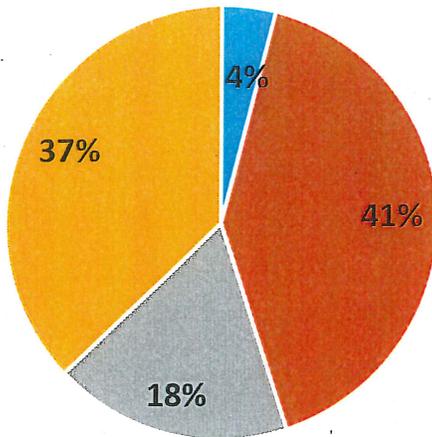


## State of Vermont Long Term Financing of Clean Water *Statewide Costs & Funding Gaps*

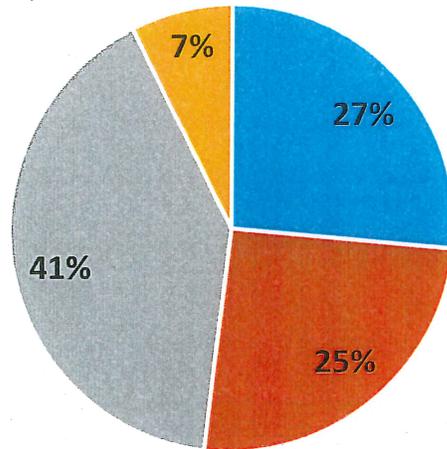
**VT Sources of Phosphorus Loading to Lake Champlain by Sector**



**Total Load 630.5 metric tons per year**

- Municipal Water Pollution Control
- Agriculture
- Stormwater
- Natural Resources

**Statewide Clean Water Funding Gap by Sector to Comply with the Vermont Clean Water Act (Act 64) and Lake Champlain TMDLs**



**Total Statewide Gap \$1.36 Billion over 20 years  
(Annualized Gap of \$68.1 Million)**

- Municipal Water Pollution Control
- Agriculture
- Stormwater
- Natural Resources

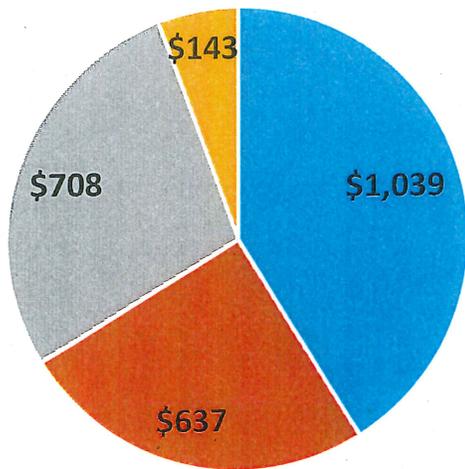
**Source:**

- Summary: Net Need (Gap) by Sector, September 12, 2016 (<http://dec.vermont.gov/watershed/cwi/cwf/future>)
- U.S. EPA Lake Champlain TMDLs, Table 3 (<https://www.epa.gov/sites/production/files/2016-06/documents/phosphorus-tmdls-vermont-segments-lake-champlain-jun-17-2016.pdf>)

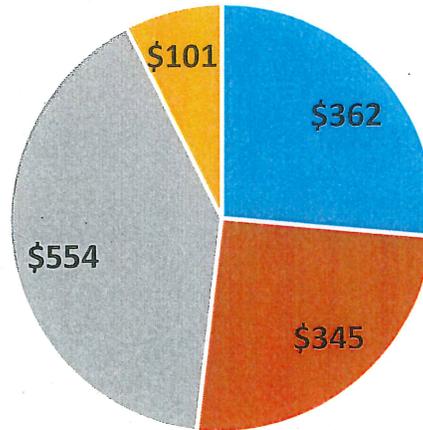


**Statewide Long Term (20-Year) Clean Water Funding**  
**Total Need (left) and Total Gap (right) by Sector, in Millions**  
**To Comply with the Vermont Clean Water Act (Act 64) and Lake Champlain TMDLs**

