

Vermont Clean Water Board Meeting Minutes

Date/Time: Monday, June 25, 2018, 3:00 pm – 4:00 pm

Location: National Life Main Building, 1 National Life Drive, The Winooski Room (M240)

Clean Water Fund Board Members/Designees:

Susanne Young, Agency of Administration (AoA) Secretary and Clean Water Board Chair

Joe Flynn, Agency of Transportation (VTrans) Secretary

Julie Moore, Agency of Natural Resources (ANR) Secretary

Anson Tebbetts, Agency of Agriculture, Food and Markets (AAFM) Secretary

Attendees:

Jill Arace, Vermont Association of Conservation
Districts

Jason Aronowitz, Department of Finance and
Management

Charlie Baker, Chittenden County Regional
Planning Commission

Greta Binzen, Department of Environmental
Conservation (DEC)

Emily Bird, DEC

Emily Boedecker, DEC

Jared Carpenter, Lake Champlain Committee

Kari Dolan, DEC

Dan Dutcher, VTrans

Rebecca Ellis, DEC

Erik Filkorn, Buildings and General Services

Marcey Hodgdon, AAFM

Jen Hollar, Vermont Housing and Conservation
Board

Mike Middleman, AoA

Joanna Pallito, DEC

Sue Scribner, VTrans

Kate Slocum, AoA

Andrew Stein, AoA

Scott Waterman, AAFM

Rebekah Weber, Conservation Law Foundation

I. OVERVIEW

3:00-3:15 pm

A. Introductions

Agency of Administration Secretary and Clean Water Board Chair Susanne Young

- Welcome; Review Agenda and Minutes of April 12, 2018
- See supporting materials: *Draft April 12, 2018 Clean Water Fund Board Meeting Minutes*
- Recommendation: Consider a motion to approve the minutes
- Julie Moore motioned for approval of April 12, 2018 Clean Water Board meeting minutes
- Joe Flynn seconded the motion
- No objections
- Minutes approved

B. Overview of Updated Board Responsibilities, per Act 168 (S. 260)

Agency of Natural Resources Secretary Julie Moore

- See supporting materials: *Vermont Statutes Annotated, as Amended by 2018 Act 168 (S. 260) and 2018 Act 208 (S. 285)*
- Notable changes to the Clean Water Board and Clean Water Fund budget process include:
 - Act 208 of 2018 added a new revenue source to the Clean Water Fund – abandoned beverage container deposit escheats, expected to generate \$1.5-\$2 million per year, effective on or before

- January 1, 2020; six months of revenue will be generated from this source for the Clean Water Fund in SFY 2020 and allocated as part of the SFY 2021 Clean Water Fund budget
- Act 168 of 2018 broadened Clean Water Board responsibilities beyond Clean Water Fund budgetary process
 - The Clean Water Board is now responsible for recommending the budget for clean water projects to be funded by capital appropriations
 - The Governor will appoint four new Clean Water Board members; the Administration is posting an application for potential Board members and is working to identify appointees by the August Board meetings
 - Formalized AoA Secretary as chair of the Clean Water Board
 - The Clean Water Board will follow public meeting law
 - The Clean Water Board will develop a process for watershed groups to propose projects to be eligible for funding from the Clean Water Fund
 - The Clean Water Board will invest in watershed basin planning and project identification and prioritization
 - Many new requirements of Act 168 of 2018 codify good practices that are already in place

II. UPDATES

3:15-3:20 pm

A. Clean Water Fund Property Transfer Tax Surcharge Revenue Update

Vermont Department of Taxes Research Economist Andrew Stein

- See supporting materials: *FY2018 Clean Water Fund Revenue Summary and Forecast*
- Department of Taxes estimated the property transfer tax surcharge generated \$4.7 million in revenue for the Clean Water Fund in SFY 2018 (\$0.7 million above forecast)
- SFY 2018 revenues are above forecast due to: (a) a conservative approach in forecasting revenue, (b) a one-time increase due to accounting changes in the past year, and (c) a strong year for property transfer
- Department of Taxes recommends updating the property transfer tax surcharge forecast semiannually using a three-year planning horizon to factor anticipated growth in SFY 2019-2021; the forecast is based on the property transfer tax forecast model adjusted by 1.75 percent to represent the surcharge (surcharge only applies to property transfer values above \$100,000)
- Revenue from abandoned beverage container deposits (i.e., escheats) is expected to generate \$1.5-\$2 million for the Clean Water Fund in SFY 2020 to be allocated as part of the SFY 2021 Clean Water Fund budget; currently no reporting requirement for escheats; escheats could generate more revenue than projected, but it is difficult to estimate until reporting requirements are in place
- Board members asked Department of Taxes to research if abandoned beverage container deposit escheats are a predictable revenue source for other states and report back to the Board
- Other states, such as Massachusetts and New York, conducted outreach to encourage the public not to return beverage containers, allowing unclaimed deposits to go to a good cause; Vermont may consider a similar outreach campaign for clean water funding

B. Review of Updated SFY 2019 Clean Water Fund Budget

Clean Water Initiative Program Manager Kari Dolan

- See supporting materials: *Updated SFY 2019 Clean Water Fund Budget*
- The Board's recommended SFY 2019 Clean Water Fund budget, including capital dollars, was approved by the Legislature and signed by the Governor with minor modifications from the Board's original recommendation
- This year, the Legislature directed \$1.6 million for in-lake treatment of Lake Carmi for water quality and public health and safety; originally, in-lake treatment was estimated to cost \$200,000 for partial treatment of the lake, but costs increased because treatment is now required throughout the entire lake

- Act 168 of 2018 allows the use of \$50,000 from the \$500,000 Clean Water Fund contingency reserve to support the initial response upon designation of a lake in crisis; Act 168 of 2018 designated Lake Carmi as a lake in crisis; the final SFY 2019 Clean Water Fund budget includes \$50,000 for the initial Lake Carmi lake in crisis response

III. PUBLIC COMMENT PROCESS FOR STATE FISCAL YEAR 2020

3:20-3:45 pm

A. SFY 2020 Budget Process and Public Comment Period

Agency of Natural Resources Secretary Julie Moore

- Discuss SFY 2020 Clean Water Fund budget process
- Discuss draft questionnaire for the July 30-day public comment period
- See supporting materials: *Draft SFY 2020 Clean Water Fund Budget Process, Draft SFY 2020 Clean Water Fund Public Comment Questionnaire*
- The Board will hold two public comment periods as part of the SFY 2020 budget process:
 - The first public comment period will take place July 1-31, 2018 via online questionnaire to collect public input on priorities for clean water spending; the Board is requesting the public weigh in on percent allocation by land use/sector and by project lifecycle step, and indicate how they would allocate if additional funds became available; public input and the Act 73 (2017) report on water quality funding will inform the SFY 2020 Clean Water Fund budget; the SFY 2020 online questionnaire is designed to be educational and was simplified in response to public concerns on the complexity of the questionnaire from prior years
 - The second public comment period was extended from 20-days to 30-days and will take place September 1-30, 2018 to collect public input on the draft SFY 2020 Clean Water Fund budget
- The “Clean Water Conversation” webinar will be held July 12, 2018 to share information on the SFY 2020 Clean Water Fund budget process and opportunities to participate
- The Clean Water Board will meet in August 2018 to review the July public comment period results and to draft the SFY 2020 Clean Water Fund budget
- The Board is responsible for recommending the budget for clean water projects to be funded by capital appropriations, however, the capital bill has not yet been drafted; Deputy Secretary of Administration will coordinate with AoA Buildings and General Services (BGS) on clean water capital funding needs to merge the Board’s SFY 2020 Clean Water Fund budget recommendation with BGS’ budget process
- Question: What weight will the survey have in decision making? What happens if the survey does not match up with science and facts?
- Response: The Board will likely base its SFY 2020 budget on the Act 73 (2017) report on water quality funding to address regulatory obligations; the Board may adjust the budget based on public comment; the Board will produce a responsiveness summary explaining how public comments informed its budget; public comments help inform education and outreach efforts, how the public defines success, and where they would like investments made
- Recommendation: Consider a motion to approve and post questionnaire for public comment
- Motion to approve and post:
 - Joe Flynn motioned to approve and post the SFY 2020 Clean Water Fund Public Comment Questionnaire
 - Julie Moore seconded the motion
 - No objections
 - SFY 2020 Clean Water Fund Public Comment Questionnaire approved for posting

IV. OPERATIONS

3:45-3:50 pm

A. Final Draft Clean Water Fund Expenditure Contingency Plan

Clean Water Initiative Program Manager Kari Dolan

- Review proposed updates to the 2016 Interim Clean Water Fund Expenditure Contingency Plan
- See supporting materials: *Draft Clean Water Fund Expenditure Contingency Plan*
- Contingency Plan maintains contingency reserve funds in case property transfer tax surcharge underperforms; Contingency Plan establishes a process to allocate surplus revenue in the following SFY budget process
- Recommendation: Consider a motion to approve the 2018 Clean Water Fund Expenditure Contingency Plan
- Motion to approve:
 - Julie Moore motioned to approve the 2018 Clean Water Fund Expenditure Contingency Plan
 - Joe Flynn seconded the motion
 - No objections
 - 2018 Clean Water Fund Expenditure Contingency Plan approved for Susanne Young's signature

V. PUBLIC COMMENTS

3:50-3:55 pm

Agency of Administration Secretary and Clean Water Board Chair Susanne Young

- Jared Carpenter, Lake Champlain Committee: In prior years, the Board posted the draft Clean Water Fund budget as part of the July public comment period; this year, the Board will not post a draft Clean Water Fund budget until September; understands that public comment does not substantially alter the budget and, ultimately, the budget will be based on science and public policy; however, posting the budget in September does not allow much time for public review, input, and digestion of the budget, and for the agency to respond to public comments; additionally, capital budget targets will not be more certain in September than they are now; expressed concern that the SFY 2020 budget process is less transparent than prior years
- Jill Arace, Vermont Association of Conservation Districts: Conservation Districts are involved in all clean water project delivery areas; noticing a change in agencies bundling smaller grants; longer term funding provides consistency and partner organization staff retainment; requested to standardize reporting across agencies
- Charlie Baker, Vermont Association of Planning and Development Agencies: Thank you for the online questionnaire; the questionnaire is a great step toward simplifying the conversation, but it might be too simple; the questionnaire is an opportunity for public outreach and it would be helpful to include information on how much sectors contribute to pollution and indicate relative cost effectiveness of treating pollution per sector; additionally, each project step is not equal in cost and it would be helpful to include information on how much funding is needed for each project delivery step; noted there is a fundamental difference of who pays by each sector and recommended including a question if public would prefer to pay for specific activities through state or municipal taxes
- Jen Hollar, Vermont Housing and Conservation Board (VHCB): VHCB's work is funded by the property transfer tax; however, portions of VHCB's property transfer tax funds have been repurposed to cover the state's general fund budget and replaced with capital funds; VHCB dollars do not need to be included in the clean water section of the capital bill, which could potentially create space for other clean water projects

VI. NEXT MEETING, ADJOURN

3:55-4:00 pm

Agency of Administration Secretary and Clean Water Board Chair Susanne Young

- Agenda recommendations from Board members
 - Requested to send draft agendas to all Board members for review
- Discuss New Member Orientation to cover:
 - Clean Water Initiative overview
 - Budget process overview

- Procedural rules, including open meeting procedures (request Attorney General's input)
- State needs to provide email accounts to non-agency Board members for state business
- Motion to adjourn:
 - Julie Moore motioned to adjourn
 - Joe Flynn seconded the motion
 - Meeting adjourned

Supporting Materials:

1. Draft April 12, 2018 Clean Water Fund Board Meeting Minutes
2. Vermont Statutes Annotated, as Amended by 2018 Act 168 (S. 260) and 2018 Act 208 (S. 285)
3. FY2018 Clean Water Fund Revenue Summary and Forecast
4. Updated SFY 2019 Clean Water Fund Budget
5. Draft SFY 2020 Clean Water Fund Budget Process
6. Draft SFY 2020 Clean Water Fund Public Comment Questionnaire
7. Draft Clean Water Fund Expenditure Contingency Plan

Title 10: Conservation and Development

Chapter 47: Water Pollution Control

Subchapter 7: Vermont Clean Water Fund

§ 1387. Purpose

The General Assembly establishes in this subchapter a Vermont Clean Water Fund as a mechanism for financing the improvement of water quality in the State. The Clean Water Fund shall be used to:

(1) assist the State in complying with water quality requirements and construction or implementation of water quality projects or programs;

(2) fund staff positions at the Agency of Natural Resources, Agency of Agriculture, Food and Markets, or Agency of Transportation when the positions are necessary to achieve or maintain compliance with water quality requirements and existing revenue sources are inadequate to fund the necessary positions; and

(3) provide funding to nonprofit organizations, regional associations, and other entities for implementation and administration of community-based water quality programs or projects. (Added 2015, No. 64, § 37, eff. June 16, 2015.)

§ 1388. Clean Water Fund

(a) There is created a special fund to be known as the "Clean Water Fund" to be administered by the Secretary of Administration. The Fund shall consist of:

(1) ~~revenues dedicated for deposit into the Fund by the General Assembly, including from the Property Transfer Tax surcharge established under 32 V.S.A. § 9602a; and~~

(2) other gifts, donations, and impact fees received from any source, public or private, dedicated for deposit into the Fund and approved by the Secretary of Administration;

(3) the unclaimed beverage container deposits (escheats) remitted to the State under chapter 53 of this title; and

(4) other revenues dedicated for deposit into the Fund by the General Assembly.

(b) Notwithstanding any contrary provisions of 32 V.S.A. chapter 7, subchapter 5, unexpended balances and any earnings shall remain in the Fund from year to year. (Added 2015, No. 64, § 37, eff. June 16, 2015.)

§ 1389. Clean Water ~~Fund~~ Board

(a) Creation.

(1) There is created the Clean Water ~~Fund~~ Board ~~which~~ that shall:

(A) be responsible and accountable for planning, coordinating, and financing of the remediation, improvement, and protection of the quality of State waters;

(B) recommend to the Secretary of Administration expenditures:

(i) appropriations from the Clean Water Fund; and

(ii) clean water projects to be funded by capital appropriations.

(2) The Clean Water ~~Fund~~ Board shall be attached to the Agency of Administration for administrative purposes.

(b) Organization of the Board. The Clean Water ~~Fund~~ Board shall be composed of:

(1) the Secretary of Administration or designee;

(2) the Secretary of Natural Resources or designee;

(3) the Secretary of Agriculture, Food and Markets or designee;

(4) the Secretary of Commerce and Community Development or designee; and

(5) the Secretary of Transportation or designee; and

(6) four members of the public, who are not legislators, with expertise in one or more of the following subject matters: public management, civil engineering, agriculture, ecology, wetlands, stormwater system management, forestry, transportation, law, banking, finance, and investment, to be appointed by the Governor.

(c) Officers; committees; rules; compensation; term.

(1) The Clean Water ~~Fund~~ Board shall ~~annually elect a chair from its members~~ Secretary of Administration shall serve as the Chair fo the Board. The Clean Water ~~Fund~~ Board may elect additional officers from its members, establish committees or subcommittees, and adopt procedural rules as necessary and appropriate to perform its work.

(2) Members of the Board who are not employees of the State of Vermont and who are not otherwise compensated or reimbursed for their attendance shall be entitled to per diem compensation and reimbursement of expenses pursuant to 32 V.S.A. § 1010 paid from the budget of the Agency of Administration for attendance of meetings of the Board.

(3) Members who are appointed to the Clean Water Board shall be appointed for terms of four years, except initial appointments shall be made such that two members appointed by the Governor shall be appointed for a term of two years. Vacancies on the Board shall be filled for the remaining period of the term in the same manner as initial appointments.

(d) Powers and duties of the Clean Water ~~Fund~~ Board. The Clean Water ~~Fund~~ Board shall have the following powers and authority:

(1) The Clean Water ~~Fund~~ Board shall recommend to the Secretary of Administration the appropriate allocation of funds from the Clean Water Fund for the purposes of developing the State budget required to be submitted to the General Assembly under 32 V.S.A. § 306. All recommendations from the Board should be intended to achieve the greatest water quality gain for the investment. The recommendations of the Clean Water Board shall be open to inspection and copying under the Public Records Act, and the Clean Water Board shall submit to the Senate Committees on Appropriations, on Finance, on Agriculture, and on Natural Resources and Energy and the House Committees on Appropriations, on Ways and Means, on Agriculture and Forestry, and on Natural Resources, Fish, and Wildlife a copy of any recommendations provided to the Governor.

(2) The Clean Water ~~Fund~~ Board may pursue and accept grants, gifts, donations, or other funding from any public or private source and may administer such grants, gifts, donations, or funding consistent with the terms of the grant, gift, or donation.

(3) The Clean Water ~~Fund~~ Board shall:

(A) establish a process by which watershed organizations, State agencies, and other interested parties may propose water quality projects or programs for financing from the Clean Water Fund;

(B) develop an annual revenue estimate and proposed budget for the Clean Water Fund;

(C) establish measures for determining progress and effectiveness of expenditures for clean water restoration efforts;

(D) issue the annual Clean Water Investment Report required under section 1389a of this title; ~~and~~

(E) solicit, consult with, and accept public comment from organizations interested in improving water quality in Vermont regarding recommendations under this subsection for the allocation of funds from the Clean Water Fund; and

(F) establish a process under which a watershed organization, State agency, or other interested party may propose that a water quality project or program identified in a watershed basin plan receive funding from the Clean Water Fund.

(e) Priorities.

(1) In making recommendations under subsection (d) of this section regarding the appropriate allocation of funds from the Clean Water Fund, the Board shall prioritize:

(A) funding to programs and projects that address sources of water pollution in waters listed as impaired on the list of waters established by 33 U.S.C. § 1313(d);

(B) funding to projects that address sources of water pollution identified as a significant contributor of water quality pollution, including financial assistance to grant recipients at the initiation of a funded project;

(C) funding to programs or projects that address or repair riparian conditions that increase the risk of flooding or pose a threat to life or property;

(D) assistance required for State and municipal compliance with stormwater requirements for highways and roads;

(E) funding for education and outreach regarding the implementation of water quality requirements, including funding for education, outreach, demonstration, and access to tools for the implementation of the Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont, as adopted by the Commissioner of Forests, Parks and Recreation;

(F) funding for innovative or alternative technologies or practices designed to improve water quality or reduce sources of pollution to surface waters, including funding for innovative nutrient removal technologies and community-based methane digesters that utilize manure, wastewater, and food residuals to produce energy;

(G) funding to purchase agricultural land in order to take that land out of practice when the State water quality requirements cannot be remediated through agricultural Best Management Practices; ~~and~~

(H) funding to municipalities for the establishment and operation of stormwater utilities; and

(I) investment in watershed basin planning, water quality project identification screening, water quality project evaluation, and conceptual plan development of water quality projects.

(2) In developing its recommendations under subsection (d) of this section regarding the appropriate allocation of funds from the Clean Water Fund, the Clean Water Fund Board shall, during the first three years of its existence and within the priorities established under subdivision (1) of this subsection (e), prioritize awards or assistance to municipalities for municipal compliance with water quality requirements, and to municipalities for the establishment and operation of stormwater utilities.

(3) In developing its recommendations under subsection (d) of this section regarding the appropriate allocation of funds from the Clean Water Fund, the Board shall, after satisfaction of the priorities established under subdivision (1) of this subsection (e), attempt to provide ~~for equitable apportionment of awards from the Fund to all regions of the State and for control of~~

all sources of point and non-point sources of pollution in the State investment in all watersheds of the State based on the needs identified in watershed basin plans.

(f) Assistance. The Clean Water Fund Board shall have the administrative, technical, and legal assistance of the Agency of Administration, the Agency of Natural Resources, the Agency of Agriculture, Food and Markets, the Agency of Transportation, and the Agency of Commerce and Community Development for those issues or services within the jurisdiction of the respective agency. The cost of the services provided by agency staff shall be paid from the budget of the agency providing the staff services. (Added 2015, No. 64, § 37, eff. June 16, 2015; amended 2015, No. 158 (Adj. Sess.), § 33, eff. June 2, 2016; 2017, No. 74, § 16a.)

§ 1389a. Clean water investment report

(a) Beginning on January 15, 2017, and annually thereafter, the Secretary of Administration shall publish the Clean Water Investment Report. The Report shall summarize all investments, including their cost-effectiveness, made by the Clean Water Fund Board and other State agencies for clean water restoration over the prior ~~calendar~~ fiscal year. The Report shall include expenditures from the Clean Water Fund, the General Fund, the Transportation Fund, and any other State expenditures for clean water restoration, regardless of funding source.

(b) The Report shall include:

(1) Documentation of progress or shortcomings in meeting established indicators for clean water restoration.

(2) A summary of additional funding sources pursued by the Board, including whether those funding sources were attained; if it was not attained, why it was not attained; and where the money was allocated from the Fund.

(3) A summary of water quality problems or concerns in each watershed basin of the State, a list of water quality projects identified as necessary in each basin of the State, and how identified projects have been prioritized for implementation. The water quality problems and projects identified under this subdivision shall include programs or projects identified across State government and shall not be limited to projects listed by the Agency of Natural Resources in its watershed projects database.

(4) A summary of any changes to applicable federal law or policy related to the State's water quality improvement efforts, including any changes to requirements to implement total maximum daily load plans in the State.

(5) A summary of available federal funding related to or for water quality improvement efforts in the State.

(c) The Report may also provide an overview of additional funding necessary to meet objectives established for clean water restoration and recommendations for additional revenue to meet those restoration objectives. The provisions of 2 V.S.A. § 20(d) (expiration of required reports) shall not apply to the report required by this section.

(d)(1) The Secretary of Administration shall develop and use a results-based accountability process in publishing the annual report required by subsection (a) of this section.

(2) The Secretary of Administration shall develop user-friendly issue briefs, tables, or executive summaries that make the information required under subdivision (b)(3) available to the public separately from the report required by this section.

(3) On or before September 1 of each year, the Secretary of Administration shall submit to the Joint Fiscal Committee an interim report regarding the information required under subdivision (b)(5) of this section relating to available federal funding. (Added 2015, No. 64, § 37, eff. June 16, 2015; amended 2017, No. 85, § E.700.1.)

§ 1389b. Clean Water Fund audit

(a) On or before January 15, 2021, the Secretary of Administration shall submit to the House and Senate Committees on Appropriations, the Senate Committee on Finance, the House Committee on Ways and Means, the Senate Committee on Agriculture, the House Committee on Agriculture and Forest Products, the Senate Committee on Natural Resources and Energy, and the House Committee on Natural Resources, Fish and Wildlife a program audit of the Clean Water Fund. The audit shall include:

(1) a summary of the expenditures from the Clean Water Fund, including the water quality projects and programs that received funding;

(2) an analysis and summary of the efficacy of the water quality projects and programs funded from the Clean Water Fund or implemented by the State;

(3) an evaluation of whether water quality projects and programs funded or implemented by the State are achieving the intended water quality benefits;

(4) an assessment of the capacity of the Agency of Agriculture, Food and Markets to effectively administer and enforce agricultural water quality requirements on farms in the State; and

(5) a recommendation of whether the General Assembly should authorize the continuation of the Clean Water Fund and, if so, at what funding level.

(b) The audit required by this section shall be conducted by a qualified, independent environmental consultant or organization with knowledge of the federal Clean Water Act, State water quality requirements and programs, the Lake Champlain Total Maximum Daily Load plan, and the program elements of the State clean water initiative.

(c) Notwithstanding provisions of section 1389 of this title to the contrary, the Secretary of Administration shall pay for the costs of the audit required under this section from the Clean Water Fund, established under section 1388 of this title. (Added 2015, No. 64, § 37, eff. June 16, 2015; amended 2015, No. 97 (Adj. Sess.), § 20.)

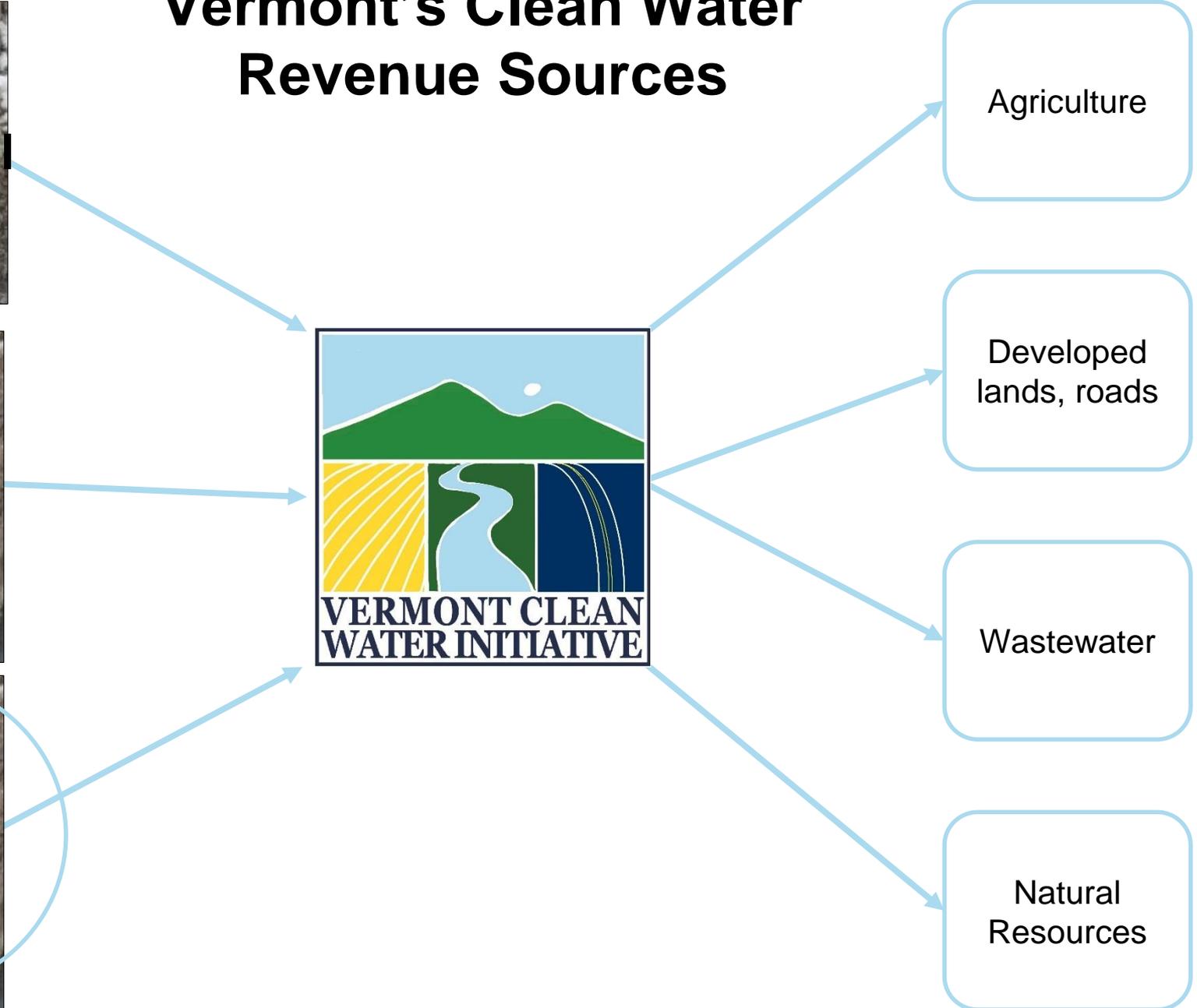
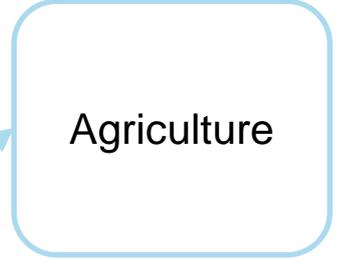
Revenue Sources



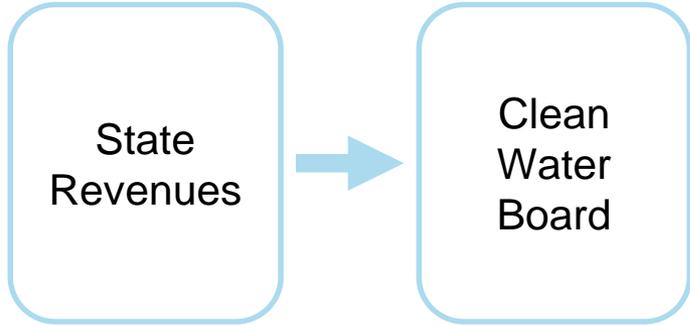
Vermont's Clean Water Revenue Sources



Targeted Actions

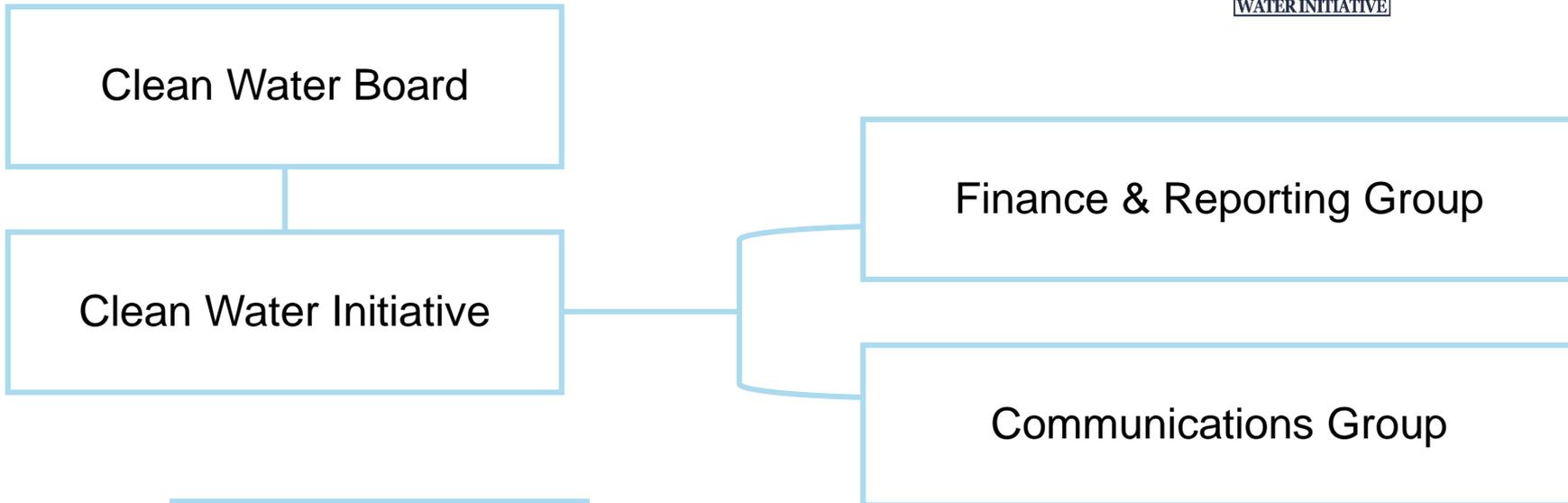


Vermont's Clean Water Board Targets Clean Water Funding



Agency of Agriculture, Food and Markets (AAFM)	Best Management Practice (BMP) Program
	Capital Equipment Assistance Program (CEAP)
	Clean Water Fund Grants and Contracts
	Clean Water Fund Operational Funds
	Conservation Reserve Enhancement Program (CREP)
Agency of Commerce and Community Development (ACCD)	Better Connections
Agency of Natural Resource (ANR)	Clean Water State Revolving Fund (CWSRF) Loans
	Municipal Pollution Control Grants
	Ecosystem Restoration Grants
Agency of Transportation (VTrans)	Better Roads Program
	Transportation Alternatives Program (TAP)
Vermont Housing and Conservation Board (VHCB)	Conservation Grants
	Farmland Protection Grants

See: <http://dec.vermont.gov/watershed/cwi/cwf>



Agency of Administration

Agriculture Transportation Natural Resources Commerce & Comm. Dev.





Clean Water Board Administrative Staff Support by Agency

Agency of Administration Secretary Susanne Young,
susanne.young@vermont.gov

Agriculture



Transportation



Natural Resources



Commerce & Comm. Dev.



Primary State Contacts:

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**Clean Water Fund Property Transfer Tax Surcharge Revenue Update
June 4, 2018**

Clean Water Surcharge: FY18 Monthly Forecast & Actuals												
	July	August	September	October	November	December	January	February	March	April	May	June
Forecast Month	501,074	551,073	435,955	488,883	420,152	521,219	305,645	259,392	337,743	387,499	463,717	577,647
Actual	571,156	591,492	469,141	494,642	570,425	498,556	392,123	257,016	335,321	414,921	554,540	
Forecast Cumulative	501,074	1,052,147	1,488,103	1,976,986	2,397,138	2,918,357	3,224,001	3,483,394	3,821,137	4,208,635	4,672,353	5,250,000
Actual Cumulative	571,156	1,162,648	1,631,789	2,126,431	2,696,856	3,195,412	3,587,535	3,844,551	4,179,872	4,594,793	5,149,332	
Cum Dollar Difference	70,082	110,501	143,686	149,445	299,718	277,055	363,534	361,157	358,735	386,157	476,980	
Cum % Difference	14.00%	10.50%	9.70%	7.60%	12.50%	9.50%	11.30%	10.40%	9.40%	9.20%	10.20%	
											Rev to Housing	Rev to CWF
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**REPORT OF THE
WORKING GROUP ON WATER QUALITY FUNDING
2017 ACT 73, SECTION 26**

**Submitted to the
General Assembly**

November 15, 2017

Vermont Act 73 § 26. WORKING GROUP ON WATER QUALITY FUNDING

(a) Establishment. There is established the Working Group on Water Quality Funding to develop recommendations for equitable and effective long-term funding methods to support clean water efforts in Vermont.

(b) Membership. The Working Group shall be composed of the following six members:

- (1) the Secretary of Natural Resources or designee (**Julie Moore**);
- (2) one member from the Vermont League of Cities and Towns, appointed by the Board of Directors of that organization (**Dominic Cloud**);
- (3) the Secretary of Agriculture, Food and Markets or designee (**Anson Tebbetts**);
- (4) a representative of the Vermont Center for Geographic Information (**John Adams**);
- (5) the Commissioner of Taxes or designee (**Kaj Samsom**);
- (6) one member representing commercial or industrial business interests in the State, to be appointed by the Governor, after consultation with other business groups in the State (**John Grenier**);

(c) Advisory Council. The Working Group shall be assisted by an Advisory Council to be made up of:

- (1) the State Treasurer or designee (**Beth Pearce**);
- (2) the Secretary of Transportation or designee (**Joe Flynn**);
- (3) one member from the Vermont Municipal Clerks and Treasurers Association appointed by the Executive Board of that organization (**Dawn Custer**);
- (4) one member from the Vermont Mayors Coalition appointed by that organization (**Jordan Redell**);
- (5) a representative of an environmental advocacy group appointed by the Speaker of the House (**Jared Carpenter**);
- (6) a representative of the agricultural community appointed by the Vermont Association of Conservation Districts (**Jill Arace**); and
- (7) a representative of University of Vermont Extension appointed by the President Pro Tempore of the Senate (**Chuck Ross**).

(d) Powers and duties. The Working Group on Water Quality Funding shall recommend to the General Assembly draft legislation to establish equitable and effective long-term funding methods to support clean water efforts in Vermont.

(e) Consultation with Advisory Council. The Working Group shall meet at least three times with the Advisory Council for input on the report to be submitted to the General Assembly under subsection (f) of this section. The Advisory Council's comments shall be included in the final report.

(f) Report. On or before November 15, 2017, the Working Group on Water Quality Funding shall submit to the General Assembly a summary of its activities, an evaluation of existing sources of funding, and draft legislation to establish equitable and effective long-term funding methods to support clean water efforts in Vermont.

(g) Meetings.

- (1) The Secretary of Natural Resources shall call the first meeting of the Working Group to occur on or before July 1, 2017.
- (2) The Secretary of Natural Resources shall be the Chair of the Working Group.
- (3) A majority of the membership shall constitute a quorum.
- (4) The Working Group shall cease to exist on March 1, 2018.
- (5) No specific state appropriations shall be used to support the working group or advisory council.

(h) Assistance. The Working Group on Water Quality Funding shall have the administrative, technical, and legal assistance of the Agency of Natural Resources and the Department of Taxes. The Working Group on Water Quality Funding shall have the technical assistance of the Vermont Center for Geographic Information or designee.

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Appendix A: [VLCT, “Estimated Cost of Establishing Separate Billing System for Stormwater Fees”](#) (8/11/2017)

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Executive Summary

Significant long-term investments are needed to restore and sustain the high quality of Vermont's waterways. These investments are necessary to reduce pollution washing into Vermont's rivers, streams, lakes, ponds and wetlands, ensuring Vermont's environment and economy remains strong and resilient. Investing in clean water also provides a unique opportunity to protect Vermont's environment and grow our economy by revitalizing working landscapes, school campuses, downtowns and village centers, supporting farmers and local agriculture, upgrading state and local roads, and restoring important natural resources. Given the magnitude of the required investment, it is essential that we carefully evaluate funding decisions based on their anticipated environmental efficiency and cost effectiveness to ensure the approach achieves our water quality goals without having a negative impact on the overall economy. To this end, this report offers several recommendations:

1. Utilize existing state revenues and financial instruments to fund clean water through FY21.
2. Allow clean water priorities to guide how costs are shared across sectors.
3. Establish approaches for revenue collection and service delivery that are environmentally efficient and cost effective.
4. Pursue technological and regulatory innovation, including commoditizing phosphorus, developing flexible financing, and leveraging integrated planning and permitting models.
5. Commit to adaptive management.

In state fiscal years 2016 and 2017, the state invested roughly \$29 million a year in clean water efforts – including roughly \$10 million a year in capital dollars. The 2017 State Treasurer's Report recommended investing an additional \$25 million per year in state funding for clean water through a combination of capital dollars, transportation dollars, and the property transfer tax surcharge for state fiscal years (SFY) 2018 and 2019. Following the Treasurer's report, Governor Scott proposed investing \$53 million a year on clean water efforts, an increase of \$24 million per year over prior years. The Legislature is on track to fulfill this commitment to clean water in SFY18-19.

Looking beyond SFY 2019, there is a critical need to establish long-term clean water funding. The Act 73 Working Group recommends that the Legislature maintain a Capital Bill clean water investment of \$15 million a year through the next biennium (FY20-21). In years beyond FY21, to estimate the amount of revenue that will need to be raised, the Working Group assumed the annual capital investment would be between \$10 and \$12 million per year.

To address long-term funding need, the General Assembly passed Act 73 in the spring of 2017. Section 26 of Act 73 established a six-member working group "to develop recommendations for

equitable and effective long-term funding methods to support clean water efforts in Vermont.” The Working Group met ten times, including three meetings with the advisory council. Agendas, handouts and minutes from those meetings are available online.^[1]

As part of its charge, the Act 73 Working Group reviewed the most recent estimates from state agencies on the cost of compliance with clean water laws and regulations for both the long-term, as well as more detailed estimates for the next five years, surveyed existing sources of revenue, identified funding gaps, made recommendations for cost-effective regulatory and technological innovations to close this gap, and outlined a path forward for establishing new revenue sources.

The Act 73 Working Group recommends continued work on financial and technical tools that will support the most cost-effective measures to reduce water pollution. With respect to “equitable and effective long-term funding,” the Working Group recommends a series of possible service delivery models for further investigation that would provide the technical and administrative capacity needed to ensure the efficient, effective disbursement of funds. When it comes to the state’s role in cost sharing, the Working Group recommends the General Assembly develop a cost share strategy that will allow the state to distribute revenue across the range of required water quality investments. The recommendations outlined at the end of this report provide the critical decision points the General Assembly will need to craft the overall vision for revenue raising and investment; there is a need to reach consensus on these foundational questions.

