Annual Report Workbook
Date: April 1, 2024

Minimum Control Measure Reporting						
GP Part 6.2	**MCM Requirements**	**Measurable Goal**	**Description of how requirement was met**	**List attachments if applicable**	**Activities planned for next year**	**Proposed change in BMP or measurable goal?**
MM#1: Public Education and Outreach on Stormwater Impacts						
1.c. (1)	Website maintained with locally relevant stormwater information	BTV will maintain basic information about stormwater on a dedicated page within its website which describe its stormwater related programming and include links on same for visitors to learn more. BTV will track the annual number of visits to this page.	The link to BTV's Stormwater website is as follows: https://www.btv.aero/about-btv/airport-development BTV's Master Plan website also highlights the airport's stormwater and environmental efforts: https://btvmasterplan.com/	None.	BTV will continue to maintain the website and track visitations.	None.
1.c (2)	Maintain a program to identify opportunities and provide technical assistance on Low Impact BMPs	BTV will provide links on a dedicated stormwater page within its website with links to relevant non-profits and government resource sites which can provide technical assistance.	On BTV's Stormwater website, links are provided to the Rethink Runoff website and also to the City of Burlington's Stormwater Management website.	None.	BTV will continue to provide links on its website to other stormwater related websites.	None.
1.c (3)	Participate in a regional stormwater education strategy or develop an MS4 specific program	BTV will participate in and provide financial support for operation of the regional Rethink Runoff campaign consisting generally of periodic advertising throughout each year supplemented by a survey of residents every 5 years to track reported behavior with regards to residential stormwater BMPs. Via an annual report provided by the Chittenden County RPC's subcontractor, BTV will document the annual number of site visits to www.rethinkrunoff.org as well as provide other metrics.	The link to the Rethink Runoff website is as follows: http://rethinkrunoff.org/	The RSEP Summary of Activities for the 2023 calendar year is presented in Appendix C.	BTV will continue to support the Chittenden County Regional Stormwater Education Program (RSEP)	None.
	Other					
MM#2: Public Involvement and Participation						
2.d	Participate in a regional stormwater public involvement and participation strategy or develop an MS4 specific program	BTV will participate in and provide financial support for operation of the Rethink Runoff Stream Team consisting generally of both outreach and hands-on participation events in various MS4 towns on a rotating annual basis. Via an annual report provided by the Chittenden County RPC's subcontractor, BTV will document on an annual basis the number of participants and/or persons contacted by outreach events and hands-on activities through the Rethink Runoff Stream Team.	The link to the Stream Team website is as follows: http://rethinkrunoff.org/the-stream-team/	The RRST Summary of Activities for the 2023 calendar year is presented in Appendix D.	BTV will continue to support the Rethink Runoff Stream Team (RRST)	None.
Other	Advertisement Space	BTV has designated advertisement space in the terminal building for public participation and involvement. Entities that can use the space include other traditional and non-traditional MS4 communities, the State of Vermont, the Lake Champlain Committee, Friends of the Winooski River, and any other groups dedicated to the storm water pollution prevention and water quality. In addition, a banner displaying the RSEP web address is displayed in the baggage claim area.	BTV designates advertising space in the Terminal Building for public participation and involvement.	None.	BTV will continue to designate advertising space in the Terminal Building for public participation and involvement. A poster displaying the **Rethink Runoff** web address is displayed in the baggage claim area.	None.
Other	Storm Drain Tagging Program	All publicly viewed storm drains have been tagged. The tags are inspected and replaced each year as necessary.	All storm catch basins on the "*Land Side* " of the airport have been previously tagged. Each year, during the annual MSGP Comprehensive Site Inspection", all drainage structures incliding all *"Land Side* " catch basins are inspected. Should a catch basin be found to be missing a tag, a note is made on the inspector's report, and included in the Annual Maintenance Recommendation report for subsequent correction by BTV's Maintenance staff.	None.	BTV will continue to inspect all drainage structures annually and correct missing tags as necessary.	None.

Patrick Leahy Burlington International Airport (BTV)
2023 MS4 Annual Report Workbook
Date: April 1, 2024

Minimum Control Measure Reporting

GP Part 6.2	MCM Requirements	Measurable Goal	Description of how requirement was met	List attachments if applicable	Activities planned for next year	Proposed change in BMP or measurable goal?
MM#3: Illicit Discharge Detection and Elimination						
3.a (1)	Develop and maintain a GIS or AutoCAD map of the storm sewers in the regulated MS4 showing all outfalls. Document how the storm sewer map will be maintained and improved, the source of the information, and the plan to verfiy the outfall locations with field surveys.	This mapping has been updated to include new development at the airport through April 2023. Electronic files of the mapping are maintained to be compatible with Geographic Information System (GIS) software. The files will be updated once a year to include new developments or information.	See Appendix E for facility site plan entitled *Burlington International Airport, Multi-Sector General Permit (MSGP) Site Drainage Map* dated April 1, 2012, with annual revisions through April 1, 2023 for locations of all labeled outfalls, water courses, wetlands, buildings, BMP's, and PPS's. The map is updated annually to reflect the stormwater infrastructure changes at BTV. All outfalls have been renumbered and referenced with GPS locations for latitude and longitude information per the upcoming MSGP requirements.	See Appendix E for facility site plan entitled *Burlington International Airport, Multi-Sector General Permit (MSGP) Site Drainage Map*	BTV will continue to update and maintain the facility site plan.	None.
3.a (2)	Develop ordinance or policy prohibiting non-stormwater discharges and implement enforcement procedures	All non-stormwater discharges to the BTV storm sewer system other than those listed in Volume 2 – Stormwater Pollution Prevention Plan, Section 4 are strictly prohibited.	Currently, all illicit discharges from BTV have been detected and eliminated. In the event future monitoring results reveal the presence of illicit discharges, BTV will establish a plan to track and eliminate the illicit discharge on a case-by-case basis.	None.	BTV will continue to monitor all stormwater infrastructure and outfalls for signs of illicit discharges.	None.
3.a (3)	Develop and implement a plan to detect and address non-stormwater discharges	1) BTV will review and update the SWMP each year. 2) BTV will complete outfall monitoring as outlined in the monitoring schedule contained in the SWPPP (Volume 2). 3) BTV will participate in annual trainings for airport staff and tenants provided by DEC (Section 2.6.3).	Requirement is met as follows: 1) BTV continues to review and update the SWMP annually as part of the MS4 Annual Report development. 2) BTV continues to complete outfall monitoring as outlined in the monitoring schedule contained in the SWPPP (SWMP, Volume 2) and as required for MSGP requirements. 3) When coordinated by VT DEC, BTV will participate in annual trainings for airport staff and tenants when made available.	None.	BTV will continue to update the SWMP annually, monitor all stormwater infrastructure and outfalls, and participate in annual Municipal Training Sessions when made available.	None.
3.a (4)	Inform public on the dangers of illegal discharges	Not applicable.				
3.a (6)	Status of monitoring activities:					
	Outfalls Inspected:	There are nineteen stormwater outfalls to surface waters or wetlands at BTV. Fifteen of these outfalls are controlled and inspected by BTV. Four outfalls are controlled and inspected by VTANG.	BTV satisfies this requirement by adhering to all MSGP monitoring and inspection requirements including quarterly benchmark monitoring, quarterly visual assessments, annual comprehensive site inspections, and monthly BMP/PPS inspections.	None.	BTV will continue to monitor all stormwater infrastructure per MSGP and MS4 requirements.	None.
	Number of dry-weather samples taken:	Two.	One set of snow melt discharge samples located at three primary outfalls (Outfall Nos 1,7, and 11) were taken during the reporting period.	None.	BTV will continue to monitor all stormwater infrastructure per MSGP and MS4 requirements.	None.
	Feet of storwmater drainage pipe inspected:	Perform all MSGP monitoring and inspection requirements including quarterly benchmark monitoring, quarterly visual assessments, annual comprehensive site inspections, and monthly BMP/PPS inspections.	Approximately 310 catch basins, 125 drainage manholes, 2,390 LF of trench drains, 4 swirl separators, and 15 outfalls were inspected during the reporting period.	None.	BTV will continue to monitor all stormwater infrastructure per MSGP and MS4 requirements.	None.
	Discharges Detected:	No discharges detected.	None, Not Applicable.	None.	BTV will continue to monitor all stormwater infrastructure per MSGP and MS4 requirements.	None.
	Discharges Corrected:	No discharges corrected.	None, Not Applicable.	None.	BTV will continue to monitor all stormwater infrastructure per MSGP and MS4 requirements.	None.
	Other					

Patrick Leahy Burlington International Airport (BTV)
2023 MS4 Annual Report Workbook
Date: April 1, 2024

Minimum Control Measure Reporting

GP Part 6.2	MCM Requirements	Measurable Goal	Description of how requirement was met	List attachments if applicable	Activities planned for next year	Proposed change in BMP or measurable goal?
MM#4: Construction Site Stormwater Runoff Control						
4.a (1)	Develop and implement procedures to ensure that construction activities undertaken by the MS4 are properly permitted	All new projects will be covered by the applicable State stormwater permit and/or conform to BTV policy as oultined in the SWMP.	BTV's active Individual Construction Stormwater Dischage Permits (INDC permits) for the following projects: 3028-INDC.19 BTV South Apron Project With the issuance of this permit, all other active construction projects within the airport were also included. As projects are completed, a notice of termination (NOT) for that portion of the 'project' is submitted via ANR online. Current active projects include: Extend Taxiway G and Construction New General Aviation South Apron Rehabilitate Taxiway A BTV Hotel (construction has not started) BETA Assembly Facility	See Appendix F for a copy of all active INDC permits.	BTV will continue to apply for INDC permits for all proposed construction activities.	None.
	Number of permitted MS4 construction projects:	Four	Operational Stormwater Discharge Permits associated with stormwater projects not fully constructed: 3028-9050.2 (BETA Technologies - BTV Assembly Facility) 3028-9050.5A (BTV Rehabilitate Taxiway A) 3028-9050.7 (BTV Hotel) 3028-9050.8 (Extend Taxiway G and Construct New General Aviation South Apron)	None.	None.	.....
4.a (2)	Review existing policies to determine effectiveness, consistency with state standards; Amend for consistency with state standards	Not applicable.				
4.a (3)	Develop and implement ordinance that regulates earth disturbance <1ac	The practices included in The Low Risk Site Handbook for Erosion Prevention and Sediment Control shall be implemented when necessary and as directed by the BTV Engineer.	Earth disturbance that is a normal part of the long-term use or maintenance of airport property (e.g. pipe and structure repairs, dirt road regrading, routine road and/or runway resurfacing) does not require coverage under the CGP-3-9020 (2020) or Individual Construction Permit. The practices included in The Low Risk Site Handbook for Erosion Prevention and Sediment Control dated February, 2020 will be implemented when necessary and as directed by the BTV Engineer.	None.	BTV will continue to use the Low Risk Site Handbook for Erosion Prevention and Sediment Control for proposed construction activities that may include earth disturbances..	None.
	Number of projects with <1ac of disturbance subject to MS4 requirements:	All current projects at BTV are > 1 acre.	Not Applicable.	None.	None.	None.
	Other					
MM#5: Post Construction Stormwater Management for New Development and Redevelopment						
5.d	Review existing policies to determine effectiveness, consistency with state standards, opportuntities for LID, and opportunties for changes to street and parking requirements; Amend for consistency with state standards	Not applicable.				
5.e	Develop and implement procedures to identify projects that disturb >1ac but do not require a state post-construction permit	BMP #2 Post Construction Runoff Control Plan	Operational Stormwater Discharge Permits were issued to BTV during the reporting period: 3028-9050.5A (BTV Rehabilitate Taxiway A) 3028-9050.7 (BTV Hotel) 3028-9050.8 (Extend Taxiway G and Construct New General Aviation South Apron) Each of these permits will be incorporated in BTV's MS4 permit 3-9014(2023). Development and implementation of BTV's plan to prevent or reduce pollutants in post-construction site runoff, including compliance with the DEC Stormwater Rules, is the most effective way to ensure appropriate protection of waters of the state following the completion of construction activities.	None.	BTV will continue to consult with VT DEC personnel on all projects during the conceptual phase regardless of projected disturbance area to determine requirements for an operational Stormwater Discharge Permit.	None.
	Number of projects >1ac of disturbance <1ac of impervious:	None.	All projects that BTV commenced and/or completed during the reporting period had greater than 1 acre of disturbed area and greater than 1 acre of impervious area.	None.	None.	None.

Patrick Leahy Burlington International Airport (BTV)
2023 MS4 Annual Report Workbook
Date: April 1, 2024

Minimum Control Measure Reporting

GP Part 6.2	MCM Requirements	Measurable Goal	Description of how requirement was met	List attachments if applicable	Activities planned for next year	Proposed change in BMP or measurable goal?
5.f	Adopt an ordinance or policy that requires projects that disturb >1ac to utilize a combination of structural, non-structural, and low impact BMPs and ensure long-term maintenance	Source protection BMPs have been implemented at BTV to prevent and/or control pollutants in stormwater discharges from the site. Source protection BMPs are included in Volume 2 - Stormwater Pollution Prevention Plan, Section 5.	BTV Maintenance staff continue to follow area specific BMP procedures identified in the SWPPP for runway deicing, aircraft deicing, propylene glycol management, and maintenance of aircraft, vehicle, and equipment maintenance and cleaning areas. Additionally, BTV Maintenance staff continue to follow site wide BMP procedures identified in the SWPPP as they relate to spills, trash, catch basin cleaning, maintaining vegetated grassed areas, and continued regular maintenance of subsurface infiltration systems.	None.	BTV will continue to prevent and/or control pollutants in stormwater discharges from all areas of the airport facility.	None.
5.g (1)	Develop and implement procedures for inspecting projects subject to the MS4's ordinance	Specification D-755 requires a Professional Engineer to inspect the stormwater management system to ensure compliance with the contract plans and specifications and the stormwater discharge permit issued for the project.	BTV's SWMP, Appendix C, contains Technical Specification D-755. The specification is included in all construction contracts.	None.	BTV will continue to include Technical Specification D-755 in all further construction contracts.	None.
	Number of STPs (without state permits) inspected by MS4:	Not applicable.				
5.g (2)	Develop and implement procedures to ensure that development activities undertaken by the MS4 are properly permitted	BTV has developed and implements procedures (BMP #2 Post Construction Runoff Control Plan) to identify projects that require an operational stormwater discharge permit and reporting these projects to the Secretary of ANR.	All new projects will be covered by the applicable State stormwater permit and/or conform to BTV policy. In order to identify projects that may require an operational Stormwater Discharge Permit, the following processes have been followed: 1. Meet with VT ANR Stormwater Section personnel to discuss and review the project during design phase. 2. Follow direction or finding(s) provided by VT ANR Stormwater Section personnel as to whether an operational Stormwater Discharge Permit is required. 3. Document direction or finding(s) in meeting notes or meeting minutes.	None.	N/A	None.
Other	Inspection and Maintenance of STPs	Annually, all catch basins will be inspected and cleaned if necessary. In the event that a catch basin with a standard sump depth of 24" is inspected and found to contain greater than 12" depth of sediment, a recommendation will be made to clean out the sump. All permitted long-term structural best management practices (BMPs) at BTV will be inspected in accordance with the terms of the permit.	BTV currently performs all MSGP and MS4 inspection requirements including annual comprehensive site inspections, inspections required under individual Operational Strormwater Discharge Permits, and performance of monthly BMP/PPS inspections. Should a catch basin be found to contain greater than 12" depth of sediment, a note is made on the inspector's report, and included in the Annual Maintenance Recommendation report for subsequent correction and pumping out by BTV's Maintenance staff.	None.	BTV will continue to monitor all stormwater infrastructure per MSGP and MS4 requirements.	None.
Other	Stormwater Management System Certification	Specification D-755: Permitted Stormwater Management System Certification shall be included in all construction contracts that have permit coverage for operational stormwater management systems. Specification D-755 requires a Professional Engineer to inspect the stormwater management system to ensure compliance with the contract plans and specifications and the stormwater discharge permit issued for the project.	BTV's SWMP, Appendix C, contains Technical Specification D-755. The specification is included in all construction contracts.	None.	BTV will continue to include Technical Specification D-755 in all furtuer construction contracts.	None.

Patrick Leahy Burlington International Airport (BTV)
2023 MS4 Annual Report Workbook
Date: April 1, 2024

Minimum Control Measure Reporting

GP Part 6.2	MCM Requirements	Measurable Goal	Description of how requirement was met	List attachments if applicable	Activities planned for next year	Proposed change in BMP or measurable goal?
MM#6: Pollution Prevention and Good Housekeeping for Municipal Operations						
6.b (2)	Conduct stormwater training for staff	BTV will conduct trainings annually to ensure that airport staff and tenants are following all rules and regulations. New employees will be trained within two weeks of hire. BTV documented the number of BTV staff who have received the educational presentation using a sign-in attendance sheet.	BTV staff were provided with a live training presentation on June 15, 2017, including educational information on stormwater pollution awareness and water quality issues as they affect the BTV facility. The approximately 45-minute training presentation was developed and presented by representatives of Stantec Consulting Services Inc., who are knowledgeable in stormwater pollution awareness and current water quality issues. The presentation was tape-recorded. Currently, staff and tenants are provided the presentation and accompanying quiz per MS4 permit requirements.	None.	BTV will continue to provide the presentation to staff and tenants.	None.
6.b (3)	Implement controls for reducing or eliminating the discharge of pollutants from the MS4	SWPPP - Section 5.5; Inspection and Maintenance procedures in the O&M Manual for each BMP; Source protection, area specific, site-wide BMPs, and procedures for spill response and vehicle/equipment washing include in SWPPP Section 5.	BTV has a Spill Prevention, Control, and Countermeasure Plan (SPCCP) prepared by ATC Group Services LLC (dated February 8, 2017) to help meet this measure. The SPCCP has been incorporated as an appendix into BTV's SWPPP.	None.	BTV's SPCCP has been updated and spill training is planned for April 2023.	None.
	STPs constructed, upgraded, & maintained	During the 2023 reporting period, BTV completed construction of the *BETA Technologies General Aviation Hangar,* Stormwater Discharge Permit No. 3028-9050.3, and *Heritage Aviation Fuel Farm Expansion,* Stormwater Discharge Permit No. 3028-9050.6; BTV is expecting to complete during the 2024 reporting period *BETA Technologies - BTV Assembly Facility,* Stormwater Discharge Permit No. 3028-9050.2; *BTV Rehabilitate Taxiway A,* Stormwater Discharge Permit No. 3028-9050.5A; and*Extend Taxiway G and Construct New General Aviation South Apron,* Stormwater Discharge Permit No. 3028-9050.8. Construction is expected to being for *BTV Hotel,* Stormwater Discharge Permit No. 3028-9050.7 in the 2024 reporting period.	See Appendix B for listings in the BMP tracking table, updated annually.	See Appendix B for BMP tracking table.	BTV anticipates completion of the BETA General Aviation Hangar, Rehabilitate Taxiway A, Extend Taxiway G and Construct New General Aviaion South Apron in 2024, and expects to being construction on the BTV Hotel.	None.
	STPs incorpoated into the MS4	On January 16, 2024, Stormwater Discharge Permit Nos. 3028-INDS.10 (BETA Hangar Site), 3028-9050 (Taxiway K), 3028-9050.1 (Terminal Integration), 3028-9050.2 (BETA Technologies- BTV Assembly Facility), 3028-9050.3 (BETA Technologies General Aviation Hangar), 3028-9050.5A (BTV Rehabilitate Taxiway A), 3028-9050.7 (BTV Hotel), 3028-9050.8 (Extend Taxiway G and Construct New General Aviation South Apron) were incorpoarted into the MS4.	See Appendix B for listings in the BMP tracking table.	See Appendix B for BMP tracking table.	BTV intends to request further permits incorporated into the MS4 in the 2023 reporting period.	None.
	Inspections performed on fleet vehicles, buildings, garages, parks, open spaces	A measurable goal for this was not identified in BTV SWMP.	Yes, as a result of BTV's comprehensive site inspections, maintenance items were identified and all items have been completed or are currently pending completion.	See Appendix H for a listing of 2023 Maintenance Recommendations.	BTV will continue to monitor all stormwater infrastructure per MSGP and MS4 requirements.	None.
	Catch basin cleaning	BTV cleaned catch basins on site and recorded the total volume of material removed. Details are recorded in 'Non Structural BMPs' tab.	See 'Non Structural Tab' for further information.	Not Applicable	Continue catch basin cleaning program per the SWMP and as noted above under per MM #5.	None.
	Street Sweeping	BTV swept all pavement periodically and provided a measurement of lane miles swept as well as an estimated total amount of material removed from pavement. Details are recorded in 'Non Structural BMPs' tab.	See 'Non Structural Tab' for further information.	Not Applicable	Continue the street sweeping program on a weekly basis.	None.
	Leaf/organic waste removal program	As an airport, BTV does not have a formal leaf/organic waste removal program similar to a typical municipality as there are no trees on the air field side of the facility.	BTV does not have a formal leaf/organic waste removal program as there are no trees on the air field side of the facility. However, leaves are removed in the Fall on an as needed basis from the open green spaces where approximately 120 houses have been purchased and removed by BTV.	Not Applicable	Leaf and organic waste removal on an as needed basis.	None.
6.b (4)	Develop and implement procedures for proper disposal of wastes	BTV has developed proper handling, storage and disposal procedures for removed wastes. Procedures are included in Volume 2 - Stormwater Pollution Prevention Plan.	BTV Maintenance staff recycles and/or properly disposes of all waste materials regularly in an approved fashion.	None.	BTV will continue to dispose of all waste materials regularly in an approved fashion.	None.

Patrick Leahy Burlington International Airport (BTV)
2023 MS4 Annual Report Workbook
Date: April 1, 2024

Minimum Control Measure Reporting

GP Part 6.2	MCM Requirements	Measurable Goal	Description of how requirement was met	List attachments if applicable	Activities planned for next year	Proposed change in BMP or measurable goal?
6.c	Prohibit use of phosphorus containing fertilizers on facility operations unless warranted by a soil test; submit copy of test	Not applicable.				
6.d	Participate in the Agency's Municipal Compliance Assistance Program (or other audit program) for municipal garages	BTV has participated in the Municipal Compliance Assistance Program.	BTV last partipated in 2016.	Not Applicable	None at this time.	None.
	Other					

Additional MS4 Reporting Requirements	
Annual Review of SWMP completed	Yes. BTV has developed a SWMP to meet these requirements, and will continue to review and update the plan annually as necessary.
Results of information collected and analyzed, if not included elsewhere	Not Applicable.
Notice that permittee is relying on another entity to satisy some of its permit obligations	BTV has a Flow Restoration Plan in hand with the city of South Burlington. Stone Environmental, Inc. has installed, maintained, and collected data, and have reported for all flow monitoring stations to obtain compliance with the flow monitoring requirements of their MS4 permits for VT DEC. Establishment and maintenance of the stream gauge stations began in 2016 and ended in 2021. The stream gauging data was reported on in 2022 and is available for review on a website: http://vt-ms4-flow.stone-env.com/FlowDev/index.html. Stone Environmental has created Flow Duration Curves in accordance to 0.3% and 95% flow exceedance for Potash and Centennial Brook.
Estimated funds spent on stormwater management for the fiscal year*	$565,080
Other information, if applicable	Not Applicable.

Impaired Waters Response Plan			
Impaired Stream	**Potash Brook**	**Centenial Brook**	**Muddy Brook**
Impairment	Chloride	Chloride	Muddy Brook, mouth to seven miles upstream (VT08-02), is on the 303(d) list of impaired waters but does not have a TMDL. Listed pollutants are Chloride and Toxicity.
Status of implementation	Approved TMDL.	Approved TMDL.	None.
Planned activities for upcoming year	None.	Centenial Brook no longer requires monitoring	None.
Other information, if applicable	Not Applicable.	Not Applicable.	Not Applicable.

* Optional response.

Non Structural BMP Reporting

Complete Table 1 or 2, depending on tracking method used by MS4

Table 1. Area tracking method			
Sub Area Name (Lake segment, route, etc.)			
Area of streets swept (acres)	Approximately 0.75 acres	A = 2045 + 709 LF + 2754 LF = 0.52 miles @ 12' lane = 33048 SF/43560 = 0.75 acre	
P Load from Streets where sweeping occurs (kg/year)	1.34		
Sweeper Frequency	Weekly		
Sweeper Technology	Mechanical Broom		
Year sweeping started	2000		
If weekly or monthly, number of months streets are swept	6		
Phosphorus Credit	0.00%		
Phosphrous Reduction from Street Sweeping (kg/year)	0		
Catch Basin Cleaning			
P Load from Streets where catch basin cleaning occurs (kg/year)	Unknown without laboratory analysis.		
Phosphorus Credit	2%	2%	2%
Phosphrous Reduction from Catch Basin Cleaning(kg/year)			

Street seeping 1x a week April - October (call it 6 months and 24 weeks), don't have specific data on this, lengths were measured in field

Table 2. Measurement of material tracking method	
Combined dry weight of material collected (kg)	
OR Cubic yards of material collected	
Number of sediment samples taken	0
Lab where samples were processed	N/A
Record the average TP result	N/A
Was a particle size analysis done?	N/A
Please attach results from the lab	N/A

**There is currently no approved accounting methodology based on weight or volume of material collected. Should a method be developed, DEC anticipates information like that in Table 2 could be required.

