



**STORMWATER
MANAGEMENT
PROGRAM**

**FOR
VTRANS MS4
SMALL MUNICIPAL SEPARATE STORM SEWER
SYSTEM**

VERMONT AGENCY OF TRANSPORTATION

SWMP Established June 3, 2013

**VTRANS STORMWATER MANAGEMENT PROGRAM
(SWMP)**

VERMONT AGENCY OF TRANSPORTATION STORMWATER MANAGEMENT PROGRAM

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VERMONT AGENCY OF TRANSPORTATION STORMWATER MANAGEMENT PROGRAM

Established June 3, 2013

Introduction & Background

As part of the VERMONT AGENCY OF TRANSPORTATION'S (VTrans) Notice of Intent for coverage under General Permit 3-9014, issued on December 5, 2012 (the Permit), National Pollutant Discharge Elimination System (NPDES) Number VTR040000, for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), the VTrans Stormwater Management Plan (SWMP) was established on June 3, 2013 and covers permit years 2013 through 2018.

VTrans has been designated as an operator of a non-traditional Municipal Separate Storm Sewer System (MS4) under the Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems administered by the VANR. The Permit is issued in accordance with the following state and federal laws and rules: the Vermont Water Pollution Control statute, 10 V.S.A. Chapter 47, including §§ 1259, 1263, and 1264; the Vermont Water Pollution Control Rules, Chapter 13, including the rule governing general permits in Section 13.12; the federal Clean Water Act, as amended, 33 U.S.C.A. 1251 et seq., including 33 U.S.C.A. 1342(p); and the regulations of the federal Environmental Protection Agency including 40 CAR 122.26, 40 CAR 122.28 and 40 I.E. 122.30 to 122.37.

VTrans is required to comply with the conditions of the Permit on State Highways, other transportation facilities, and VTrans maintenance facilities that are located in the 2000 Census Urbanized Areas (UAs) and in the watersheds of waters that are principally impaired by collected stormwater runoff.

The VTrans MS4, which is regulated by the Permit, is approximately two (2) square miles. The area includes approximately 102 miles of State Highway and one Maintenance Garage located within the UAs and the associated impaired waters. Please refer to the attached map for a display of the VTrans MS4 (Figure 1).

This document defines the SWMP for VTrans as required in Section 2 of the Permit. The SWMP will advance and evolve through the term of the Permit, under the direction of the VTrans Stormwater Steering Committee. VTrans will coordinate the implementation of the VTrans SWMP with the related activities of all other MS4s in Vermont.

VTrans is committed to the full implementation and enforcement of the SWMP which has been designed to reduce the discharge of pollutants from the VTrans non-traditional small MS4 to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. The Permit states that the implementation of best management practices consistent with the provisions of the SWMP required pursuant to this permit constitutes compliance with the standard of reducing pollutants to the "maximum extent practicable".

VTrans is committed to stewardship of the natural and cultural resources of the State of Vermont. This commitment is reflected in the VTrans Mission Statement where it is stated that: "The Agency's Mission is to maintain a transportation system that allows for the safe movement of people and goods in a cost-effective, environmentally sensitive and timely manner". The VTrans Policy Manual reflects the Agency's commitment to environmental quality as noted under Policy #8021 which establishes the Environmental Stewardship Ethic for VTrans. It is under this Policy where the ethic statement to recognize environmental quality is guided by principles and practices that are applied to all of the Agency's business practices. Under this Policy VTrans aims to be a positive force in supporting the state's environmental quality, while subject to our responsibilities to make judgments and decisions based on numerous factors including cost, safety, and resource availability.

Stormwater Discharges

The 2012 MS4 permit authorizes stormwater discharges to waters of the State and waters of the United States from the small MS4s. The following discharges are eligible for authorization under this general permit:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensate
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Flows from riparian habitats and wetlands, and
- Discharges from fire fighting activities.

Discharges from Bridge and Vehicle Washing are not authorized under this permit, to address these discharges the Agency will follow the VTrans Bridge Washing BMP and ANRs Vehicle Washing Policy (see appendix C). Any other discharge to the Agency's MS4 that is not authorized under this permit will be treated as illicit discharges and dealt with according to the requirements of this permit.

Discharges Requirements

Impaired waters are those waters that the Secretary has identified pursuant to Section 303(d) of the Clean Water Act as not meeting the Vermont Water Quality Standards. Impaired waters encompass both those with approved Total Maximum Daily Loads (TMDLs), and those for which TMDL development has been identified as necessary, but for which a TMDL has not yet been approved by the Secretary or EPA. Stormwater impaired waters include those waters that the Secretary has listed as impaired primarily due to stormwater runoff on the EPA-approved State of Vermont 303(d) List of Waters.

For the complete list of VTrans MS4 Receiving water refer to Figure 2.

Stormwater Impaired Waters

*The permittee shall develop and submit a comprehensive Flow Restoration Plan (FRP) for the portion of each stormwater- impaired watershed within the permittee's boundaries. Permittees that discharge into the same stormwater- impaired watershed may elect to cooperate to develop a single FRP for the watershed. The FRP shall be submitted to the Secretary **no later than three years after the date of issuance of an authorization to discharge to the permittee under this general permit.** The FRP shall contain the following elements:*

VTrans has infrastructure in 11 of the 12 stormwater impaired waters; Allen, Bartlett, Centennial, Englesby, Indian, Moon, Munroe, Potash, Rugg, Stevens, and Sunderland Brooks. VTrans will work cooperatively with the other MS4s in each watershed wherever possible to define allocation of TMDL targets and develop the Flow Restoration Plans no later than 3 years and will report on the progress following the schedule as put forth by the Secretary. Once developed, each approved FRP will be included in the SWMP as an appendix.

Technical Assistance for Low Impact Best Management Practices

Commencing two years after the issuance of an authorization or designation as a regulated small MS4, the permittee shall develop a program to identify opportunities for and provide technical assistance to landowners in the implementation by landowners of low impact BMPs such as maximizing disconnection, maximizing infiltration of stormwater runoff, preventing and eliminating soil erosion, and preventing and eliminating the delivery of pollutants to stormwater conveyances.

VTrans does not have landowners within its jurisdictional boundaries and therefore does not need to comply (see page 22 of the response to comments for the draft MS4 permit):

“26d. (IV.C.1.e.4) Is this intended for municipalities with landowners within their MS4 jurisdiction. What does this mean for non-traditional MS4’s with no landowners within its jurisdictional boundaries? (VTrans)

Response: If a permittee has no landowners within its boundaries, then it would not apply.”

However, in an attempt to fulfill the intent of the requirement, VTrans will develop an educational brochure focusing on low impact BMPs along with the hazards of illicit discharges. This brochure will be handed out with appropriate Title 19, Section 1111 permits and will be available on our website. (MM#3)

Stream Corridor Protection

Commencing two years after the issuance of an authorization, the permittee shall prepare and submit to the Agency a report on legal authorities or strategies that the permittee has adopted to protect and regulate development in the stream corridors of stormwater impaired waters. The report will include a section on enhanced protection of stream corridors of stormwater impaired waters

Within two years of receiving authorization under the 2012 MS4 permit the Agency will develop and submit a report to ANR regarding the protection and regulation of development in stream corridors, the SWMP will be updated to include this report.

Stream Flow Monitoring

The permittee shall implement, or otherwise fund, a flow and precipitation monitoring program, subject to approval by the Secretary, in its respective stormwater impaired watersheds. A nontraditional MS4, at a minimum, may cost share in the O&M cost of the gage(s) for each watershed into which it discharges.

This section is reserved for a description of the flow monitoring plan required by section IV.C.1(e)(7) of the 2012 MS4 permit. The 2012 MS4 permit requires that the Agency, at a minimum, cost share in the O&M cost of the gages(s) for each watershed into which it discharges. The SWMP will be amended to include this information once it is approved by the Vermont ANR.

Requirements to Reduce Pollutants to the Maximum Extent Practicable - “The Six Minimum Measures”

A permittee shall develop, implement, and enforce a Stormwater Management Program (SWMP) designed to reduce the discharge of pollutants from the small MS4 to the maximum extent practicable (MEP), to protect water quality, and to

satisfy the appropriate water quality requirements of the Clean Water Act. For purposes of the permit, narrative effluent limitations requiring implementation of best management practices (BMPs) are the most appropriate form of effluent limitations when designed to satisfy technology requirements (including reductions of pollutants to the maximum extent practicable) and to protect water quality. Implementation of best management practices for purposes of the six minimum measures consistent with the provisions of the SWMP constitutes compliance with the standard of reducing pollutants to the "maximum extent practicable".

The six minimum measures include:

1. Public Education and Outreach
2. Public Participation/Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post-Construction Runoff Control
6. Pollution Prevention/Good Housekeeping

1. Public Education and Outreach on Stormwater Impacts

A permittee must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies.

For the purpose of this permit VTrans will utilize the definition of “public” found in the New Hampshire MS4 which states “the audiences for a Non-traditional MS4 include the employees, clients and customers (including students at education MS4s) or visitors to the property, and any contractors working at the facility where the MS4 is located.” To meet this requirement VTrans will:

- Maintain a web site with locally relevant stormwater management information and promote its existence and use.
- Participate in the regional stormwater education and outreach strategy described in the March 10, 2008 memorandum of agreement between designated small MS4s, the Chittenden County Regional Planning Commission and the Vermont Agency of Natural Resources. See appendix A.
 - Measurable Goal: VTrans will participate in the Regional Stormwater Education Program (RSEP) and will report accomplishments annually.

2. Public Involvement/ Participation

The permittee must implement a public involvement/ participation program, which at a minimum, complies with State and local public notice requirement.

For the purpose of this permit VTrans will utilize the definition of “public” found in the New Hampshire MS4 which states “the audiences for a Non-traditional MS4 include the employees, clients and customers (including students at education MS4s) or visitors to the property, and any contractors working at the facility where the MS4 is located.” To meet this requirement VTrans will:

In Chittenden County MS4 area:

- Participate in the regional stormwater public involvement and participation program described in the May 1, 2011 memorandum of understanding between the designated small MS4s and the Chittenden County Regional Planning Commission. See Appendix B.
 - Measurable Goal: VTrans will participate in the Chittenden County Stream Team program and will report accomplishments annually.