In sum, the restoration and protection and Vermont’s vast water resources is not a short-term proposition – measured in months or even a handful of years. Improving water quality will require the continued and expanded support of federal, state and local government, private landowners and watershed stakeholders. It is important to have a clear set of parameters that will guide how state dollars are invested in water quality to ensure they produce improvements in the landscape and water quality in as efficient and effective a manner as possible. There is also an urgency to continue to push toward the goal of clean, healthy waterways and this report is an important step forward.

^[1] <http://anr.vermont.gov/about/special-topics/act-73-clean-water-funding>

I. Introduction

It is often tempting for Vermonters to take our state's vast water resources for granted, after all water in Vermont is abundant and generally high quality. However, conditions during the late-summer and fall of 2017 provided a stark reminder of importance of and need for constant stewardship of our water resources.



In September 2017, Lake Carmi residents reported to the Vermont Agency of Natural Resources (ANR) that a 15-foot ribbon of teal, white, green algae hugged the shoreline, causing a horrific stench. As one person wrote, “We cannot sit outside and keep our windows closed for fear of breathing toxic spores in the air around us.... we don't dare go out on the lake in our boats, eat the fish, bring the water into our homes for showering etc. and our property values are plunging. We are afraid the lake is reaching a point whereby it will be too late to save.”¹

Lake Carmi is located near the Canadian border in northwest Vermont, in the Missisquoi Watershed. Throughout the summer, the Department of Health's website² reported cyanobacteria (blue-green algae) outbreaks at beaches across Vermont, with high-level alerts reported on Lake Champlain in Addison, Burlington, Ferrisburgh, Franklin, Georgia, Shelburne, St. Albans, and elsewhere. High alerts mean that water is not safe for swimming.

Like Lake Carmi and Lake Champlain, many Vermont waters are under stress and many of them are impaired. The Vermont Legislature has responded to this impending crisis with a series of legislation designed to protect water quality, including:

- [2012 Act 138](#) (Report “Water Quality Remediation, Implementation, and Funding”)³,
- [2014 Act 97](#) (Report “Vermont's Clean Water Initiative”)⁴ and
- [2015 Act 64](#) (Report “Annual Clean Water Investment”)⁵.

Act 64 of 2015 – often referred to as Vermont's Clean Water Act – laid the foundation for the protection and restoration of Vermont's waters by adopting a cross-sector “all in” approach, with a broad suite of programs regulations addressing: agricultural practices, stormwater runoff from roads and other developed lands, and natural infrastructure (river corridors, wetlands and forest management).

¹ Email from Diana Larose, September 11, 2017.

² <http://www.healthvermont.gov/tracking/cyanobacteria-tracker>

³ <http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/Act-138-Report-Water-Quality-Funding-Report-Jan-2013.pdf>

⁴ <http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/Act-97-Report-What-Is-The-Clean-Water-Initiative-Jan-2015.pdf>

⁵ <http://dec.vermont.gov/watershed/cwi/reports>

Act 64’s water quality requirements, summarized below, are extensive.

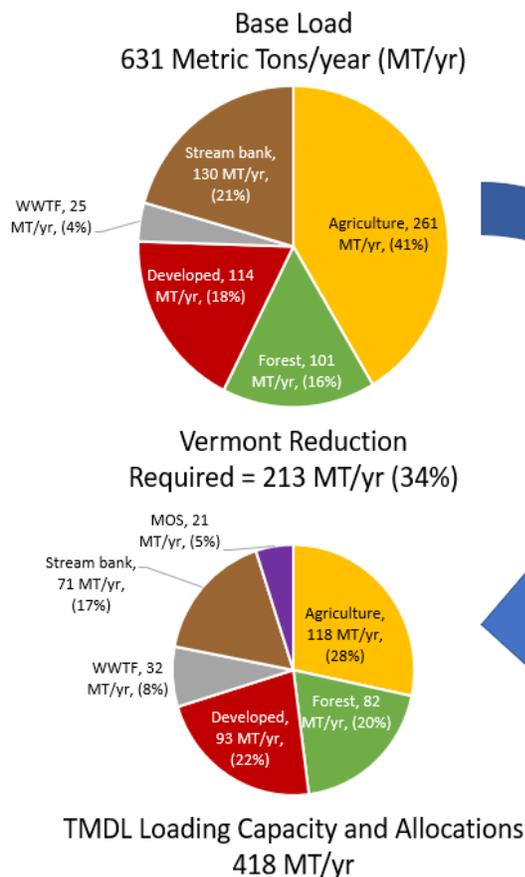
Summary of 2015 Act 64 Requirements			
Agriculture	Roads	Developed Lands	Natural Resources
			
<ul style="list-style-type: none"> • Required Agricultural Practices adopted by Agency of Agriculture (eff. 12/5/16) • Nutrient Management Plans • Manure and Nutrient Storage standards • Livestock exclusion • Cover cropping in critical areas • Extended winter spreading ban on floodplains • Setbacks (25 feet from surface waters, 10 feet from ditches) 	<ul style="list-style-type: none"> • Municipal Roads General Permit (Rule eff. 7/31/18, permits in place by 1/1/21, 10-year compliance period) • State Highways “Transportation Separate Storm Sewer System” (TS4) permit 	<ul style="list-style-type: none"> • Sites with ≥ 3 acres impervious surface will require a new permit. Sites that do not comply with 2002 or more recent standards will need to implement new practices. (Rule eff. 1/1/18, Lake Champlain parcels must implement practices 2023-2028, other parcels must implement practices 2028-2033) • MS4 permits must incorporate phosphorus reduction standards. 	<ul style="list-style-type: none"> • Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont adopted by Dept. of Forests, Parks & Recreation (eff. 7/1/16) • Ongoing implementation of Act 138, River Corridor Planning and Protection.

In addition to the state’s response to need to protect waters statewide in Act 64, the U.S. Environmental Protection Agency (US EPA), in June 2016, adopted Total Maximum Daily Limits (TMDLs) for phosphorus in Lake Champlain and, in September 2017, for Lake Memphremagog. The US EPA set reduction targets for each segment of Lake Champlain, as well as Lake Memphremagog, for each broad category of phosphorus source⁶

In approving the TMDLs, the US EPA relied on the commitments made in Act 64 to address nonpoint sources of nutrient pollution statewide and, in addition, required phosphorus reductions at certain wastewater treatment facilities.



⁶ <https://www.epa.gov/tmdl/lake-champlain-phosphorus-tmdl-commitment-clean-water>



The US EPA TMDLs require Vermont to significantly reduce annual phosphorus loading to both Lake Champlain (34%) and Lake Memphremagog (23%).

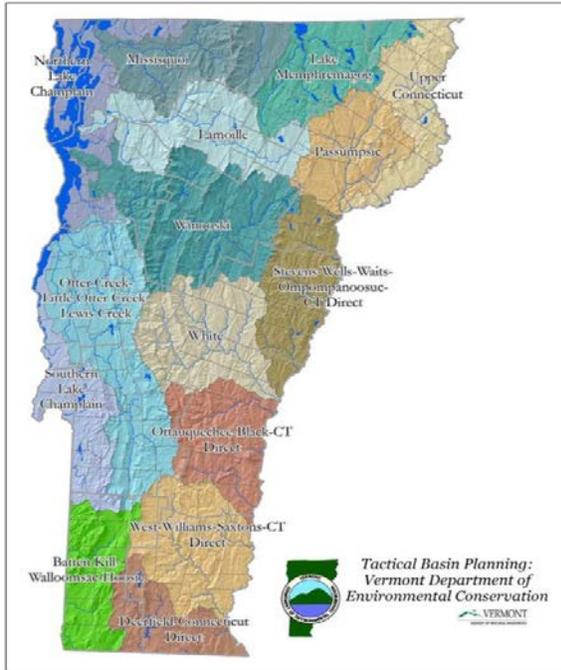
In both watersheds, agriculture is the largest contributing source of phosphorus, and assigned the largest amount of responsibility for reducing phosphorus loads. Under the TMDLs, agriculture will generate the greatest reductions to phosphorus, both in tonnage and percentage. The agricultural community's percentage reduction will be well above their percentage contribution, making up for percentage reductions in other sectors that are below their percentage contribution. As recognized by the US EPA, targeting agriculture is a cost-effective investment that benefits other sectors.

Source: Figure 7, U.S. EPA TMDLs for Lake Champlain.

The State of Vermont reports on its implementation progress in an annual Clean Water Report.⁷ In working to implement Act 64 and the TMDLs,⁸ Vermont identified the actions and activities needed to achieve the targets set by the US EPA, and set a series of milestones for adopting new permits and standards, which will drive the implementation of water quality best management practices statewide and ultimately change the way Vermonters live with both land and water.

⁷ <http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/2017-01-20%20Clean%20Water%20Initiative%20Deliverables.pdf>

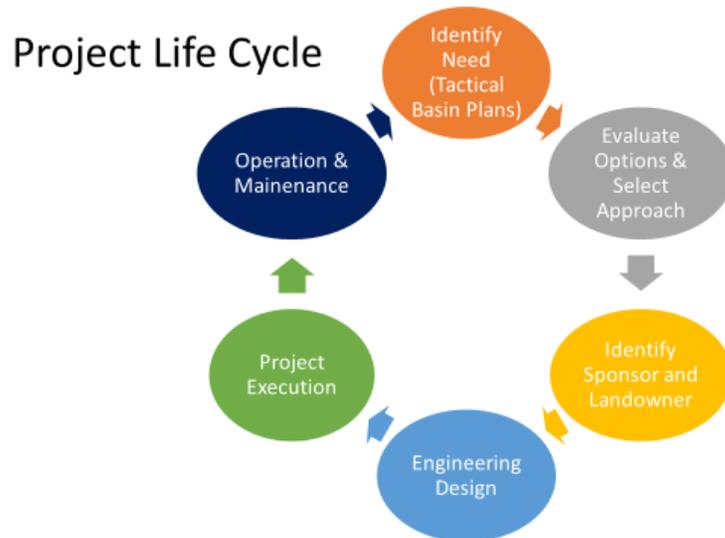
⁸ http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/160915_Phase_1_Implementation_Plan_Final.pdf



Concurrent with these implementation efforts, the Department of Environmental Conservation (DEC) is rolling out updated Tactical Basin Plans.⁹ Each plan covers a five-year period and will identify and prioritize both regulatory and non-regulatory activities needed to meet water quality goals.

DEC is also in the process of designing a project database that will be used to track activities identified in the Basin Plans, including a project grading system that addresses project readiness, environmental benefits, funding sources, and costs. The same database will also be used to track progress as projects move through their “life cycle” – from evaluating possible solutions to engineering design to implementation and the on-going operation

and maintenance. Ultimately the database will be used to quantify phosphorus load reductions and to measure progress towards clean water.¹⁰



⁹ <http://dec.vermont.gov/watershed/map/basin-planning>

¹⁰ <https://anrweb.vt.gov/DEC/IWIS/ARK/ProjectSearch.aspx>

II. Summary of Activities

Act 73, Section 26(f) requires the Working Group to provide “a summary of its activities.” The Act 73 Working Group met ten times over the summer and fall: June 28, July 14, July 28, August 11, August 25, September 8, September 22, October 18, November 3 and November 14. As required by statute, the Advisory Council joined the Working Group on three occasions: September 8, October 18, and November 14. All the meetings were open and attended by the general public. Agendas and minutes are available on the Act 73 Working Group website.¹¹ The Working Group expresses its appreciation to all those who attended meetings and contributed to this important dialogue.

A. Treasurer’s Report and FY18 State Budget (June 28)

At its first meeting, the Act 73 Working Group reviewed the recommendations in the Treasurer’s January 2017 Report on Clean Water Funding.¹² The Treasurer’s Report, which was mandated by the Legislature in 2015 Act 64, includes “a recommendation for financing water quality improvement programs in the State.”

With support from Executive Agencies, the Treasurer examined existing sources of clean water revenues and estimated the cost of achieving Vermont’s water quality goals statewide, including compliance with 2015 Act 64; the Lake Champlain Total Maximum Daily Limit (TMDL), the Lake Memphremagog, Lake Carmi, Connecticut River and Long Island Sound TMDLs; and Vermont’s 2016 Combined Sewer Overflow (CSO) Rule.

The cost estimates in the Treasurer’s Report and in this report are driven primarily by regulatory requirements. Act 64 requires the state, municipalities, farmers and private landowners to obtain permits, retrofit existing parcels with stormwater practices, implement nutrient management plans and attendant conservation measures, and upgrade gravel roads and paved highways. Even in the absence of state or federal subsidies, landowners will be expected to implement stormwater mitigation to reduce pollutant loads to Vermont’s waters.

The cost estimates in the Treasurer’s Report and in this report do not include:

- Staffing costs at ANR, VTrans and AAFM, for administering the state’s clean water regulatory programs; or
- Operation and maintenance (O&M) costs following construction and implementation of clean water projects, which can be substantial.

Following the structure of the US EPA’s TMDLs for Lake Champlain and Lake Memphremagog, the cost estimates in the Treasurer’s Report were organized into four sectors: municipal

¹¹ <http://anr.vermont.gov/about/special-topics/act-73-clean-water-funding>

¹² http://www.vermonttreasurer.gov/sites/treasurer/files/committees-and-reports/_FINAL_CleanWaterReport_2017.pdf

wastewater control (including CSOs), stormwater pollution control (including roads and developed lands), agriculture pollution control, and natural resources restoration. The cost estimates assumed a 20-year planning horizon to coincide with the Act 64 compliance schedule and the Lake Champlain TMDL implementation plan.

The Treasurer's Report distinguished between "Tier 1" and "Tier 2" costs. Tier 1 costs represent the regulatory cost of compliance with TMDLs, Act 64 of 2015, and the Combined Sewer Overflow Rule. Tier 1 costs were estimated to be \$82 million annually; revenues were \$34 million, leaving a gap of \$48 million. Tier 2 costs are not required for compliance with the TMDLs or Act 64, but may be required by other permitting programs, and represent costs that would accelerate clean-up of pollution, such as capital equipment assistance. The Act 73 Working Group has included both "Tier 1" and "Tier 2" costs in its estimates.

The Treasurer recommended filling half of the "Tier 1" gap in SFY18 and SFY19 with additional capital funds (\$15 million), highway funds (\$5 million), and Clean Water Funds (\$5 million). The Governor adopted the Treasurer's funding recommendation, as did the Legislature. In SFY16 and SFY17, the state spent roughly \$29 million a year on clean water efforts. In SFY18 and SFY19, following the Treasurer's recommendation, Governor Scott proposed to invest \$53 million a year on clean water efforts, an average increase of \$24 million a year on clean water over previous years. The Legislature is on track to fulfill this commitment to clean water in SFY18 and SFY19.

Reviewing the SFY18 clean water appropriations, the Act 73 Working Group found that:

The SFY18 budget supported early adopters of clean water projects, namely municipal infrastructure, municipal roads, and natural infrastructure. Other sectors, like agriculture and stormwater retrofits on private property, saw lower levels of demand in SFY18, in part a reflection of somewhat later timing of key regulatory drivers and permit requirements in these sectors.

State subsidies vary by sector and by landowner type. Generally, municipal wastewater treatment facilities are eligible for municipal pollution control grants up to 35% of project costs, farmers who implement best management practices are eligible for federal and state grants up to 80% or 90% of project costs, municipal road projects are eligible for incentives up to 80% of project costs, while private property (non-farm) owners are eligible for 0% to 80% state match, depending on the type of project.

Executive Agency staff costs are not included in the clean water budget. The General Assembly will need to consider the staffing capacity of Executive Agencies to oversee and administer grants and construction activities, and the capacity of partners (municipalities, farmers, non-profit organizations) to implement projects on the ground. State agencies are actively exploring new partnerships and new grant programs for lowering the cost of administering grant awards, but capacity will be a challenge, regardless of the granting entity.

Many state's appropriations have restrictions on how they may be spent. For example, federal highway pass-through funds can only be used on highway projects that meet federal funding requirements, and capital funds (as a policy choice) can only be used on municipal and agricultural projects. Likewise, capital funds are restricted to project design and construction, meaning that the need for non-restricted funds to pay for planning, scoping, and technical assistance will likely become more acute as time goes on.

In SFY18, the Legislature targeted the annualized average budget gap, rather than the estimated budget gap for SFY18. Going forward, it will be important to consider the effective dates of key regulatory requirements, which in turn will impact the type of funds and subsidies that are required in a given year.

B. Impervious Surface and Parcel Fee Options (July 14 & 28, August 11 & 25)

In the January 2017 Report, the Treasurer recommended consideration of a parcel fee or impervious surface fee to support clean water projects if existing state resources do not provide the target level of cost share:

“[T]he General Assembly should consider adopting a parcel and/or impervious surface fees.... Given the nexus to the water quality and the ability to tie these revenues, and to incentivize best management practices, consideration should be given to incorporating a tiered impervious cover fee as a long-term revenue option.” (Page 62.)

Cognizant of this recommendation, the Act 73 Working Group discussed issues related to parcel-based and impervious surface fees over several meetings. The Act 73 Working Group considered four options for the administration of a parcel or impervious surface fee: municipal administration, state administration, parallel systems, and local or regional stormwater utility.¹³

1. Municipal administration. This collection approach would leverage the current property tax system with state support for municipal collection of a parcel or impervious surface fee, and would be similar to collection of current statewide education property tax system, where the State assists municipalities with tax administration. The State pays \$5 - \$6 million to municipalities for help in collecting the statewide education property tax.

The Vermont League of Cities and Towns (VLCT) provided a memo¹⁴ (Appendix A) estimating that the combined cost of establishing a new stormwater billing system in each of the state's 246 municipalities would range anywhere from \$1,760,000 to \$6,775,000. In response, it was mentioned that placing a stormwater fee as a separate line on existing property tax bills could be a less-costly option, result in higher compliance rates, and could be paid through escrow

¹³ See Vt. Dept of Taxes Memo on “Parcel Fee Collection and Appeal Considerations” (Feb. 2017) (legislature.vermont.gov/assets/Documents/2018/WorkGroups/House%20Natural/Committee%20Bills/17-0230%20An%20act%20relating%20to%20clean%20water%20funding/Testimony/W~Kaj%20Samsom~Parcel%20Fee%20Collecti on%20and%20Appeal%20Considerations~2-10-2017.pdf).

¹⁴ <http://anr.vermont.gov/sites/anr/files/specialtopics/Act73WorkingGroup/2017-08-11-VLCT-memo.pdf>

accounts resulting in less paperwork for property owners. However, since a stormwater fee is not a tax, it was also noted that placing a stormwater fee on property tax bills may cause confusion.

2. State administration. Under this option, the State would take on both statewide property education tax and impervious parcel fee. The Working Group discussed extensively the idea of collecting both the education property tax and a stormwater fee at the state level. It was noted that statewide collection of the education tax would represent a fundamental shift in Vermont tax policy.

The Vermont Tax Department emphasized that a shift of this magnitude must be transparent and would require strong legislative support. Vermont municipalities are divided on whether the education property tax should be collected locally or by the state.

The Tax Department listed numerous issues that would need to be resolved prior to the transition to statewide collection of the education property tax and a stormwater fee. Among the many issues discussed by the Working Group were:

- How quickly could the State stand up the system? It was noted that the State would need to conduct an extensive the request-for-proposal process to upgrade the information technology to support a statewide property tax.
- How would property assessments be handled? Would assessments remain local? Under the current system, property owners have the right to request an inspection of their property by the local civil board of authority. If assessments remain local, a process for communicating local appeals to the statewide billing and collection program would need to be established. If assessments were handled by the state, a possible advantage would be increased consistency in property valuation, particularly for high-value commercial properties.
- Would town clerks continue to hold land records? How would the shift impact revenue that is currently collected by town clerks?
- Would overall costs related to tax collection go up or down? There are currently 300 to 500 FTEs in the municipal property tax system. Overall administrative costs may rise unless municipalities reduce staff. Statewide administrative efficiencies and reduced software licensing costs could exert downward pressure on costs.

3. Parallel collection. This option presumes local collection of property taxes and state collection of parcel or impervious surface fee. The consensus of the Working Group was that this option would be duplicative and expensive. The Vermont Tax Department estimated (Appendix B) that a standalone, statewide impervious surface fee would require statewide billing and collection (313,000 invoices) and would be very difficult to implement, requiring upwards of 25 FTEs.

	FY16 Op Expenses	Revenues	Cost/\$1 of Rev
Department Wide	\$17,700,000	\$1,670,000,000	\$0.01
Parcel Fee - Ongoing	\$4,000,000	\$18,000,000	\$0.22

The Tax Department currently spends roughly \$17.7 million to collect \$1.67 billion in income tax revenues. To implement statewide collection of a parcel or impervious surface fee, the Vermont Tax Department would need to spend roughly \$4 million each year to collect \$18 million each year.

4. Local or regional water quality utility collection. Under this scenario, the Tax Department would support collection of a parcel or impervious surface fee by a regional or statewide water quality utility. This would be similar to the first scenario, except that the Tax Department would need to develop new partnerships with local and regional utilities, rather than build upon existing relationships with municipal billing systems. Additionally, these new utilities would need to establish billing and collections capacities, which would likely cost in the range of \$4 million a year, based on estimates provided for options #1 and #3.

C. Data Requirements for Parcel and Impervious Surface Fees (July 14)

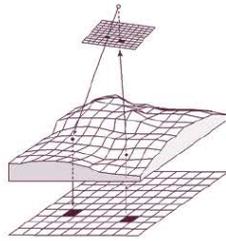
Moving on to data requirements for a parcel or impervious surface fee, the Act 73 Working Group reviewed information prepared by the Vermont Center for Geographical Information, Appendix C and “VCGI, Geospatial Data and Imagery Application,” [Powerpoint](#) (Feb. 2017).¹⁵ There are four mapping efforts currently underway. Notable estimated completion dates are statewide land cover data by July 2018, which is derived from orthoimagery and LiDAR, and statewide parcel data by December 2020. The cost of maintaining and updating land cover data on an annual basis will depend, in part, on whether algorithms can leverage lower-level resolution imagery to capture changes in of impervious surface. The technology related to

¹⁵ legislature.vermont.gov/assets/Documents/2018/WorkGroups/House%20Natural/Committee%20Bills/17-0230%20An%20act%20relating%20to%20clean%20water%20funding/Testimony/W~John%20Adams~Geospatial%20Data%20and%20Imagery%20Acquisition%20relatedto%20the%20Treasurer's%20Report%20on%20Clean%20Water~2-2-2017.pdf

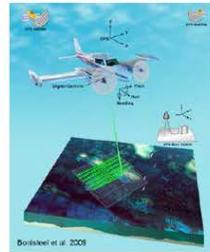
image processing and land cover is evolving rapidly – thanks in part to work being done by the UVM Spatial Analysis Lab.



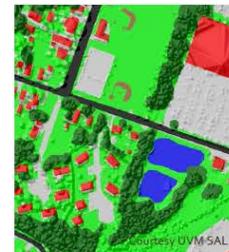
PARCELS



ORTHOIMAGERY



LIDAR



LAND COVER /
IMPERVIOUS SURFACE

D. Clean Water Cost Estimates (August 11, August 25, September 8)

The Act 73 Working Group noted at its first meeting that the SFY18 clean water budget attempted to fill half of the Tier 1 clean water gap, but that the SFY18 budget had used the Treasurer’s 20-year average clean water gap rather than the SFY18 gap. In addition, the SFY18 budget did not explicitly take into account the expected cost share from municipalities and the private sector. For future budgeting purposes, the Working Group agreed that it would be more transparent to look at cost projections for each individual year, to look at funding sources by sector, and to look at expected cost share by each type of landowner.

State agencies were asked to revisit the cost projections provided to the Treasurer for the January 2017 Report, with an eye towards the cost of complying with statutory and regulatory clean water requirements over the next five years.

1. Municipal Infrastructure. The Vermont Department of Environmental Conservation (DEC) provided updated estimates of upgrades at municipal waste water treatment facilities (WWTFs) and Combined Sewer Overflows (CSOs) based on “intended use plans” submitted to the Department by municipalities. Projections for the next two years tend to be fairly accurate, while projections beyond two years need to be extrapolated.

2. Agriculture. The Vermont Agency of Agriculture, Food and Markets (AAFM) explained the process used in the Treasurer’s Report for estimating the agricultural sector’s cost of compliance with the TMDLs and Act 64. In May 2015, AAFM launched the [North Lake Farm Survey](#) (NLFS) to quantify the impacts of agriculture on Lake Champlain. AAFM surveyed over 165 farm facilities in the Missisquoi River basin and St. Albans Bay watershed to determine how much work needed to be done to comply with Act 64’s Required Agricultural Practices. Using

cost data from the U.S. Department of Agriculture (USDA), AAFM extrapolated from the North Lake Survey to estimate statewide Act 64 compliance costs.

AAFM estimated that the cost to comply with the TMDLs and Act 64 over 20 years would be \$528 million, or an average cost of \$27 million per year. This does not include AAFM staff costs. In SFY18, state and federal funds to agriculture total about \$12 million (roughly \$5 million state capital funds, \$2 million Clean Water Fund and General Fund, \$5 million USDA funding outside of the state budget). Based on average costs, the agricultural sector should be putting on the ground an additional \$14 million a year in agricultural clean water practices. The capacity does not currently exist within the agriculture sector – AAFM, USDA, and the farm community – to effectively deliver \$27 million in technical and financial assistance programming. AAFM is working on plans to increase the agency’s capacity to deliver services, including expanding the project pipeline with concerns identified during inspections that will take place over the next 7 years as the agency implements the new Certified Small Farm Operation (CSFO) program. Ultimately, over time, AAFM may require additional staff in its Water Quality Section to fully support implementation.¹⁶

3. Developed Lands. DEC reported that the EPA’s estimated acreage of roads in the Lake Champlain basin that will require treatment dropped significantly between the draft version of the TMDLs (available at the time of the Treasurer’s Report) and the final version. Specifically, the acreage of state paved roads from decreased from 1,400 to 750 acres; municipal paved roads from 2,700 to 1,400 acres; and municipal unpaved roads from 9,600 to 7,100. Furthermore, based on actual cost figures from the last 12 months, the estimated cost of compliance for municipal unpaved roads has been revised from \$11,900 per acre to \$6,100. While these changes may ultimately significantly reduce the total cost of compliance over the next 20 years in this sector, the Act 73 Working Group decided not to change any of the 20-year estimates in the Treasurer’s Report until further data is collected.

DEC also reported that the final EPA TMDLs estimate that 12,800 acres of non-road impervious surface will need to be treated to comply with water quality standards. Based on an average cost of \$30,000 per acre, the total cost of compliance for non-road impervious surface in the Treasurer’s Report was \$360 million over 20 years. Of the 12,800 acres, about 7,200 acres are allocated to compensate for “future growth.” It was suggested that a change in the stormwater permit threshold for new development, from 1 acre to ½ acre would reduce the need to retrofit 7,200 acres for “future growth,” and thus reduce overall 20-year costs of compliance. Again, however, no change was made to the 20-year estimates in the Treasurer’s Report.

¹⁶ <http://agriculture.vermont.gov/sites/ag/files/Org-Chart-ARMS-WQ-2017.pdf>

E. Advisory Group and Public Comment (September 22, October 18, November 3)

The Act 73 Working Group published a draft report on October 18, accepted comments through November 1, and discussed the comments on November 3. The Group received 26 sets of comments from 35 entities, which are available on the Act 73 Working Group website.¹⁷ The Act 73 Working Group is very appreciative of the public's interest in this report. Some general themes emerged from the comments, as detailed below.

Many of the comments urged the Working Group to make more progress towards a long-term funding source. While acknowledging the progress made towards identifying short-term funding sources, many of the comments expressed concern that these funding sources, particularly the Capital Bill, could not meet long-term water quality needs. The Act 73 Working Group accepted this recommendation and accelerated its proposed timeframe for next steps.

Several comments supported the creation of a clean water authority. A coalition of environmental and business groups submitted a concept paper on September 22 supporting the creation of a clean water authority. As expressed by one member of this group, the "devil is in the details." Those details include whether the clean water authority would have authority to set rates; whether the authority's revenue source would be a parcel fee, impervious surface fee, or some other tool; whether the authority would collect revenues, spend revenues, or both; whether the authority would co-exist with or supplant regional authorities; whether the authority would design a revenue system or implement it; and whether the authority would have a sunset date. See Appendix D.

The comments revealed a lack of consensus over how to spend revenues, should a new funding source emerge. While many of the commentators supported a new long-term revenue source, they lacked consensus on how to spend the revenues. Municipalities strongly urged the Act 73 Working Group to consider municipal operations & maintenance (O&M) costs and to increase municipal support accordingly. Others disagreed with investments in wastewater and developed land sectors, and asked for more emphasis on the agricultural sector and natural resources restoration projects; a few noted the burden of clean water compliance on the private sector. Furthermore, there was no consensus as to whether a new revenue source would replace existing revenue sources (state, local, private), or complement them.

A number of people expressed disappointment by the lack of proposed legislation in the Report. While the Act 73 Working Group acknowledges the Legislature's desire for "draft legislation," Act 73 § 26(d), the complexity of the issues, the lack of consensus on some basic questions, and the short timeframe proved insurmountable to achieving this goal. The Act 73 Working Group nonetheless feels strongly that this report is an important step forward towards identifying long-term water quality funding solutions.

¹⁷ <http://anr.vermont.gov/about/special-topics/act-73-clean-water-funding>

III. Existing and Potential Sources of Clean Water Funding

Act 73, Section 26(f) requires the Working Group to conduct “an evaluation of existing sources of funding.”¹⁸ Vermont’s clean water efforts are supported by a myriad of federal, state, and municipal revenue sources and financing tools. This funding provides substantial support for clean water, albeit leaving gaps in certain areas, as further examined later in this report.

A. State

State spending on clean water is spread across the Capital Bill, the Clean Water Fund, the Transportation Bill, the General Fund, and Special Funds. The spreadsheet on the following page summarizes state spending on clean water in SFY18 and SFY19.

1. Capital Bill

The Capital Bill is the vehicle used by the General Assembly to appropriate revenues from the issuance of general obligation bonds. Vermont’s Capital Debt Affordability Advisory Committee, established in 1990, determines a prudent level of new debt issuance for the State each year, and thus the ceiling on annual capital appropriations. During SFY 2016 and 2017, the Legislature appropriated on average \$10 million a year in the Capital Bill to clean water. The Treasurer’s Report (January 2017) recommended that an additional \$15 million a year in capital funds, or a total of \$25 million a year, should be dedicated each year to clean water. Governor Scott supported this recommendation, and the capital appropriations in SFY2018 is \$22 million.

The Agency of Agriculture, Food and Markets (AAFM) uses capital funds, either alone or in conjunction with federal USDA funds, to support implementation of on-farm agricultural water quality improvements including production area practices (barnyard improvements, manure pits, and waste storage facilities) and livestock exclusion fencing.

¹⁸ During the October comment period, several people opined that future federal, state and local revenues, whether generated by fees or taxes, are not “existing” because they are contingent upon congressional, legislative or local approval. To clarify, this Report treats the current set of grant programs and regulatory obligations to pay for permit compliance as “existing” revenue sources. For example, municipalities will need to comply with TMDL requirements whether or not the state provides a grant match. Therefore, municipal revenues are treated as “existing.”

FY18-19 VERMONT CLEAN WATER APPROPRIATIONS

	A Baseline (2 year total)	B		C		D		E Filling Gap= D-A (2 year total)
		As Passed House & Senate (5/5/2017)		FY18 & FY19				
		FY18	FY19	FY18	FY19	FY18	FY19	
1 Capital Bill, H.519 Section 11: Clean Water Investments								
2 (a)(1) & (e)(1) AAFM BMP & CREP	\$ 3,800,000	\$ 3,450,000	\$ 2,000,000	\$ 2,000,000	\$ 5,450,000	\$ 1,650,000	\$ 1,650,000	\$ 1,650,000
3 (a)(2) AAFM Water Quality Grants & Contracts	\$ -	\$ 600,000	\$ -	\$ -	\$ 600,000	\$ 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	\$ 1,200,000	\$ 2,200,000	\$ (200,000)	\$ (200,000)	\$ (200,000)
5 (b)(2)&(f)(2) DEC Ecosystem Restoration Grants	\$ 7,460,000	\$ 6,000,000	\$ 5,000,000	\$ 5,000,000	\$ 11,000,000	\$ 3,540,000	\$ 3,540,000	\$ 3,540,000
6 (b)(3) DEC Municipal Pollution Control Grants (prior)	\$ 35,000	\$ 2,982,384	\$ -	\$ -	\$ 2,982,384	\$ 2,947,384	\$ 2,947,384	\$ 2,947,384
7 (b)(4)&(f)(3) DEC Municipal Pollution Control Grants (new)	\$ 3,306,500	\$ 2,704,232	\$ 1,407,268	\$ 1,407,268	\$ 4,111,500	\$ 805,000	\$ 805,000	\$ 805,000
8 (c) VTrans Municipal Mitigation Program	\$ -	\$ 1,400,000	\$ -	\$ -	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000
9 (d)(1) VHCB: water quality projects	\$ 3,750,000	\$ 2,800,000	\$ 2,750,000	\$ 2,750,000	\$ 5,550,000	\$ 1,800,000	\$ 1,800,000	\$ 1,800,000
10 (d)(2) VHCB: farm grants or fee purchase water quality projects	\$ -	\$ 1,000,000	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
11 (f)(4) FY19 Statewide Clean Water Implementation	\$ -	\$ -	\$ 11,112,944	\$ 11,112,944	\$ 11,112,944	\$ 11,112,944	\$ 11,112,944	\$ 11,112,944
12	\$ 20,751,500	\$ 21,936,616	\$ 23,470,212	\$ 23,470,212	\$ 45,406,828	\$ 24,655,328	\$ 24,655,328	\$ 24,655,328
13								
14 Transportation Bill H.494								
15 State Highway Compliance	\$ 10,450,000	\$ 4,850,000	\$ 5,600,000	\$ 5,600,000	\$ 10,450,000	\$ -	\$ -	\$ -
16 Section 14: Transportation Alternatives (for stormwater)	\$ 2,200,000	\$ 2,200,000	\$ 2,200,000	\$ 2,200,000	\$ 4,400,000	\$ 2,200,000	\$ 2,200,000	\$ 2,200,000
17 Section 8: Municipal Mitigation (for stormwater)	\$ 2,880,000	\$ 1,240,000	\$ 1,240,000	\$ 1,240,000	\$ 2,480,000	\$ (400,000)	\$ (400,000)	\$ (400,000)
18 Section 8: Municipal Mitigation from Federal Hgwy STBG Fund	\$ -	\$ 5,442,342	\$ 5,442,342	\$ 5,442,342	\$ 10,884,684	\$ 10,884,684	\$ 10,884,684	\$ 10,884,684
19	\$ 15,530,000	\$ 13,732,342	\$ 14,482,342	\$ 14,482,342	\$ 28,214,684	\$ 12,684,684	\$ 12,684,684	\$ 12,684,684
20								
21 Appropriations Bill								
22 DEC Federal match pass through for DEC Clean Water SRF	\$ 20,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 20,000,000	\$ -	\$ -	\$ -
23 DF&W Watershed Grants Program	\$ 70,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 70,000	\$ -	\$ -	\$ -
24 AAFM Farm Agronomic Practices Program	\$ 300,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 300,000	\$ -	\$ -	\$ -
25 AAFM Water Quality Grants and Contracts	\$ 594,000	\$ 297,000	\$ 297,000	\$ 297,000	\$ 594,000	\$ -	\$ -	\$ -
26 AAFM Operational Funds	\$ 750,000	\$ 375,000	\$ 375,000	\$ 375,000	\$ 750,000	\$ -	\$ -	\$ -
27 Clean Water Fund	\$ -	\$ 4,000,000	\$ 4,000,000	\$ 4,000,000	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000
28 FY19 Capital Bill: Bond premium from sale of bonds	\$ -	\$ -	\$ 2,259,988	\$ 2,259,988	\$ 2,259,988	\$ 2,259,988	\$ 2,259,988	\$ 2,259,988
29								
30 GRAND TOTAL	\$ 57,995,500	\$ 50,525,958	\$ 55,069,542	\$ 55,069,542	\$ 105,595,500	\$ 47,600,000	\$ 47,600,000	\$ 47,600,000

* Rows 15-18, 22-26, 28: Appropriations for FY19 are projected

In FY18, Vermont has appropriated \$51 million for clean water projects (state and federal funds).

In FY19, Vermont is projected to spend \$55 million on clean water efforts (state and federal funds).

Over 2 years, this represents an increase of \$48 million over baseline spending, or \$24 million average annual increase (state and federal funds).

DEC uses capital funds to support several grant programs, including:

- Ecosystem restoration grants for stormwater treatment on non-road developed lands.
- Ecosystem restoration grants for natural resources restoration, including floodplains, river corridors, wetlands, and riparian areas for flood resilience, water quality, and habitat benefits.
- Ecosystem restoration block grants for direct funding of packages of stormwater treatment and natural resources restoration projects by eligible recipients.
- Municipal pollution control grants for wastewater, stormwater and combined sewer overflows, pursuant to 10 V.S.A. Chapter 55.
- Municipal roads grants-in-aid pilot project, which provides funding to municipalities, via regional planning commissions, to implement Best Management Practices (BMPs) on municipal roads, ahead of the state Municipal Road General Permit (MRGP).

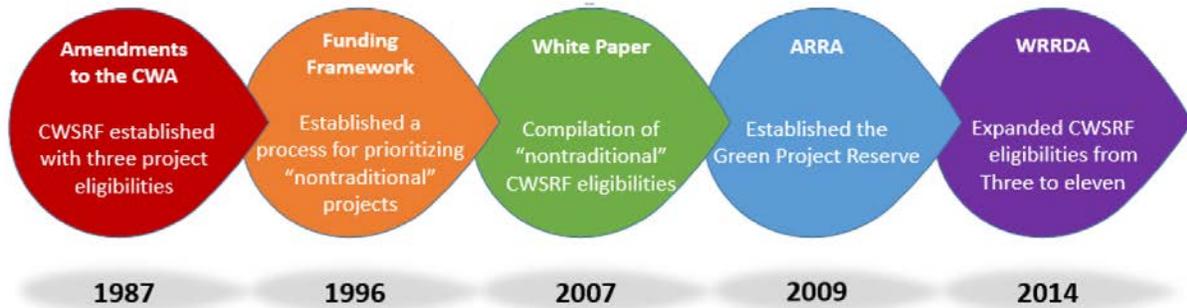
VTrans uses capital bill funds to support two grant programs, including:

- Better Roads municipal grants; in SFY18 grant funds were used to fund transportation projects related to stormwater treatment, replacement of undersized culverts and shoreland stabilization along a town highway.
- Municipal Highway and Stormwater Mitigation Program; in SFY18 capital bill funds were used with federal funds to treat comingled stormwater.

The Legislature has, for many years, supported investments in clean water through the Capital Bill, both in the form of state match for Clean Water State Revolving Fund (CWSRF), administered by DEC, and in the form of municipal pollution control grants, as authorized by 10 V.S.A. chapter 55 and 24 V.S.A. Chapter 120.

The CWSRF is a state-run program, authorized by US EPA, that provides low-cost financing for water quality infrastructure projects including municipal wastewater, stormwater, combined sewer overflow and other infrastructure projects. The fund is capitalized through federal and state funds, principal repayments, and interest (24 V.S.A. 4753(a)(1)). In 2016, the General Assembly appropriated \$1.3 million to the CWSRF to match \$6.4 million in federal funds.