Table 3. Phosphorus Reduction Factor				
	2/year (spring and fall)	Monthly	Weekly	4X in the fall
Mechanical Broom	1%	3%	5%	17%
Vacuum Assisted	2%	4%	8%	17%
High Efficiency Regenerative Air-Vacuum	2%	8%	10%	17%

Flow Restoration Plan Implementation		
	Centenial Brook	**Potash Brook**
Summary of actions taken to implement FRP components	There is no set construction date for Dumont Avenue or North Henry Court FRP projects.	Plans have been completed for two subsurface infiltration galleries location on Airport Drive. This work will be completed by the City of South Burlington and will place on BTV owned land.
What is the MS4's overall status in implementing the FRP?	South Burlington Project ID CB0023, Retrofit #25, Picard Circle Infiltration Gallery is complete to date. Monitoring of Centenial Brook by Stone Environmental has been complete.	BTV has been involved in construction planning and will remain involved as the project progresses.
Summary of BMP implentation planned for the next calendar year, if any.	None	Construction is proposed to being in 2024.
Assessment of ability to meet outstanding schedule items	Discussions are on-going for cost sharing with the City of South Burlington for South Burlington ID CB0018, Retrofit #200, North Henry Court Infiltration Gallery.	

Stream Flow Monitoring	
Does your municipality conduct stream flow monitoring?	Stone Environmental performed the stream monitoring and reporting in 2022.

Steam Corridor Protection	
Ordinance or regulation adopted to protect and regulate development in sw impaired water stream corridors	The requirement for Regulating Development In Stormwater Impaired Stream Corridors has been fulfilled for all previously permitted MS4 communities. Previously permitted MS4's, such as BTV, complied with these requirements in 2008 as part of a settlement agreement with the Conservation Law Foundation (CLF). The requirement for Enhanced Protection of Stormwater Impaired Stream Corridors has been fulfilled for all previously permitted MS4 communities. Previously permitted MS4's, such as BTV, complied with these requirements in 2008 as part of a settlement agreement with the Conservation Law Foundation (CLF).

Phophorus Control Plan Development (PCP)	
Road Erosion Inventory (REI)	Uploaded to 'Municipal Roads General Permit Implementation Table'
Are there any segments on the MRGP Implementation Table portal that are incomplete? If so, please describe how the data will be completed.	Please describe status
Roads and Outlets planned for upgrade in calendar year 2023.	If these have not been identified in the Implementation Table, to the best of your ability, list them here.
Extent of street sweeping and catch basin cleaning	See 'Non-structural tab'
Extent of stormwater BMP implementation	See 'BMP Tracking Table'
What is the MS4's overall status in implementing the PCP?	BMP Tracking Table shows that BTV has met it's phosphorus reduction goals. BMP Tracking table shows that BTV has met its goal in both the Shelburne Bay and Main Lake segments of Lake Champlain. The BMP Tracking table will continue to track progress as airport improvements are made and BMPs are built and maintained.
Assessment of the ability to meet outstanding schedule items	BMP Tracking Table shows that BTV has met it's phosphorus reduction goals.
List of '3 acre sites' that have been taken over by the MS4 in the past calendar year.	None
Has the additional loading from privately owned land associated with the 3-acre sites been addressed in the phosphorus control plan? If not describe the MS4s plan to address the additional target.	No, BTV's MS4 only applies to BTV owned land.

PATRICK LEAHY BURLINGTON INTERNATIONAL AIRPORT

Annual Report for General Permit 3-9014 (MS4)

Including Annual Reporting Summary for MS4-Incorporated Operational Stormwater Discharge Permits

April 1, 2024

Appendix B

BTV Phosphorus Control Plan (PCP) Memo and BMP Tracking Table

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
STORMWATER PROGRAM

Notice of Intent (NOI) for Stormwater Discharges from Municipal Separate Store Sewer Systems (MS4) General Permit 3-9014

Submission of this Notice of Intent (NOI) constitutes notice that the entity in Section A intends to be authorized to discharge pollutants to waters of the State under Vermont's Municipal Separate Storm Sewer Systems (MS4) permit. Submission of the NOI also constitutes notice that the party identified in Section A of this form has read, understands and meets the eligibility conditions; agrees to comply with all applicable terms and conditions; and understands that continued authorization under the MS4 General Permit is contingent on maintaining eligibility for coverage. In order to be granted coverage, all information required on this form and a complete Stormwater Management Program (SWMP) Plan must be submitted.

A. Permittee Information

1. Name of MS4: City of Burlington, Burlington International Airport (BTV)

2a. Name of Principle Executive Officer (PEO) or Chief Elected Official (CEO):

2b. Title: Director of Aviation

3a. Mailing Address: 1200 Airport Drive, #1

3b. Town: South Burlingon	3c. State: Vermont	3d. Zip: 05403

4. Phone: 8028632874	5. Email:

6. Municipal Office Latitude: 73.154722 °N Longitude: -73.154722 °W

B. Primary contact responsible for overall coordination of SWMP, if different than PEO/CEO

1. Name: (Same as Above)

2a. Mailing Address:

2b. Town:	2c. State:	2d. Zip:

3. Phone:	4. Email:

5. Additional Contact Name:

6. Additional Contact Email:

C. Partnering organization responsible for Minimum Control Measure implementation (if applicable)

1. If you are participating in the CCRPC MOU to implement MCM1 &/or MCM2 check here: ☑ MCM 1 ☑ MCM 2

Or, if you are relying on another entity to implement a MCM, please complete the following:

2. Organization:

3. Contact Name:

4. Minimum Control Measure(s) being implemented:

5a. Mailing Address

5b. Town:	5c. State:	5d. Zip:

6. Phone:	7. Email:

D. Incorporation of Previously Permitted Stormwater Systems

1a. As part of this application, is the MS4 incorporating a stormwater system that was previously authorized under a State stormwater permit? ☐ Yes ☑ No

1b. If yes, the MS4 must complete and attach the MS4 Incorporation Form.

List permit numbers here: _____

_____

E. Phosphorus Control Plan Submittal

As part of this application, is the MS4 submitting a Phosphorus Control Plan in accordance with Part 8.2 of the MS4 Permit?

☑ Yes, the Phosphorus Control Plan is attached to this application.

F. Stormwater Discharges

1. Identify the names of all know waters that receive a discharge from the MS4 or developed lands subject to this permit:

Receiving water	# of outfalls (if known)	Impaired status	Nature of impairment	Response Plan developed *(FRP, PCP, No TMDL - Part 4.2.B)*
Unnamed Tributary of Winooski River	Six (6)	No	None	NA
Muddy Brook	One (1)	No	None	NA
Class 2 Wetland contiguous with Muddy Brook	Five (5)	No	None	NA
Class 2 Wetland contiguous with Potash Brook	Five (5)	Yes	E. Coli, Stormwater	FRP
South Burlington Stormwater Collection System	One (1)	Yes	assume Potash Brook: E. Coli, Stormwater	FRP
Centennial Brook	One (1)	Yes	Stormwater	FRP
		No		NA
		No		NA
		No		NA
		No		NA
		No		NA
		No		NA

G. Certification

This NOI shall be signed by a principal executive officer, ranking elected official or other duly authorized employee consistent with 40 CFR §122.22(b) and certified as follows:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Nicolas Longo
Print Name

Director of Aviation
Title

Signature

3/22/24
Date

Submit this form and applicable attachments to:
https://anronline.vermont.gov/?formtag=WSMD_Intake

April 1, 2024
File: E2340
Christy Witters, AICP, MS4, and MSGP Program Coordinator

Reference:
Burlington International Airport (BTV)
General Permit 3-9014 (2018) MS4
Phosphorus Control Plan (PCP)

Attention: Christy Witters, AICP, MS4, and MSGP Program Coordinator
Vermont DEC – Watershed Management Division
Stormwater Management Program
One National Life Drive, Main 2
Montpelier, VT 05620-3522

Dear Christy,

On behalf of the City of Burlington, Burlington International Airport (BTV), this report shall serve as BTV's Phosphorus Control Plan (PCP) for Permit No 7021-9014.A2R [reference Municipal Separate Storm Sewer System (MS4) General permit 3-9014 (2018)].

Burlington International Airport discharges to two segments of Lake Champlain: Shelburne Bay and Main Lake. DEC's TMDL provides goals for these segments as 23.50 kg/year in Shelburne Bay and 51.60 kg/year in Main Lake. As recorded and calculated in the BMP Tracking Table, BTV has completed 33.83 total kg/year of phosphorus removal in Shelburne Bay and 103.74 total kg/year of phosphorus removal in Main Lake. Goals for both lake segments have been reached at this time. BTV intends on maintaining all BMPs in place and continuing BMP development as airport improvements are made.

Regards,

Heidi Miller, Civil and Environmental Engineer
EIV Technical Services
355 Main St. Suite 500

Cc: Larry Lackey (BTV Director of Engineering and Environmental Compliance)

	BMP Identification								Design, Construction and Maintence					Basin Information			BMP Tracking Specifications											Phosphorus Calculations						
Unique ID	Burlington International Airport (BTV) BMP Tracking Table Date: April 1, 2024 Project Name	Land Owner	Responsible Party	Latitude (decimal degrees)	Longitude (decimal degrees)	Existing SW permit number (if applicable)	Watershed Projects Database ID (if known)	Part of MS4/ Incorporated into MS4	Cost Estimate (optional)	BMP Status	Year Planned Construction	Date Constructed	Date of last Inspection	Maintenance needed?	Applicable FRP	LC TMDL Drainare Area	LC TMDL Lake Segment	Eligible for Phosphorus Credit?	BMP Type	Impervious area (acres)	Pervious Entry Method	Pervious HSG A	Pervious HSG B	Pervious HSG C	Pervious HSG D	Total Pervious area (acres)	Storage volume (ft³)	Infiltration rate (in/hr)	* Load Before Treatment (lbs/ac/yr)	* Storage Depth (inches)	Upper Efficiency - Lower Efficience	Percent of Storage Depth Sizes	* Practice Efficiency	* P Reduction (lbs/year)	Manual P Reduction (lbs/yr)	Is this an upgrade to an existing BMP?	Does the upgrade changed the drainage area?	% Credit to MS4	* P Credit (lbs/yr)
SHELBURNE BAY LAKE SEGMENT																																			
BTV BCJG-1	Taxiway B, C, J, G (Swale #1)	Burlington International Airport	Burlington Int'l Airport MS4	44.46750	-73.14722	3028-9010.2	3028-9010.2	Yes		Complete		August /September 2016		No	Potash Brook	Laplatte River	Shelburne Bay	Yes	Grass Channel	1.50	Total Pervious					1.57	8,295	8.27 in/hr	1.70	1.14		0.28			0.28		100%	0.28
BTV BCJG-2	Taxiway B, C, J, G (Swale #2)	Burlington International Airport	Burlington Int'l Airport MS4	44.46750	-73.14722	3028-9010.2	3028-9010.2	Yes		Complete		August /September 2016		No	Potash Brook	Laplatte River	Shelburne Bay	Yes	Grass Channel	1.15	Total Pervious					1.21	7,722	8.27 in/hr	1.64	1.05		0.09			0.22		100%	0.22
BTV BCJG-3	Taxiway B, C, J, G (Swale #3)	Burlington International Airport	Burlington Int'l Airport MS4	44.46750	-73.14722	3028-9010.2	3028-9010.2	Yes		Complete		August /September 2016		No	Potash Brook	Laplatte River	Shelburne Bay	Yes	Grass Channel	2.81	Total Pervious					2.81	7,722	8.27 in/hr	1.64	1.05		0.09			0.25		100%	0.25
BTV BCJG-4	Taxiway B, C, J, G (Swale #4)	Burlington International Airport	Burlington Int'l Airport MS4	44.46750	-73.14722	3028-9010.2	3028-9010.2	Yes		Complete		August /September 2016		No	Potash Brook	Laplatte River	Shelburne Bay	Yes	Grass Channel	0.20	Total Pervious					0.58	1,268	8.27 in/hr	0.29	1.04		0.08			0.04		100%	0.04
BTV HEA	Heritage Flight Aviation	Burlington International Airport	Burlington Int'l Airport MS4	44.46389	-73.14722	3845-9010	3845-9010	Yes		Complete		7/28/16; 8/9/16		No	Potash Brook	Laplatte River	Shelburne Bay	Yes	Bioretention (infiltrating)	0.78	Total Pervious					0.52	6,382	8.27 in/hr	0.83	1.71	0.00	0.42	100.00%	0.83	0.82		100%	0.82
BTV SFS	Sewage Receiving Station	Burlington International Airport	Burlington Int'l Airport MS4	44.46580	-73.15472	3028-9025.3	3028-9025.3	Yes		Complete		8/4/2016		No	Potash Brook	Laplatte River	Shelburne Bay	Yes	Infiltration Trench	0.24	Total Pervious					0.173	885	8.27 in/hr	0.26	0.86	0.01	0.28	98.28%	0.26	0.25		100%	0.25
BTV HAPL (POI 1)	Heritage Aviation Parking Lot (POI 1)	Burlington International Airport	Burlington Int'l Airport MS4	44.46389	-73.14722	3845-9015.1	3845-9015.1	Yes		Complete		5/19/16; 6/2/16; 6/16/16; 6/29/16; 7/13/16; 7		No	Potash Brook	Laplatte River	Shelburne Bay	Yes	Infiltration Trench	0.00001	Total Pervious					0.00001	1,455	8.27 in/hr	0.00	2.00	0.00		100.00%	0.00	0.00		100%	0.00
BTV HAPL (POI 2)	Heritage Aviation Parking Lot (POI 2)	Burlington International Airport	Burlington Int'l Airport MS4	44.46389	-73.14722	3845-9015.1	3845-9015.1	Yes		Complete		5/19/16; 6/2/16; 6/16/16; 6/29/16; 7/13/16; 7		No	Potash Brook	Laplatte River	Shelburne Bay	Yes	Infiltration Trench	0.00	Total Pervious					0.00001	2,173	8.27 in/hr	0.00	2.00	0.00		100.00%	0.00	0.00		100%	0.00
BTV BMP 17	BMP 17 Glycol Infiltration Field	Burlington International Airport	Burlington Int'l Airport MS4			UIC #6-0117	UIC #6-0117	Yes		Complete		3/23/2013		No	Potash Brook	Laplatte River	Shelburne Bay	Yes	Infiltration Trench	10.97	Total Pervious					0.54	21,600	8.27 in/hr	10.54	0.54	0.19	0.69	88.34%	9.29	9.56		100%	9.56
BTV STE	BTV South Terminal Expansion	Burlington International Airport	Burlington Int'l Airport MS4	TBD	TBD	n/a	TBD	Yes		Planned					Potash Brook	Laplatte River	Shelburne Bay	Yes		n/a	Total Pervious					n/a	n/a										100%	0.00
BTV BLDG 7 001	BTV Beta Technologies Hanger (Bld 7) S/N 0	Burlington International Airport	Burlington Int'l Airport MS4	44.46674	-73.15104	3028-9025.10	TBD	No		Complete					Potash Brook	Laplatte River	Shelburne Bay	Yes	Infiltration Basin	0.52	Total Pervious					0.4	1,612	8.27 in/hr	0.56	0.74	0.03	0.68	98.04%	0.55	0.00		100%	0.00
BTV BLDG 7 002	BTV Beta Technologies Hanger (Bld 7) S/N 0	Burlington International Airport	Burlington Int'l Airport MS4	44.46555	-73.15442	3028-9025.10	TBD	No		Complete					Potash Brook	Laplatte River	Shelburne Bay	Yes	Infiltration Chambers	0.25	Total Pervious					0.107	3,093	8.27 in/hr	0.26	2.00	0.00		100.00%	0.26	0.00		100%	0.00
BTV BLDG 7 003	BTV Beta Technologies Hanger (Bld 7) S/N 0	Burlington International Airport	Burlington Int'l Airport MS4	44.46595	-73.15525	3028-9025.10	TBD	No		Complete					Potash Brook	Laplatte River	Shelburne Bay	Yes	Infiltration Basin	0.05						n/a	n/a								0.00		100%	0.00
BTV BLDG 7 004	BTV Beta Technologies Hanger (Bld 7) S/N 0	Burlington International Airport	Burlington Int'l Airport MS4	44.46603	-73.15466	3028-9025.10	TBD	No		Complete					Potash Brook	Laplatte River	Shelburne Bay	Yes	Infiltration Basin	0.02						n/a	n/a								0.00		100%	0.00
BTV FRF 1	Airport Drive Infiltration Gallery	Burlington International Airport	Burlington Int'l Airport MS4	TBD	TBD	n/a	TBD	Yes	$439,000	Planned	Summer 2024				Potash Brook	Laplatte River	Shelburne Bay	Yes	Infiltration Trench	2.70	Total Pervious					6.95	20,037	8.27 in/hr	3.77	1.13	0.01	0.26	99.26%	3.74	3.74	No	100%	3.74
HERITAGE ADDITION	Heritage Flight Hanger Addition S/N 001	Burlington International Airport	Burlington Int'l Airport MS4	44.46206	-73.15468	3028-9025.8	TBD	No		Complete					Potash Brook	Laplatte River	Shelburne Bay	Yes	Infiltration Chambers	0.57	Total Pervious					0.405	3,223	8.27 in/hr	0.62	1.24	0.01	0.49	99.49%	0.61	0.00		100%	0.00
BTV RON	Remain Overnight Aepon (Phase 7)	Burlington International Airport	Burlington Int'l Airport MS4	TBD	TBD	3028-9025.9	TBD	Yes		Complete					Potash Brook	Laplatte River	Shelburne Bay	Yes	Infiltration Chambers	3.82	Total Pervious					1.44	8,926	8.27 in/hr	3.88	0.60	0.04	0.02	94.09%	3.65	0.00		100%	0.00
BTV TW 4	Taxiway K	Burlington International Airport	Burlington Int'l Airport MS4	44.46583	-73.15139	3028-9050	TBD	Yes		Complete					Potash Brook	Laplatte River	Shelburne Bay	Yes	Grass Channel	0.50	Total Pervious					0.07441689	5,824		0.49	2.00	0.07		29.00%	0.14	0.00		100%	0.00
BTV TERMINT	BTV Terminal Integration	Burlington International Airport	Burlington Int'l Airport MS4	44.46822	-73.15402	3028-9050.1	TBD	Yes		Complete	Fall 2022				Potash Brook	Laplatte River	Shelburne Bay	No											0.00							0.00	N/A	100%	0.00
BTV Re_TW A (001)	Rehabilitate Taxiway A	Burlington International Airport	Burlington Int'l Airport MS4	44.46776	-73.15304	3028-9050.5A		Yes		Under Construction	2023				Centennial Brook	Laplatte River	Shelburne Bay	Yes	Infiltration Chambers	0.49	Total Pervious					2.28	11,374	8.27 in/hr	0.86	1.87	0.00	0.74	100.00%	0.86	0.00	N/A	100%	0.00
MAIN LAKE SEGMENT																																			
BTV TW G-1	Taxiway G (Dry Detention Pond 001)	Burlington International Airport	Burlington Int'l Airport MS4	44.48239	-73.16999	3028-9025.6A	3028-9025.6A	Yes		Complete		Spring 2019		No	n/a	Winooski River	Main Lake	Yes	Extended Dry Detention Pond	10.71	Total Pervious					47.31	110,555	8.83 in/hr	22.89	1.17		0.33			2.53		100%	2.53
BTV TW G-2, Phase 1	Taxiway G Underground Chamber #1 001)	Burlington International Airport	Burlington Int'l Airport MS4	44.48239	-73.16999	3028-9025.6A	3028-9025.6A	Yes		Complete		October, 2018		No	n/a	Winooski River	Main Lake	Yes	Infiltration Trench	10.31	Total Pervious					20.497	87,617	2.41 in/hr	16.25	1.34	0.02	0.68	97.37%	15.83	14.35		100%	14.35
BTV TW G-3, Phase 2	Taxiway G Underground Infiltration Tank #(	Burlington International Airport	Burlington Int'l Airport MS4	44.47066	-73.15167	3028-9025.6A	3028-9025.6A	Yes		Complete		October, 2019		No	n/a	Winooski River	Main Lake	Yes	Infiltration Trench	0.69	Total Pervious					1.007	9,074	2.41 in/hr	1.00	2.00	0.00		100.00%	1.00	0.92		100%	0.92
BTV TW F	Taxiway F (S/N 002)	Burlington International Airport	Burlington Int'l Airport MS4	44.47667	-73.15744	3028-9025.7	3028-9025.7	Yes		Complete		October, 2019		No	n/a	Winooski River	Main Lake	Yes	Infiltration Trench	8.47	Total Pervious					27.6	15,536	8.27 in/hr	15.84	0.37	0.25	0.87	71.69%	11.35	10.33		100%	10.33
BTV RW 15-33 (006)	Reconstruct, Mark, and Groove Runway 15-	Burlington International Airport	Burlington Int'l Airport MS4	44.49306	-73.17222	3028-9025.7	3028-9025.7	Yes		Complete		Spring 2019		No	n/a	Winooski River	Main Lake	Yes	Infiltration Trench	1.75	Total Pervious					5.17	2,654	8.27 in/hr	3.15	0.33	0.25	0.63	65.76%	2.07	1.70		100%	1.70
BTV RW 15-33 (004)	Reconstruct, Mark, and Groove Runway 15-	Burlington International Airport	Burlington Int'l Airport MS4	44.49306	-73.17222	3028-9025.7	3028-9025.7	Yes		Complete		Spring 2019		No	n/a	Winooski River	Main Lake	Yes	Infiltration Trench	0.47	Total Pervious					2.61	7,147	8.27 in/hr	1.13	1.35	0.01	0.71	99.71%	1.12	1.06		100%	1.06
BTV RW 15-33 (003)	Reconstruct, Mark, and Groove Runway 15-	Burlington International Airport	Burlington Int'l Airport MS4	44.49306	-73.17222	3028-9025.7	3028-9025.7	Yes		Complete		Spring 2019		No	n/a	Winooski River	Main Lake	Yes	Grass Channel	4.43	Total Pervious					10.96	8,839	8.27 in/hr	5.04	0.59		0.96			0.41		100%	0.41
BTV RW 15-33 (002)	Reconstruct, Mark, and Groove Runway 15-	Burlington International Airport	Burlington Int'l Airport MS4	44.49306	-73.17222	3028-9025.7	3028-9025.7	Yes		Complete		Spring 2019		No	n/a	Winooski River	Main Lake	Yes	Infiltration Trench	4.19	Total Pervious					15.2	17,183	8.27 in/hr	8.19	0.67	0.04	0.35	95.39%	7.81	5.57		100%	5.57
BTV RW 15-33 (001)	Reconstruct, Mark, and Groove Runway 15-	Burlington International Airport	Burlington Int'l Airport MS4	44.49306	-73.17222	3028-9025.7	3028-9025.7	Yes		Complete		Spring 2019		No	n/a	Winooski River	Main Lake	Yes	Grass Channel	7.57	Total Pervious					11.5	22,247	8.27 in/hr	11.11	0.64		0.18			0.95		100%	0.95
BTV BMP 3	BMP 3 Glycol Infiltration Field	Burlington International Airport	Burlington Int'l Airport MS4	44.47243	-73.15619	UIC #6-0075	UIC #6-0075	Yes		Complete		2/28/2017		Yes	n/a	Winooski River	Main Lake	Yes	Infiltration Trench	15.36	Total Pervious					1.47	67,100	8.27 in/hr	17.50	1.17	0.01	0.33	99.33%	17.38	17.50		100%	17.50
BTV CRCF	Consolidated Rental Car Facility (US-System	Burlington International Airport	Burlington Int'l Airport MS4	44.47180	-73.15646	3028-9025.4	3028-9025.4	Yes		Complete		August, 2020			n/a	Winooski River	Main Lake	Yes	Infiltration Trench	0.89	Total Pervious					0.33	5,695	8.27 in/hr	1.07	1.52	0.00	0.05	100.00%	1.07	1.06		100%	1.06
BTV TW B-1	Taxiway B Extension (Storm Trap 1)	Burlington International Airport	Burlington Int'l Airport MS4	44.47291	-73.15213	3028-9015.3	3028-9015.3	Yes		Complete					n/a	Winooski River	Main Lake	Yes	Infiltration Trench	0.66	Total Pervious					1.28	3,659	8.27 in/hr	1.03	0.99	0.01	0.96	98.96%	1.02	1.00		100%	1.00
BTV TW B-2	Taxiway B Extension (Storm Trap 2)	Burlington International Airport	Burlington Int'l Airport MS4	44.47291	-73.15213	3028-9015.3	3028-9015.3	Yes		Complete				n/a	n/a	Winooski River	Main Lake	Yes	Infiltration Trench	1.34	Total Pervious					2.42	7,466	8.27 in/hr	2.06	1.01	0.01	0.03	99.03%	2.04	2.00		100%	2.00
BTV HOTEL 001	BTV HOTEL S/N 001	Burlington International Airport	Burlington Int'l Airport MS4	TBD	TBD	3028-9050.7	TBD	Yes		Planned	2025				Centennial Brook	Winooski River	Main Lake	Yes	Gravel Wetland	0.13	Total Pervious					0.001	n/a		0.15						0.00		100%	0.00
BTV HOTEL 002	BTV HOTEL S/N 002	Burlington International Airport	Burlington Int'l Airport MS4	TBD	TBD	3028-9050.7	TBD	Yes		Planned	2025				Centennial Brook	Winooski River	Main Lake	Yes	Infiltration Basin	0.28	Total Pervious					0	1,699	8.27 in/hr	0.31						0.00		100%	0.00
BTV HOTEL 003	BTV HOTEL S/N 003	Burlington International Airport	Burlington Int'l Airport MS4	TBD	TBD	3028-9050.7	TBD	Yes		Planned	2025				Centennial Brook	Winooski River	Main Lake	Yes		0.01	Total Pervious					0	44	8.27 in/hr	0.01						0.00		100%	0.00
BETA AK (001)	BETA Technologies - BTV Assembly Facility	Burlington International Airport	Burlington Int'l Airport MS4	44.46540	-73.13752	3028-9050.2	3028-9050.2	Yes		Under Construction	2023				n/a	Winooski River	Main Lake		Gravel Wetland	12.318	Total Pervious					7.854	46,143	0.53 in/hr	15.57	0.89		0.45	58.79%	9.16	9.16	No			9.16
BETA GA (001)	BETA General Aviation Hanger	Burlington International Airport	Burlington Int'l Airport MS4	44.46540	-73.13752	3028-9050.3	3028-9050.3	Yes		Under Construction	2023				n/a	Winooski River	Main Lake		Bioretention (w/ underdrain)	1.066	Total Pervious					0.298	4,278	0.53 in/hr	1.26	1.03		0.05	53.23%	0.67	0.67	No			0.67
BETA FF (002)	Heritage Aviation Fuel Farm Expansion	Burlington International Airport	Burlington Int'l Airport MS4	44.46317	-73.14717	3028-9050.6	3028-9050.6	Yes		Under Construction	2023				n/a	Winooski River	Main Lake		Infiltration Basin	0.763	Total Pervious					0.204	3,293	0.52 in/hr	0.90	1.10	0.03	0.20	92.59%	0.83	0.83	Yes			0.83
RTY 1-4/RIN/EXT TW G	Extend Taxiway G and Construct New Gener	Burlington International Airport	Burlington Int'l Airport MS4	44.46443	-73.13875	3028-9050.8		Yes		Under Construction	2023				n/a	Winooski River	Main Lake	Yes	Infiltration Chambers	2.18	Total Pervious					1.83	7,884	8.27 in/hr	2.44						1.83	Yes			1.83
IMPERVIOUS SURFACE REMOVAL																																			
HOUSE REMOVAL A	House Removal Centennial	Burlington International Airport	Burlington Int'l Airport MS4					Yes		Complete					Centennial Brook	Winooski River	Main Lake	Yes											0.00							4.9		100%	4.90
HOUSE REMOVAL B	House Removal Potash	Burlington International Airport	Burlington Int'l Airport MS4					Yes		Complete					Potash Brook	Laplatte River	Shelburne Bay	Yes											0.00							0.8		100%	0.80
RUNWAY REMOVAL	Taxiway G	Burlington International Airport	Burlington Int'l Airport MS4					Yes		Complete					n/a	Winooski River	Main Lake	Yes											0.00							4.3		100%	4.30
DISCONNECTION																																			
BTV BCJG-001	Taxiway B, C, J, G (disconnection 001)	Burlington International Airport	Burlington Int'l Airport MS4	44.46750	-73.14722	3028-9025.AR	3028-9025.AR	Yes		Complete			8/11/2016	5/27/2021	No	Potash Brook	Laplatte River	Shelburne Bay	Yes							2.22	Total Pervious		15.11						8.27 in/hr	4.71	0.00							3.30			
BTV BCJG-002	Taxiway B, C, J, G (disconnection 002)	Burlington International Airport	Burlington Int'l Airport MS4	44.46750	-73.14722	3028-9025.AR	3028-9025.AR	Yes		Complete			8/11/2016	5/27/2021	No	Potash Brook	Laplatte River	Shelburne Bay	Yes							1.19	Total Pervious		5.88						8.27 in/hr	2.34	0.00							1.74			
BTV RW 15-33 (001)	Reconstruct, Mark, and Groove Runway 15-	Burlington International Airport	Burlington Int'l Airport MS4	44.49306	-73.17222	3028-9025.7	3028-9025.7	Yes		Complete		Spring 2019	6/11/2021	No	n/a	Winooski River	Main Lake	Yes								8.98	Total Pervious		11.5						8.27 in/hr	12.69	0.00							9.10			
BTV RW 15-33 (002)	Reconstruct, Mark, and Groove Runway 15-	Burlington International Airport	Burlington Int'l Airport MS4	44.49306	-73.17222	3028-9025.7	3028-9025.7	Yes		Complete		Spring 2019	6/11/2021	No	Potash Brook	Laplatte River	Shelburne Bay	Yes								7.91	Total Pervious		15.2						8.27 in/hr	10.14	0.00							7.79			
BTV RW 15-33 (003)	Reconstruct, Mark, and Groove Runway 15-	Burlington International Airport	Burlington Int'l Airport MS4	44.49306	-73.17222	3028-9025.7	3028-9025.7	Yes		Complete		Spring 2019	6/11/2021	No	n/a	Winooski River	Main Lake	Yes								3.58	Total Pervious		10.36						8.27 in/hr	6.32	0.00							5.02			
BTV RW 15-33 (004)	Reconstruct, Mark, and Groove Runway 15-	Burlington International Airport	Burlington Int'l Airport MS4	44.49306	-73.17222	3028-9025.7	3028-9025.7	Yes		Complete		Spring 2019	6/11/2021	No	n/a	Winooski River	Main Lake	Yes								0.67	Total Pervious		2.61						8.27 in/hr	1.35	0.00							1.00			
BTV RW 15-33 (005)	Reconstruct, Mark, and Groove Runway 15-	Burlington International Airport	Burlington Int'l Airport MS4	44.49306	-73.17222	3028-9025.7	3028-9025.7	Yes		Complete		Spring 2019	6/11/2021	No	n/a	Winooski River	Main Lake	Yes								3.94	Total Pervious		7.4						8.27 in/hr	6.11	0.00							4.54			
BTV RW 15-33 (006)	Reconstruct, Mark, and Groove Runway 15-	Burlington International Airport	Burlington Int'l Airport MS4	44.49306	-73.17222	3028-9025.7	3028-9025.7	Yes		Complete		Spring 2019	6/11/2021	No	n/a	Winooski River	Main Lake	Yes								2.34	Total Pervious		5.17						8.27 in/hr	3.81	0.00							3.03			
BTV QA	Quarry Access Road (disconnection S/N 002	Burlington International Airport	Burlington Int'l Airport MS4	44.46019	-73.13989	3028-9015.1	3028-9015.1	Yes		Complete			6/23/2016	5/21/2021	No	Potash Brook	Laplatte River	Shelburne Bay	Yes							0.05	Total Pervious		0.298						2.41 in/hr	0.10	0.00							0.08			
BTV TW G/K	Construct Mark & Light TW G/K (disconnect	Burlington International Airport	Burlington Int'l Airport MS4	44.46750	-73.14722	3028-9025.3	9028-9015.2	Yes		Complete			9/20/2016	5/27/21-6/1/1	No	Potash Brook	Laplatte River	Shelburne Bay	Yes							5.04	Total Pervious		8.69						8.27 in/hr	6.29	0.00							4.93			