In Moon, Stevens, and Rugg Brooks:

- Establish or support a water quality monitoring program involving citizen volunteers.

Measurable Goal: VTrans will establish a partnership with a citizen water quality monitoring program in first year and report accomplishments annually.

- Institute an on-going public workshop series on stormwater awareness. VTrans will develop and put on workshops for employees.
 - Measurable Goal: VTrans will report on the number, attendance and, title of trainings provided.
- Establish and support a citizen “stormwater watch” group. VTrans will develop a web page for citizens to report alleged stormwater concerns, such as erosion, illegal dumping, hazmat spills, unauthorized non-stormwater discharges, etc.
 - Measureable Goals: VTrans will report on the number and the nature of the reports that are submitted annually.

3. Illicit Discharge Detection and Elimination

A permittee must develop, implement and enforce a program to detect and eliminate illicit discharges (as defined in 40 CFR § 122.26(b) (2)) into its small MS4, if it has not already done so.

To meet this requirement VTrans will:

- Develop and maintain a storm sewer geographic information systems (GIS) map of the small MS4, showing the location of all outfalls and the names and location of all waters of the State and waters of the United States that receive discharges from those outfalls. In the first year of the permit, VTrans will map infrastructure within the Rugg and Stevens Brook Watersheds. VTrans will update the mapping already completed for the Moon Brook Watershed as well as the Chittenden County area in years 2 and 3 of the permit term.

- Measurable Goals: VTrans will report annually on progress and accomplishments.
- VTrans has an existing program that issues permits for residential and commercial driveway access to the State Rights-of-Way (ROW). VTrans also issues permits for non-VTrans projects within the ROW. The program includes review of proposals for open and/or closed connection to the VTrans MS4 from residential and commercial property owners. To the extent allowable under State or local law, VTrans uses this Section 1111 Permitting authority to effectively prohibit non-stormwater discharges into the VTrans MS4 storm sewer system and implement appropriate enforcement procedures and actions to satisfy the terms of the Permit. This is implemented through the imposition of Special Conditions (put in place in 2007) under its Title 19, Section 1111 Permitting Authority on all identified proposed and existing connections to the VTrans MS4 stormwater system. VTrans will adopt an illegal connection illicit discharge policy to enhance title 19 authorization in year two.
 - Measurable Goals: VTrans will report annually on a summary update of these efforts.
- Develop and implement a plan to detect and address non- stormwater discharges, with emphasis on outfalls in the stormwater impaired watershed(s) and random illegal dumping to the system, such as the dumping of RV wastes, used oil, paint, etc. VTrans completed testing of outfalls for illicit discharges in Chittenden County in 2006. VTrans will complete testing of outfalls in the Moon, Rugg and Stevens Brooks following completion of the mapping in those watersheds.
 - Measurable Goals: VTrans will report annually on progress and accomplishments including the number of illicit discharges encountered each year.
- Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste. VTrans will develop an informational flyer to give to 1111 permit holders that discusses these hazards
 - Measurable Goals: VTrans will report annually on the number of permits issued in the MS4 area.
- VTrans Hazmat Coordinators conduct Spill Prevention Control Countermeasure Plans (SPCCPs) trainings and inspections annually and as needed. Additionally, they monitor and conduct hazmate spill response and illegal dumping.
 - Measurable Goals: VTrans will provide the Secretary with an annual status report of monitoring activities conducted and corrective actions taken.

4. Construction Site Stormwater Runoff Control

Pursuant to federal regulations at 40 C.F.R. 122.34(b)(4) the permittee must to the extent allowable under state or local law develop, if it has not already done so, and enforce a program to reduce pollutants in any stormwater runoff to the

small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre.

To meet this requirement VTrans will:

- Develop and implement procedures to assure that construction activities undertaken by VTrans are properly permitted and implemented in accordance with the terms of the construction permit. VTrans will comply, or will require others working in our right-of-way under a Section 1111 Permit to comply, with ANR issued General Permit 3-9020 (2008) and/or Individual Permit regulating stormwater runoff from construction sites which result in land disturbance equal to or greater than one acres of land.
 - Measurable Goals: VTrans will report annually a list of projects in the MS4 with Construction General Permit and/or Individual Permit Coverage.

- Vtrans will review existing policies to determine their effectiveness in managing construction-related erosion and sediment. The policies will also be reviewed for their consistency with the requirements of the Secretary's general permits for stormwater runoff from large and small construction sites and construction erosion guidelines for low impact development. In 2002 VTrans developed an "Environmental Field Handbook for Culvert and Ditching Procedures". This Handbook is based on field application of the VTrans Statewide Culvert and Ditching Procedures that have been in effect since 1997. The Culvert and Ditching Procedures were developed with participation from the ANR, US Army Corps of Engineer, US Environmental Protection Agency, US Fish and Wildlife Service, and the Federal Highway Administration. The VTrans EPSC Protocol was developed in late Fall 2006 and sets guidelines for Consultants, VTrans Designers, VTrans Construction Management Staff and District field staff for creating and implementing consistent Erosion Prevention and Sediment Control Plans that meet the requirements of the New CGP 3-9020 and for those projects disturbing less than 1 acre with any potential to impact resources. The guidelines include EPSC Plan Checklists, flowcharts, detail drawings, specifications and general guidance; all of which are posted on the VTrans Environmental Webpage. VTrans will review and update as needed the Culvert and Ditching Procedures and the EPSC Protocol.
 - Measurable Goals: VTrans will report annually a summary update of actions taken and changes to standards, procedures, and guidance documents.

- Develop and implement an erosion control policy which, at a minimum, regulates development activities not subject to state or federal erosion control requirements. The VTrans EPSC Protocol was developed in late Fall 2006 and sets guidelines for Consultants, VTrans Designers, VTrans Construction Management Staff and District field staff for creating and implementing consistent Erosion Prevention and Sediment Control Plans that meet the requirements of the New CGP 3-9020 and for those projects disturbing less than 1 acre with any potential to impact resources. The guidelines include EPSC Plan Checklists, flowcharts, detail drawings, specifications and general guidance; all of which are posted on the VTrans

Environmental Webpage.

- Measurable Goals: VTrans will report annually a list of projects in the MS4 that are non-jurisdictional but fall under the VTrans EPSC Protocol.
- VTrans will conduct Erosion Prevention and Sediment Control Assurance Visits. The primary purpose of Erosion Prevention and Sediment Control Assurance Visits is to ensure that VTrans protects natural resources and complies with state and federal regulations through implementation of project Erosion Prevention and Sediment Control Plans and compliance with environmental permit conditions. The VTrans Construction Engineers will visit VTrans contracted construction projects to provide input, training, support, and resources relative to erosion prevention and sediment control.
 - Measurable Goals: VTrans will report annually the number of construction sites visited within the MS4.
- VTrans will conduct and attend Stormwater Management - Erosion Prevention & Sediment Control Training. VTrans offers a broad range of formal training on erosion and sediment control and stormwater management design to agency staff. These training classes are instructed by VTrans and non-VTrans subject experts from around the country. More classes are scheduled for 2013–2018 Permit Term. When space allows the training classes are open to employees of ANR, the Federal Highway Administration, the U.S. Department of Agriculture Natural Resources Conservation Service, and consulting companies. VTrans also provides an extensive amount of annual erosion and sediment control training to maintenance and construction employees through internal training meetings. VTrans staff is encouraged to seek training opportunities outside the agency. Additionally, each year VTrans provides a one-day training workshop for construction contractors that included a session on erosion and sediment control and compliance with regulations. Annual training for Maintenance District personnel training includes a session on stormwater management, erosion and sediment control, and compliance with regulations governing these activities.
 - Measurable Goals: VTrans will report annually on class titles, attendance, target audience and, number of trainings.

5. Post-Construction Stormwater Management for New Development and Redevelopment

Pursuant to 40 C.F.R 122.34(b)(5) a permittee must develop, if it has not already done so, implement, and to the extent allowable under State or local law, enforce a program to address post-construction stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the small MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts.

- VTrans will review existing policies to determine their effectiveness in managing stormwater runoff that discharges from new development and redevelopment projects to prevent adverse impacts to water quality as well as their consistency with the requirements of the Secretary's rules and general permits regulating post-construction stormwater runoff.
 - Measurable Goals: VTrans will report annually a list of projects in the MS4 with VT ANR Operational Permit coverage.
 - Measurable Goals: list of Vtrans State Operational permits inspected in MS4.

- VTrans will assess whether changes can be made to its process and policies in order to support low impact design options whether changes can be made to current street design and parking lot guidelines and other local requirements that affect the creation of impervious surfaces to support low impact design options. Governor Shumlin, in March of 2012, signed an Executive Order which established an Interagency Green Stormwater Infrastructure Council. The Council includes the Secretaries (or delegates) of the Agency of Natural Resources, Agency of Transportation, Agency of Commerce and Community Development, and the Commissioner of the Department of Buildings and General Services or their designees. The main responsibilities of the council include, but are not limited to:
 1. Identifying opportunities for the integration of green stormwater infrastructure systems and practices into existing state programs.
 2. Initiating a process for the development of a technical guidance for implementation of green stormwater infrastructure systems and practices.
 3. Establishing a plan and timeframe for the implementation of green stormwater infrastructure systems and practices associated with state properties and state constructed sites.
 4. Identifying state liaisons to support green stormwater infrastructure implementation within their agencies.
 5. Identifying and undertaking green stormwater infrastructure research and monitoring studies.
 6. Identifying on-going and sustainable funding sources to support regional planning, coordination, and implementation efforts.

In conjunction with the above, members of the Council are also responsible for the development of *Green Stormwater Infrastructure (GSI) Implementation Work Plans*. The purpose of the work plans is to highlight current initiatives, identify barriers to the implementation of green infrastructure practices, and set a direction for the promotion and adoption of green stormwater infrastructure in the years ahead.