DEC has traditionally lent money from the CWSRF to municipalities for wastewater treatment facility (WWTFs) projects, combined sewer overflow (CSO) abatement, and sewer related refurbishment and upgrade projects. In 2014, the federal government passed a law, the Water Resources Reform and Development Act (WRRDA), that expanded the scope of projects and types of entities that may be eligible for CWSRF loan funding. For Vermont to make loans to private entities from the CWSRF, the General Assembly would need to amend state statute to take advantage of the 2014 federal law.



Clean Water State Revolving Fund (CWSRF) Eligibility Timeline¹⁹

Federal law now allows CWSRF monies to be used for eleven different project types, including watershed and stormwater projects, 2014 WRRDA, Section 5003 (codified at 33 U.S.C. § 1383(c). Of the eleven project types eligible for CWSRF loans, the 2014 WRRDA authorized private entities to take on loans for five project types, 33 U.S.C. § 1383(c)(4), (5), (7), (9), (11), as described in more detail below:

Non-profits only:

Projects providing technical assistance to small and medium publicly owned treatment works for planning, design, and pre-construction activities. 33 U.S.C. § 1383(c)(11).

Private and public entities generally:

(a) Wastewater projects:

- (1) Decentralized wastewater treatment system projects that treat municipal wastewater or domestic sewage (33 U.S.C. § 1383(c)(4)); and
- (2) Projects to reuse or recycle wastewater. 33 U.S.C. § 1383(c)(9).

(b) Stormwater projects:

- (1) Projects that manage, reduce, treat, or recapture stormwater (33 U.S.C. § 1383(c)(5)); and
- (2) Projects to reuse or recycle stormwater. 33 U.S.C. § 1383(c)(9).

(c) Subsurface drainage projects:

- (1) Projects that manage, reduce, treat, or recapture subsurface drainage water (33 U.S.C. § 1383(c)(5)); and
- (2) Projects to reuse or recycle subsurface drainage water. 33 U.S.C. § 1383(c)(9).

¹⁹ Graphic from "Overview of Clean Water State Revolving Fund" Eligibilities (EPA May 2016). https://www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf

- (d) Pilot projects 33 U.S.C. § 1383(c)(7); *see also* 33 U.S.C. § 1274; (innovative projects to try out new technologies or approaches to managing pollutants):
- (1) Watershed management of wet weather discharge projects;
 - (2) Stormwater Best Management Practices (BMP) projects;
 - (3) Watershed partnership projects;
 - (4) Integrated water resource planning projects;
 - (5) Municipality-wide stormwater management planning projects; and
 - (6) Increased resilience of treatment works projects.

During the 2016 legislative session, in Act 103, the General Assembly substantially reorganized the loan and grant provisions for the clean water and drinking water programs administered by the Department of Environmental Conservation. In the course of its deliberations, the Legislature took testimony on the Vermont Clean Water State Revolving Fund (CWSRF) program, and the possibility of expanding loans from the CWSRF from municipalities to include private entities, and mandated a report on whether and how to provide loans from the CWSRF to private entities for water pollution abatement and control facilities, and for public water supply systems.

DEC submitted a report in December 2016 recommending expanding eligibility for CWSRF loans to private entities for certain types of water quality projects.²⁰ As stated on page 9 of the Report:

Lending CWSRF monies to private entities will (1) encourage cost-effective water pollution strategies, (2) generate additional funds for the CWSRF by recouping higher interest on loans to private entities, (3) reduce the administrative burden on municipalities that otherwise are asked to sponsor loans to private entities, and (4) promote social justice by offering low-interest loans to private entities such as homeowners' associations or mobile home parks that need to upgrade sanitary facilities and are otherwise unable to obtain loans.

The Act 73 Working Group likewise recommends expansion of CWSRF eligibility to private entities for a limited scope of water pollution control projects.

2. Clean Water Fund

The Legislature established the Clean Water Fund in 2015 as part of Act 64. The Clean Water Fund derives its revenues from a surcharge on the property transfer tax, which was extended in

²⁰ <http://legislature.vermont.gov/assets/Legislative-Reports/2016-12-30-DEC-CWSRF-Lending-to-Private-Entities-Report.pdf>

2017 for an additional nine years and will now sunset in 2027. Annual expected revenues are in the range of \$4 million a year.

- AAFM uses Clean Water Funds to support development of nutrient management plans, training classes for farmers, manure applicators and agricultural technical service providers, grants for agricultural assistance partners, and alternative phosphorus reduction strategies.
- ANR and DEC use Clean Water Funds to support grant programs that target delivery of: (a) technical assistance, project development and implementation of stormwater pollution abatement on developed lands including municipal roads, (b) natural resources restoration for improvements in water quality and flood resilience and (c) technical assistance, outreach and education to operators of municipal WWTFs and pretreatment facilities on strategies to optimize facility processes to reduce nitrogen and phosphorus loadings.
- VTrans uses Clean Water Funds for a variety of municipal grants through the Better Roads Program.

3. Transportation Bill

The Agency of Transportation (VTrans) administers and provides grants to municipalities through the Better Roads Program, which provides grants and technical assistance to municipalities to correct erosion problems and adopt road maintenance practices that protect water quality while reducing long-term highway maintenance costs. Its long-term goal is to enable and encourage municipalities to practice best management practices in road maintenance and repairs and institutionalize these practices into municipal capital budget priorities.

The Transportation Infrastructure Bond (TIB) is another source of bond revenue available for transportation-related spending on clean water, both for state-owned and municipally-owned highways. TIB revenues are used by VTrans for several types of clean water spending, including:

- Projects on state-owned highways, for which the State is able to draw down 80% federal match;
- Projects on state-owned, non-road developed lands, such as district maintenance facilities, for which the state pays 100% of the cost;
- VTrans staff who work on clean water activities; and
- Ongoing maintenance and operations activities supporting clean water.

4. General Fund

The Legislature appropriates money in the General Fund in the Appropriations Bill (“the Big Bill”). General Fund revenues include the personal income tax, the sales and use tax, and other general taxes and fees. AAFM uses general funds to support the Farm Agronomic Practices (FAP) program. FAP provides money to farmers for the implementation of annual conservation measures that are not eligible for capital funds, such as cover cropping, conservation tillage, and alternative manure incorporation practices such as injection or aeration.

5. Special Funds

The Department of Fish and Wildlife (DFW) uses half of the revenues derived from the sale of the Vermont Conservation License Plates to fund the Vermont Watershed Grant Program. The Program is administered by DFW with assistance from DEC. It distributes grant dollars for local and regional water-related projects that protect habitat, water quality and shorelines, reduce phosphorus and sediment loading, enhance recreational use, identify cultural and history resources, and increase education and monitoring.

B. Federal

- U.S. Department of Agriculture, Rural Development (RD)
 - USDA RD Water and Environmental Programs (WEP) Annual Loan and Grant Appropriations makes low interest loans and grants to qualifying communities with a population under 10,000.
 - USDA RD Rural Economic Area Partnership (REAP) Zone Grant is a pilot program for rural revitalization and community development to qualifying communities in the Northeast Kingdom (Caledonia, Essex and Orleans Counties) with a population under 10,000.
- U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS)
 - USDA Environmental Quality Incentive Program (EQIP). The USDA-NRCS provides funding for agricultural best management practices and conservation measures in Vermont through its EQIP program. These funds support improvements to farm production areas (barnyard improvements, manure pits) and field practices (cover crops, reduced tillage, and controlling field gully erosion). In 2014, then USDA Secretary Vilsack committed \$45M over five years to Lake Champlain water quality improvement. This resulted in significant

increase funding from NRCS in recent years, however, these funds are expected to decrease to prior levels (approximately \$5M/year) in FY19.

- USDA Regional Conservation Partnership Program (RCPP). DEC and AAFM jointly received a \$16M grant from USDA's Regional Conservation Partnership Program (RCPP) in 2015 which provides funds for farm and forest water quality improvement practices, wetland restoration and conservation, and land conservation easements. The awarded RCPP funds are available through 2020. The RCPP grant has been used to leverage \$20 million in match from other state and private partners. In addition, the Vermont Association of Conservation Districts received an \$800,000 grant from USDA RCPP in 2015 that provides funds for increased nutrient management plan development and implementation for farmers. VACD is holding classes, in conjunction with UVM Extension, to teach farmers how to develop plans, and conducting follow-up outreach to assist with implementation. Funds are available through the spring of 2018.
- USDA NRCS Agriculture Conservation Easement Program (Wetland Reserve Easements ACEP-WRE and Agricultural Land Easements ACEP-ALE) is a voluntary conservation easement program that provides technical and financial assistance to private landowners to restore, protect and enhance wetlands in exchange for retiring eligible land from active agriculture.
- U.S. Federal Highway Administration.
 - Federal Highway Administration Transportation Alternatives Grant Program. VTrans administers the Federal Highway Administration Transportation Alternatives Grant Program for both non-traditional transportation-related projects. Eligible activities under this program include "any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff." All available program funds are dedicated for projects eligible under this activity for SFY18 and SFY19. Per Act 38 of 2017, no funds will be set aside for these types of projects in SFY20 and SFY21. Starting in SFY22, one half of the funding will be set aside for these types of projects.
 - Municipal Highway and Stormwater Mitigation Grant Program. VTrans administers the Municipal Highway and Stormwater Mitigation Grant Program with federal funds for non-traditional transportation-related projects. Project

eligibility is the same as for Transportation Alternatives. In SFY18 and SFY19, VTrans used both capital bill funds and federal funds to support this grant program.

- Federal Highway Administration – Project Development and Construction monies are federal funds that are used by VTrans for state highway-related compliance costs under the Transportation Separate Storm Sewer System (TS4) General Permit, issued to VTrans by DEC pursuant to Act 64 (2015).
- Federal Aviation Administration funds are used by VTrans for state airport-related compliance costs under the TS4 General Permit.
- U.S. Fish and Wildlife Service, Partners for Fish & Wildlife Program. The Partners Program serves as a bridge to owners and managers of private lands to develop partnerships for the benefit of federal trust species. The Partners program focuses on restoration of wetlands, woodlands and riparian areas that provide breeding habitat and critical migratory stopovers for migratory birds and benefit fish populations.
- Lake Champlain Basin Program (LCBP) is a Congressionally-designated geographic area program tasked with working to restore and protect Lake Champlain and its surrounding watershed. LCBP works with partners in New York, Vermont and Quebec to coordinate and fund efforts to address challenges in the areas of phosphorus pollution, toxic substances, biodiversity, aquatic invasive species, and climate change. LCBP also administers the Champlain Valley National Heritage Partnership which builds appreciation and improves stewardship of the region’s rich cultural resources by interpreting and promoting its history. LCBP is supported through annual appropriations from the U.S. Environmental Protection Agency, the Great Lakes Fishery Commission, and the National Park Service.

C. Municipal

Vermont municipalities have three potential sources of revenue for clean water investments: sewer rates, stormwater utility fees, and property taxes. Cities, towns, villages and prudential committees have authority to establish rates for the operation of sewer and stormwater systems, 24 V.S.A. § 3507. Municipalities have authority to create consolidated districts composed of two or more towns for purposes of water and sewer, 24 V.S.A. chs. 91 & 105. Municipalities can use the revenue from district rates to pay back loans obtained to finance clean water investments. Four Vermont municipalities have established stormwater utilities, with per parcel and impervious surface fees as sources of revenue. And finally, all

municipalities impose local property taxes, which are a source of revenue for highway investment, including stormwater best practices.

D. Private

Most of the costs identified in this report are regulatory costs of compliance with Act 64 and the TMDLs. This report acknowledges that the private sector, including farmers and businesses, will share in the regulatory cost of clean water in their role as landowners. For purposes of this report, the Act 73 Working Group has assumed that current levels of cost share will be maintained. For example, farmers currently receive subsidies as high as 90%, municipalities receive subsidies ranging from 35% to 80%, while owners of private land generally receive no cost share for compliance with regulatory requirements. Adjusting the cost share will, in turn, impact the cost to the state of clean water compliance. Although not part of its statutory mandate, the Act 73 Working Group has explored below some innovations that may enhance the cost-effectiveness of clean water investments for both public and private landowners. A summary of current levels of water quality cost share by project type is presented in Section IV of this report.

E. Other Potential Sources of Funding

Several sources of funding may be available to support clean water work that are not currently accounted for; these sources may help to fill gaps.

1. TDI-NE Project. The Act 73 Working Group noted that additional revenues of \$5 million a year may become available if TDI-NE constructs an electric transmission line in Lake Champlain. In a stipulation with the State of Vermont, incorporated in TDI-NE's Certificate of Public Good (CPG), TDI-NE agrees to deposit into the Clean Water Fund, 10 V.S.A. § 1388: (i) \$1 million on the fiscal close of the Project; (ii) \$6 million on July 1 of the initial year of commercial operations of the Project; and (iii) \$5 million on July 1 of each year thereafter for 39 years. Compliance with the terms of the stipulation is a condition of the Vermont Public Utility Commission's approval of the TDI-NE project.
2. Competitive Federal Funding. The State of Vermont will also continue pursuing additional federal funding, including grant and contract opportunities with Lake Champlain Basin Program (LCBP), as well as USDA's Regional Conservation Partnership Program (RCPP), to support clean water efforts in Vermont.

IV. Matching Existing Sources of Revenue with Projected Costs, SFY20-24

This section of the Act 73 Report provides updated estimates of the project costs of clean water investments anticipated over the next five years, SFY20-24. For each sector, from wastewater and agriculture to developed lands and natural resources, the Report identifies costs and matches them with revenues, noting any restrictions on the use of funds. The Act 73 Working Group acknowledges that not all funding sources may be realized, including Capital Bill appropriations, underscoring the need to identify a new long-term funding source in the near future.

In allocating costs across federal, state, municipal and private entities, the Working Group adopted the existing match requirements in federal and state grant programs. For example:

Private Lands. There currently exists no grant program for regulatorily-required stormwater upgrades on private lands; the Act 73 Working Group therefore assumed that these costs would be 100% funded by private landowners.

Municipal Developed Lands and Municipally Sponsored Projects. Stormwater projects on private lands that are municipally sponsored may be eligible for up to 50% match if the stormwater treatment is regulatorily required, or up to 100% match if the treatment is voluntary.

Municipal Infrastructure. The statute governing municipal pollution control grants authorizes the state to award grants up to 35% of the cost of the project, depending on the number of points awarded in the application process; however, because not all projects will receive the maximum grant, the Working Group assumed an average grant award of 20%.

The table on the next page lists the state's existing grant programs and match amounts. The Act 73 Working Group encourages the Legislature to examine these grant programs and match amounts comprehensively since, as a package, they drive relative cost shares and are an important public policy tool for allocating the cost of water quality compliance across society.

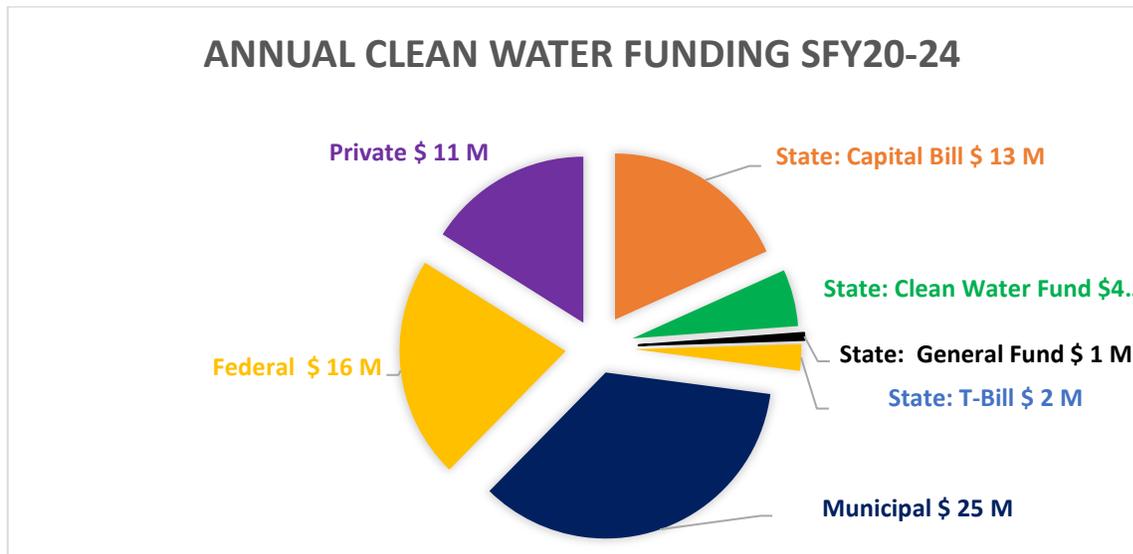
STATE AND FEDERAL GRANT MATCH (%)				
Sector	Owner Type	Pollution Improvements Regulatory or Non-Reg	Incentivized State or Federal Match	Programs
Sector 1: WWTF, CSOs	Municipalities	Regulatory	35%	MPCG
Sector 2: Agriculture	Farmer	Regulatory/Non-Reg	90%	AAFAM, NRCS
Sector 3A: State Highways	State	Regulatory	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

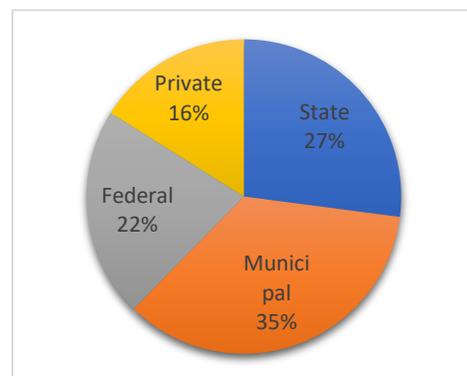
Overall Findings

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.

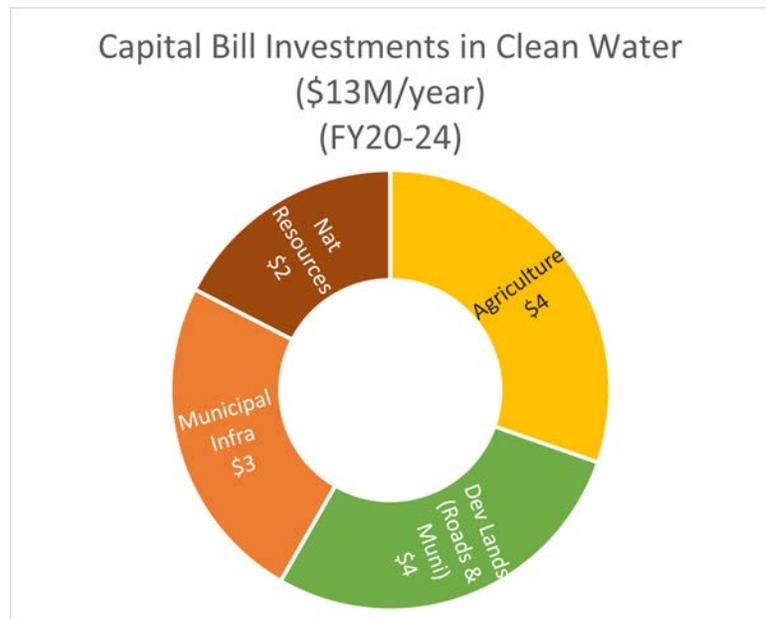
An average of \$18 million in funding each of the next five years will need to be addressed using other sources. There is significant variation in the estimated shortfall year-to-year during the

next five years, although the gap is more significant in SFY22 and beyond. As discussed above, possible funding sources include, but are not limited to: environmental impact fees should TDI-NE construct an electric transmission line in Lake Champlain; and, competitive federal grant programs. It is worth noting, it is unlikely that the indicated gap in municipal WWTF funding will materialize before SFY22 as the cost projections do not reflect delays likely to result from legal appeals of recently issued wastewater discharge permits.

The \$13 million in Capital Bill contributions are spread over each of the four sectors: municipal wastewater infrastructure and CWSRF match \$3 million, agriculture \$4 million, municipal roads and lands \$4 million, natural resources \$2 million.

The Act 73 Working Group allows that these assumptions may not bear out, and that further adjustments may be needed. The Working Group suggests that the General Assembly revisit clean

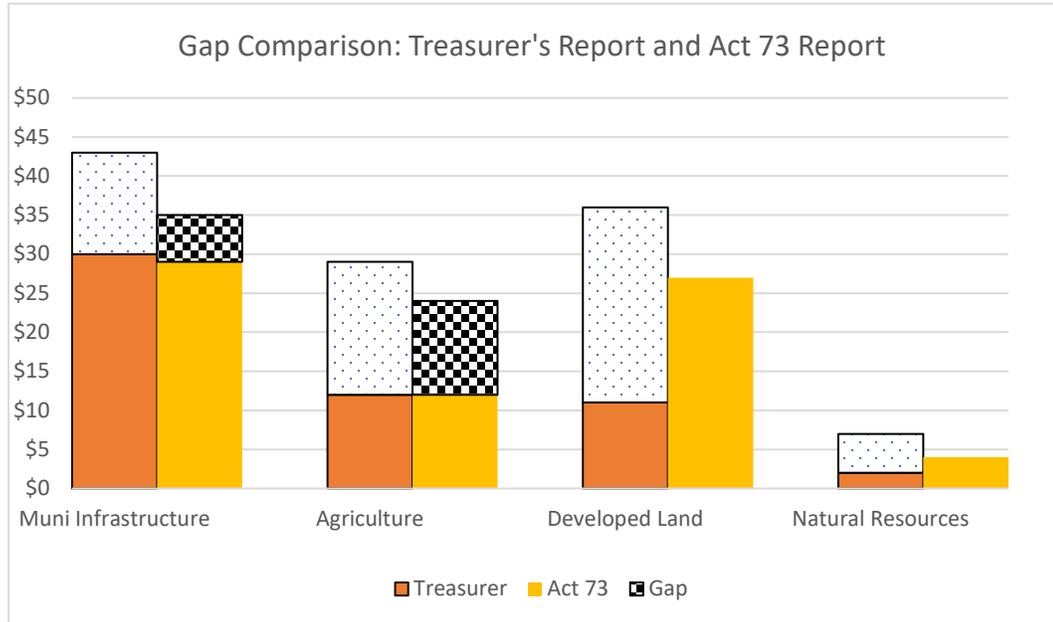
water costs every two years going forward to incorporate new data from water quality monitoring and actual costs of implementation to ensure sufficient funding is available to meet the need.



As noted earlier, the cost estimates in the Treasurer’s Report and in this report do not include:

- Staffing costs at ANR, VTrans and AAFM, for administering the state’s clean water regulatory programs, including costs to administer grant programs, track spending, maintain project inventories, monitor water quality, and assess cost effectiveness.
- Operation and maintenance (O&M) costs following construction and implementation of clean water projects, which can be substantial.

Comparing the Act 73 Report with the Treasurer’s Report, costs differ slightly because (1) the Treasurer’s Report showed an average annual estimate over 20 years, while the Act 73 Report provides an average annual estimate over 5 years, and (2) the Act 73 Report shows reduced costs in the developed land sector as explained above (section II.D).



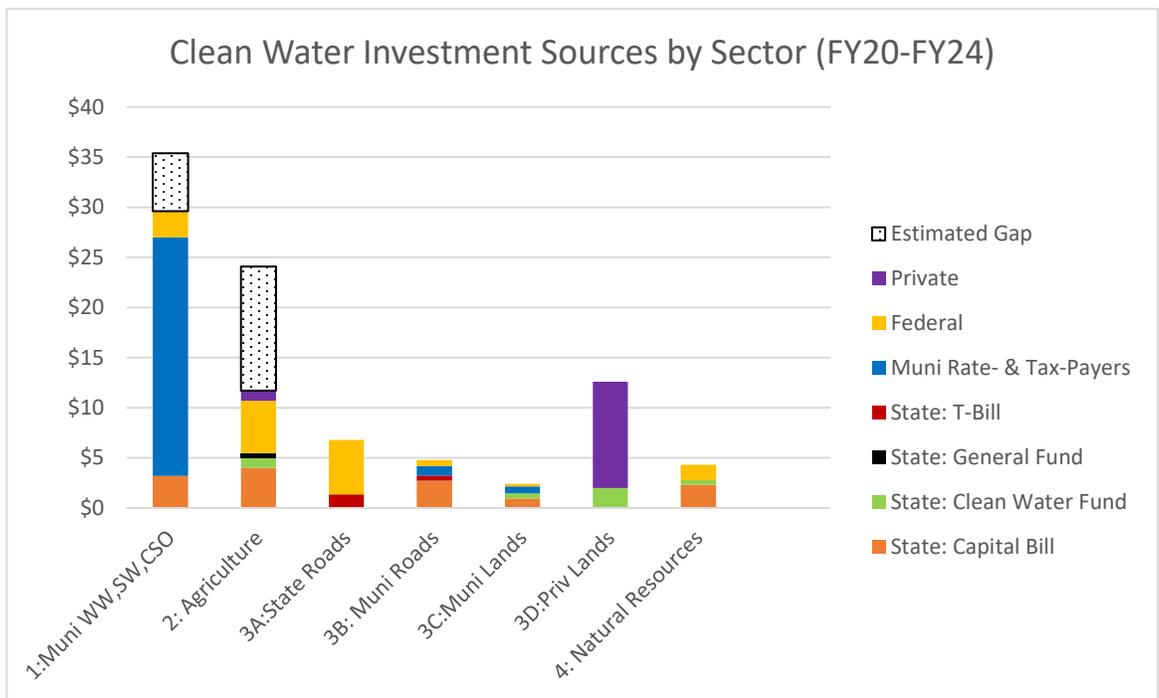
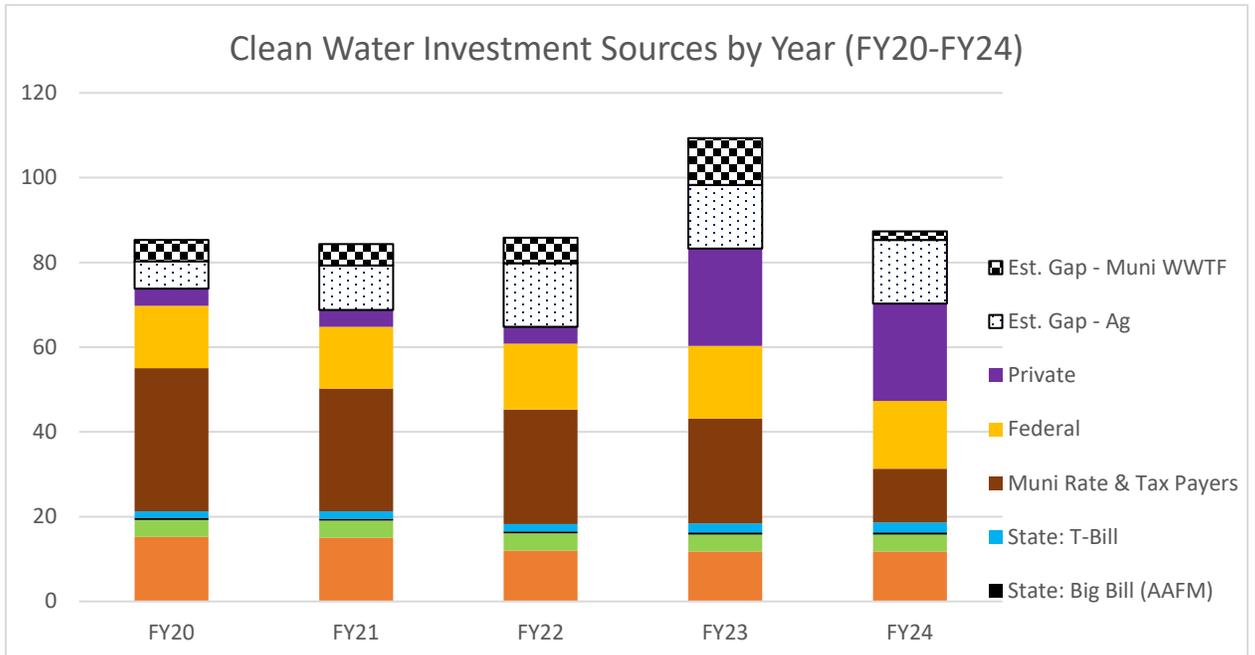
As to revenues, the Treasurer’s Report included a baseline contribution (\$10 million) from the Capital Bill. The Act 73 Report shows a modest increase in the contribution from the Capital Bill (\$13 million), as well as contributions from the municipal and private sectors.

	Municipal Infrastructure	Agriculture	Developed Lands	Natural Resources	Total
Act 73 Report (5-yr avg)					
Cost Estimate	35	24	27	4	90
Revenue Estimate	29	12	27	4	72
Gap Estimate	6	12	0	0	18
Treasurer's Report (Tiers I & 2) (20-yr avg)					
Cost Estimate	43	29	36	7	115
Revenue Estimate	30	12	11	2	55
Gap Estimate	13	17	25	5	60

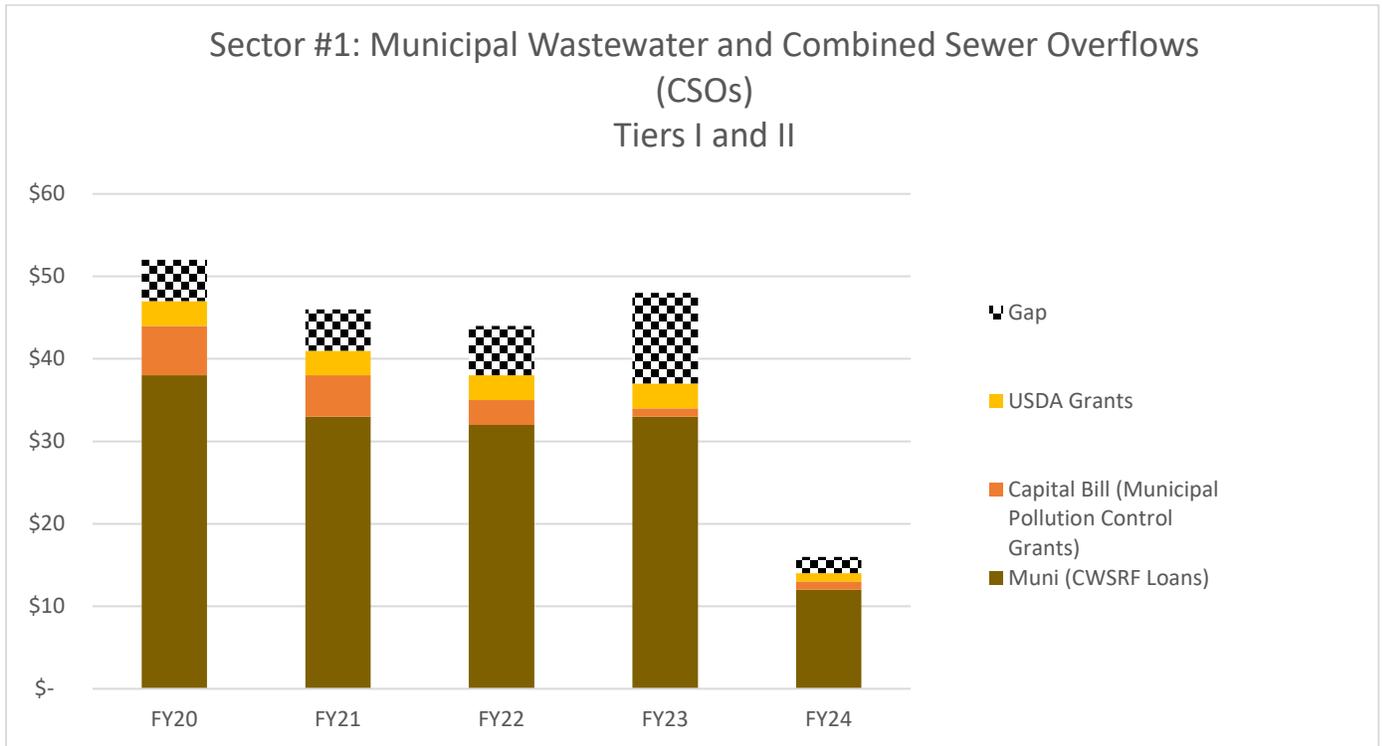
Act 73 Notes

- Sector 1: Assumes state grants of 20% for municipal infrastructure; state grants not fully funded.
- Sector 2: Assumes funding and capacity constraints will lead to a gap in agricultural sector spending.
- Sector 3: Assumes private landowners will pay 100% compliance costs on private developed lands unless projects are municipally sponsored.

Summary Charts



Sector 1: Municipal Infrastructure



- Funding.** The Act 73 Working Group anticipates that municipal wastewater infrastructure upgrades and refurbishments can be funded through a combination of debt incurred by municipal ratepayers, municipal pollution control grants through the Capital Bill, and federal grants through USDA.

The Vermont Legislature has set a maximum award of 35% for municipal pollution control grants, and minimum grant award of 10%. These estimates use an average grant award of 20%. The municipal pollution control grant program is funded through the Capital Bill. Given average annual Capital Bill investments of \$13 million a year, spread across various sectors, the Group anticipates an annual average gap in the funding of municipal pollution control grants of \$6 million.

Recent legal challenge to the phosphorus limits for certain wastewater treatment facilities may impact municipalities’ willingness to take on loans, and therefore the demand for municipal pollution control grants. Legal challenges create uncertainty regarding phosphorus targets and the infrastructure necessary to meet those targets.

The Legislature may want to consider supplemental affordability grants for municipalities where loan repayments for required phosphorus upgrades, combined with regular service

payments, may exceed 2% of median household income (MHI) – a threshold considered by EPA to have significant socio-economic impacts.

Municipal ratepayers are assumed to pay their share of project costs in the form of loan repayments, obtained either through the state's Clean Water State Revolving Fund (CWSRF) or USDA loan programs. Both programs offer loans with 0% interest and some forms of loan forgiveness. Municipalities must obtain voter approval prior to incurring bonded debt. 24 V.S.A. § 1755, 1786a.

Vermont's Clean Water State Revolving Fund carried a balance of \$76.9 million at the end of SFY17. In the unlikely event that all of the projects on the municipal intended use plans are approved by voters, additional capacity may be available through the USDA loan programs and the Vermont Municipal Bond Bank (VMBB). ANR intends to collaborate with the Treasurer's Office to explore alternatives to the CWSRF should that source of lending become exhausted.

- Wastewater Treatment Facilities. The State and the federal government have invested over \$600 million since the 1970s to safeguard public health by funding the construction of and upgrades to wastewater treatment facilities (WWTFs). Over 120 municipally- and privately-owned wastewater collection and treatment facilities exist in Vermont, serving approximately half the state's population. Those investments continue to pay substantial dividends to public health and safety, local economies, and the environment.

Many municipal WWTFs are reaching the end of their design life and require refurbishment; in addition, a number of these facilities will need to implement enhanced nutrient removal technologies to meet allocations included in TMDL plans for Lake Champlain (phosphorus), Lake Memphremagog (phosphorus) and the Connecticut River and Long Island Sound (nitrogen).

Based on their intended use plans, thirty-four municipalities intend to construct sewer, wastewater treatment, or stormwater infrastructure projects, other than those required by a TMDL or the CSO rule, during the period FY20 to FY24. The aggregate project costs are \$31 million in FY20, \$17 million in FY21, \$12 million in FY22, \$9 million in FY23, and \$0.6 million in FY24. Because the municipalities' intended use plans likely underestimate activity in FY21 to FY24, an upward adjustment of \$5 million a year was made for each of these years.

- Phosphorus Upgrades at Wastewater Treatment Facilities. Collectively, the 49 wastewater treatment facilities in the Lake Champlain basin are responsible for approximately 4% of the phosphorus loading to the lake, and will need to reduce their annual phosphorus contributions by 42% over the next 20 years. The Treasurer's Report projected that providing enhanced nutrient removal at the 13 facilities identified in the TMDL as requiring upgrades would cost \$78.4 million. Several recent WWTF pilot projects suggest that the cost of nutrient removal could be substantially less than

originally estimated in 2016. More recently, DEC has estimated that the cost would be \$54 million.

Five municipalities are likely to upgrade wastewater treatment facilities between FY20 and FY24 to comply with the Lake Champlain TMDLs. The municipalities and estimated project costs are: North Troy (\$1 million), Plainfield (\$1 million), Richford (\$8 million), Swanton (\$3 million), Winooski (\$8 million). The St. Albans' WWTF upgrade should be completed by FY20.

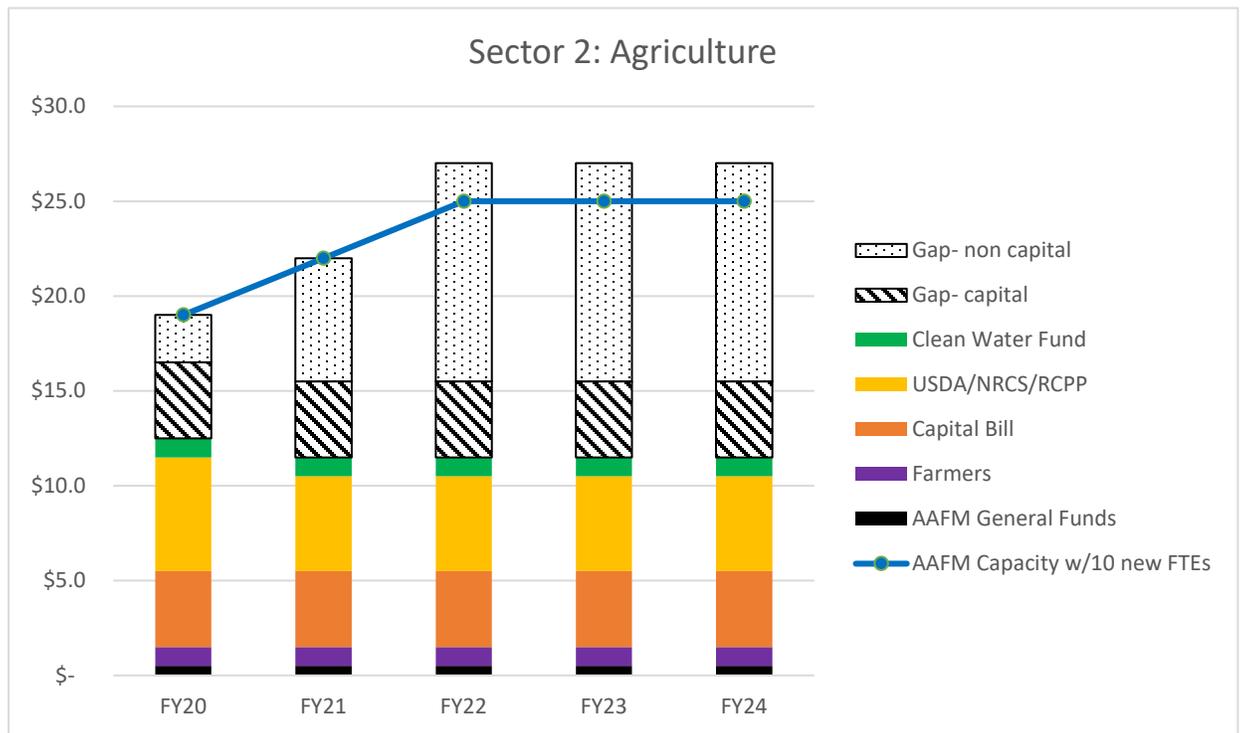
- Combined Sewer Overflows. Combined sewer systems are collection systems designed to convey both sewage and stormwater in the same pipe to a treatment facility. Storm events can cause flows to exceed the capacity of the collection system or treatment facility, resulting in discharges from CSOs of untreated wastewater, diluted with stormwater, to surface waters. ANR's 2016 Combined Sewer Overflow Rule requires municipalities to establish timeframes for addressing combined sewer overflows. The 2016 Combined Sewer Overflow (CSO) rule addresses discharges from the CSOs statewide.

Four municipalities currently have specific plans to address combined sewer overflows between FY20 and FY24. The municipalities and estimated project costs are: Northfield (\$500,000), Middlebury (\$1 million), Rutland (\$3 million), St. Albans (\$1 million). Because current plans likely underestimate future CSO activity, an average upward adjustment of \$6 million per year was made for FY21 through FY24.

