

**VT-ANR RESPONSES  
TO QUESTIONS  
FROM THE SENATE COMMITTEES**



**Joint Senate Hearing  
Clean Water Projects: Planning and Implementation**  
Friday, January 19, 2018 from 9 AM to 11:30 AM in Room 10 at the State House.

Senate Committee on Agriculture  
Senate Committee on Natural Resources

Invitation

“The Committees request reports at that time from the Agencies of Agriculture, Transportation, and Natural Resources concerning water quality in Vermont. Included in information in the reports for the Committees should be:

- a brief summary of accomplishments of the past year and,
- in greater detail, long-term plans for the next 5 years.

The Committees are most interested in specific action plans, the process used to develop and update the plans, and projections of funds needed to accomplish water quality goals.”

Five Questions

1. “What is your agency’s five-year plan for clean water? (If not a five-year plan, please substitute whatever interval you employ.)
2. “How do you build your plan and replenish it to ensure you have ample planned, budgeted, and scheduled projects in your five-year plan?
3. “What is the basis for developing your plan? Do you begin, for example, with the state’s Tactical Basin Plans (e.g. watershed by watershed)?
4. “What is the budget associated with that five-year plan? And within that budget, please specify capital versus non-capital dollars.
5. “What agency has overarching clean water planning and implementation responsibility— that is, the responsibility to ensure that regardless of operating area (e.g. VTRANS, ANR, AAFM, BGS, ACCD, etc.), the state’s clean water laws are being following and appropriate planning and programs are in place?

# What are your accomplishments of the past year?

- Accomplishments are described in the 2017 Agency of Administration’s VT Clean Water Initiative Investment Report (CWIR) - <http://dec.vermont.gov/watershed/cwi/cwf#report>
  - 114% increase in state funds awarded for clean water projects in FY2017;
  - New: Report now shows a “Scorecard” of funds invested and results by sector (agriculture, roads, stormwater, natural resources restoration) and by Tactical Basin Plan watershed (Appendix A);
  - New: On-line Clean Water Dashboard that makes information about individual projects available to the public.
- For FY18, ANR allocated nearly \$17 million for clean water projects. For more detail, see the Clean Water Fund Board report “List of Clean Water Improvement Projects Funded with VT Capital Funds in the First Four Months of FY2018 (Nov. 1, 2017),” <http://bit.ly/2DN9R5X>
  - Municipal Road Grants-in-Aid Pilot Project uses the regional planning commissions to award \$2.5 million to help municipalities adopt state water quality road standards. Approximately 75% of municipalities signed up to participate, which is expected move nearly 700 road segments (42 miles) to full compliance with the state standards.
  - Abatement of stormwater runoff from the Cambridge Elementary School parking Lot that is discharging directly into the Brewster River. The \$37,000 project will use “green infrastructure” to capture and infiltrate runoff and reduce erosion, treating nearly 2 acres of impervious surface.
- Our new Scorecard (see CWIR Executive Summary) presents state investments and the results of those investments as outputs and environmental outcomes such as pollutant reductions by sector (agriculture, natural resources restoration, road-related stormwater treatment, and stormwater)

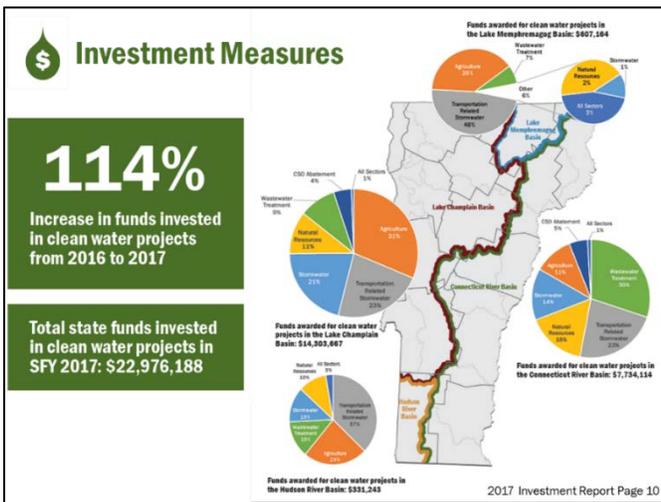


Figure 2: Executive Summary and Scorecard (Pages 8-18 in CWIR)

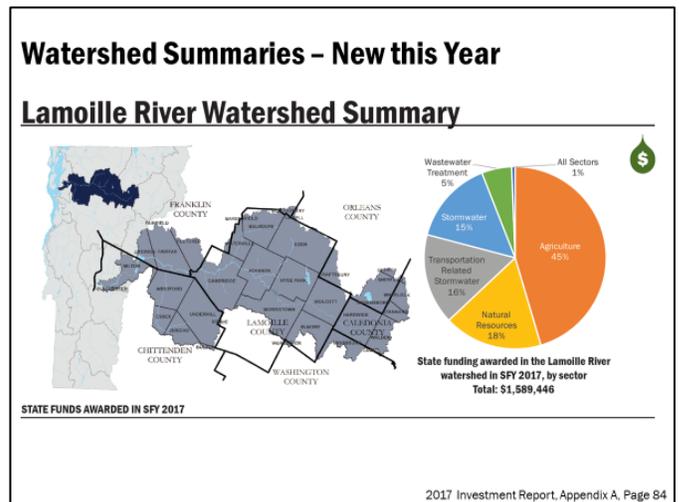


Figure 1: Excerpt from Appendix A: Lamoille River Watershed Summary (Page 84 in CWIR)

