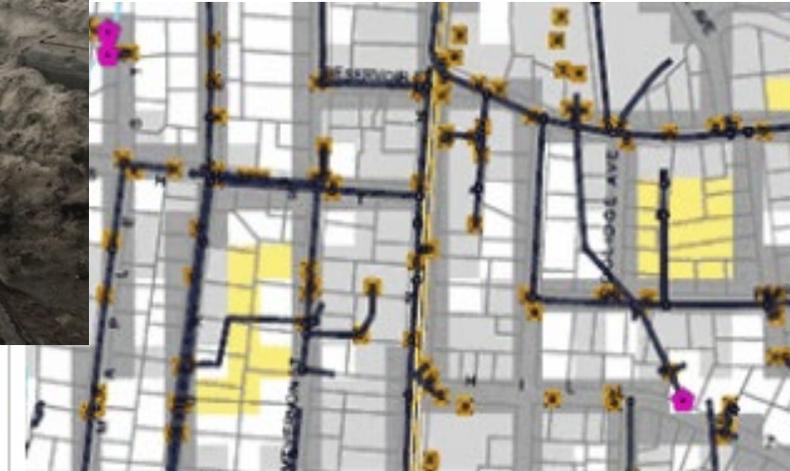


Stormwater Utility Report (Act 158 of 2016)

February 7, 2019



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What is Stormwater?

After The Storm: Chittenden County, Vermont

<https://www.youtube.com/watch?v=TCDElle128k&feature=youtu.be>

Published on Aug 13, 2010

Information about what happens to rain after a storm, and how stormwater works its way through our environment in damaging ways. From the Regional Stormwater Education Program (RSEP) of Chittenden County, Vermont.

www.smartwaterways.org

Why does stormwater matter?

- ◆ Stormwater runoff is generated when precipitation from rain and snowmelt flows over land or impervious surfaces and does not infiltrate into the ground.
- ◆ Impervious surfaces and concentrated drainage conveyances increase the frequency, volume, and flow rate of stormwater runoff and pollutants, causing cumulative impacts throughout a watershed.
- ◆ Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, or wetland. Unmitigated, this may result in impacts to downstream waters.

Photo: Stormwater runoff from impervious surfaces



How do roads impact stormwater?

- ◆ Impervious roadway surfaces can quickly convey polluted stormwater runoff to nearby waterways.
- ◆ VTrans is responsible for stormwater collection, conveyance, and treatment along its highways and at other transportation facilities (airports, maintenance yards, park & rides, welcome centers, gravel pits).
- ◆ Linear Transportation stormwater management differs from city, town, retail, and commercial entities:
 - Highways stretch for many miles, crossing multiple waterways, watersheds, and jurisdictions.
 - Transportation storm conveyance systems are linear and often discharge stormwater and associated pollutants that originate outside of the transportation right-of-way.

Photo: Road stormwater collection



How did we get here?

Act 158 of 2016 Legislative Session resulted in:

- An automatic 35% credit for VTrans on Stormwater Utility fees charged under 24 V.S.A. Section 3615 “Rents and Rates”
- Annual reporting for 5 years.

What is a Stormwater Utility?

- Stormwater Utility, per 10 V.S.A Section 1251(18), is defined as a system adopted by a municipality or group of municipalities under 24 V.S.A. chapter 97, 101 or 105 for management of stormwater runoff.
- A Stormwater Utility is an entity that generates revenue by charging fees for stormwater related services, including the costs of regulatory compliance, planning, maintenance, capital improvements and repair or replacement of infrastructure.
- Fee models include Flat Fee (same rate for all property owners), Tiered Fee (fees based on land use/type), Variable Fee (based on ERU/impervious surface), and Correlative Fee (added to existing fee/tax).
- Stormwater utilities are seen as a fair way of collecting funds for stormwater management. The properties that contribute stormwater runoff and pollutant loads and, therefore, create the need for stormwater management, pay for the program. Properties that are managing stormwater can apply for credits and reduce billing.
- Communities across the nation are increasingly examining the option of stormwater utilities to fund stormwater management, with over 400 communities in the United States have created stormwater utilities.