- Measurable Goals: VTrans will report annually on the development and implementation of the GSI work plans.

- VTrans has developed an internal procedure to address the permit jurisdictional threshold gap between the VTANR GP-3-9015 jurisdictional thresholds and the EPA one acre of land disturbance permit threshold. The goal of this internal procedure is to protect water quality by designing post-construction stormwater management systems on all new and

redeveloped VTrans projects in the VTrans MS4 to comply with the Vermont Stormwater Management Manual to the extent that is practical.

- Measurable Goals: VTrans will report annually a list of projects that complied with a VT ANR Operational Permit or that followed the internal VTrans procedure for projects not subject to these permits.
- VTrans will develop and implement an asset management tool that will ensure adequate inspections and long-term operation and maintenance of Best Management Practices. Permit term years 1 and 2 will focus on the development of the tool with the anticipation of implementing it in year 3.
 - Measurable Goals: VTrans will report annually on the development and implementation of the asset management tool.
- VTrans will conduct and attend Stormwater Management and Erosion and Sediment Control Training. VTrans offers a broad range of formal training on erosion and sediment control and stormwater management design to agency staff. These training classes are instructed by VTrans and non-VTrans subject experts from around the country. More classes are scheduled for 2013 – 2018 Permit Term. When space allows the training classes are open to employees of ANR, the Federal Highway Administration, the U.S. Department of Agriculture Natural Resources Conservation Service, and consulting companies. VTrans also provides an extensive amount of annual erosion and sediment control training to maintenance and construction employees through internal training meetings. VTrans staff is encouraged to seek training opportunities outside the agency. Additionally, each year VTrans provides a one-day training workshop for construction contractors that included a session on erosion and sediment control and compliance with regulations. Annual training for Maintenance District personnel training includes a session on stormwater management, erosion and sediment control, and compliance with regulations.
 - Measurable Goals: VTrans will report annually on class titles, attendance, target audience and, number of trainings.

6. Pollution Prevention/ Good Housekeeping for Municipal Operations

The permittee must describe its operation and maintenance program for preventing or reducing pollutant runoff from small MS4 operations.

- VTrans Operation Districts will comply with the terms of the VTANR Construction General Permit or Individual Permit for new construction and land disturbance within the MS4. For projects that are under the jurisdictional threshold the Districts will follow the Culvert and Ditching Procedures.
 - Measurable Goals: VTrans will report annually a list of District projects with Construction General Permit or Individual Permit coverage.
- VTrans will:
 - Follow the ANR Vehicle Washing Policy for the washing of fleet vehicles.

- Follow the VTrans Bridge Washing BMP for all Bridge washing done in the MS4.
- All state garages located in the MS4 will develop a Stormwater Pollution Prevention Plan (SWPPP) and a Spill Prevention Plan (SPP). VTrans will have annual trainings on these plans and the facilities will be inspected annually.
- Implement a Tri-Level Winter Maintenance with a goal to be more efficient with winter maintenance usage of snow and ice controls and reduce sand/salt usage.
- Conduct street sweeping on VTrans road within the MS4.
- Conduct storm drain inspection and cleaning within the MS4.
- Properly dispose of materials collected during street sweeping and storm drain cleaning.
- Implement roadside bank stabilization projects.
- Track use of fertilizers used. Fertilizing is used primarily for turf establishment, typically for ditches, slopes and around culverts. A bill passed in 2011 primarily addresses turf maintenance. This bill requires use of only low or no phosphorous fertilizers unless a soil test is taken to require more. VTrans does not use any fertilizer for turf management.
- Measurable Goals:
 - VTrans will report:
 - Report annually on inspections and trainings conducted at state garages.
 - Report annually on salt and sand usage for winter road maintenance.
 - Report annually on total volume of material removed from street sweeping and storm drain cleaning.
 - Report annually on slope stabilization and erosion repair projects completed.
 - Report annually on fertilizer use.
- VTrans owns the land in which industrial facilities subject to an individual NPDES permit or General Permit 3-9003, Multi-Sector General Permit for Stormwater Discharges Associated With Industrial Activity (2011) (NPDES Number: VTR 050001) are operated on:
 - Rutland Rail Yard (5252-9003.R) – operated by Vermont Railway Systems Inc.
 - Burlington Rail Yard (5251-9003.R) – operated by Vermont Railway Systems Inc.

Reporting

The Agency will submit an annual report to the Vermont ANR on or before April 1 of each year. The report will detail the Agency's efforts over the previous calendar year and include the following information:

- The status of the Agency's compliance with permit conditions.
- An assessment of the appropriateness of the identified best management practices.
- Progress towards achieving implementation of BMPs necessary to meet TMDL requirements and progress towards achieving the statutory goal for the six minimum measures of reducing the discharge of pollutants to the

Maximum Extent Practicable

- Measurable goals for each of the minimum control measures and TMDL implementation measures;
- A summary of monitoring data used to assess the success of the program at meeting TMDL requirements.
- A summary of the stormwater activities the permittee plans to undertake during the next reporting cycle (including an implementation schedule);
- Proposed changes to the Agency's SWMP; and
- Notice that the Agency is relying on another entity to satisfy some of its permit obligations.

Figure 1 - Map of VTrans MS4

Figure 2 – VTrans MS4 Receiving Waters

VTrans MS4 Receiving Waters for permit term 2013-2018

Receiving Water	Town	number of outfalls *	Impaired (Yes/No)	Pollutant of Concern	TMDL (Yes/No)	MS4 Allocation	Measures
unknown Trib to Lamoille River	Milton	1	No				
The Creek	Jericho	1	No				
Browns River	Jericho/Jericho Village/Essex	8	No				
Alder Brook	Essex	15	No				
unknown trib to Alder Brook	Essex	2	No				
Winooski River	Essex/South Burlington/Colchester	15	No				
unknown trib to the Winooski River	Essex, South Burlington, Winooski, Colchester	9	No				
unknown trib to Sunderland Brook	Colchester	1	No				
Indian Brook	Essex	9	No				
unknown trib to lake champlain	Colchester	2	No				
McCabes Brook	Shelburne	2	No				
unknown trib to Sunderland Brook	Colchester	6	No				
Pond Brook	Colchester	4	No				
Indian Brook	Essex	11	Yes	Stormwater	Yes	Yes	FRP development and implementation
Englesby Brook	Burlington	unknown	Yes	Stormwater	Yes	Yes	FRP development and implementation
Englesby Brook	Burlington	unknown	Yes	E.Coli	Yes	No	MM #1 and #3
Bartlett Brook	South Burlington	2	Yes	Stormwater	Yes	Yes	FRP development and implementation
LaPlatte Brook	Shelburne	1	Yes	E.Coli	Yes	No	MM #1 and #3
Allen Brook	Williston	15	Yes	Stormwater	Yes	Yes	FRP development and implementation
Allen Brook	Williston	16	Yes	E.Coli	Yes	No	MM #1 and #3
Centennial Brook	South Burlington	2	Yes	Stormwater	Yes	Yes	FRP development and implementation
Muddy Brook	Williston	6	Yes	Toxics	No		Surface water impact from past disposal activities - no action from VTrans
Sunderland Brook	Colchester	1	Yes	Stormwater	Yes	Yes	FRP development and implementation
Stevens Brook	St. Albans	unknown	Yes	Stormwater	Yes	Yes	FRP development and implementation
Moon Brook	Rutland	1	Yes	Stormwater	Yes	Yes	FRP development and implementation
Potash Brook	South Burlington	34	Yes	Stormwater	Yes	Yes	FRP development and implementation
Potash Brook	South Burlington	35	Yes	E.Coli	Yes	No	MM #1 and #3
unknown trib to winooski river	South Burlington	1	Yes	metals	No		Part b - plan in place to mitigate - no action from VTrans
direct smaller drainage to inner mallets bay	Colchester	5	Yes	E.Coli	Yes	No	MM #1 and #3
Muddy Brook	Williston	9	Yes	nutrients, temperature	No		MM #1, #4, #5, and #6
Munroe Brook	Shelburne	3	Yes	Stormwater	Yes	Yes	FRP development and implementation
Rugg Brook	St. Albans	unknown	Yes	Stormwater	Yes	Yes	FRP development and implementation
Lower Lamoille River	Milton	2	Yes	Low D.O.	No		Part b - plan in place to mitigate - no action from VTrans

* this number was gathered using the best available data and will be updated as more information becomes available

Appendix A - RSEP MOU

**CHITTENDEN COUNTY
REGIONAL STORMWATER EDUCATION PROGRAM
MEMORANDUM OF UNDERSTANDING
FOR THE PERIOD MARCH 10, 2013 THROUGH MARCH 9, 2018**

This Memorandum of Understanding (“MOU”) establishes an agreement among the Parties (as specified in Section 1) for a group of Municipal Separate Storm Sewer Systems (“MS4s”) to contract to operate a Regional Stormwater Education Program (“Program”) that conforms with and satisfies the relevant requirements regarding Minimum Control Measure One (“Public Education and Outreach”) of the Phase II NPDES Permit for Program Years 2013--2018), as established in General Permit 3-9014 (2012) (MS4 Permit”) as continued or renewed by the Vermont Department of Environmental Conservation (“VTDEC”).

1. **Parties to the MOU** – The parties to this agreement are:

- a. **MS4s** – the undersigned municipalities and other entities and any other MS4 that may execute this agreement following approval of that MS4’s inclusion as a party to this MOU by a 2/3rds majority of the voting members of the Steering Committee and
- b. **Lead Agency** – the Chittenden County Regional Planning Commission (“CCRPC”), unless a majority of the Steering Committee favors a different lead agency or the CCRPC no longer wishes to act as the Lead Agency.