**Table 1. Summary of FY18 Capital Funds Obligated, Awarded, or Encumbered to Vermont Clean Water Projects (Snapshot as of October 27, 2017)**

October 27, 2017

	A		B		C		D		E	
	Baseline (2 year total)		FY18 Obligation*	FY18 Obligated/Awarded/Encumbered	FY19 Appropriation	FY18 & FY19 Appropriation	Filling Gap = D-A (2 year total)			
1 <b>Capital Bill, H.519 Section 11: Clean Water Investments</b>										
2 (a)(1) & (e)(1) AAFM BMP & CREP	\$ 3,800,000	\$ 3,450,000	\$ 658,432	\$ 2,000,000	\$ 5,450,000	\$ 1,650,000				
3 (a)(2) AAFM Water Quality Grants & Contracts	\$ -	\$ 600,000		\$ -	\$ 600,000	\$ 600,000				
4 (b)(1)&(f)(1) DEC Clean Water State Revolving Fund (SRF)	\$ 2,400,000	\$ 1,000,000		\$ 1,200,000	\$ 2,200,000	\$ (200,000)				
5 (b)(2)&(f)(2) DEC Ecosystem Restoration Grants	\$ 7,460,000	\$ 6,000,000	\$ 4,008,093	\$ 5,000,000	\$ 11,000,000	\$ 3,540,000				
6 (b)(3) DEC Municipal Pollution Control Grants (prior)	\$ 35,000	\$ 2,982,384	\$ 2,982,384	\$ -	\$ 2,982,384	\$ 2,947,384				
7 (b)(4)&(f)(3) DEC Municipal Pollution Control Grants (new)	\$ 3,306,500	\$ 2,704,232	\$ 403,567	\$ 1,407,268	\$ 4,111,500	\$ 805,000				
8 (c) VTrans Municipal Mitigation Program	\$ -	\$ 1,400,000	\$ 1,381,871	\$ -	\$ 1,400,000	\$ 1,400,000				
9 (d)(1) VHCB: water quality projects	\$ 3,750,000	\$ 2,800,000	\$ 2,763,743	\$ 2,750,000	\$ 5,550,000	\$ 1,800,000				
10 (d)(2) VHCB: farm grants or fee purchase water quality projects	\$ -	\$ 1,000,000		\$ -	\$ 1,000,000	\$ 1,000,000				
11 (f)(4) FY19 Statewide Clean Water Implementation	\$ -	\$ -		\$ 11,112,944	\$ 11,112,944	\$ 11,112,944				
12	\$ 20,751,500	\$ 21,936,616	\$ 12,198,090	\$ 23,470,212	\$ 45,406,828	\$ 24,655,328				

**Total Obligated/Awarded/Encumbered in FY18 using Prior Year Capital Funds \$ 4,782,936**

AAFM Obligated/Awarded/Encumbered in FY18 using Prior Year Capital Funds \$ 1,359,387

ANR Obligated/Awarded/Encumbered in FY18 using Prior Year Capital Funds \$ 3,423,550

**Total FY18 Obligated/Awarded/Encumbered \$ 16,981,026**

\* Capital Bill appropriated amounts are before costs of debt service (i.e., bond costs), and a portion of this appropriation will contribute to costs of debt service.

## “1. What is your agency’s five-year plan for clean water?”

(If not a five-year plan, please substitute whatever interval you employ.)

- Five-year plan is driven by Act 64, Total Maximum Daily Loads (TMDLs) and the Combined Sewage Overflow (CSO) Policy. Together, these state and federal directive mandate ANR to implement clean water improvement projects in a manner that will achieve 20-year reduction targets
  - EPA TMDLs:
    - Establish pollution reduction targets
    - Supported by Implementation Plans
      - Phase 1: Identifies overarching regulatory and programmatic commitments , such as
        - Update of the Required Agricultural Practices for agriculture and Acceptable Management Practices for logging operations
        - Release of new stormwater permits including state and municipal road stormwater permits
        - Municipal wastewater facility upgrades
      - Phase 2: Tactical Basin Plans (watershed-based) use monitoring and assessment data to identify, prioritize and target clean water improvement projects to achieve water quality goals
    - Includes “Accountability Framework” – This framework includes specific benchmarks to monitor progress over time
  - Act 64 (2015) “VT Clean Water Act:”
    - Provides authorities to implement TMDLs
  - Clean Water State Revolving Fund (SRF) Intended Use Plans: Implementation plans for investments in wastewater and stormwater infrastructure using the SRF low-interest financing through loans.
  - Compliance with the State’s 2016 Combined Sewer Overflow (CSO) Rule, which is designed to correct untreated or partially treated discharges that pose public human health threats. Link: [http://dec.vermont.gov/sites/dec/files/wsm/Laws-Regulations-Rules/2016\\_08\\_26%3B%202015\\_WSMD\\_005%3B%20Final\\_Adopted\\_CS0\\_Rule.pdf](http://dec.vermont.gov/sites/dec/files/wsm/Laws-Regulations-Rules/2016_08_26%3B%202015_WSMD_005%3B%20Final_Adopted_CS0_Rule.pdf)
- The Clean Water Investment Report (CWIR) summarizes statewide investments for each fiscal year, including projects implemented and outcomes achieved. The report will be a useful tool for tracking and reporting the State’s progress in meeting its clean water goals and the effectiveness of those investments over the next 5 years.