Since 1990, municipalities have eliminated many CSOs, reducing the number of CSOs from 171 to 68. The remaining 68 CSOs are located in 15 Vermont municipalities.

ANR anticipates working with the 15 municipalities that are responsible for the remaining combined sewer overflows to develop comprehensive long-term control plans, including cost estimates, with results available by November 2018.

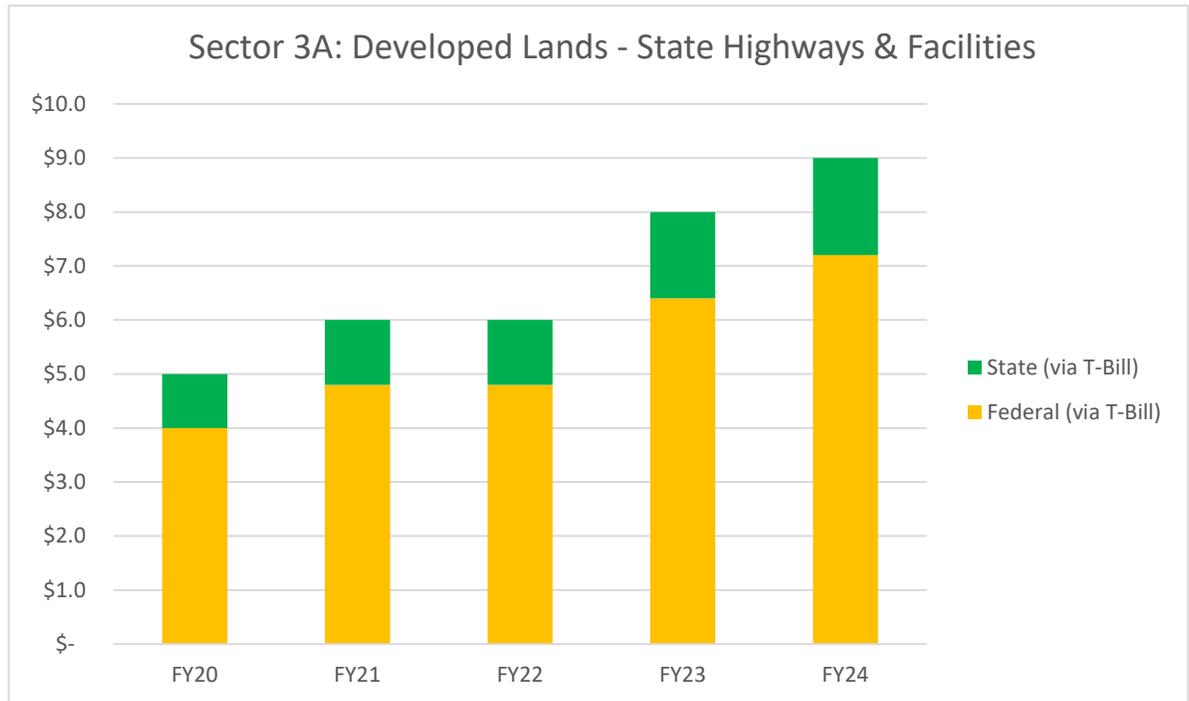
Sector 2: Agriculture



- The Treasurer’s Report (1/15/2017) estimated that the agricultural sector’s Tier 1 cost of complying with the TMDLs and the Vermont Clean Water Act of 2015 averaged \$27 million a year over 20 years. Of this, \$8 million are capital costs and \$19 million are non-capital costs. Capital costs include implementation of best management practices (BMPs) for production areas and livestock exclusion infrastructure. Non-capital costs include development of nutrient management plans, deployment of agronomic practices and field-based conservation measures such as cover cropping, technical assistance and training. The graph above shows a gap for both capital and non-capital costs in the agricultural sector.
- The Agency of Agriculture, Food and Markets (AAFM) is currently delivering approximately \$6 million in technical and financial assistance programming to farmers each year. USDA’s Natural Resource Conservation Service (NRCS) delivers another \$5 million in technical and financial assistance. Farmers are expected to contribute \$1 million each year in cost share. The delivery mechanism for AAFM’s technical assistance is nearly completely outsourced through grants or contracts to organizations in Vermont who work directly with farmers to develop projects and oversee the implementation. The financial assistance is mostly through direct grant agreements between AAFM and farms.

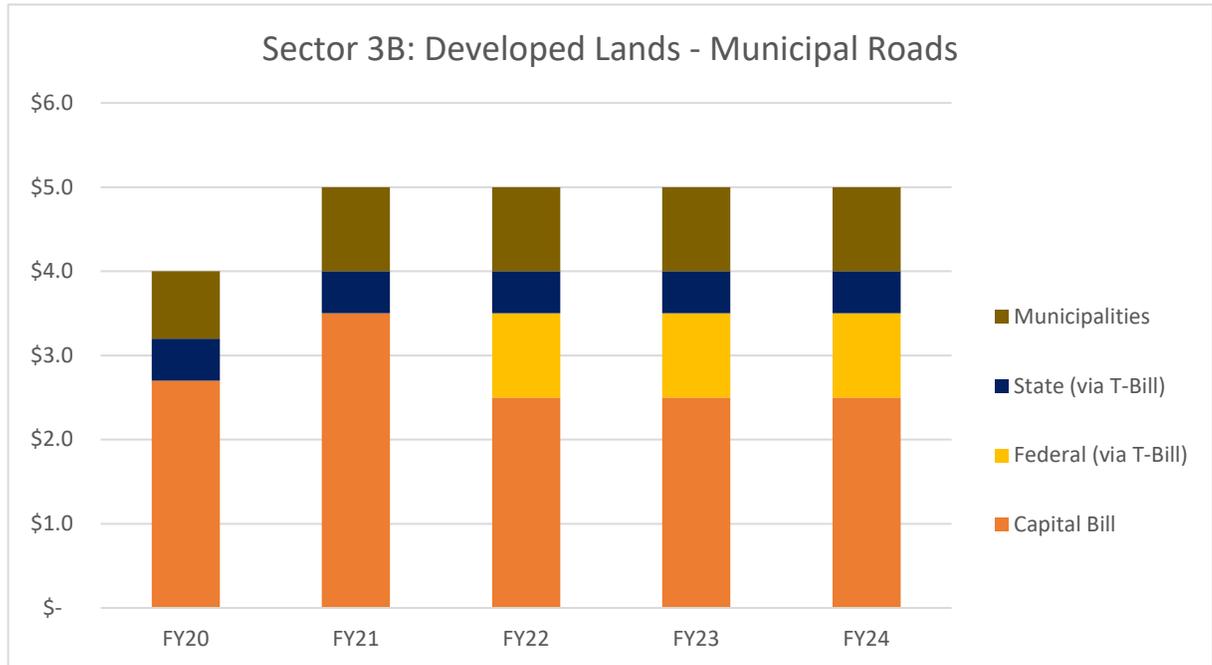
- The capacity does not currently exist within the agriculture sector – AAFM, NRCS and farm partners – to deliver \$27 million in technical and financial assistance programming. AAFM is working on plans to increase the agency’s capacity to deliver services to farmers. Specifically, AAFM continues to implement the new Certified Small Farm Operation (CSFO) inspection program, which results in roughly 100 farm inspections annually, along with increased numbers of inspections on the medium and large farms due to changes in statutory requirements. These inspections will increase the demand for capital improvement projects on farms over time as farmers work to resolve the concerns identified during these inspections. AAFM envisions that the demand to address non-point source pollution challenges identified through inspection will ramp up and exceed the current resource allocations of state and federal agencies by SFY 2022, as at that point there will be 300 completed CSFO inspections in addition to the medium and large farm inspections. To meet the projected need, AAFM envisions that additional staffing and financial assistance will be required beginning in SFY 2022.

Sector 3A: Developed Lands – State Highways and Facilities



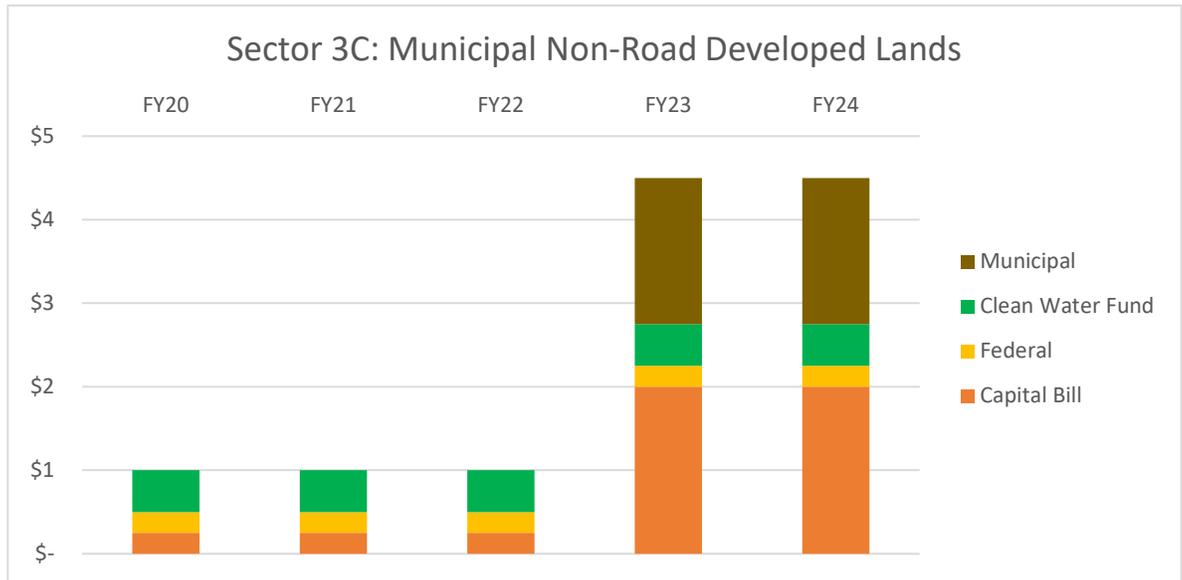
- The Act 73 Working Group anticipates that the costs of implementing stormwater practices on state highways and facilities to comply with Act 64’s TS4 (“Transportation Separate Storm Sewer System”) permit will be fully covered by the Transportation Bill, and that the state’s revenues will be matched by federal funds on an average 20% State/80% Federal ratio. The actual match varies on a project by project basis. Planning for and implementing stormwater treatment practices and retrofits on VTrans non-road developed land (facilities) will be 100% state funded.
- The Act 73 Working Group noted that the cost of the state highway compliance with the TMDLs and Act 64 over 20 years is likely to decrease from the estimate in the Treasurer’s Report. This is because the estimates in the Treasurer’s Report relied on draft modeling by US EPA to determine the number of acres of highway roads that must be treated to comply with the Lake Champlain TMDLs. The Act 73 Report relies on US EPA’s final modeling. However, given the uncertainty in estimating costs over a 20-year period, the Act 73 Working Group has not revised any of the 20-year estimates. Instead, the Act 73 Working Group recommends revisiting these estimates every two to four years.
- VTrans’ cost estimates to comply with the TS4 General Permit include the cost of retrofitting state highway facilities, including garages, park & rides, welcome centers, and state airports. VTrans’ staff costs are also included in the TS4 cost estimates.

Sector 3B: Developed Lands – Municipal Roads



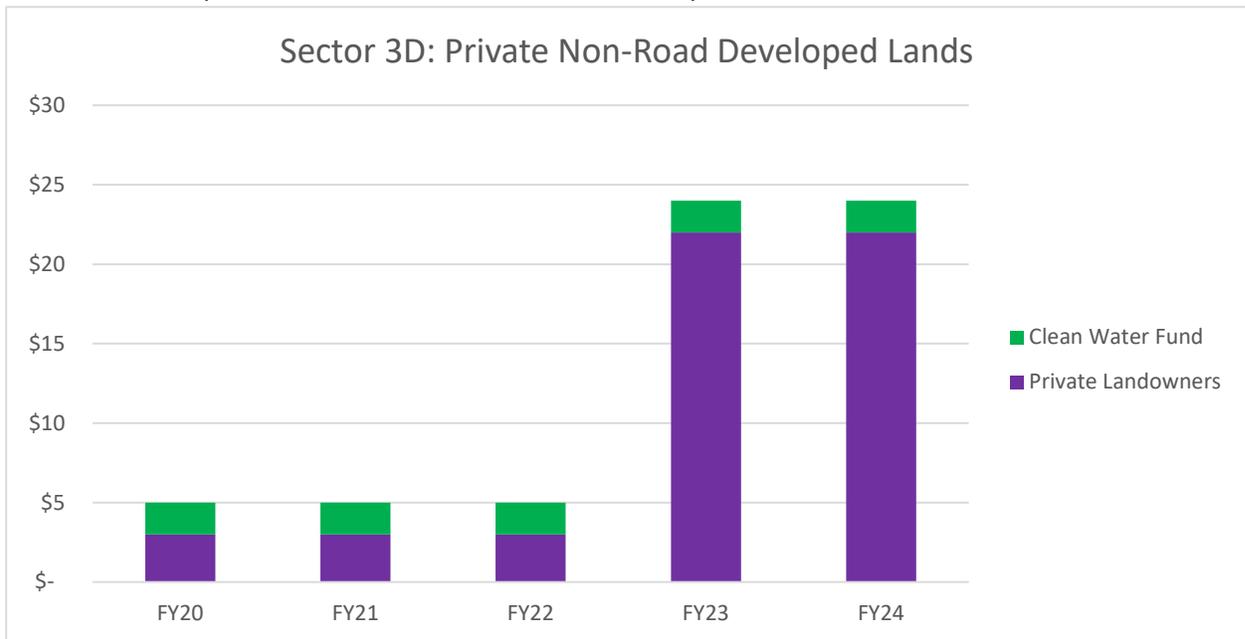
- The Act 73 Working Group anticipates that funding for compliance with Act 64’s Municipal Roads General Permit (MRGP) will be shared by federal funds in the Transportation Bill (\$1.5 million); state funds in the Transportation Bill (\$0.5 million); state funds in the Capital Bill (\$2.0 million); and municipalities (\$1 million).
- As with state highways, the Act 73 Working Group noted that the cost of municipal road compliance with the TMDLs and Act 64 over 20 years is likely to be less than the estimate in the Treasurer’s Report. However, given the uncertainty in estimating costs over a 20-year period, the Act 73 Working Group has not revised any of the 20-year estimates. Instead, the Act 73 Working Group recommends revisiting these estimates at least every two to four years.

Sector 3C: Developed Lands – Municipal Non-Road Lands



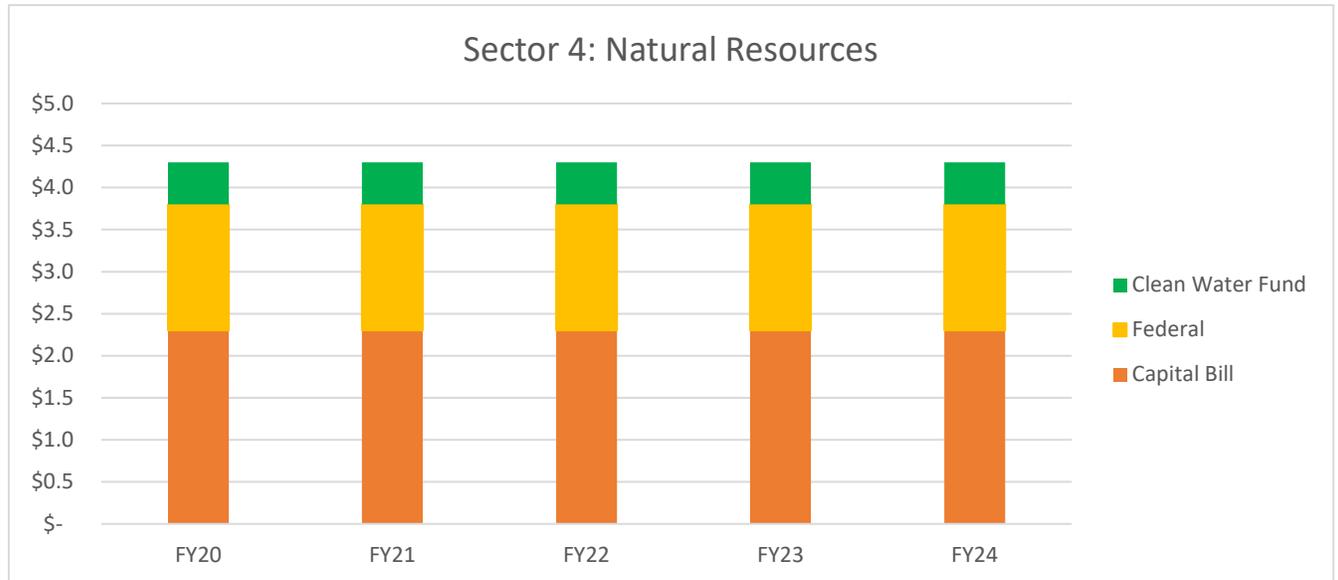
- The Act 73 Working Group anticipates that the cost of implementing stormwater practices on parcels owned by municipalities with greater than 3 acres of impervious surface will be fully reimbursed in SFY20, SFY21 and SFY22 through grants from the Capital Bill, Lake Champlain Basin Program and the Clean Water Fund. Starting in SFY23, when compliance with Act 64’s 3-acre permit becomes mandatory, municipalities will need to provide a 50% match.
- Starting in SFY23, it is assumed that the Capital Bill will provide 50% match for municipal projects through DEC’s Ecosystem Restoration Grants, while federal sources and the Clean Water Fund will provide fixed amounts of \$250,000 and \$500,000 respectively.

Sector 3D: Developed Lands – Private Non-Road Developed Lands



- The Act 73 Working Group assumed that private landowners would bear the cost of implementing stormwater practices on existing parcels of land that have 3-acres or more of impervious surface, as currently required by Act 64, codified at 10 V.S.A. § 1264(c)(7).
- Current cost estimates assume that private landowners will not have to access state grants to support the implementation of projects required by the Lake Champlain TMDLs or Act 64; however, private owners may become eligible for grant funding by entering into public-private partnerships with municipalities. Private projects that are municipally-sponsored may be eligible for up to 50% grant funding through DEC’s Ecosystem Restoration Program.
- Under existing programs, stormwater improvements that are not required by statute are eligible for ecosystem restoration grants up to 100%, funded through the Clean Water Fund. Stormwater improvements that are sponsored by municipalities are eligible for ecosystem restoration grants up to 50%, funded through the Clean Water Fund and the Capital Bill.
- The Legislature may want to consider expanding eligibility for loans from the Clean Water State Revolving Funds (CWSRF) to private entities that are constructing stormwater improvements required by the Lake Champlain TMDLs or the Act 64, including the up to 35% municipal pollution control grants available through DEC’s Facilities and Engineering Division.

Sector 4: Natural Resources



- DEC estimates that the phosphorus target assigned to the natural resources sector can be met through annual completion of 10-12 river corridor easements, 6-8 wetland easements, 4-6 floodplain restoration projects, and up to 20 wetland restoration projects. The average total cost of these projects was estimated at approximately \$4 million per year.
- The Act 73 Working Group anticipates that implementation costs related to natural resources will be fully funded through state and federal grants. Funding will allow partners to acquire river corridor easements to secure permanent channel management rights, passive restoration of floodplains, and the restoration and maintenance of undisturbed riparian buffers.
- Well-functioning rivers, wetlands, shorelands and vegetated buffers are natural infrastructures reduce the amount of pollution that enters our lakes and waters. Rivers and streams in their equilibrium condition provide floodplain protection and promote high quality aquatic habitats. Wetlands filter pollutants, reduce erosion, and minimize flood hazards. Shorelands resist erosion that otherwise occurs from high water levels and wave action. Vegetated buffers and wetlands absorb nutrients in runoff; support erosion-resistant stream banks; support fish habitat function, and provide habitat and movement corridors for wildlife. Forested areas, particularly headwaters, protect water quality and can be managed to prevent discharges into waterways.

V. Technological and Regulatory Innovations

While not part of its statutory mandate, the Act 73 Working Group recognized that technological and regulatory innovations could increase the cost-effectiveness of pollution reduction activities, while accelerating the clean-up of Vermont's waters. This section highlights some of those opportunities.

A. Watershed Phosphorus "Mass Balance"

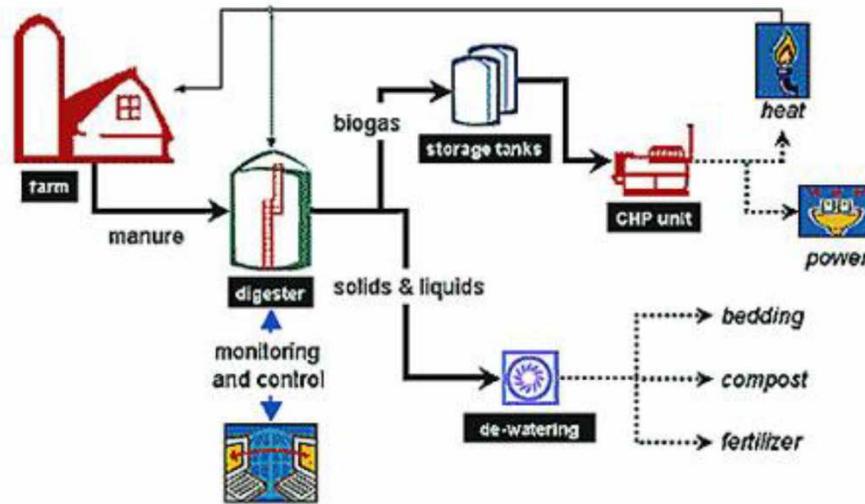
The concept of phosphorus mass balance may help guide future policy in selected watersheds. Mass balance is an accounting of the total importation and exportation of phosphorus in a watershed. Historically in Vermont's watersheds, the importation of phosphorus has exceeded exportation, resulting in accumulation of excess phosphorus in soils – especially in the agricultural sector. For context, in the agricultural sector phosphorus *exports* include: milk and meat production and sales, crop harvest, manure production and application, fertilizer application, and surface water and soil loss. Phosphorus *imports* include feed and manure from out of watershed, fertilizers, bedding, and other smaller sources. Under current practices, producers most often import more phosphorus than is exported.

The Executive Agencies are therefore contemplating programs where one or more key subwatersheds may be targeted for interventions designed to achieve a phosphorus mass balance. Several approaches are under consideration, including sequestering phosphorus from manure for export (see section below on digesters), and limitations on importation of fertilizer.

B. Anaerobic Digesters and Enhanced Nutrient Removal

Anaerobic digesters hold the promise of helping to address several environmental and economic challenges facing Vermont, especially when paired with enhanced phosphorus removal technologies and air emissions controls. There are currently fifteen anaerobic digesters on Vermont farms ranging in size from 45 to 2500 cows. As shown in the figure below, anaerobic digesters break down raw dairy manure, producing biogas in the form of methane, which can be used for hot water and space heating on the farm or transformed into electricity. The solid and liquid byproducts are separated upon completion of the digestion process. The solids are commonly separated using a screw press, and the separated solids, also known as fibers, can be used as fertilizer, compost, animal bedding, or separated nutrients, most notably phosphorus.²¹

²¹ A. Babcock et al., "The Viability of Biomethane Digesters in Vermont," (Middlebury College 2016), page 12.



Source: A. Babcock et al., “The Viability of Biomethane Digesters in Vermont,” (Middlebury College 2016), citing <http://www.plugflowdigester.com>.

Internal combustion engines, regardless of the fuel burned, emit nitrogen oxides, carbon monoxide and hydrocarbons, all sources of air pollution. Agricultural digesters that utilize manure as the primary feedstock also produce significant amounts of H₂S due to the high sulfur levels in the manure. H₂S is a hazardous air contaminant (HAC) and when combusted forms the criteria pollutant sulfur dioxide (SO₂).

Sulfur dioxide emissions can be controlled by scrubbing hydrogen sulfide (H₂S) from the digester gas before it is burned in the engine. The scrubbing of hydrogen sulfide is expected to also reduce maintenance and damage to biomethane engines caused by the formation of acids when the hydrogen sulfide is burned.

Due to the high initial capital costs, the installation of new digesters has stagnated since funding from an initial series of federal grants ended in 2011. In order to make anaerobic digesters economically viable, a variety of revenue streams will be necessary. Vermont’s 2009 Standard Offer Program incentivized the kilowatt-hour rate for biodigesters, as did the 2015 Renewable Energy Standard. Finding a market for phosphorus products, which are more easily recovered from digested manure, could further compensate farmers as well as address Vermont’s phosphorus imbalance.

C. Engineered Ecosystems

Executive Agencies are partnering with the Lake Champlain Basin Program and the Army Corps of Engineers to evaluate a pair of engineering-based phosphorus reduction projects targeting St. Albans Bay. The intent of these engineered phosphorus reduction projects is to provide a measure of relief to the unacceptable late-summer cyanobacteria blooms in the Bay more rapidly than would be expected were watershed reductions alone to be pursued.

The first project, currently supported by the Lake Champlain Basin Program, is evaluating the feasibility of constructing a phosphorus “treatment train” in the Jewett Brook portion of the St. Albans Bay watershed. Treatment trains divert a portion of stream flow from a polluted stream, pass it thru a series of engineered treatment cells or constructed wetlands, before returning the water to the stream or a natural wetland. This type of approach has been applied in Ohio, and demonstrated to be effective at treating a portion of the total phosphorus load from a similarly polluted stream.

The second project is being conducted by the Army Corps of Engineers with DEC, and will evaluate the cost and feasibility of removing historical phosphorus buildup in the sediments of the Black Creek Wetland, at the confluence of Jewett and Stevens Brooks. All of the phosphorus delivered from the Jewett and Stevens Brook subwatersheds to St. Albans Bay flows through this wetland. For over one hundred years, this wetland has acted to slow and settle sediment, and its associated phosphorus load. An analysis done in the early 2000’s indicated that the capacity for the wetland to retain this sediment-bound phosphorus is likely exhausted, and thus the wetland is now acting as a phosphorus source during the critical summer and fall months. The current work of the Army Corps of Engineers is to evaluate the costs, efficacy, and range of technical options available to reduce or eliminate the legacy phosphorus loading to the Bay from the wetland complex.

D. Integrated Planning and Permitting

Burlington is one of five cities across the United States chosen by the U.S. EPA to test an integrated planning process. As explained by the U.S. EPA:

“An integrated planning approach offers a voluntary opportunity for a municipality to propose to meet multiple CWA [Clean Water Act] requirements by identifying efficiencies from separate wastewater and stormwater programs and sequencing investments so that the highest priority projects come first. This approach can also lead to more sustainable and comprehensive solutions, such as [green infrastructure](#), that improve water quality and provide multiple benefits that enhance community vitality.”²²

²² <https://www.epa.gov/npdes/integrated-planning-municipal-stormwater-and-wastewater>

The Act 73 Working Group is supportive of integrated planning and permitting as a way of achieving water quality goals while reducing and staging overall costs. DEC is actively promoting integrated planning through asset management grants that encourage municipalities to plan for and schedule clean water infrastructure improvements in the most cost-effective way possible. Increased funding for asset management planning could reduce overall costs of compliance with stormwater mandates.

E. Public-Private Partnerships

Public Private Partnerships (P3) are innovative strategies that can help municipalities optimize their limited resources to address infrastructure needs. P3s involve municipalities and private entities entering into agreements to design, build, finance and/or maintain public infrastructure.²³ This approach has been used to support improvements to roads (using revenues from tolls), wastewater and water supply facilities and energy efficiency investments. States across the country are now evaluating the merits of P3s to help install lower cost stormwater treatment systems.

The fundamental benefit of a P3 approach is to gain efficiencies at the operational level. For example, a municipality may need to implement stormwater treatment practice. However, site-specific conditions (e.g., soils, slope conditions, land uses, and natural or existing infrastructure constraints) may make the installation of stormwater treatment on municipal lands inside its right-of-way more expensive. Lands outside the municipal right-of-way may be more suitable, thus becoming a lower cost option to site the stormwater treatment. P3s can help support the implementation of the more relatively lower cost options.

Philadelphia's Greened Arce Retrofit Program (GARP) uses this model. Philadelphia operates a stormwater utility that uses parcel-based fees and credits to incentivize landowners to adopt stormwater treatment practices. Philadelphia also offers grants to private companies or contractors who can install stormwater practices on private property below a defined cost-efficiency threshold. The project benefits the city because it is installing cost-effective practices and benefits the private landowner who receives a credit on its parcel fee.

F. State Grant Incentives for Municipal Adoption of Stormwater Zoning Standards

The State of Vermont currently provides to municipalities up to 35% municipal pollution control grants for wastewater and stormwater infrastructure; 50% ecosystem restoration program grants for required stormwater practices on developed lands; 80% grants for stormwater practices on roads, whether regulatorily required or not; and 100% grants for practices on developed lands that are not regulatorily required. Many of these municipalities do not have

²³ U.S. EPA Region 3, "Community Based Public-Private Partnerships (CBP3s) and Alternative Market-Based Tools for Integrated Green Stormwater Infrastructure," April 2015. https://www.epa.gov/sites/production/files/2015-12/documents/gi_cb_p3_guide_epa_r3_final_042115_508.pdf

local zoning for stormwater.²⁴ The Act 73 Working Group encourages adoption of a tiered grant structure to incentivize municipalities to adopt a local stormwater ordinance.²⁵

G. Market-Based Solutions

DEC has an existing offset program that allows regulated entities to meet “net zero” requirements for discharges to impaired waters without a TMDL. An “offset” typically refers to a program that allows a landowner to satisfy regulatory requirements by implementing a practice on a site owned by a different landowner, or on a project owned by the state. The action or project is designed to mitigate the impacts associated with an existing or proposed discharge that the permitted source has or is expected to have on the impaired water body.

Impact fees have broader applicability than offsets. This approach allows projects that are unable to meet full permit requirements due to site constraints a means of equitably contributing to overall pollution reduction solutions. ANR’s draft stormwater rule proposes a relatively simple impact fee system where dischargers are assessed fees based on the level of pollutant reduction achieved, and those fees are directed to other pollutant reduction efforts in the watershed.

Phosphorus credit trading, or “banking,” allows permit holders to buy or sell quantifiable pollutant load reduction credits in order to meet permit requirements. Credits are generated from actions that extend beyond the minimum threshold baseline requirements. To establish a phosphorus banking system, the state would need to develop a legal, policy, technical and administrative trading framework to ensure that there is a net benefit to water quality; and ensure that verification, accountability and enforceability measures are in place to guarantee that phosphorus reductions take place over time. North Carolina has several different types of water quality banking programs; more information about these banking programs is available on North Carolina’s website.²⁶ The Act 73 Working Group supports further research into the establishment of a phosphorus banking system managed by a third-party administrator.

²⁴ VLCT Water Resources: <http://www.vpic.info/Publications/Reports/Implementation/GreenInfrastructure.pdf>

²⁵ VLCT Model Stormwater Bylaw: <http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/2015-LID-GSI-VLCT%20model-bylaw.11-2015.pdf>

²⁶ <https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/401-wetlands-buffer-permits/401-stream-wetland-mitigation-program>.

H. Treasurer's Report: Innovative Uses of Lending Programs

The January 2017 Treasurer's Report recommended several innovative ways to expand existing lending programs to support clean water investments. The Act 73 Working Group agrees with and supports the Treasurer's recommendations, which include:

The Vermont Agricultural Credit Corporation (VACC), a program of the Vermont Economic Development Authority (VEDA), could provide capital to buy down the interest payments on loans for best management practices on farms. VACC is a nonprofit corporation which provides credit to Vermont farmers, agricultural facilities, forestry and forest product-based businesses. Farm loans are available to strengthen existing farm operations, including promoting soil and water conservation and protection. Through a buy-down program, farmers would be responsible for their share of the project cost, after federal and state grant funding, through an interest reduced or interest free loan. The farmer's debt would be amortized over five years and begin after the payment of all grant funding. The capital required for such a program would vary based on negotiations with VAAC on origination costs, servicing, and loan loss reserve requirements.

The Clean Water State Revolving Fund (CWSRF) could offer debt forgiveness on natural resource projects paired with traditional infrastructure projects. Vermont's CWSRF provides low interest construction loans for clean water projects to municipalities with terms of 20 to 30 years, a 0% loan rate, and a 2% administrative fee. The CWSRF could, instead, offer loans with a 1% loan rate and a 1% administrative fee, and then advance the 1% interest payments for natural resources projects. As explained in the Treasurer's Report, using the 1% pairing support, a \$5 million infrastructure project with a 20-year term rate would generate about \$541,531 for a "paired project" or, over a 30-year borrowing, up to \$812,217. Since these monies would be advanced, the restoration project could take place immediately rather than waiting to recoup the funds over the course of the loan period. Given capital funding, all or part of the interest due for the restoration project could be waived, providing additional incentive.

The Municipal Equipment Loan Fund (MELF), 29 V.S.A. Chapter 61, could be used for municipal equipment purchases that have a clean water benefit. The MELF was created to provide loans on favorable terms to municipalities for the purchase of construction, fire, emergency or heavy equipment or vehicles. By statute, the amount loaned shall be no more than 75% of the purchase price of the equipment, up to the maximum of \$110,000, and shall be repaid in no more than five years. For loans to a single municipality the interest rate is 2%. For loans to two or more municipalities jointly purchasing equipment, there shall be no interest assessed. A committee, consisting of the State Treasurer, Secretary of Transportation, Commissioner of Public Safety and Commissioner of Motor Vehicles, reviews and approves applications.

VI. Conclusions and Recommendations

The Act 73 Working Group first convened on June 28, 2017 and spent four months advancing the effort to ensure long-term, sustainable funding for clean water work in Vermont. The constructive dialogue and input provided by Working Group members, aided by the Advisory Council, municipal officials, and other groups and organizations, helped identify areas of broad agreement when it comes to funding clean water investments for the long-term. This team also identified areas where additional work is needed to achieve consensus regarding how costs will be shared across sectors.

Vermont faces an urgent need to address statewide water pollution. Existing resources available from state, municipal and private sectors to meet their portion of the required clean water investment are stressed and unlikely to be adequate. The Working Group's consensus recommendations reflect the need for action and propose a path forward to fund long-term clean water investments. These recommendations also include specific actions for the Legislature to consider in its upcoming session.

1. Utilitize existing state revenues and financial instruments to fund clean water through FY21.

Vermont dramatically increased its investment of capital dollars in clean water work in FY18 (\$22 million) and FY19 (\$23 million), from \$10 million in FY16 and FY17. The Act 73 Working Group recognizes that capital dollars will be scarce and that bonding level authorizations will likely continue to decline, meaning that capital dollars cannot viably be viewed as the primary long-term funding source to support clean water work.

The Act 73 Working Group recommends that the Legislature maintain a Capital Bill clean water investment of \$15 million a year through the next biennium (FY20-21). In years beyond FY21, to estimate the amount of revenue that will need to be raised, the Working Group assumed the annual capital investment would be between \$10 and \$12 million per year.

The Act 73 Working Group also recommends that the Legislature maintain its Clean Water Fund spending at a minimum level of \$4 million a year. These investments are funded by the property transfer tax surcharge which is slated to expire in 2027. The Clean Water Fund is an important source of flexible money that can be used for scoping, creating inventories, and for construction projects on private lands.

The combination of these two funding sources may fall somewhat short of the total clean water investment needs anticipated in FY20 and 21, depending on the resolution of several potential funding opportunities. In addition to awaiting a final decision on the construction of the TDI Clean Powerlink before the end of the 2017 calendar year, Executive Agencies are aggressively pursuing other sources of funding for water quality work, including but not limited to grants

offered by the Lake Champlain Basin Program and USDA's Regional Conservation Partnership Program. In recent these sources have provided between \$5 and \$8 million per year in support of clean water work in Vermont. These types of funding sources could help provide sufficient time for the Legislature, working with Executive Agencies and other stakeholders, to fully implement a long-term revenue source and service delivery model.

2. Let clean water priorities guide how costs are shared across sectors.

The total amount of state funding required is based on a set of important public policy decisions relative to the cost-share provided for different types of projects including wastewater treatment facility upgrades, stormwater retrofits on public and private property, and agricultural stewardship practices.

To date, cost-share decisions have largely been sector-specific and stand-alone. While statute and agency practice have established a framework for cost-sharing that determines the level of state funding required to support water quality, it is critical that the Legislature review the collective weight of these decisions during the upcoming session.

3. Establish approaches for revenue collection and service delivery that are environmentally efficient and cost effective.

Additional revenues will likely be needed to support clean water work. Much of the Working Group's discussion centered around a fee based on the amount of runoff from a parcel, as this appeared to be the most viable and equitable long-term funding method. There are two key issues that must be resolved in order to fully evaluate and, ultimately, implement such a fee. The first is revenue collection and the second is service delivery.

Revenue Collection

The Working Group found that administering a water quality fee outside of existing collection and billing structures would be inefficient for the State and municipalities. The Working Group asked the Tax Department and the Vermont League of Cities and Towns (Appendices A and B) to look at how much it would cost for their organizations to collect a parcel fee in support of clean water using a new billing structure. Their analyses concluded that the administrative costs to bill and collect a parcel fee with a new structure would cost roughly 20% of the total revenue raised. Other options that are more cost-effective must be evaluated.

We believe that, with more time, a smaller committee could continue the work needed to find an efficient revenue collection method. The Working Group recommends forming a small committee comprised of individuals with relevant expertise to further investigate potential revenue collection mechanisms. This committee should contain representative from Tax, VLCT,

existing utilities, municipal clerks and treasurers, and other entities with direct knowledge and experience raising revenue in Vermont. This group should consider the type of collection (e.g., local, regional, sector-specific or statewide) and whether enlisting a third-party, such a Clean Water Authority, would be an efficient tool for collecting revenue. The Legislature must also provide specific guidance is needed for several issues (see Appendix E), including the amount of revenue needed and what the revenue is intended to fund.

Service Delivery

Distinct from reviewing revenue-raising mechanisms, there needs to be a complete evaluation of possible service delivery models (Appendix E), with an eye toward approaches that will expand technical innovation and capacity. One approach would be to conduct engineering projects through a centralized entity with the ability to design, construct, operate and maintain larger practices, thereby leveraging efficiencies and implementing more cost-effective strategies.

This evaluation should consider and recommend whether ongoing implementation is best accomplished by an entity within or outside state government such as a Clean Water Authority. There could also be a hybrid model whereby a state-level “corps of engineers” is formed from different agencies to support implementation. As a clear next step, the Working Group will immediately begin to draft a scope of work to contract for the investigation of a range of potential service delivery models, culminating in the recommendation a preferred approach.

4. Pursue technological and regulatory innovation.

The Working Group recommends that the Legislature and Executive Agencies continue to pursue technological and regulatory innovations to reduce costs and accelerate results. There will need to be cross-cutting work, involving the public sector, academia and private markets, to devise and create innovative solutions to achieve our water quality goals. This will likely require technical, financial and political support for not only the development of new ideas and solutions, but to see them through to maturation. Specific opportunities discussed by the Working Group include (1) investigating options for commoditizing excess phosphorus in Vermont, (2) supporting municipal clean water implementation through integrated planning and permitting, and (3) flexible financing.

Commoditizing Phosphorus

Several existing and emerging technologies can facilitate phosphorus (P) recovery from various waste streams including agricultural manure, municipal wastewater, and food waste. Phosphorus recovered from these waste streams can be beneficially reused. Incentives need to be paired with existing regulations to help promote P recovery and reuse in Vermont. Establishing markets for recovered P will create economic drivers to minimize P loss to the

environment, generating revenue that can be reinvested in clean water and other desirable outcomes. Two opportunities that Executive Agencies have initiated investigation of are:

- Compost products like Foster Brothers “Moo-Doo” operation in Middlebury that creates bagged composted cow manure for sale at garden centers.
- Renewable Phosphorus Standard (RPS): Vermont is not actively recycling its phosphorus. More than 2,000 tons of fertilizer containing artificial phosphorus were imported into Vermont in 2011. Creating an RPS target, similar to a renewable energy goal, for recycling phosphorus in Vermont would create an immediate market for recovered phosphorus. Many European countries like Finland, Germany, and Sweden lacking in-country mined phosphorus have introduced renewable phosphorus standards.