2. **Steering Committee**

- a. **Composition** – The voting members of the Steering Committee shall consist of one representative from each of the MS4s who are signatory to this Agreement as designated by each MS4. The voting members may, by a 2/3rds majority vote, invite one or more other organizations to each appoint a representative to serve as a new member, a non-voting member or as an advisory member of the Steering Committee. Such organizations may include, but not be limited to, the Lake Champlain Committee, the Champlain Water District, the Chittenden Solid Waste District, other MS4s, or other municipalities.
- b. **Duties** – The voting members of the Steering Committee shall advise the Lead Agency on the development and performance of Program Services and on matters bearing on the administration of this agreement. The Steering Committee will endeavor to meet, quarterly or more often as needed.

3. **Lead Agency**

- a. **Duties** – The Lead Agency will provide Administrative Services in terms of administering this MOU and agreements with contractors (including executing contracts, receiving and disbursing funds, and monitoring the provision of services) on behalf of the MS4s. The Lead Agency shall not provide services related to this program for entities outside of the MS4 signatories. Additional coordination shall be only at the direction of the Steering Committee or its chair. The Lead Agency may also provide other Non-Administrative services (including, but not limited to, public education and outreach activities, public relations, grant writing, web site editing, etc.) as

directed by the Steering Committee and at a level consistent with each year's Program Budget as described in Section 6.a. The Lead Agency is not a guarantor that services will be performed.

- b. **Compensation** – The MS4s agree to compensate the Lead Agency for the actual costs of performing Administrative and Non-Administrative duties defined in Section 3.a. Compensation shall be for hourly wages, appropriate overhead and expenses. Compensation for Administrative Duties shall not exceed ten (10%) percent of the Program Budget as specified in Section 6 without prior approval of a simple majority of the Steering Committee present at the time of the vote or by email response. Personnel costs for Lead Agency staff engaged in Administrative or Non-Administrative Duties shall be calculated at a rate of salary plus fringe. The Lead Agency shall submit invoices no more frequently than monthly. Invoices shall provide a description of work tasks completed by the Lead Agency for that billing period with sufficient detail to the satisfaction of the steering committee.
4. **Selection of Contractors** – In general, the Steering Committee shall competitively bid for contract(s) for Program Services that collectively satisfy the requirements for Minimum Control Measure One ("Public Education and Outreach") of the Phase II NPDES Permit for Program Years 2013 – 2018 as established by the MS4 Permit and as defined in Section 5. All contracts shall be awarded based on qualifications, price, and the ability of the entity to provide services that meet the relevant MS4 Permit requirements. However, upon consent of the majority of the voting members of the Steering Committee present, the RSEP may waive the bid process for select contracts. Contracts may be up to 5 years in length and shall include, but not be limited to, language specifying the right of the RSEP to cancel a contract if services are not being adequately provided and language specifying that payments to contractors shall be made only for services rendered.
5. **Program Services** – The Steering Committee, assisted by the Lead Agency and contractors, will implement a media advertising campaign and provide stormwater education services that satisfy the requirements of Minimum Control Measure One ("Public Education and Outreach") of the Phase II NPDES Permit for Program Years 2013 – 2018), as established by the MS4 Permit, in accordance with Section 5.a..
 - a. **Program Content** – The Program Content for each Program Year will be as defined in the Communications Plan for that year as approved by a majority of the Steering Committee. Annual Program elements will include, at a minimum: 1) operation of the Program's website, www.smartwaterways.org or its equivalent, 2) the hosting of occasional educational seminars open to the public concerning stormwater pollution prevention and related topics, and 3) advertisements in various media.
6. **Program Budget, Costs, and Payments**
 - a. **Program Budget**
 - 1) The annual Program Budget shall consist of the sum of the annual \$5,000 payments for a given Program Year made by participating MS4s plus any Public Participation payment as described below in Sections 6b and 6c, respectively.
 - 2) Prior to March 1st of every year, the Steering Committee shall adopt a Program Budget governing expenditures for the subsequent program year. Budget categories shall include, but not be limited to: Lead Agency Administrative Duties, Lead Agency Non-Administrative Duties, Media Advertising Purchases, Media Marketing Consulting Services, and Other Contractual Services.

- b. **Participating MS4 Maximum Annual Costs and Payments** – Except as otherwise provided for in this section or in section 12c, each MS4 that is a party to this MOU shall by July 30 of each program year make a single annual payment of \$5,000 to pay for Program Services (as defined in Section 5) and Lead Agency services (as defined in Section-3.a.). In the event that costs are less than anticipated or that grants or other funding sources become available, a majority of the voting members of the Steering Committee may decide to reduce each MS4's payment by an equal amount. The Steering Committee may require additional dues from new members joining after March 9, 2013 to help defray program development costs incurred since the Program's inception.
 - c. **Public Participation Payments** – Any payments made by an MS4 (regardless of whether or not the MS4 is a Party to this MOU) to the Lead Agency as a part of compliance with Section 4.2.2.1 of the MS4 Permit (governing payments in lieu of undertaking specific Public Involvement/Participation Activities) shall pay for Program Services as defined in Section 5.
 - d. **Other Funds** – Any funds made available to the Program other than Participating MS4 Costs and Payments (pursuant to Section 6.b.) or Public Participation Payments (pursuant to Section 6.c.) shall be dedicated to reducing the annual costs of each MS4 participating in the Program, except as a majority of the voting members of the Steering Committee may decide.
 - e. **Excess Funds** – Any funds remaining at the end of a Program Year, less any earmarked set aside funds (such as survey funds, etc), shall be carried over to the next Program Year, unless a 2/3^{rds} majority of the voting members of the Steering Committee decides otherwise. Following the payment for all Program Services and Lead Agency services at the end of Program Year 2018, any funds remaining shall be carried forward for successive years where program services continue under successive agreements. Any funds refunded to the MS4s participating in this MOU shall be refunded based upon a prorated portion depending upon the number of months of participation by that MS4, except that any additional payments made by a member beyond its \$5,000 annual payments shall be first refunded in full, except for payments made in lieu of performance of Minimum Measure #2.
 - f. **In-Kind Services** – Program Services (as defined in Section 5) that are provided by a member may be used to offset the Participating MS4 Costs and Payment of that member by such amount as may be determined by a majority of the voting members of the Steering Committee.
7. **Contracts Required** – All contracts with Contractors to provide Program Services shall be conditioned upon approval by a 2/3^{rds} majority of the voting members of the Steering Committee.
 8. **Withdrawal Prohibited** – No MS4 that is a party to this MOU may withdraw from this MOU, except for early termination as defined in Section 9 of this MOU. Early termination of a signatory may be considered by the Steering Committee with 12 months' notice of withdrawal for cause and with a 2/3^{rds} majority approval of the voting members of the Steering Committee
 9. **Early Termination** – This MOU shall become null and void with no further obligation of the parties if:
 - a. a majority of the voting members of the Steering Committee does not approve one or more contracts for the provision of Program Services within 90 days after execution of this MOU or

- b. VTDEC determines that the Program outlined in this MOU does not meet the requirements for minimum control measure #1 ("Public Education and Outreach") of the Phase II NPDES Permit for Programs Years 2013 – 2018) and the parties to this MOU are unable to craft a Program to satisfy VTDEC.
- c. alternate contractual arrangements for MM1 compliance are developed and a vote to dissolve this MOU is approved by a 2/3rds majority approval of the voting members of the Steering Committee.

10. **Automatic Termination** – This MOU will terminate at the end of Program Year 2018.

11. **Amendment** – Unless a specific section of this MOU provides otherwise, this MOU may be amended only upon the unanimous consent of all of the Parties.

12. **Adding New MS4 Entities** – New MS4 entities shall be allowed to become party to this MOU with a 2/3rds majority approval of the voting members of the Steering Committee. The new party agrees to:

- a. pay for costs directly associated with re-evaluation and reconfiguration of the Program's existing Communications Plan to ensure that planned media advertising purchases appropriately cover the geographic area served by their MS4, unless waived by a 2/3rds majority approval of the voting members of the Steering Committee. The new MS4 shall coordinate this work with the Lead Agency and RSEP Chair using existing RESP program contractors.
- b. The new MS4 obtains approval from the permitting agency indicating that their participation in the established Program would satisfy their requirements under minimum control measure #1 ("Public Education and Outreach") of the Phase II NPDES Permit for Programs Years 2013 – 2018)
- c. The new MS4 makes five additional annual payments of \$ 500.00 to the Program in recognition of Program development costs incurred since the program's inception.

13. **Counterparts** – This MOU may be executed in multiple counterparts, each of which is deemed an original and all of which constitute one and the same document. Each such counterpart may be a facsimile copy and such facsimile copy shall be deemed an original.

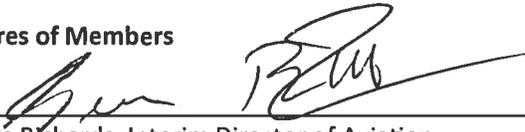
Signature of Lead Agency



Charles Baker, Executive Director
Chittenden County Regional Planning Commission

5/1/13
Date

Signatures of Members

 _____ Gene Richards, Interim Director of Aviation Burlington International Airport	<u>3-26-13</u> _____ Date
_____ Steven Goodkind, Director of Public Works The City of Burlington Department of Public Works	_____ Date
_____ Bryan K. Osborne, Director of Public Works The Town of Colchester	_____ Date
_____ Dennis E. Lutz, PE, Public Works Dir. / Town Engineer The Town of Essex	_____ Date
_____ Authorized Signer The Village of Essex Junction	_____ Date
_____ Brian M. Palaia, Town Manager The Town of Milton	_____ Date
_____ Dean Pierce, Director of Planning and Zoning The Town of Shelburne	_____ Date
_____ Bob Rusten, Interim Temporary City Manager The City of South Burlington	_____ Date
_____ Brian Searles, Secretary of Transportation The Vermont Agency of Transportation	_____ Date
_____ Linda Seavey, Director, Campus Planning Services The University of Vermont	_____ Date
_____ Richard McGuire, Town Manager The Town of Williston	_____ Date
_____ Katherine Decarreau, City Manager The City of Winooski	_____ Date

Signatures of Members

Gene Richards, Interim Director of Aviation
Burlington International Airport

Steven Goodkind, Director of Public Works
The City of Burlington Department of Public Works

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Katherine Decarreau, City Manager
The City of Winooski

Date
3/27/13
Date

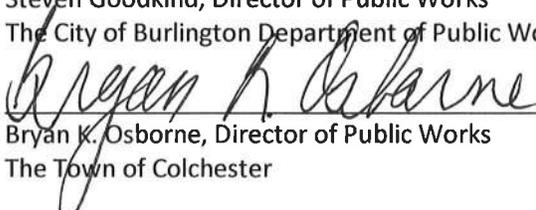
Signatures of Members

Gene Richards, Interim Director of Aviation
Burlington International Airport

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Steven Goodkind, Director of Public Works
The City of Burlington Department of Public Works

Date



Bryan K. Osborne, Director of Public Works
The Town of Colchester

4/23/13

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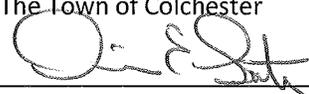
Richard McGuire, Town Manager
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The City of Winooski

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_____ Steven Goodkind, Director of Public Works The City of Burlington Department of Public Works	_____ Date
_____ Bryan K. Osborne, Director of Public Works The Town of Colchester 	_____ Date 4/18/13
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Susan McNamee-DeD, Interim Co. Mgr.