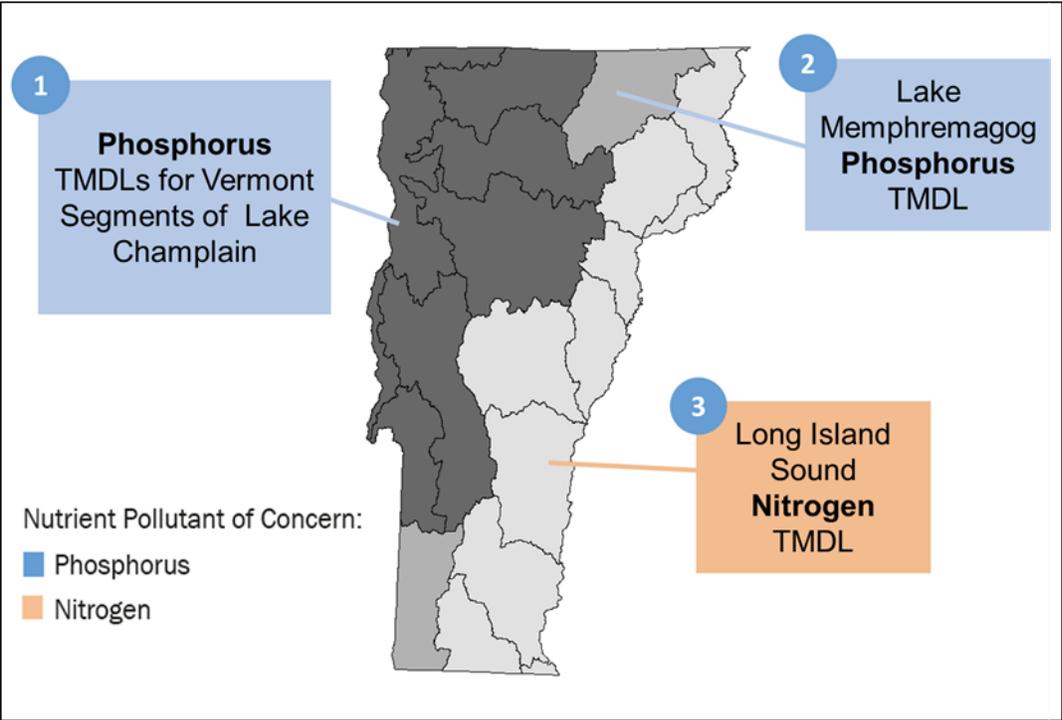
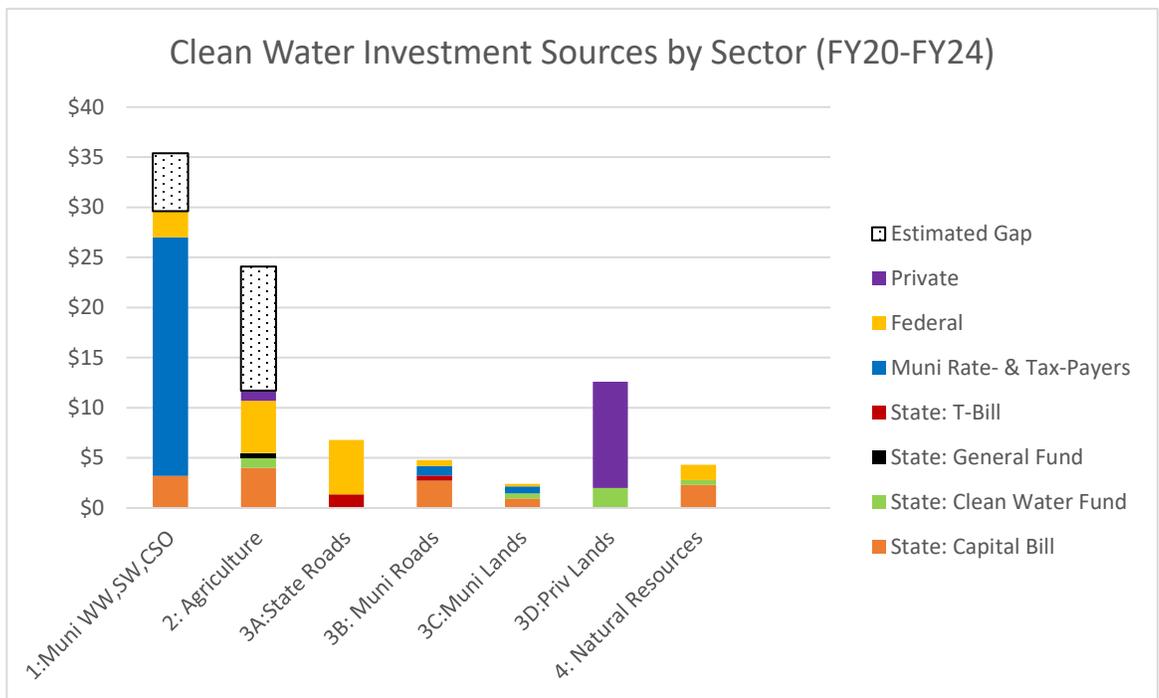