PATRICK LEAHY BURLINGTON INTERNATIONAL AIRPORT

Annual Report for General Permit 3-9014 (MS4)

Including Annual Reporting Summary for MS4-Incorporated Operational Stormwater Discharge Permits

April 1, 2024

Appendix C

Public Education Outreach (MCM #1)

Regional Stormwater Education (RSEP) January -December 2023 Annual Report

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

JANUARY–DECEMBER 2023
ANNUAL REPORT

Prepared by:
Pluck

This project is supported by the twelve Municipal Separate Storm Sewer System permittees in Chittenden County implementing the regional Rethink Runoff campaign

VCET/266 Main Street, Burlington, VT 05401 p 802.224.6975 e hello@pluckvermont.com w pluckvermont.com

pluck

VCET/266 Main Street, Burlington, VT 05401 p 802.224.6975
e hello@pluckvermont.com w pluckvermont.com

INTRODUCTION

This 2023 calendar year report recaps the work done primarily related to Minimum Control Measure #1. As in prior years, this work was developed through coordination with CCRPC and its MS4 subcommittee of the Clean Water Advisory Committee.

HISTORY

Since 2003, Chittenden County's 12 MS4s have worked to pool resources to professionally engage the public in a one message, one outreach effort, first known as the Regional Stormwater Education Program. Through regular spring and summer advertisements to drive people to the program's first website, www.smartwaterways.org, this cooperative approach to fulfill its NPDES Permit Minimum Control Measure #1 (Public Education & Outreach) requirements 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 its Lead Agency, the Chittenden County Regional Planning Commission to rebrand the Smart Waterways campaign and coordinate it with the MS4's Minimum Control Measure #2 (public involvement and participation) regional effort, known as the Chittenden County Stream Team, which had begun in 2011. The goal was to create one cohesive organization and outreach effort to educate the public about stormwater and boost public participation implementing projects to combat the negative impacts of stormwater. In the spring of 2017, implementation of the MCM #1 aspects of this joint effort, Rethink Runoff, was publicly launched, which included a new website, www.rethinkrunoff.org and revised creative by Pluck (previously Tally Ho Design).

Pluck has been responsible for the management and creative development of Rethink Runoff since late 2017 while the Winooski Natural Resources Conservation District has overseen and implemented MCM #2. This 2023 calendar year report recaps the work done primarily related to Minimum Control Measure #1.

2023 INITIATIVES

2023/2024 New Creative

As part of our 2022/2023 contract, Pluck began concepting for new creative, including a series of shorter animations.

We identified four topics, with an initial plan to create four :15 second animated spots. Since we focus more on digital distribution as opposed to broadcast (based on both cost and targeting ability), we conceptualized these as both landscape and portrait, enabling additional distribution via Facebook stories and Instagram stories, with the ability to move into TikTok or other avenues as desired.

Each spot has been planned and storyboarded around a single focus or piece of information with an additional call to action to the site.

Together with the 2024 Production budget, our preliminary schedule for 2024 is as follows:

January: Salt Use
February: Pet Waste:
March/April: Gardening/Rain Garden
April/May: Rain Barrel Installation

In addition, the art for each spot will serve as a both print and static digital ads.

Stream Monitoring Data

With the interruption of COVID-19 and turnover, stream monitoring data was no longer current on the site. In addition, the site maintained current stream monitoring data, but did not present a history of all stream monitoring.

In collaboration with The Stream Team, we completely reformatted the data for all streams monitored, both past and current. In addition to providing year-by-year data, we also revised how points of collection are presented on the site. Past locations were typically identified as upstream or downstream. As multiple collection points were introduced, we adopted the same naming conventions used in the data tracking.

Media Buy Breakdown

We eliminated all broadcast purchases, based on cost, allowing us a stronger effort to use targeted digital advertising.

Digital media buys include Google ads: Display, Search and YouTube as well as Facebook and VTDigger. We continued our radio spots on WVMT and VPR (underwriting). In addition, we tested a large Front Porch Forum campaign in fall.

VCET/266 Main Street, Burlington, VT 05401 p 802.224.6975
e hello@pluckvermont.com w pluckvermont.com

Currently, our largest interaction rate from digital ads is from Facebook/Instagram, although this may change from year to year.

We also began examining other opportunities for advertising, including assessing the Lake Monsters baseball games as a potential outreach location and restarting print advertising in local community newspapers. Our plan is to review these options in Spring 2024 for potential changes in the near future.

Municipal Projects

Pluck is also looking at integrating a new section in the website that highlights municipal projects involving stormwater efforts. The goal here is to illustrate that local and state governments are addressing stormwater reduction as Rethink Runoff and The Stream Team focuses on residential efforts.

Social Media

Pluck continued on social media development and content creation. Our primary focus is Facebook, although we do cross-post occasionally, and our advertising efforts cross both channels.

We also began posting in additional weather-based posts and other secondary information that may indirectly relate to stormwater including new stories or other pertinent information, such as beach closures during the summer.

Print Collateral

Pluck also created a new print materials for The Stream Team for stream monitoring activities.

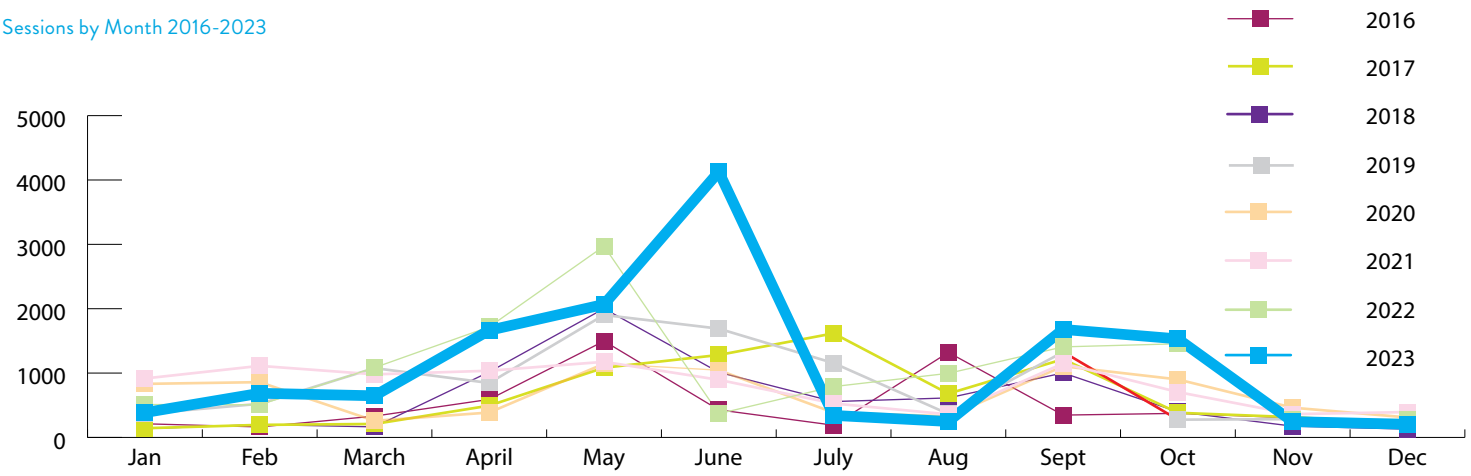
pluck

VCET/266 Main Street, Burlington, VT 05401 p 802.224.6975
e hello@pluckvermont.com w pluckvermont.com

WEBSITE METRICS FOR 2016–2022

Overall website sessions continued to climb, surpassing our pre-COVID metrics. From 2021 to 2022, we had a 17% increase in sessions and a 11% increase in users. Most notably, we had a 100% increase in page views.

Sessions by Month 2016-2023



Year to Year Metrics

	2023	2022	2021	2020	2019
SESSIONS	13,1916	12,365	10,557	8,908	10,111
USERS	11,121	10,537	9,436	7,861	8,531
PAGEVIEWS	19,690*	16,634	16,001	13,112	15,769

Total Sessions/Visits (1/1—12/31)

TIME PERIOD	TOTAL
2023	13,916
2022	12,365
2021	10,557
2020	8,908
2019	10,111
2018	7,832
2017	7,407
2016	6,004
2015	4,659

Website Event Tracking

CALL-TO-ACTION	2023	2022	2021	2020
MAILCHIMP FORM	41	66	48	61
RAIN GARDEN PDF	32	68	56	N/A
RAIN BARREL PDF	19	75	17	8
SOIL TEST CTA	0	5	18	5
SCIENCE EXPERIMENT PDF	20	26	15	N/A

* Our pageviews for 2023 were 34,872. Further analysis shows a spike in pageviews on four separate days, visits from foreign countries. With that in mind, we scaled down our page views by only including the expected visits on those days and not the actual amount.

In 2023, Google introduced G4 Analytics, a new system of reporting that includes new measurements. Engaged sessions, one of these new measurements, indicates a session in which someone has visited the site for over 10 seconds and/or engaged in what Google refers to as an Event, which includes everything from measurable events to page clicks. We will continue to measure both Sessions and Engaged Sessions for the time being.

Sessions vs. Engaged Sessions by Month

MONTH	SESSIONS	ENGAGED SESSIONS
JAN	386	
FEB	686	
MARCH	647	
APRIL;	1,664	544
MAY	2,067	660
JUNE	4,217	1,035
JULY	342	206
AUG	248	132
SEP	1,678	429
OCT	1,531	289
NOV	246	125
DEC	204	95

pluck

VCET/266 Main Street, Burlington, VT 05401 p 802.224.6975
e hello@pluckvermont.com w pluckvermont.com

Overall Media Spend

YEAR	SPEND
2023	$16,682*
2022	$22,174
2021	$26,870
2020	$25,918
2019	$27,135

* In 2023, we softened our media buy, knowing new creative would be coming in 2024 and that 2024 is an election year, which could increase the digital advertising bids/costs overall.

Google Advertising Metric

CAMPAIGN	IMPRESSIONS	INTERACTIONS*	INTERACTION RATE	COST
DISPLAY	3,266,336	4,352	0.14%	$5,930.01
VIDEO	268,785	209,988	80.05%*	$3,089.99
SEARCH	15,786	1,050	6.65%	$1,244.65
FACEBOOK/INSTA	300,041	2,816	1%	$2,328.75
FPF	~110,000	33	<.1%	$1,430

* Interaction rates for video ads are full video views and click, not just clicks.

Impressions are the number of times the ads are served to web users. For Display and Search, Interactions are the number of times a web user clicks on the ad.

Video ads are considered pre-roll or mid-roll, meaning they are shown either directly before or in the middle of a video the web user is watching. These ads are typically skipable after the first five seconds. Interactions include web users who click on the ads or watch the entire ad.

Facebook Advertising

Impressions are the number of ads served to Facebook users. Clicks are the number of people who click on an ads. Reach is the number of individual Facebook users that see the ad.

Our increased focus on social media also provides us with age-and gender-related information about users who like our Facebook page (Likes) and individuals who follow our Instagram page (Followers).

In this case, reach refers to the overall unique users in each platform that have seen our posts, either through other users liking and sharing our content, users using the Explore features, or users who see promoted posts.

Facebook Likes Demographics

	2023	2022	2021
REACH	39,620	33,412	60,666
NEW LIKES	25	33	32

Instagram Follower Demographics

	2023	2022	2021
REACH	21,812	17,495	19,384
FOLLOWERS	523	440	349

** We intentionally lightened our spend in 2022/20223 in anticipation of new creative in Winter/Spring 2024.*

pluck

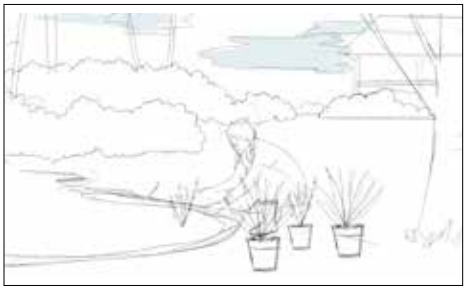
VCET/266 Main Street, Burlington, VT 05401 p 802.224.6975
e hello@pluckvermont.com w pluckvermont.com

STREAM TEAM DATA

2024 CREATIVE CONCEPTING

Salt Use Creative

Mobile Framing



Gardening Tips/Rain Garden

Pet Waste

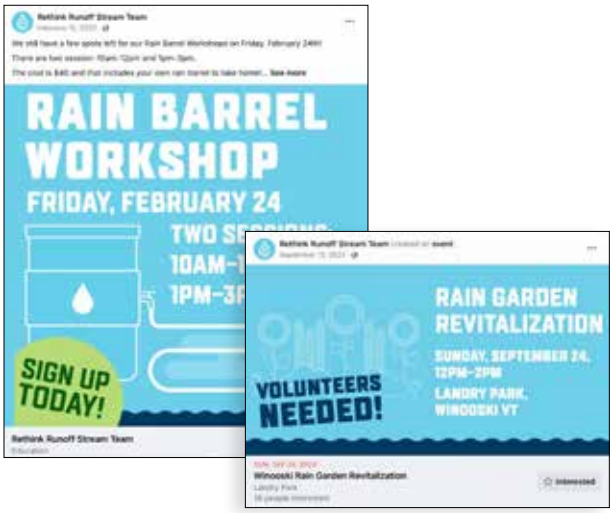
Rain Barrel

pluck

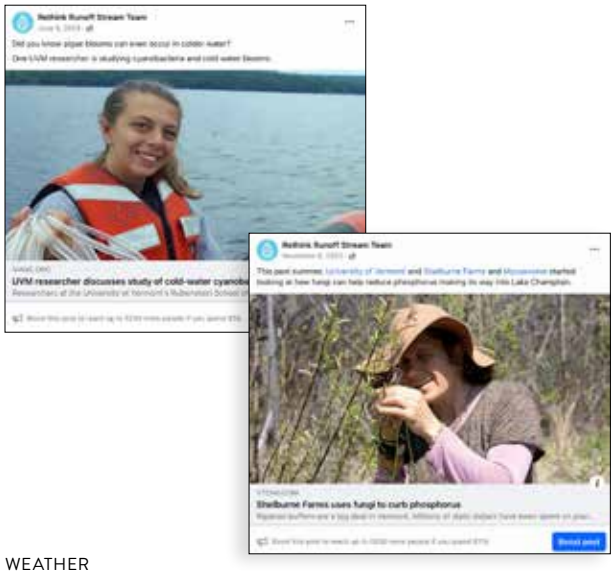
VCET/266 Main Street, Burlington, VT 05401 p 802.224.6975
e hello@pluckvermont.com w pluckvermont.com

SOCIAL MEDIA POSTS

STREAM TEAM EVENTS

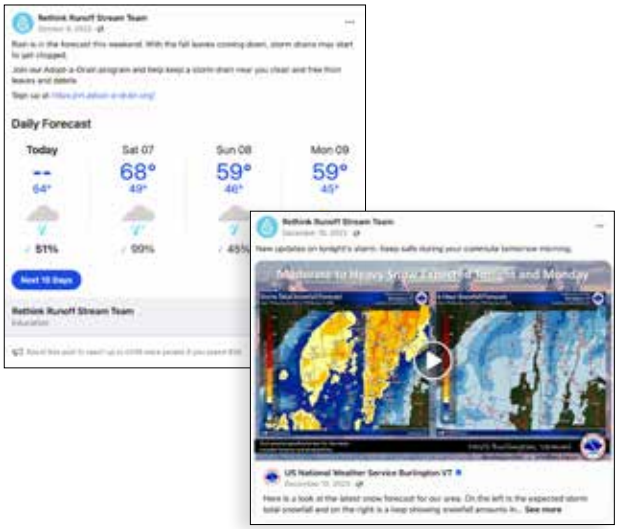


NEWS STORIES



GENERAL INFO

WEATHER

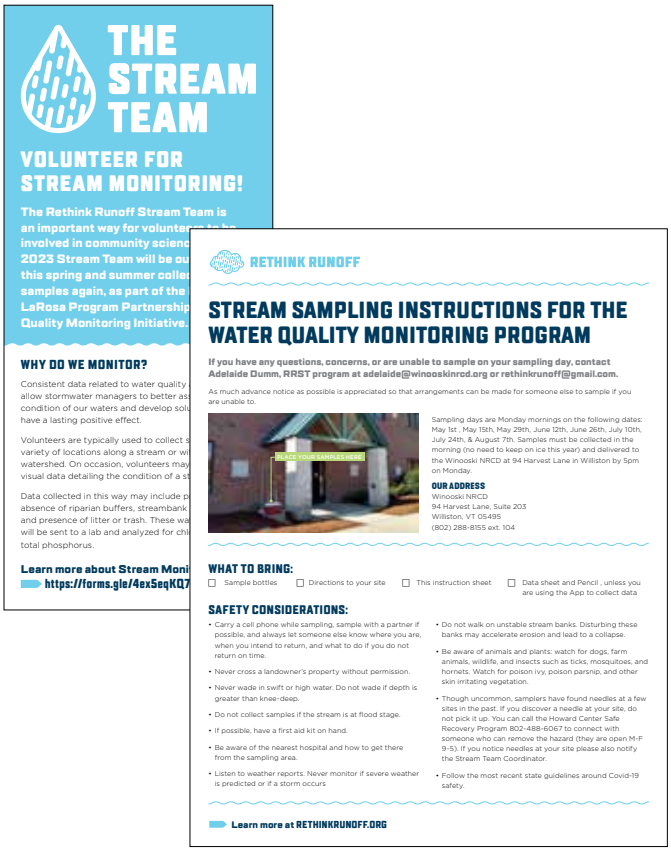


DIRECT CALL-TO-ACTION

pluck

VCET/266 Main Street, Burlington, VT 05401 p 802.224.6975
e hello@pluckvermont.com w pluckvermont.com

STREAM MONITORING COLLATERAL



THE STREAM TEAM

VOLUNTEER FOR STREAM MONITORING!