Authorized Signer
The Village of Essex Junction

4/24/13

Date

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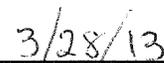
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Paul Bohne, Town Manager
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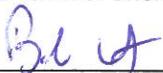
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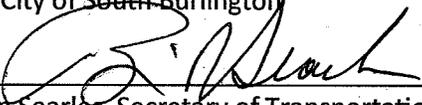
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03/29/13

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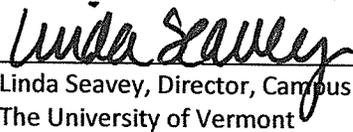
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_____  Katherine Decarreau, City Manager The City of Winooski	_____ 4.11.13 Date

Appendix B – Stream Team MOU

**CHITTENDEN COUNTY
REGIONAL STORMWATER PUBLIC INVOLVEMENT AND
PARTICIPATION PROGRAM
MEMORANDUM OF UNDERSTANDING
FOR THE PERIOD JULY 2011 THROUGH JUNE 2016**

This Memorandum of Understanding (“MOU”) establishes an agreement among the Parties (as specified in Section 1) for a group of Municipal Separate Storm Sewer Systems (“MS4s”) to contract to operate a Regional Stormwater Public Involvement and Participation Program (“Program”) that conforms with and satisfies the relevant requirements regarding Minimum Control Measure Two (“Public Involvement and Participation) of the Phase II NPDES Permit for Program Years 2011 -2016), as established in General Permit 3-9014 (MS4 Permit”) as continued or renewed by the Vermont Department of Environmental Conservation (“VTDEC”).

1. **Parties to the MOU** – The parties to this agreement are:
 - a. **MS4s** – the undersigned municipal MS4s and non-traditional MS4s and any other MS4 that may execute this agreement following approval of that MS4’s inclusion as a party to this MOU by a majority of the voting members of the Stream Team Steering Committee as defined in Section 2.a. below and
 - b. **Lead Agency** – the Chittenden County Regional Planning Commission (“CCRPC”), unless a majority of the Steering Committee favors a different lead agency or the CCRPC no longer wishes to act as the Lead Agency and withdraws its services pursuant to Section 9 below.

2. Steering Committee

- a. **Composition** – The voting members of the Steering Committee shall consist of one representative from each of the MS4s who are full level signatory members to this Agreement as designated by each MS4. The voting members may, by a majority vote, invite organizations to appoint a representative to serve as a non-voting, advisory member of the Steering Committee.
- b. **Duties** – The voting members of the Steering Committee shall advise the Lead Agency on the development and performance of Program Services and on matters bearing on the administration of this agreement. The Steering Committee will attempt to meet quarterly or more often as needed.

3. Lead Agency

- a. **Duties** – The Lead Agency will provide Services in terms of administering this MOU and agreements with contractors (including executing contracts, receiving and disbursing funds, and monitoring the provision of services) on behalf of the MS4s. The Lead Agency may also provide other Services (including, but not limited to, public involvement and participation activities, public relations, grant writing, etc.) as directed by the Steering Committee and at a level consistent with each year’s Program Budget as described in Section 6.a.

- b. **Compensation** – The MS4s agree to compensate the Lead Agency for the actual costs of performing Duties defined in Section 3.a. Compensation for Duties shall not exceed ten (10%) percent of the Program Budget as specified in Section 6 without prior approval of a majority of the Steering Committee. Personnel charges for Lead Agency staff shall be calculated at a rate of salary plus fringe.
4. **Selection of Primary and Sub-Contractors** – In general, the Steering Committee shall competitively bid for contract(s) for Program Services that collectively satisfy the requirements for Minimum Control Measure Two (“Public Involvement and Participation”) of the Phase II NPDES Permit for Program Years 2011 – 2016 as established by the MS4 Permit and as defined in Section 5. All contracts shall be awarded based on qualifications, price, and the ability of the entity to provide services that meet the relevant MS4 Permit requirements. Contracts may be up to 5 years in length and shall include, but not be limited to, language specifying the right of the Committee to cancel a contract if services are not being adequately provided and language specifying that payments to contractors shall be made only for services rendered.

Contracting for services under this MOU will comply with the Fair Employment Practices and Americans with Disabilities Act: the Steering Committee agree to comply with the requirement of Title 21 V.S.A Chapter 5, Subchapter 6, relating to fair employment practices, to the full extent applicable. The Steering Committee shall also ensure, to the full extent required by the Americans with Disabilities Act of 1990 that qualified individuals with disabilities receive equitable access to the services, programs, and activities provided by the Steering Committee under this MOU. This provision will also be included in all contracts and subcontracts executed under this MOU involving state or federal funds.

The Steering Committee recognizes the important contribution and vital impact which small businesses have on the state’s economy. In this regard, the Steering Committee will ensure a free and open bidding process that affords all businesses equal access and opportunity to compete. The Steering Committee also recognizes the existence of businesses owned by minorities and women and will make a good faith effort to encourage these firms to compete for contracts involving state or federal funds.

5. **Program Services** – The Steering Committee, assisted by the Lead Agency and contractor(s), will implement a public involvement and participation campaign known as the Chittenden Country Stream Team (CCST) that satisfies the relevant requirements of Minimum Control Measure Two (“Public Involvement and Participation”) of the Phase II NPDES Permit for Program Years 2011 – 2016), as established by the MS4 Permit, in accordance with Section 5.a.
 - a. **Program Content** – The Program Content for each Program Year will be as approved by a majority of the Steering Committee. Annual Program elements will include, at a minimum:
 - i. operation of the Program’s website www.ccstreamteam.org or its equivalent.
 - ii. the hosting and/or organization of workshops, projects and other events to engage the public.

- iii. the recruitment of volunteers to engage in and promote public involvement and participation.
- iv. end of MS4 permit year annual reporting on Minimum Control Measure 2 compliance efforts to the MS4s for inclusion in MS4 annual reports to ANR.

6. **Program Budget, Costs, and Payments**

a. **Program Budget**

- 1. The annual Program Budget shall consist of the sum of the annual \$1,800 payment for each Program Year made by participating MS4s plus any other funds available to the Program by majority vote of the Steering Committee as specified in Section 6.c below. Prior to February of every year, the Steering Committee shall adopt a Program Budget governing expenditures for the subsequent program year. Budget categories shall include, but not be limited to: Lead Agency Duties, Contractual Services and Expenses.

- b. **Participating MS4 Maximum Annual Costs and Payments** – Except as otherwise provided for in this section, each MS4 that is a party to this MOU shall by July 30 of each program year make a single annual payment of \$1,800 to pay for Program Services (as defined in Section 5) and Lead Agency Services (as defined in Section 3.a.). In the event that costs are less than anticipated or that grants or other funding sources become available, a majority of the voting members of the Steering Committee may decide to reduce each MS4's payment by an equal amount or to credit the following Program Year assessment to each MS4. Any MS4 is allowed to join in prior to April 1, 2012 without penalty. The Steering Committee may require additional dues from new members joining on or after April 1, 2012 to help defray program development costs incurred since the Program's inception.

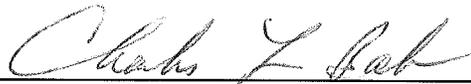
- c. **Other Funds** – Any funds made available to the Program shall be dedicated to reducing the annual costs of each MS4 participating in the Program, except as a majority of the voting members of the Steering Committee may decide.

- d. **Excess Funds** – Any funds remaining at the end of a Program Year shall be carried over to the next Program Year, unless a majority of the voting members of the Steering Committee decides otherwise. Following the payment for all Program Services and Lead Agency Services at the end of Program Year 2016, any funds remaining shall be carried forward for successive years where Program Services continue under successive agreements. Any funds refunded to the MS4s participating in this MOU shall be refunded based upon a prorated portion depending upon the number of months of participation by that MS4, except that any additional payments made by a member beyond its \$1,800 annual payment shall be first refunded in full.

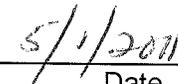
- 7. **Contracts Required** – All contracts with Contractors to provide Program Services shall be conditioned upon approval by a majority of the voting members of the Steering Committee and consistent with Section 4 above.