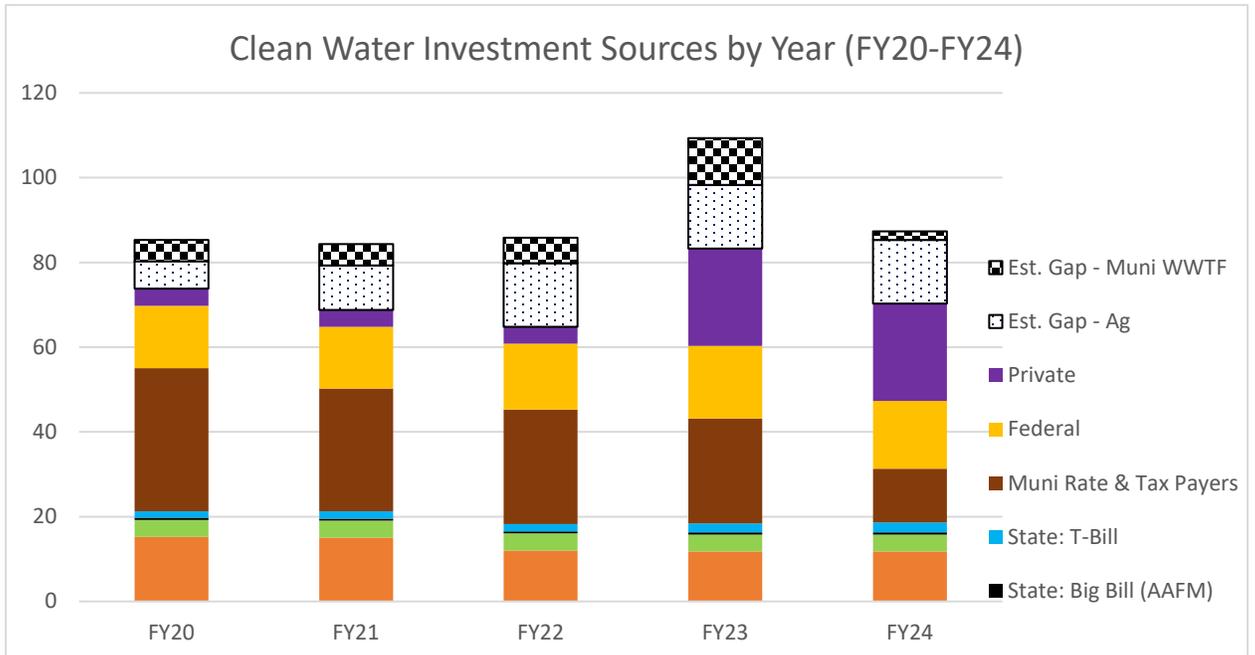