The Rethink Runoff Stream Team is an important way for volunteers to be involved in community science. The 2023 Stream Team will be ou... this spring and summer colle... samples again, as part of the ... LaRosa Program Partnership ... Quality Monitoring Initiative.

WHY DO WE MONITOR?

Consistent data related to water quality ... allow stormwater managers to better as... condition of our waters and develop solu... have a lasting positive effect.

Volunteers are typically used to collect s... variety of locations along a stream or wi... watershed. On occasion, volunteers may... visual data detailing the condition of a st...

Data collected in this way may include p... absence of riparian buffers, streambank ... and presence of litter or trash. These wa... will be sent to a lab and analyzed for chl... total phosphorus.

Learn more about Stream Moni...
https://forms.gle/4ex5eqKQ7...

RETHINK RUNOFF

STREAM SAMPLING INSTRUCTIONS FOR THE WATER QUALITY MONITORING PROGRAM

If you have any questions, concerns, or are unable to sample on your sampling day, contact Adelaide Dumm, RRST program at adelaide@winooskinrcd.org or rethinkrunoff@gmail.com.

As much advance notice as possible is appreciated so that arrangements can be made for someone else to sample if you are unable to.

Sampling days are Monday mornings on the following dates: May 1st , May 15th, May 29th, June 12th, June 26th, July 10th, July 24th, & August 7th. Samples must be collected in the morning (no need to keep on ice this year) and delivered to the Winooski NRCD at 94 Harvest Lane in Williston by 5pm on Monday.

OUR ADDRESS
Winooski NRCD
94 Harvest Lane, Suite 203
Williston, VT 05495
(802) 288-8155 ext. 104

WHAT TO BRING:
☐ Sample bottles ☐ Directions to your site ☐ This instruction sheet ☐ Data sheet and Pencil , unless you are using the App to collect data

SAFETY CONSIDERATIONS:

- Carry a cell phone while sampling, sample with a partner if possible, and always let someone else know where you are, when you intend to return, and what to do if you do not return on time.
- Never cross a landowner's property without permission.
- Never wade in swift or high water. Do not wade if depth is greater than knee-deep.
- Do not collect samples if the stream is at flood stage.
- If possible, have a first aid kit on hand.
- Be aware of the nearest hospital and how to get there from the sampling area.
- Listen to weather reports. Never monitor if severe weather is predicted or if a storm occurs
- Do not walk on unstable stream banks. Disturbing these banks may accelerate erosion and lead to a collapse.
- Be aware of animals and plants: watch for dogs, farm animals, wildlife, and insects such as ticks, mosquitoes, and hornets. Watch for poison ivy, poison parsnip, and other skin irritating vegetation.
- Though uncommon, samplers have found needles at a few sites in the past. If you discover a needle at your site, do not pick it up. You can call the Howard Center Safe Recovery Program 802-488-6067 to connect with someone who can remove the hazard (they are open M-F 9-5). If you notice needles at your site please also notify the Stream Team Coordinator.
- Follow the most recent state guidelines around Covid-19 safety.

Learn more at RETHINKRUNOFF.ORG

PATRICK LEAHY BURLINGTON INTERNATIONAL AIRPORT

Annual Report for General Permit 3-9014 (MS4)

Including Annual Reporting Summary for MS4-Incorporated Operational Stormwater Discharge Permits

April 1, 2024

Appendix D

Public Involvement/Participation (MCM #2)

Rethink Runoff Stream Team

2023 Summary of Activities and 2023 Water Quality Monitoring Interim Report

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

This project is supported by the twelve Municipal Separate Storm Sewer System permittees in Chittenden County implementing the regional Rethink Runoff campaign

Prepared by Winooski Natural Resources Conservation District

2023 Calendar Year

Overview

Since July 2011, Winooski Natural Resources Conservation District (WNRCD) has been subcontracted by the Chittenden County Regional Planning Commission (CCRPC) to implement Minimum Control Measure #2 (MCM#2): Public Involvement & Participation program on behalf of twelve MS4 permittees in the county. Amid Administrative staff changes within WNRCD in 2023, the Stream Team engaged many residents in meaningful actions to improve stormwater in their community. The WNRCD responded to CCRPC's RFP for a MCM#2 implementer in January 2023 and was again selected to continue working as Project Coordinator. Adelaide Dumm, WNRCD Conservation specialist and RRST Project Coordinator, took maternity leave from mid June to the end of August and had assistance from the WNRCD Agriculture Specialist on coordination of the water quality sampling program. Adelaide ensured all summer tasks and outreach events were coordinated before her leave and swiftly executed upon return to work. Adelaide was then promoted to the WNRCD District Manager in November and began coordination of hiring a new Conservation Specialist who will continue to support the Rethink Runoff work for the WNRCD in January 2024. Collectively, the WNRCD team organized two rain barrel workshop in Shelburne and Williston, hosted an Earth day clean up event in South Burlington, continued our volunteer water quality monitoring program with increased sampling sites, maintained ongoing participation of the Adopt-a-Drain program, conducted a rain garden revitalization project at Landry Park in Winooski and inventoried all existing rain gardens for functionality and coordinated adopters for each garden. Program Coordinator, Adelaide Dumm, also spoke with local residents about the impacts of Stormwater runoff and passed out Stream Team merchandise at four outreach and education events in the communities of Essex, Colchester, Milton, and South Burlington.

RRST Estimated Impact by Municipality

The table below depicts the estimated number of individuals engaged in each MS4 municipality in 2023. This table reflects in-person interactions where it was possible to log participants' town of residence. For information about residents reached through advertising and

social media outlets, see the MCM #1 annual report from Pluck.

Table 1: Interaction with the Stream Team by municipality

Municipality	# of people reached in-person in 2023
Burlington	107
Colchester	48
Essex	19
Essex Junction	39
Milton	14
Shelburne	8
South Burlington	17
Williston	6
Winooski	15
Total	273

Organizational Partnerships

The Rethink Runoff Stream Team continued partnerships with 5 non-municipal organizations in 2023:

1. Hamline University: Continued work on the Adopt-a-Drain program led to the Hamline University team enhancing the website platform for Adopt a Drain and maintaining the social science research in an effort to engage more volunteers in maintaining the health of storm drains in MS4 communities across the country. See "Projects" section for more details.

2. Lake Champlain Basin Program- Resource Room: A continued partnership with the LCBP that staffs and operates the Resources Room at the ECHO Leahy Center for Lake Champlain has benefited the RRST through increased public awareness about Stream Team events. The Resources Room staff spreads the word to community members about RRST projects and distributes Stream Team literature to enhance participation and

education about stormwater management within the Lake Champlain Basin.

3. Boves Inc : In 2022 we secured a sustainable partnership with a local pasta sauce company that provides the Stream Team with blue 55 gallon drums with removable lids that can be recycled into rain barrels. This partnership filled a significant need as the old barrel supplier is no longer in business and these can be quite expensive when purchased new or even second hand. This partnership with Boves in Milton is especially valuable because we get the barrels for FREE! We maintained this partnership and were able to offer two rain barrel workshops in 2023.
4. VHB Engineering: The Stream Team participated in a Earth Day Clean up at the University Mall Stormwater detention ponds with the staff of VHB Engineering. This was an opportunity for staff of VHB and local residents to come together and learn about Stormwater infrastructure.
5. The UVM Horticulture Farm: The UVM Horticulture farm and the Stream Team worked together to bring on new water quality monitoring sites along Bartlett brook. Program Coordinator, Adelaide Dum also attended a "lead in your soil" workshop hosted by the Master Gardener's program and tabled on behalf of the Stream Team at this event on the UVM Horticulture Farm.

2023 Chittenden County Regional Planning Commission Stormwater Awareness Survey

Rethink Runoff,conducted a survey in nine cities and towns of Chittenden County about residents' perceptions and habits regarding stormwater runoff. Rethink Runoff has conducted a similar survey every five years for the past 20 years, in an effort to gauge the effectiveness of their program in educating residents and influencing behavior about the impacts of excess stormwater runoff and what practices can mitigate its effects.

The survey was conducted from January 12 to January 30, 2023, by Probolsky Research, a market and opinion research firm with locations in California and Washington D.C. that conducts research in business, government, non-profit, election, and association practice areas. The survey included 500 participants from Burlington, South Burlington, Colchester, Essex Junction, Williston, Milton, Essex, Shelburne, and Winooski. The survey yielded a +/-4.5% margin of error at a 95% level of confidence. 20% of respondents replied by phone while 80% replied online.

Personal Actions

Survey results indicate a sustained public understanding of the role of residents in dealing with stormwater runoff. 79% of those surveyed agree that their own personal actions affect the water quality in Lake Champlain. This was very similar to results of 79%, 72% and 79% reported in the 2018, 2013 and 2008 surveys, respectively. While a near majority of those surveyed definitely felt that roads, parking lots and farms have a great impact on water quality, at the same time, 20% of those surveyed also felt that runoff from residential roofs and driveways had a great impact on water quality as well. Rethink Runoff encourages area residents to adopt various practices to slow and

infiltrate stormwater.
Of those surveyed who make decisions about their property, over the next two years:
• 12% said they definitely plan to install a rain barrel,
• 11% said they definitely plan install a rain garden,
• 15% said they definitely plan to ask their landscaper to use natural lawn care practices, and
• 14% said they definitely plan to plant trees on their property

Pet Waste and Water Quality

One continued focus of Rethink Runoff is the proper disposal of pet waste. Pet waste that is left on the ground is often washed into our streams and rivers, where it is carried to Lake Champlain, leading to high levels of e.Coli and beach closings during the warmer summer months. Fortunately, area residents have taken the message distributed by Rethink Runoff and others to heart as the 2023 survey results demonstrate. In both 2023 and in 2018 only 2% of dog owners surveyed indicated that they left the waste on the ground when walking the dog. This sustained reported behavior represents a definite improvement over reported behavior in 2013 when, for example, 25% and 16% of respondents indicated they left the waste on the ground when walking the dog in a park or trail or walking the dog in winter respectively.

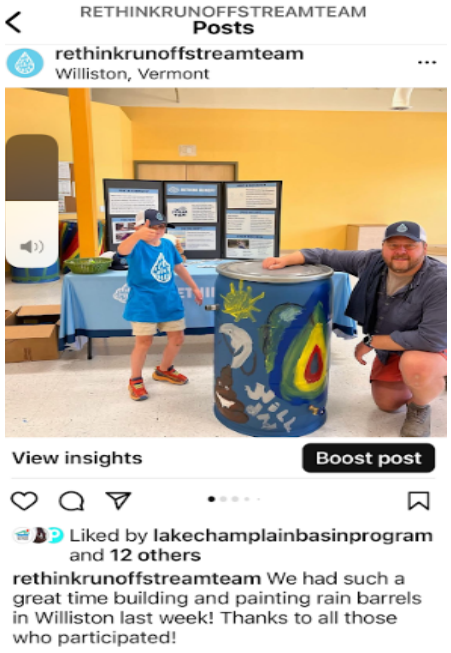
Lawn Care and Fertilizer Use

Reported behavior regarding lawn care was mixed. Unfortunately, we saw an uptick in individuals who use fertilizer on their lawns from 21% in 2018 to 34%. On the other hand, residents are getting the message that it is better to fertilize your lawn in the fall so its nutrients have a longer time to work as well as less likely to wash off. In 2018, 93% of those surveyed who fertilize would spread some fertilizer in the spring but in 2023 that had dropped to 28%. Finally, the 2023 survey results show excellent reported progress by residents in handling grass clippings and leaves to prevent them getting into ditches and storm drains. 94% of respondents in 2023, compared to only 47% in 2018, said that they either compost, leave grass and leaves on the ground or bag them for disposal rather than disposing of them in the nearest ditch or ravine.

Outreach ----------

Social Media

The Stream Team coordinator consistently updated the social media platforms including RRST Facebook and Instagram pages with information about upcoming outreach events or volunteer opportunities. Sixteen social media posts and many more social media "stories" were created by the stream Team coordinator.



At left, Figure 1. Promotional post for the Rain Garden Revitalization event in Winooski, VT
Ar right, Figure 2. Rain Barrel workshop post for event in Williston, VT

At left, Figure 3. Rain Barrel workshop post for event in Shelburne, VT
At right, Figure 4. Promotional post for the Explore Essex event in Essex, VT

RRST Website

We maintained the "events" section of the www.rethinkrunoff.org website and occasionally helped to develop ideas for new web content in collaboration with Pluck Design. The events that were added to the website included content on the rain barrel construction workshop held in Shelburne and Williston, "Explore Essex" and "The Colchester Corner's Annual Autumn Market", Rain Garden Revitalization event in Winooski and the Milton Library Event. In addition, there has been regional advocacy for participants to join the Adopt-a-Drain initiative. For more information on the website and the ongoing projects of the Stream Team please visit: https://rethinkrunoff.org/

Newsletter

Frequent newsletters were released and kept the RRST community informed of events and ongoing projects. At the end of 2023 there were 768 subscribers, down from last year's number at 794 subscribers to the RRST newsletter. In an effort to increase newsletter subscriptions we created a social media post encouraging followers to subscribe to the newsletter and coordinated with Pluck Design Professional, Dave Barron to add a popup to the website prompting visitors to subscribe last year. "Open" rates for each newsletter were as follows:

- Adopt a Drain K-12 program, November 2023, 282 subscribers opened
- Summer newsletter, June 2023, 313 subscribers opened
- The Rethink Runoff survey Results are in! May 2023, 266 subscribers opened
- RRST Spring Newsletter, May 2023, 267 subscribers opened
- Join the Stream Team, April 2023, 243 subscribers opened
- Rain Barrel workshop, February 2023, 276 subscribers opened

Outreach Events

The RRST outreach events held in 2023 consisted mainly of tabling efforts at which the Project Coordinator spoke to residents about the Stream Team. The outreach events took place in South Burlington, Colchester, Essex and Milton. The deliverable associated with the outreach events was 3 events and connecting with 50 residents and in 2023 74 people were recorded for engagement at outreach events. Outreach efforts also included informing local media outlets prior to major programs and posting volunteer opportunities on social media calendars, Front Porch Forum, etc.

Figure 5. Rethink Runoff tabling display

- Colchester Corner Annual Autumn Market on September 16th, 2023

- Explore Essex event on October 7th, 2023
- LCBP presentation tabling in Milton at the Public Library on October 28th, 2023
- Master Gardeners workshop at the UVM Horticulture Farm in South Burlington

Figure 6. Rethink Runoff coordinator Adelaide Dumm and her young son at three Outreach events in 2023.

Projects ----------

Four in-person project events were held in 2023 in Winooski, Williston, Shelburne, and South Burlington. A total of 198 people participated in hands-on volunteer events in their communities. The projects are described in detail below:

- Stream Team Water Quality Sampling (10 volunteers)
- Rain Barrel Construction workshop in Shelburne (15 participants)
- Rain Barrel Construction workshop in Williston (18 participants)
- Earth Day Clean up at the University Mall Stormwater detention ponds with VBH staff (8 volunteers)
- Adopt-a-Rain Garden Program (6 rain garden stewards)
- Adopt-a-Drain Program (17 new storm drain adopters in 2023, 135 total adopters to date)
- Rain Garden Revitalization event(6 volunteers from MS4 towns)

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.

In 2021 the VT DEC's (Department of Environmental Conservation) LaRosa Partnership Program (LPP) 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 in 2022 and 2023 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. The estimated report release date will be in February 2024 and will be distributed to the MS4 town representatives and Stream Team volunteers when it becomes publicly available.

Ten dedicated Stream Team volunteers collected biweekly water quality samples at sixteen sites on seven streams during the sampling season from April-August 2022. The sampling sites were located along Allen Brook in Milton, Indian Brook in Colchester, Englesby Brook in Burlington, Morehouse Brook in Winooski, Bartlett Brook in South Burlington, Potash Brook in Burlington, and Sunderland Book in Essex Junction. This is an increase in sampling efforts from 2022 and three streams were removed from the sampling list due to sufficient data for DEC management decisions, these streams included Centennial Brook, Alder Brook, and Munroe Brook. The next step for DEC is continuous monitoring with chloride loggers along with biological sampling. Both are necessary for our assessment and listing process to determine if a stream should be listed as impaired.

During the 2023 sampling season volunteers collected biweekly grab samples from May 1st -August 7th. Special care was taken for safety during the historic July flooding and volunteers were directed to avoid sampling during dangerous high flow events. Grab samples were analyzed for total phosphorus and chloride. These parameters were also sampled at all sites after two high flow events-replacing the regular weekly sample. Some sites 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. To show our appreciation for the Stream Team volunteers who have participated in the water quality monitoring, each volunteer was delivered a hand written thank you note, along with a $20 gift card to Gardeners Supply Company, Stream Team sticker, hat and tee-shirt.

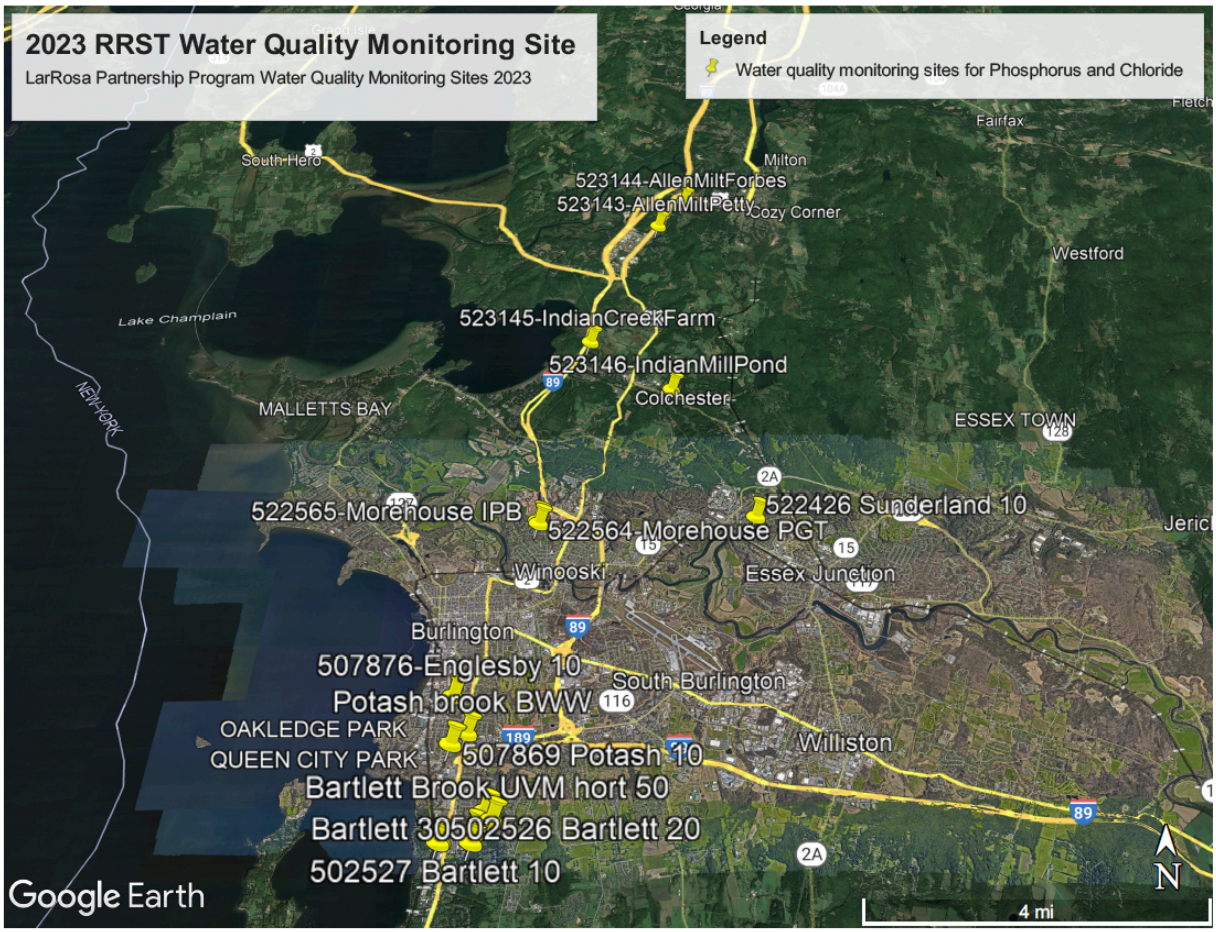


Figure 7. Stream Team Water Quality Sampling sites map.

See interactive online version here: [Stream Team Sampling Map 2023]

The [virtual training] day for volunteer samplers took place in May. When given a choice for an online or in person training all volunteers opted for the online training. Most volunteers were returning from previous seasons and benefited from a refresher. There were three new volunteers recruited and WNRCD staff met them at their sampling site and received demonstration and training on [sampling procedures]. During the training the Adelaide Dumm, Stream Team coordinator, demonstrated proper sampling technique, 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 WNRCD staff ensured all samples were properly checked-in and prepared for delivery to the lab.

Advertising: Advertising was completed through direct email outreach to our list of active volunteers. We also sent out a volunteer sign up form through the newsletters, on social media, Front Porch Forum and on the Rethink Runoff website. Primarily, we targeted past volunteers for this program who had prior experience with water quality monitoring. WNRCD recruited

three new volunteers to the Stream Team during 2023.

Figure 8. Stream Team water quality monitoring

Advertising Language used in Rethink Runoff Newsletter promoting the water quality monitoring program: *"The Rethink Runoff Stream Team is an important way for volunteers to be involved in community science! The 2023 Stream Team will be out and about this spring and summer collecting water samples again, as part of the DEC's LaRosa Program Partnership Water Quality Monitoring Initiative. Consistent data related to water quality and quantity allow stormwater managers to better assess the condition of our waters and develop solutions that will have a lasting positive effect. Volunteers are typically used to collect samples at a variety of locations along a stream or within a watershed. On occasion, volunteers may also gather visual data detailing the condition of a stream. Data collected in this way may include presence or absence of riparian buffers, streambank stability, and presence of litter or trash.These water samples will be sent to a lab and analyzed for chloride and total phosphorus. This sampling season the Stream Team will monitor 16 sites within Chittenden county. Water samples are collected bi-weekly from May1st- August 7th, 2023. The waterways we will be monitoring are Potash Brook, Bartlett Brook, Sunderland Brook, Englesby Brook, Indian Brook, Morehouse Brook,and Allen Brook. If you're interested in being a water quality sampler on the Stream Team click the link below to sign up!"*

Impact: In total volunteers collected 256 individual samples including regular biweekly samples for total phosphorus and chloride and two high flow samples for each site. 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 2024 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 9. Stream Team water samples collected at various sites across the RRST service area

Table 2: Stream Team Water Quality Sampling Volunteers by town

Municipality	# of volunteer water quality monitors
Burlington	1
Colchester	1
Essex	1
Essex Junction	
Milton	1
Shelburne	2
South Burlington	2
Williston	1
Winooski	1
Total	10

Rain Barrel Construction Workshops

Summary: Two rain barrel construction workshops were hosted in 2023. The first workshop took place in Shelburne on February 24th at the Shelburne Town Center Gymnasium at 5420 Shelburne Road Shelburne, VT 05482. The second workshop took place in Williston on May 26th at the R.E.C Zone 94 Harvest Lane Williston VT, 05495. Participants paid $40 to attend the workshop which included the cost of the barrel, associated hardware needed to build the rain barrel and time for workshop coordination. Each participant was offered a stream team tee shirt, hat and sticker as an added benefit for attending this event. Project Coordinator, Adelaide Dumm had help from RRST volunteer, Henry Bonges at the Shelburne rain barrel workshop and help from WNRCD staff, Kathleen Lewis and Casey Spencer at the Williston rain barrel event. Both events were held in two sessions. Participants were greeted and given a brief educational lesson on the importance of GSI in management of Stormwater runoff. Then Adelaide led a demonstration of how to drill the holes and assemble the hardware. The rain barrels were sourced for free from Bove's in Milton.

Table 3. Number of Participants at Rain Barrel Workshop by town

Municipality	Williston Rain Barrel Workshop	Shelburne Rain Barrel Workshop
Burlington	6	5
Colchester	0	1
Essex	2	0
Essex Junction	0	1
Milton	0	0
Shelburne	2	4
South Burlington	1	2
Williston	5	0
Winooski	2	2
Total	18	15

Advertising: This event was advertised on the Rethink Runoff website and on social media platforms including Facebook and Instagram. There was also a press release sent to local media outlets to help spread the word about this event. In addition, MS4 municipal representatives were asked to distribute a message on their respective Front Porch Forum pages to advertise this event. A short tik tok video was created to prompt this event and other rain barrel workshop events in the future.