8. **MS4 Withdrawal Prohibited** – No MS4 that is a party to this MOU may withdraw from this MOU, except for early termination as defined in Section 10 of this MOU.
9. **Termination of Lead Agency**
The CCRPC or the Steering Committee by a majority vote of its full membership may elect to terminate the Agreement for Lead Agency Services by providing 90 days written notice to the other party.
10. **Early Termination** – This MOU shall become null and void with no further obligation of the parties if:
 - a. a majority of the voting members of the Steering Committee does not approve one or more contracts for the provision of Program Services within 120 days after execution of this MOU or
 - b. VTDEC determines that the Program outlined in this MOU does not meet the relevant requirements for Minimum Control Measure Two (“Public Involvement and Participation”) of the Phase II NPDES Permit for Programs Years 2011 – 2016) and the parties to this MOU are unable to craft a Program to satisfy VTDEC.
11. **Automatic Termination** – This MOU will terminate at the end of Program Year 2016.
12. **Amendment** – Unless a specific section of this MOU provides otherwise, this MOU may be amended only upon the unanimous consent of all of the Parties.
13. **Counterparts** – This MOU may be executed in multiple counterparts, each of which is deemed an original and all of which constitute one and the same document. Each such counterpart may be a facsimile or PDF copy and such facsimile or PDF copy shall be deemed an original.

Signature of Lead Agency



Charles Baker, Executive Director
Chittenden County Regional Planning Commission



Date

Signatures of Members



Robert McEwing, Interim Director of Aviation
The Burlington International Airport

5/3/11
Date

Steven Goodkind, Director of Public Works
The City of Burlington Department of Public Works

Date

Bryan K. Osborne, Director of Public Works
The Town of Colchester

Date

Dennis E. Lutz, PE, Public Works Dir. / Town Engineer
The Town of Essex

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Vermont Agency of Transportation

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Katherine R. Decarreau, City Manager
The City of Winooski

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The Burlington International Airport

Date

4/15/11

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Date

David Crawford, Village Manager
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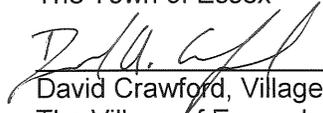
Date

Bryan K. Osborne, Director of Public Works
The Town of Colchester

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Dennis E. Lutz, PE, Public Works Dir. / Town Engineer
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David Crawford, Village Manager
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3/23/2011

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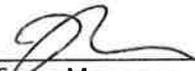
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Brian Palaia, Town Manager
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4-5-11

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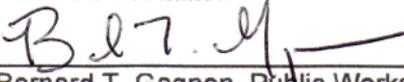
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3-22-11
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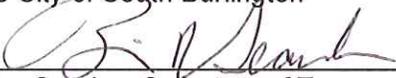
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Linda Seavey

Linda Seavey, Director, Campus Planning Services
The University of Vermont

4.20.11

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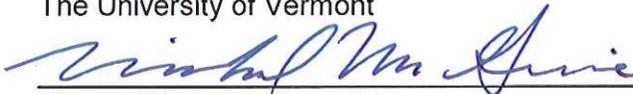
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Richard McGuire, Town Manager
The Town of Williston

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Katherine R. Decarreau, City Manager
The City of Winooski

3-29-11

Date

Appendix C – Bridge Washing and Vehicle Washing BMPs

State of Vermont
Operations Division
Web: <http://www.aot.state.vt.us/maint/Operations.htm>

Agency of Transportation
One National Life Drive – Dewey Bldg
Montpelier, VT 05633-5001

Best Management Practice: **“BRIDGE WASHING”**

Effective Date: 5/1/2013

VTrans Authorized Signature: *Scott A. Rogers*
Director, Operations Division

VTTRANS STATE HIGHWAY SYSTEM BRIDGE WASHING BEST MANAGEMENT PRACTICES (BMPs)

PURPOSE STATEMENTS

Washing bridges is a preventative maintenance task performed on a recurring basis in order to protect bridge decks, components and superstructure against corrosive effects of chlorides, de-icing chemicals and the accumulation of sand on bridge surfaces throughout the winter.

The VTrans State Highway System Bridge Washing BMP guides maintenance activities in order to:

- ∞ Define appropriate level of service and performance expectations;
- ∞ Maintain safe bridges for the traveling public and bridge maintenance employees;
- ∞ Prevent infrastructure deterioration, extend useful life and provide for a better functioning structure;
- ∞ Comply with VTrans Policy and Federal or State rules and regulations;
- ∞ Reduce Cost (water consumption, energy, equipment and personnel costs);
- ∞ Protect water quality and aquatic wildlife habitats;
- ∞ Create mechanisms and standards for addressing environmentally sensitive areas;
- ∞ Preserve the scenic qualities of the highway corridor.

GUIDING PRINCIPLES

These BMPs have several guiding principles:

- ∞ VTrans Bridge Washing Policy;
- ∞ State and Federal Regulatory Requirements;
- ∞ Create consistent requirements throughout the state that protects water quality;
- ∞ Preserve the scenic qualities of the corridor to the extent practicable, while maintaining environmental stewardship and conserving resources.

LEVEL OF SERVICE & PERFORMANCE EXPECTATIONS

Sweep 100% and wash 50% of all bridges annually in the Spring. It is expected that all bridges will be washed at least every other year and that bridge washing operations are compliant with all applicable Safety and Environmental Regulations. Annual Trainings shall be provided to VTrans Maintenance Personnel directly involved in bridge washing activities.

GENERAL STANDARDS

These standards are applicable only to bridges on the VTrans State Highway System, are subject to the conditions and exceptions noted below and are intended to be implemented to the extent reasonable and practicable when not otherwise required by rule, regulation or law. Bridge washing operations shall not violate any written VTrans Policy or State/Federal Rule, Regulation or Permit.

The VTrans District Transportation Administrator (DTA) or its designee must ensure compliance with all VOSHA standards and the Manual for Uniform Traffic Control Devices (MUTCD) by use of contract language and safety plan review meetings with contractors or VTrans personnel. Items to be addressed in addition to VOSHA and MUTCD standards should include, but are not limited to, equipment loading, storage, and access plans; safety plans for working over water; traffic control and mobile operations sign planning, and protection of personnel, infrastructure, and the traveling public.

TARGET AUDIENCE

These BMPs are primarily intended for VTrans Operations Division. In addition, these BMP's may also be applicable to municipally managed structures and Municipal bridge maintenance crews.

Municipalities may wish to refer to these standards and implement the practices mentioned herein. VTrans will not be responsible for monitoring Municipal performance nor compliance under these standards and practices, but may serve as a technical resource for Municipalities regarding the implementation of these practices.

POLICY & REGULATORY REQUIREMENTS

VTrans Policy and State/Federal Regulations will dictate how, where and when these BMPs are applied and to what performance level. The BMPs noted herein are directed at addressing these requirements.

- ∞ VTrans Bridge Washing Policy (Attachment A) – applicable statewide
Requirements have statewide implications and include but are not limited to:
 - ∞ Removal and proper disposal of sand, debris and other material from bridge deck prior to use of water to clean bridge surface.
 - ∞ Water used to flush salts and de-icing chemicals from the bridge must come from a water source which has no potential to harm the receiving water body.
 - ∞ Minimize impact to the receiving waters when washing bridge seats, pier caps, diaphragms and any other superstructure (steel) components of the bridge.
- ∞ “Transport of Aquatic Plants and Other Nuisance Species” V.S.A Title 10 Chapter 50 Section 1454 <http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=10&Chapter=050&Section=01454> (Attachment B) – applicable statewide.
On July 1, 2010 the then 22-year old law was amended prohibiting:
 - ∞ Transport of any invasive aquatic species in Vermont. Specifically, the law prohibits transport on the outside of boats, personal watercraft, trailer or other equipment. That means the outside of an intake hose on any pump or water truck and any pump equipment used by VTrans to get water from natural water bodies. This is a law that has statewide jurisdiction and may require:
 - ∞ Avoid taking water from document water bodies that are known to have aquatic invasive species http://www.anr.state.vt.us/dec/waterq/lakes/docs/ans/lp_transportlaw2010.pdf
 - ∞ Drawing water from nearby municipal water supplies or stand pipes installed by various fire districts or other clean/non-contaminated water source.
 - ∞ Clean off any equipment used for “working over water” safety programs before moving to next bridge.

- ∞ Vermont Water Quality Standards in effect or as may be amended and are applied statewide.
<http://www.nrb.state.vt.us/wrp/rules.htm>
- ∞ Federal Clean Water Act – National Pollutant Elimination System – Municipal Separate Storm Sewer System (MS4) General Permit – applicable in designated MS4 areas.
 - ∞ Districts with bridges in MS4 areas are **NOT** allowed to discharge bridge deck washing water into water bodies subject to MS4 Permit requirements. The list of waters is noted on ANR’s web site (link below) and is subject to change. This is a regulation that has limited geographical jurisdiction in the state that can and does change periodically. See the Agency of Natural Resources MS4 Map: http://www.vtwaterquality.org/stormwater/docs/ms4/sw_MS4_map.pdf
- ∞ Federal Migratory Bird (MBTA)/Bald & Golden Eagle Protection Act and Endangered Species Act – applicable statewide. Both Federal programs are intended to protect species of concern.

The MBTA provides that it is unlawful to pursue, hunt, take, harass, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg or any such bird, unless authorized under a permit issued by the Secretary of the Interior. Some regulatory exceptions apply. Take is defined in regulations as: “pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect.” The Bald/Golden Eagle Act is extremely comprehensive, prohibiting the take, possession, sale, purchase, barter, or offer to sell, purchase, or barter, export or import of the bald or Golden eagles at any time or in any manner.
<http://www.fws.gov/migratorybirds/mbpermits/ActSummaries.html>

The migratory bird species protected by the Act are listed in 50 CFR 10.13. View the list of [MBTA protected birds](http://www.fws.gov/migratorybirds/index.html) and Migratory Bird Program Rule at <http://www.fws.gov/migratorybirds/index.html>.