What's going on in Vermont?

- Act 109 (Vermont Legislature, spring 2002) gave Vermont municipalities the authority to create Stormwater Utilities.
- To date, five (5) of Vermont's municipalities have created a stormwater utility. Other communities may consider it given increased pressure to fund clean water projects.
- Fees are commonly calculated at varying rates \$ value per Equivalent Residential Unit (ERU) based on impervious surface (rooftops, driveways, parking lots, walkways, roads).
- Some states have used monetary incentives to encourage municipalities to create a Stormwater Utility. The State Agency of Administration provides \$25,000 annually to any municipality that creates and maintains a Stormwater Utility.
- Utilities can be an effective way to identify and manage stormwater problems, projects, and infrastructure upgrades. It can also play a role in complying with state and federal clean water regulations and providing a stable and adequate source of revenue to complete required maintenance and manage stormwater related activities.
- Services may not be provided to direct benefit of rate payers. VTrans does not directly benefit from paying into these utilities.

Stormwater Utility Report

Submitted on January 15, 2019 for 2018 Calendar Year (3rd out of 5 annual reports)

As required by Section 34 of Act 158 of 2016, VTrans is required to submit a stormwater utility report for five consecutive years. In summary, the report addresses:

1. Number of municipal stormwater utilities (*SW Utilities*) in existence at time of report.
2. Number of new municipal stormwater utilities established in preceding year.
3. Fees paid by VTrans to municipal stormwater utilities in preceding year.
4. List of stormwater projects implemented by VTrans in municipalities with stormwater utilities over the preceding year.
5. List of stormwater programs implemented by VTrans in municipalities with stormwater utilities over the preceding year.
6. List of water quality related grant awards and stormwater utility incentive grant payments by VTrans to municipalities with stormwater utilities.

SUMMARY TABLE – PRIOR YEAR COMPARISON TO CURRENT YEAR

Report On	2016	2017	2018	Change from Previous Year
1 – Existing SW Utilities at time of Report	3	4	5	1 new
2 – New SW Utilities established in calendar year	0	1	1	1 new
3 – SW Utility Fees Paid	\$25,807	\$109,382	\$188,141	\$78,759 increase
4 – Projects Benefiting Water Quality	\$72,000 and no construction projects	\$124,600 and 6 construction projects	\$19,656 and 8 construction projects	\$104,944 decrease and construction projects increased by 2
5 – Programs Benefiting Water Quality	\$38,000	\$40,600	\$369,882	\$329,282 increase
6 – Grants, Including Incentives Benefiting Water Quality	\$308,000	\$1.6 million	\$1.4 million	\$200,000 decrease

Note: Fees shown under #3 include the 35% automatic credit.

What stormwater related projects did VTrans undertake in Municipalities with Stormwater Utilities?



St. Albans I-89
Median Swales

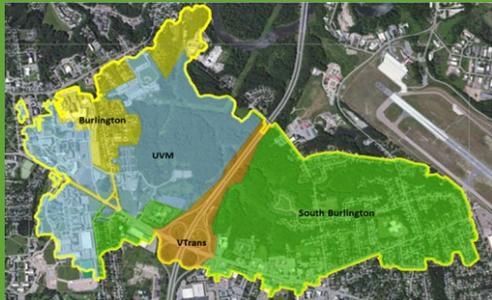


Ditch stabilization

Project/Activity	2018 #'s or Costs
<p>Projects under construction with either:</p> <ul style="list-style-type: none"> ➤ Permanent operational stormwater treatment <ul style="list-style-type: none"> ☞ Burlington = 0 ☞ Colchester = 1 ☞ South Burlington = 0 ☞ Williston = 1 ☞ St. Albans City = 0 ➤ Temporary construction erosion control stormwater treatment <ul style="list-style-type: none"> ☞ Burlington = 0 ☞ Colchester = 2 ☞ South Burlington = 3 ☞ Williston = 1 ☞ St. Albans City = 0 <p>Requiring 25 quality control assurance site inspections by VTrans Construction Environmental Engineers.</p>	8 projects (costs are difficult to tease out and are not included)
<p>Stormwater retrofit projects to meet Total Maximum Daily Load (TMDL) requirements.</p> <ul style="list-style-type: none"> ➤ No stormwater retrofit projects were installed this past year. Construction is scheduled to commence on Allen Brook retrofits in Williston in Spring of 2019. 	\$0
Maintenance District stormwater and water quality projects (retrofits/restoration/slope stabilization/etc.).	\$1,509
Stormwater management system work (new or maintenance); could include DI cleaning, stormwater pipe cleaning, ditching, replacing stormwater pipes, or other.	\$18,147
Total	\$19,656 and 8 active projects

