

Municipal Stormwater Utility Rates and Credits Summary

Williston Stormwater Utility Case Study

Prepared by VTrans

2-1-2016

Williston Stormwater Utility

Formed in 2014 by city ordinance

**VTrans owns or manages 121 acres of impervious surface within municipal limits (roads and parcels)
Based on Williston Stormwater Utility Rates VTrans is being assessed a fee of \$57,630/year**

Let's see how the Credit System is set up and how it would look applied to VTrans

1. User Fee Credits (Per 2014 Credit Manual and discussion with Williston DPW staff)

A. Multiple credits can be given to eligible properties but the total credit given to any property cannot exceed 50% of the stormwater fee for that property unless impervious cover from offsite is also captured.

B. The maximum credit given to any property treating offsite impervious is 100%.

C. The following credits are listed in the Williston Credit Manual need Town Approval via Credit Application:

1) **The Stormwater Treatment Practice (STP) Credit.** Up to 50% credit

Must design, construct and maintain STPs per Vermont Stormwater Manual. STPs used to meet Vermont DEC Treatment Standards include:

- a) Water Quality STPs: disconnection, grass swale, dry swale, wet swale, gravel wetlands, infiltration trench/ basin, bioretention, wet ponds
- b) Recharge STPs: disconnection credit, grass swale, infiltration trench/ basin, bioretention
- c) Channel Protection STPs: dry or wet ponds, occasionally infiltration basin
- d) Overbank Flood STPs: dry or wet ponds

2) **STP Credit for Non-Structural Practices.** Up to 10% credit

If properties implement one (or more) of the following:

- a) Natural Area Conservation.
- b) Disconnect, infiltrate and filter rooftop and/or non-rooftop runoff.
- c) Stream buffers and/or grass channels.

3) **STP Credits for Control of Stormwater from Off-Site Properties.** Up to 50% credit

If construct and maintain STPs that control stormwater from offsite properties.

4) **MS4 Credit.** A 10% credit

If regulated under the Municipal Separate Storm Sewer System (MS4) Permit Program.

5) **Education Credit and Incorporated Homeowner Property Credit.**

Not applicable to VTrans.

Applying Municipal Stormwater Utility Credits to VTrans Land Holdings

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2. Considerations and process when applying the STP Credits to VTrans land holdings:

- A. VTrans has eleven (11) “properties” – [see map and table on page 3](#)
 - 1) **Majority are linear State Highways and Interstate**
 - 2) Two developed parcels (I89 NB and SB Welcome Centers)

- B. VTrans would need to secure VT Registered Engineering services to conduct STP credit analysis on each of the 11 properties. The process would look like this following STP Credit opportunities.
 - 1) **Identify existing STPs permitted under State SW Permits** and how much impervious is currently treated to the levels required under the State SW Permit. Have VT Registered Engineer certify STPs are functioning as permitted. VTrans has a single parcel (Welcome Centers) that have a State Permit.

 - 2) Engineering analysis to determine:
 - a) **Presence of existing non-permitted STPs** (primarily non-structural), that are currently treating impervious surface and to what level of compliance under the State Stormwater Manual.

 - b) **Need for and placement of new/retrofit STPs** (structural and non-structural) to achieve treatment compliant with State SW Manual. Need to treat 100% impervious from each property. Anything less will not get the 50% credit. STP Credits only apply to that portion of the property served by the STP.