The Endangered Species Act (ESA) and the Vermont Rare, Threatened, and Endangered Species Rules (VRTER) are designed to regulate a wide range of activities affecting animals designated as endangered or threatened, and the habitats upon which they depend. With some exceptions, the ESA and VRTER prohibits taking and other activities affecting these protected species and their habitats unless authorized by a permit. Permitted activities are designed to be consistent with the conservation of the species. Take - From Section 3(18) of the Federal Endangered Species Act means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.
<http://www.fws.gov/endangered/species/index.html> and http://www.vtfishandwildlife.com/cwp_elem_spec_rte.cfm

Contact VTrans Program Development Environmental Program Staff Biologist or the Vermont Department of Fish & Wildlife (links below) if you find a nest with or without eggs or young and if you feel you have a rare, threatened or endangered species present (ie. Bats or other listed species using the bridge has habitat). Be advised, you may be instructed to avoid disturbing the nest and to wash areas around the nest, leaving the nest undisturbed.
http://vtransengineering.vermont.gov/sections/environmental/natural_resources and http://www.vtfishandwildlife.com/cwp_contact_us.cfm

- ∞ Highway Safety – applicable statewide
The DTA or its designee must ensure compliance with all VOSHA standards and the Manual for Uniform Traffic Control Devices (MUTCD) by use of contract language and safety plan review meetings with contractors or VTrans personnel. Items to be addressed in addition to VOSHA and MUTCD standards should include, but are not limited to, equipment loading, storage, and access plans; safety plans for working over water; traffic control and mobile operations sign planning, and protection of personnel, infrastructure, and the traveling public.

BRIDGE WASHING PROCEDURES & BEST MANAGEMENT PRACTICES

1. **Prepare for and set up a work plan** for each bridge site addressing, among other things:
 - a. Traffic control, fall protection, working over water plan, and other MUTDC/VOSHA requirements.
 - b. Location of bridges to be washed and acknowledgement of higher standards if located in a designated MS4.
 - c. Consider proximity of bridge to various clean bridge washing water sources (even sources on route),
 - d. Consider presence of invasive/nuisance aquatic plants/organisms in local surface water sources;
 - e. Consider presence of bird nests or other protected species and complete coordination with the VTans Program Development Environmental Section's Staff Biologist or Vermont Department of Fish & Wildlife prior to disturbing any nests, birds or other protected species. Bridge washing between April 1 and August 1 is more likely to encounter birds and nesting. Bridge Maintenance Crews that experience recurring bird use, nesting or use by rare, threatened or endangered species may want to consider installing deterrents on that specific bridge.

2. **Identify appropriate water source** for bridges scheduled for washing:
 - a. Check for local sources of fresh/clean water and if considering using a local water body as source, check Agency of Natural Resources (ANR) web site for presence of aquatic invasive/nuisance species. If the surface water body intended for use to fill the tanker truck is or is suspected of carrying aquatic invasive/nuisance species then that water body SHALL NOT be used and an alternate clean water source will need to be found, most likely municipal.
 - b. When considering water sources, first consideration is to use a clean untreated or de-chlorinated water source from a municipal supply, second from fire stand pipe in the same watershed as the bridge scheduled for washing, and final last option is from a water body under bridge being washed or in the same watershed if the bridge is not over waters and those water bodies are not known or suspected of carrying aquatic invasive/nuisance species.
 - c. If the only available option is to use a surface water body to fill a water tanker truck first inspect all hoses, pipes, pumps that will come in contact with the water for any plant material or mud prior to putting this equipment into the water....remove any materials if found and properly dispose of the plant material. Proper disposal means bagged and disposed of in trash receptacle. After pumping is completed, inspect again and remove plant materials and mud if any are found before moving on to the next bridge. Empty tanker truck of all water taken up from surface water body before moving onto the next bridge.
 - i. **Inspect** and clean off any aquatic plants, animals, and mud from all equipment before leaving bridge location where water was drawn from.
 - ii. **Drain** pumps, hoses and all other water containing devices.
 - iii. **Dispose of unused water on location if source of water is from non-municipal supply.**
 - iv. **Never dump live fish, vegetation or other organisms from one water body into another.**

The intent of these actions is to clean off any visible large-bodied organisms attached to equipment. Draining can also remove small organisms such as zebra mussel veligers, however, additional steps are needed to remove small-bodied organisms from other parts of the equipment. Those can be easily rinsed off or die out of water in a short period of time. To this end, added precautions that improve treatment effectiveness are to:

- i. **Spray/rinse** equipment with high pressure hot water to clean off mud and kill aquatic invasive species,
 - ii. **Flush pump** motor according to owner's manual, and/or
 - iii. **Dry** everything for at least five days before reuse or **wipe** with a towel before reuse.
- d. If a surface water body is used as bridge washing water source the pipes/hoses used to withdraw water shall be screened to prevent fish entrainment and to help prevent uptake of vegetation.

3. **Prior to washing bridge surface**, the following activities will be completed:
 - a. Sweep sand, debris and deicing chemical contaminated sediment from the bridge.
 - b. Sweepings will be removed by hand using shovels, wheelbarrows or bobcat buckets and placed off the roadway shoulder. Larger amounts of sweepings will be spread out along roadway shoulder after trash and larger debris has been removed for proper disposal. Sweepings can also be trucked back to Maintenance Yard and added to sand pile for future re-use (again after trash and larger debris has been removed and properly disposed of). Sweepings will not be swept into open deck drains or over the edge of the bridge.
 - c. Prior to washing bridge surfaces, all scuppers and other drains will be blocked with unbroken sand bags to prevent accidental discharge of wash water to surface waters under bridge or onto roadway below bridge.
 - d. Brush and vegetation may need to be removed from around wings abutments and piers. Any vegetation management in river buffers should follow the VTrans Riparian Tree and Brush Cutting BMP. <http://vtransoperations.vermont.gov/bmp>
 - e. Invasive terrestrial (plant) species encountered and in need of removal should be managed per the VTrans Invasive Species BMP. <http://vtransoperations.vermont.gov/bmp>

4. **Prior to washing bridge superstructure**, the following activities will be completed:
 - a. If nests are found while on-site working or if you feel you may have a rare, threatened or endangered species present (ie. Indiana Bat or other listed species using the bridge as habitat), contact Vermont Department of Fish & Wildlife http://www.vtfishandwildlife.com/wildlife_nongame.cfm or VTrans Environmental Biologist http://vtransengineering.vermont.gov/sections/environmental/natural_resources.
 - b. If bird nests are present they must not be disturbed. Bridge washing operations may proceed so long as nests and birds can be avoided and left undisturbed.
 - c. If rare, threatened or endangered species are suspected or are present, Bridge Maintenance Crews must contact VTrans Environmental Biologist or Vermont Department of Fish & Wildlife to confirm species and secure guidance on how to proceed before bridge washing operations commence on that specific bridge.

5. **Washing the bridge surface and superstructure** will follow these procedures:
 - a. Water hose nozzles will be aimed to minimize overspray into surface waters or roads below bridge.
 - b. Limit psi when washing steel bridge components so as to avoid the accidental dislodging of paint which might end up in the water body beneath the bridge. Pressure washing equipment shall be operated at pressures that do not damage the paint or other coatings on the bridge or undercut the grout or harm the masonry plates beneath the bearings.
 - c. Water will be aimed along the curb line to wash any accumulated sand/salt towards the bridge down slope.
 - d. Washing will include bridge joints, finger joint troughs, bridge shoe and seats and any bridge components that are within the splash zone.
 - e. To the extent practicable, washing of bridges will be scheduled on structures over waterways during the springtime to coincide with high-flow periods or during other high-flow periods following storm events.
 - f. Any bridge deficiencies should be repaired or noted and added to the work schedule.
 - g. **Bridge deck washing in designated MS4** – All bridge drainage systems shall be blocked during surface washing and to the extent practicable, residual wash water will be diverted to upland areas (i.e. over embankments into vegetated areas or into catch basins) so that sediments may settle out prior to reaching the waterway. Water washed over a vegetated area must not cause scour or contribute to sedimentation of the waterway. This is an absolute requirement in MS4 designated watersheds.
 - h. **Bridge deck washing in designated MS4** - REPORT within 5 business days, to VTrans Operations Environmental Program Stormwater Technician any accidental discharges to water bodies and corrective measures taken to cease the discharge and prevent additional discharges.
 - i. Clean off any equipment used for “working over water” safety programs before moving to next bridge.

USEFUL LINKS

VTrans Bridge Washing Policy

<https://inside.vermont.gov/agency/vtrans/VTransIntranetHome/Ops/Policy%20and%20Procedures%20Manual/BridgeWashing3011.pdf>

VSA Title 10 – Aquatic Plants & Aquatic Invasive Species Transport Law

http://www.vtwaterquality.org/lakes/htm/ans/lp_ans-index.htm

http://www.anr.state.vt.us/dec/waterq/lakes/docs/ans/lp_transportlaw2010.pdf

ANR Aquatic Invasive Species Site (Map)

http://www.vtwaterquality.org/lakes/docs/ans/lp_aismapmajorspecies2011.pdf#zoom=100

http://www.vtwaterquality.org/lakes/docs/ans/lp_infestedwaterbodieslist.pdf

Migratory Bird Treaty Act & Bald/Golden Eagle Protection Act

<http://www.fws.gov/migratorybirds/index.html>

View the list of [MBTA protected birds](#)

<http://www.fws.gov/migratorybirds/mbpermits/ActSummaries.html>

Federal Endangered Species Act

<http://www.fws.gov/endangered/species/index.html>

Vermont Rare, Threatened, and Endangered Species

http://www.vtfishandwildlife.com/cwp_elem_spec_rte.cfm

State of Vermont DEC - EPA NPDES – State MS4

http://www.vtwaterquality.org/stormwater/htm/sw_ms4.htm

Map of designated MS4's

http://www.vtwaterquality.org/stormwater/docs/ms4/sw_MS4_map.pdf

VT Water Quality Standards

<http://www.nrb.state.vt.us/wrp/rules.htm>

VTrans Training PowerPoint (most recent posted on VTrans Web Site)

<http://vtransoperations.vermont.gov/bmp>

OSHA

Contact VTrans Safety Officer

http://vtransoperations.vermont.gov/technical_services/occupational_safety

VTrans Safety Site (working over water, etc)

Contact VTrans Safety Officer

http://vtransoperations.vermont.gov/technical_services/occupational_safety

VTrans Riparian Tree & Brush Cutting BMP

<http://vtransoperations.vermont.gov/bmp>

VTrans Invasive Species BMP

<http://vtransoperations.vermont.gov/bmp>

Operations Division Vermont Agency of Transportation	Original Policy Adopted Date: N/a	Original Identification No. 05-MOP--3011
Policy and Procedures Manual	Responsible Section: Maintenance Districts	Policy Name: Bridge Washing
Subject: Training	Approval Date: 11/29/2005	Page(s) 1 of 1

Statutory Reference / Other Authority: Federal and state rules and regulations, and the Manual on Uniform Traffic Control Devices (MUTCD)

Approved by: Samuel B. Lewis, Director of Operations

BRIDGE WASHING

Purpose:

Bridge preventive maintenance is critical in extending the life of bridges. Decks, seats, pier caps and troughs need to be periodically cleaned of debris and salt residue. Over the winter, sand and debris accumulate along the deck /curbing interface, as well as on abutments or pier caps, allowing a perfect medium for residual salt to penetrate to the reinforcing steel and cause deterioration of both the steel and structural concrete. It is important that the process of removing of the sand and debris is accomplished early in the spring and in a manner that does not harm the environment or violate state or federal regulations.