Figure 3: Large TMDLs

## Summary Charts



“2. How do you build your plan and replenish it to ensure you have ample planned, budgeted, and scheduled projects in your five-year plan?”

- ANR uses both regulatory and non-regulatory programs to plan for and implement clean water improvement projects.
  - *Examples of Regulatory Programs:* Municipal Wastewater treatment facility discharge permits, Municipal Separate Storm Sewer System (MS4) Permit, Municipal Road General Permit, Developed Lands General Permit
  - *Non-regulatory:* Natural resources restoration (including floodplain, river corridor, wetlands, and vegetated woody buffers adjacent to waterways)
- Regulatory activities are mandatory, and need to be completed within specific timeframes regardless of the availability of the regulated entity’s access to matching funds to share in the cost of compliance. cost-share.
- Nonregulatory clean water activities are discretionary, requiring landowner or municipal approval before projects can move forward, and are typically eligible for cost-share.
- ANR supports implementation using:
  - Outreach and education – to provide opportunities to learn about the problems and options to abate them using workshops, trainings and public or stakeholder meetings
  - Technical Assistance – to advise and support implementation
  - Financial Assistance (cost-share)

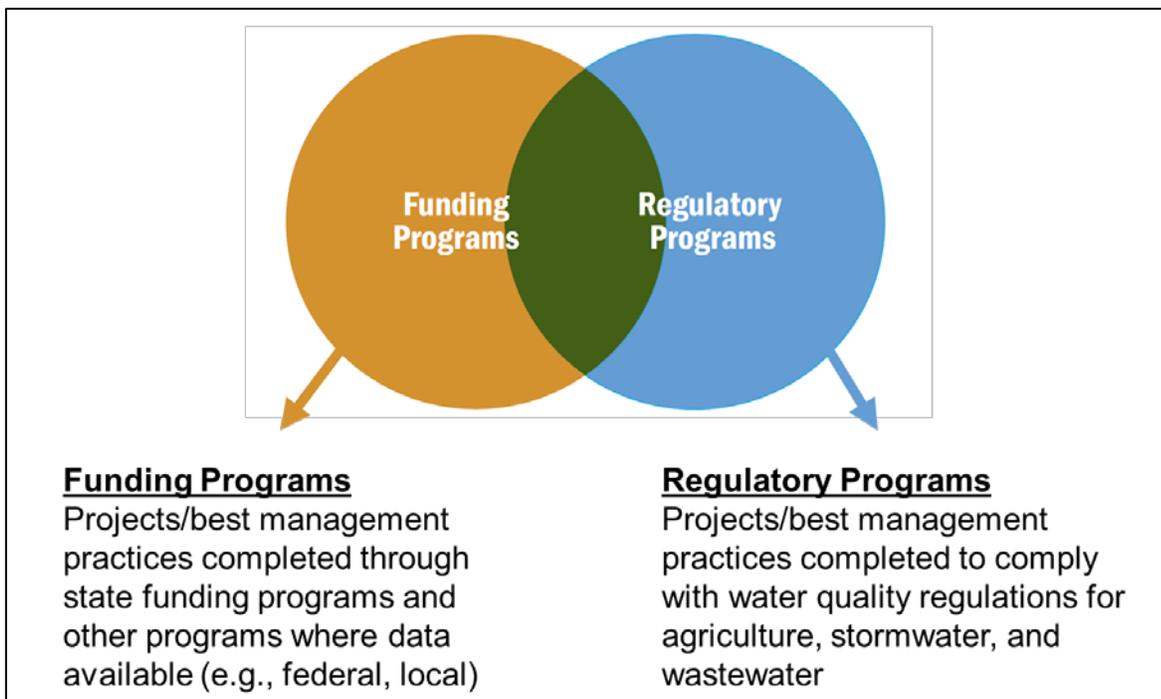
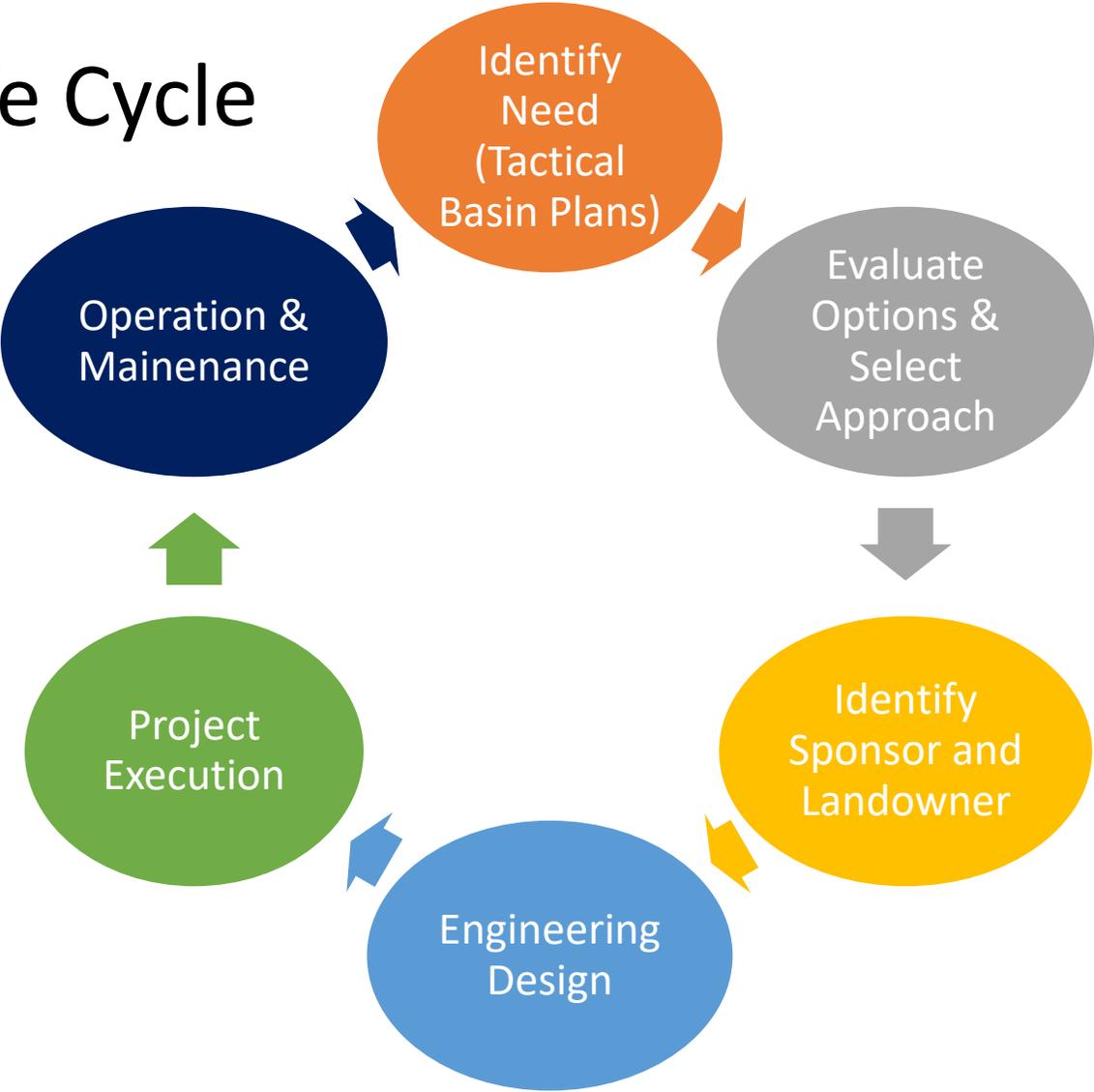