Note: Funds mixed State T-Funds, FHWA and FAA

What stormwater related programs did VTrans implement in Municipalities with Stormwater Utilities?



Note: Includes VTrans non-grant/incentive programs.

Programs / Activity	2018 Costs
MS4 Minimum Control Measures (Municipal Separate Storm Sewer System General Permit) ➤ Rethink Runoff: http://rethinkrunoff.org	\$5,500
TMDL Stormwater Flow Restoration Planning (FRP) (Stormwater Impaired Watersheds with Total Maximum Daily Loads). Includes: ➤ Allen Brook Design and Construction Plans (Williston)	\$216,732
TMDL Phosphorus Control/Reduction Retrofit Planning (PCP) (Lake Champlain Phosphorus Impaired Watershed with Total Maximum Daily Load).	\$76,000
TS4 – Transportation Separate Storm Sewer System Permit Compliance. Includes: ➤ Developing Notice of Intent, Stormwater Pollution Prevention Plan and Annual Report Template.	\$39,000
Asset Management/Data Collection capturing and updating stormwater collection, conveyance, and treatment systems. ➤ Summer Temporary Staff (2) worked over Summer 2018 to collect data and map stormwater infrastructure along VTrans Road networks. Work involved State Roads in Burlington, Colchester, South Burlington and Williston.	\$31,000
VTrans Training Center and Vermont Local Roads Education/Training Targeting Municipal Staff. ➤ 3 trainings attended by 2 towns (So. Burlington and Williston) with a total of 4 municipal staff in attendance.	\$1,650
Total	\$369,882

Note: Funds mixed State T-Funds, FHWA and FAA

What stormwater related grant/incentive programs did VTrans implement in Municipalities with Stormwater Utilities?



Note: Includes municipal grants/incentives including water quality related grant awards and stormwater utility incentive grant payments by VTrans to municipalities with stormwater utilities.

Programs / Activity	2018 Costs
Transportation Alternatives (requires local match not included in totals listed here). Grant awards include: <ul style="list-style-type: none"> ➤ Colchester – Construction of several BMPs in the Moorings Stream Watershed. ☞ (Grant Award = \$295,200) ➤ South Burlington – Construction of a sub-surface stormwater infiltration & detention system. ☞ (Grant Award = \$242,000) ➤ South Burlington – Expansion of an existing stormwater pond along Kennedy Drive. ☞ (Grant Award = \$300,000) 	\$837,200
Municipal Highway & Stormwater Mitigation in the Municipal Mitigation Assistance Program (requires local match not included in totals listed here). Grant awards include: <ul style="list-style-type: none"> ➤ South Burlington - Design/construction of new closed system and associated stormwater treatment along Lindenwood Dr. ☞ (Grant Award = \$303,574) ➤ South Burlington - Retrofit of existing detention pond into a gravel wetland along Kennedy Drive. ☞ (Grant Award = \$253,616) 	\$557,190
Better Roads in the Municipal Mitigation Assistance Program (requires 20% local matching funds not included in totals listed here). <ul style="list-style-type: none"> ➤ No applications were received 	\$0
Municipal Stormwater Utility Incentive Payments in the Municipal Mitigation Assistance Program using Clean Water Funds.	\$0 *
Total (rounded)	\$1.4 million

*Payments in calendar year 2018 are to be made by the Agency of Administration, not VTrans.