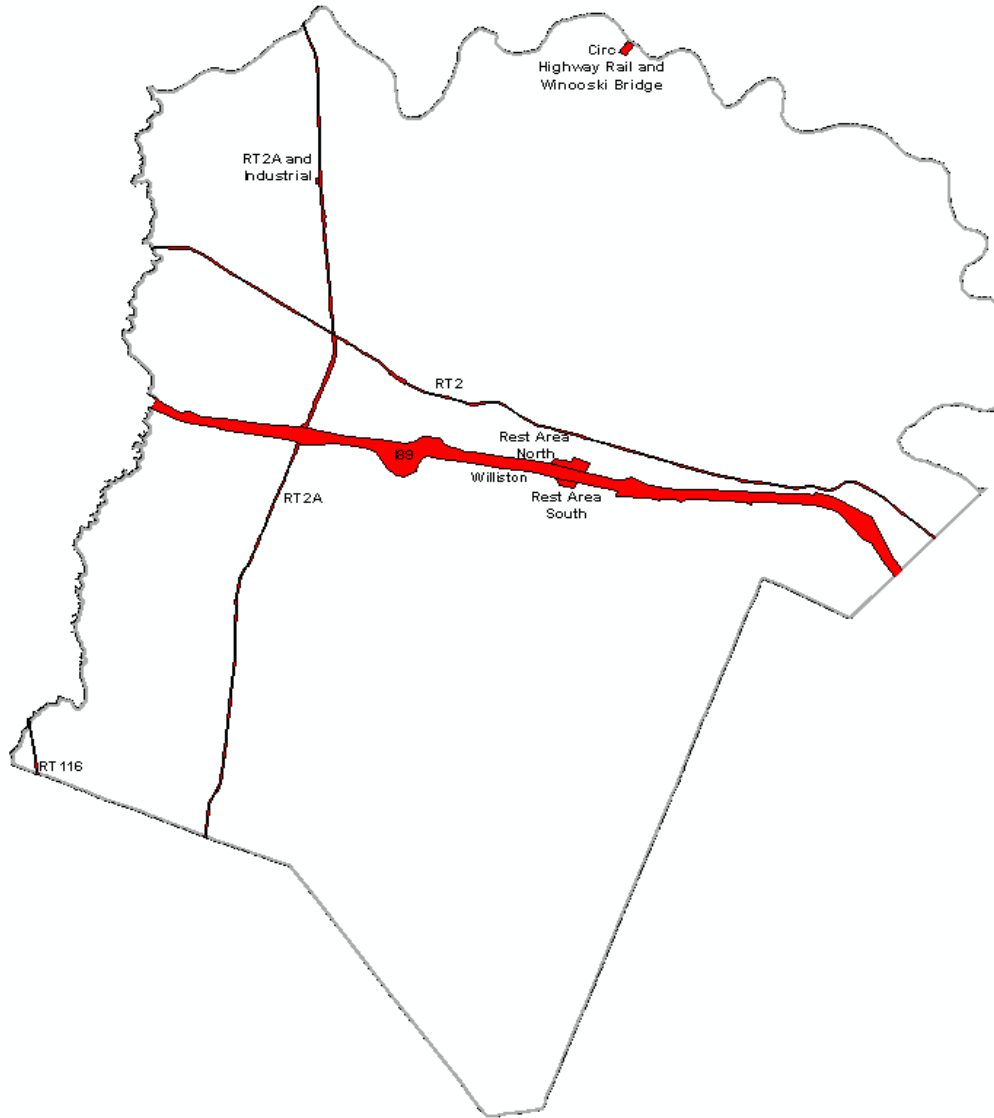
 - c) **Current “untreated” offsite impervious** surface being treated by State SW Manual compliant STPs throughout the 11 properties and the potential to re-route, capture and treat any “untreated” offsite impervious with State SW Manual compliant STPs on VTrans land/ROW.

 - 3) Use engineering results to **advance STP project development**, design and construction. This could include natural & cultural resource clearance/permitting, negotiations with property owners, right-of-way acquisition, contracting and construction. Credits are not applied until STPs are constructed.

 - 4) STP credit applications must include Information on how **STPs comply with State SW Manual** (include hydrologic calculations, Site Plan, Engineering calculations by VT Registered Engineer).

- C. Once STPs are constructed and credits are issued, VTrans will conduct **ongoing operation and maintenance** of STPs with annual Certifications from VT Registered Engineer confirming STPs are compliant.

VTrans Properties Map in Williston
11 “Properties” per Williston Map Listing
 [Source Town of Williston DPW]



Map Number	ERU	Impervious* (ft ²)	Impervious* (acre)
08:289:000.000,e	1	2,526	0.1
08:289:000.000,b	1	2,277	0.1
14:189:069.000,a	16	63,859	1.5
14:189:069.000,b	17	62,883	1.4
Essex Rd, 102, VT2A	113	479,974	11.0
Interstate 89, 189	507	2,663,422	61.1
St George Rd, 103, VT2A	66	260,916	6.0
St George Rd, 103, VT2A	116	487,865	11.2
Hinesburg Rd, 116, VT116	13	45,235	1
Williston Rd, 104, US2	197	873,613	20.1
Williston Rd, 105, US2	83	342,170	7.9
Total	1,130	5,284,739	121.3