Figure 4: Excerpt from Clean Water Investment Report (page 19)

# Project Life Cycle



STATE AND FEDERAL GRANT MATCH (%)				
Sector	Owner Type	Pollution Improvements Regulatory or Non-Reg	Incentivized State or Federal Match	Programs
Sector 1: WWTF, CSOs	Municipalities	Regulatory	35%	MPCG
Sector 2: Agriculture	Farmer	Regulatory/Non-Reg	90%	AAFAM, NRCS
Sector 3A: State Highways	State	Regulatory	100%	T-BILL
Sector 3B: Municipal Roads	Municipalities	Regulatory	80%	BR, ERP
Sector 3B: Municipal Roads	Municipalities	Regulatory/Non-Reg	80%	TA, MHSWM
Sector 3C: Muni Non-Road Lands	Municipalities	Regulatory	50%	ERP, MPCG
Sector 3C: Muni Non-Road Lands	Municipalities	Regulatory/Non-Reg	80%	TA, MHSWM
Sector 3D: Private Non-Road Lands	Private	Regulatory	0%	
Sector 3D: Private Non-Road Lands	Muni Partnership	Regulatory	50%	ERP
Sector 3D: Private Non-Road Lands	Private	Non-Reg	80%	ERP
Sector 4: Natural Resources	Public or Private	Non-Reg	80%	ERP



GLOSSARY	
VTRANS = Vermont Agency of Transportation	DEC = Vermont Department of Environmental Conservation
TA = VTRANS Transportation Alternatives Program	ERP = DEC Ecosystem Restoration Program
MHSWM = VTRANS Municipal Highway and Stormwater Mitigation Grant Program	MPCG = DEC Municipal Pollution Control Grant
BR = VTRANS Better Roads Program	AAFAM = Vermont Agency of Agriculture, Food & Markets
T-BILL = Transportation Bill	NRCS = U.S. Dep't of Agriculture, Natural Resources & Conservation Service

“3. What is the basis for developing your plan? Do you begin, for example, with the state’s Tactical Basin Plans (e.g. watershed by watershed)?”

The Tactical Basin Plans incorporate data from the following plan:

Agency	Sector	Plan
<b>ANR</b>	Sector 1: Municipal Infrastructure (WWTFs, Combined Sewer Overflows, Stormwater Systems)	-Clean Water State Revolving Fund Intended Use Plan
	Sector 3: Developed Lands -- Municipal Roads	-Municipal Road Erosion Risk Inventories (required by the Municipal Roads General Permit) (MRGP), 10 VSA 1264
	Sector 3: Developed Lands -- Municipal Lands	-MS4 Flow Restoration Plans and Phosphorus Control Plans -Stormwater plans (including municipal stormwater master plans, stormwater infrastructure asset mapping, Illicit Discharge Detection and Elimination Plans)
	Sector 3: Developed Lands -- Private Lands	-Developed Land General Permit requirement, 10 VSA 1264
	Sector 4: Natural Resources Restoration	-Stream geomorphic assessments and river corridor plans, -Wetland restoration plans, -Lake Watershed Management Plans, Lakewise Plans -Timber harvest project review, compliance reports on Acceptable Management Practice for logging jobs
<b>AAFM</b>	Sector 2: Agriculture	-Farm surveys, visits, inspections and assessments
<b>VTrans</b>	Sector 3: Developed Lands -- State highways	-TS4 Permit—Clean Water Projects and plans - Flow Restoration Plans and Phosphorus Control Plans -Transportation Capital Projects Planning Process (5 year)