Total Statewide Need \$2.53 Billion



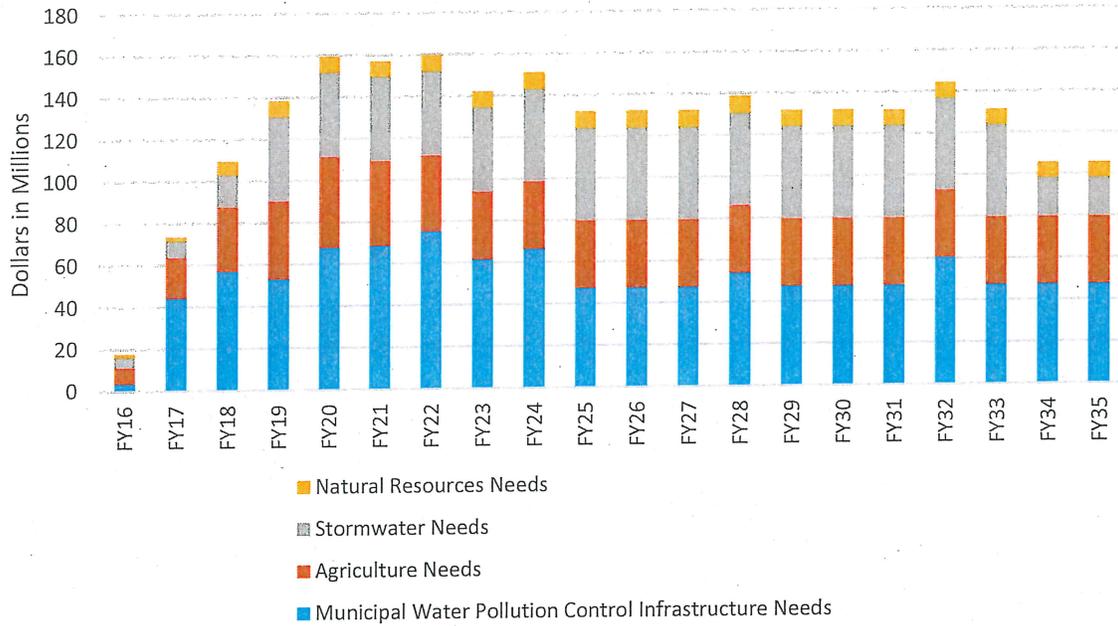
Total Statewide Gap \$1.36 Billion



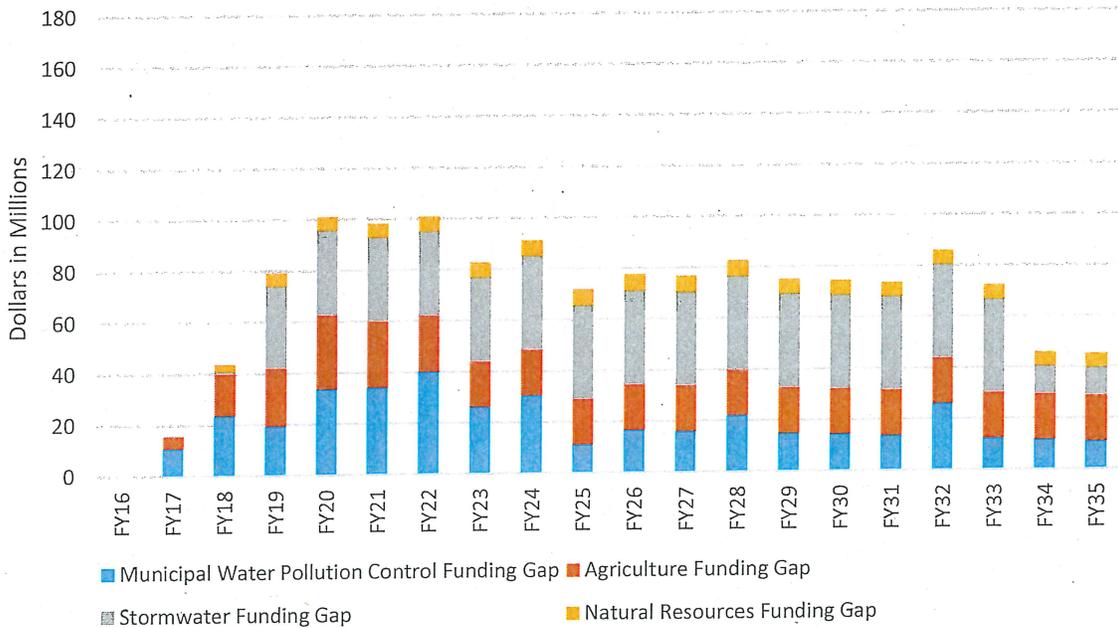
- Municipal Water Pollution Control
- Agriculture
- Stormwater
- Natural Resources



**Statewide Total Annual Clean Water Funding *Need* by Sector, in Millions, over 20-Years to Comply with the Vermont Clean Water Act and the Lake Champlain TMDLs**



**Statewide Total Annual Clean Water Funding *Gap* by Sector, in Millions, over 20-Years to Comply with the Vermont Clean Water Act and the Lake Champlain TMDLs**





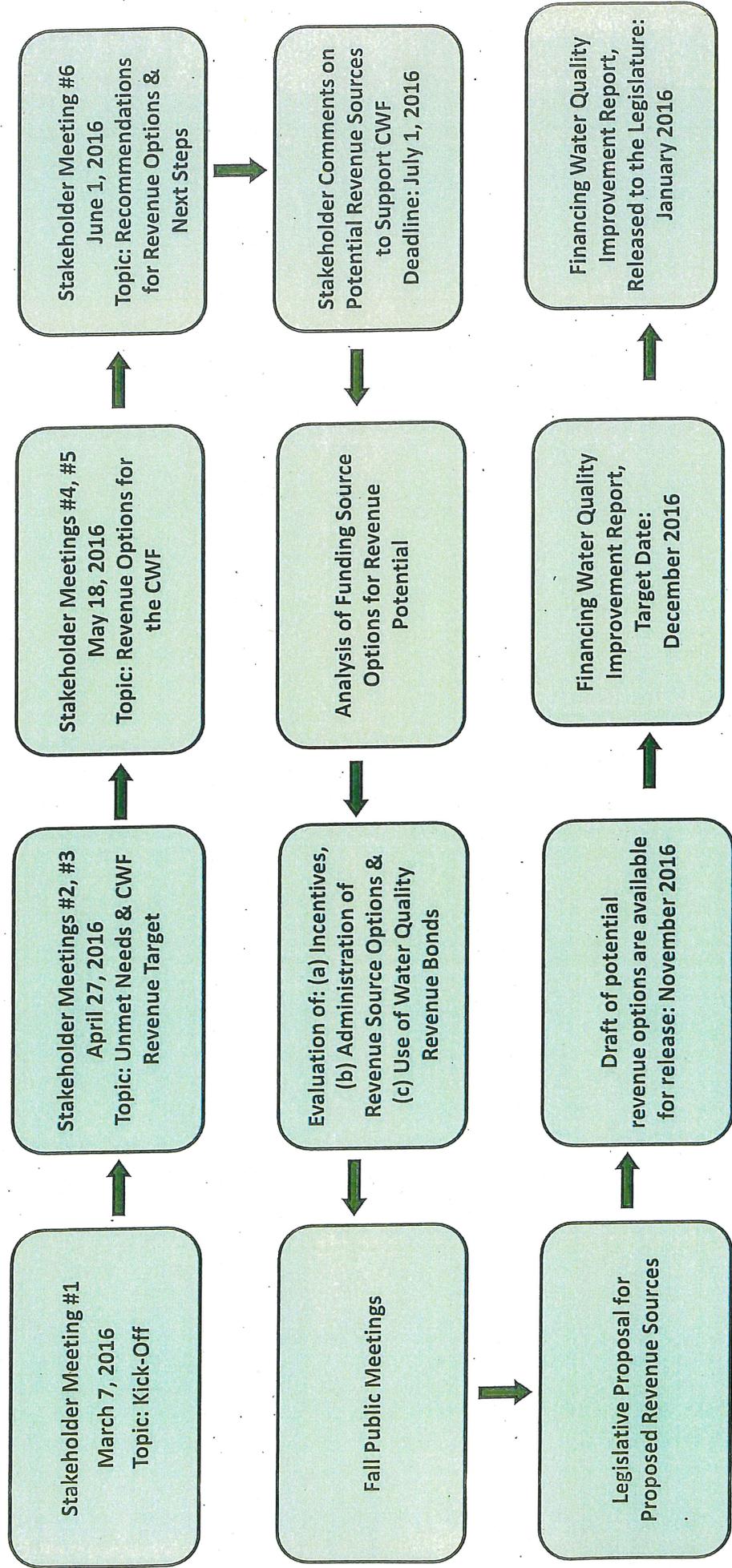
2015 Act 64, Sec. 40. STATE TREASURER REPORT ON LONG-TERM FINANCING OF STATEWIDE WATER QUALITY IMPROVEMENT