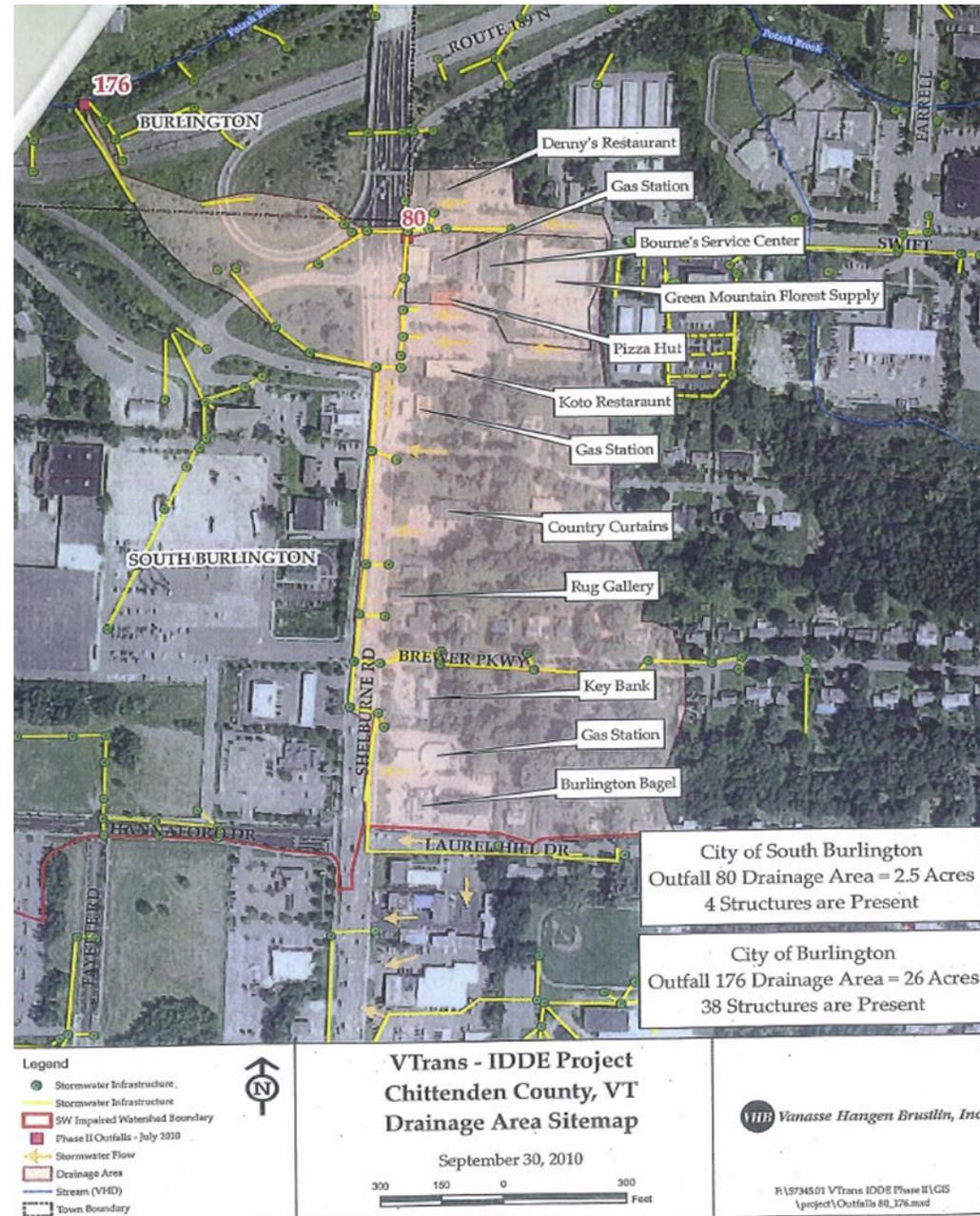
**Note: Funded through VTrans’ Municipal Assistance Program
 Funding sources include T-Funds, FHWA, Capital Bill, and Clean Water Funds**

VTrans and Stormwater Utilities

- VTrans owns 394 acres of impervious (roads and non-roads) in the 5 municipalities with SW Utilities.
- In calendar year 2018 VTrans paid \$197,789 into these utilities (roughly \$500/acre).
- VTrans received no direct services (clean water projects, maintenance or technical support) from these municipalities.
- VTrans owns roughly 12,000 to 14,000 acres of roadway impervious surface statewide. (note: VTrans owns 20% of the roads in Vermont and Municipalities own 80%)
- VTrans is currently estimating its statewide non-road impervious surface area.