Integrated Planning & Permitting

Vermont municipalities have numerous clean water obligations: to upgrade wastewater facilities; implement stormwater management requirements; and, to reduce the frequency of combined sewer overflows. Municipalities also have aging wastewater and stormwater infrastructure. Integrated planning is mechanism EPA promotes that allows communities with numerous clean water obligations to examine them holistically and prioritize repairs with the highest cost benefit first. The City of Burlington is currently piloting this approach. Executive Agencies and the Legislature should be prepared to implement regulatory changes needed to support successful implementation of this approach on a broader scale.

Flexible Financing

The Legislature and the Executive Agencies currently use a number of tools to support clean water and there are opportunities to expand the ways these tools are used to meet clean water priorities. The Working Group recommends the following actions to provide the maximum flexibility in implementing clean water programs:

- Explore opportunities to support the creation of local or regional “stormwater districts” as a mechanism for managing the financing, construction and on-going operation of stormwater management projects;
- Expand eligibility for Clean Water State Revolving Fund loans to private entities to the extent authorized by federal law;
- Allow capital dollars to be spent on private lands and equipment;
- Evaluate options for optimizing the use of existing financial tools and clean water programs to accelerate development of the pipeline of capital-eligible projects;
- Authorize DEC’s Ecosystem Restoration Protection (ERP) program to fund private projects that are regulatorily required;

- Explore the possibility of a private activity bond to increase access to capital by private landowners who are implementing clean water practices to comply with Act 64 and the TMDLs.

5. Commit to adaptive management.

The ability to routinely revisit and adapt the implementation plan is essential. Adaptive management is a structured “plan, do, check, repeat” iterative process that supports action and implementation in the face of uncertainty. The aim is to reduce uncertainty over time by informing future decisions on past outcomes through assessment and monitoring. Best practices will be developed over time through data-driven decision making informed by growing knowledge and changing technology. As mechanisms are developed to raise revenue and deliver services, progress must be regularly evaluated, and methods adapted to reach shared water quality goals.

The Executive Agencies currently provide an annual investment report, detailing the state’s investments in clean water work across Vermont including the estimated environmental benefits of each measure. The information contained in this report must be coupled with the targeted monitoring and assessment initiatives ANR and other agencies conduct as part of the Tactical Basin Planning process. This information would determine if the work completed produces water quality improvements.

Conclusion

In conclusion, the Act 73 Working Group found that existing revenues are generally adequate to address clean water needs through FY21. There are critical public policy decisions that need to be made including the level of cost-share the state is willing to provide each sector for clean water projects. These decisions need to be informed by potential approaches for both raising and disbursing revenue in FY22 and beyond, including the evaluation of service delivery models described above. The primary goal of Vermont’s clean water initiative is not simply to raise and spend money, rather it is to reach water quality standards. It is essential that any approach to raising revenue is efficient with administrative costs proportionate to the revenue raised.

We complete this report encouraged by what has been accomplished so far, and buoyed by the hard work and effort of many people dedicated to seeing this effort through to the end.

VLCT MEMO

TO: ACT 73 WORKING GROUP**FROM:** GWYNN ZAKOV, VERMONT LEAGUE OF CITIES AND TOWNS**DATE:** AUGUST 11, 2017**RE:** APPROXIMATE COST ESTIMATES TO MUNICIPALITIES TO ADMINISTER A NEW UTILITY FEE BILLING SYSTEM

Determining the costs to municipalities to administer billing and collections of a new utility or “clean water fee” is very hard to determine with great accuracy. We looked at the current costs to larger municipalities with similar utility billing capabilities. We conducted informal inquiries of smaller communities regarding the cost of collecting property taxes now – including NEMRC, billing, mailing, adjustments to bills, tracking payments, notices, etc. – and the estimates below are the best numbers we’ve been able to come up with.

With the exact structure and requirements of a newly mandated fee or utility unknown, the potential cost range is understandably quite large. Municipalities and the State will greatly benefit from more detailed specifics of exactly what a new mandate will look like, to more adequately estimate the actual costs to municipalities.

CURRENT EXAMPLES OF UTILITY BILLING:Populations:

Colchester: 17,067

South Burlington: 18,971

Williston: 8,698

Cost of billing for utilities

Colchester: \$24,000

South Burlington: \$43,000

Williston: \$20,000 - \$29,000

Yearly ERU (stormwater) fees per municipality

Colchester: \$52.39

South Burlington: \$78.48

Williston: \$51.00

Approximate yearly costs for billing ONLY by population:

1 – 5,000 (220 municipalities) – between \$5,000 - \$25,000 per municipality (\$1,100,000 – \$5,500,000)

5,001 – 10,000 (19 municipalities) – between \$20,000 - \$45,000 per municipality (\$380,000 - \$855,000)

10,001 – 20,000 (7 municipalities) – between \$ 40,000 - \$60,000 per municipality (\$280,000 - \$420,000)

20,001 – 45,000 (1 municipality, Burlington) – ? ? ?

ESTIMATED YEARLY COSTS (excluding cost to Burlington): between \$1,760,000 - \$6,775,000

*** The low estimate is too low, and the high is too high. The low estimate is assuming all municipalities will fall on the lowest end of the cost spectrum, which is not realistic; the same is true for the high end estimates.

In all likelihood the number will fall somewhere closer to the middle - around \$4,000,000 (+/-). Again, these estimates are based on a small, random sampling of smaller communities, and current costs to larger communities with utility billing. These numbers will change depending on the actual structure of a newly mandated fee. ***

DRAFT

Parcel Fee Collection and Appeal Considerations (2/10/2017)

This memo provides a general overview of the Department of Taxes' administrative concerns for collecting and fielding appeals of a parcel fee at the State level. It is in response to a draft bill that the House Natural Resources, Fish, and Wildlife Committee is considering. The following information is based on the general concept of collecting and fielding appeals for this type of fee.

Why it is cost-effective to collect and appeal at the local level:

1. The administrative capacity already essentially exists at the local level to collect and field appeals for property taxes, and – for some towns – water and sewer services. The same collections and appeals systems could be leveraged for a parcel and/or impervious surface fee. The State could assist with data organization, administrative oversight, and billing assistance, as it currently does with property taxes.
2. Creating a second property-based collection system at the State level would be costly, redundant, and inefficient because it parallels a system that already exists at the local level.
3. It is not cost-effective and can result in a net loss for the Tax Department to collect smaller bills, and the Department anticipates poor compliance with a property-based fee collected at the State level.

State Compensation to Municipalities for Property-Based Collections

The State compensates municipalities for property tax-related administration, which can be leveraged to collect another property-based fee. The following table is a breakout of that compensation.

Description	Statute	Payment Calculation	FY 2016 Amount
Timely Remittance	32 V.S.A. § 5402.(c)	0.225% of total education tax collected	\$2,398,143
Reappraisal and Grand List Maintenance	32 V.S.A. § 4041a.(a)	\$8.50 per grand list parcel per year	\$2,837,000
Lister Education	32 V.S.A. § 4041a.(c)	A sum not to exceed \$100,000	\$99,000
Equalization Study Assistance			\$334,000
		Total	\$5,668,143

To put the proposed parcel fees into perspective:

Currently, the largest tax type the Department administers is Personal Income, with 375,000 filers. The next largest tax is Sales and Use, with 30,000 filers. The State collects more than \$700M in Personal Income Tax revenues and roughly \$370M in Sales and Use Tax revenues. The vast majority of these taxes are remitted voluntarily without the generation of a bill.

The proposed parcel-based fees would require the State to bill out to roughly 333,000 parcels to collect roughly \$18M. The cost-effectiveness, or bang for the buck, of this proposal is extremely poor for the State of Vermont and its taxpayers.

This proposal would require a collections effort similar – and in some cases more onerous – than Personal Income Tax, to raise revenue similar to the Health Care Claims Tax, which has only 140 filers. The below table compares the average revenue per filer of these assessments.

Assessment	Revenues	Filers	Avg. Rev/Filer
Personal Income	\$747,000,000	375,000	\$1,992
Sales and Use	\$371,000,000	30,000	\$12,367
Health Care Claims	\$17,100,000	140	\$122,143
Proposed Parcel	\$18,000,000	333,000	\$54

Another element that would affect the cost of administration is the frequency of filing or billing. Roughly 30,000 Sales and Use filers submit 153,000 returns based on monthly, quarterly, and annual cycles. If a parcel fee were assessed on nearly 333,000 parcels quarterly, that would require more than 1.2M bills or returns.

Cost Estimate of Collections and Appeals

This cost estimate is based solely on the State collecting and fielding appeals of the proposed parcel fees and does not consider other elements of this fee's administration, such as mapping, data organization, and other costs. It is based on draft proposals of the fee that are not fully developed. This value should not be considered a final estimate for administering a parcel fee. Once a more formulated proposal is on the table, the Department can better estimate the total cost of a proposal.

Estimated Collection & Appeals Costs	
VTAX Implementation	\$1.5M-\$2M
Ongoing Billing & Collections	\$2.8M
Ongoing Appeals	\$1.2M
Total First Year Costs	\$5.5M-\$6M
Total Ongoing Costs	\$4M

The cost to implement a parcel fee is based on the Department’s experience with tax types of similar complexity and volume. The ongoing collections costs are based on the 25 FTEs the Department has previously estimated it would require to collect property taxes at the State level. The ongoing cost of appeals is based on property tax grievance data compiled by municipalities and the State. This appeals structure, and the additional seven FTEs it would require, would combine the appeals responsibility with that of district advisors for property tax administration. It would put an appeals officer/advisor in each county.

Cost-Effectiveness Comparison

The table below compares the Department-wide costs of collecting all revenues with the estimated cost to administer the proposed parcel fee. Administering the parcel fee would be 22 times more expensive than the average cost of administering all other tax types.

	FY16 Op Expenses	Revenues	Cost/\$1 of Rev
Department Wide	\$17,700,000	\$1,670,000,000	\$0.01
Parcel Fee - Ongoing	\$4,000,000	\$18,000,000	\$0.22

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Memo

To: Clean Water Fund Working Group
From: John E. Adams, VCGI Director
Date: 8/25/2017
Re: Data needs for an impervious surface stormwater fee

This memorandum outlines the status of statewide impervious surface data and statewide parcel data. I've included some notes related to ongoing maintenance needs as well as several other issues to consider.

Statewide Impervious Surface Data. (Target Completion: Summer 2018)

VCGI has begun the process of acquiring impervious surface data (1-meter resolution) that could be used in administering an impervious surface stormwater fee. The dataset will be derived from 4 band orthophotography and lidar data used to generate high resolution land cover data.

Status: Draft RFP under review by Buildings and General Services and the Agency of Digital Services.

Ongoing maintenance needs: The frequency and extent of necessary updates to the data needed to successfully administer an impervious surface fee is currently unknown. Updates to the data will be needed to capture changes in impervious surface cover due to development and redevelopment of areas, as well as to correct any identified inaccuracies in the data. Costs associated with updating the dataset are dependent on a several variables related to program specifics and advancements in technology. The source for updates from the data could either come from imagery, or from documentation submitted as part of a permitting process. Given that most development in Vermont is not subject to any State permit/review, updates would likely need to come from orthophotography (as opposed to any application requirements submissions.) It may be possible to capture areas undergoing higher levels of change by incorporating application submission materials for projects that are subject to State review – such as Act 250 or stormwater permits. Additionally, municipalities could also potentially update data based on information collected via local review processes. Updates using orthophotography depend on access to updated imagery and technical capabilities to update the data given the resolution and conditions at the time of collection (leaf-on vs. leaf off.) Both access to updated imagery and our abilities to process imagery to identify change is changing rapidly.

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Considerations:

- The definition of what qualifies as impervious surface could have significant impact on data needs. If the definition differs from mapped land cover classifications, it may be challenging if not impossible in any economical way to update the data.
- A process for updating and/or appealing any measurements must be clearly defined.

Statewide Parcel Data. (Target Completion: January 1, 2020)

The creation of a statewide GIS database of parcel boundaries that is joined to the grand list is a significant multiagency initiative underway that will produce a dataset that could potentially be utilized to administer an impervious surface stormwater fee. Acquisition of the data is broken up into 3 phases, with 1/3 of municipalities to be completed in each phase. The project is managed by VTrans in collaboration with VCGI.

Status: Phase 1 contracts in process of being finalized by VTrans.

Ongoing maintenance needs: VCGI is currently working with the State Parcel Advisory board to develop a maintenance program that would keep parcel data up to date. It is assumed that parcel data would need to be maintained regularly to capture changes and to be able to measure impervious surface and assign a corresponding fee to a parcel. Many municipalities currently do not update their parcel data on a regular basis and VCGI is evaluating options for how to most cost effectively keep the data maintained without adding to the workload of municipalities. There are a variety of significant challenges with keeping parcel data up to date in Vermont. While most subdivisions and boundary line adjustments are surveyed, surveys are typically only available in a paper format in the municipal land records.

Considerations:

- Parcel data will vary in quality and the boundaries represented are approximate.
- Initial calculations show that approximately 5% of land area in Vermont is unaccounted for when comparing the listed acreage in the grand list with the physical area of Vermont. Municipalities would potentially need to update parcel maps to identify mapped areas that do not join with the grand list.
- Differences in how municipalities maintain their grand lists may create challenges in consistently assigning an impervious surface value to certain kinds of properties, such as 'unlanded parcels' and common lands.
- The definition of a parcel, "all contiguous land in the same ownership, together with all improvements thereon," is problematic when certain span numbers become 'inactive' and not reflected on the grand list.

Next Steps: Preliminary assessment of the processes for measuring impervious surface and assigning values to parcel.

9/22/2017

Dear Secretary Moore,

Thank you for the opportunity to share this proposal on behalf of the undersigned members of our clean water working group, a coalition of municipal and regional leaders, environmental advocates, Vermont business people and attorneys. Our group has been working together since before the end of the 2017 legislative session to identify strategies to advance our shared goal of broad public funding and support for clean water. The proposal below represents our common vision for a new approach to help meet those goals. Vermont's investments in clean water require the leadership of a publicly-accountable and politically-independent Clean Water Authority tasked with supporting the implementation of Act 64 of 2015, total maximum daily loads (TMDLs) across the state, the Combined Sewer Overflow Rule (CSO Rule), and the goal of meeting or exceeding Vermont Water Quality Standards in surface waters statewide. We believe that a Clean Water Authority, as described below, could help raise the needed revenue and administer those funds in order to meet the significant water quality challenges facing Vermont by complementing the vital work of the Agencies of Natural Resources, Agriculture, Food and Markets, and Transportation.

1. The Purpose of a Vermont Clean Water Authority:

The primary purpose of the Clean Water Authority would be to ensure that the State of Vermont has an equitable, broad-based, long term and flexible mechanism to make public clean water investments to meet water quality standards and assist in implementing Act 64, TMDLs and the CSO Rule. A secondary purpose would be to instill through those sustained investments a collective clean water ethic predicated on collaborative action, public-private partnerships and community development. The Authority would ensure government accountability for expenditures on clean water priorities that provide long term environmental benefits, as well as protecting our communities and the Vermont economy from the long term costs of failing to protect Vermont's most vital natural assets.

2. The Nature and Scope of the Clean Water Authority:

The Authority's role to direct clean water investments by the State of Vermont would begin with the power to develop clean water budgets for the State, raise revenue through a statewide fee based on the options described in the 2017 Vermont Treasurer's Report on Clean Water and deliver services necessary to achieve the State's water quality goals. The Authority would also have the normal powers and authorities Vermont law provides to municipal and regional entities and utilities in order to enforce the fee payment requirement and/or collect unpaid water quality fees through the sale or lease of property (similar to municipal authority relative to water and wastewater bills), as well as the power of condemnation and eminent domain after demonstrating necessity. However, the Authority would not supplant, but rather would work in concert with local and regional entities. Moreover, the Authority would not administer money from the Vermont clean water state revolving loan fund or the Clean Water Act Section 319 Nonpoint Source Management grant funding program. The authority to manage these funds would remain with the Agency of Natural Resources (ANR). The Authority would be governed by a board of not more than nine members appointed jointly by the Governor, the President

Pro Tem of the Vermont Senate and the Speaker of the Vermont House. Members of the board would have relevant experience in public policy, public management, and/or relevant disciplines such as civil engineering (i.e. stormwater and wastewater management), agriculture, ecology, forestry, transportation, law and finance. In addition, the Vermont Treasurer and the Secretary of the Vermont Agency of Administration would be ex-officio members of the Board. The Board would hire and oversee an Executive Director and such professional staff as its budget allowed.

3. Overview of Funding Mechanism for Clean Water Authority.

In addition to capital investments in clean water projects to be made by the State of Vermont, the clean water dollars invested by the Authority would be raised through a statewide tiered parcel fee, based on the type, size and use of the parcel, as well as the extent of stormwater treatment and/or nutrient management on the parcel and relative contribution of polluted runoff to surface waters. The fee would be applied equitably to all properties statewide, with provision for fees to be offset based on financial hardship and other factors. Implementation of the fee would take place following an appropriate public process to develop the details of the fee setting and collection model and a campaign to educate Vermonters about the state of surface water pollution, needed investments and the plan for making those investments wisely and cost-effectively. The fee would be collected by the Authority, either directly or through a third party acting on behalf of the Authority.

The fee would be set by the Authority, based on projected clean water budgets over a three year cycle, following public notice and an opportunity for stakeholders to comment on the proposal. The budgets and fees set by the Authority would be approved by the Authority's board following that public process, or by an independent third party regulatory entity with the necessary expertise and authority to approve budgets and fees of this magnitude (e.g. the Vermont Public Utility Commission for utility rates or the Green Mountain Care Board for health care rates). In addition to setting budgets and fees, the Authority would also be responsible to provide an annual audit of collections and investments, and it would publish an investment report tracking implementation of Act 64, statewide TMDLs and the CSO Rule, and measuring progress against the requirements of the Vermont Water Quality Standards.

The Vermont Legislature would have a key role in creating the Authority and determining the limits of the Authority's powers. In addition, the Legislature would be privy to the Authority's transparent budget setting process and/or any independent third party regulatory that may be established. Of course, the Legislature may address concerns about the Authority at any time through the legislative process.

4. Priorities for Clean Water Authority Investments.

The primary basis for Clean Water Authority investments would be those priorities established by the Vermont Department of Environmental Conservation in the Tactical Basin Plans with the greatest water quality benefits. In addition, the Clean Water Authority investments would focus investments on projects that promote public/private partnerships and collective action, incent early implementation of regulatory requirements and drive projects to implement measures that go beyond regulatory requirements. The Authority would be able to make grants, loans or directly contract to deliver on

Vermont's clean water priorities; however, it would be prohibited from paying for private compliance requirements on individual parcels.

Again, we thank you for the opportunity to present this vision for a new Vermont Clean Water Authority. We recognize that the ideas set forth in this short summary provide only the outline of a proposal. We look forward to working with you and the Act 74 Working Group to refine and hone this concept.

Sincerely,

Thomas W. Torti

Tom Torti, President, Lake Champlain Regional Chamber of Commerce

DCE

Dominic Cloud, City Manager, St. Albans, Vermont

Catherine Dimitruk

Catherine Dimitruk, Executive Director, Northwest Vermont Regional Planning Commission

Jon Groveman

Jon Groveman, Policy and Water Program Director, Vermont Natural Resource Council

Lauren Hierl

Lauren Hierl, Political Director, Vermont Conservation Voters



Chip Sawyer, Director of Planning and Development, St. Albans, Vermont



Trey Martin, Of Counsel, Downs Rachlin Martin PLLC

Cc:

Susanne Young, Secretary, Vermont Agency of Administration

Joe Flynn, Secretary, Vermont Agency of Transportation

Anson Tebbetts, Secretary, Vermont Agency of Agriculture, Food and Markets

Michael Schirling, Secretary, Vermont Agency of Commerce and Community Development



Service Delivery Models for Supporting Clean Water Implementation

1. Type of Fee

- a. Parcel - flat
- b. Parcel – tiered
- c. Impervious – flat
- d. Impervious – tiered
- e. Impervious – based on actual acreage
- f. Combination of above

2. Type of collection

- a. Municipal collection
- b. State collection
- c. State collection of both stormwater fee and statewide education property tax
- d. Local, regional, agricultural or statewide district
- e. Combination of above

3. Appeals process

- a. Decision of local board is appealed to the Environmental Court
- b. Decision of local board (BCA) is appealed to Tax Dept (PVR), which is appealed to Superior Court

4. Use of revenues

- a. Developed lands (3 acres impervious)
- b. Roads (municipal)
- c. Agriculture
- d. Stormwater systems (MS4, non-MS4)
- e. Combination of above

5. Delivery of services

- a. Governmental or non-profit
- b. Geography (local, regional or statewide)
- c. Sector based (agriculture, developed lands, natural resources)

6. Possible glidepaths

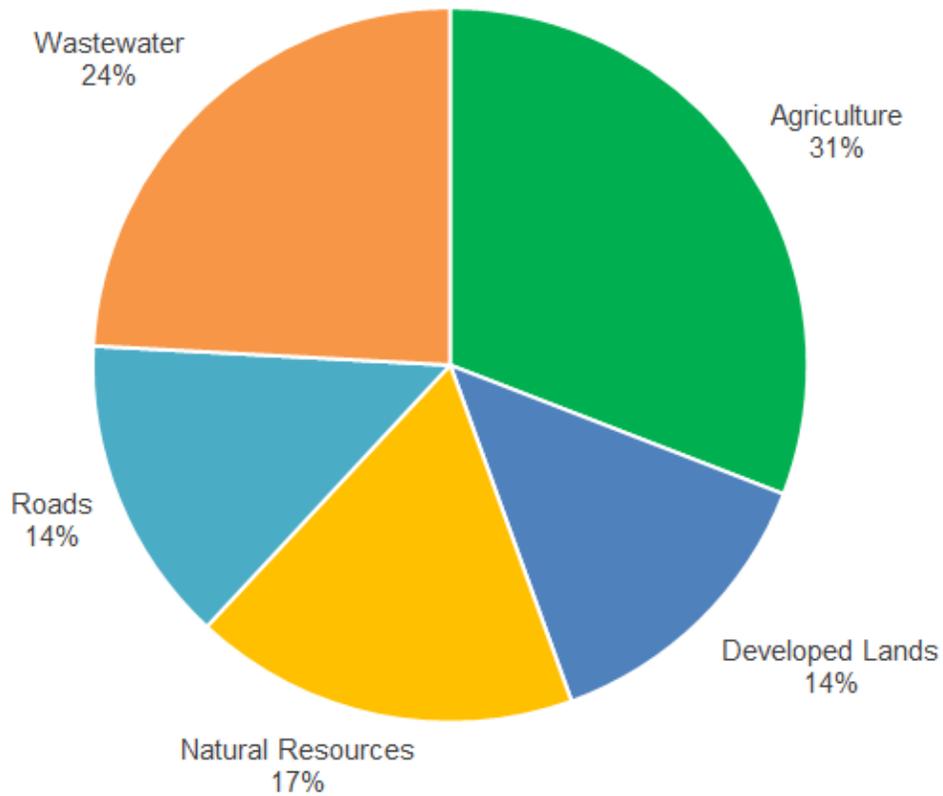
- a. Start with parcel fees, move to impervious surface fees
 - b. Start with voluntary local option, move to statewide fees
 - c. Wait until impervious surface fee based on actual acreage is feasible
 - d. Combination of above
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SFY18 Clean Water Initiative Cash Flow

	A	B	C	D	E	F	H	I	
	Appropriated (per legislation)	Appropriated (after Bond Fees)	Administrative Adjustment	PY Carry Forward (Carried in From PY tab, columns G+J)	Current FY Cancellations or Under-Runs	Current Obligated Excluding Encumbrances	Current Encumbered Beyond Obligated	Actual Expended to date	Uncommitted or Available Funds
1									
2	Capital Bill, Act 51 (H.533) (FY15)								
3	Section 14: Agency of Agriculture								
4	14(b)	Best Management Practices & CREP (2200991502)		\$ 1,369,479.40	\$ -	\$ -	\$ -	\$ 1,369,479.40	\$ -
5	Capital Bill, Act 26 (H.492) (FY16)								
6	Section 11: Agency of Natural Resources:								
7	11(a)(9)	Mnpl Poll Control Grants, poll control projects & planning advances for feasibility studies (FY16)		\$ 390,283.00	\$ -	\$ 42,666.00	\$ -	\$ 347,617.00	\$ -
8	Section 14: Agency of Agriculture								
9	14(a)(1)	Best Management Practices & CREP (2200991602)		\$ 1,718,025.55	\$ -	\$ 1,071,057.22	\$ -	\$ 646,968.33	\$ -
10	14(a)(3)	Community and nonprofit agricultural water quality projects (2200991504)		\$ 212,965.62	\$ -	\$ -	\$ -	\$ 212,965.62	\$ -
11	Section 18: Vermont Housing and Conservation Board								
12	18(b)(1)	Statewide: water quality improvement projects (FY16)		\$ 1,492,449.00	\$ -	\$ -	\$ -	\$ 1,492,449.00	\$ -
13	18(a)(3)	Statewide: water quality improvement projects or other conservation and ag projects (FY16)		\$ 1,243,708.00	\$ -	\$ -	\$ -	\$ 1,243,708.00	\$ -
14	Capital Bill, Act 26 (H.492) (FY17)								
15	Section 11: Agency of Natural Resources:								
16	11(d)(5)	Ecosystem Restoration and Protection (6140991605)		\$ 3,715,850.00	\$ -	\$ -	\$ 1,770,444.00	\$ 1,945,406.00	\$ -
20	Section 18: Vermont Housing and Conservation Board								
21	18(a)(1), 18(b)(1)	Statewide: water quality improvement projects (FY17)		\$ 990,893.00	\$ -	\$ 18,750.00	\$ -	\$ 972,143.00	\$ -
22	Capital Bill, Act 160 (H.878) Budget Adjustment (FY16 & FY17)								
23	Section 9 (Section 11 of Act 26): Agency of Natural Resources								
24	11(a)(9)	Municipal Pollution Control Grants, pollution control projects and planning advances for feasibility studies		\$ 2,255,763.00	\$ -	\$ -	\$ -	\$ 2,255,763.00	\$ -
25	Prior Year Capital Bills subTotal								
26	Capital Bill, Act 84 (H.519) FY18								
27	Section 11: Clean Water Investments								
28	Agency of Agriculture, Food & Market								
29	11(a)(1)	Best Management Practices & CREP (FY18)		\$ 3,450,000.00	\$ -	\$ 1,425,462.10	\$ -	\$ 982,350.68	\$ 997,513.22
30	11(a)(2)	Water Quality Grants & Contracts (FY18)		\$ 600,000.00	\$ -	\$ -	\$ -	\$ -	\$ 592,231.00
31	Agency of Natural Resources								
32	11(b)(2)	DEC Ecosystem Restoration Grants (FY18)		\$ 6,000,000.00	\$ -	\$ 13,900.00	\$ 4,969,197.00	\$ 845,716.00	\$ 93,493.00
33	11(b)(3)	DEC Municipal Pollution Control Grants (6140991706)		\$ 2,982,384.00	\$ -	\$ -	\$ -	\$ 2,943,765.00	\$ -
34	??	DEC Municipal Pollution Control Grants (6140991707)		\$ 2,704,232.00	\$ -	\$ 995,382.75	\$ 1,363,561.10	\$ 310,271.15	\$ -
35	Agency of Transportation								
36	11(c)	VTrans Municipal Mitigation Program (8100991701)		\$ 1,400,000.00	\$ -	\$ (131,456.00)	\$ 1,250,415.00	\$ 190,031.86	\$ -
37	Vermont Housing and Conservation Board								
38	11(d)(1)	VHCB: water quality projects (FY18)		\$ 2,800,000.00	\$ -	\$ 1,851,243.00	\$ -	\$ 912,500.00	\$ -
39	11(d)(2)	VHCB: farm grants or fee purchase water quality projects (FY18)		\$ 1,000,000.00	\$ -	\$ 532,873.00	\$ -	\$ 114,540.43	\$ 339,637.57
40	SFY18 Capital Bills SubTotal								
41									
42	Transportation Bill Act 38 (H.494) FY18								
43	Section 8: Municipal Mitigation- Dept ID 8100005800, Program Cat MM01 -Transportation Funds								
44	Section 8: Municipal Mitigation- Dept ID 8100005800 - Program Cat MM01, Fund Source "8" -Clean Water Funds								
45	Section 8: Municipal Mitigation-Dept ID 8100005800, Program Cat MM01- Federal Funds								
46	Section 14: Transportation Alternatives - Dept ID Federal Funds								
47	State Highway Compliance								
48	SWFR() - Stormwater Flow Restoration - Federal Funds (90%F/10%S split)								
49	SWFR() - Stormwater Flow Restoration - State Funds								
50	MAWP009-001 and MAWP010-001 - FHWA Work Programs - Activity 5900 only - Federal Funds								
51	MAWP009-001 and MAWP010-001 - FHWA Work Programs - Activity 5900 only -Transportation Funds								
52	Various Projects (activities 1610,4640,5900) not included in projects listed above - Transportation Funds								
53	Various Projects (activities 1610,4640,5900) not included in projects listed above - Federal Funds								
54	Various Projects (activities 1610,4640,5900) not included in projects listed above - TIB Funds -Fund Source "4"								
55	Various Projects (activities 1610,4640,5900) not included in projects listed above - FAA Funds - Fund Source "A"								
56	Transportation SubTotal								
57	Appropriations Bill Act 85 (H.542) FY18								
58	DF&W Watershed Grants Program								
59	AAFM Farm Agronomic Practices Program (2200044000 - P 26862)								
60	AAFM Water Quality Grants and Contracts (2200044000 - P 26863 & 26020)								
61	AAFM Misc. Water Quality Programs (2200044000) (Contract & Grant account codes)								
62	Appropriations Bill SubTotal								
63	Clean Water Funds FY18								
64	ANR DEC Clean Water Initiative Program, Ecosystem Restoration Grant Program (6140040000)								
65	AAFM Misc. Water Quality Programs (2200160000 - grants + Topcon, SAAS & some contracts)								
66	AAFM Operational Funds (2200160000)								
67	ACCD (7100000025)								
68	AOT (8100005800)								
69	Clean Water SubTotal								
70	GRAND TOTAL								
71									

Q1 For each land use listed below, assign a percentage of the Clean Water Fund that would support clean water projects. Your percentages must add up to 100.

Answered: 319 Skipped: 5



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Agriculture	35	10,321	299
Wastewater	27	8,017	297
Natural Resources	19	5,263	270
Roads	16	4,236	272
Developed Lands	15	4,063	267
Total Respondents: 319			

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Q1 Additional Comments

Answered: 145 Skipped: 179

#	RESPONSES	DATE
1	Need to stop all the phosphorus the fairs are spreading. Need to outlaw manure on open fields... it is toxic to breath... the farmers spread outside the allowed dated and don't care about runoff in some cases up here in fletcher....	8/1/2018 7:08 AM
2	stop wasting money studying and lets fix the problems	7/31/2018 5:36 PM
3	I'd give developed lands less because more owners of developed lands are corporations that should have enough profit to budget for this. Agriculture funds don't need to be at a particularly high amount - it's more important that they are available over time. The effects of agricultural BMPs will also have slower results than... wastewater, whose spills have immediate impacts and are expensive to fix. Therefore we should allocate extra money to wastewater.	7/31/2018 3:25 PM
4	Prioritize funding allocations to projects that provide most pollution reduction gain vs. dollar spent.	7/31/2018 2:46 PM
5	Uncontrolled farm runoff and wastewater from cities and towns are in my opinion the largest polluters to our lakes and streams. The wastewater systems were mostly installed in the 60's and are in need of refurbishment. The farm community moved from a hay based feed to a corn based and in Addison county are installing massive drainage systems that drain waste from the farm fields untreated. I doesn't need to be manure but the raw chemicals that promote corn growth and weed control that are drained into the nearest ditch. This water and it's contents were since time eternal were kept in the ground on site and was that problematic wet spot on the farm. No more. and to add insult to injury we are subsidizing it thru Current Use.	7/31/2018 12:55 PM
6	All are important, but wastewater overflows are a serious concern.	7/31/2018 12:10 PM
7	Many agricultural lands are in flood zones which were lowland forests long ago. Consider using funds to buyback ag lands near river ways to increase the width of riparian buffers (possibly also utilizing stormwater BMPs) and reduce nutrient pollution via runoff. Buybacks would also provide capital injection for struggling farm owners. Important to reconsider separating storm and sewer, at least entirely in the traditional sense, in urban areas that are still combined systems. Most effective way to remove nutrients from stormwater is to send it (especially "first flush") to the WWTP. Understanding that heavy rainstorms can trigger CSOs in these systems, important to update infrastructure to allow system during heavy rain events to attenuate flow and/or divert stormwater directly to waterways before it mixes with untreated wastewater, so to reduce or prevent CSOs. I.e., send the 1-yr, even the 5-yr (depending on the capacity of the plant) storms to the WWTPs, but divert the excess runoff that would cause as CSO. Also important to reduce impermeable surface area where feasible, and reduce inflow and infiltration in sewer (and storm) pipes.	7/31/2018 10:33 AM
8	I would also like to recommend that a portion of funding be allocated to pre and post implementation water sampling to measuring the effectiveness of BMPs. And I would add that there needs to be more follow up on O&M agreements with landowners and towns: Proper maintenance of these practices over time is critical.	7/31/2018 9:17 AM
9	DEC funding is very ineffective right now with a new \$20,000 cap for ERP projects and no work allowed on private lands, which are a huge contributor...	7/31/2018 7:32 AM
10	DEC ought to consider identifying 14 relatively small "strategic watersheds" (1 per county) where a 10+ year records of WQ monitoring exists and where funds would be set aside for DEC/AAFV/Trans to expend over the next 10 years on priority projects. Such an approach - in parallel with current unfocused sending - would help to document actual changes in WQ as a result of implementation.	7/30/2018 9:03 PM
11	The City of Burlington's dumping of 12 million gallons of partially treated wastewater indicates an immediate need for remediation. The City seems enable to address this situation. It is time for the State to step in and correct this dire strait.	7/30/2018 3:45 PM
12	First stop the pesticides being put into the waters from the VT Dept of Fish & Wildlife which is also happening in NY and is govern't funded. That would be free!	7/30/2018 1:47 PM

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13	<p>We support all of these areas of funding, and are not necessarily in a position to determine which needs more than any other. However, it is clear that there are relationships between these project areas and consciously working on their intersections is a suggestion we put forward, along with working in the general direction of building towards a more just local / regional economy supporting the needs of the humans, land, and non-humans who live here. We'd like to see generally a greater short, medium, and long term strategic plan for moving beyond mitigation, and working primarily on and towards adaptation to water quality standards and climate change; as well as transformation to systems (in all areas) which are more resilient to changing climate and weather patterns, and in some cases (agriculture, natural resources) generate ecological services affecting water quality directly and indirectly. In terms of agriculture, the "clean water objectives" (similarly to NRCS EQIP funding) are primarily mitigation focused, "addresses farm run-off and soil erosion from farm production areas and farm fields". We need funding that not only contributes to infrastructure improvements where there are currently water quality problems on primarily medium and large farms; but also funding to transform farms and the working landscape (and support people already doing this work) at all scales of operation into places that generate water quality and other ecological services, and are less reliant on external inputs and fossil fuels. This could include such things as: regional and watershed planning and design with respect to locations of farms and farm infrastructure as well as roads, settlement patterns, wastewater infrastructure, etc.; supporting farming practices such as "adaptive multi-paddock grazing", integration of agroforestry, phase out of pesticides and herbicides, cover cropping, growing soil organic matter, alternatives to liquid manure, etc. Most funding at this point goes towards infrastructure improvements in problem areas on medium to large scale farms; and though this is important to aid in crisis response, it is critical that we be moving away from systems that require mitigation and intensive inputs (from flood and drought recovery costs, to algae blooms, etc.), and towards those that do not, and those which rely less on fossil fuels and external inputs, and which generate water quality and ecological health more broadly. Lastly, in considering this question, we recognize the need to diversify "water quality" concerns beyond Phosphorous: other nutrients, pesticides, etc. that are not only toxic in the environment, but can also mobilize nutrients in the soil profile contributing to greater nitrification issues.</p>	7/30/2018 1:41 PM
14	<p>Allocate state funds where you get the largest possible phosphorus reduction at the lowest cost - i.e. cost effectively.</p>	7/30/2018 1:37 PM
15	<p>Increased buffer zones around agricultural lands and fencing off streams and waterways to cattle are a must as well as smart conservation practices in farming reducing run-off, solifluction and the release of phosphorus and nitrogen from soil particles.</p>	7/30/2018 10:46 AM
16	<p>Dairy manure puts the human waste equivalent of the entire population of Vermont on our fields annually. AND for a failed industry with no meaningful positive longterm economic outlook. Simply enforce the existing regulations for human and animal waste, and begin shutting down some farms for alternative agricultural utilization.</p>	7/30/2018 9:32 AM
17	<p>Many of the projects being implemented address potential issues not actual issues. This will be hard to justify in the future if water quality is not showing improvements. Stream bank erosion and wwtf are contributing more than the models indicate in northern half of lake Champlain.</p>	7/29/2018 7:10 AM
18	<p>It is seriously time to look at man's contributions beyond agricultural.</p>	7/27/2018 5:20 PM
19	<p>Consider scaling back dairy production given its r9ole in generating phosphorus.</p>	7/27/2018 3:58 PM
20	<p>Farmers need the help they are a big source of pollution and have no money due to poor milk prices.</p>	7/27/2018 11:27 AM
21	<p>All funding should be used to mitigate and strategize around the impact of climate change. We are only getting wetter and wetter!</p>	7/27/2018 9:12 AM