Impact: In total, 33 residents participated in the 2023 rain barrel workshop events. At these events the Project Coordinator described that by installing a rain barrel you can save water, save money, and help your local streams all at the same time. This event taught participants how to build, install and maintain their own rain barrel. When it rains, stormwater moves quickly over impervious surfaces such as buildings and roads, picking up pollutants like nutrients, sediment, oil, chemicals, road salt, and metals. By capturing stormwater in a rain barrel before it flows over roads residents can help decrease the amount of pollutants entering Lake Champlain. The water participants save in a rain barrel can be used for watering lawns and flower gardens, and washing their car or tools. Rain barrels help decrease runoff to Lake Champlain by capturing and holding rain water during a storm, and that means cleaner water for everyone.






23 R… …d W…

Earth Day Clean up at the University Mall Stormwater detention ponds with VBH staff

Summary: The Stream Team participated in a Earth Day Clean up at the University Mall Stormwater detention ponds with the staff of VHB Engineering. This was an opportunity for staff of VHB and local residents to come together and learn about Stormwater infrastructure. Stormwater detention ponds temporarily store stormwater runoff, cleaning up these areas helps to maintain the systems and promotes healthy space for wildlife.

Advertising: This event was advertised at the VHB workplace and through an email distributed to all employees. This event was hosted by the RRST but targeted outreach focused on participants from within the VHB company.

Impact: 8 VHB employees learned about the Rethink Runoff mission and gave back to the community and planet at this special Earth Day event.

Figure 10. Volunteers with bags of litter removed from stormwater retention ponds behind the University mall.

Table 4. Volunteers at the Earth Day clean up event

Municipality	# of volunteers
Burlington	4
Colchester	0
Essex	0
Essex Junction	0
Milton	0
Shelburne	0
South Burlington	3
Williston	0
Winooski	1
Total	8

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 twelve public rain gardens managed by Stream Team. In 2022 the rain gardens were cared for by approximately 6 volunteers. Four of the gardens are now cared for by municipal staff or hired landscaping crews, so recruitment for community volunteers stopped in 2021. There is still one 1 rain garden in Williston

that could be used as a steward.

Figure 11. Volunteer opportunity advertising for Rain garden Adoption at the Milton Library

Advertising:Outreach efforts to recruit volunteers included social media posts, posts on the RRST website, and Front Porch Forum posts for Rain garden adopters. We plan to continue advertising these gardens for adoption in 2024. See table below for more details.

Impact: Rain gardens are a way for citizens to become more engaged in the Rethink Runoff Stream Team. By becoming a rain garden adopter the volunteers learn about GSI and how stormwater is managed by this purposeful landscaping. Several of the rain gardens need RRST informative signage replaced. An inventory conducted in 2023 and signs installed in the spring 2024. Currently there are 4 signs available, and only one garden has RRST signage.

Table 5: 2023 Rain Garden Adopters

Location	Adopter Name
Chamberlin School (262 White St, South Burlington, VT 05403)	Chris P.
Farrell Park (95 Swift St, South Burlington, VT 05403)	Jill S.
South Burlington Library (180 Market St, South Burlington, VT 05403)	Maintained by South Burlington
South Burlington High School (550 Dorset St, South Burlington, VT 05403)	Carolyn W.
South Burlington Fire Dept. (575 Dorset St, South Burlington, VT 05403)	Carolyn W.
Coast Guard Station (1 Depot St, Burlington, VT 05401)	Larry K.
Callahan Park, Burlington (45 Locust St, Burlington, VT 05401)	Brad K.
Williston Annex (7900 Williston Rd, Williston, VT 05495)	Open for Adoption!
Dorothy Alling Memorial Library (21 Library Ln, Williston, VT 05495)	Maintained by Library
Brownell Library (6 Lincoln St, Essex Junction, VT 05452)	Maintained by Essex Junction
Milton Public works/ Library(43 Bombardier Rd, Milton, VT 05468)	Maintained by Milton, but the couple who attended outreach event have agreed to informally adopt it.
Landry Park (35 Pine Street, Winooski VT 05404)	Lauren L.

Rain Garden Revitalization Event

Figure 12. Volunteers at rain garden revitalization event in Winooski

Summary:A rain garden revitalization was held at the Landry Park Rain Garden on September 24th at Landry Park at 53 Pine St, Winooski, VT 05404. At this event volunteers learned about the value of rain gardens as Green Stormwater Infrastructure (GSI) in our communities . Volunteers assisted with pulling weeds, removing trash, removing sediment from the inflow of the garden using a flat shovel and by removing rocks and digging out excess sediment. The six volunteers also helped with pruning back existing vegetation and planting perennials.

Impact: The rain garden collected approx. 1.75kg of phosphorus annually- mostly form the road as stormwater is directed to the curb cut garden. Rain gardens are designed to capture and clean stormwater runoff and during rainstorms function like a sponge, absorbing and filtering runoff from the parking lot and nearby roads. The bowl-shaped design of the garden allows the water to slow down and sink into the groundwater instead of flowing over paved surfaces where it could pick up pollutants and deposit them in streams and lakes. Through this event volunteers were able to learn about the impacts that rain gardens have in the community and gain first hand experience with GSI maintenance. The event was also aired on WCAX.

Figure 12. rain garden event advertising flyer and project location map.

Table 5. Volunteers at rain garden revitalization event

Municipality	# of volunteer by town
Burlington	0
Colchester	2
Essex	0
Essex Junction	0
Milton	0
Shelburne	0

South Burlington	0
Williston	0
Winooski	4
Total	6

Regional: Adopt-a-Drain

Summary: Adopt-a-Drain made its debut on Earth Day, April 22nd, 2022 and efforts continued in 2023. . Adopt-a-Drain asks residents to adopt a storm drain in their neighborhood and keep it clear of leaves, trash, and other debris to reduce water pollution. Storm drains flow directly to lakes and streams, acting as a conduit for trash and pollutants. Rethink Runoff, an ongoing awareness and public outreach effort to reduce dirt and pollutants from stormwater runoff entering Lake Champlain and local streams, partnered with Hamline University to launch Adopt-a-Drain in Chittenden County. Hamline University, in Saint Paul MN, first developed this program and it has been used in six states (Minnesota, Washington, Louisiana, New Jersey, Massachusetts, and Vermont) across the country. Currently, the program has been adopted by five municipalities in Vermont including Burlington, Colchester, Essex, Essex Junction, and Milton. Volunteers choose how frequently to clear their drain and report how much debris is collected. They receive a welcome packet, small yard sign, and the clever perk of getting to name a drain!

Adopt a drain town	2023 adopters	Total adopters	Total Debris Cleaned for Region in pounds
Essex:	2	16	241.3
Essex Junction:	0	13	115.8
Burlington:	12	79	764.1
Colchester:	3	24	933.55
Milton:	0	4	149
Total:	17	136	2203.75

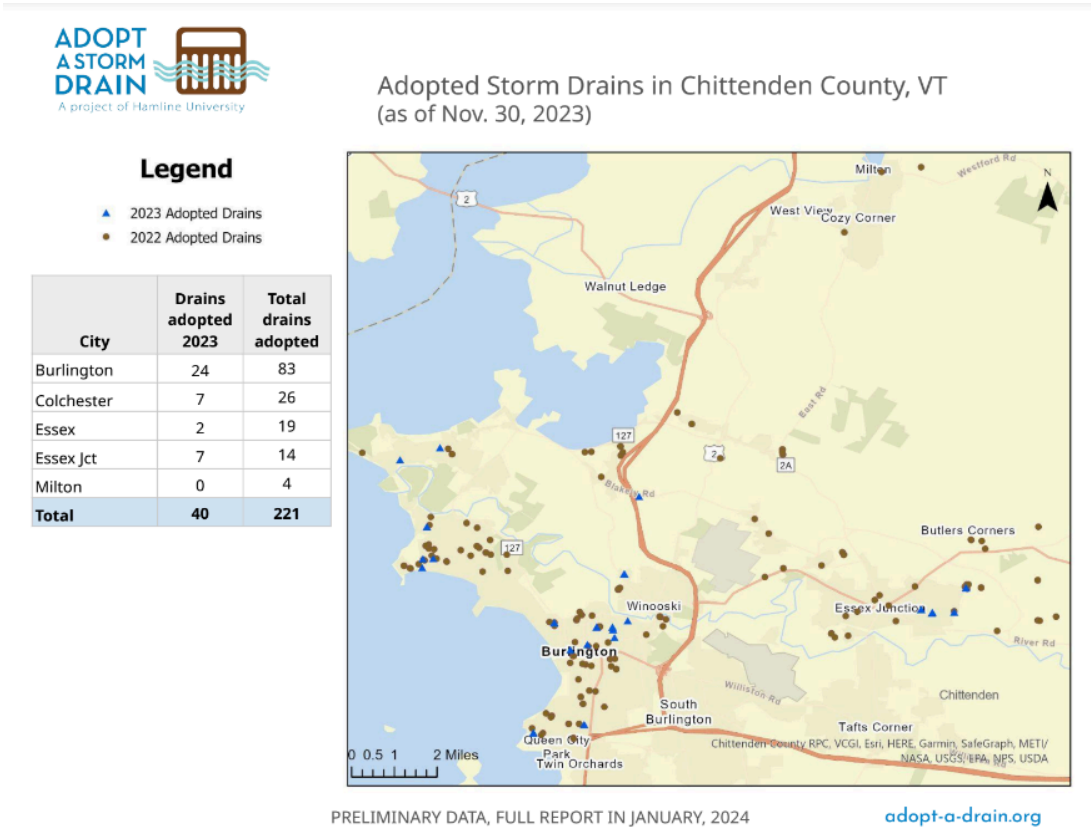


Figure 13. Map created by Hamline University displaying the geographic distribution of drains adopted in VT.

Advertising: The Adopt-a-Drain program has been advertised on social media pages including Facebook and Instagram, through press releases to local media outlets, Front Porch Forum posts, and on the Rethink Runoff website. Towns who have chosen to participate in the program have contributed to advertising efforts by including a flier about the program that was included in residents' water bills.. A pamphlet was also distributed at the annual WNRCD tree sale to help spread the word.

Impact: The main goal of the program has been to recruit volunteers to care for storm drains in their neighborhood by clearing trash, sediment, salt and other pollutants on a regular basis. Launching the Adopt-a-Storm-Drain program has been a great fit for the involved communities as residents have continued to be impacted by COVID 19 and this opportunity is a remote option to be involved in the Stream Team and maintain a comfortable level for physical distancing for those who choose to do so. Outreach and engagement efforts for this program have led to 221 storm drains being adopted by 136 people. In 2023 there were 40 drains adopted and the program grew by 17 adopters. To date there have been 2203.75 lbs of debris removed from storm drains by resident adopters. We are confident that this program will continue to grow as residents become more aware of the impact they can make. 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.

WNRCD and the participating towns plan to duplicate the outreach efforts in 2024 and aim to recruit double the number of volunteers for Adopt a Drain to compensate for the relatively low new signups in 2023.

Stream Team Merchandise

The Stream Team coordinated with Pluck to generate a new Stream Team tee shirt and hat in 2022 and this merchandise was distributed to the stream Team and program volunteers throughout 2023.

Figure 14. Stream Team merchandise

Volunteer Appreciation Summary

All volunteers were offered Stream Team tee shirts and stickers at the time of the event and many accepted one or both. We also delivered handwritten thank-you notes and a $20 gift card to Gardeners Supply Company, and a Stream Team tee shirt and hat to our most dedicated volunteers who participated in the Stream Team as water quality monitors.

PATRICK LEAHY BURLINGTON INTERNATIONAL AIRPORT

Annual Report for General Permit 3-9014 (MS4)

Including Annual Reporting Summary for MS4-Incorporated Operational Stormwater Discharge Permits

April 1, 2024

Appendix E

BTV Drainage Map

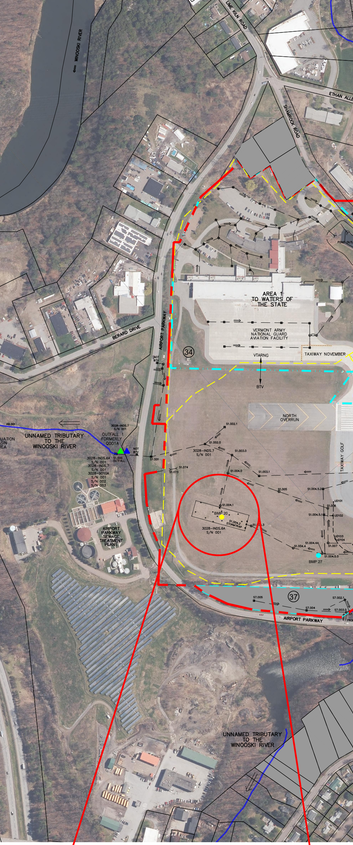
GENERAL NOTES

1) THE PURPOSE OF THIS PLAN IS TO SERVE AS A MASTER RECORD FILE OF THE EXISTING DRAINAGE SYSTEM ASSOCIATED WITH THE BURLINGTON INTERNATIONAL AIRPORT AND SURROUNDING AREAS. INFORMATION PROVIDED ON THIS PLAN IS BASED ON A COMPILATION OF AS-BUILT AND DESIGN PLANS PROVIDED BY A VARIETY OF DIFFERENT OUTFITS FOR VARIOUS PROJECTS AT AND AROUND THE BURLINGTON INTERNATIONAL AIRPORT. CATAMOUNT CONSULTING ENGINEERS, PLLC (CCE) HAS PERFORMED NO FIELD SURVEY WORK IN PREPARATION OF THIS PLAN AND TAKES NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF THE DRAINAGE SYSTEM AND STRUCTURES SHOWN ON THIS PLAN.

2) ORIENTATION AND COORDINATES SHOWN ARE BASED UPON THE VERMONT STATE PLANE COORDINATE SYSTEM (SPCS) DATUM (NAD 83) ESTABLISHED IN THE FILES PROVIDED FOR THE PREPARATION OF THIS MASTER PLAN.

3) PROPERTY LINES SHOWN ARE FROM GIS MAPPING AND HAVE BEEN MODIFIED SLIGHTLY TO BETTER DEPICT THE BOUNDARY OF THE BURLINGTON INTERNATIONAL AIRPORT.

4) DUE TO SOME DISTORTION IN THE PHOTOGRAPH BASE, SOME GIS PROPERTY LINES MAY NOT FIT THE PHYSICAL FEATURES SHOWN IN THE PHOTO.



DMH AND CB OPENINGS IN THE STORMTRAP – NO SCALE

STORMWATER DISCHARGE POINTS FOR THE BURLINGTON INTERNATIONAL AIRPORT

OUTFALL NUMBER	DISCHARGE DESIGNATION	STRUCTURE DESIGNATION	LATITUDE – NORTH				LONGITUDE – WEST			
			DEGREES	MINUTES	DEGREES	DECIMAL	DEGREES	MINUTES	DEGREES	DECIMAL
1	Q001A	S1.000	44	28	56.68	44.482411	73	10	12.06	73.170017
2	AP700	S7.001	44	28	41.52	44.478200	73	10	5.55	73.168208
3	CN001	CN001	44	28	26.26	44.473861	73	9	55.46	73.159850
4	SW001	SW001	44	27	47.51	44.463197	73	9	14.50	73.154028
5	P007	S2.042	44	27	46.85	44.463014	73	9	8.82	73.152450
6	P006	S2.033	44	27	47.09	44.463081	73	9	8.48	73.152356
7	P005	S2.020	44	27	48.23	44.463397	73	9	1.84	73.150511
8	P001	S2.001	44	27	48.19	44.463386	73	8	57.68	73.149356
9	P002	S3.001	44	27	46.54	44.462928	73	8	54.60	73.148500
10	MU01	S3.043	44	27	43.78	44.462161	73	8	49.62	73.147117
11	MU02	S3.007	44	27	47.10	44.463083	73	8	42.67	73.145186
12	MU03	S3.039	44	27	43.33	44.462036	73	8	38.86	73.144128
13	MU04	S3.033	44	27	41.16	44.461433	73	8	34.77	73.142992
14	MU05	S3.023	44	27	39.65	44.461014	73	8	34.88	73.143022
15	D018	S4.001	44	27	52.01	44.464447	73	8	19.50	73.138750
16	NG001–P	S6.016	44	28	46.20	44.479500	73	9	23.74	73.156594
17	NG002–N	S6.012	44	28	49.05	44.480292	73	9	32.34	73.158983
18	NG003–O	S6.005.0	44	28	52.44	44.481233	73	9	36.89	73.160247
19	NG004–M	S6.001	44	28	54.67	44.481853	73	9	40.56	73.161267

LEGEND

- DRAINAGE AREA LIMIT
- APPROXIMATE STORM DRAINAGE LINE
- APPROXIMATE UNDERDRAIN LINE
- APPROXIMATE DRAINAGE LINE PREVIOUSLY REMOVED
- DRAINAGE AREA LIMIT
- ADDITIONAL PROPERTIES OWNED BY BTV
- (35) BUILDING NUMBER, SEE TABLE 1 OF REPORT
- DRAINAGE MANHOLE
- CATCH BASIN
- SX.XXX DRAINAGE STRUCTURE NUMBER
- DIRECTION OF FLOW

DRAINAGE DISCHARGE POINT –

- AP_____ FINAL DISCHARGE TO UNNAMED TRIBUTARY OF THE WINOOSKI RIVER
- CN_____ NON-POINT SOURCE DISCHARGE TO CENTENNIAL BROOK
- D_____ FINAL DISCHARGE TO MUDDY BROOK
- MU_____ INTERNAL DISCHARGE TO MUDDY BROOK
- NG_____ ALONG NATIONAL GUARD AVENUE
- PO_____ TO POTASH BROOK
- Q_____ TO UNNAMED TRIBUTARY OF WINOOSKI RIVER
- SW_____ TO SO. BURLINGTON MUNICIPAL SEWER SYSTEM
- _____ MSGP BENCHMARK SAMPLING POINT

BMP (BEST MANAGEMENT PRACTICE) –

- BMP_ STORMWATER DETENTION BASIN
- BMP_ STORMWATER INFILTRATION CHAMBER
- BMP_ OIL/GREASE SEPARATOR
- BMP_ EXFILTRATING SAND FILTER
- BMP_ SWIRL CONCENTRATOR DEVICE/ HYDRODYNAMIC SEPARATOR

PPS (POSSIBLE POLLUTION SOURCE) –

- PPS_ CONTAMINANT STORAGE
- PPS_ AIRCRAFT DE-ICING
- PPS_ GAS/FUEL PUMP OR STORAGE
- PPS_ OLD EQUIPMENT STORAGE
- PPS_ MATERIAL STOCKPILE LOCATION

GRAPHIC SCALE

400 0 200 400 800 1600

(IN FEET)
1 inch = 400 ft.

CATAMOUNT
consulting eningeers, pllc
PO Box 65067 I Burlington VT I 05406
802-598-8081 I www.ccevt.com

OWNER:

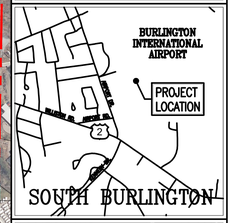
Burlington International Airport
Airport Dr.
South Burlington, VT 05403

PROJECT:

Master Drainage Summary Plan
Airport Dr.
South Burlington, VT 05403

SHEET TITLE:

Overall Existing Conditions Site Plan



LOCATION MAP 1" = ±2,000'

- [x] PRELIMINARY
- [ ] FOR PERMITTING
- [ ] NOT FOR CONSTRUCTION
- [ ] FOR CONSTRUCTION

PROJECT NO.: 21065
DATE: FEBRUARY 21, 2022
SCALE: 1" = 400'

REV. NO.	DESCRIPTION	DATE
1	UPDATE w/2022-23 PROJECTS	3/10/23
2		
3		
4		
5		
6		
7		
8		
9		
10		

SHEET NUMBER:

C1.0

PATRICK LEAHY BURLINGTON INTERNATIONAL AIRPORT

Annual Report for General Permit 3-9014 (MS4)

Including Annual Reporting Summary for MS4-Incorporated Operationl Stormwater Discharge Permits

April 1, 2024

Appendix F

Construction Site Stormwater Runoff Control (MCM#4)

Active Individual Construction Stormwater Discharge Permits (INDC's) in 2023

3028-INDC.19 (Extend Taxiway G and Construct South Apron)

NOTE:

This permit incorporates all active construction projects at BTV. As projects are started and completed, this permit is amended accordingly.

STATE OF VERMONT
AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
1 NATIONAL LIFE DRIVE, DAVIS 3
MONTPELIER, VT 05620-3522

DISCHARGE PERMIT
NPDES Number: VTS007128
Permit Number: 3028-INDC.19

For Stormwater Discharges from the construction and construction-related activities associated with the construction of the BTV South Apron Project located at **1200 Airport Drive** in **South Burlington**, Vermont.

In compliance with provisions of the following state and federal laws and rules: the Vermont Water Pollution Control statute, 10 V.S.A. Chapter 47, including §§1258, 1259 and 1263 and 1264; the Stormwater Permitting Rule (Chapter 22: Vermont Environmental Protection Rules); the Vermont Water Pollution Control Rules, Chapter 13, the federal Clean Water Act, as amended, 33 U.S.C. 1251 et seq., including 33 USC 1342(p); and the regulations of the federal Environmental Protection Agency including 40 CFR 122.26 and in accordance with terms and conditions hereinafter specified,

Permittee(s) and Co-Permittees: (All landowners and operators shall obtain coverage as co-permittees prior to the commencement of construction activities.)

City of Burlington, Burlington International Airport
1200 Airport Drive
South Burlington, VT 05403

are hereby authorized by the Secretary of the Agency of Natural Resources (ANR), to discharge stormwater runoff from construction and construction-related activities associated with the construction of **BTV South Apron Project** located at **1200 Airport Drive**, in **South Burlington**, Vermont discharging to **Muddy Brook, Potash Brook, and Class II Wetlands**.

This authorization incorporates by reference the following Erosion Prevention and Sediment Control Plan (EPSC Plan) provided by the applicant to the Secretary:

EPSC Plan prepared by:

Stantec; Hoyle, Tanner & Associates Inc; CHA; McFarland Johnson

Plan Set Reference:

Sheet L1.0, Legend / Key Sheet, dated July 2022
Sheet L1.1, Limits Plan, dated July 2022
BTV Extend TWY G and Construction South Apron, Sheet GP1.1, Overall Site Plan, May 2022, last revised 01/30/2023
BTV Extend TWY G and Construction South Apron, Sheet GP1.2, Disturbance Limits, May 2022, last revised 01/30/2023
BTV Extend TWY G and Construction South Apron, Sheet SW1.1, Existing Conditions, May 2022, last revised 12/19/2022

BTV Extend TWY G and Construction South Apron, Sheet SW1.2, Proposed Conditions, May 2022, last revised 01/30/2023
BTV Extend TWY G and Construction South Apron, Sheet G1.6, Construction Safety and Phasing Plan Phase 1, May 2022, last revised 01/30/2023
BTV Extend TWY G and Construction South Apron, Sheet G1.7, Construction Safety and Phasing Plan Phase 1, May 2022, last revised 01/30/2023
BTV Extend TWY G and Construction South Apron, Sheet ER1.1, Erosion Control Note and Details, May 2022, last revised 01/30/2023
BTV Extend TWY G and Construction South Apron, Sheet ER1.2, Erosion Control Plan and Details, May 2022, last revised 01/30/2023
BTV Extend TWY G and Construction South Apron, Sheet ER1.3, Erosion Control Plan and Details, May 2022, last revised 01/30/2023
BTV Extend TWY G and Construction South Apron, Sheet GD1.1, Grading and Drainage Plan, May 2022, last revised 01/12/2023
BTV Extend TWY G and Construction South Apron, Sheet GD1.2, Grading and Drainage Plan Sheet 2 of 2, May 2022, last revised 01/12/2023
BTV Extend TWY G and Construction South Apron, Sheet GD2.1, Drainage Details Sheet 1 of 4, May 2022, last revised 12/19/2022
BTV Extend TWY G and Construction South Apron, Sheet GD2.2, Drainage Details Sheet 2 of 4, May 2022, last revised 01/06/2023
BTV Extend TWY G and Construction South Apron, Sheet GD2.3, Drainage Details Sheet 3 of 4, May 2022, last revised 01/06/2023
BTV Extend TWY G and Construction South Apron, Sheet GD2.4, Drainage Details Sheet 4 of 4, May 2022, last revised 01/12/2023
BTV Extend TWY G and Construction South Apron, Sheet GD3.1, Soils Management Plan, May 2022, last revised 01/30/2023
General Aviation Hangar, Sheet C-601, EPSC pre-construction plan, 2/11/2022, last revised 03/11/2022
General Aviation Hangar, Sheet C-602, EPSC Construction plan, 2/11/2022, last revised 05/05/2022
General Aviation Hangar, Sheet C-603, EPSC final plan, 2/11/2022, last revised 05/05/2022
General Aviation Hangar, Sheet C-604, EPSC narrative, 2/11/2022, last revised 03/11/2022
General Aviation Hangar, Sheet C-605, EPSC notes, 2/11/2022, last revised 03/11/2022
General Aviation Hangar, Sheet C-606, EPSC details, 2/11/2022, last revised 03/11/2022
General Aviation Hangar, Sheet C-607, EPSC details, 2/11/2022, last revised 03/11/2022.