Stormwater System Mapping

Non-VTrans Stormwater Discharges into the VTrans Stormwater Collection System



VTrans Transportation Infrastructure and Facilities

2,709 State Highway System Miles
(378 Interstate + 2,331 State Highway)

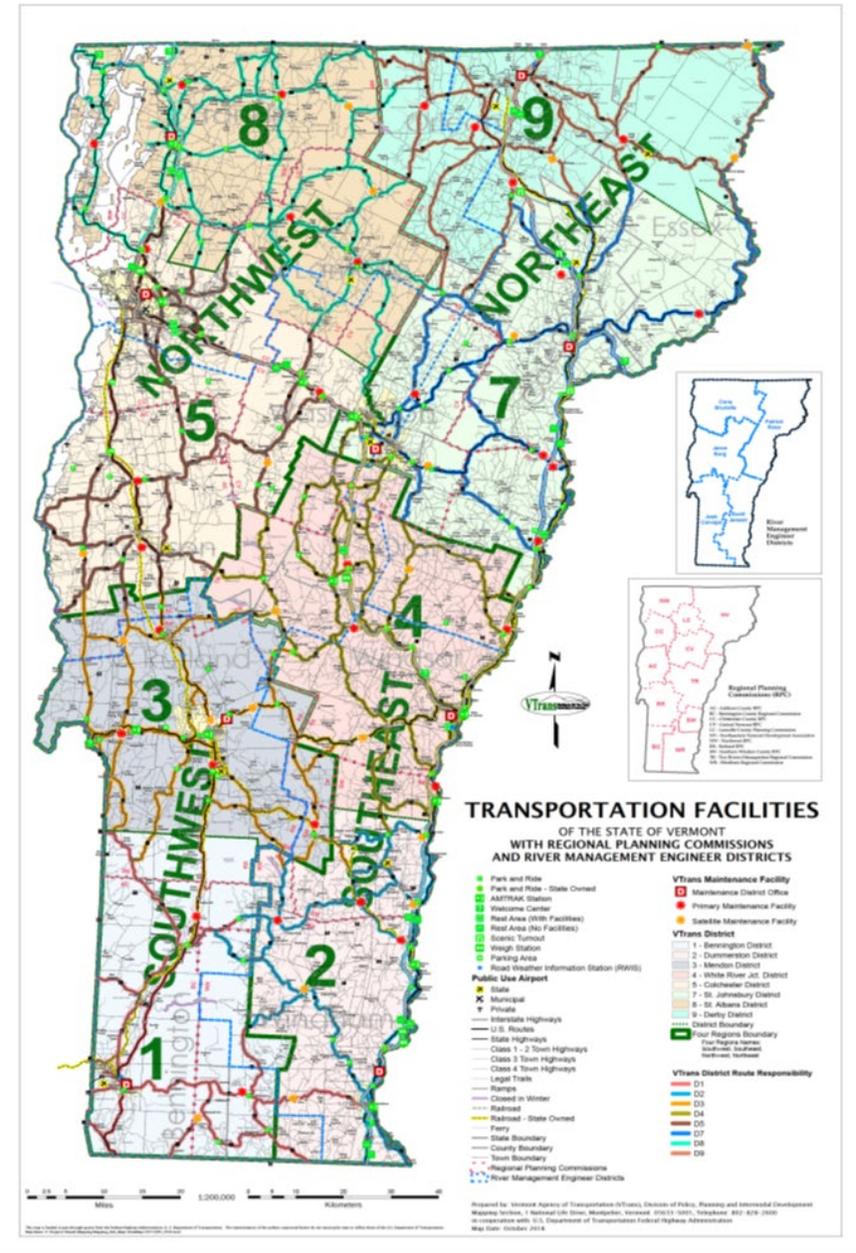
30 State-Owned Park & Ride Lots

64 State Maintenance facilities

10 State-Owned Airports

3 State-Owned Gravel Pits

VTrans maintains extensive compliance programs addressing multiple clean water/stormwater regulations impacting its entire transportation network, associated infrastructure, and facilities.