On or before January 15, 2017, the State Treasurer, after consultation with the Secretary of Administration, the Commissioner of Environmental Conservation, and the Commissioner of Taxes, shall submit to the Senate and House Committees on Appropriations, the House Committee on Fish, Wildlife and Water Resources, the Senate Committee on Natural Resources and Energy, the House Committee on Agriculture and Forest Products, the Senate Committee on Agriculture, the House Committee on Ways and Means, and the Senate Committee on Finance a recommendation for financing water quality improvement programs in the State. The recommendation shall include:

- (1) Proposed revenue sources for water quality improvement programs that will replace the Property Transfer Tax surcharge established under 32 V.S.A. § 9602a. The proposed revenue sources shall be designed to assess fees, taxes, or other revenue sources from a property, parcel use, parcel, type, or an activity in proportion to the negative impacts of property, parcel use, parcel type, or activity on the water quality in the State.
- (2) A recommendation for rewarding or incentivizing best management practices for a property or activity that is subject to the proposed fee, tax, or revenue source.
- (3) An estimate of the amount of revenue to be generated from each proposed revenue source.
- (4) A summary of how assessment of the proposed revenue source will be administered, collected, and enforced.
- (5) A recommendation of whether the State should bond for the purposes of financing water quality improvement programs, including whether a proposed revenue source would be sufficient for issuance of water quality revenue bonds.
- (6) A legislative proposal to implement each of the revenue sources proposed under this section.



**DRAFT Process for Developing Legislative Report**  
**Financing Clean Water Improvement Using the State Clean Water Fund (CWF)**





Preliminary DRAFT - Revenue Sources and Proposed Evaluation Criteria for a Vermont Clean Water Fund

Description of Criteria	Revenue Amount	Revenue Potential		Predictability		Sufficiency		Effect on Outside Dollars		Next to Water Quality		Promotes Mitigation		Administration & Compliance		Accountability		Geographic Distribution		Income Equity	
		Stable & predictable, or unstable & unpredictable	Supports spending with or without other sources, or is insufficient to support spending	Potential to leverage, or inhibits outside dollars (federal, other state revenues, etc.)	Direct relationship to water quality, indirect relationship, or no relationship	Encourages positive behavior, or does not encourage positive behavior	Simple and/or pre-existing structure compared to complex structure and/or requires a new structure	Transparent to payer, or semi-transparent, or is opaque	Degree to which tax/fee applied uniformly across state	Degree to which tax/fee based on ability to pay											
<b>Major Categories</b>																					
<b>Revenue Options Presented at First Stakeholder Meeting</b>																					
1 Excise Tax on Bottled Water Containers																					
2 Excise Tax on Flushable Consumer Products																					
3 Surtax on Meats and Foods and Alcoholic Beverages																					
4 Surtax on Rental Cars																					
5 Excise Tax on Unclaimed Beverage Container Deposits																					
6 Surtax on Sales & Use Tax																					
7 Imperious Surface Fee (Paved Fee)																					
8 Sewer, Septic, Water Surcharges																					
9 Excise Tax on Fertilizers & Pesticides																					
10 Special License Plate Fee																					
11 Mitigation or Impact Fees																					
12 Lottery Game																					
13 Surcharges on Property Transfers																					
Revenues are in the process of being modeled and estimated.																					
<b>Newly Proposed Revenue Sources - Spring Stakeholder Meetings</b>																					
<b>General Revenue</b>																					
34 Income Tax																					
35 Line Item on Income Tax Form + Corporate matches																					
36 Reappropriations of current expenditures																					
37 Raising permit fees																					
38 Property tax																					
39 Increased recreation fees (state parks)																					
40 Tour bus per-passenger fee																					
41 Dollar surcharge on hotel rooms																					
42 Toll on Champlain bridge and other gateways to VT																					
<b>Agriculture Nexus</b>																					
23 Fines for non-compliance																					
24 Unroll from current use ag land within x distance of waterways and apply estimated tax dollars to improvements																					
25 Licensing fee for technical service providers (i.e. manure applicator fee)																					
26 Manure per ton fee for all animals (even past)																					
<b>Developed Lands/Roads/Stormwater Nexus</b>																					
27 Vehicle registration fee																					
28 Other motorized fees (boats, certain farm equipment, etc.)																					
29 Gas tax																					
30 Stormwater permit fees																					
31 Lake-related purchase fees (dock fees, lakeshore frontage fee, etc.)																					
32 Land Gains Surtax																					
33 Energy consumption tax																					
<b>Natural Resources Nexus</b>																					
34 Fees on water-reliant recreation equipment (winter skiing, boats, etc.)																					
<b>Wastewater Nexus</b>																					
35 Sewer Surcharges																					
36 Septage Pumping Fees																					
37 Other septic related fees																					
38 Pharmaceutical Tax																					
39 Personal Care Product Tax																					