Part I. Coverage Under this Permit

A. Discharges Covered by this Permit

Subject to compliance with the terms and conditions of this permit, this permit authorizes the discharge of pollutants in stormwater associated with the construction and construction-related activity associated with the construction of **BTV South Apron Project** located at **1200 Airport Drive** in **South Burlington**, Vermont, discharging to **Muddy Brook, Potash Brook, Class II Wetlands**. This permit only applies to construction and construction-related activities performed in accordance with the approved EPSC Plan. This permit also authorizes discharges from excavation dewatering activities in accordance with Part II.H of this permit.

B. Limitations on Coverage

1. The Secretary has determined that an individual permit is required for this project.

2. This permit does not authorize:
    a. Discharges of post-construction regulated stormwater runoff from impervious surfaces regulated pursuant to Vermont's stormwater statute (10 V.S.A. Section §1264) and Vermont Department of Environmental Conservation's (DEC) Stormwater Permitting Rule (Chapter 22: Vermont Environmental Protection Rules);
    b. Stormwater discharges not associated with construction and construction-related activities;
    c. Stormwater discharges from construction and construction-related activities when the discharge or activity is likely to jeopardize the continued existence of any State or federally listed threatened or endangered species or result in the destruction or adverse modification of critical habitat.

C. Support Activities

The permittee shall obtain permit coverage from the Secretary prior to the use of any support activities occurring outside of the identified project limits of disturbance (e.g. equipment staging areas, material storage areas, excavated material disposal areas and borrow areas). Support activities outside of the approved project boundaries shown in the EPSC Plan shall obtain coverage by amending this permit, or by obtaining coverage under a different individual discharge permit or under DEC's General Permit for Stormwater Runoff from Construction Sites.

D. Co-Permittees

1. In addition to the permittee, all landowners and operators associated with the construction activity who meet either of the following two criteria must obtain coverage under this permit as co-permittee prior to the commencement of construction activities:
    a. The party has operational control over construction plans and specifications, including but not limited to the ability to make modifications to those plans and specifications; or
    b. The party has continuous day-to-day operational control of those activities authorized by the permit, which shall include all construction and construction-related activities involving earth disturbance and EPSC Plan implementation.

Part II. Erosion Prevention and Sediment Control Requirements

A. Implementation of EPSC Plan

1. Each permittee is responsible for implementing the approved EPSC Plan and shall at all times comply with the approved EPSC Plan or amended versions of the EPSC Plan updated in accordance with this permit.

2. The EPSC Plan is incorporated by reference and included in the terms of this permit, and each permittee shall implement the provisions of the EPSC Plan, and all amendments thereto, as a condition of this permit. Failure to comply with the EPSC Plan, and all amendments thereto, shall be deemed a violation of this permit and subject to potential enforcement.

3. Each permittee is responsible for ensuring that each co-permittee involved in construction activities is familiar with the terms and conditions of the EPSC Plan and that each co-permittee's activities are carried out in accordance with the EPSC Plan.

4. The permittee shall assure that construction of all small and large sediment control practices, where proposed on the site, are completed in accordance with the 2020 Vermont Standards and Specifications for Erosion Prevention and Sediment Control prior to upslope earth disturbance of areas for which these features are designed to provide sediment control.

5. The permittee shall assure that, prior to earth disturbance within any area of the site located within 100 feet upslope of a stream or wetland, silt fence or approved perimeter control shall be installed in accordance with the 2020 Vermont Standards and Specifications for Erosion Prevention and Sediment Control and the EPSC Plan at an appropriate distance down slope from disturbed areas and upslope from such waters.

6. The permittee shall install all required elements as set forth in the EPSC Plan within a given work area prior to earth disturbance within that work area. Earth disturbance includes, but is not limited to, stumping and grubbing of cleared areas.

B. On-Site Plan Coordinator (OSPC)

1. The permittee shall designate a person as the OSPC who shall be directly responsible for on-site implementation of the EPSC Plan. Such person shall be knowledgeable in the principles and practice of erosion prevention and sediment controls and possess the skills to assess conditions at the construction site that could impact stormwater quality and to assess the effectiveness of all erosion prevention and sediment control measures selected to control the quality of stormwater discharges from the construction and construction-related activity.

2. The OSPC shall have the authority to stop and/or modify construction activities as necessary to comply with the EPSC Plan and the terms and conditions of this permit and shall be responsible for inspections and record keeping. The OSPC or his/her designee shall be on site on a daily basis during construction and construction-related activity. The OSPC does not have to be the permit applicant.

3. The name, email, and daytime telephone number of the OSPC shall be filed in writing by email with the DEC Stormwater Management Program district staff member prior to the commencement of construction and construction-related activities.

C. Maintenance of Erosion Prevention and Sediment Control Measures

1. All erosion prevention and sediment control measures (Best Management Practices) identified in the EPSC Plan shall be maintained in effective operating condition. If site inspections required by Part III.A identify Best Management Practices (BMPs) that are not operating effectively, maintenance shall be performed as soon as possible and before the next storm or snowmelt event to maintain the continued effectiveness of the measures. If implementing BMPs is impracticable before the next storm or snowmelt event, then the affected area shall be stabilized temporarily until such time that the BMPs can be installed.

2. If existing BMPs need to be modified or if additional BMPs are necessary for any reason, implementation shall be completed before the next storm event. If implementing BMPs is impracticable before the next storm event, then the affected area shall be stabilized temporarily until such time that the BMPs can be installed. These instances shall be documented pursuant to OSPC inspections required under this permit.

D. Modifications to the EPSC Plan Identified as Necessary During Inspections

1. If, based upon inspections or investigations by representatives of the Secretary, it is determined that the EPSC Plan may not consider a given site condition and there is a reasonable potential to cause, or contribute to a release of a visibly discolored discharge, or other discharge from the construction site that would cause or contribute to a violation of Vermont's Water Quality Standards, the permittee shall be required to:
    a. Modify the EPSC Plan and implement a project change to adequately address the identified concern within seven (7) calendar days following the inspection or per a schedule as otherwise established in a directive by the Secretary; or
    b. Cease discharges of pollutants to surface waters from the construction activity; or
    c. Submit valid and verifiable data with seven (7) days, to be reviewed and approved by the Secretary, containing information representative of current conditions, including stormwater discharges, and any known or identifiable impacts that occurred to waters, wetlands, or established buffers specific to stormwater discharges, including sediment transport or deposition.

2. At any time after issuing this permit, the Secretary may, in his or her sole discretion, determine that a stormwater discharge may cause, has reasonable potential to cause, or contribute to a violation of Vermont's Water Quality Standards. If such a determination is made, the Secretary will require the permittee to:
    a. Amend the EPSC Plan to address adequately the identified water quality concerns.
    b. Submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or
    c. Cease discharges of pollutants to surface waters from the construction activity.

3. The Secretary has the sole discretion to order a permittee to immediately stop all ongoing construction and construction-related activities upon a finding that a discharge or potential discharge from such activities presents a current or potential threat of harm to the environment. The Secretary's stop work order may also require the permittee to take all actions to prevent or correct the discharge or potential discharge. Any action taken by the Secretary pursuant to this subpart shall not limit the Secretary's authority to pursue other enforcement actions pursuant to 10 V.S.A Chapters 47 and 201.

4. Each revised EPSC Plan prepared pursuant to this Part shall be maintained on-site and shall be made available to the Secretary's representatives upon request.

E. EPSC Plan Availability

The permittee shall maintain a copy of the EPSC Plan, including any amendments thereto, and all records of co-permittee status for additional landowners and operators responsible for construction and construction-related activities onsite at all times. A copy of the EPSC Plan shall be made available to the Secretary, or his or her designated representative, upon request.

F. Project Changes

1. Project Changes That Do Not Require a Permit Amendment

a. Use of interchangeable practices found in the Vermont Standards and Specifications for Erosion Prevention and Sediment Control. Interchangeable practices include those identified to serve similar or equivalent erosion prevention or sediment control.

b. A change that increases the total project-related earth disturbance by 10 percent or less than the previously authorized total, provided that:
   i. The increased area(s) of disturbance are contiguous to the disturbed area authorized.
   ii. The permittee documents this change on a form provided by the Secretary. This documentation shall be completed and maintained on site with the permittee's existing authorization.

c. The use of active stormwater treatments, including flocculants, provided a permittee has obtained the Secretary's written approval and has revised any EPSC Plan applicable to the project.
   i. When the use of active stormwater treatments, including flocculants, was not previously approved as part of an existing authorization, a permittee shall submit in writing a request for the Secretary's written approval, including a detailed description of the proposed use of active stormwater treatments and any additional information requested by the Secretary.

d. The permittee shall update the EPSC Plan prior to implementing any change in the design, construction, operation, or other procedure which would alter the grading plan, construction sequence, or the location or implementation of any BMPs.

e. An update to the EPSC Plan is required, if after taking corrective action, as required in Part III.B, it is determined that the EPSC Plan requires modification to be effective in future efforts in preventing erosion and controlling the discharge of sediment.

f. An update to the EPSC Plan is required if the Secretary makes this determination pursuant to Part II.D.1 of this permit.

g. The OSPC is authorized to implement project changes that involve substituting interchangeable erosion prevention and sediment control practices in the Vermont Standards and Specifications for Erosion Prevention and Sediment Control. Interchangeable practices include those identified to serve similar or equivalent erosion prevention or sediment control. The substitution shall be noted on the on-site EPSC Plan.

h. For changes to the EPSC Plan other than substitution of interchangeable practices, the permittee shall have the EPSC Plan modified to reflect the change by either the original designer, a professional engineer licensed in the State of Vermont or a Certified Professional in EPSC. Such modification shall include a certification that the modified EPSC Plan meets the requirements of this permit and The Vermont Standards and Specifications for Erosion Prevention and Sediment Control.

i. All proposed changes to the EPSC Plan that do not conform to The Vermont Standards and Specifications for Erosion Prevention and Sediment Control must be submitted to the Secretary for formal approval prior to implementation of the changes in the field.

j. Any project change involving earth disturbance substantially outside (non-contiguous) of the originally authorized limits of disturbance, provided the permittee submits to the Secretary request for written approval prior to implementation of the change. The Secretary may consider several factors in determining whether the change is substantial and requires an amendment to the permit. Such considerations may include, but are not limited to, size of additional area(s) to be disturbed, existing condition of area(s) to be disturbed, proximity to water resources and their buffers, proximity to existing development, and whether the change will present a reasonable potential to cause or contribute to water resources impacts.

k. The modified EPSC Plan submitted pursuant to Part II.F.1(h) shall include:
   i. A narrative description of the change(s);
   ii. Justification for the change(s);
   iii. An updated EPSC Plan sheets showing the proposed change(s);
   iv. Any additional information required by the Secretary

2. Project Changes that Require an Amendment to the Permit
   a. All project changes determined by the Secretary to present a reasonable potential to cause or contribute to water resource impacts.
   b. Increases to the total project-related area of earth disturbance by more than 10 percent of the previously authorized total area of earth disturbance.
   c. Increases to the total amount of concurrent earth disturbance.
   d. Decreases in the effectiveness or length of vegetated buffers between the construction site earth disturbance and the receiving waters, such that the risk score calculated in the Appendix A – Risk Evaluation of Vermont's Construction General Permit 3-9020 and completed at the time of application, increases.
   e. Increases to the slope or erodibility of soils within the limits of disturbance, such that the risk score calculated in the Appendix A – Risk Evaluation of Vermont's Construction General Permit 3-9020 and completed at the time of application, increases.

G. Winter Construction Period (late fall/winter/early spring construction activities)
   1. If construction activities involving earth disturbance continue past October 15 or begin before April 15 (Winter Construction), the permittee shall implement Winter Construction EPSC practices as outlined in the EPSC Plan and as identified in the Vermont Standards and Specifications for Erosion Prevention and Sediment Control.

   2. If a permittee plans to undertake construction activities during Winter Construction and the EPSC Plan does not identify EPSC measures during this time period, the permittee shall submit a stand-alone EPSC Plan for this late fall/winter/early spring work to the Secretary for formal approval prior to undertaking such activities. The submission shall include a narrative description of the proposed work and the stand-alone EPSC Plan shall include only this work. The stand-alone EPSC Plan shall be designed according to The Vermont Standards and Specifications for Erosion Prevention and Sediment Control.

3. All possible measures will be taken to limit the exposure of soils during all late fall/winter/early spring construction activities. The Secretary reserves the right to require suspension of construction activities until after April 15 if late fall/winter/early spring construction is determined to present a significant risk to water quality. Also, the Secretary reserves the right to prohibit construction activities from October 15 through April 15 if construction activity during the Winter Construction Period is determined to present a significant risk to water quality.

H. Dewatering Activities

1. A site-specific dewatering plan shall be employed for any dewatering activities. The dewatering plan shall detail the following:
    a. Nature of activity requiring dewatering;
    b. Location of the dewatering pumpage show on plan;
    c. EPSC practice(s) to be used during dewatering activities; and
    d. Anticipated duration of dewatering activities.

    The use of EPSC practice(s) for dewatering activities not included in the original EPSC Plan are subject to the requirements of Part II.F.

    Pumpage from areas excavated for the construction of the project shall be treated or disposed of in such manner that any dewatering discharge to waters of the state is visibly clear and does not present a significant risk of environmental harm or significant risk to public health and safety. Prior to any dewatering activities which may result in the pumpage reaching State waters by surface flow, the permittee shall measure and document the turbidity value to ensure that it is sufficient to comply with the terms and conditions of this permit. The inspection reports shall contain information on when dewatering is being done, measures being utilized for treatment, and effectiveness of those measures.

    If the receiving water is off-site, the permittee shall confirm the runoff flow path will not present a significant risk to environmental harm or public health and safety in route to the stormwater discharge location. If the stormwater discharge results in a significant risk of environmental harm or a significant risk to public health and safety, the permittee shall cease dewatering activities and evaluate whether the dewatering plan requires modification to minimize or prevent such risks.

I. Disturbance Limitations/Stabilization

1. The total earth disturbance associated with construction of this project is **71.32 acres**. The maximum area of concurrent earth disturbance at any one time allowed under this permit is **10 acres for all active project areas and 5 acres for each individual project area.**

2. All areas of earth disturbance must have temporary or final stabilization within **14 days** of initial disturbance. After this initial **14-day** period, all disturbance in these areas must be temporarily or permanently stabilized in advance of any runoff producing event. A runoff producing event is an event that produces runoff from the construction site. The following exception to the above stabilization requirements applies:
    a. Stabilization is not required if the work is occurring in a self-contained excavation (i.e. no outlet for stormwater) with a depth of 2 feet or greater (e.g. underground utility installation). Areas of a construction site that drain to sediment basins are not considered eligible for this exemption and the exemption applies only to the excavated area itself.

J. Pre-construction Conferences

The permittee shall notify the Secretary of the planned start date and schedule a pre-construction conference at least two weeks prior to commencing construction. The pre-construction conference shall occur prior to initiating construction activities and shall be attended by the OSPC, EPSC Specialist, and a representative of the Secretary. At the discretion of the Secretary, a Pre-Construction Conference may be completed off-site from location of the project site and may also occur via video or phone conference if determined to be acceptable and preferable to all parties involved.

K. Presumption of Compliance with Vermont's Anti-Degradation Policy and Water Quality Standards
The Secretary has determined that the permitted discharges satisfy Vermont's Anti-Degradation Policy described in the DEC's Interim Anti-Degradation Implementation Procedure (Procedure), because the procedure allows a presumption of compliance for discharges that meet the requirements of a BMP or treatment and control manual as described in Section IX.D.1.a of the Procedure. The Secretary has also determined that for such discharges that qualify for the presumption under IX.D.1.a, all existing uses of surface waters, and the level of water quality necessary to protect those existing uses will be maintained and protected. The Secretary has determined that if the permittee is in full compliance with all permit conditions, including approved plans, sampling, monitoring, reporting and recordkeeping conditions, and is fully implementing stormwater BMPs required by this permit, the permitted discharges will meet the requirements of the Vermont Standards and Specifications for Erosion Prevention and Sediment Control and qualify for the presumption described in Section IX.D.1.a of the Procedure and will be presumed to comply with the Vermont Water Quality Standards, including but not limited to §1-03 (Vermont's Anti-degradation Policy).

Part III. Inspections, Discharge Sampling, Corrective Action, and Recordkeeping

A. General Inspection Requirements

1. The permittee is responsible for inspecting and maintaining erosion prevention and sediment controls that minimize or eliminate pollutants in the discharge in accordance with the requirements of this permit.

1. Inspections shall be conducted at least once every seven (7) calendar days and as required in Part III.B of this permit.

2. During the Winter Construction period (October 15 through April 15), daily inspections shall be conducted of areas that have been disturbed and are not yet finally stabilized (70 percent vegetated cover or equivalent stabilization with stone or other material).

3. Inspection frequency may be reduced to not less than one (1) per month if the entire site is temporarily stabilized.

4. Inspections may be postponed indefinitely if the entire site has achieved final stabilization.

5. Inspections shall be conducted by, or under the direction of, the OSPC.

6. Inspections shall include all areas of the site disturbed by construction activity and construction-related activity, and all discharge locations, including areas with temporary stabilization.

7. An inspection report shall be completed for each inspection and signed by the OSPC or the person acting under the direction of the OSPC. At a minimum, each inspection report shall include:
    a. The inspection date and time;
    b. Names, titles, and qualifications of personnel making the inspection;
    c. A general description of weather information for the period since the last inspection (or since commencement of construction or construction-related activity if the first inspection) including a general description of any precipitation, any runoff of visibly discolored stormwater from the construction site and any discharges of visibly discolored stormwater from the construction site to waters of the state;
    d. A description of current weather information, including approximate duration and accumulation of any precipitation or snowmelt, and a description of any runoff or discharges of visibly discolored stormwater from the site or to waters of the state occurring at the time of the inspection;
    e. Confirmation that the inspection was performed during the precipitation or snowmelt event, and if not an explanation;
    f. Location(s) of clear discharges of stormwater runoff from the site, with a description of any evidence of prior or current sediment transport at this location, including resuspension and transport of previously deposited sediment;
    g. Location(s) of runoff or discharges of visibly discolored stormwater from the site or to waters of the state;
    h. Location(s) of BMPs that need to be maintained;
    i. Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
    j. Location(s) where additional BMPs are needed that did not exist at the time of inspection;
    k. Any corrective action required including any necessary changes to the EPSC Plan and implementation dates, to be completed prior to the next event that produces runoff from the construction site;
    l. Description of areas that are currently disturbed, areas that have been temporarily stabilized, and/or areas that have achieved final stabilization since last inspection;
    m. A description of the soil conditions (e.g. dry, wet, saturated); and
    n. A certification that the construction activities are now in compliance with the EPSC Plan and this permit.

8. A record of each inspection report and of any actions taken in accordance with this Subpart shall be maintained on-site with the EPSC Plan and shall be made available upon request by the Secretary's representatives.

9. When site conditions occurring outside of the Winter Construction period (October 15 – April 15) are similar to winter conditions (e.g. snow cover, frozen ground and/or saturated soils) within the areas of planned earth disturbance, the appropriate winter restrictions from the 2020 Vermont Standards and Specifications for Erosion Prevention and Sediment Control selected by the OSPC shall be applied to the portions of the site that are experiencing those conditions.

B. Inspection, Sampling and Corrective Action Requirements

1. As soon as reasonably possible, during, or after, every rainfall event or snowmelt event which produces runoff from the construction site, the OSPC shall inspect for the runoff of visibly discolored stormwater from the construction site. If there is runoff of visibly discolored water from the construction site, the OSPC shall as soon as practicable inspect and maintain BMPs for compliance with the approved EPSC plan. For purposes of this permit, "construction site" shall mean the land or water area where any facility or activity is physically located or conducted, including adjacent land used in connection with the facility or activity or the area of earth disturbance directly associated with the permitted construction activity.

2. If after inspecting and maintaining existing BMPs in accordance with Part III.B.1, the runoff of visibly discolored stormwater continues, the OSPC shall sample the runoff as follows:
    a. A turbidity sample shall be taken at each point where visibly discolored stormwater runs off the construction site. Samples shall be representative of the flow and characteristics of the runoff.
    b. If due to unexpected circumstances an OSPC is unable to sample during periods of runoff, the monitoring report shall include a brief explanation of such circumstances.
    c. Sampling is required at all points where visibly discolored stormwater runoff from disturbed areas that have not been finally stabilized leaves the construction site.
    d. All sampling points shall be identified on the EPSC Plan site map and be clearly marked in the field with a flag, tape, stake, or other visible marker.
    e. After approval by the Secretary, sampling may be discontinued at those points of stormwater runoff that are deemed to pose no risk of discharge to waters of the state.

3. If the turbidity sample taken is 25 NTU or lower, no further sampling or action is required during this particular event.

4. If the turbidity sample taken is greater than 25 NTU:
    a. The OSPC shall as soon as practicable evaluate the need for supplemental BMPs and install such BMPs as necessary to correct the runoff.
    b. The OSPC shall, within 72 hours of first discovering the runoff, submit a written report about the runoff and resulting corrective action to the Secretary. The report shall:
        i. Be on a form provided by the Secretary
        ii. Describe the cause, time and date, and location of the runoff;
        iii. Describe the status of construction and conformance with the EPSC Plan at the time of the runoff;
        iv. Detail the corrective action taken to stop the runoff, including a description of the actions taken, their location, and the time and date of the corrective action; and
        v. Be copied and a copy retained on-site with the EPSC Plan.

    c. The EPSC Plan shall be updated within 72 hours to reflect the actions taken.

5. After taking the actions required in Part III.B.4.a above, and if the runoff of visibly discolored stormwater continues, the OSPC shall again follow the inspection and sampling requirements in Part III.B.2 above. If the turbidity sample is less than 25 NTU then no further action is needed. If the turbidity sample is greater than 25 NTU, the OSPC shall immediately notify DEC's Stormwater Program. The Secretary may require the OSPC to reevaluate existing BMPs and install supplemental BMPs as necessary to correct the runoff. At the Secretary's discretion, the OSPC may also be required to continue sampling runoff daily when runoff is occurring until:
    a. Turbidity is 25 NTU or lower; or
    b. The runoff stops or is eliminated.

C. Recordkeeping

1. The following records shall be maintained on-site with the EPSC Plan:
    a. Inspection reports prepared pursuant to Part III.A of this permit;
    b. Discharge Reports, Corrective Action reports and Summaries of Releases prepared pursuant to Parts III.B and VIII.C of this permit;
    c. Notices of Addition or Termination of Co-Permittees submitted to the Secretary in accordance with Part V of this permit;
    d. Any Notices of Termination for Portions of the On-going Construction Site in accordance with Part V of this permit; and
    e. Any project changes or amendments to the EPSC Plan required by this permit, including the initials of the person or persons that revised the plans with dates of revision.

2. A copy of the authorized EPSC Plan shall be on-site during normal working hours from the date of commencement of construction activities to the date of final stabilization. EPSC Plans shall be made available upon request by the Secretary's representatives. The EPSC Plan maintained on site may be available in paper format or in electronic format via a computer maintained on the project site.

3. The OSPC shall have a copy of the EPSC Plan and all amendments available at a central location on-site for the use of all those identified as having responsibilities under the EPSC Plan whenever they are on the construction site.

4. The permittee shall post a Notice of Authorization, provided by the Secretary, demonstrating authorization under this permit. The notice shall be placed near the construction entrance at a location visible to the public. If displaying near the main entrance is infeasible, the notice shall be posted in a local public building such as the municipal office or public library. For linear projects, the notice shall be posted at a publicly accessible location near the active part of the construction project (e.g., where a utility project crosses a public road) or, in the event posting in a publicly accessible location near the active part of the project is infeasible, the permittee shall post in a local public building such as the municipal office or public library.

Part IV. EPSC Specialist Oversight

EPSC Specialist

1. In addition to the regular inspections required under Part III.A., the permittee shall designate an EPSC Specialist who will be responsible for performing environmental inspections during the project; confirming water resources protection throughout the project, assisting the permittee(s) with EPSC Plan implementation, and for related record keeping and reporting to the Secretary per the schedule established in this permit. The name, address, telephone number, email address, and basic qualifications of the person shall be provided to the Secretary for approval before the commencement of construction. This person shall not be the OSPC.

2. The EPSC Specialist shall determine, confirm, and report whether the EPSC Plan is being implemented and that appropriate revisions or updates are being made to the EPSC Plan when the EPSC Plan proves inadequate. In addition, the EPSC Specialist shall, in conjunction with the OSPC bear the responsibility of reviewing the site to ensure compliance with the approved EPSC Plan and to direct corrective action in accordance with Part III.B of this permit.