Policy:

Sand, debris, and other material must be removed from the bridge deck prior to the use of pressure water which will remove the salt latents from the deck/curbing interface. Appropriate removal of material can be accomplished with hand tools and power or hand brooms. All removed material must be deposited in an area which will not affect the river, brook or other body of water crossed by the bridge. Generally, an appropriate place for depositing the material can be found along the approaches of the bridge. **No foreign material can be deposited over the side of the bridge rail, even if it is not directly over water!**

Water used to flush the salt latents from the deck must come from a source which has no potential to harm the receiving water body. Scuppers will need to be sand bagged or plugged if they have a direct route to the body of water crossed by the bridge.

Care needs to taken when washing bridge seats, pier caps, and diaphragms to minimize any impact on the receiving water.

Traffic control shall follow the guidance provided in the MUTCD.

It is expected that bridges will be washed at least every other year.

Law Prohibits the Transport of Aquatic Plants and Aquatic Invasive Species in Vermont

Invasive species such as Eurasian watermilfoil and zebra mussels are typically spread by “hitchhiking” on boat trailers, propellers and fishing gear that isn’t cleaned, or in bilge water, bait buckets, or livewells that aren’t drained before moving to a different water body. It often takes only a tiny fragment of an invasive plant, sometimes less than an inch, to start a whole new infestation.

On July 1, 2010, Vermont’s 22-year old law prohibiting the transport of important aquatic invasive species changed. Previously, the law prohibited the transport of the invasive plants Eurasian watermilfoil and water chestnut. Come July 1, Vermont’s invasive species transport law prohibits the transport of **all aquatic plants or aquatic plant parts** on the outside of a vehicle boat, personal watercraft, trailer or other equipment.



The law defines an aquatic plant as “...a plant that naturally grows in water, saturated soils or seasonally saturated soils, including algae and submerged, floating leafed, floating, or emergent plants.”

A poster titled "CLEAN BOATS CLEAN WATERS" with the slogan "No More Free Rides". It includes text about Vermont law penalties and a "WATERCRAFT CHECK POINTS" diagram. The diagram labels parts of a boat: Hitch, Live Well, Transom Well, Rollers, Axle, and Lower Unit/Propeller. Below the diagram are instructions: "When you leave a body of water: Clean off any mud, plants (even small fragments), and animals from boats, trailers and equipment. If possible wash at home or at a car wash. Drain boat and equipment away from water. Dry anything that comes into contact with water. Never release plants, fish or animals into a body of water unless they came out of that body of water."/>

**CLEAN BOATS
CLEAN WATERS**

No More Free Rides

Under Vermont Law, you may be fined up to \$1000 for transporting any aquatic plant or plant fragment, zebra mussels or quagga mussels. So carefully inspect and clean your boat and trailer every time you take them out of the water.

WATERCRAFT CHECK POINTS

Hitch Live Well Transom Well
Rollers Axle Lower Unit/Propeller

When you leave a body of water:

- Clean** off any mud, plants (even small fragments), and animals from boats, trailers and equipment. If possible wash at home or at a car wash.
- Drain** boat and equipment away from water.
- Dry** anything that comes into contact with water.

Never release plants, fish or animals into a body of water unless they came out of that body of water.

The law change means both the public and those who enforce the law will not have to know how to distinguish one type of aquatic plant from another.

Vermont’s invasive species transport law also will continue to prohibit the transport of two animal species, zebra mussels and quagga mussels.

The full law is available [here](#).

A person who violates this law may be subject to a penalty of up to \$1,000 per violation (Vermont Statutes Annotated Title 23, Chapter 29 § 3317. Penalties).

More information

- Click [here](#) for the full text of Vermont’s aquatic invasive species transport law.
- For more information on aquatic invasive species, visit the VT Water Quality Division Web site at <http://www.vtwaterquality.org>

Issued - 12/9/2002

Revised - 5/6/2009

**Department Of Conservation
Wastewater Management Division
Practice Regarding Washwater Discharges from Vehicle Washing**

Water used in washing cars, trucks, and other equipment may contain a wide range of contaminants including oil, other hydrocarbons, metals, detergents, antifreeze, road salt, and grit. These pollutants can be toxic and harmful to living organisms, including fish and the people who eat the fish. It is important to keep these contaminants out of our drinking water. We have developed this guidance for discharging washwater generated from washing the exterior of vehicles and equipment such as cars and/or trucks and light or heavy equipment to protect Vermont's drinking water. **This policy covers only the washwater generated from washing the exterior of vehicles.** If, at any time, there is a spill down the floor drain or on to the surface of the ground and the groundwater is contaminated or the contents of a holding tank is considered hazardous the Department of Environmental Conservation should be contacted.

There are four options (see below for more information):

1. Operate a closed loop system with wastewater recycling (no discharge of wastewater to the subsurface or ground surface.)
2. Install a holding tank to collect the washwater from the floor drain and have the contents disposed of properly.
3. Discharge to a municipal sanitary sewer.
4. Wash 30 or fewer vehicles per week and discharge to the ground surface.

1. Closed System with No Discharge

This does not require a permit. However, it may require a holding tank that will need to be permitted by the DEC Regional Office in your area.

2. Install a holding tank

Holding tanks can be installed and pumped out as needed by a qualified hauler. The discharges must be collected and disposed of at an approved disposal facility (i.e. a wastewater treatment facility.) Holding tanks require a permit by the DEC Regional Office in your area.

3. Discharge to Municipal Sanitary Sewer

Connections to the local wastewater treatment facility are permitted by the Regional Offices and may require adequate pretreatment (e.g. an oil/water separator.)



4. Wash 30 or Fewer Vehicles per Week

A. The wastewater from washing 30 or fewer vehicles per week may be discharged onto the surface of the ground. All washwater must sheet flow over a vegetated area and infiltrate or evaporate on site. The site should not be graded in a manner that would encourage collection of the washwater. The washwater must not reach waters of the state, either directly or through stormwater drains or drainage ditches. Only non-phosphorous based soap is allowed. **Pressure washing or other methods of undercarriage washing or engine cleaning are prohibited.** The use of acids, bases, metal brighteners and degreasing agents are prohibited.

B. Indoor vehicle washing:

All indoor vehicle washing must occur in a wash bay that is physically separated from any maintenance areas. No hazardous materials can be stored in the area with the floor drain. An oil-water separator must be installed. The floor drain must be registered with the Department of Environmental Conservation. The floor drain can daylight as long as the discharge does not erode the ground surface downslope of the discharge pipe and complies with the restrictions noted above. Sheet flow across a vegetated area must be achieved below the discharge pipe. Unless this is a pre-existing use, a Wastewater System and Potable Water Supply Permit is required. The permit should include the requirements noted above in A.

C. Outdoor vehicle washing:

All outdoor vehicle washing should occur, where possible, on an impermeable surface (i.e. concrete, asphalt, plastic or other.) From the impermeable surface, washwater must be directed as sheet flow to a vegetated area and away from waters of the state, storm water drains and drainage ditches. The discharge must comply with the restrictions noted above.

Appendix D- Allen Brook Flow Restoration Plan

This appendix is reserved for the Allen Brook Flow Restoration Plan (FRP).

Appendix E- Bartlett Brook Flow Restoration Plan

This appendix is reserved for the Bartlett Brook Flow Restoration Plan (FRP).

Appendix F - Centennial Brook Flow Restoration Plan

This appendix is reserved for the Centennial Brook Flow Restoration Plan (FRP).

Appendix G - Englesby Brook Flow Restoration Plan

This appendix is reserved for the Englesby Brook Flow Restoration Plan (FRP).

Appendix H - Indian Brook Flow Restoration Plan

This appendix is reserved for the Indian Brook Flow Restoration Plan (FRP).

Appendix I - Moon Brook Flow Restoration Plan

This appendix is reserved for the Moon Brook Flow Restoration Plan (FRP).

Appendix J – Munroe Brook Flow Restoration Plan

This appendix is reserved for the Munroe Brook Flow Restoration Plan (FRP).

Appendix K - Potash Brook Flow Restoration Plan

This appendix is reserved for the Potash Brook Flow Restoration Plan (FRP).

Appendix L- Rugg Brook Flow Restoration Plan

This appendix is reserved for the Rugg Brook Flow Restoration Plan (FRP).

Appendix M- Stevens Brook Flow Restoration Plan

This appendix is reserved for the Stevens Brook Flow Restoration Plan (FRP).

Appendix N- Sunderland Brook Flow Restoration Plan

This appendix is reserved for the Sunderland Brook Flow Restoration Plan (FRP).

Appendix O – Stream Corridor Protection Report

Appendix P – VTrans Green Stormwater Infrastructure Work Plan

**Appendix Q - 2013 Municipal Separate Storm Sewer Systems (MS4)
Authorization/NOI**