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22	<p>We have to take in account that our Natural Resources are finite. The Clean Water Fund should not only be essential for "Cleaning-Up" but also for protection - being PRO-ACTIVE instead of RE-ACTIVE. It is to often that we as a society always look to solve the problem after it is created. Why is it that we ignore the resources that are Clean! Or just dismiss or overuse them. Or not pay attention to them because it isn't a priority... this is the wrong way of thinking. Whatever this fund is suppose to do, it should be applied to all waters of the state, not just the ones we feel need to be "Cleaned-Up". In order to protect our waters we need to have that close relationship with the communities that are surrounded by such. We know in several towns they are struggling with keeping up with failing infrastructure. They also don't have the resources or the man/woman power to install proper resources. These smaller communities with less than 500 voting members are overwhelmed. In regards to Agriculture, we cannot make a law and then not enforce it. Or spend money to "Assist" farmers whom are not willing to help themselves. Spend thousand of dollars to clean up their production area and then they go out of business due to the overall cost of the project. This is a larger problem that needs to be addressed in the Market. There are good managers and bad managers. The folks that have built their business from the ground up want to do what is right for the environment, but with a failing market, they are faced with either paying for the electric bill or feeding their children. And the subsidy program only goes so far. If the legislature wants "Clean Water" for our surrounding communities in Dairy. Give them a better price for their milk. I didn't give Wastewater a high priority because this should already be on the radar and funding should already be in place for these larger projects. Developed lands need a community based approach, break it down in chunks, have volunteers be your voice. If you want a change in your larger cities look to the people that will move that change through the "Block" or "Area". It will be more effective if these folks living here have more "buy-in". Thank you for reading my comments.</p>	7/27/2018 9:01 AM
23	<p>Why did you not include the % of the pollution that was coming from each sector? Also, I do not believe in funding projects that are essentially helping businesses to expand.</p>	7/26/2018 9:47 PM
24	<p>The farms need help to stop polluting the lakes</p>	7/26/2018 6:45 PM
25	<p>Unabated run off of nutrients from liquid manure must cease in the watersheds of impaired lakes.</p>	7/26/2018 3:55 PM
26	<p>Thank you.</p>	7/26/2018 3:46 PM
27	<p>We know that Agriculture is the single largest culprit. Farmers struggle to earn a living farming. Provide assistance to farmers to facilitate compliance with the regulations. Reduce creating new impervious surfaces and sprawl that reduces undeveloped lands utility for SW service by making it simple to redevelop existing properties. Allowing SW/ecosystem service to be provided by adjacent parcels in the subwatershed.</p>	7/26/2018 2:22 PM
28	<p>The land use types above are all part of the TMDL Plan to clean up Lake Champlain. It is important that they are all funded one way or another.</p>	7/26/2018 1:17 PM
29	<p>assuming that these are somewhat related to the costs in each area that should be borne by the public</p>	7/26/2018 1:08 PM
30	<p>Have to stop the phosphorous at the source - the farm! Agriculture is NOT as big or important as it used to be. Feel bad for small farmers, but the world is changing and they need to change with it.</p>	7/26/2018 12:31 PM
31	<p>The survey does not inform respondents of how money is to be spent which makes it impossible for respondents to decide how money should be allocated.</p>	7/26/2018 11:48 AM
32	<p>Farmers fields should be required to have small like ponds for runoff to collect matter before entering waterways etc. & storm drains should not be flooding out wastewater sewer systems.</p>	7/26/2018 11:47 AM
33	<p>We need to work together to solve the problems. Public education and on going TV, Radio and newspaper reports necessary..</p>	7/26/2018 11:19 AM
34	<p>developers and farmers are responsible for cleaning up their messes</p>	7/26/2018 11:09 AM
35	<p>This isn't worded properly - I think you're asking what percentage of the Clean Water Fund should be used for projects in these sectors? That's not clear!</p>	7/26/2018 10:25 AM
36	<p>Focusing 75% or more of the resources available to the most cost-effective methods.</p>	7/26/2018 10:24 AM
37	<p>If more funding needed must be provided by group needing it.</p>	7/26/2018 10:23 AM
38	<p>We live downstream of both Rutland and directly downstream Brandon's waste water treatment plants and we are appalled at the amount of untreated waste that flows into Otter Creek and affects our farm. Can we please move waste water treatment plants far away from rivers forcing water to go through acres of reef bed filtration systems first????????</p>	7/26/2018 10:21 AM

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39	All five of the listed land uses listed is important. It would be helpful in your asking this question what %'s of the budget these 5 are allotted.	7/26/2018 10:18 AM
40	Up grading municipal treatment plants.	7/26/2018 10:17 AM
41	Seems like waste water treatment plants are over capacity. Keep getting livestock out of streams and wetlands and work with farmers to reduce or eliminate synthetic chemicals reaching water bodies.	7/26/2018 12:45 AM
42	They all seem really important. Flood resilience and health and safety—these are top priority. Then next is supporting habitats.	7/25/2018 11:52 PM
43	while a larger percentage should be used for ag, the wastewater funds should be focused on reducing or removed sewage overflow systems.	7/25/2018 10:38 PM
44	43 percent is AG. Let's use this money towards the highest percentage of lake problem first.	7/25/2018 5:33 PM
45	Develop our in-state natural resources such as HYDRO-POWER to fuel our energy needs. It has been proven that this can be done without detriment to nature, and in fact with benefits for aquatic wildlife and quality of waterways.	7/25/2018 3:58 PM
46	Missing under all land use categories is the use of pesticides and nitrates both of which negatively affect water quality.	7/25/2018 3:29 PM
47	it is unbelievable that raw sewage is still being discharged due to inadequate separation and treatment facilities.	7/25/2018 10:26 AM
48	Agriculture and the failed wastewater infrastructure in Vermont are the largest sources of nutrient overload into our public waters. If we fail to reduce the nutrient overload now, we will ultimately fail in all our clean water endeavors.	7/25/2018 10:14 AM
49	It baffles me that we are still doing surveys when the major contributor is well-known to be large scale dairy farming. Someone needs to have the courage bring this industry in line with environmental standards or we all need to accept their practices and stop devoting millions to fixing the comparatively minute contributors to water pollutants.	7/25/2018 9:49 AM
50	Please require developers and large commercial farms to pay for most of the expenses of mitigating their pollution	7/25/2018 8:08 AM
51	None	7/25/2018 7:39 AM
52	agriculture needs the most help	7/25/2018 7:21 AM
53	Towns and cities that are polluting should be fined for their "contributions" to the polluted waters	7/25/2018 5:28 AM
54	I drive by a corn farm everyday to work in middlesex on i89. The farmer spread manure literally feet from the rivers edge which corn is currently growing, and is easily seen from the highway. Let's stop the flow of nutrient pollution instead of throwing money at the issue. Consider placing a moratorium on farms in flood plains should be a consideration.	7/24/2018 10:29 PM
55	We think it is time for farmers and developers to take responsibility for any damage they have done and are doing.	7/24/2018 12:01 PM
56	Agricultural non point is supposedly the largest contributor of nutrients to our waters, and investment in this area is most cost-effective, while wastewater contributes a relatively small amount of nutrients but requires high capital investments for diminishing water quality returns.	7/24/2018 9:07 AM
57	I think we need to continue to support the ag issues in the Lake Carmi watershed.... helping farmers change their practices.... stop the run off, build up natural wetlands	7/23/2018 10:06 PM
58	#1 priority -infiltrate and store water where it falls #2 municipal stormwater ordinances to accomplish #1 #3 land management practices to accomplish #1	7/23/2018 12:23 PM
59	Ensure farmers are accountable for best Ag practices! Replace Tibbetts who does NOTHING to help improve water quality. He is a serious obstacle to cleaning our waters. Hold treatment plants accountable for spills. Don't give Ag or treatment plants more money - let them pay for their pollution clean up!! Put the money toward enforcement in these two areas.	7/22/2018 11:45 AM
60	Champlain Water District needs to be monitored for incompetency & lack of transparency. Single-handedly destroying water supply.	7/20/2018 7:04 PM
61	funding needs to include means and methods to address reducing nutrients from river bank erosion	7/20/2018 5:31 PM

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62	If VT claims that they are so green, then stop subsidizing ag and go organic and support that. It will solve all the AG issues. Just see report from organic farmer in leister. If that can't happen make sure injection of manure. We all don't need to smell the farm from miles away. Invest in phosphorus reclamation technology thru hydrothermal carbonization. Also 10' - 20' out on lake hit the weeds and algae with non harmful treatments used in lakes in Michigan and Minnesota I	7/20/2018 4:15 PM
63	Very important to update wastewater plants to prevent contamination from overflow. Educate people to protect water sources.	7/20/2018 12:45 PM
64	The funds should directly be applied to Dana Hill Rd. In Waitsfield VT to protect Millbrook from Run Off.	7/18/2018 9:59 AM
65	The amount spent on Natural Resources protection and restoration gives significant water quality results at a relatively low cost and carries many co-benefits.	7/18/2018 8:52 AM
66	Focus on building soil health and infiltration to keep water in the ground not run off	7/17/2018 10:11 PM
67	Top priorities should be protection of clean water resources and flood resiliency from wastewater, agriculture and road runoff.	7/17/2018 3:07 PM
68	Aging infrastructure of wastewater treatment really needs to be addressed. And since it is most expensive it will require most funds at this point. However, alternative types of treatment other than the conventional/energy intensive methods currently in use need to be researched. Other places in the world utilizing methods that are less energy intensive.	7/17/2018 9:21 AM
69	Emphasis on liquid manure and it's contribution to algae blooms	7/17/2018 6:07 AM
70	More focus on investing in natural resources such as the permanent conservation of private forestland that secure water supply/watershed resources	7/16/2018 8:35 PM
71	Keeping clean water clean is most important	7/16/2018 3:31 PM
72	It is important that we understand that our most important water infrastructure is soil. I have written two books that highlight this: Cows Save the Planet and Other Improbable Ways of Restoring Soil to Heal the Earth and Water In Plain Sight: Hope for a Thirsty World	7/16/2018 1:30 PM
73	n/a	7/16/2018 10:40 AM
74	All of these areas are worthy of investment. Agricultural land and "natural infrastructure" are likely to have the least base funding, so they should get more support. This assume that the public/private owners of developed lands; the state/town/resident owner of roads; and the municipal owner of wastewater systems can provide base funding for improvements in these areas.	7/16/2018 9:52 AM
75	please address the wastewater issues dumping "partially treated" waste water into lake champlain and surrounding areas this needs to stop	7/16/2018 9:33 AM
76	Must do all we can to help support clean drinking water	7/16/2018 8:24 AM
77	Focus funds on and solve one contributing factor at a time. Dispersing funds to numerous varied projects hasn't achieved the desired results (since the 80s). Think about how "single use plastics" has become an international rallying call. This was done by focusing the world's attention on one "small" change that everyone can make. Take a couple of years and focus on septic / waste water treatment! What small change can the average Vermonter make? Meanwhile pour funds into municipal waste water upgrades!	7/16/2018 7:21 AM
78	Accessing federal funds is important as it stretches available monies further.	7/16/2018 7:13 AM
79	The biggest effect we can have is on our natural resources. Use the money to support wetland rejuvenation efforts, please.	7/15/2018 11:15 PM
80	It is extremely disturbing that sewage and wastewater has been spilled into Lake Champlain. We need to protect this natural resource. This is completely unacceptable. We need to do serious cleanup of the Lake by investing money into it and preventing this from happening in the future.	7/15/2018 10:31 PM

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81	Each county needs an agricultural ombudsman. For many farmers the their first encounter with an ag agency official is the "water police". Extension and USDA offices have been shuttered, leaving farmers to their own devices, hence many of the ag related water issues. Need to reintroduce agricultural conservation from the soil Conservation era - cover crops, robust crop rotations, soil testing/manure testing and do not over apply any one nutrient, add animals where possible, reduce tillage, keep soil covered, practice ration grazing with all classes of livestock. All these practices reduce erosion and increase organic matter. None of this is rocket science or new. It may be called by new names but it is still just good agronomic practices. Show farmers that by making changes to their cropping and animal management that incorporate the previous practices they will save money and the ag part of the water quality will solve its self. There are thousands of farmers that have have made these changes and the changes saved the farm, Those farmers are your best ambassadors for getting other farmers to make changes - not new laws or carbon farming.	7/15/2018 9:06 PM
82	The wastewater issues occurring lately is unacceptable. I'd love be apart of fixing the infrastructure and fundraising/lobbying to repair and update our systems. I'm not an expert on waste treatment but I am passionate about our resources and protecting them. Bobbie Hedley bhedley2007@gmail.com	7/15/2018 6:14 PM
83	I would like to see an end to GMO and Bayer / Monsanto products here in Vermont. These are the products that are the most damaging to our soil, our water, our animals, and our people. Unfortunately, our idyllic scene of cows and cornfields is coming to a "change-or-die" phase. Dairy farmers cannot survive in this model. Even distributors of dairy products can see it, as evidenced by recent cutbacks from suppliers. Let us not wait until it is too late to save our tradition of the land. Rather than farm owners lending their land to third party entities for corn, allow the state to furnish them with equipment and resources to grow Organic Hemp. Hemp seed is a viable product to be used for animal feed, as it is high in aminos and omega-3 and 6 fatty acids. Besides the seeds, the hemp crop will produce many other usable products, materials such as concrete, plastic, fabrics, and even biofuels! Also, take a moment to look up "phytoremediation". Nuclear disaster sites have already been growing hemp. If it works for something so drastic, imagine the effects it could have on our lake, our so called "crown jewel". The field of mycology has become aware of how important fungi are to our soil and our natural systems; I believe these methods warrant investigation, evaluation, and implementation. I also believe our wastewater systems also could be harnessed to provide properly treated fertilizer	7/15/2018 1:32 PM
84	make the best of fed \$ available : wastewater system upgrades-and stop dumping sewage in our beer water...jeez huh?	7/15/2018 8:49 AM
85	What about residential!?! All of the Vt residents they have companies come to fertilize their lawns? Run off from these companies?	7/15/2018 2:29 AM
86	Protecting our high elevation head waters and wildlife habitat should be a top priority	7/15/2018 12:46 AM
87	It is necessary to develop both an expertise based strategy and ongoing funding mechanism for stakeholder buy in to initiatives at the local, regional and watershed levels and to at the same time work at a continuing stakeholder based mechanism for measurement of satisfaction of ecological goals of restoration and protection of public health and wilderness ecological health where stakeholder and expert science based measurements are compared and the two forms of knowledge are compared and can be both used to develop action items for implementation for compliance and local support of ecological visions and goals, including meeting NPDES II compliance.	7/15/2018 12:05 AM
88	Any available funds should be spent making sure we don't "accidentally" release MILLIONS of gallons of sewage into our lake! Fix the failing water treatment facilities!	7/14/2018 11:32 PM
89	Global climate change will mean increased water management needs in the near future specifically for Vermont. We need to be ready.	7/14/2018 10:11 PM
90	Stop flooding the lake with wastewater runoff.	7/14/2018 3:46 PM
91	The sewers gush millions of gallons into water all the time - fix the biggest problem first. And ask Montreal do the same!	7/14/2018 3:27 PM
92	Agriculture and wastewater should pay the costs of cleanup for the pollution that they produce.	7/14/2018 2:41 PM
93	Public health is at risk with our wastewater dumping into waterways. There should be a pristine lakes and rivers standard. Otherwise our natural waterways are not any different than any industrial pollution outpipe. Fines to the individuals and the municipality for endangering public health!!!	7/14/2018 2:19 PM

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94	Especially in counties bordering and having tributary Lake Champlain, the wastewater infrastructures are woefully outdated. And in Chittenden County, the out of control development has created a situation where the current condition of the facilities can't even handle the load. The state needs to put a halt to all current and future development in Chittenden County until these facilities are brought up to date and expanded to handle the future estimated waste load out to 2050	7/14/2018 1:24 PM
95	Cities need to stop dumping fecalmatter	7/14/2018 1:04 PM
96	Stop talking and begin action!!!	7/14/2018 12:25 PM
97	Fix the waste water system so you stop dumping millions of gallons of untreated or partially treated sewage into the lake.	7/14/2018 11:47 AM
98	I believe we need to focus funds on protecting lake Champlain from aging infrastructure, like CSO's as well as Ag runoff	7/14/2018 11:19 AM
99	FIX BURLINGTON AND OTHER SEWAGE PLANTS! THIS IS AN OUTRAGE HOW MUCH WATER HAS BEEN DUMPING INTO LAKE CHAMPLAIN	7/14/2018 9:53 AM
100	Projects to lower lead levels in drinking water	7/14/2018 9:29 AM
101	Hold Burlington financially accountable for multiple million gallon dumps and spills and money would be plentiful..	7/14/2018 9:28 AM
102	Storm water should not go into treatment facilities. It needs to be addressed at the local site, and plants can take up the treatment of nutrients. Individuals can also reduce their water usage with available technologies or awareness.	7/14/2018 8:37 AM
103	Build a Levi system around Burlington so their filth stops pouring into the lake. Abbas further more change the laws for all state plants to stop dumping into our water ways	7/14/2018 8:14 AM
104	The state should be pursuing using drain-able paving as a standard and not as an aside. Certainly for all sidewalks and parking areas. Get real about the condition of our ancient waste water treatment facilities. Reporting with no penalty is not a reasonable system.	7/14/2018 7:56 AM
105	Make funding available to agriculture for the purchase of equipment such as drag line manure systems. These systems nearly eliminate all tractor traffic on the road and help to reduce compaction in the fields and can also make incorporating manure into the soil easier and more efficient. Removing tractor traffic from the roads will in turn reduce the damage caused to roads and help slow road deterioration that causes towns and the state millions of dollars.	7/14/2018 7:04 AM
106	Fix wastewater treatment plant in Burlington to stop sewage from going into lake Champlain!!	7/13/2018 9:31 PM
107	Agriculture needs it the most.	7/13/2018 9:10 PM
108	Stop Burlington discharges	7/13/2018 7:31 PM
109	It's very important to clean up Lake Champlain it's far too valuable to lose you need to go in and extract these weeds don't spend all the money on surveys spend it in the water	7/13/2018 6:56 PM
110	Developers and farmers should be responsible for their own	7/13/2018 2:51 PM
111	Waste HAS to be addressed. As of July there have already been discharges of 21+ millions gallons of partially treated and untreated sewage and waste water into the Champlain watershed. Current infrastructure is obviously unable able to handle the current loads, especially after storms. Too much focus on farmers/croplands that are already abiding by nutrient management plans!	7/13/2018 1:13 PM
112	Public money should be used for public projects, not given to private business to correct their wrongdoings.	7/13/2018 12:57 PM
113	The issue of what to do has been going around for years here in Vermont - it's time to stop talking about it and actually do something. Including enforcing what regulations/rules/statutes we already have in place. No one likes to problem but it seems that policy makers and enforcement agencies keep handing out "passes".	7/12/2018 8:56 AM

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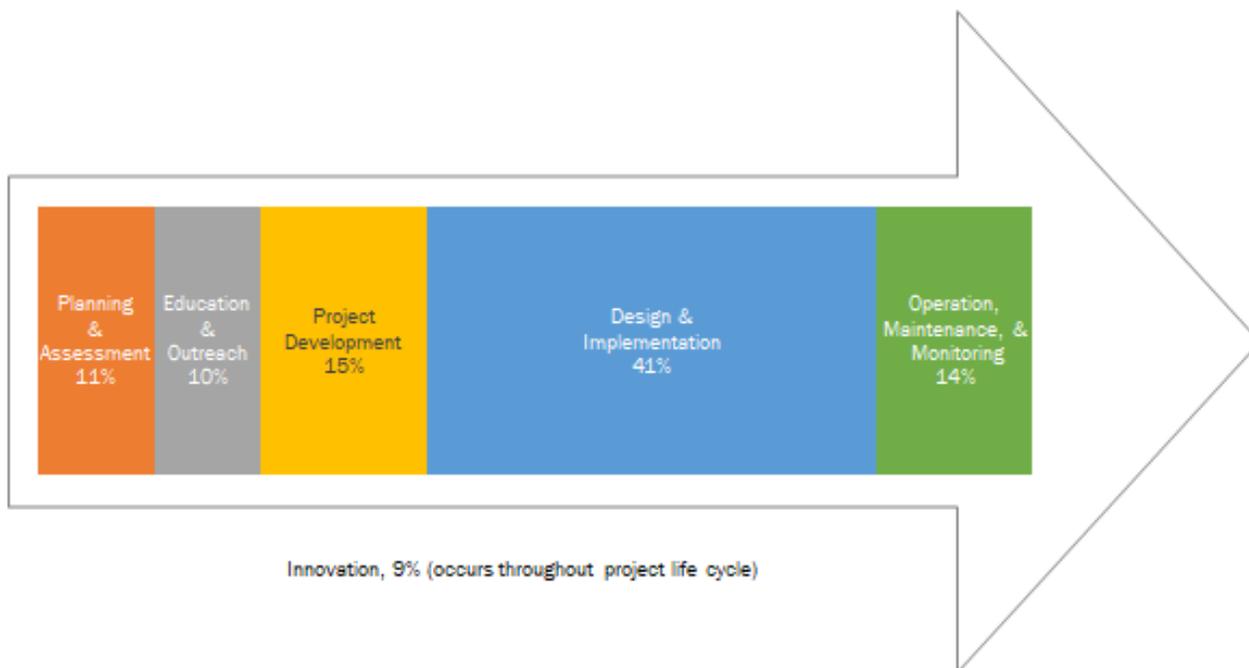
114	<p>sunset all pollution fix funding that has been needed due to insufficient land stewardship/mgmt. Incent public funding for protection of areas of high public value, including wq protection features including recharge and hi infiltration soils/geology,river corridors, wetlands, tribs/flow paths, lakes/ponds. REDO the pie chart to show natural areas/"resources" such as rivers that are impacted by the adjacent landuse sector such as developed/ag. /roads. To fix the river, we must fix the land use. Include all galcail lacustrine acreage in its own category of "at capacity" lands thatt must have no alterations or exceptional or optimal conservation practices/stewardship, especially with in the large lake zone. All mgmt must acknowledge clay particle size and extreme weather impacts..</p>	7/11/2018 12:53 PM
115	<p>The ability to leverage federal funding streams and prioritize multiple objectives including public health are very important. Additionally, providing education, technical assistance, and opportunities for public engagement across the spectrum should be considered.</p>	7/10/2018 12:00 PM
116	<p>Seems that other state and local funds should cover roads and that land developers and big business (i.e. large retailers, general contractors, etc) should fund the rehab of developed lands. Without agriculture in our state, our rural communities will collapse and farmers are already shouldering more than their fair share of the solution.</p>	7/10/2018 11:26 AM
117	<p>I believe there are more dangers with the wastewater being dumped into the lake, than there is with Agriculture. Though Ag can use more assistance when it comes to funds.</p>	7/10/2018 8:40 AM
118	<p>Agriculture is doing its job - very well. They do NOT need any more pressure. Put the pressure on urban issues and roads. Teach the public what they are doing is wrong. Farmers are doing it right. Just not enough money to do everything they want to do. Price of milk, hay, and MANY other commodities are VERY, VERY low. MILK IS THE LOWEST.</p>	7/9/2018 7:46 PM
119	<p>Agriculture has sufficient funding opportunities through other state and federal programs</p>	7/9/2018 6:29 PM
120	<p>Roads are a developed land. Breaking them out is a confusing addition to the survey. Also, state funding for private businesses (e.g. agricultural operations) is a tricky place to me. This makes the Agency of Ag both the regulatory and the advocacy agency for private business in the state. Should Clean Water funding be distributed to these entities in anything other than a low interest loan?</p>	7/9/2018 9:20 AM
121	<p>runoff</p>	7/9/2018 5:56 AM
122	<p>It is hard to answer this question without ready access to the percentage of impacts from each land use.</p>	7/8/2018 10:30 AM
123	<p>Need to help farmers rebuild the soil carbon sponge.</p>	7/7/2018 8:32 AM
124	<p>This survey is shockingly disturbing to me as a 25 year dedicated, outgoing aquatic biologist and shoreland manager in the Watershed Management Division. I can not support this survey as there are NO funds going towards Vermont's 800 inland lakes. Lakes is NOT even mentioned, yet rivers and wetlands are. Sorry to use a survey to get heard, but our lakes bring in millions of dollars annually to our economy and yet despite repeated attempts to point this out to the Clean Water Initiative Program Staff, Vermont lakes remain excluded from support from the Clean Water Funds. At this point with how these funds are being distributed, I do not have faith that our surface waters will ever get cleaned up and will not be able to complete this survey.</p>	7/6/2018 2:37 PM
125	<p>We need to intelligently transition away from conventional dairy. By and large water quality funds are being wasted on manure pits and barnyard improvements. This is doubling down on the system that created the problem and organizations that spend money on these practices are part of the problem. Please don't be part of the problem. Fund transitions rather than putting bandaids on a broken system.</p>	7/5/2018 5:27 PM
126	<p>Do you mean sewer or stormwater when you say "wastewater?"</p>	7/5/2018 1:08 PM
127	<p>Water quality and flood control begin high in watersheds. Don't ask roads, hard infrastructure and other engineered measures to do what farmers and foresters and their soils, need to do. When pollutants and runoff have reached ditches and stream channels, the fight has largely been lost.</p>	7/5/2018 10:12 AM
128	<p>If farmers are supported in adopting regenerative practices and building healthy living soils there would be far less need for inputs (fertilizers, pesticides) that ultimately end up in our ground and surface waters. Also, building the soil carbon sponge will result in higher water infiltration rates, improved resiliency to flooding and drought, and reduced water use for irrigation.</p>	7/5/2018 9:28 AM
129	<p>The above question is too simplistic! Funding should be used in all areas but there are specific areas that need extra work; helping agriculture make sound environmental choices and support infrastructure changes to remove sewerage overflow.</p>	7/4/2018 10:46 PM

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130	Go after two largest sources of phosphorus. Do it soon before it's too late. Farming isn't as important as before - don't treat agriculture as sacred. If Vermont farmers are not competitive, then they should close - not be propped up by Vermont and the Fed.	7/4/2018 10:48 AM
131	its hard to not asses more percentages to each area. as all are so important im not sure this question is going to provide an accurate data set for you. possibly break it into a couple of questions.	7/3/2018 2:31 PM
132	More is needed for project development.	7/3/2018 12:31 PM
133	we need more action orientated projects with completion of goals ,not more meetings to set up more meetings to talk about more meetings to plan more meetings	7/3/2018 9:03 AM
134	Farms have long been identified as the major source. How about the state paying the farmer to leave undisturbed any and all lands susceptible to flooding, in the floodplain or deemed a medium or larger threat to any watershed.	7/3/2018 8:35 AM
135	The amount of run off gcreated from development seems to far outweigh the natural and ag Contribution to this problem.	7/2/2018 4:28 PM
136	Providing separate percentages for roads and developed lands is difficult because these impervious surfaces are typically co-mingled in the real world.	7/2/2018 2:54 PM
137	Agriculture is biggest problem, roads are important to the economy.	7/2/2018 2:33 PM
138	We need more enforcement of agricultural rules concerning water quality. Same is true of forestry operations. There are a lot of bad operations using poor techniques.	7/2/2018 12:38 PM
139	I think working with agriculture and development to improve water quality will most preserve the water and the aesthetic appeal of the state. I don't think the stone ditch lining on backroads is grounded in proven science and it looks horrible. Washing rocks is the most asinine thing I've heard of in quite a while.	7/2/2018 12:29 PM
140	Need more focus on practices that have long-term benefits rather than ones that will need replacement in 10 - 20 years as most stormwater treatments do.	7/2/2018 11:42 AM
141	Enforce farms to comply with standards	7/2/2018 10:53 AM
142	Natural Resource projects leverage federal funds also. As well as Foundation funding. All Ecosystem Restoration grants require 1 to 1 match. You should list that.	7/2/2018 10:49 AM
143	protect the best, restore the rest	7/2/2018 10:28 AM
144	We first have to fix our aging infrastructure. The sewage dumps are avoidable.	7/2/2018 10:21 AM
145	Focus on natural resource protection and enhancement and then cost efficient projects in other sectors.	7/2/2018 10:11 AM

Q2 Assign a percentage of the Clean Water Fund that would support each project activity listed below. Your percentages must add up to 100.

Answered: 279 Skipped: 45



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Design and Implementation	44	11,920	269
Project Development	16	4,240	259
Operation, Maintenance, and Monitoring	15	3,914	255
Planning and Assessment	11	2,904	254
Education and Outreach	11	2,673	254
Innovation	10	2,249	231
Total Respondents: 279			

Q2 Additional Comments

Answered: 106 Skipped: 218

#	RESPONSES	DATE
1	It's way easier to get money for design/implementation (state capital funds, NRCS funds, for example) and for innovation (private foundations) than for any other project activity. We need more money especially for project development, but also edu & outreach and planning & assessment. *MOST IMPORTANTLY* I believe we need targeted money for operation, maintenance and monitoring. Too many installed projects have lost their effectiveness before they should have, even when landowners committed to operations and maintenance. For example, many tree planting projects have failed or partially failed and it is WAY TOO DIFFICULT to find money to monitor, steward, or, when necessary, re-plant these sites. US Partners for Fish & Wildlife is making important contributions on this front, but additional funding and partners are needed. Permeable pavement is another example of projects that can be effective but need more support for operations and maintenance.	7/31/2018 3:36 PM
2	If previous implemented projects for given sector have been successful in regards to pollution prevention results gained per cost to achieve, insure similar future projects are given priority for funding allocations.	7/31/2018 2:52 PM
3	Monitoring is critical, both to baseline existing conditions and to measure changes to water quality after projects are completed. Innovation should largely be left to the private sector, though the State should encourage use of proven and innovative solutions in design and implementation.	7/31/2018 12:16 PM
4	Innovative practices have been implemented in difficult situations with positive results for P and N reduction.	7/31/2018 12:14 PM
5	Without maintenance, many projects fail over time. DEC does not require tree plantings, for example, to be monitored or dead trees replaced. They count the results of a riparian buffer in their reports, without knowing if the buffer survived... And good organizations go back and check and maintain projects, incurring a financial and time cost that is not compensated...	7/31/2018 7:36 AM
6	Another issue in my neighborhood is people using Trugreen chemicals to spray their lawns, which goes down into the ground into the water supply. I have tried to get a report of chemicals from Trugreen and they wouldn't share the info. If the state is spraying any type of pesticides at state camps or roadways, stop this now. And, farmers must go organic, no pesticides to kill weeds.	7/30/2018 1:53 PM
7	Without adequate assessment, planning and project development, you will not be able to develop appropriate projects and will waste capital dollars on ineffective projects. Education and outreach is needed to garner public support for clean water investments as well as engage everyone in developing solutions.	7/30/2018 1:42 PM
8	We again, do not feel that we are in a position to suggest how resources should be focused / prioritized among these project activities. However, we do have comments. Monitoring and enforcement of existing methodology is missing on a consistent and reliable basis - so we don't know what actually is working and what isn't with respect to ag. (eg. NMPs, RAPs, tile drainage, etc.). Currently the VAAFM is hoping to visit SFOs once every 7 years, MFOs once every 3, and LFOs once each year. This is inadequate in terms of monitoring, enforcement, assistance, education, etc. "Innovation" is also framed in terms of mitigation - focusing on "nutrient pollution removal" - and this is problematic. As suggested in our previous comment, we feel that mitigation is important, but more critical are adaptive and transformative practices, projects, and systems and funding supporting them. We must not just be focusing on removal of nutrients, but making sure we aren't releasing them anymore, and are actually using them effectively with the lowest energy input possible. We must be moving towards a vision of systems (particularly agricultural) which are not contributing to water pollution (not just nitrification), and this requires funding just transitions towards systems of all scales which generate water quality and ecological services, and reduce external inputs: silvopasture and agroforestry, adaptive grazing, phasing out pesticide use, reduction of external inputs and fossil fuels, cover crops, viable local economic models valuing ecosystem services and just livelihoods for farmers, etc. We need more funding and monitoring of these systems to understand their impact at various scales, as well as education (including youth, farmer to farmer, policy makers, etc.) and technical assistance with respect to adopting them.	7/30/2018 1:41 PM

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9	1) Planning and Assessment and Operation, Maintenance, and Monitoring should be combined. 2) Education and Outreach and Project Development along with Innovation should be combined. There is a great deal more opportunity for networking and comprehensive understanding of expected outcomes if these different areas are more interconnected. Plus I believe certain amounts of funding can be partially supported by municipalities relative to the assessed needs and urgency to address issues respective of that community.	7/30/2018 11:04 AM
10	We know where the problems are. We need to remove cost share restrictions on ag and get the needed agronomic practices to manage manure on the landscape done. No more state funding should be used to expand manure storage on farms it has no benefit to water quality.	7/29/2018 7:13 AM
11	There is a project in the mid west that is called wetland initiative.They have been working with farms for a long time.	7/27/2018 11:32 AM
12	How do you design and implement a project without first planning and assessing what needs to be done with this project? "Capital Dollars" are hindered without the support of a TEAM in place to be sure that those dollars are used correctly and used in a efficient manner. If we were to look at a 24 inch culvert and say it was "failing", replace it with a another 24 inch culvert without actually taking the time to look at the hydrology and soil structure and that culvert "Fails" due to an extreme rain event. How are those funds cost effective when the project needs to be re-assessed and fixed again. Wouldn't the state take the approach of doing it right the first time. Instead of assuming... having a plan is essential. And moving forward in a timely manner is also essential. Not make a plan and sit on it for 2 years. There has to be constant contact to move communities and projects forward. Always "checking-In" it is helpful. It re-aligns the mission of what your intention is to be. Project development will arise from those communities having that contact. That stability, the team. Operation and Maintenance is key. It goes back to the culvert. If we put the culvert in and never go back to see how it is being effective how do we learn anything from these practices that we put it? Who is to police this? How do you force to do operation and maintenance on any project, Stormwater GIS systems, Silage leachate Collection systems, Bio-Retention Facilities... Wastewater Treatment Plants. Design, it is essential but not when the engineers are taking you to the cleaners. We tend to spend a lot of money on design. Engineering firms know their market and they know that the state has several dollars for this... how do we hold engineering firms accountable. Does the state have their own engineering firms to help cut costs?	7/27/2018 9:02 AM
13	All work, except monitoring and oversight should be done by private sector emtoties	7/27/2018 8:14 AM
14	Operation Maintenance and Monitoring should fit a certain criteria such as there was a failure beyond a person or departments ability to predict (like the roof blowing off a structure due to a microburst)	7/26/2018 10:10 PM
15	Monitoring should be happening because how do you know if taxpayers money that was spent is actually making a difference?	7/26/2018 9:47 PM
16	We need projects. There have been too much time and money spent on studies	7/26/2018 6:46 PM
17	We have been studying the problem for years and have spent millions on education and outreach. It is time to act.	7/26/2018 3:58 PM
18	RPC staff are very familiar with local issues in their towns. Leverage their expertise and their local relationships by having them provide education and outreach in their towns. Develop and adopt site specific, flexible and innovative practices for SW management that is calibrated to a transect of built and natural environments. (Avoid use of land intensive suburban type LID/GI in urban settings). Develop something like ACCD's designation program for SW to encourage redevelopment of existing places in the smallest footprint possible, incentivize new development in the compact and walkable patterns in places where it makes sense for it to be located. In a nutshell, view your role as helping to shape/enable growth thoughtfully and in a manner that supports smart SW management and conserves resources.	7/26/2018 2:42 PM
19	Project development such as meeting with project partners, site visits, and assisting communities in applying for funding to implement water quality projects is a key component to moving a project forward. Funding for project and grants management to support municipalities in implementing clean water projects is also a key factor in moving a project forward to final design and implementation, and through those last few phases to project fruition.	7/26/2018 1:32 PM
20	innovation should be part of the planning and assessment stage	7/26/2018 1:11 PM
21	Just get it done! Planning cycle too long - action is needed now before the Lake is not swimmable. It seems the Governor doesn't care about the Lake - too bad since it is a big driver of the economy in Chittenden County - far more than Thunder Road will ever be for Washington County.	7/26/2018 12:34 PM

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22	Study is taking to much time. Pooling information with other states would be helpful	7/26/2018 11:22 AM
23	Ongoing operation, maintenance, and monitoring seems just as important as designing and implementing. If you don't have a long-term plan (with funding) for the project, what's the point?	7/26/2018 11:19 AM
24	Spend money on real work, not meetings, admin	7/26/2018 11:12 AM
25	have you monitored for compliance all the work done so far? How do you know it is working?	7/26/2018 11:10 AM
26	Some comment why there is currently no money for innovation would have been helpful. It is a feasibility problem? Innovation is ALWAYS needed, but maybe with the State of Vermont through this mechanism it is not possible.	7/26/2018 10:23 AM
27	Innovation is key all waste water systems are antiquated and we need new ideas everywhere. Vermont is not monolithic and one size can't fit all.	7/26/2018 10:23 AM
28	X	7/26/2018 12:47 AM
29	I think more should go toward maintenance than what it is currently	7/25/2018 11:55 PM
30	How can you be sure your projects are working if you do not test before and after? AND who does the maintenance?	7/25/2018 10:42 PM
31	Use all monies to implement treatment of lake, ie herbicides, injection of manure or implement of organic farming.	7/25/2018 5:36 PM
32	It is most important to raise awareness, so there is a better understanding of the options available and the advantages/disadvantages of each project.	7/25/2018 4:02 PM
33	I'm sorry but I don't find this format of assigning percentages to be useful. ANR/DEC is part of the problem, where on the one hand there are good scientists attempting to do good work, and then DEC permits all kinds of pollution in total contradiction to what your other programs are doing. The schizophrenia within the Agency is a big problem. How does that figure into the percentages?	7/25/2018 3:49 PM
34	If you cause/caused the pollution you are responsible to clean it up.	7/25/2018 3:34 PM
35	Committees have been forms, plans have been studied, research has been done, endless meetings have been held. Now it's time to stop the studies and do something tangible.	7/25/2018 3:15 PM
36	Too much talk not enough action	7/25/2018 12:50 PM
37	Seems to me that Planning, education, and development are 3 ways to say "finding projects". The Natural Resources Councils can help.	7/25/2018 11:21 AM
38	We are long past the time for "planning and assessment" as well as "education and outreach". The time to act is now. We must reduce the nutrient overloads into our public waters, or face a future of "water wars" as States escalate the fight over clean water sources and access.	7/25/2018 10:20 AM
39	Monitoring of farms waste control needs more oversight.	7/25/2018 10:18 AM
40	Your percentages seem sensible. Innovation should be included and invited in every stage.	7/25/2018 9:52 AM
41	Please ramp up enforcement. I did not see that as one of the choices.	7/25/2018 8:12 AM
42	None	7/25/2018 7:43 AM
43	just need to get some things DONE	7/25/2018 7:23 AM
44	Too little money has so far been devoted to outreach and education, which has strong long-term benefits.	7/25/2018 7:15 AM
45	adopt a revegetation performance standard for all projects that disturb soils. See Colorado research: https://www.codot.gov/programs/research/pdfs/2015-research-reports/assessment-of-cdot-revegetation-practices-for-highway-construction-sites/view See recommendations in Composting Association Soil Policy paper: http://compostingvermont.org/wp-content/uploads/2015/03/Soil-Policy-in-Vermont-FINAL-170110.pdf	7/23/2018 12:30 PM
46	We already know what needs to be done--let's just DO it.	7/22/2018 4:32 PM
47	Nothing there about accountability after solutions are developed or tried.	7/22/2018 11:49 AM
48	Innovation is important but should be funded via separate avenues (e.g. NSF)	7/20/2018 7:56 PM
49	The problem is simple. Eliminate or recover phosphorus from farms in watershed which is the majority of the problem. Aquatic herbicides are very effective in controlling milfoil. Use them.	7/20/2018 4:20 PM