What is the regulatory framework VTrans is subject to?

VTrans has a role to play under Vermont’s Act 64 “Clean Water Act” and under pre-Act 64 regulations addressing stormwater from its highways and non-road developed lands.

- **Transportation Separate Storm Sewer System (TS4 - since 2018) General Permit** (VTrans specific statewide permit allowing several stormwater programs to be rolled into one comprehensive regulatory program), includes:

Municipal Separate Storm Sewer System General Permit (MS4 – since 2003) – a MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains). In addition to TMDL implementation, requires compliance with six minimum control measures including:

Public Education & Outreach	Illicit (non-stormwater) Discharge Elimination	Post-Construction Runoff Control
Public Participation & Involvement	Construction Site Runoff Control	Pollution Prevention & Good Housekeeping

Multi-Sector Industrial General Permit (since 2007) – regulates discharges of stormwater from industrial facilities which conduct activities and use materials that have the potential to impact the quality of Vermont’s waters (applies to State Airports and Gravel Pits)

State Operational Stormwater Discharges (since pre-2002) – regulates stormwater runoff from the construction, expansion, and redevelopment of impervious surfaces pursuant to the permit threshold triggers established in Vermont Statutes (average 10 projects per year obtaining coverage and building treatment)

Total Maximum Daily Load (pre and post Act 64) - establishes reduction targets for specific pollutants (e.g. stormwater flow, phosphorus, E. coli, etc.) to attain water quality standards

- **State Construction Stormwater General Permit (since 2003)** – Not under TS4 - regulates discharge of stormwater runoff from construction activities with average 30 projects per year complying with this permit during construction.

Refer to VTrans Fact Sheet for more detailed information on Clean Water Programs and Regulations VTrans must comply.

What Clean Water Projects is VTrans investing in?

St. Albans Park & Ride Gravel Wetland Retrofit (2010)

Eliminated direct discharge to stream, reduce flow, promote infiltration and phosphorus reduction



St. Albans I-89 Exit 19 & 20 Median Infiltration Trenches (2012)