Please send comments to TAX.Commissioner@vermont.gov

Revenue Evaluation Criteria		Revenue Potential		Predictability		Sufficiency		Effect on Outside Dollars		Next to Water Quality		Promote Mitigation		Administration & Compliance		Accountability		Geographic Distribution		Income Equity				
Description of Criteria		Revenue Amount		Stable & predictable, or unstable & unpredictable		Supports spending with or without other sources, or is insufficient to support spending		Potential to leverage, or inhibits outside dollars (federal, other state revenues, etc.)		Direct relationship to water quality, indirect relationship, or no relationship		Encourages positive behavior, or does not encourage positive behavior		Simple and/or pre-existing structure compared to complex and/or requires a new structure		Transparent to payer, or semi-transparent, or is opaque		Degree to which tax/fee applied uniformly across state		Degree to which tax/fee based on ability to pay				
40	Nutritional Supplement Tax	Included/Excluded	Usable/Not Usable																					
41	Exporting waste as a value-added product (i.e. fertilizer)	Included/Excluded	Usable/Not Usable																					
42	Tax on products that use phosphorous and nitrogen during production/tax incentive for those that don't	Included/Excluded	Usable/Not Usable																					
<b>Other Sources</b>																								
<b>Sales Tax on Services &amp; Other Sources</b>																								
43	Sales Tax on General Auto Repair																							
44	Sales tax on new car dealer labor charges, work under warranty, and value of service contracts																							
45	Sales Tax on Storage Units																							
46	Sales Tax on Pet Care (except vet services)																							
47	Sales Tax on Parking Services (Lots and Garages)																							
48	Sales Tax on Marinas																							
49	Sales Tax on Landscaping Services (residential and commercial)																							
50	Sales Tax on Limousine Services																							
51	Sales Tax on Beauty Salon Services																							
52	Sales Tax on Nail Salons																							
53	Excise Tax on water appliances and plumbing fixtures																							
54	Other sources																							

## CLEAN WATER FUND REVENUE CRITERIA EXERCISE

Clean Water Long-Term Financing Report Purpose: The Vermont Clean Water Act (Act 64) “requires the State Treasurer to recommend a long-term revenue source to fund water quality improvements.”

Action: The State plans to use the below criteria to evaluate revenue sources for water quality improvements. Stakeholders have an opportunity to rank the criteria in the table below by allocating no more than 100 total points to the line items you value most. Please send your rankings to [tax.comssioner@vermont.gov](mailto:tax.comssioner@vermont.gov) by July 1, 2016.

Criteria	Explanation	Degree of Assessment	Points
Revenue Potential	The revenue source’s potential to support the Clean Water Fund or debt service on a bond for clean water improvements.	Revenue Amount	
Predictability	Revenues are relatively constant over time and not subject to unpredictable fluctuations	a) Stable & predictable, b) Unstable & unpredictable	
Sufficiency	The revenue source provides the dollars necessary to finance the desired rate of spending.	a) Supports spending with/without other sources, (b) Insufficient to support spending	
Effect on Outside Dollars	A revenue source’s potential to attract outside dollars from entities such as the federal government or inhibit another source of revenue	a) Has potential to leverage, b) Inhibits outside dollars (e.g., federal, other state revenues)	
Nexus to Water Quality	The degree to which the tax or fee bears a relationship to water quality	a) Direct relationship to water quality, b) Indirect relationship, c) No relationship	
Promotes Mitigation	The degree to which a tax or fee encourages individuals and businesses to perform on-site mitigation to improve water quality	a) Encourages positive behavior, b) Does not encourage positive behavior	
Administration & Compliance	The degree to which revenues can be collected effectively, the provision can be enforced, and payers can easily comply.	a) Simple or pre-existing structure, b) Complex or new structure	
Accountability	The degree to which the amount of the tax or fee is explicit and known to those who pay.	a) Transparent to payer b) Semi-transparent to payer c) Not transparent to payer	
Geographic Distribution	The degree to which the tax or fee applies uniformly across the entire state.	a) Source is applied across state b) Source is applied to particular geographic regions	
Income Equity	The degree to which the tax or fee is based on ability to pay	a) Source is based on a progressive income/wealth structure b) Source is not based on income/wealth	
Other Criteria or Considerations	<i>Please provide suggestions if desired.</i>		



## DRAFT Clean Water Initiative: Major Statutory and Lake Champlain Phosphorus TMDL Phase I Plan Deliverables

*\*\* The light blue-shaded tasks are milestones specified in the Lake Champlain TMDLs Accountability Framework – the guide containing required tasks for monitoring progress in the restoration of Lake Champlain*