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50	More monitoring of completed works needed. More preliminary study of innovative ideas.	7/20/2018 12:49 PM
51	All aspects should reflect a public education theme.	7/19/2018 9:13 PM
52	If there isn't money to develop projects it is very difficult to bring projects to implementation. In addition education and outreach are extremely important at the local level and these important activities are chronically underfunded.	7/18/2018 8:55 AM
53	Don't have opinion about this	7/17/2018 10:11 PM
54	Funds for innovation may be costly up front, but often bring improved practices/ methods that are lower cost in the long run.	7/17/2018 9:27 AM
55	Monitoring the effectiveness of BMPs is vital to implementing measures that work. Thorough monitoring of existing efforts can inform better design in future endeavors.	7/17/2018 7:48 AM
56	citizens must learn the importance of protecting clean water and NOT wasting water	7/16/2018 3:33 PM
57	We can enhance water infrastructure by building healthy topsoil and change our agriculture priorities from commodity yield to ecological function.	7/16/2018 1:34 PM
58	Overall my recommendation would be to spend more on monitoring/evaluation and innovation, which may reveal efficiencies or better ROI that in theory could retain more dollars for project development/design/implementation.	7/16/2018 10:02 AM
59	How can we implement new ideas if we can't maintain the existing ones?	7/15/2018 11:17 PM
60	We need to implement new projects now to clean up Lake Champlain. We need better monitoring of what is going into the Lake as well.	7/15/2018 10:34 PM
61	NRCS has cause as many problems and left bad blood with many farmers- too rigid and cost prohibitive	7/15/2018 9:08 PM
62	* this is guesswork by an unqualified person-grain of salt please	7/15/2018 8:53 AM
63	the proportions of money used in the budget items should be reviewed with the stakeholders and experts on a regular basis	7/15/2018 12:07 AM
64	There has been so much planning! Let's get on with it..	7/14/2018 11:10 PM
65	Innovation MUST be considered	7/14/2018 5:35 PM
66	Develop a project that prevents wastewater from flooding into the lake.	7/14/2018 3:48 PM
67	Stop fiddling around with nonsense and fix the several sewer systems that pump shit into our waterways. Fine towns that do this and shrug their shoulders. Fine farms that are egregious violators.	7/14/2018 3:29 PM
68	No to innovation. Use common sense fixes	7/14/2018 2:21 PM
69	Stop the fooling around and put the most money possible into updating and maintaining a new system	7/14/2018 1:29 PM
70	Fix it so the sewage stops being dumped into rivers and lakes	7/14/2018 11:49 AM
71	We need to focus on replacement costs for aging infrastructure	7/14/2018 11:20 AM
72	Even the basics would help us .. let's do things!!	7/14/2018 9:30 AM
73	Action required.	7/14/2018 8:40 AM
74	Build human waist digesters. Create clean energy from human waist	7/14/2018 8:16 AM
75	The water fund does not have enough money to make a meaningful change in our water quality because the projects, like sewer, are enormous. But letting towns know what is the latest and greatest is money well spent. Our town in the last 8 years did a lot of down town development in paving, sidewalks, etc mostly after Irene. There was little or no encouragement from the state to look into or access the overall benefits of drainable surfaces especially in areas proximate to a river.	7/14/2018 8:02 AM
76	We study too much, the solutions are often obvious and easy to achieve.	7/14/2018 7:06 AM
77	Na	7/13/2018 9:32 PM
78	Innovation is key.	7/13/2018 9:13 PM

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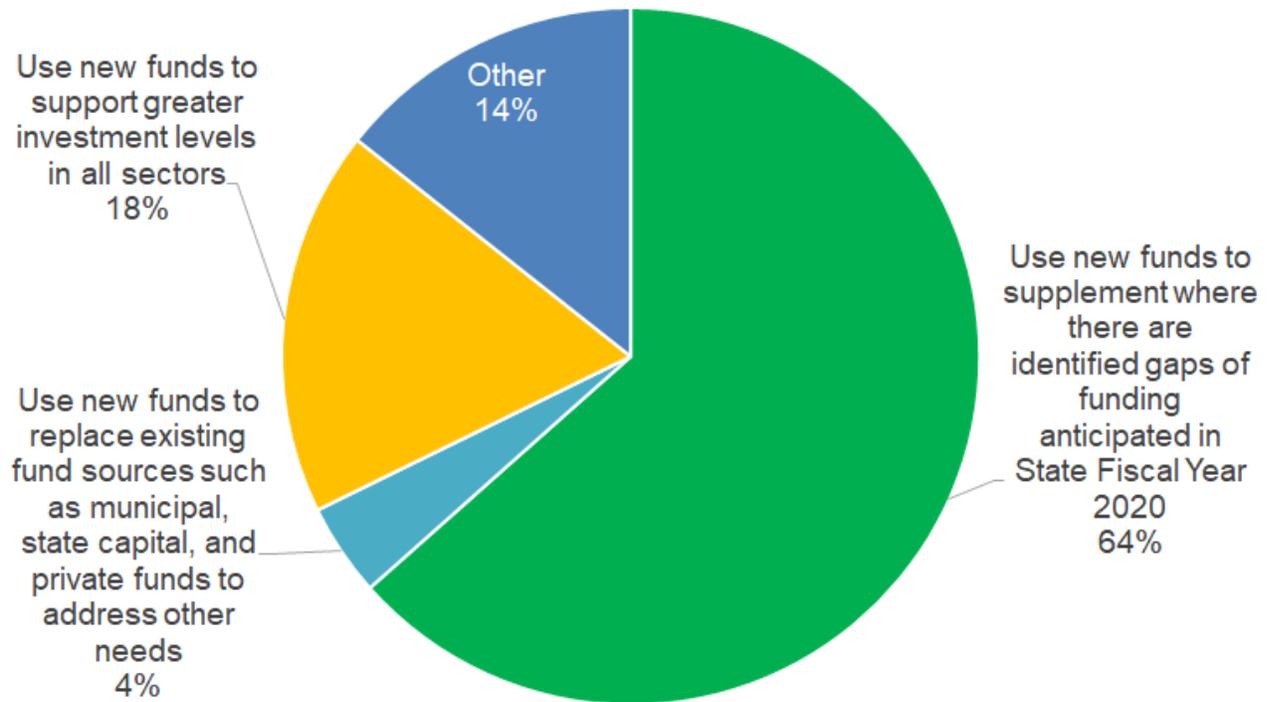
79	You need to get rid of all the restrictions for cultivating milfoil	7/13/2018 7:00 PM
80	O&M needs to be the owner's responsibility and should not be grant eligible. Monitoring is important so that we understand where the problems are and address them.	7/13/2018 2:13 PM
81	At this point, one would hope, after years now, that planning and assessment, education and outreach and project development should have been (or be) completed. Minimal dollars should be assigned; enough to provide for questions or changes in the plan. The lions share of funding should be allocated to implementation with the remainder focused on monitoring outcomes, and, if necessary improving Innovation. I believe there is not much in the way of innovation at this point.	7/13/2018 1:20 PM
82	The 3% for operation, maintenance and monitoring is weighted toward increased monitoring. The results from monitoring are important in informing changes to practice and making sure we are maximizing our investments.	7/13/2018 11:46 AM
83	you know these numbers, base future numbers on high quality work that has succeeded. include O&M, and education. we should know the complete picture and then decide who should fund which tasks	7/11/2018 12:58 PM
84	This assumes a static distribution, clearly, funding can be dynamic for example with years where planning and assessment take priority. It's unclear specifically what funds in each bucket are doing. Minimizing overhead while ensuring prioritization of projects and auditing on the ground implementation should be obvious overall goals.	7/10/2018 12:06 PM
85	Tap partner organizations to help with Education & Outreach in their existing programs and networks. Need to do more monitoring to be able to speak to the environmental & financial effectiveness of projects implemented to have more people implement. I would expect Innovation to happen during development, design, and implementation so it does not need its own bucket of funds.	7/10/2018 11:30 AM
86	Build the project pipeline early with a higher % of funds to scoping/planning and then the design/construction % will grow with time. Also, it is my understanding that the CWF was never considered as a source of funding for municipalities O&M costs. Has this changed?	7/9/2018 9:22 AM
87	More people should know how they can make a difference for their watershed. Monitoring helps show where we need to address and implement design projects.	7/9/2018 6:03 AM
88	Education of farmers on the benefits of developing the soil carbon sponge.	7/7/2018 8:36 AM
89	I would assign the same percentages as you	7/5/2018 1:10 PM
90	Monitor, monitor, monitor. Can't manage what you don't measure.	7/5/2018 10:13 AM
91	Educating farmers on the benefits of adopting regenerative soil practices is essential in helping them to transition from conventional methods to regenerative agriculture. Cooperatives could be created to offset cost of any special equipment needed, and for support during the transition.	7/5/2018 9:34 AM
92	Again, simplistic. Different projects will require different support activities.	7/4/2018 10:51 PM
93	As many years as we have worked on getting funding to do something about the lake plus the studies, it would seem to me that areas of concern would have already been identified with projects to remedy. Am I wrong in thinking none of this was in the works, shovel ready??	7/3/2018 8:43 AM
94	We know what we need to do; we need to build the stakeholder support to do it.	7/2/2018 8:20 PM
95	Provide more money now to identify and develop projects. Over the short term (the next 2-4 years) shift some of this money to design / implementation.	7/2/2018 2:56 PM
96	Don't know difference between design and development. Education and outreach is vital to long term success.	7/2/2018 2:38 PM
97	There are a lot of other funds, such as federal funds, that can be used on project implementation. Various groups need more funding to help them develop projects--this step takes time. I am not convinced that the innovative practices are all that practical. The bubbler in Lake Carmi is a boondoggle, it is not improving water quality at the pollution source.	7/2/2018 12:41 PM
98	I think the education and outreach portion should be increased. Especially when it comes to farmers the state needs to knowledge that they're already working 100s of hours every week just to do their business. Learning water quality regulations and best practices takes time many don't have and making it easy for them is important. Farming is a way of life, not a job. It needs to be treated as such and education efforts should take that into consideration.	7/2/2018 12:34 PM

Clean Water Fund State Fiscal Year 2020 Questionnaire

99	Need more funds for project planning and development until there are enough good projects - STATEWIDE - ready for implementation.	7/2/2018 11:49 AM
100	these values are initial years, the project development % should decrease over time	7/2/2018 11:44 AM
101	There must be sufficient money to fund planning, design and development so quality projects get in the pipeline for implementation.	7/2/2018 11:33 AM
102	Don't let ANR interject its political philosophy into this process. Work statewide with small and large local consultants. Minimize ANR involvement.	7/2/2018 10:53 AM
103	Projects need money to be designed (engineers aren't cheap)! Put the most money where we get real results (not studies etc. on innovation)!	7/2/2018 10:52 AM
104	phosphorus particularly hard to track and connect to project implementation; keep an eye on the long term and revise unrealistic expectations of immediate results	7/2/2018 10:34 AM
105	The more people know about these problems, the more passionate they'll be, and the more pressure they will put on politicians.	7/2/2018 10:22 AM
106	Part of planning and assessment and project development should include targeting in on those actions that achieve the highest benefits at the least cost.	7/2/2018 10:16 AM

Q3 How should the State treat any new state or federal funds?

Answered: 279 Skipped: 45



#	OTHER (PLEASE SPECIFY)	DATE
1	The State should assume no new State or Federal funds and plan/budget accordingly.	7/31/2018 1:20 PM
2	work to ensure runoff from conserved lands is as low as possible by providing 90 to 100% grants for implementation. Such assistance could very well prompt landowners to enroll their land in conservation programs. Conserved land where development will not occur is the best BMP in the tool box.	7/30/2018 9:08 PM
3	By stopping the govern't funded pesticides going into our waterways and other uses in the state, they should use this money for the gaps of funding. Look at what has caused the problems, find out the sources, and eliminate these activities and transfer this fund savings for new and healthy activity for the state's water and waste issues.	7/30/2018 2:18 PM
4	Private and municipal only	7/27/2018 8:25 AM
5	to clean up carmi	7/26/2018 4:27 PM
6	The state should buy riparian corridors along all rivers and prohibit from 2020 all building in flood plains and buffer zones up to 500 plus feet.	7/26/2018 10:26 AM
7	Use to clean up agriculture first. It is the biggest polluter of lake	7/25/2018 5:40 PM
8	Until ANR and Ag stop permitting so much pollution, it's pretty hard to speak to where more money should be spent.	7/25/2018 3:53 PM
9	increase enforcement.	7/25/2018 3:39 PM

Clean Water Fund State Fiscal Year 2020 Questionnaire

10	The state should use any new funds to upgrade our deficient wastewater plants to stop the discharge of millions of gallons of untreated wastewater into international waters and waters of the state.	7/25/2018 11:27 AM
11	Listen to th3 Governor and pay down the dam residential and non residential property taxes	7/24/2018 10:34 PM
12	The State should use any new funds to supplement where there are identified gaps of funding anticipated in State Fiscal Year 2020, primarily in the agricultural sector and to a smaller extent, in the wastewater treatment sector.	7/24/2018 9:13 AM
13	Zero discharge, from agriculture and developed land, stop growing corn, feeding corn to dairy cattle	7/23/2018 12:33 PM
14	The state should pay farmers to change their farming practices to organic without the use of inputs that put all the pollutants in the water in the first place.	7/21/2018 8:46 PM
15	Implement the suggestios made	7/20/2018 4:23 PM
16	Aggressive public educational programming.	7/19/2018 9:22 PM
17	The state should use funds to both better control (1) 50% and help improve (4) 50%.	7/17/2018 3:15 PM
18	The State should seriously look at biological means of cleaning water rather than assume that it is an engineering problem.	7/16/2018 1:36 PM
19	The state should use the opportunity to already have contingency plans ready for increases or decreases in funding so that logic based and stakeholder accepted goals and objectives can be discussed and agreed upon when new funding is available on an ongoing basis.	7/15/2018 12:09 AM
20	New funds should be preparing us for climate change in Vermont.	7/14/2018 10:15 PM
21	State should invest in innovation...new ways to do the work. Outside the box ideas	7/14/2018 5:36 PM
22	Replacing aging sewer infrastructure. This is simple. Do it.	7/14/2018 3:31 PM
23	The polluters (farms, city governments) should pay to clean up the mess that they have created.	7/14/2018 2:44 PM
24	The state should back off from ag which has already been completely compliant and focus on updating and modernizing wastewater treatment	7/14/2018 1:33 PM
25	Use all funds to fix the raw sewage being dumped into the lake.	7/14/2018 11:50 AM
26	Innovation	7/14/2018 8:44 AM
27	The state should help subsidize any repaving of parking areas at schools. It will be 10X more effective than putting in rain gardens.	7/14/2018 8:06 AM
28	Needs to be spent on cultivating the weeds in Lake Champlain	7/13/2018 7:02 PM
29	The state should not add money to the Agriculture sector. The Ag sector is a private for profit sector which should be funding itself. New funding whould be used to replace municipal funds.	7/13/2018 1:09 PM
30	the state should use new funds for date collection, monitoring and field reporting for all land use sectors. Reports should include land use/property O&M recs that would ensure pollution prevention. Objective: identify source or cause of pollutrion and I dont mean the gullies themselves, for example. I mean true sources as in why the gully formed (such as slope. land cover, soils etc.ent more pollution	7/11/2018 1:09 PM
31	The state should use new funds to supplement gaps, but not for agriculture. Agriculture is an industry that needs to pay more of its share from private--i.e. The farmers--pockets	7/9/2018 6:33 PM
32	All out education campaign about the importance of regenerating our soils.	7/5/2018 9:46 AM
33	Any new funds should be returned to the taxpayers and the scope of work needs to be scaled to meet available funds	7/3/2018 12:06 PM
34	farms in particular and infrastructure in cities to prevent major discharges	7/3/2018 8:52 AM
35	I think there is a funding gap for the natural resources sector. If the state were helping to fund project development, there would be more demand for project implementation. This sector delivers big water quality benefits with multiple other benefits and is a good return on investment. I would use some of the new funds for NR project development.	7/2/2018 12:45 PM
36	New funds should be used to increase natural resource sector dues to the long-term benefits of these practices	7/2/2018 11:54 AM

Clean Water Fund State Fiscal Year 2020 Questionnaire

37	Municipal rate and property tax payers account for \$30-40 million in the municipal column. However those funds are not in place and must be voted. Really the gap in the municipal column should be around \$40 million and new dollars should be invested there.	7/2/2018 11:37 AM
38	Supplement 3B and 3D	7/2/2018 11:01 AM
39	The State should use all new funds to draw down additional dollars (match from federal, private etc.)!	7/2/2018 10:56 AM
40	Roads	7/2/2018 10:16 AM

Q4 Additional Comments

Answered: 65 Skipped: 259

#	RESPONSES	DATE
1	We need to stop waste water run off during storms in our cities. Divert rain out of sewers to holding ponds... need to do this NOW the know how to do it in Florida... come on!	8/1/2018 7:12 AM
2	The state should help municipalities to keep their costs way down. They want to do the right thing	7/31/2018 8:23 PM
3	Increased funding for agricultural improvements need to have careful messaging. Allocation of funding that is rightly intended to support them in their WQ efforts is easily interpreted as blame and singling-out. Investing in ag improvements is important, and farmers need to know they're not the only ones being asked to make changes.	7/31/2018 3:40 PM
4	Vermont has a lot of issues to address. Water quality is important but should not take the forefront at the expense of other sectors. With that said, there is much overlap between the quality of our lakes and waterways, and the economic well-being, especially in the tourism sector, which is hugely important to the State economy. A potential source of new State revenue would be a tax on legalized sale of recreational cannabis. These funds could be earmarked for water quality improvements.	7/31/2018 12:27 PM
5	The State can only spend so much money on WWTP and Ag. There are many more homeowners (especially streamside and lake shorefront) that need assistance and potentially with good long-term results for a lot less money per project. Please fund projects for private landowners. Perhaps using an income cap, like NRCS does (but lower).	7/31/2018 7:43 AM
6	I don't understand how VT can give people \$10,000 to move here when we can't handle the growth we have now. For example, our sewer/septic systems are overflowing...Why are there septic pipes still emptying into Lake Champlain? Why hasn't the state reprimanded people who have this going on? Why hasn't the City of Burlington been reprimanded for dumping waste or somebody fired for this criminal act. Which state office is suppose to be monitoring this activity and why has it gone on so long?!? You might want to have a meeting with NY state officials to see if you both can come up with what is wrong with your current actions and Lake Champlain. Water is life, many animals are being hurt and dying from the lack of wisdom and political agendas. Get our local Washington Representatives to reveal what they allowing to get passed that is not okay for our waterways and tell them to stop it.	7/30/2018 2:18 PM
7	Improvements to agricultural water quality are the most cost effective.	7/30/2018 1:44 PM
8	I believe Regional Planning Commissions should work more closely with municipalities and help prioritize assessment needs and help implement strategies for addressing clean water practices.	7/30/2018 11:13 AM
9	The state of Vermont can not afford to drive away anymore people with taxes that spend money with no return to the tax payer. For the millions spent we need to see improved water quality monitoring data.	7/29/2018 7:16 AM
10	It appears the Clean Water Fund is very small compared to the other funding sources. Would it be possible to take our tax-funds and move it equal across the board?	7/27/2018 9:02 AM
11	Agriculture has had a free ride long enough. It is the biggest contributor and should be responsible for the largest cost. Using state & federal funds to eliminate CSO's is appropriate. The standards for eliminating phosphorus contribution from municipal roads and infrastructure	7/27/2018 8:25 AM
12	Money needs to be applies to help agriculture survive and not pollute Vermont waters.	7/26/2018 4:01 PM
13	Land use drives water quality problems. I support a more comprehensive approach to using new funding because I think we need to address the drivers of water quality problems not just pay for its symptoms. For instance, the unaffordability of employment centers reflects a supply problem created in part by land use regulations that preference low-density car dependent single use development. The parcelization and sprawl that results worsens water quality and is a lot less 'resilient' than VT's traditional settlement patterns.	7/26/2018 3:47 PM
14	Watershed groups do not have access to the funding necessary to develop projects and get them to the grant stage.	7/26/2018 1:25 PM

Clean Water Fund State Fiscal Year 2020 Questionnaire

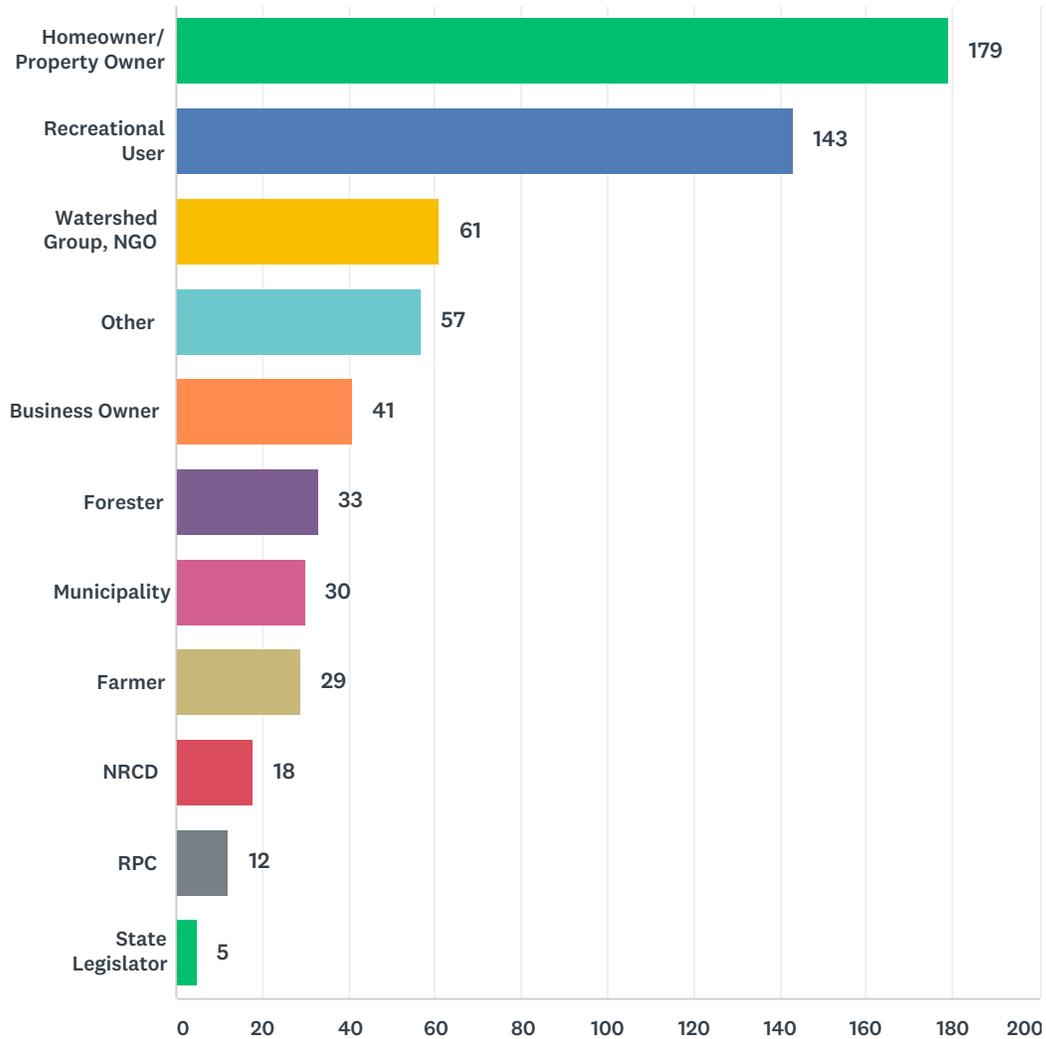
15	more resources are needed to address the needs.	7/26/2018 1:12 PM
16	none	7/26/2018 12:40 PM
17	Money needs to go to a project, not meetings, admin et	7/26/2018 11:13 AM
18	but don't support noncompliant farmers	7/26/2018 11:11 AM
19	This is a tough one to answer. Response 2 is not the way to go in my opinion, Response 3 is also reasonable.	7/26/2018 10:27 AM
20	I see too much development along rivers route 73, the bethel mountain road and route 12 all spring to mind as well as route 107 to name a few. Move roads protect the rivers far better than we do, stop all developments along them and revoke grandfather provisions when it comes to buildings along rivers.	7/26/2018 10:26 AM
21	X	7/26/2018 12:49 AM
22	Part of cleaning up the state's waters is reducing the amount of chemicals used in Vermont on farms and roadways, such as Roundup and Dicamba and Atrazine and Simazene. Stop allowing farmers to dump all kinds of chemicals including foot baths that contain formaldehyde into manure pits that then get spread on land.	7/25/2018 3:53 PM
23	If you cause/caused the pollution you are responsible for cleaning it up. Ban use and import of phosphates.	7/25/2018 3:39 PM
24	However, the funds should include enforcement of the RAP's, and greater penalties in both the municipal and agriculture sectors for unmitigated pollution.	7/25/2018 10:23 AM
25	Green Stormwater Infrastructure concepts can be applied to developed lands and roads without fully complying with the State Stormwater Manual (which is too heavy a lift in terms of analysis and too high a bar to achieve in many cases). Less formal approaches making use of existing settings/context can achieve a lot and help shift the paradigm of how drainage is perceived.	7/25/2018 9:15 AM
26	None	7/25/2018 7:44 AM
27	none	7/25/2018 7:25 AM
28	We need any and all sources to increase our investments in building our state's resilience to the storm events we know are coming.	7/25/2018 7:17 AM
29	If you reduced spending in other areas, bemely ed spending, we would have more money to invest in clean water.	7/24/2018 10:34 PM
30	We should be helping more farmers implement water quality protections; more ware quality return per dollar invested.	7/24/2018 9:13 AM
31	Agriculture and Wastewater are the main problems--let's hit those areas harder	7/22/2018 4:34 PM
32	Use funds to support improvement in infrastructure of waste water treatment. Hold accountable if human error or bad practices in waste water and ag.	7/22/2018 11:52 AM
33	Educating and providing financial support for farmers to convert to organic and change rotational practices would go a long way to cleaning the state waters and dealing with drought and flooding. It could help recharge the aquifers.	7/21/2018 8:46 PM
34	no opinion	7/21/2018 10:14 AM
35	Get rid of phosphorous	7/20/2018 7:10 PM
36	Fix AG first as 43 percent is AG.	7/20/2018 4:23 PM
37	Investigate the role of surface/groundwater interactions in both clean surface water and clean groundwater.	7/20/2018 2:37 PM
38	Hold towns accountable for program implementation. Backroads management is a disgrace.	7/19/2018 9:22 PM
39	Hard to form opinion about this	7/17/2018 10:12 PM
40	Must do better w municipalities and farms. Both are a big lift. But collaborations are key. Between state agencies the Feds and non profit sector.	7/16/2018 6:25 PM
41	no comments	7/16/2018 3:34 PM
42	Breweries wastewater is concerning	7/16/2018 11:14 AM

Clean Water Fund State Fiscal Year 2020 Questionnaire

43	Seeing these gaps would be helpful before making recommendations on the percentage allocations in the first question. Now that I see the gap for wastewater, stormwater and CSO, I think that area should be a higher priority for funding than what I indicated in Q1.	7/16/2018 10:05 AM
44	I'm not understanding why more funds aren't dedicated to remediation of municipal lands. It seems like this could be an area of least public resistance to increased scrutiny, restoration & conservation. Are municipal lands already meeting goals?	7/16/2018 7:33 AM
45	The CSO is the elephant in the room here-ask the engineers who designed that system to chip in to fix it...accountability has a nice ring to it, eh?	7/15/2018 8:56 AM
46	Unless of course the money is earmarked for water cleanup.	7/15/2018 2:38 AM
47	Wastewater treatment sector should be fully funded!	7/14/2018 3:49 PM
48	Any game adjacent to a waterway needs a berm system to keep phosphorous and waste out. Help them build them. And replace sewer systems.	7/14/2018 3:31 PM
49	We're underspending historically, let's get this done. VT leads NY in Lake Champlain water pollution- that's shocking!	7/14/2018 2:25 PM
50	Focus on wastewater treatment!	7/14/2018 1:33 PM
51	Fix the sewage.	7/14/2018 11:50 AM
52	Clean up the filth created by wastewater treatment plants. The status quo is highly unacceptable. Disgusting	7/14/2018 8:18 AM
53	transition OUT of VT's erroneous pay to pollute paradigm. Get out of the nrcs policies and procedures. They are proven to be obsolete. VT needs nrcs \$ to be delegated to VT to achieve its more sound and sustainable policies, because we will be taking the pollution prevention pathway that designs for climate changes.	7/11/2018 1:09 PM
54	Answer to #5 above contingent on source, purpose and limitations associated with new funds.	7/10/2018 12:09 PM
55	This isn't a wastewater problem. Only 3% of the issue is wastewater. Stop cowering to CLF and actually do the right thing by addressing stormwater runoff from Ag and Developed Surfaces.	7/9/2018 9:24 AM
56	Help with the development of regenerative agriculture.	7/7/2018 8:39 AM
57	Aren't agriculture and impervious surfaces the elephants in the room that no one wants to talk about?	7/5/2018 10:16 AM
58	Educating farmers, homeowners, policy-makers, and the general public is essential in understanding the importance of restoring the soil, and thus improving water quality and balancing water cycles.	7/5/2018 9:46 AM
59	None	7/4/2018 10:50 AM
60	With trump promising infrastructure funding it sounds like there is a significant need to prevent discharges into the lake during major storm events. In discussion with a private manure spreader, the 19m gallons already discharged in the lake this year mirrors the amount he has spread on farms so far in 2018	7/3/2018 8:52 AM
61	The municipal / rate payer portion of this is SUBSTANTIAL. Does this data just assume that municipalities and municipal utilities will raise their taxes and rates to meet this demand? This looks like a gap in funding that you are not appropriately identifying and making the public aware of.	7/2/2018 2:59 PM
62	I believe we need long term sustainable solutions but am unsure which are best.	7/2/2018 2:44 PM
63	State funding is minimal for Natural Resources improvements and needs to be enhanced.	7/2/2018 11:54 AM
64	This problem was not the fault of private landowners and local property tax payers. They should be protected from additional cost necessitated by governmental failures to address problems as they became obvious.	7/2/2018 11:01 AM
65	Again, your charts are off. Natural Resource projects are bringing in Private dollars as match. There are millions of dollars available from Foundations for river restoration projects!	7/2/2018 10:56 AM

Q5 We are interested to know who is completing this survey. Which groups do you belong to or identify with? Select all that apply.

Answered: 280 Skipped: 44



Clean Water Fund State Fiscal Year 2020 Questionnaire

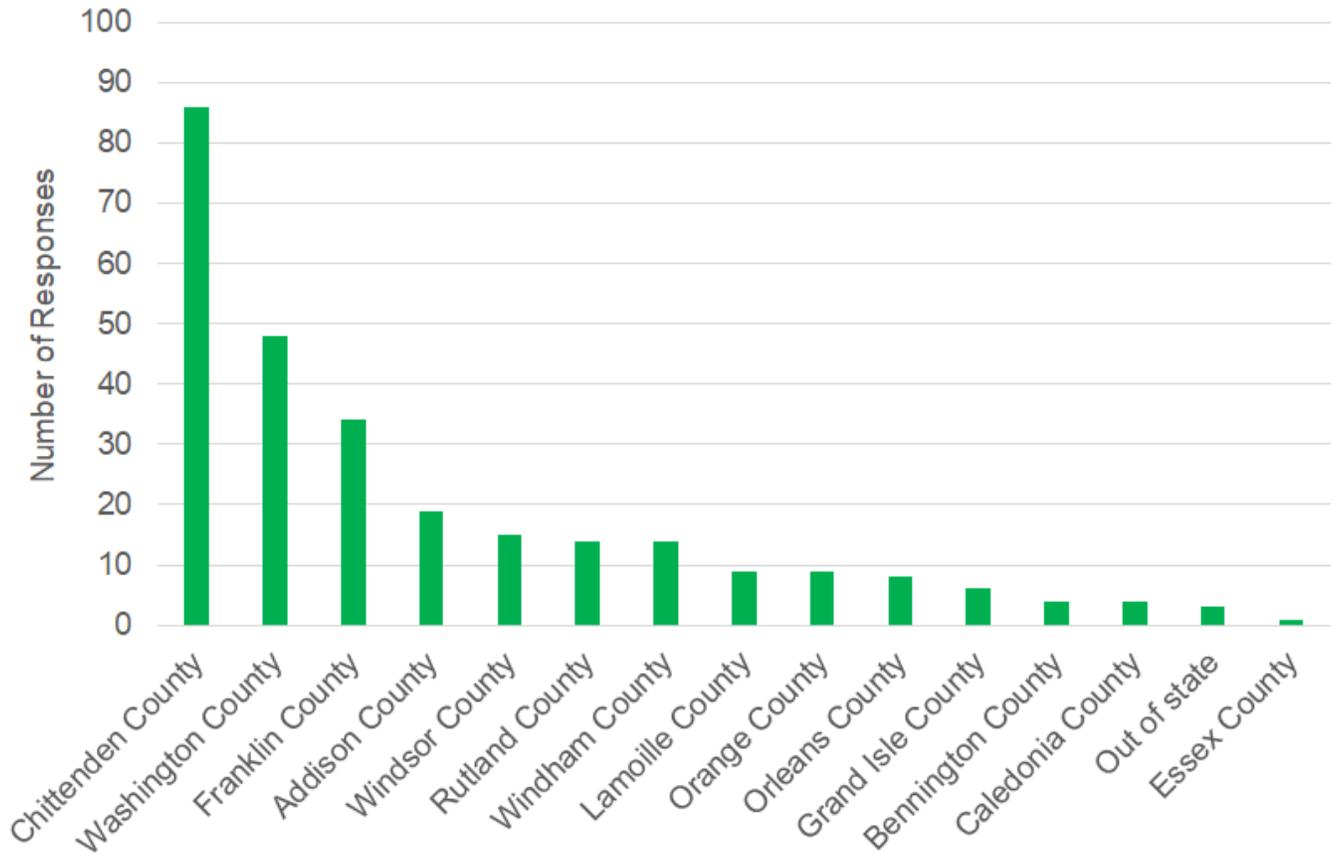
#	OTHER (PLEASE SPECIFY)	DATE
1	Lake Champlain United board	8/1/2018 7:14 AM
2	Concerned tax payer	7/31/2018 1:21 PM
3	Conservation District	7/31/2018 9:21 AM
4	Non-Profit: Rural Vermont	7/30/2018 1:41 PM
5	Field Coordinator/Biologist for the Lemon Fair Insect Control District, Otter Creek Audubon Society Board Member, Spirit in Nature trustee, New Haven River Anglers Association; conservation & education projects, River Watch Collaborative;Field tech.	7/30/2018 11:25 AM
6	Tax payer	7/27/2018 8:26 AM
7	Taxpayer	7/26/2018 9:47 PM
8	Middle school teacher	7/26/2018 3:51 PM
9	Community Design Consultant and Landscape Architect, Planning Commissioner	7/26/2018 3:49 PM
10	land trust	7/26/2018 12:23 PM
11	Lake Carmi camp owner	7/26/2018 12:18 PM
12	We own a home on Lake Carmi	7/26/2018 11:42 AM
13	advocate	7/26/2018 11:32 AM
14	Manufacturer of novel Phosphorus removal machinery	7/26/2018 8:39 AM
15	Live on lake Champlain	7/25/2018 5:41 PM
16	We rely on Lake Champlain as our water source as does most all of Grand Isle County.	7/25/2018 3:42 PM
17	Outraged Vermonter	7/25/2018 3:15 PM
18	retired ANR	7/25/2018 7:28 AM
19	A Vermont taxpayer who doesn't want to contribute to clean water while farms who pollute get a free pass.	7/24/2018 10:36 PM
20	Environmental engineering student	7/24/2018 9:15 AM
21	soil policy advocate	7/23/2018 12:35 PM
22	I drink the water!!!!!!!!!!!!!!	7/20/2018 7:13 PM
23	Lakefront property	7/20/2018 4:26 PM
24	Former ANR Commissioner	7/19/2018 9:27 PM
25	State Employee	7/19/2018 9:56 AM
26	retired AOT employee	7/18/2018 11:05 PM
27	Work at Endyne - Environmental Laboratory	7/17/2018 8:11 PM
28	Farm Service Provider- Tech Assistance	7/17/2018 9:35 AM
29	retired aquatic biologist and recreational user	7/17/2018 7:50 AM
30	Town Planning/zoning board	7/16/2018 3:37 PM
31	Author/journalist	7/16/2018 1:37 PM
32	farm service provider	7/16/2018 1:02 PM
33	Taxpayer, conservative conservationist, elderly, native VTer	7/16/2018 11:15 AM
34	resident	7/16/2018 9:36 AM

Clean Water Fund State Fiscal Year 2020 Questionnaire

35	Agricultural Lender	7/16/2018 8:09 AM
36	Concerned Citizen	7/15/2018 1:39 PM
37	Resilient Sanitation and Clean Water Advocate	7/15/2018 8:17 AM
38	State Employee	7/15/2018 4:24 AM
39	sustainability consultant	7/15/2018 12:11 AM
40	Local citizen who likes swimming and using clean water. I no longer swim in lake champlain.	7/14/2018 11:52 AM
41	Camp owner in North hero	7/13/2018 7:05 PM
42	State Government	7/13/2018 2:15 PM
43	State Employee	7/13/2018 1:40 PM
44	Academic research	7/10/2018 11:46 AM
45	farm service provider	7/10/2018 11:33 AM
46	Registered nurse	7/7/2018 8:41 AM
47	Vermont Healthy Soils Coalition	7/5/2018 10:19 AM
48	Conservation Commissioner	7/5/2018 9:48 AM
49	Public Health!	7/2/2018 8:23 PM
50	Retired teacher who belongs to my lake association	7/2/2018 4:36 PM
51	Audubon Society	7/2/2018 2:47 PM
52	Lake Carmi camp owner (72 years). Please save my lake!	7/2/2018 2:03 PM
53	Grew up on a dairy farm.	7/2/2018 12:36 PM
54	taxpayer	7/2/2018 11:02 AM
55	Volunteer for local 501(c)3 organizations	7/2/2018 10:57 AM
56	Also employed by the State in ANR	7/2/2018 10:19 AM
57	Federal Civil Service Employee	7/2/2018 10:17 AM

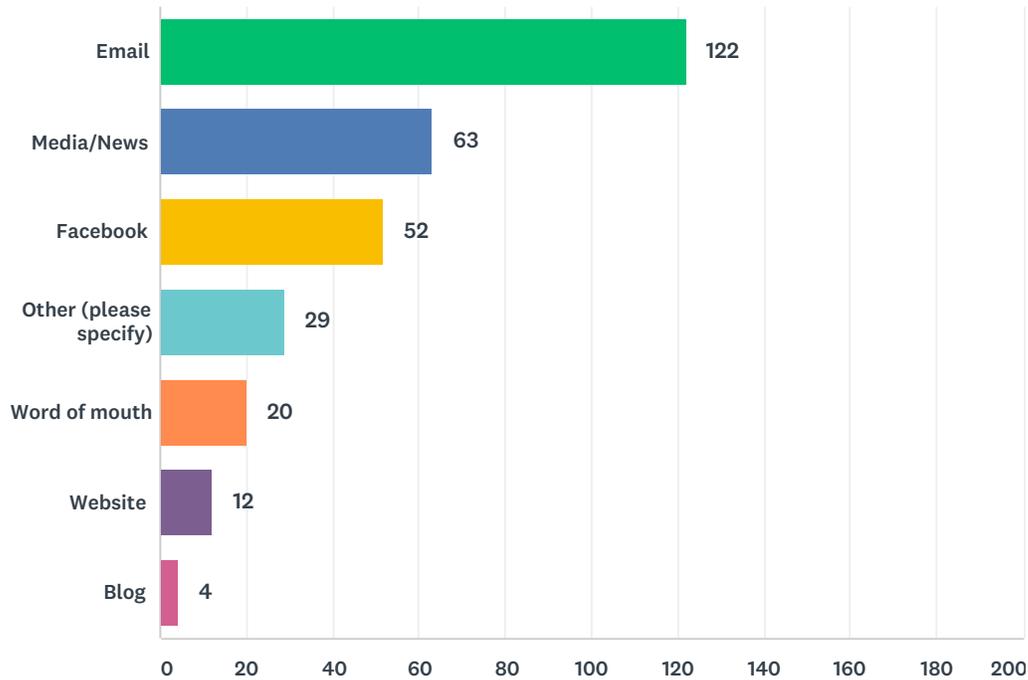
Q6 Please enter your zip code to help us understand the statewide distribution of responses to this questionnaire.

Answered: 274 Skipped: 50



Q7 How did you hear of this questionnaire (select all that apply)?