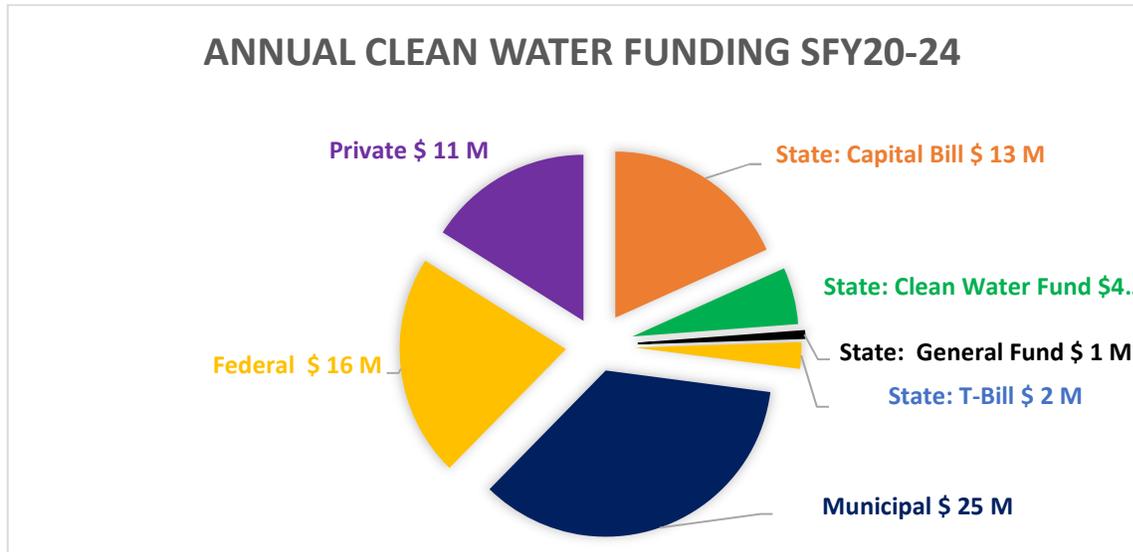
Figure 5: Table Showing Agency Plans, Budget and Schedule Projects in 5-year Plan

“4. What is the budget associated with that five-year plan? And within that budget, please specify capital versus non-capital dollars”

- Act 73 Working Group refined estimates in the Treasurer’s Report for FY20-24 (pp. 31-40, presents five-year budgets that break down the potential funding sources per year)
  - Average annual investment needed: \$90 million
  - Average annual revenue available: \$72 million
    - Includes \$4 million/year from surcharge on Property Transfer Tax
    - Includes \$15 million/year in capital funds for FY20 an FY21
    - Includes \$12 million/year in capital funds for FY22-24, consistent with historic funding levels
  - Estimates of federal funding are conservative, and significantly lower than federal resources currently committed to clean water work
- Ultimately, the State’s investment will be determined by how much cost-share is provided to each sector
  - Increasing the amount of cost-share will reduce costs borne by municipalities and the private sector
  - Decreasing the amount of cost-share will increase costs borne by these entities

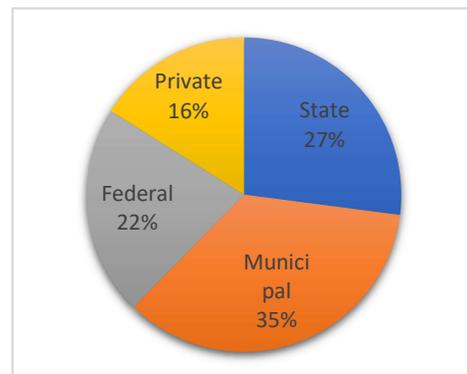
## Overall Findings

The Act 73 Working Group estimates that Vermont’s average annual cost to comply with clean water commitments made in the TMDLs and Act 64 for each of the next five years is \$90 million, average annual revenue sources both public (federal, state, local) and private are \$72 million.



The \$72 million in existing revenues includes \$20 million in state funds, \$25 million from municipalities, \$16 million from federal sources, \$11 million in private investments. State funds comprise \$13 million from the Capital Bill, \$4 million from the Clean Water Fund; \$1 million from the General Fund; and \$2 million in state funds from the Transportation Bill.

Revenue sources in the Act 73 Report include both public and private investments. Assuming \$13 million average contribution from the Capital Bill for SFY20-24, and continuation of existing grant matches, the allocation of costs across sectors is state 27%; municipalities 35%; federal government 22%; private landowners 16%.



This assumes that the Legislature will on average allocate \$13 million each year from the Capital Bill for clean water and \$4 million from the Clean Water Fund; that municipal voters will approve clean water bond requests; that the federal funding for clean water remain at current levels; and that private landowners will be able to access capital for their portion of costs.

An average of \$18 million in funding each of the next five years will need to be addressed using other sources. There is significant variation in the estimated shortfall year-to-year during the

“5. What agency has overarching clean water planning and implementation responsibility— that is, the responsibility to ensure that regardless of operating area (e.g. VTRANS, ANR, AAFM, BGS, ACCD, etc.), the state’s clean water laws are being following and appropriate planning and programs are in place?”