Agency	KEY TASK	DEADLINE	UPDATE	RECURRING?
DEC, AAFM, VTrans, ACCD, Administration	Establish a Clean Water Fund	Act 64: 06/16/2015	Fund Completed; Requires legislative action to sustain fund beyond 6/30/2017 New Target Date: 6/30/2017	No
DEC	Develop funding proposal with other agencies and Convene Clean Water Fund Board	September	FY16 & FY17 appropriated; FY18 Clean Water Fund Board Meeting scheduled	Annually
DEC	Recommend allocation of Clean Water Fund as part of state budget	November	On track	Annually
DEC	Develop Stormwater Management Practices Handbook for sub-jurisdictional activities	Act 64: 1/1/2016	Completed web-based materials; New target date for hard-copy handbook: 2/1/2017	No
DEC, AAFM, VTrans	Develop databases to consistently track TMDL implementation activities achieved through regulatory and funding programs across agencies, and link databases with DEC TMDL implementation tracking system	Champlain TMDL deadline: 12/30/2016	Databases complete; Testing data transfer between DEC and AAFM systems; New Target Date: 12/30/2016	No
DEC, AAFM	Agency technical staff develop accounting and tracking protocol to document methods for estimating phosphorus load reductions achieved by TMDL implementation activities at the BMP level	Champlain TMDL deadline: 12/30/2016	On track	No
DEC	Update Combined Sewer Overflow (CSO) Rule	Champlain TMDL deadline: 12/30/2016	Formal rule-making is under way; rule will replace former policy	No
DEC	Prepare and maintain management plan to assure that the State is meeting water quality standards and include a schedule for updating basin plans	On-going	Tactical basin plans scheduled for 2015 and 2016 on-schedule. Chapter 4 (basin planning process) of Statewide Strategy undergoing revision; Lake TMDL Phase 1 plan includes release schedule of tactical basin plans	Schedule for issuance of tactical basin plans in Lake TMDL Phase 1 Plan

Agency	KEY TASK	DEADLINE	UPDATE	RECURRING?
DEC, AAFM	ANR and AAFM shall each develop 3 performance measures relating to MOU	Act 64: 7/1/2016	Part of MOU update process and based on Results Based Accountability measures that are under development; New Target Date: 12/31/2016	No
DEC, AAFM, VTrans, FPR	Update Phase 1 Plan to reflect final Lake Champlain Phosphorus TMDL and how basin plans will be used for TMDL implementation and hold 30-day public comment period	Act 64: Three months following release of final TMDL; Deadline: 9/15/2016	TMDL finalized; anticipate release of final draft Phase I Plan for public notice on August 5, 2016; public meetings scheduled for 8/29 (Burlington & St. Albans) and 8/30 (Rutland)	September 15, 2016
FPR	Revise by rule the Acceptable Management Practices for Maintaining Water Quality on Logging Jobs (Act 64, Sec. 49)	Champlain TMDL deadline: 12/30/2016	Undergoing formal rulemaking; rescheduled from 9/1/2016 to 11/1/2016	No
AAFM	As part of revisions to Required Agricultural Practices (RAP; formerly "Accepted agricultural practices or AAP), adopt by rule requirements for training classes or programs for farmers	Champlain TMDL deadline: 12/30/2016	Act 64 deadline: 7/1/2016; RAP rule-making under way; New deadline: 9/15/2016	No
AAFM	As part of RAP revisions, adopt by rule a custom applicator certification program for operating in VT (Act 64, Sec. 16)	Champlain TMDL deadline: 12/30/2016	Act 64 deadline: 7/1/2016; RAP rule-making under way; New deadline: 9/15/2016	No
AAFM	Adopt small farm certification program	Champlain TMDL deadline: 12/30/2016	Act 64 deadline: 7/1/2016; RAP rule-making under way; New deadline: 9/15/2016	No
AAFM	Revise AAPs to improve water quality in the state and implement the small farm certification program	Champlain TMDL deadline: 12/30/2016	Act 64 deadline: 7/1/2016; RAP rule-making under way; New deadline: 9/15/2016	No
AAFM	Develop a matrix and small farm template for nutrient management planning	Champlain TMDL deadline: 12/30/2016	Act 64 deadline: 7/1/2016; RAP rule-making under way; New deadline: 9/15/2016	No
AAFM	Establish a livestock exclusion incentive program (Act 64, Sec. 4)	Champlain TMDL deadline: 12/30/2016	--	No

Agency	KEY TASK	DEADLINE	UPDATE	RECURRING?
DEC, AAFM	Revise DEC/AAFM MOU for the agricultural nonpoint source program	Champlain TMDL deadline: 12/30/2016	Act 64 deadline: 7/1/2016; Schedule for revision and MOU under development; New Target Date: 12/31/2016	No
DEC, AAFM	Update Water Quality Standards Anti-degradation Implementation Rule	Act 64: 7/1/2016	VT Water Quality Standards rule under development; anti-degradation rule to follow; Champlain TMDL deadline: 12/30/2017	No
DEC	Complete Update of Tactical Basin Plans (Phase 2 Implementation Plans) for Lamoille and Missisquoi basins	Champlain TMDL deadline: 12/30/2016	On Track	To be updated using Tactical Basin Planning five year cycles
DEC	Issue TS4 Permit for State Roads System	Champlain TMDL deadline: 12/30/2016	Under development	No
DEC, Office of the State Treasurer	Report to the Legislature on Financing of Statewide Clean Water Improvement (in partnership with Office of State Treasurer, Dept. of Taxes, AAFM, VTrans, ACCD)	Act 64: 1/15/2017	Under development; Held a series of six stakeholder meetings in Spring, 2016; Target deadline 12/2016	No
AAFM, DEC	Report to Legislature on meeting agricultural nonpoint source pollution MOU performance measures	Act 64: 1/15/2017	Will integrate this report in the Clean Water Initiative Annual Performance Report	1/15/2017 and annually thereafter
AAFM, DEC	Submit report to legislature on current scientific research and recommendations to amend RAPs to reduce nutrient contributions from tile drainage	Act 64: 1/15/2017	Champlain TMDL deadline: 12/30/2017	No
DEC, AAFM	Report to Legislature on the execution of the Phase I Implementation Plan for the Lake Champlain TMDL	Act 64: 1/15/2017	Will integrate this report in the Clean Water Initiative Annual Performance Report	1/15/2017, and every four years thereafter
AAFM	As part of the Small Farm Certification Program, Farms are to certify for compliance with RAPs	Act 64: 7/1/2017	--	7/1/2017 and annually thereafter
AAFM	Establish a training program and schedule for all farmers to complete training	Champlain TMDL deadline: 12/30/2016	Act 64 deadline: 7/1/2016; RAP rule-making under way; New deadline: 9/15/2016	No
DEC	Update Vermont Stormwater Management Manual	Champlain TMDL deadline: 12/30/2016	Underway	No