3. The EPSC Specialist shall notify the permittee(s) and operator(s) when changes in practice are necessary to comply with the EPSC Plan and the terms and conditions of this permit. The EPSC Specialist shall be responsible for inspections, photo documentation, and record keeping and shall, biweekly during earth disturbance activities, file by email to DEC Stormwater Program district staff, a report outlining:
    a. Construction status;
    b. Dates of inspection(s)
    c. EPSC practices installed and removed since last report;
    d. New measures undertaken subsequent to the prior report;
    e. Erosion problems encountered and how and when resolved;
    f. Discussion and summary of OSPC inspection reporting as described within Part III.B.1;
    g. Status of the project in terms of consistency with the planned construction sequence;
    h. Description, including location and total area (acres), of disturbed land at the time of the inspection;
    i. Description of areas temporarily or permanently stabilized since the last inspection record;
    j. Changes in the EPSC Plan that are required (including submission for authorization from the Secretary, when necessary);
    k. When dewatering is underway, discussion and photographs of measures being utilized for treatment, and turbidity monitoring results in conformance with Part III.H of this permit;
    l. Photographs of areas stabilized since the prior report;
    m. Photographs of all disturbed areas;
    n. Photographs of receiving water(s) at turbidity monitoring location(s); and
    o. All turbidity monitoring results collected since prior report in accordance with Subpart III.B of this permit.

4. Prior to commencement of construction or construction-related activities, the EPSC Specialist shall present to the Secretary for approval the proposed reporting format. Construction may not commence prior to the Secretary's written approval of the reporting format and schedule for report submittal. Bi-weekly reports shall be submitted by the Wednesday, or as soon as responsibly possible, following the end of the bi-weekly period. The Department may approve an alternative reporting deadline to the

permittee in writing. EPSC Specialist reports shall be filed via email with DEC Stormwater Program district staff. Submittal of reports by mail to the mailing address below will not be accepted without prior approval:

Department of Environmental Conservation
Watershed Management Division
Stormwater Management Program
One National Life Drive, Davis 3
Montpelier, VT 05620-3522

5. Each inspection report shall be prepared in consultation with the OSPC, shall include a review of the OSPC's inspection reports since the last inspection period, and shall be signed by the EPSC Specialist.

Part V. Transfers of Permit, Co-Permittees, and Termination

A. Transfer of Permit Coverage

1. A transfer of this permit may occur only in connection with the transfer of the entire construction site to a new owner.

2. A Notice of Transfer must be submitted to the Secretary not later than thirty (30) days prior to the transfer and shall include the following:
    a. The name and address of the present permittee;
    b. The name and address of the prospective permittee;
    c. The proposed date of transfer; and
    d. A statement signed by the prospective permittee, stating that:
        i. The conditions of the facility operation that contribute to, or affect, any discharge will not be materially different under the new ownership;
        ii. The prospective permittee has read and is familiar with the terms of the permit and agrees to comply with all the terms and conditions of the permit; and
        iii. The prospective permittee has adequate funding or other means to affect compliance with all the terms of the permit.

B. Adding or Terminating Co-Permittees

1. An owner or principal operator may be added as a co-permittee by filing a Notice of Addition of Co-Permittee form with the Secretary. The Co-Permittee shall be subject to all the terms and conditions of this permit and the EPSC Plan.

2. If the owner of the construction site obtains coverage under this permit and the owner is not the principal operator or the sole principal operator, then all principal operators shall obtain coverage as co-permittees in accordance with this Subpart prior to the commencement of construction activities.

3. A co-permittee may be terminated as a Co-Permittee by filing a Notice of Termination of Co-Permittee form on a form provided by the Secretary. The Co-Permittee shall only be terminated from the permit upon approval by the Secretary.

C. Notice of Termination for Portions of an On-going Construction Site

1. A permittee may submit a Notice of Termination (NOT) for a portion of the on-going construction project in the following instances:
    a. When final stabilization has been achieved on the portion of the site for which termination is sought;
    b. When title to a portion of the construction site has been transferred to a new owner and the new owner has obtained separate coverage under an individual construction permit or DEC's General Permit 3-9020 for Stormwater Runoff from Construction Sites (February 2020) or its replacement;
    c. When another operator has assumed control over the portion of the site for which termination is sought and the new operator has obtained coverage under an individual construction permit or DEC's General Permit 3-9020 for Stormwater Runoff from Construction Sites (February 2020) or its replacement;
    d. For residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner.

2. To obtain a notice of termination for a portion of an on-going construction site, the permittee shall follow the requirements of Part V.E of this permit.

D. Notice of Termination for the Entire Construction Site

1. The permittee may submit a NOT for the entire construction site in the following instances:
    a. Final stabilization has been achieved on the entire construction site for which the permittee is responsible;
    b. Another operator has assumed control over all areas of the site that have not been finally stabilized and has obtained permit coverage; or
    c. Coverage under an individual or DEC's General Permit 3-9020 for Stormwater Runoff from Construction Sites (February 2020) or its replacement has been obtained.

2. To obtain a notice of termination for the entire construction site, the permittee shall follow the requirements of Part V.E of this permit.

E. Submitting a Notice of Termination

1. A permittee shall submit a complete and accurate NOT, on a form provided by the Secretary.

2. A NOT shall include, at a minimum, the following information:
    a. The permit number for which termination is sought;
    b. The basis for submission of the NOT;
    c. The owner's and operator's name, address and telephone number;
    d. The name of the project and address (or a description of location if no street address is available) of the construction site for which the notification is submitted;
    e. A certification statement, signed and dated by the OSPC and by an authorized representative as defined in the signature requirements in Part VIII.I, and the name and title of that authorized representative; and
    f. If the NOT is for only a portion of an ongoing construction project, a description of the portion of the site to which the NOT will apply and a plan showing the boundaries of this portion.

Part VI. Violation of Permit Requirements; Enforcement

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of 10 V.S.A. Chapter 47 and the federal Clean Water Act and is grounds for an enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

Part VII. Appeals

1. Renewable Energy Projects – Right to Appeal to Public Utility Commission
   Any appeal of this decision must be filed with the clerk of the Vermont Public Utility Commission pursuant to 10 V.S.A. §8506 within 30 days of the date of this decision. The appellant must file with the Clerk an original and six copies of its appeal. The appellant shall provide notice of the filing of an appeal in accordance with 10 V.S.A. §8504(c)(2) and shall also serve a copy of the Notice of Appeal on the Vermont Department of Public Service. For information, see the Rules and General orders of the Public Utility Commission available online at www.puc.vermont.gov. The address for the Public Utility Commission is 112 State Street Montpelier, Vermont 05620-2701 (Tel. #802-828-2358).

2. All Other Projects – Right to Appeal to Environmental Court
   Pursuant to 10 V.S.A. Chapter 220, if this decision relates to all other projects, any appeal of this decision must be filed with the clerk of the Environmental Court within 30 days of the date of the decision. The appellant must attach to the Notice of Appeal the entry fee of $250.00 payable to the State of Vermont. The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Court; and must be signed by the appellant or their attorney. In addition, the appeal must give the address or location and description of the property, project or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings. For additional information, see the Vermont Rules for Environmental Court Proceedings, available online at www.vermontjudiciary.org or call (802) 951-1740. The address for the Environmental Court is 32 Cherry Street, 2nd Floor Suite 303, Burlington, Vermont 05401.

Part VIII. Standard Permit Conditions

A Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause as set forth in Stormwater Permitting Rule § 22-310 (Environmental Protection Rules, Ch. 22). The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

B. Limitations

1. This permit conveys no vested rights or exclusive privileges. The permit conveys no title to land nor authorizes any injury to public or private property. The permit does not authorize infringement of any applicable federal, state or local laws or regulations nor obviate the necessity of obtaining such additional permits as may be required.

2. Nothing in this permit shall be construed as having relieved, modified, or in any manner affected the permittee's ongoing obligation to comply with all other federal, state or local statutes, regulations or directives applicable to the permittee in the operation of its business, nor does it relieve the permittee of the obligation to obtain all necessary federal, state and local permits.

C. Prohibitions

1. This permit does not relieve any person of the federal reporting requirements of 40 CFR Part 110, 40 CFR Part 117 and 40 CFR Part 302 relating to spills or other releases of oils or hazardous substances. Nothing in this permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under 10 V.S.A. § 1281. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

2. If a release of oil or hazardous substances in excess of reportable quantities occurs, the permittee must modify the EPSC Plan required under Part III within 7 calendar days of knowledge of the release to: provide a description of the release, the circumstances leading to the release, and the date of the release. The EPSC Plan must identify measures to prevent the reoccurrence of such releases and to respond to such releases.

3. Discharges of any material other than stormwater, such as vehicle and equipment maintenance spills, fuels, wash water, construction debris, oil, wet concrete (including washout water from concrete batch trucks or equipment used to mix concrete), and other substances are prohibited.

4. Sediments and other pollutants collected and removed in the course of treatment of stormwater runoff shall be disposed in a manner that will not result in the sediments and pollutants entering waters of the State.

D. Right of Entry

The permittee shall allow the Secretary and his/her authorized representatives, at reasonable times, and upon presentation of credentials, to:

1. Enter upon and inspect the property on which the construction activities are occurring or the premises where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records required to be kept pursuant to the permit;

3. Inspect at reasonable times any facilities, equipment – including monitoring and control equipment – practices, or operations regulated or required under this permit; and;

4. Sample or monitor at reasonable times any construction-related discharges.

E. Historic Properties

Each permittee must comply with any applicable state and local laws concerning the protection of historic properties and places.

F. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit for a period of at least five years from the date of the sample, measurement, report, or application, in accordance with Stormwater Permitting Rule § 1201(c) (Environmental Protection Rules, Ch. 22). This period may be extended by request of the Secretary at any time.

G. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

H. Duty to Mitigate

A permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

I. Signatory Requirements

1. All applications must be signed as follows:
    a. For a corporation: by a responsible corporate officer. For the purposes of this section, a responsible corporate officer means:
        i. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation;
        ii. The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
    b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
    c. For a municipality, State, Federal or other public agency: by either a principal executive officer or a ranking elected official. For purposes of this section, a principal executive officer of a Federal Agency includes: the chief executive officer of the agency or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. All reports required by this permit, including but not limited to EPSC Plans, must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    a. The authorization is made in writing by a person described above;
    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or

position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

c. The signed and dated written authorization is included in the EPSC Plan. A copy must be submitted to the Secretary, if requested.

3. Any person signing documents required under the terms of this permit must include the following certification:
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

J. Duty to Reapply

If a discharge from the construction site is anticipated to continue after the expiration date of this permit, the permittee must reapply for coverage under a new permit sixty (60) days prior to the expiration date of this permit.

K. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit.

L. Notice of Planned Changes

The permittee shall give notice to the Secretary as soon as possible of any planned physical alterations to the permitted facility.

M. Notice of Anticipated Noncompliance

The permittee shall give advance notice to the Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

N. Duty to Provide Information

The permittee shall furnish to the Secretary, within a reasonable time, any information which the Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine noncompliance with this permit. The permittee shall also furnish to the Secretary upon request, copies of records to be kept pursuant to this permit. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in a report to the Secretary, it shall promptly submit such facts or information.

O. Penalty for Permit Violation

10 V.S.A. Section 1275(a) provides that:
Any person who violations any provision of this subchapter or who fails, neglects, or refuses to obey or comply with any order or the terms of any permit issued in accordance with this subchapter, shall be fined

not more than $25,000.00 or imprisoned not more than six months, or both. Each violation may be a separate offense, and, in the case of a continuing violation, each day's continuance may be deemed a separate offense.

10 V.S.A. Section 8010(c) provides that:
A penalty of not more than $42,500 may be assessed for each determination of a separate violation. In addition, if the secretary determines that a violation is continuing the secretary may assess a penalty of not more than $17,000.00 for each day the violation continues. The maximum amount of penalty assessed under this subsection shall not exceed $170,000.00.

P. Penalty for False Statement

10 V.S.A. Section 1275(b) provides that:
Any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained under this subchapter, or by any permit, rule, regulation or order issued under this subchapter, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this subchapter or by any permit, rule, regulation, or order issued under this subchapter, shall upon conviction, be punished by a fine of not more than $10,000.00 or by imprisonment for not more than six months, or by both.

Q. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

R. Monitoring

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

S. Twenty-four-hour reporting

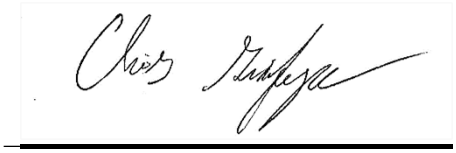
Unless provided otherwise by this permit, the permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

Part X. Effective Date of Permit and Permit Term

This permit shall become effective on **March 10, 2023** and shall expire on **March 9, 2028**. The permittee shall reapply for coverage at least sixty (60) days prior to the expiration if the project has not achieved final stabilization or if the construction activities are expected after the date of expiration.

Signed March 10, 2023,

Julia S. Moore, Secretary
Agency of Natural Resources

By: 
Chris Gianfagna, Stormwater Program Manager

PATRICK LEAHY BURLINGTON INTERNATIONAL AIRPORT

Annual Report for General Permit 3-9014 (MS4)

Including Annual Reporting Summary for MS4-Incorporated Operational Stormwater Discharge Permits

April 1, 2024

Appendix H

Pollution Prevention and Good Housekeeping (MCM#6)

Field Inspection Maintenance Recommendations

2023 Summary

Summary of Maintenance Recommendations

For the Patrick Leahy Burlington International Airport

Tasks to be performed as recommended maintenance tasks are shown in the tables below. As part of the May/June 2023 inspections, EIV examined the existing stormwater system and reviewed the status of recommendations made during the 2022 maintenance recommendations.

From The Stormwater Permit Annual Inspection 2023			
Sediment Issues: Remove sediment from the following:			
Structure Name	**Structure Location**	**Status**	**Anticipated Completion Date**
S1.064.3	In the Building 6 parking lot	Completed	2023
S1.064.3	In the Building 6 parking lot	Completed	2023
S1.004.19	West side of new Golf, south of Hotel emergency pad	Completed	2023
S2.012.3.5	West side of R/W 1-19, between Charlie and Lima	Completed	2023
S3.009.6.1	Between Aviation Support Hangar and Heritage 890	Completed	2023
S3.009.9	Westerly side of Aviation Support Hangar	Completed	2023
S1.029	Main Apron trench drain	Completed	2023
S1.027	Main Apron trench drain	Completed	2023
S1.040.1	Employee and long term parking lot	Completed	2023
S1.031.1	Near Gate 11	Completed	2023
S1.028	Main Apron trench drain	Completed	2023
S1.004.8	West of Golf, line up south edge of Mike	Completed	2023
S1.004.6	West of Taxiway Golf	Completed	2023
S1.004.14	West side of new Golf, north of Hotel emergency pad	Completed	2023
S1.004.16	West side of new Golf, north of Hotel emergency pad	Completed	2023
S2.009.1	East side of R/W 1-19, south of T/W Charlie	Completed	2023
S1.051	FAA compound, parking area	Completed	2023
S1.058.1	Airport Loop Road, end of taxi lane	Completed	2023
S1.060.1	Airport Loop Road, north of southerly sky walk	Completed	2023
S1.060.2	Airport Loop Road, north of southerly sky walk	Completed	2023
S1.047.3.2	Parking garage north exit	Completed	2023
S0.001.1	North end in ILS Critical Area near fence	Completed	2023
S3.002	In Aviatron front lawn	Completed	2023
S1.032	Main Apron trench drain	Completed	2023
S4.025	South barrier pit, VTANG side of the field	Completed	2023
S1.004.9.1	On west edge of Taxiway Golf near Mike	Completed	2023

S1.004.13	West side of new Golf, north of Hotel emergency pad	Completed	2023
S3.009.6.2	Between Aviation Support Hangar and Heritage 890	Completed	2023
S1.031.0	Main Apron trench drain	Completed	2023
S1.047.6.0	FAA compound, northwest corner	Completed	2023
S2.040	Northwesterly of Heritage West terminal building	Completed	2023
S1.064.0	Airport Loop Road, at start of short term garage entrance	Completed	2023
S2.039	Northeasterly of Heritage West terminal building	Completed	2023
S1.004.11	West side of new Golf, north of Hotel emergency pad	Completed	2023
S1.047.3.4	Airport Loop Road	Completed	2023
S1.047.3.3	Parking garage north exit	Completed	2023
S4.018.2	In island created by R/W 1-19, R/W 15-33, T/W Bravo	Completed	2023
S1.038	Westerly side of north service road	Completed	2023
S1.039.1	Employee and long term parking lot	Completed	2023
S1.041.2	Employee and long term parking lot	Completed	2023
S1.024.6	Easterly of Main Apron, south of T/W Bravo	Completed	2023
S1.050.0	Inside carwash area	Completed	2023
S1.053.3	Airport Loop Road	Completed	2023
S1.056.1.2	Airport Loop Road, northerly sky walk	Completed	2023
S1.064.2.1	At start of Airport Loop Road	Completed	2023
S3.031.1	Near southerly end of main building, 3060 Valley Road	Completed	2023

From The Stormwater Permit Annual Inspection 2023			
Vegetation, Debris, or Trash Issues			
Structure Name	**Structure Location**	**Remarks**	**Anticipated Completion Date**
S2.036.3	In trench drain north of Tee Hangar	Some debris in the trench.	**2024**
S3.009.9	Westerly side of Aviation Support Hangar	Vegetation in grate and frame.	**2024**
S3.032	At driveway, north side of Valley Road near Williston Rd	Vegetation observed.	**2024**

From The Stormwater Permit Annual Inspection 2023			
Grading and Sinkhole Issues			
Structure Name	**Structure Location**	**Remarks**	**Anticipated Completion Date**
S3.040	In a bowl near driveway to Flight Academy at Valley Road	Sinkholes.	**2023**
S1.003.1	North of T/W Golf, easterly of north overrun	Sinkhole.	**2023**
S4.013.1	South of T/W Bravo, east of T/W Kilo, near glycol field	Sinkhole at southerly end at swale.	**2023**
S4.012.1	North of T/W Charlie, east of T/W Kilo	Sinkhole at southerly end.	**2023**
S1.001	Just outside north security fence, next to Airport Drive	Multiple sinkholes.	**2023**

The structures in the following table could not be opened with traditional means during the annual inspection due to issues at the frames and covers. Once the grates have been made removable again, the structures can be opened and photographed and added to the VEOCI database.

From The Stormwater Permit Annual Inspection 2023			
Access Issues			
Structure Name	**Structure Location**	**Remarks**	**Anticipated Completion Date**
S3.009.6.1	Between Aviation Support Hangar and Heritage 890	Could not open.	**2024**
S7.005	East edge of parking lot, northerly end, 700 Airport Pky	Could not open.	**2024**

PATRICK LEAHY BURLINGTON INTERNATIONAL AIRPORT

Annual Report for General Permit 3-9014 (MS4)

Including Annual Reporting Summary for MS4-Incorporated Operational Stormwater Discharge Permits

April 1, 2024

Appendix I

Annual Flow Restoration Plan (FRP) Report

April 1, 2024
Christy Witters, AICP, MS4 and MSGP Program Coordinator

Reference:
Patrick Leahy Burlington International Airport (BTV)
General Permit 3-9014 (2018) MS4
Annual Flow Restoration Report for Permit No. 7021-9014.A2R

Attention: Christy Witters, AICP, MS4 and MSGP Program Coordinator
Vermont DEC – Watershed Management Division
Stormwater Management Program
One National Life Drive, Main 2
Montpelier, VT 05620-3522

Dear Christy,

On behalf of the City of Burlington, Patrick Leahy Burlington International Airport (BTV), this report shall serve as BTV's Annual Flow Restoration Plan (FRP) Report for Permit No. 7021-9014.A2R1 [reference Municipal Separate Storm Sewer System (MS4) General Permit 3-9014 (2023)]. This annual report details BTV's development and implementation progress of the FRP from April 1, 2023 through April 1, 2024. The report includes a status update on BTV's FRP, Flow Monitoring Program, and incorporation of expired permits.

Prior to the reporting period, BTV was previously covered under the General Permit 3-9014 (2018) MS4 as issued on April 30, 2019. However, General Permit 3-9014 (2018) MS4 was re-authorized on September 28, 2023. Subsequently, BTV submitted a Notice of Intent (NOI) for review and approval was received and issued Permit No. 7021-9014.A2R1 on January 16, 2024. An updated Stormwater Management Program (SWMP) was submitted on March 26, 2024.

FRP reporting continues to be required on an annual basis. The issued permit on January 16, 2024 specifies that all measures necessary to achieve the flow restoration targets in the approved Flow Restoration Plans shall be implemented no later than December 5, 2032.

The original text from BTV's FRP prepared by Stantec as submitted to Vermont DEC on September 30, 2016 is included below in ***italics*** with status updates noted in a **bold** font.

INTRODUCTION

BTV has five outfalls that discharge to Potash Brook, a stormwater impaired water with an approved Total Maximum Daily Load (TMDL). The outfalls discharge to a Class 2 wetland that is contiguous to Potash Brook. In addition, BTV has one non-point source discharge to Centennial Brook, another stormwater impaired water with an approved TMDL. As such, BTV is responsible for development and implementation of an FRP for the portions of the Potash Brook and Centennial Brook watersheds within its boundaries. MS4 communities that discharge into the same stormwater impaired watershed may elect to cooperate to develop a single FRP for the watershed. To that end, BTV is collaborating with the City of South Burlington on these FRPs.

FLOW RESTORATION PLAN

The City of South Burlington has developed an FRP for the Potash Brook watershed. The Potash Brook FRP will become part of the Stormwater Management Plans (SWMPs) prepared by the MS4 permittees in the Potash Brook watershed, including the City of South Burlington, the Vermont Agency of Transportation (VTrans), the City of Burlington, the University of Vermont (UVM), and BTV. The Potash Brook FRP will act as a guidance document for the MS4 entities as they implement the stormwater Best Management Practices (BMPs) necessary to attain the flow restoration targets established by the Potash Brook TMDL. The Potash Brook TMDL was approved by the U.S. Environmental Protection Agency (EPA) on December 19, 2006. The TMDL suggests an 11.2% increase in stream flow during low flow conditions, and requires a 16.5% reduction in stream flow during high flow conditions (established as the 1-year storm event).

The City of South Burlington has also developed an FRP for the Centennial Brook watershed, which will act as a guidance document for the MS4 entities as they implement the stormwater BMPs necessary to attain the flow restoration targets established by the Centennial Brook TMDL. The Centennial Brook TMDL was approved by the U.S. EPA on September 28, 2007. This TMDL suggests a 23.2% increase in stream flow during low flow conditions, and requires a 63.4% reduction in stream flow during high flow conditions (established as the 1-year storm event). The Chittenden County Regional Planning Commission (CCRPC) completed a study in July, 2013 to estimate the expected non-jurisdictional impervious area future growth in the Centennial Brook watershed over the next 20 years. The CCRPC study resulted in a reduction of the high flow target from 63.4% to 51.6%, and this is the target used in the City of South Burlington's Centennial Brook FRP.

In accordance with the requirements in the MS4 General Permit, the FRP for discharges to impaired waters with an approved TMDL (Potash Brook and Centennial Brook) contain the following elements:

- *Identification of Required Controls*

- *Design and Construction Schedule*
- *Financial Plan*
- *Regulatory Analysis*
- *Identification of Regulatory Assistance*
- *Third-Party Implementation*

April 1, 2024 FRP Status Update:

A. Background and Permit Information

As noted above, BTV was issued Permit No. 7021-9014.A2R1 on January 16, 2024. BTV's FRP reporting will continue to be updated on an annual basis until the complete implementation.

BTV currently has two (2) stormwater permits that are not incorporated into the MS4:

3028-INDS.8 (dated April 28, 2020)	**Heritage Flight Hangar Addition**
3028-9050.6 (dated July 13, 2022)	**Heritage Aviation Fuel Farm Expansion**

When General Permit 3-9014 (2023) MS4 was re-authorized on January 16, 2024, eight (8) previously authorized State Stormwater Discharge Permits were incorporated into BTV's MS4:

3028-9050	**Taxiway K**
3028-9050.1	**Terminal Integration**
3028-9050.2	**BETA Technologies – BTV Assembly Facility**
3028-9050.3	**BETA Technologies – General Aviation Hangar**
3028-9050.5A	**BTV Rehabilitate Taxiway A**
3028-9050.7	**BTV Hotel**
3028-9050.8	**Extend Taxiway G and Construct New General Aviation South Apron**
3028-INDS.10	**BETA Hangar Site**

Permit No. 7021-9014.A2R1 now includes the above listed previously authorized State Stormwater Permits and the following, previously incorporated State Stormwater Permits:

3028-9010.A	**3028-9010.2**	**3028-INDS.AR**
3028-INDS.4	**3028-9015.1**	**3028-INDS.3**
3028-9015.2	**3845-9010**	**3845-9015.1**
1-0839 (Formerly Expired)	**1-1391 (Formerly Expired)**	**3028-9015.3**
3028-INDS.7		

It is noted that Stormwater Discharge Permit No. 3028-9010.1 was terminated and not incorporated into the MS4 permit as the impervious areas covered under that permit were previously reauthorized under Permit Nos. 3028-INDS.5 and 3028-INDS.7.