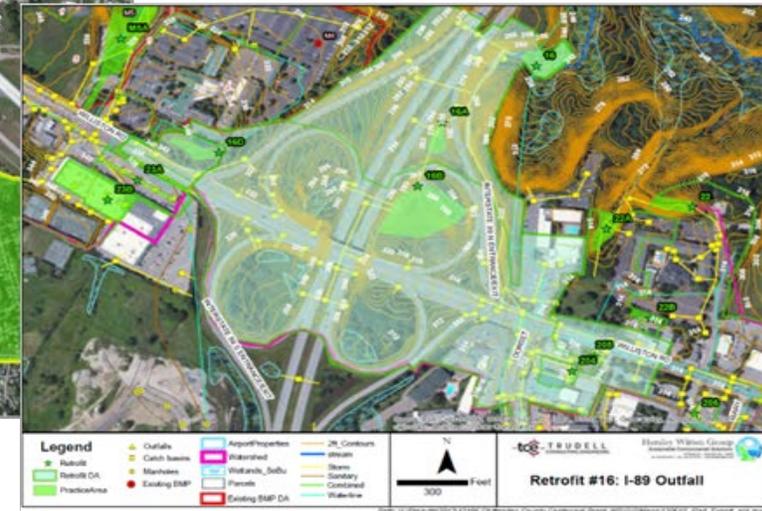
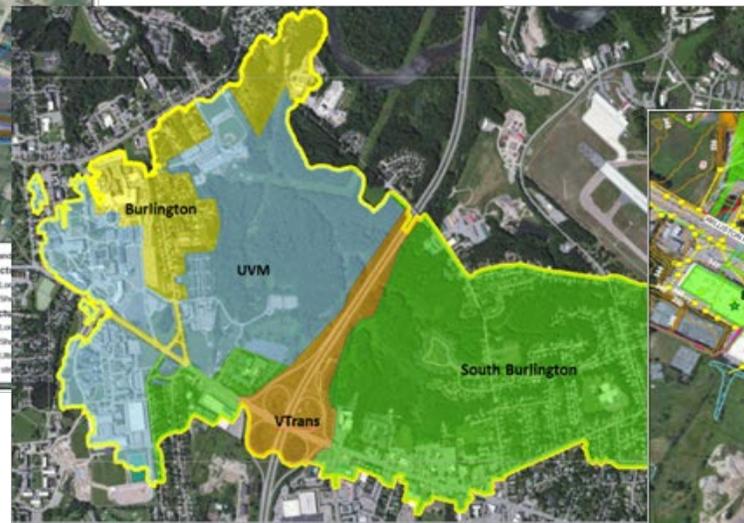
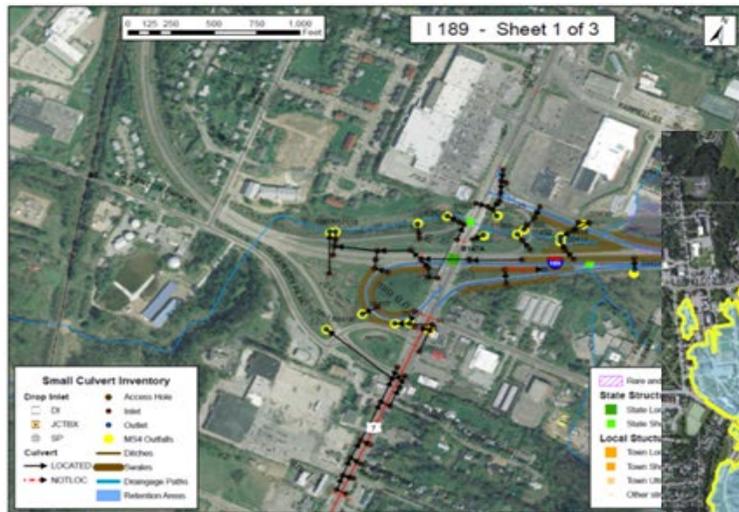
Modified grass swale to reduce flow, promote infiltration and phosphorus reduction



How does VTrans build its Clean Water Action Plan?

→ stormwater asset mapping → flow patterns → partnerships → impervious surface → sub-watershed scale calculating & modeling → treatment practice identification → ANR review & approval → design & construction →

repeat → over less than 20 years for 12 Stormwater Impaired Watersheds and 12 Lake Champlain Phosphorus Impaired Lake Segments (sub-watersheds)





VTrans Clean Water accomplishments (2018)

- ✓ 30 new projects undergoing stormwater design and permitting
- ✓ 12 new projects constructing new stormwater treatment practices.
- ✓ 82 previously constructed projects with stormwater treatment practices were inspected and maintained.
- ✓ 29 of the 77 active construction projects required Construction Stormwater Permit coverage and implemented erosion prevention and sediment controls and 134 compliance visits by VTrans staff.
- ✓ Submitted to ANR a Flow Restoration Plan (FRP) calling out 58 structural stormwater treatment practices addressing stormwater flow reduction targets in the VTrans designated MS4 (TS4) to be constructed over seven phases between 2018 and 2032 to comply with our TMDL flow reduction targets in the 10 stormwater impaired streams. Of the 58 practices 16 have been fully designed and 4 have been constructed.
- ✓ Undertaking Flow Restoration planning and design and initiated project programming to undertake final design and initiate construction of Flow Restoration Projects (aka Clean Water Projects) which could result in up to 13 new clean water practices constructed in the upcoming years.
- ✓ Initiated Missisquoi Bay Watershed Phosphorus Control Planning to address Lake Champlain TMDL and VTrans' phosphorus reduction targets.
- ✓ Developed 8 new Stormwater Pollution Prevention Plans (SWPPPs) for VTrans Maintenance Facilities. This is in addition to the existing 12 SWPPPs in place for other VTrans District Facilities, Airports and Gravel Pits.
- ✓ Expended approximately \$5 million on clean water program and compliance costs including planning, design, construction, Operation & Maintenance, and staff time.