Agency	KEY TASK	DEADLINE	UPDATE	RECURRING?
DEC	Issue Municipal Roads General Permit	Champlain TMDL deadline: 12/30/2017	Outreach to municipalities under way; issued "Interim Guidance for completing municipal road erosion inventories and capital budget;" Issued "Road Erosion Risk Ranking Layer" on ANR Atlas	No
DEC	Adopt rules to manage stormwater runoff, including technical standards and BMPs	12/31/2017	Internal discussions underway	No
DEC	Issue Stormwater general permit for impervious surfaces equal to or greater than 3 acres	Champlain TMDL deadline: 12/30/2017	Under development	No
DEC	Complete Update of Tactical Basin Plans (Phase 2 Implementation Plans) for Poultney, Mettawee and Lower Lake Champlain basins	Champlain TMDL deadline: 12/30/2017	--	To be updated using Tactical Basin Planning five year cycles
DEC	Update existing regulated municipal MS4 permits to include Phosphorus Control Plan requirements that are consistent with the TMDLs' targets	Champlain TMDL deadline: 12/30/2017	Internal discussions underway	No
AAFM	Target funding for agricultural BMP and Nutrient Management Plan implementation for Missisquoi Bay, St. Albans Bay & South Lake	Champlain TMDL deadline: 12/30/2017	Underway	Likely; Need remains
AAFM	Complete education, outreach & compliance activities with farms in the Missisquoi Bay watershed per Section II,6 of Secretary of AAFM 2/3/2016 Decision	Champlain TMDL deadline: 12/30/2017	Underway	No
AAFM	Commence notification of affected farms about the Assessment and Plan process, per Section II,6 of Secretary of AAFM 2/3/2016 Decision	Champlain TMDL deadline: 12/30/2017	--	No
DEC, AAFM, VTrans, ACCD, Administration	Establish long-term revenue source to support water quality improvement via the Clean Water Fund	Champlain TMDL deadline: 12/30/2017	Legislative Report underway; will require legislative decision-making in Leg. Session 2017 to establish revenue source	No
AAFM	Revise RAPs to include requirements to reduce nutrient pollution from tile drains and other priority actions (Act 64, Sec. 4)	Act 64: 1/15/2018	--	No

Agency	KEY TASK	DEADLINE	UPDATE	RECURRING?
DEC, AAFM	Develop ANR/AAFMS MOU regarding the concentrated animal feeding operation (CAFO) program and relationship with state large, medium and small farm operations (LFO, MFO and SMO, respectively), enforcement and implementation	Act 64: 7/1/2016	Schedule for revision and MOU under development; New Target Date: 12/31/2016	No
DEC, AAFM	Develop ANR/AAFMS MOU relating to AAFMS's request to ANR to take enforcement action to enforce 6 V.S.A. Ch. 215.	Act 64: 7/1/2016	Schedule for revision and MOU under development; New Target Date: 12/31/2016	No

DRAFT

## COMPLETED Clean Water Initiative Deliverables

Agency	KEY TASK	DEADLINE	UPDATE	RECURRING?
AAFM, DEC	Submit interim progress report to legislature on impacts from tile drainage	Act 64: 1/15/2016	Progress report completed	No
DEC	Report on lowering the impervious surface regulatory permitting threshold from once acre to 1/2 acre	Act 64: 1/15/2016	Report completed	No
DEC	Report to Legislature on Basin Planning Progress	Act 64: 1/15/2016	Report completed	1/15/2016 and annually thereafter
DEC	Report to Legislature on land application of septage and sludge	Act 64: 1/15/2016	Report completed	No
FPR	Report to legislature on recommendation on how to implement forestry AMPs as mandatory practices, how to enforce AMPs, whether maple syrup production should be enrolled in UVA as managed forestland	Act 64: 1/15/2016	Report completed	No
DEC	Report on activities and progress of water quality ecosystem restoration programs	Act 64: 2/1/2016	Report completed	2/1/2016 and annually thereafter
DEC	Develop TMDL implementation tracking system at DEC with ability to estimate phosphorus load reductions achieved by TMDL implementation activities	Act 64: 6/1/2016	Complete	No

# Lake Champlain Phosphorus TMDL

(TOTAL MAXIMUM DAILY LOAD)

## Requirements for Municipalities

### WASTEWATER

#### Wastewater Treatment Facilities

Of the 59 Vermont wastewater treatment facilities in the Lake Champlain Basin, 25 will receive new reduced phosphorus limits according to a permit reissuance schedule that is based on DEC's five-year tactical basin planning schedule. Flexible options to meet the TMDL include:

- Require new or upgrade treatment facilities only when the current phosphorus discharge exceeds 80% of the facility's annual phosphorus allocation.
- Employ annual average phosphorus loading rates (rather than concentration limits) to set TMDL-based discharge permit limits in order to allow operational flexibility in attaining the limits.

- Establish compliance schedules that couple phosphorus upgrades with other planned facility construction projects to enhance cost-effectiveness.
- Support opportunities to reallocate (i.e., trading) phosphorus limits for facilities within the same lake segment watershed as long as total permitted phosphorus discharge remains the same. Discharges in the Main Lake, Burlington Bay, and Shelburne Bay watersheds will be considered to be discharges to the same lake segment for reallocation purposes.