In addition, Stormwater Discharge Permit 3028-9050.5A replaces Stormwater Discharge Permit 3028-9050.5, which replaced Stormwater Discharge Permit 3028-INDS.9. All discharges in both 3028-9050.5 and 3028-INDS.9 are covered in the existing permit 3028-9050.5A.

See FRP Attachment #1 for a current stormwater discharge permit summary.

B. Proposed BMP's

The City of South Burlington has identified three (3) BMPs in the Centennial Brook FRP which drains to the Winooski River and ultimately the Main Lake segment of Lake Champlain and one (2) BMPs for the Potash Brook FRP which drains into the LaPlatte River and ultimately the Shelburne Bay segment of Lake Champlain.

Centennial Brook FRP:

- **South Burlington ID CB0023/Retrofit #25: The Picard Circle Infiltration Gallery was completed in August 2019. The April 1, 2020 FRP Report has further details on construction. The City of South Burlington continues to maintain and inspect this project location.**

- **<u>South Burlington ID CB0008/Retrofit #21</u>: The Dumont Avenue Infiltration Gallery is proposed within a house lot along the north side of Dumont Avenue that was acquired by BTV where houses were removed in 2018 and 2019.**

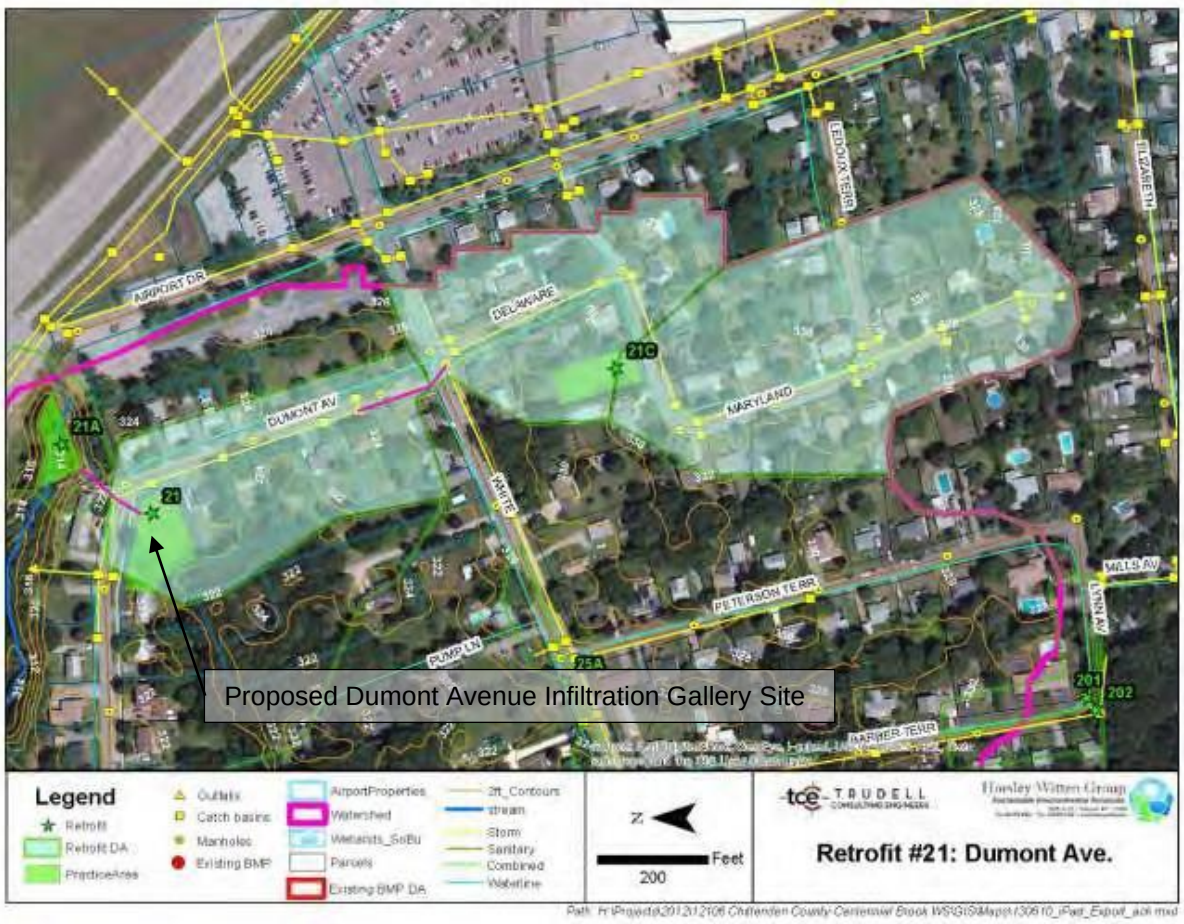
  Currently, there is untreated stormwater runoff generated from a 3.96 acre residential drainage area (including 0.86 acres of impervious surface) that discharges directly into a wetland which is the headwaters of the impaired Centennial Brook. Existing conditions for stormwater include catch basins and conveyance of runoff via underground piping along Maryland Avenue, Delaware Avenue, and Dumont Avenue.

  The proposed project includes the design and construction of a new stormwater infiltration gallery to be sited on a single parcel of land that is currently owned and controlled by BTV. Overflow discharge from the infiltration gallery is proposed to be to an existing stormwater detention basin located on the northerly side of Dumont Avenue and on the 'air side' of the airport facility. The existing stormwater detention basin represents the headwater of the Centennial Brook. Based on HydroCAD modeling conducted by the City of South Burlington's consultant, the project is designed to infiltrate a volume of 0.05 acre-feet.

  Construction of the Dumont Avenue Infiltration Gallery was originally scheduled by the City of South Burlington for 2020 as presented in the BTV's final FRP dated May 5, 2017. Discussions are on-going for cost sharing with the City of South Burlington for the Dumont Avenue Infiltration Gallery, and include land use of the proposed parcel which is owned by BTV.

  The City of South Burlington has gained all necessary funding for the Airport Rd/Airport Dr BMP and plans to move forward with that before they continue with Dumont Ave. The scope of the Dumont Ave project may change in the future depending on other surrounding stormwater BMPs. Discussions will continue in the future and there is not a date set in stone for construction of this BMP.

  A location plan and site drainage area as prepared by the City of South Burlington's design consultant is presented below.



Proposed Dumont Avenue Infiltration Gallery Location Plan and Site Drainage Area

Existing condition photographs of the proposed Dumont Avenue site and BTV's existing stormwater detention basin are presented below. Photo provided by Stantec in their April 1, 2020 FRP Annual Report.

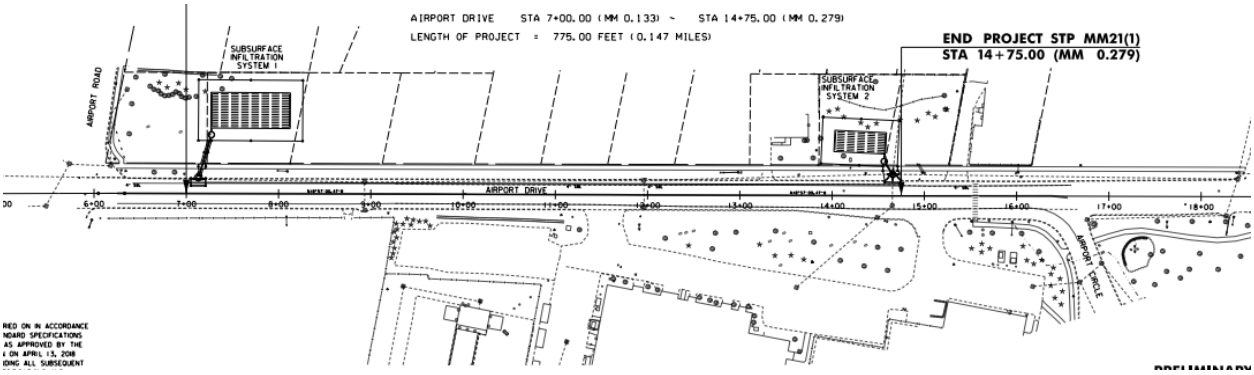
- **<u>South Burlington ID CB0018/Retrofit#200</u>, North Henry Court Infiltration Gallery has a potential construction date for 2032 as noted in BTV's SWMP. The scope of this project could change in the future and depends on surrounding stormwater BMP projects. Discussions have included the idea of removing pavement there and will continue in the future.**

Potash Brook FRP:

- **<u>Airport Drive Stormwater Treatment Systems (South Burlington STP MM21(1)):</u> This project is located along the west side of Airport Drive, with one system at the**

intersection with Airport Rd and one across from Airport Circle. This will divert runoff to proposed subsurface infiltration systems to provide stormwater treatment. There is a memorandum dated March 8, 2021 that states South Burlington will be covering the cost of the project as well as maintenance for 25 years but the property is still owned by BTV. The City of South Burlington has gained full funding from a VTrans grant. All upkeep and maintenance costs of Stormwater improvements are taken on by the city of South Burlington except for any damage by Burlington.

Final design plans are in progress and construction is expected in 2024. There is a permanent easement granted to the City of South Burlington to maintain these stormwater systems and associated permitting. The easement extends 20 feet from each stormwater improvement shown on the associated plan set.



Proposed Airport Drive Infiltration Systems location and site plan (photo provided by the City of South Burlington)

C. Flow Monitoring Program

In September of 2015, VTDEC received bids from three independent contractors/consultants to perform a joint MS4 flow monitoring program. Under the proposed flow monitoring program, eleven stream gauge stations will be established and maintained for a period of three years with an option for two additional years. After bid review by DEC and selected MS4 community representatives, Stone Environmental, Inc., of Montpelier, Vermont was selected as the primary consultant for establishing and maintaining the stream gauge stations.

During review of the bids, several cost allocation formulas for covering the cost of the flow monitoring program were circulated and reviewed amongst all MS4 communities. A proposed formula was subsequently agreed upon by all MS4 communities, including BTV.

A draft Memorandum of Agreement (MOA) between VTDEC and the MS4 communities, including proposed cost allocations, was circulated to MS4 communities in November, 2015 for review. The final MOA was subsequently issued for public notice beginning on November 17, 2015, and

extending through December 17, 2015. No external comments were received during the public notice period. The final MOA was distributed to MS4 community members for approval and signature on February 22, 2016.

The final cost sharing for BTV includes $3,623 for Year 2017, $2,805 for Year 2018, $2,796 for Year 2019, $2,087 for Year 2020, and $2,140 for Year 2021. The fees will begin for Fiscal Year 2017 with invoices to be sent out to individual MS4 communities on July 1, 2016. Invoices will be due May 1, 2017.

April 1, 2024 Status Update:

BTV is cooperatively pursuing an MS4 precipitation and streamflow monitoring program with Chittenden County's other MS4 entities in compliance with NPDES General Permit 3-9014, Section IV. C. 1. (e) (7). This group has approved a Memorandum of Agreement (MOU) with Stone Environmental, Inc. to install, maintain, and collect data, and report for all flow monitoring stations to obtain compliance with the flow monitoring requirements of their MS4 permits. Under the flow monitoring program, eleven stream gauge stations have been established and will be maintained for a period of three years with an option for two additional years. Streamflow monitoring stations have been installed on Allen, Bartlett, Centennial, Englesby, Indian, Morehouse, Monroe, Potash, Rugg, Stevens, and Sunderland Brooks.

Establishment and maintenance of the stream gauge stations began in 2016. Each streamflow monitoring station collects data at five-minute intervals, and the gaging data is available for review on a website: http://vt-ms4-flow.stone-env.com/FlowDev/index.html. The data generated by the monitoring program will be used to compute flow duration curves of measured streamflows, which will be compared to the flow duration curves used to establish the TMDL targets.

Currently, daily stream flow data for Potash Brook and Centennial Brook, including stream gauge data, are available on the website for all of 2017, 2018, 2019, and through April 1, 2021. Rain gauge data is not available for Potash Brook and Centennial Brook.

Daily average watershed precipitation and daily mean discharge data are available for all of 2017, 2018, 2019, and 2020. Each year has a link to an excel sheet with a 5-minute data. Stream Monitoring will not continue past December 2021. Stone Environmental presented a final report of their findings from this study in 2022.

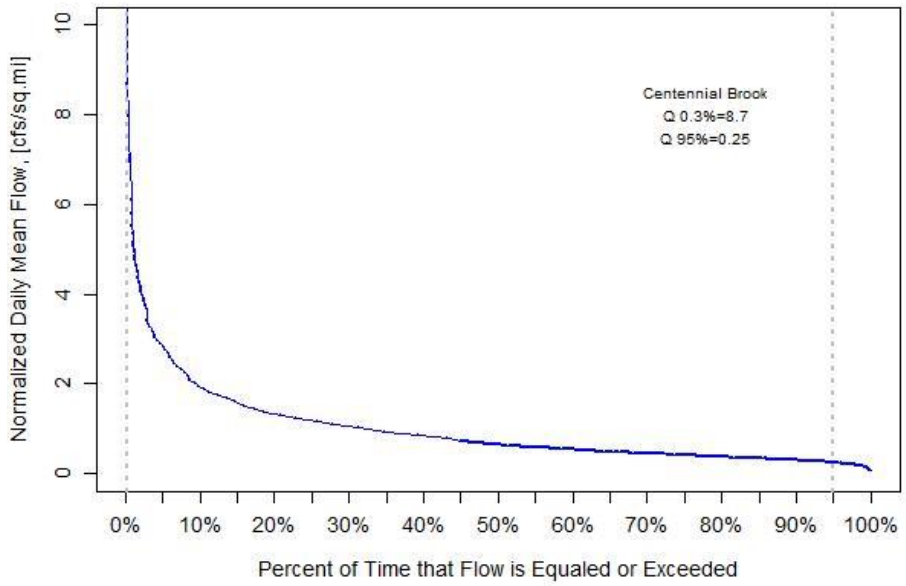
Stone Environmental calculated the 0.3% and 95% flow exceedances of impaired waterbodies and determined that the time interval and inclusion/exclusion of winter flows significantly impacted estimates.

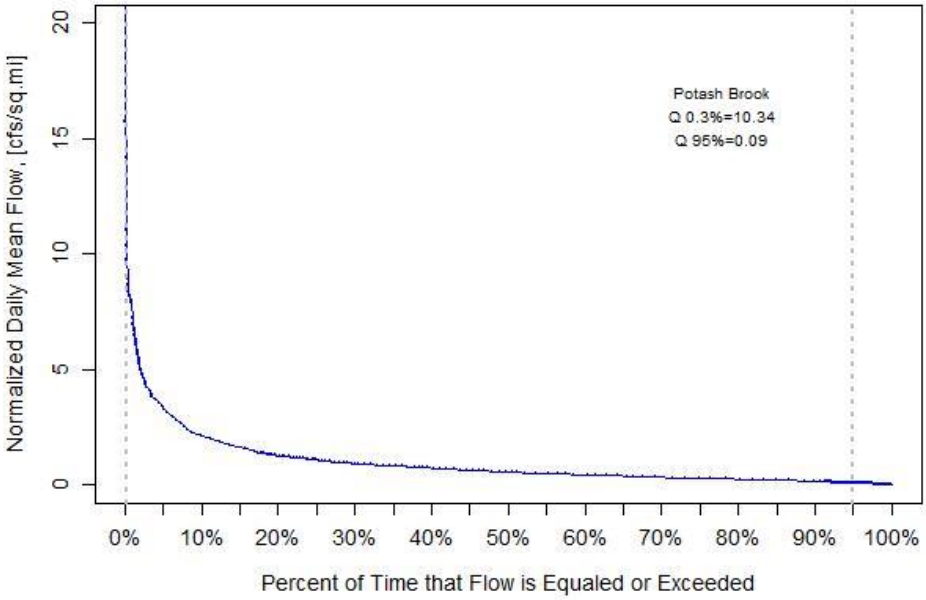
Comparing calculated 0.3% and 95% flow exceedances and corresponding modeled and attainment flows:

	From Daily Data	From Hourly Data	From Hourly Data	From Daily Data	From Hourly Data	From Hourly Data
Stream	2017-2020 Q 0.3% (cfs/mi^2)	Modeled Q 0.3% (cfs/mi^2)	Attainment Q 0.3% (cfs/mi^2)	2017-2020 Q 95% (cfs/mi^2)	Modeled Q 95% (cfs/mi^2)	Attainment Q 95% (cfs/mi^2)
Allen	14.53	11.74	11.27	0.02	0.20	0.22
Bartlett	8.93	11.35	10.27	0.05	0.20	0.22
Centennial	8.70	16.04	7.96	0.24	0.19	0.23
Englesby	8.42	15.46	11.53	0.00	0.19	0.21
Indian	11.54	11.64	11.53	0.10	0.21	0.21
Morehouse[1]	5.41	16.88	8.14	0.09	0.19	0.22
Munroe	15.73	12.01	11.27	0.00	0.20	0.22
Potash	10.34	12.24	10.27	0.08	0.20	0.22
Rugg[2]	28.29	11.32	8.87	0.01	0.20	0.25
Stevens[2]	14.29	11.91	8.87	0.00	0.20	0.25
Sunderland	7.59	8.25	7.96	0.27	0.22	0.23
1. Morehouse Brook watershed is DEC's boundary—does not exclude stormwater diversion to Winooski River						
2.High flow diversion from Stevens to Rugg Brook above the gauges not considered in watershed areas						

Flow Duration Curves:

***Note: Stone Environmental was unable to produce directly comparable hourly FDCs and 0.3% and 95% exceedance values within the project's scope.**


Centennial Brook
Q 0.3%=8.7
Q 95%=0.25
Normalized Daily Mean Flow, [cfs/sq.mi]
0
2
4
6
8
10
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time that Flow is Equaled or Exceeded


Potash Brook
Q 0.3%=10.34
Q 95%=0.09
Normalized Daily Mean Flow, [cfs/sq.mi]
0
5
10
15
20
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time that Flow is Equaled or Exceeded

D. Status of Expired Permits

On September 30, 2015, BTV formally requested incorporation of BTV's two (2) expired operational stormwater discharge permits (Permit Nos. 1-0839 and 1-1391) into BTV's General Permit 3-9014 (2012) MS4 authorization per subsection IV., C., 1.,c), (3), Schedule of Compliance, Month 24.

As part of this submittal, BTV submitted a Notice of Intent (NOI) for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4) General Permit 3-9014, Initial Designer's Statement of Compliance for Permit Nos. 1-0839 and 1-1391, revisions to Volume 1 of BTV's SWMP, and the application fee. The fee was subsequently refunded as VTDEC determined that incorporation of an operational permit by the MS4 does not constitute a "change in activities."

Stormwater system evaluations for both expired permit systems as prepared by Stantec Consulting Services. Inc., for the South Burlington Stormwater Utility and as documented in the BTV Stormwater Utility Credit Analysis dated February 22, 2013 were also submitted for VTDEC review.

VTDEC review and MS4 permit amendment were pending authorization of the Lake Champlain TMDL by U.S. EPA. On June 17, 2016, EPA established new phosphorus TMDLs *for the twelve Vermont segments of* Lake Champlain. *VTDEC made the following comment during review:*

> *"The compliance schedule in the 2012 MS4 permit includes a requirement that expired state stormwater permits be addressed. Permits may be addressed either by incorporation into your MS4 General Permit authorization, provided the systems are verified as being in compliance with the most recent expired permit, or by requesting that they be issued a permit under DEC's authority. The airport has chosen to incorporate both active expired permits, 1-0839 and 1-1391, and the majority of the currently issued permits into their MS4."*

April 1, 2024 Status Update:

No updates on expired permits.

There are no further FRP updates at this time.

Should you have any questions, or require further information, please do not hesitate to contact us.

Regards,

Heidi Miller

Heidi Miller, Civil and Environmental Engineer
EIV Technical Services
355 Main Street, Suite 500
Winooski, VT 05404

cc: Larry Lackey (BTV Director of Engineering and Environmental Compliance)
Jacqueline Dagesse, MBA, CPESC (EIV)

EIV Technical Services

Revised April 1, 2024

Burlington International Airport
Operational Stormwater Permit Summary

Current Permit Number	Description	Issued	Expires	Permit Previously Incorporated into MS4 GP	Permit is propsed for incorporation to MS4 GP on 1/16/2024	Active/Not Active	Notes
3028-9010.A	BTV's Master Permit (Outfalls S/N 001 through S/N 009)	12/22/2009	12/22/2019	Yes	No	Not Active	
1-1391	South Apron Expansion (Vortechs unit)	12/9/1999	9/30/2004	Yes	No	Not Active	
1-0839	Redirect Airfield Drainage to North Outfall	6/11/1990	3/31/1995	Yes	No	Not Active	
3028-9010.2	Reconstruct TW B & C; Relocate TW J; Construct TW G (Muddy Brook discharge)	11/5/2015	11/5/2025	Yes	No	Active	
3028-INDS.AR	Reconstruct TW B & C; Relocate TW J; Construct TW G (Potash Brook discharge)	12/4/2015	12/4/2020	Yes	No	Not Active	Replaced 3028-INDS.A
~~3028--9010.1~~	~~Reconstruct Mark & Groove Runway 15-33~~ See Note below for S/N coverage.	8/13/2015	8/13/2025	No	No	Not Active	Replaced by 3028-INDS.5 & 3028-INDS.7
3845-9010	Heritage Flight Aviation Campus Expansion	8/13/2015	8/13/2025	Yes	No	Active	Replaces 3028-9015
3028-9015.1	Quarry Area Access Road	11/20/2012	11/20/2022	Yes	No	Not Active	
3028-INDS.3	Aircraft Sewage Receiving Station	9/4/2013	9/4/2018	Yes	No	Not Active	
3028-9015.2	Construct, Mark and Light Taxiway "G"/"K"	5/27/2015	5/27/2025	Yes	No	Active	
3845-9015.1	Heritage Aviation Parking Lot	8/25/2015	8/25/2025	Yes	No	Active	
3028-INDS.4	BTV Consolidated Car Rental Facility	7/19/2016	7/19/2021	Yes	No	Not Active	
3028-9015.3	Taxiway 'B' Extension	10/24/2016	10/24/2021	Yes	No	Not Active	
3028-INDS.6 A	Parallel Taxiway 'G', Phase 2	3/26/2019	3/25/2024	Yes	No	Active	Replaced 3028-INDS.6
3028-INDS.7	VT ANG Taxiway 'F' Widening and a portion of Reconstruct, Mark, and Groove Runway 15-33	3/22/2017	3/22/2022	Yes	No	Not Active	
3105-9050	Vermont Air National Guard Base	12/27/2022	12/26/2027	No	No	Active	Replaces BTV permit 3028-INDS.5
3028-9015.4	BTV Hotel	8/29/2019	8/28/2024	No	No	Active	to be replaced by 3028-9050.7
3028-INDS.8	Heritage Flight Hangar Addition	4/28/2020	4/27/2025	No	No	Not Active	Terminated
3028-INDS.9	~~Remain Overnight Apron (Phase 7)~~	6/9/2020	6/8/2025	No	No	Not Active	Replaced by 3028-9050.5 & 3028-9050.5A
3028-INDS.10	BETA Hangar Site	9/28/2020	9/27/2025	No	Yes	Active	Completed
3028-9050	Taxiway K	9/30/2021	9/29/2026	No	Yes	Active	Completed
3028-9050.1	Terminal Integration	8/11/2021	8/10/2026	No	Yes	Active	Completed
3028-9050.2	BETA Technologies - BTV Assembly Facility	4/26/2022	4/25/2027	No	Yes	Active	Under construction, expected completion spring 2024
3028-9050.3	BETA Technologies General Aviation Hangar	4/27/2022	4/26/2027	No	Yes	Active	Completed
3028-9050.5A	BTV Rehabilitate Taxiway A	6/2/2023	6/1/2028	No	Yes	Active	Replaced 3028-9050.5, under construction, expected completion spring 2024
3028-9050.6	Heritage Aviation Fuel Farm Expansion	7/13/2022	7/12/2027	No	No	Active	Completed
3028-9050.7	BTV Hotel	4/12/2023	4/11/2028	No	Yes	Active	not constructed
3028-9050.8	Extend Taxiway G and Construct New General Aviation South Apron	4/20/2023	4/19/2028	No	Yes	Active	Under construction, expected completion 2024

Permits acquired in the last 5 years:
- Acquired in 2019
- Acquired in 2020
- Acquired in 2021
- Acquired in 2022
- Acquired in 2023

Permits incorporated into MS4:
- Incorporated into MS4 12/22/2017
- Incorporated into MS4 4/30/2019
- Incorporated into MS4 1/16/2024

NOTE: Upon issuance, S/N 001, 002, 004, 005, and 006 was covered under 3028-INDS.7 (*VT ANG Taxiway 'F' Widening and a portion of Reconstruct, Mark, and Groove Runway 15-33*),
and
S/N 003 was covered under 3028-INDS.5 (*VT ANG Taxiway 'F' and 'D' Widening, North and South Arm Pad, Apron Repair Project, and a portion of Reconstruct, Mark, and Groove Runway 15-33*).

As a result, Permit 3028-9010.1 *(Reconstruct, Mark, and Groove Runway 15-33)* was terminated.