3. Issues applying the STP Credits to VTrans Linear Transportation Infrastructure

- A. Credits target parcel-based development with limited and compact impervious surface and drainage areas.
- B. Need to treat 100% impervious from each property. Anything less will not get the 50% credit.
- C. The credit system seems cumbersome and unreasonably expensive when applied to linear transportation infrastructure which have multiple linear properties, various limits of impervious surface which are not compact and have multiple drainage areas with extensive offsite run-on and limited space in the right-of-way for STPs.
- D. When attempting to evaluate the need for STP along linear property (highways) the number of potential drainage areas serving defined limits of highway impervious surface and associated drainage areas are going to be very high. **The number of individual STPs required to treat VTrans highway miles could be in the hundreds across all 11 linear properties given the number of sub watersheds associated with defined impervious limits and distinct drainage patterns along state highways.** – see below [Allen Brook Flow Restoration Plan on I89](#) (note: will cost VTrans \$500,000 to \$800,000 to meet its Flow Restoration obligations in Allen Brook Watershed)



- E. VTrans would need to design/construct STPs to the State SW Manual for the entire impervious surface acreage in each of the 11 billable parcels in order to get 50% credit off each of the 11 properties? This is a substantial and costly effort for only a 50% credit. **The cost of performing the STP engineering analysis alone would be higher than the current \$57,630 fee** and that does not even contemplate getting these STPs through design development and construction. **This seems like an inefficient use of taxpayers' dollars.**
- F. The credit system does not sufficiently recognize VTrans' investments benefitting water quality.
- D. **It appears as though achieving the maximum 50% credit for VTrans requires STPs beyond that required under State and Federal regulatory programs like the Post-Construction Stormwater and Flow Restoration Efforts for Stormwater Impaired waters.**

- 4. What are the financial implications of applying the Williston STP credit system to VTrans?
... and is this the most efficient use of taxpayer dollars?
... especially considering VTrans' financial and resource commitments to water quality?**

Cost are very difficult to estimate at this time and appear to be more than the fees being charged by the Utilities. Cost implications for VTrans include:

- A. Consulting VT Registered Engineers at \$100/hour or more to perform engineering services noted herein
- B. Environmental Resource staff costs to handle increased number of STP projects (resource clearances & permits)
- C. STP Project development costs for what could be hundreds of STPs along state highways with the potential for right-of-way negation/acquisition
- D. Design staff costs to move projects through design development process
- E. Contract and construction management costs
- F. Capital costs to install STPs
- G. Operation and maintenance staff costs to handle increased number of STPs
- H. Environmental staff costs to handle tracking, inspection, reporting, and overall compliance
- I. Environmental capital costs for ongoing maintenance and replacement costs for STPs

Consider multiplying the work effort and costs to VTrans by the number of municipal stormwater utilities in place now (2) and those that may come over the years as the municipalities seek to raise revenue to support their compliance efforts with:

- 1) Expanding MS4 jurisdiction
- 2) Stormwater Impaired Stream Watersheds
- 3) Lake Champlain Basin Phosphorus impairment
- 4) New Municipal Roads General Permit for Stormwater under Vermont's Clean Water Act

5. Considerations when applying the Municipal Separate Storm Sewer System (MS4) Credit for VTrans:

- A. This seems to be a fairly simple and automatic credit for VTrans
- B. 10% Credit can be applied to each of the 11 properties
- C. Must supply evidence of MS4 coverage and most recent annual report
- D. No added costs to VTrans are expected to obtain this Credit

Other MS4 Credit considerations:

- A. MS4 Credit of 10% does not adequately reflect the level of funding or commitment to water quality undertaken by VTrans
- B. Quick search on-line shows a range of MS4 credits under Municipal Stormwater Utilities:
 - 1) 10% (Williston VT)
 - 2) 20% (Fort Mills SC)
 - 3) 25% (Pasco Cnty FLA)
 - 4) 35% (Raleigh NC)
 - 5) 100% (Royal Palm Beach, FLA)

END OF CASE STUDY