Administrative processing fee: \$240; application review fee: varies; annual operating fee: \$0.003/gallon of permitted flow (\$200 minimum; \$12,500 maximum). See website for details: <http://www.watershedmanagement.vt.gov/wastewater.htm>

### STORMWATER

#### Municipal Roads General Permit

The new general permit for all municipal roads will go into effect before January 2018, with all municipalities signed up no later than 2021. Municipalities will be "credited" for projects implemented before the permit goes into effect. The general permit will require:

- Practices to reduce erosion and stormwater discharges being generated from roads and drainage systems. New roads will likely continue to be permitted as they are now. All practices will be consistent with the VTrans Road and Bridge standards.

- A management plan to oversee implementation and bring roads up to standards over several years. The general permit will not require separate approval for every maintenance activity or upgrade.
- Application fee: \$400; annual operating fee: \$2,000.

#### Municipal Separate Storm Sewer System (MS4) General Permit

Municipalities that have municipal separate storm sewer system (MS4) permits will require a new MS4 general permit. New components to the permit include:

- Long-range phosphorus control plans similar to the "flow restoration plan" requirements for municipalities with stormwater-impaired waters. Municipal road management requirements will be incorporated into the MS4 permit; separate permit coverage will not be required.

- Implementation plans for stormwater best management practices (BMPs) to reduce phosphorus in conformance with the Champlain TMDL.
- Application fee: \$2,400; annual operating fee: \$10 per acre of impervious surface.

The reissuance process for the MS4 permit will start within 3 months of the issuance of the TMDL. Regulated MS4s will be notified and included in the stakeholder process.

#### Municipally Owned Developed Land Permit

##### What's required?

- All municipal sites with 3 or more acres of impervious surface, including municipal properties, will require a new developed land permit.
- If a site does not have a stormwater system designed to 2002 or more current standards, it will need to implement stormwater management practices.

- Smaller sites may be subject to the same requirement if necessary to implement the Lake Champlain TMDL, or stormwater TMDLs.
- Application fee: \$860 per acre of impervious surface; annual operating fee: \$160 per acre impervious surface.

The developed land general permit must go into effect before January 2018, with all projects in the Champlain basin under a permit by 2023, and the rest of the state under a permit by 2028.

## NEW PROJECTS

### New Municipal Projects Construction Standards

The permitting standards for new projects have not yet changed. However, by January 2016 DEC will report to legislature on the prospect of lowering the threshold for requiring a post-construction stormwater permit for new projects to ½-acre of impervious surface (it is currently 1 acre). The Department will also be revising its

Stormwater Manual and Stormwater Rules over the coming year. The Manual and Stormwater Rules revisions will both go through the formal APA rulemaking process and municipalities will be invited to participate in rulemaking meetings and public comment processes.

## Timeline for Municipalities

	ACTIVITY	MUNICIPAL OBLIGATIONS	TIMELINE
WASTEWATER	Wastewater Treatment Facilities (WWTFs)	Reductions from currently permitted phosphorus loads at 25 of 59 facilities in the Lake Champlain Basin.	Vermont DEC will issue wastewater discharge permits incorporating the new phosphorus allocations according to the five-year tactical river basin planning schedule (2016-2020).
STORMWATER	Municipal Roads General Permit <a href="http://www.watershedmanagement.vt.gov/stormwater/hm/sw_municipalroads.htm">www.watershedmanagement.vt.gov/stormwater/hm/sw_municipalroads.htm</a>	Implementation of practices to reduce erosion and stormwater discharged generated from roads and drainage systems.	The general permit must go into effect before January 2018, with all municipalities signed up no later than 2021.
	Municipal Separate Storm Sewer System (MS4) Permit	MS4 municipalities will develop long-range phosphorus control plans following the reissuance of this permit.	The reissuance process for the MS4 permit will commence within 3 months of the issuance of the TMDL.
	Stormwater Permits for Municipally Owned Developed Land	VT DEC's Stormwater Program will develop a general permit applicable to all sites with 3 or more acres of impervious surface, including municipal properties.	The general permit must go into effect before January 2018, with all projects in the Champlain basin under a permit by 2023, and the rest of the state under a permit by 2028.
NEW PROJECTS	Stormwater Permits for New Municipal Projects	No change. Report to Legislature by January 15, 2016 on whether to lower the threshold for new projects from 1 acre to ½-acre of impervious surface.	
	Stormwater Planning <a href="http://www.watershedmanagement.vt.gov/erp/docs/erp_SWMPFinal2-18-14.pdf">www.watershedmanagement.vt.gov/erp/docs/erp_SWMPFinal2-18-14.pdf</a>	No change. Towns are encouraged to seek funding for stormwater planning, which can be used in tactical basin plans.	

Providing Time, Flexibility and Support to Meet Requirements of the TMDL



For more information, contact:  
Kari Dolan, Watershed Management Division  
One National Life Drive, Davis Bldg, 2nd floor,  
Montpelier, VT 05620-3522  
(802) 490-6113

# VT DEC Municipal Roads Program

## Factsheet: Developing the Municipal Roads General Permit

---

This general permit is intended to achieve significant reductions in stormwater-related erosion from municipal roads, both paved and unpaved. Municipalities will implement a customized, multi-year plan to stabilize their road drainage system. The plan will include bringing road drainage systems up to basic maintenance standards, and additional corrective measure to reduce erosion as necessary to meet a TMDL or other water quality restoration effort. The permit is required by H.35/Act 64, the Vermont Clean Water Act, and the Lake Champlain Phase I TMDL.

For more information on the DEC Municipal Roads program and the development of the Municipal Roads General Permit, contact Jim Ryan at (802) 490-6140 or via email at [jim.ryan@vermont.gov](mailto:jim.ryan@vermont.gov).