- Environmental Protection Agency (EPA):
  - Approves TMDLs developed by States
    - \*Note – EPA disapproved the Vermont’s portion of the 2002 Lake Champlain Phosphorus TMDL, which resulted in EPA establishing the 2016 TMDL
  - Routinely assesses Vermont’s progress in carrying out TMDLs based on Accountability Framework
- Clean Water Fund Board (CWFB):
  - Act 64 (2015) established the CWFB to receive and manage clean water funds as principally allocations to existing state agency grant programs.
  - CWFB is comprised of the Secretaries of Administration, ANR, AAFM, ACCD and VTrans, or their designees, and chaired by the Secretary of Administration.
  - Clean Water Initiative Program at ANR provides staff to the Board and manages interagency coordination.
  - Secretary of Administration is responsible for Clean Water Initiative Annual Performance Report that summarizes public investments and results of those investments.
- ANR:
  - Responsible for the management and enforcement of the state water pollution control statutes
    - Wastewater
    - Stormwater
  - Clean Water Initiative Program and Ecosystem Restoration Grant Program:
    - Interagency Coordination and Communication
    - Clean Water Investment Report
    - Clean Water Dashboard
- AAFM:
  - Responsible for implementing and enforcing agricultural related clean water programs
    - Required Agricultural Practices (RAPs)
    - LFO, MFO, CSFO farm permitting programs
  - Role is described in the Memorandum of Understanding between ANR and AAFM, dated 3/17/2017
  - Work is completed in coordination with VANR
- VTrans:
  - Responsible for complying with the terms and conditions of ANR permits and to ensure that appropriate resources, funding, planning and programs are in place
    - Transportation Separate Storm Sewer System (TS4) Permit





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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FEB 15 2017

Julie Moore, Secretary  
Vermont Agency of Natural Resources  
1 National Life Drive, Davis 2  
Montpelier, VT 05620-3901

Anson Tebbetts, Secretary  
Vermont Agency of Agriculture, Food and Markets  
116 State Street  
Montpelier, VT 05620-2901

Dear Secretary Moore and Secretary Tebbetts:

Congratulations on your appointments to lead your agencies. EPA has enjoyed a very productive and collaborative working relationship with both of your agencies and looks forward to continuing this collaboration in the years ahead.

As you know, in June, 2016 EPA established the final phosphorus Total Maximum Daily Loads (TMDLs) for the Vermont Segments of Lake Champlain and transmitted them to the State for incorporation into Vermont's current Water Quality Management plan (also referred to as Vermont's Surface Water Management Strategy). The TMDLs included an Accountability Framework in which EPA identified 16 key milestones for 2016 in Vermont's Phase 1 Implementation Plan that were crucial to the long-term success of implementing the TMDLs. EPA promised an interim "report card" assessing Vermont's success in meeting these key milestones.

EPA has assessed Vermont's progress in meeting these milestones by actively providing input in the development of some of the deliverables and providing formal and informal comment on drafts of others. This has provided EPA with the opportunity to assess the adequacy of the content as well as the timeliness of these actions. EPA has also relied on information contained in the "Spending Plan Capacity Report for the Phosphorus TMDLs for Vermont Segments of Lake Champlain" that was submitted to EPA on December 30, 2016. Appendix B in the report provides a good summary of Vermont's progress in 2016 and highlights the measures that were included in the Accountability Framework.

EPA's overall assessment is that Vermont has made excellent progress in achieving the milestones in the Accountability Framework. Thirteen of sixteen milestones were completed by December 30, 2016. Of the three remaining milestones, two are planned for completion this month (the development of the matrix and template for nutrient management planning and revision of the Agency of Natural Resources/Agency of Agriculture, Food and Markets (AAFMM)

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Memorandum of Understanding for the agricultural nonpoint source program) and the other was rescheduled to 2017 in the final version of the Phase 1 Plan (the livestock exclusion incentive program). A summary of the status of each of the milestones is included in Attachment A.

EPA appreciates the significant effort your agencies made in satisfying the 2016 implementation milestones. The State still has a lot of work ahead in 2017 (including completion of the milestones from the 2016 commitments) so we urge you to continue the strong momentum you generated in 2016. EPA will continue to provide technical support and input and comment on the rules and permits that will be developed to meet the 2017 milestones. EPA's final report card on the first phase of implementation will be issued in early 2018 based on progress through December, 2017.

Thank you again for a very successful implementation effort in 2016. If we can be of additional assistance in the year ahead, please don't hesitate to ask.

Sincerely,

A handwritten signature in cursive script that reads "Deborah A. Szaro".

Deborah A. Szaro  
Acting Regional Administrator

cc: Joe Flynn, Secretary, Vermont Agency of Transportation  
Pete LaFlamme, Vermont Department of Environmental Conservation  
Laura DiPietro, Vermont Agency of Agriculture, Food and Markets