Refer to VTrans Fact Sheet for more detailed information on Clean Water Programs and Regulations VTrans must comply.

What is the budget and funding source associated with that five-year plan?

TMDL planning and implementation is estimated at an annual average of \$7 million over the next 5 years (includes 4 million current programming plus new TMDL compliance).

VTrans' 5 year TMDL compliance plan (an 18 to 20 year commitment) is included in our Fiscal Year Transportation Program Projects Book submitted to the General Assembly each legislative session for authorization under Act 38. For FFY 20 refer to:

Page 15 "St. Albans IM SWFR(2)"

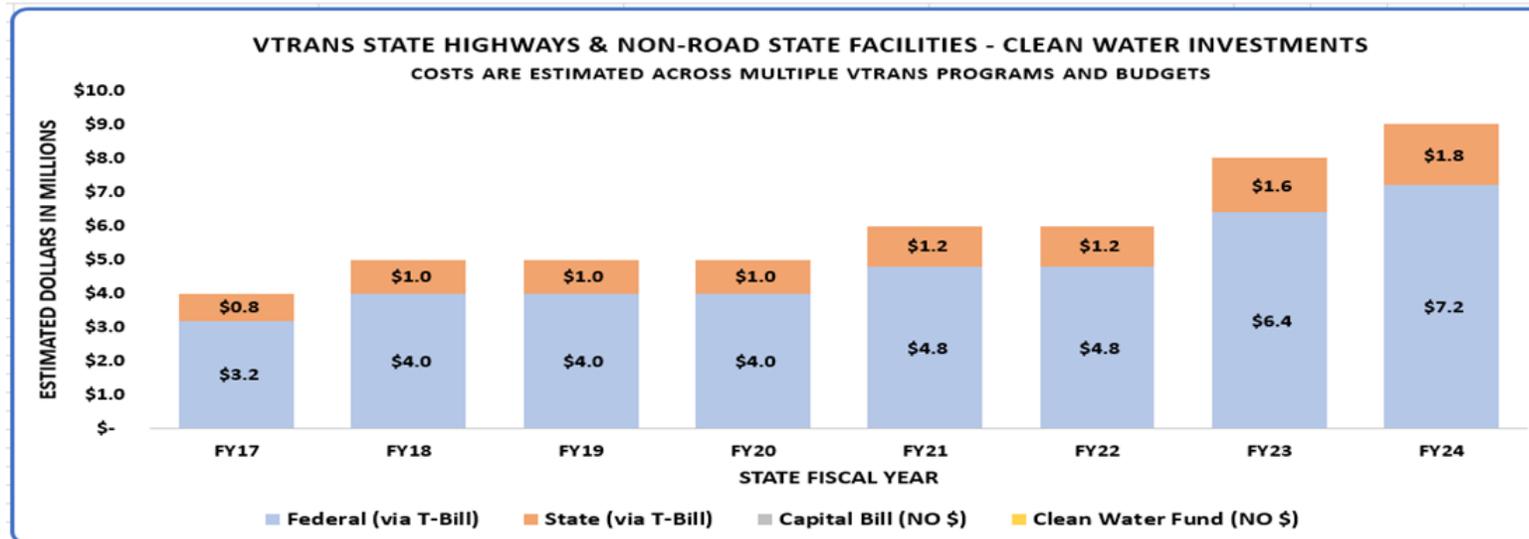
Page 18 "Statewide SWFR ()"

Page 17 "Statewide PCPM ()"

Page 23 "Williston IM SWFR (1)"

All of the funding is Federal or State (Transportation Funds) VTrans' Clean Water Initiatives and Stormwater Regulatory Compliance Investments for the State Highway System and VTrans non-road developed lands are anticipated to be covered by the Transportation Bill and Federal Funds where eligible and does not include "Capital Dollars".

See estimated costs below through SFY24 which include Project Development, Construction, O&M and FTE across multiple VTrans Programs & Budgets.



Questions?