Answered: 268 Skipped: 56



ANSWER CHOICES	RESPONSES	
Email	45.52%	122
Media/News	23.51%	63
Facebook	19.40%	52
Other (please specify)	10.82%	29
Word of mouth	7.46%	20
Website	4.48%	12
Blog	1.49%	4
Total Respondents: 268		

#	OTHER (PLEASE SPECIFY)	DATE
1	LCU website	8/1/2018 7:14 AM
2	forum	7/31/2018 5:41 PM
3	District conservation Board	7/31/2018 5:29 PM
4	from Jill Arace (VACD) and Lyn Munno (WUV)	7/31/2018 3:41 PM
5	Online fishing forum - Lake Champlain United	7/31/2018 1:21 PM
6	meeting	7/30/2018 1:47 PM
7	Vermont Clean Water Initiative	7/30/2018 11:25 AM
8	front porch forum	7/27/2018 9:19 AM
9	Twitter	7/26/2018 11:20 AM

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10	From you	7/26/2018 10:27 AM
11	press release	7/25/2018 3:54 PM
12	VT Digger	7/25/2018 3:42 PM
13	VT Digger	7/25/2018 11:24 AM
14	Local Watershed Meeting	7/25/2018 10:25 AM
15	VT Digger	7/25/2018 9:53 AM
16	VT Digger	7/25/2018 7:19 AM
17	Addison Independent newspaper	7/22/2018 4:35 PM
18	Addison Independent article (print)	7/22/2018 2:45 PM
19	Former colleagues	7/19/2018 9:27 PM
20	newspaper article	7/18/2018 11:05 PM
21	VHSC	7/15/2018 9:08 PM
22	you sent it to me at work. ;)	7/13/2018 2:15 PM
23	Diane Bothfeld's email	7/9/2018 5:08 PM
24	researching water quality	7/9/2018 6:05 AM
25	Directed here by regional DEC Rep, Marie Caduto	7/5/2018 10:19 AM
26	email forwarded through VT Healthy Soils Coalition	7/5/2018 10:19 AM
27	Town planner	7/4/2018 8:16 AM
28	FNLC chair	7/3/2018 8:57 AM
29	It was sent to us by a private individual who received it.	7/2/2018 11:39 AM



AGENCY OF ADMINISTRATION
 AGENCY OF AGRICULTURE, FOOD & MARKETS
 AGENCY OF COMMERCE & COMMUNITY DEVELOPMENT
 AGENCY OF NATURAL RESOURCES
 AGENCY OF TRANSPORTATION

Clean Water Fund State Fiscal Year 2020 Questionnaire

Land Use Priorities for Clean Water Funds

Below is a description of the land uses that impact clean water, how Clean Water Funds would be used, and the additional benefits of supporting clean water projects for that land use.

Land Use	Clean Water Project Objectives and Example Project Images	Additional Benefits
 AGRICULTURE	Addresses runoff and soil erosion from farm production areas and farm fields 	<ul style="list-style-type: none"> • Supports Clean Water Act compliance • More cost-effective • Leverages federal funds • Supports agricultural economy
 DEVELOPED LANDS	Addresses stormwater runoff from developed lands, such as parking lots, sidewalks, and rooftops 	<ul style="list-style-type: none"> • Supports Clean Water Act compliance • Increases flood resilience • May enhance aesthetic appeal
 NATURAL RESOURCES	Restores functions of "natural infrastructure"—river channels, floodplains, and wetlands 	<ul style="list-style-type: none"> • Supports Clean Water Act compliance • More cost-effective • Increases flood resilience • Improves habitat • Enhances recreation
 ROADS	Addresses stormwater runoff from roads 	<ul style="list-style-type: none"> • Supports Clean Water Act compliance • More cost-effective • Increases flood resilience • Leverages federal funds • Reduces future road maintenance costs
 WASTEWATER	Decreases nutrients (phosphorus and nitrogen) through enhanced wastewater treatment and addresses aging infrastructure 	<ul style="list-style-type: none"> • Protects public health and safety • Supports Clean Water Act compliance • Leverages federal funds

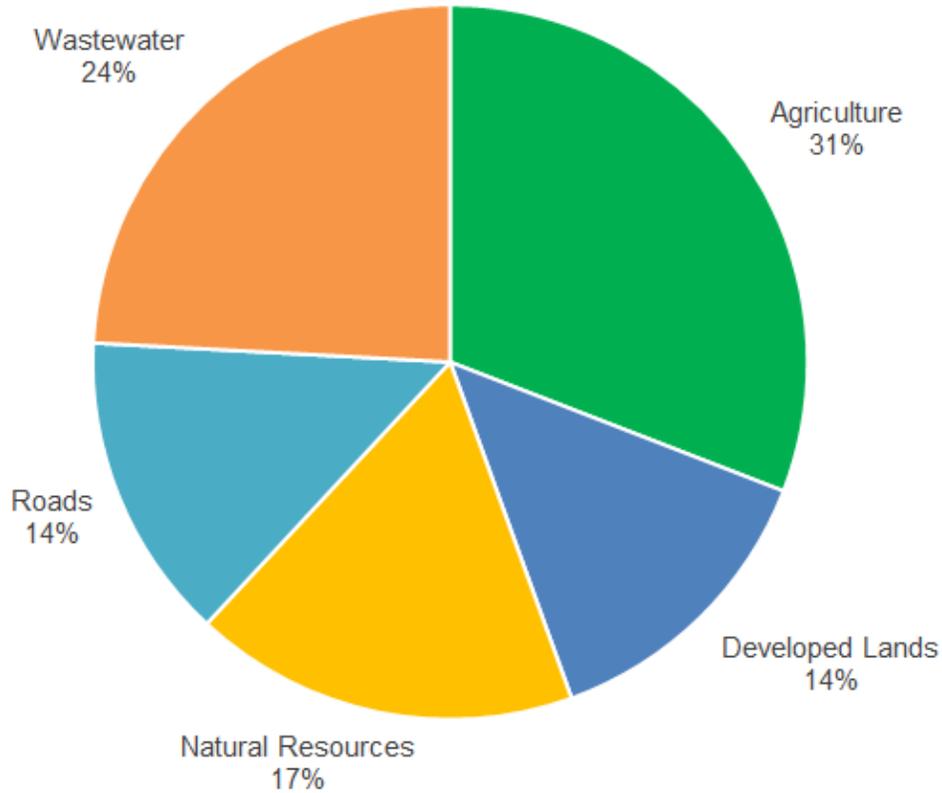
1. For each land use listed below, assign a percentage of the Clean Water Fund that would support clean water projects. Your percentages must add up to 100.

Agriculture	<input type="text"/>
Developed Lands	<input type="text"/>
Natural Resources	<input type="text"/>
Roads	<input type="text"/>
Wastewater	<input type="text"/>

Q1 For each land use listed below, assign a percentage of the Clean Water Fund that would support clean water projects. Your percentages must add up to 100.

Answered: 319 Skipped: 5

RESULTS:



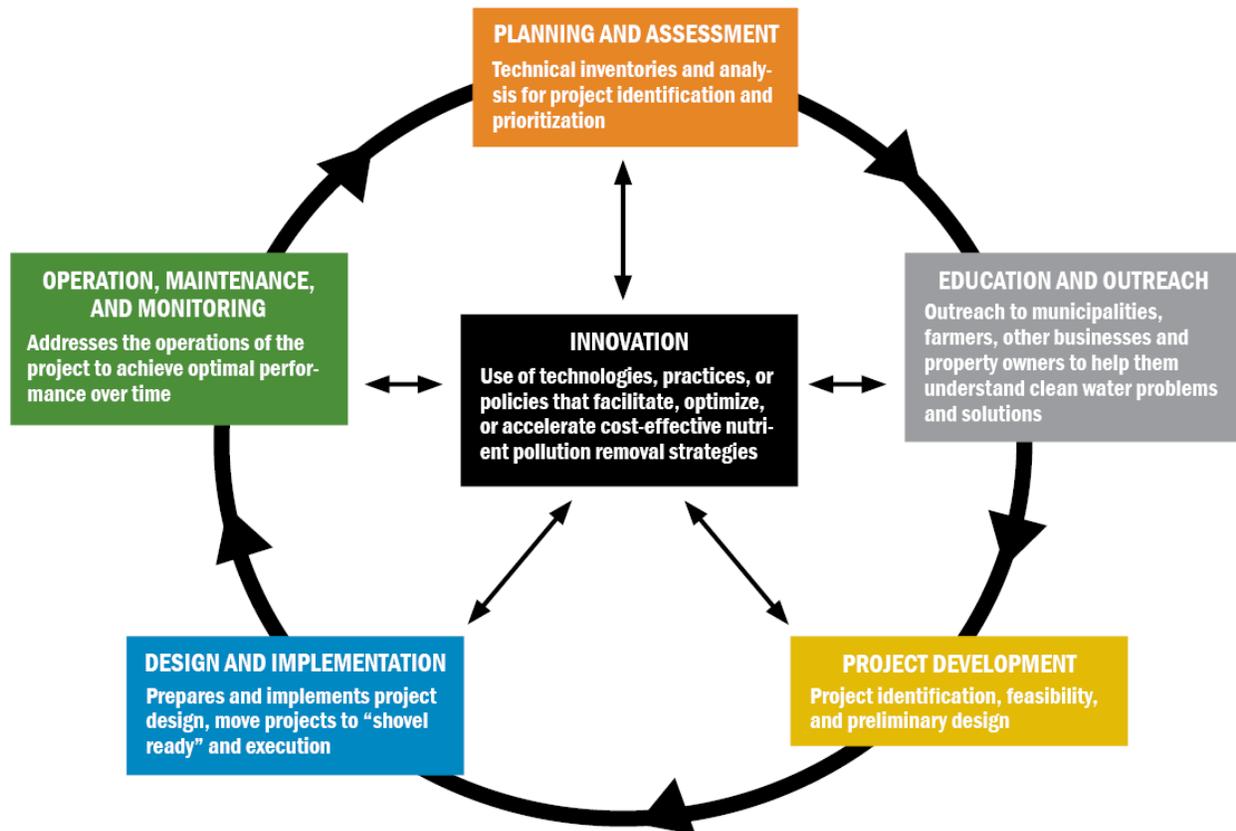
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Agriculture	35	10,321	299
Wastewater	27	8,017	297
Natural Resources	19	5,263	270
Roads	16	4,236	272
Developed Lands	15	4,063	267
Total Respondents: 319			



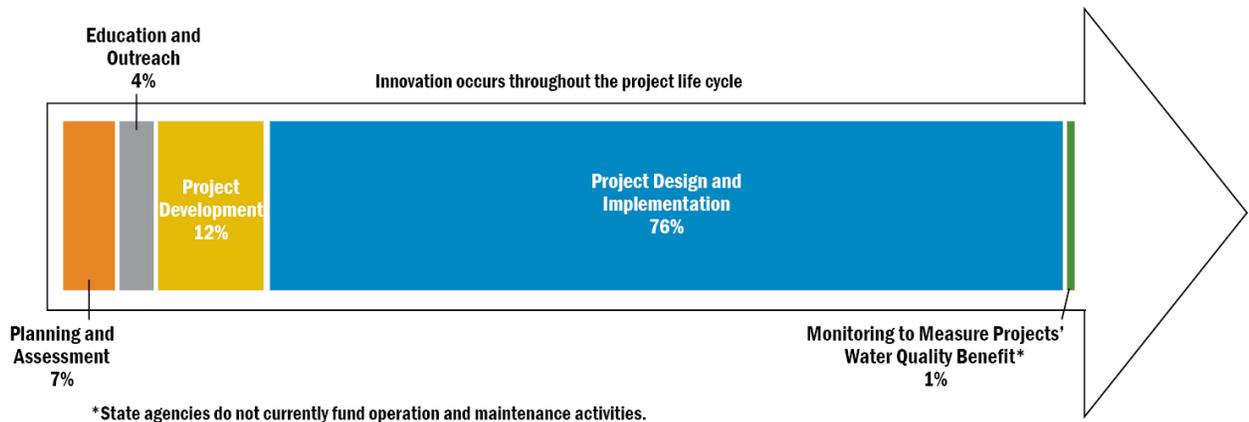
Project Activity Priorities for Clean Water Funds

Implementing cost-effective clean water improvement projects that address Vermont's most significant water pollution challenges requires funding support for the full project life cycle, depicted below.

CLEAN WATER PROJECT LIFE CYCLE



For your reference, the graphic below shows the percentage of state clean water funds invested in State Fiscal Year 2017 by project life cycle step.



3. Assign a percentage of the Clean Water Fund that would support each project activity listed below. Your percentages must add up to 100.

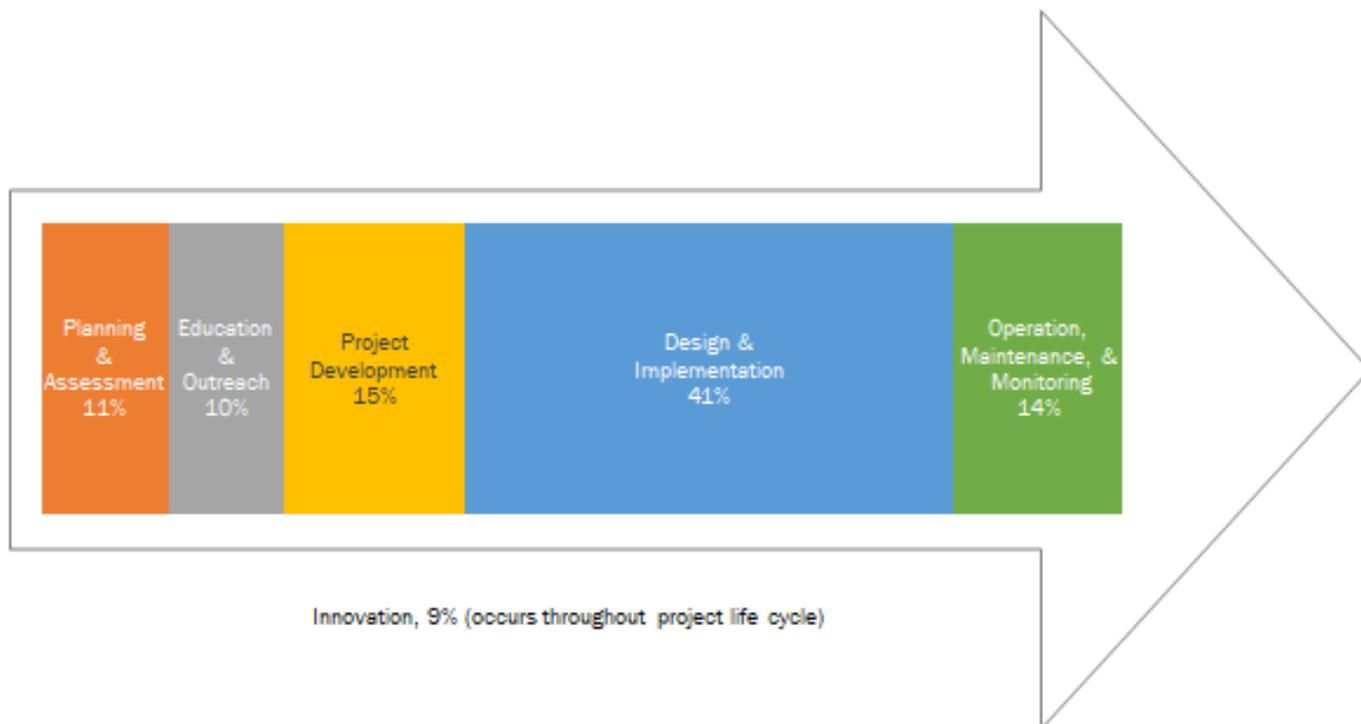
Planning and Assessment	<input type="text"/>
Education and Outreach	<input type="text"/>
Project Development	<input type="text"/>
Design and Implementation	<input type="text"/>
Operation, Maintenance, and Monitoring	<input type="text"/>
Innovation	<input type="text"/>

4. Additional Comments

Q2 Assign a percentage of the Clean Water Fund that would support each project activity listed below. Your percentages must add up to 100.

Answered: 279 Skipped: 45

RESULTS:



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Design and Implementation	44	11,920	269
Project Development	16	4,240	259
Operation, Maintenance, and Monitoring	15	3,914	255
Planning and Assessment	11	2,904	254
Education and Outreach	11	2,673	254
Innovation	10	2,249	231
Total Respondents: 279			

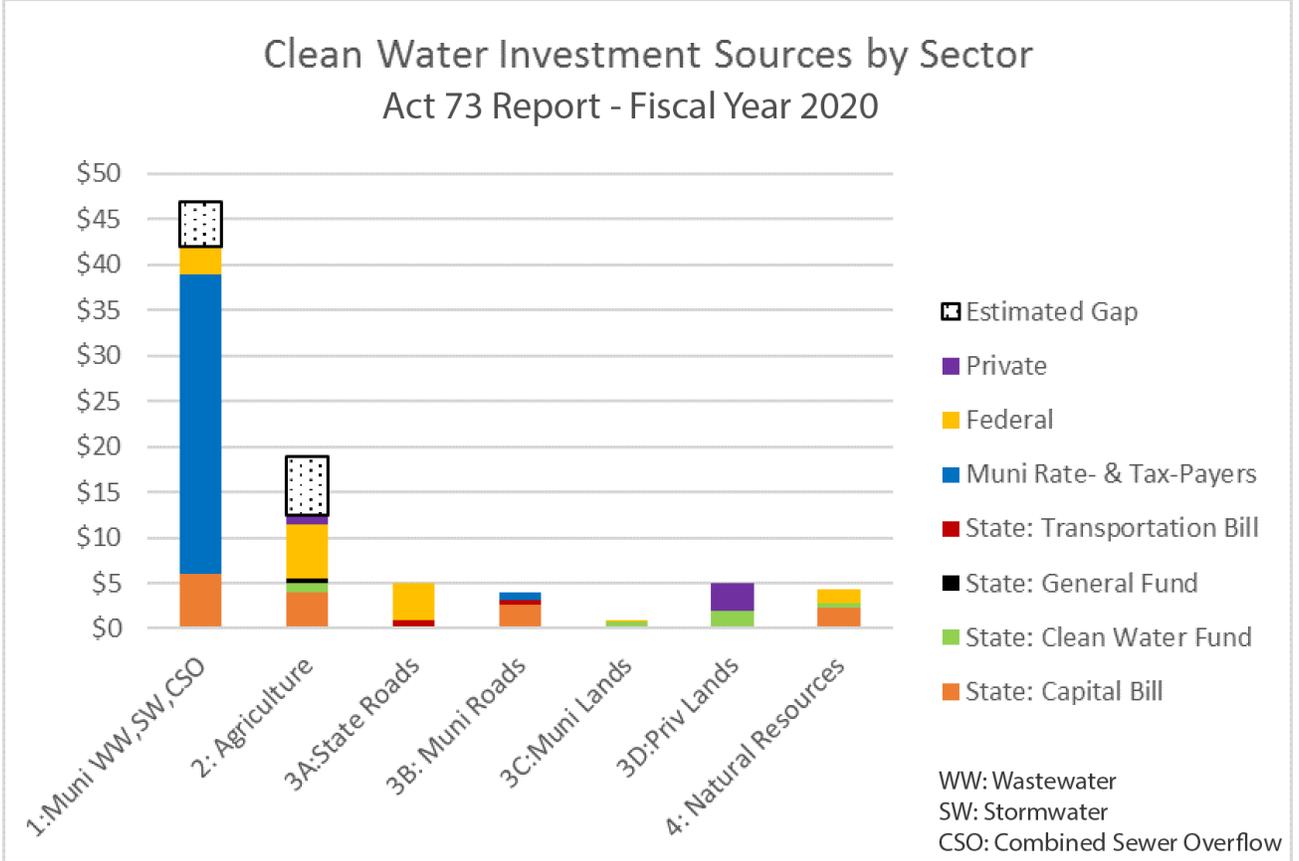


AGENCY OF ADMINISTRATION
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 AGENCY OF NATURAL RESOURCES
 AGENCY OF TRANSPORTATION

Clean Water Fund State Fiscal Year 2020 Questionnaire

Priorities for New State or Federal Clean Water Funds

The chart below shows Vermont's use of state and federal funds by sector to restore the state's waterways, as described in a recent clean water funding report required by Act 73 (2017).



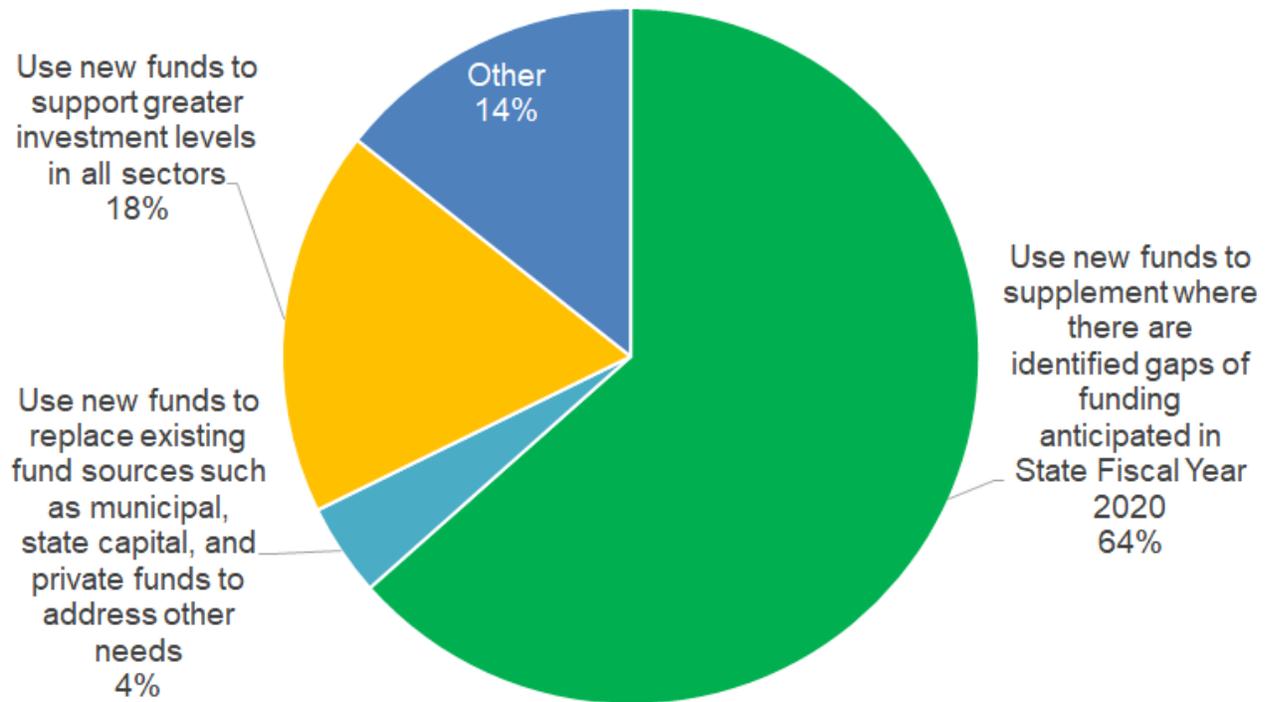
5. How should the State treat any new state or federal funds?

- The State should use any new funds to supplement where there are identified gaps of funding anticipated in State Fiscal Year 2020, such as in the agricultural sector and the wastewater treatment sector.
- The State should use any new funds to replace existing fund sources such as municipal funds, state capital funds, and private funds to address other needs.
- The State should use any new funds to support greater investment levels in all sectors.
- Other (please specify)

Q3 How should the State treat any new state or federal funds?

Answered: 279 Skipped: 45

RESULTS:



Clean Water Fund State Fiscal Year 2020 Questionnaire

Summary of Open Ended Responses

Q1. For each land use listed below, assign a percentage of the Clean Water Fund that would support clean water projects. Your percentages must add up to 100.

Summary of open ended responses on where to prioritize funds:

Comment Summary	Number of Comments
CSO abatement and wastewater treatment facility upgrades	38
Agricultural assistance	23
Natural resources protection and restoration	17
Agricultural enforcement	11
Agricultural nutrient management planning and soil health	10
Developed lands, roads	8
Cost effective projects	5
Municipal pollution and enforcement	5
Climate change, sustainability and resiliency	4
Drinking water	3
Leverage federal funds	3
Public education and outreach	3
Limit chemicals (e.g., fertilizers, pesticides)	3
In-lake treatment, aquatic weed removal	2
Verification of operation and maintenance, pre- and post-implementation monitoring	2

Summary of open ended responses on entities responsible to pay for clean water projects:

Comment Summary	Number of Comments
Businesses and farms should pay for themselves	8
Public funds should support public costs	4
Do not subsidize development	1
Businesses, including agriculture, should only be eligible for low interest loans	1
State funds focus on non-agricultural costs because other funding sources are available for agriculture	1
Support small municipalities	1

Q2. Assign a percentage of the Clean Water Fund that would support each project activity listed below. Your percentages must add up to 100.

Summary of open ended responses:

Comment Summary	Number of Comments
Take action and implement	21
Post-implementation monitoring, operation, and maintenance	18
Project development	12
Public education and outreach, awareness	11
Innovation	6
Monitoring	4
Seek innovation outside state government, rely on privates	4
Cost effective targeting	3
Enforcement	3
Asset management of aging infrastructure	1
Maximize cost effectiveness through redevelopment	1
Need more flexible funding options	1
State should not pay for operation and maintenance	1

Q3. How should the State treat any new state or federal funds?

Summary of open ended responses:

Comment Summary	Number of Comments
CSO abatement and wastewater treatment facility upgrades	9
Agricultural assistance	8
Municipal support	4
More funding is needed	2
Water quality is important to Vermont's economy	2
Natural resources restoration and protection	2
All sectors share the responsibility	1
Chemicals (e.g., fertilizer, pesticides)	1
Enforcement	1
Focus on non-wastewater sources	1
Incentivize compliance with regulations	1
Municipal enforcement	1
Natural resources restoration projects bring in match	1
Polluter is responsible for costs	1
Project development	1
Public education, outreach and awareness	1
Smart development	1
Take action and implement	1

2018

Report on Federal Funding Related to Water Quality Improvement Efforts in Vermont



August 31, 2018

Prepared for the Vermont General Assembly pursuant to 10 V.S.A. § 1389a.



Report on Federal Funding Related to Water Quality Improvement Efforts in Vermont

August 31, 2018

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The Secretary of Administration appreciates the assistance received from staff at the Agencies of Natural Resources, Agriculture, Food and Markets and Transportation in the preparation of this report.

Cover Photos:

- Top Left: Stabilized stream crossing and vegetated buffer, Courtesy of USDA NRCS
- Top Right: Municipal wastewater treatment facility, Courtesy of Vermont DEC
- Bottom Left: New barnyard feedlot structure and waste storage facility, Courtesy of USDA NRCS
- Bottom Right: Restored wetland, Courtesy of USDA NRCS

Report on Federal Funding Related to Water Quality Improvement Efforts in Vermont

Introduction

This report fulfills the requirement contained in 10 V.S.A. §1389a (amended by section E.700.1 of Act 85 (2017)):

(d)(3) On or before September 1 of each year, the Secretary of Administration shall submit to the Joint Fiscal Committee a report regarding the information required under subdivision (b)(5) of this section relating to available federal funding.

(b)(5) A summary of available federal funding related to, or for, water quality improvement efforts in the State.

The intent of this report is to better anticipate federal clean water funding to support Vermont's clean water improvement programs. It should be noted that an exact correlation between state and fiscal years is not possible, first because the state (SFY) and federal fiscal years (FFY) do not coincide; second, because some federal grants cross several state fiscal years; and third, because Congress has in recent years either not passed a budget bill or not passed it until late in the fiscal year.

The federal fiscal year runs from October 1 to September 30th, while the state fiscal year runs from July 1st to June 30th:

	SFY17/FFY17	SFY18/FFY18	SFY19/FFY19
State Fiscal Year (SFY)	7/1/16-6/30/17	7/1/17-6/30/18	7/1/18-6/30/19
Federal Fiscal Year (FFY)	10/1/16-9/30/17	10/1/17-9/30/18	10/1/18-9/30/19

Traditionally the House and Senate of Congress pass a **concurrent** resolution in March that guides the adoption of 12 appropriations bills by October 1st of each year. In practice, Congress rarely passes all appropriations bills in any given year. Instead, Congress often passes a **continuing** resolution that continues spending at roughly the same level as the previous year and for a set amount of time.

On February 9, 2018, the President signed the Bipartisan Budget Act of 2018 (H.R. 1892), which authorized spending for federal fiscal years 2018 and 2019, and appropriated money through March 23, 2018. On March 23, 2018, the president signed the Consolidated Appropriations Act of 2018 (H.R. 1625), which funded the government through September 30, 2018.

As of this report, the Senate had passed nine out of the 12 committee-reported appropriations bills for Federal Fiscal Year 2019,¹ and the House had passed six. None of these bills have yet reached the President's desk and, therefore, FFY19 funding levels remain uncertain. Given the uncertainty regarding federal fiscal year 2019, this report presents information on federal fiscal year 2018, by agency and federal funding program.

Finally, the table at the end of the report includes federal funding that passes through the state budget, as well as funding that passes outside the state budget, such as the U.S. Department of Agriculture's (USDA) Environmental Quality Incentives Program and USDA's Rural Development low-cost loan program for municipalities.

¹ <https://www.leahy.senate.gov/press/082018minibusappropsfloorstatement>

Vermont Agency of Agriculture, Food and Markets (AAFM)

The Vermont Agency of Agriculture, Food and Markets (AAFM) receives federal funds to support its engineering capacity from the following programs related to water quality:

- U.S. Environmental Protection Agency (U.S. EPA) Section 319 Nonpoint Source Grant passthrough from Agency of Natural Resources (ANR) to AAFM. Section 319 supports 2.4 full time equivalent (FTEs) positions within AAFM. The Section 319 program is described below under the ANR section of this report.
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Services (NRCS) Strategic Watershed Action Teams (SWAT), a program that focuses on the most critical subwatersheds to accelerate agricultural best practices implementation. The program currently funds 50 percent of two FTEs.

The table at the end of this report has a complete list of federal programs that support agricultural water quality improvements

Vermont Agency of Natural Resources (ANR)

The Agency of Natural Resources Department of Environmental Conservation (DEC) administers and funds most of the state's environmental programs. In SFY19, DEC will receive 42.3 percent of its funding (\$37.4 million of its \$88.4 million budget) from federal sources, primarily from the U.S. EPA. Approximately \$20 million of these funds represent multiple grant awards for the Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF). In June 2018, the federal government increased the FFY 2018 Lake Champlain Basin Program award from \$526,000 to \$4,046,727; these SFY19 numbers reflect that increase.

Section 319 Nonpoint Source Grant

U.S. EPA's FFY 2018 Section 319 Nonpoint Source Grant (PPG319) application was for \$1,166,901, a slight decrease from last year's funding level of \$1,180,793. This funding represents approximately 6.7 percent of DEC's base federal funding of approximately \$17.4 million (excluding federal State Revolving Loan Fund Program). The federal Clean Water Act Section 319 federal grant supports much of DEC's efforts to implement state clean water improvement projects. The grant focuses on addressing nonpoint source pollution – diffuse sources of water pollution caused by precipitation- or snowmelt-driven stormwater runoff from parking lots, roads and other hard surfaces and agricultural lands. Nonpoint source pollution is the leading cause of water use impairment to Vermont's surface water and ground water resources. Funding supports the implementation of the major nutrient total maximum daily loads (TMDLs) statewide, including the Lake Champlain TMDLs for phosphorus, the Lake Memphremagog TMDL for phosphorus, and the Long Island Sound/Connecticut River TMDL for nitrogen.

Pollution Control, Water Quality Monitoring (Section 106)

U.S. EPA's FFY 2018 Section 106 Water Quality Monitoring (PPG106) funds are \$1,068,929, a slight reduction from last year's report showing the FFY2017 award of \$1,114,980. The FFY2018 which represents approximately 6.2 percent of DEC's base federal funding of approximately \$17.4 million (excluding federal State Revolving Loan Fund Program). The federal Clean Water Act Section 106 funds support water quality monitoring and assessments. Vermont uses these funds to support statewide water quality monitoring and assessments to ensure that the state's surface waters – rivers, streams, lakes, ponds, and wetlands – are safe for public uses and that municipally-operated wastewater control

facilities and other dischargers into surface waters operate in a manner that maintains good water quality.

Lake Champlain Basin Program

U.S. EPA's FFY 2018 Lake Champlain Basin Program (LCBP) grant to DEC (on behalf of the state of Vermont) is \$4,046,724. DEC is responsible for overall grant administration and reporting, including direct project management of \$3,324,724. (Note that of this total amount for FFY 2018, AAFM manages \$722,000 to support agricultural best management practice implementation). The funding level for FFY 2018 represents a \$3,520,724 increase from FFY2017 funding level of \$526,000.² The amount for DEC represents approximately 23.3 percent of DEC's base federal funding of approximately \$17.4 million (excluding federal State Revolving Loan Fund Program). This increase is a result of work by Vermont's federal congressional delegation to increase federal funding to support implementation of the Lake Champlain Phosphorus TMDL and will largely be used to fund initiatives related to stormwater management and agricultural stewardship. The LCBP funds also support five FTEs within DEC for FFY 2018 and the long-term monitoring program in Lake Champlain. The long-term monitoring data are used to identify public health risks and to track progress in implementing the Lake Champlain Phosphorus TMDL. The LCBP also routinely issues grant and contract opportunities to support the implementation of the Lake Champlain Phosphorus TMDL and to complement DEC's water quality programs throughout the watershed.

Clean Water State Revolving Fund (CWSRF)

The CWSRF is a federal-state partnership to provide municipalities access to low-cost financing for water quality infrastructure projects. The FFY2018 capitalization grant appropriation saw a nationwide increase of \$300 million, which is a significant increase compared to the previous year. For Vermont, the FFY2018 capitalization grant is \$7.859 million (an increase from FFY2017 of \$6.525 million). There is no change in the federal funding level for administration of Vermont's CWSRF program.

USDA Rural Development Program (USDA-RD)

The USDA-RD program focuses on helping rural communities (communities at or below 10,000 population) grow economically. USDA-RD offers these communities access to low-cost financing to support drinking water, wastewater treatment, and stormwater management.

Vermont Agency of Transportation (VTrans)

Transportation Separate Storm Sewer System (TS4) Compliance

VTrans-managed state transportation highway network and associated transportation facilities are subject to a state DEC stormwater permit referred to as the TS4 Stormwater General Permit. VTrans uses state funds to leverage Federal Highway Administration funds to support implementation of stormwater abatement practices for TS4 compliance. VTrans received approximately \$3.2 million and anticipate \$4 million for FFY 2017 and FFY 2018, respectively.

Transportation Alternatives Program

The Transportation Alternatives Program is a federally funded program established through MAP-21 and signed into law in July 2012. MAP-21's replacement, the FAST ACT, continues funding for this program to support a variety of project types, including "any environmental mitigation activity, including pollution

² <https://www.leahy.senate.gov/press/060418champlainfundingfactsheet>

prevention and pollution abatement activities and mitigation to: (i) address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff.” The Vermont Legislature directed VTrans to dedicate half of the available funding to these types of projects in SFY17 and to use the full amount of available funding to these type of projects in SFY 2018. Awards result in reimbursement grants that require 20 percent in matching funds from the grantee. Transportation Alternatives funds must be granted out to eligible entities and cannot be used to support VTrans operating costs.

Federal Highway Administration (FHWA) Surface Transportation Block Grant (STBG)

VTrans receives a set amount of STBG funds each federal fiscal year from FHWA. These funds are used for a variety of purposes, such as paving roads, rehabilitating or repairing bridges and improving infrastructure in downtowns. There is flexibility to use some of these funds for the activities described above in the Transportation Alternatives Program section, but at the expense of the other types of projects that VTrans funds. The funds can be expended as stand-alone projects or can be used for these types of improvements as a component of other types of projects, which VTrans has routinely done.

Summary

In sum, the total federal funds for water quality improvement efforts in Vermont was \$34.5 million in FFY17 and \$34.0 million in FFY18.

Table 1: Summary of FFY 2018 Funding Related to Water Quality Improvements in Vermont

Sector	Federal Agency	Program	Program Description	Lead State Agency	FFY2017 Budget	FFY2018 Budget
Agriculture	USDA	USDA NRCS SWAT Program	Federal share of state FTEs to support agricultural best practice implementation at targeted watersheds	AAFM	\$46,963	\$61,049
Agriculture	USDA	Environmental Quality Incentives Program (EQIP)	Farm Bill program that supports conservation practices for water quality, soil health & ecosystem benefits	AAFM*	\$13,714,242	\$13,882,226
Agriculture	USDA	RCCP EQIP	Agricultural & forestry water quality improvement practices in Champlain Basin	DEC*	\$3,445,984	\$1,507,553
Agriculture	USDA	Agricultural Land Easements (ALE)	Farm Bill program to conserve priority agricultural land	AAFM*	\$2,777,500	\$2,502,000
Agriculture	USDA	RCCP ALE	Farm Bill program that focuses ALE in Champlain Basin	AAFM*	\$2,558,925	\$1,182,500
Agriculture	USDA	Wetlands Reserve Easements WRE	Farm Bill program to restore & conserve priority wetlands	AAFM*	\$1,746,712	\$153,032
Agriculture	USDA	RCCP WRE	Farm Bill program that focuses WRE in Champlain Basin	DEC*	\$422,449	\$234,167
Agriculture	USDA	CREP	Farm Bill program that establishes landowner agreements to install woody vegetated buffers	AAFM*	\$445,449	\$360,929
All Sectors	US EPA	EPA Clean Water Act Section 319	Nonpoint Source Pollution Reduction	DEC	\$1,180,793	\$1,166,901
All Sectors	US EPA	EPA Clean Water Act Section 106	Water Quality Monitoring & Assessment	DEC	\$1,114,980	\$1,068,929
All Sectors	US EPA	EPA Lake Champlain Basin Program	Implementation of the Lake Champlain Management Plan ³	DEC	\$526,000	\$4,046,724
Clean Water Infrastructure	US EPA	EPA Clean Water State Revolving Fund	Low-cost financing for water quality infrastructure projects	DEC	\$6,525,000	\$7,859,000

* Federal appropriations pass in whole or part outside of the state budget.

** Funds shown reflect the amount appropriated by the Legislature during each of the state fiscal years.

³ See 2017 LCBP Opportunities for Action – the Lake Champlain management plan: <http://www.lcbp.org/about-us/opportunities-for-action/>

Table 1: Summary of FFY 2018 Funding Related to Water Quality Improvements in Vermont (continued)

Sector	Federal Agency	Program	Program Description	Lead State Agency	FFY2017 Budget	FFY2018 Budget
Clean Water Infrastructure	USDA-RD	USDA Rural Development	Low-cost financing for water quality infrastructure projects in rural communities (< 10,000 population)	DEC*	\$23,831,761	\$20,000,000
Transportation	FHWA	TS4 Stormwater General Permit	Projects to address stormwater discharges from state highways	VTrans**	\$3,200,000	\$4,000,000
Transportation	FHWA	Transportation Alternatives	Variety of transportation projects that meet eligibility criteria, one of which is environmental mitigation	VTrans**	\$1,100,000	\$2,200,000
Transportation	FHWA	Surface Transportation Block Grant	Variety of transportation projects that meet eligibility criteria, one of which is environmental mitigation	VTrans**	\$5,442,342	\$5,442,342
TOTAL					\$34,504,997	\$34,025,010

Key:

* Federal appropriations pass in whole or part outside of the state budget.

** Funds shown reflect the amount appropriated by the Legislature during each of the state fiscal years.

AAFM: Vermont Agency of Food and Markets

ALE: Agricultural Land Easements

CREP: US Department of Agriculture Conservation Reserve Enhancement Program

DEC: Vermont Department of Environmental Protection

EPA: US Environmental Protection Agency

FTE: Full Time Equivalent; a staff position

FHWA: Federal Highway Administration

NRCS: USDA Natural Resources Conservation Service

RCPP: US Department of Agriculture Resource Conservation Performance Partnership

SWAT: USDA NRCS Strategic Watershed Action Team

TMDL: Total Maximum Daily Load

USDA: US Department of Agriculture

TS4: Transportation Separate Storm Sewer System stormwater general permit

VTrans: Vermont Transportation Agency

WRE: USDA Wetlands Reserve Program