Updated information can also be found on the program's website at:

[http://www.watershedmanagement.vt.gov/stormwater/htm/sw\\_municipalroads.htm](http://www.watershedmanagement.vt.gov/stormwater/htm/sw_municipalroads.htm)

### Requirements for Existing Roads

- As a first step municipalities will inventory the sections of their road networks that are hydrologically-connected to surface waters through ditches, culverts or other drainage structures. Hydrologically-connected roads present substantially greater risks to water quality. A map layer of hydrologically-connected municipal road segments is available at: <http://anr.vermont.gov/maps/nr-atlas>
- The second step will involve inventorying the connected portions of their road network to determine if the road and drainage systems meet the new standards. Standards will be consistent with Town Road and Bridge Standards, and will likely include measures such as:
  - Ditch Slopes greater than 5% to be stone-lined or have stone check-dams and/or disconnect road stormwater inputs
  - Ditches: "U-shaped" and disconnected from surface waters where possible
  - Upgrading road drainage culverts and installing outlet stabilization and/or headwalls where erosion is present
  - Soils exposed by maintenance would be seeded and mulched or otherwise stabilized

- Municipalities will develop and implement a long-term plan to bring all sections of hydrologically-connected roads up to MRGP Standards.
- Class 4 roads that are adversely affecting water quality may require the installation of best management practices to reduce erosion, but will not be required to be open to travel as part of this permit.
- In-Culverts and bridges:
  - No new requirements to replace stream crossings, but may require headwall or outlet stabilization measures
  - Maintenance and construction activities would continue to conform to the ANR Stream Alteration General Permit.

#### Requirements for New Projects

- Stable conveyances
- Designed to Vermont Stormwater Manual if over permit threshold of 1 acre impervious surface, or >5,000 square foot expansion

#### Permit Process

- 2016: stakeholder process to develop permit and standards
- Before January 2017: draft general permit
- Before January 2018: final permit
- No later than 2021: all municipalities have permit coverage
- Commencing with permit coverage, 2018 and beyond: municipalities conduct road erosion inventories for hydrologically-connected road segments and develop and implement road stormwater management plans
- Technical and Financial assistance is from DEC, VTrans, RPCs, NRCDs, and others. A new series of Municipal Road Round Table Forums has been launched by VTrans and DEC for a foremen-foremen exchange of ideas of selecting the most appropriate BMPs to remediate erosion and discuss equipment needs and operation. Additional grant funding is available to municipalities to conduct road erosion inventories, implement best management practices, and to purchase shared equipment.

# VT DEC Municipal Roads Program

## Questions & Answers

---

- 1. Will the DEC Municipal Roads Stormwater General Permit (GP) apply to the entire state or to the Lake Champlain basin?** The DEC Municipal Roads General Permit will cover the entire state and result in improvements in water quality and aquatic habitat statewide. Addressing sediment and nutrient sources from municipal roads will also reduce phosphorus loads to Lake Champlain and other waters in the state, such as Lake Memphremagog. The Implementation schedule will be determined during the permit development process.
- 2. Will the DEC Municipal Roads Stormwater GP cover paved and gravel roads?** Yes, the Municipal Roads GP will cover all municipal road systems, paved and gravel.
- 3. Will the DEC Municipal Roads GP apply to all Classes of municipal roads including Class 4 roads?** Yes, the Municipal Roads Stormwater GP will apply to all Classes of municipal roads. Management options for Class 4 roads will be included in the GP but best management practice implementation may be more limited in scope than more regularly traveled roads.
- 4. Is there technical assistance available for municipalities in identifying high priority road erosion segments and determining appropriate solutions?** Yes, technical assistance will be available for towns from a number of different organizations including DEC, VTrans, regional planning commissions and other organizations. DEC and VTrans are currently developing enhanced trainings for road foremen and others to inventory and prioritize road erosion sites, this is in addition to the existing DEC-VTrans Rivers-Roads trainings for VTrans and municipal road crews. Municipalities will be made aware of available trainings.
- 5. Will the new Municipal Roads Stormwater Standards be consistent with current VTrans Road and Bridge Standards? How will they be different?** The BMPs that are developed as part of the Municipal Roads Stormwater GP will be consistent with the Road and Bridge Standards, although the geographic applicability of practices may differ. For example, the MRGP will only apply to hydrologically-connected road segments while the VTrans Road and Bridge Standards usually apply town-wide. A map layer of hydrologically-connected municipal road segments is available at: <http://anr.vermont.gov/maps/nr-atlas>
- 6. Will culvert replacements be required in the new DEC Municipal Roads Stormwater GP?** Road drainage culverts and cross culverts upgrades may be included in the new GP. In-stream culvert and bridge replacements will not be required in this permit. Culvert headwall erosion and/or culvert outlet scour, for both drainage culverts and in-stream culverts, maybe included in the new GP if they are identified as significant sources of erosion.

7. **How long will towns have to implement their roads stormwater management plan?** Municipalities will be required to develop a road stormwater management plan. The plan will be based on the water quality impacts of a stormwater discharge, the current state of a municipal road, the priority of a municipal road in any existing transportation capital plan, and the benefits of the stormwater improvement to the life of the municipal road. The implementation plan shall address all sources of erosion as soon as possible, but not to exceed 20 years.
8. **Will there be funding to assist municipalities in implementing road restoration practices?** Yes, additional funding will be available from VTrans and DEC to implement restoration practices on high priority road erosion segments through programs such as the Better Backroads grant from VTrans or Ecosystem Restoration grant program from DEC. Municipalities will likely have to contribute a portion of the total cost or in-kind measures.
9. **Will the DEC Municipal Roads Stormwater GP be required for municipalities that are already authorized under the Municipal Separate Storm Sewer System (MS4) Permit?** No, MS4 communities will not have to apply for the Municipal Roads GP. The MS4 permit will be amended to include similar road requirements, with the goal of simplifying implementation and reporting requirements for MS4s.