

# Appendix

## Appendix A

Clean Water Costs & Existing Funding Sources

## Appendix B

Review of Bonding Options

**B.1.** Capital Expenditure Analysis and Remaining Bond Balances

**B.2.** Treasurer's Request for Capital Project Funds for Clean Water Purposes

## Appendix C

Review of Revenue Options

**C.1.** Revenue Review Criteria

**C.2.** Abbreviated List of Revenue Sources Reviewed at the November 16<sup>th</sup> Public Meeting

**C.3.** Description of Revenue Sources Reviewed at the November 16<sup>th</sup> Public Meeting

**C.4.** Full list of Stakeholder Revenue Recommendations

## Appendix D

Public Comment

**Appendix A**  
Clean Water Costs & Existing Funding Sources

1/10/17 9:38 AM

**Summary: Costs for Clean Water Improvements by Sector**  
 Vermont Water Quality Funding 20-Year Projection (\$\$ in millions, unless otherwise indicated), Page 1

<b>Tier 1 and Tier 2 Legend</b>				
Blue Shaded lines are "Tier 1" costs, the incremental costs associated with TMDLs, Act 64 (2015) and CSO Policy (2016)				
Unshaded lines are "Tier 2" costs, costs that support, enhance and catalyze compliance				
Tan shaded lines represent total of "Tier 1" and "Tier 2"				
<b>Tier 1 Summary: Costs &amp; Financing Sources</b>				
<b>Tier 1 Municipal Wastewater Pollution Control, including CSO</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Yr Financing</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$337,971,000	\$215,181,138	(\$122,789,862)	(\$6,139,493)
<b>Tier 1 Summary: Costs &amp; Funding Sources</b>				
<b>Tier 1 Agriculture Pollution Control</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Year Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$527,633,654	\$209,505,000	(\$318,128,654)	(\$15,906,433)
<b>Tier 1 Stormwater Pollution Control, Including Roads</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Year Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$694,678,108	\$215,755,179	(\$478,922,929)	(\$23,946,146)
<b>Tier 1 Natural Resources Restoration for Pollution Control</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Year Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$83,885,000	\$32,927,000	(\$50,958,000)	(\$2,547,900)
<b>Tier 1 Subtotal: Agriculture, Stormwater, Natural Resources</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Year Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$1,306,196,762	\$458,187,179	(\$848,009,583)	(\$42,400,479)
<b>Tier 1 Total</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Year Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$1,644,167,762	\$673,368,317	(\$970,799,445)	(\$48,539,972)
<b>Tier 2 Summary: Costs &amp; Financing Sources</b>				
<b>Tier 2 Municipal Wastewater Control</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Yr Financing</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$530,399,000	\$378,603,565	(\$151,795,435)	(\$7,589,772)
<b>Tier 2 Summary: Costs &amp; Funding Sources to Support Compliance</b>				
<b>Tier 2 Agriculture Pollution Control</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Yr Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$46,766,538	\$0	(\$46,766,538)	(\$2,338,327)
<b>Tier 2 Stormwater Pollution Control, Including Roads</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Year Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$32,540,000	\$6,159,000	(\$26,381,000)	(\$1,319,050)
<b>Tier 2 Natural Resources Restoration for Pollution Control</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Year Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$58,868,000	\$6,435,000	(\$52,433,000)	(\$2,621,650)
<b>Tier 2 Subtotal: Agriculture, Stormwater, Natural Resources</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Year Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$138,174,538	\$12,594,000	(\$125,580,538)	(\$6,279,027)
<b>Tier 2 Total</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Yr Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$668,573,538	\$391,197,565	(\$277,375,974)	(\$13,868,799)
<b>Tier 1 &amp; Tier 2 Total</b>				
<b>Total Summary: Costs &amp; Financing Sources</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Yr Financing</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
<b>Municipal Wastewater Control, including CSO</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Yr Financing</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$868,370,000	\$593,784,703	(\$274,585,297)	(\$13,729,265)
<b>Total Summary: Costs &amp; Funding Sources</b>				
<b>Agriculture Pollution Control</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Yr Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$574,400,192	\$209,505,000	(\$364,895,192)	(\$18,244,760)
<b>Stormwater Pollution Control, Including Roads</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Yr Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$727,218,108	\$221,914,179	(\$505,303,929)	(\$25,265,196)
<b>Natural Resources Restoration for Pollution Control</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Yr Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$142,753,000	\$39,362,000	(\$103,391,000)	(\$5,169,550)
<b>Subtotal: Agriculture, Stormwater, Natural Resources</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Yr Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$1,444,371,300	\$470,781,179	(\$973,590,121)	(\$48,679,506)
<b>Tier 1 &amp; Tier 2 Total</b>	<b>Projected 20-Year Costs</b>	<b>Projected 20-Yr Funds</b>	<b>Total 20-Year Gap</b>	<b>Annualized Gap</b>
	\$2,312,741,300	\$1,064,565,882	(\$1,248,175,418)	(\$62,408,771)

<b>Abbreviations</b>	
BMP:	Best Management Practice
CSO:	Combined Sewer Overflows
CWF:	Clean Water Fund
CWIP:	Clean Water Initiative Program
CWSRF:	Clean Water State Revolving Fund
ER:	Ecosystem Restoration Grants (of CWIP)
FWD:	Fish & Wildlife Department
LC TMDL:	Lake Champlain Total Max Daily Load
NPS:	NonPoint Source (not wastewater & reg. stormwater)
PO4:	Phosphorus
REAP Zone:	Rural Economic Area Program Grants
USDA RD:	US Dept of Agriculture Rural Development
VTrans:	Vermont Agency of Transportation
WEP:	Water Environment Program
WPC:	Water Pollution Control
WW:	Wastewater

Summary: Costs for Clean Water Improvements by Sector  
 Vermont Water Quality Funding 20-Year Projection (\$s in millions, unless otherwise indicated), Page 2

Tier 1 and Tier 2 Legend	
Blue Shaded lines are "Tier 1" costs, the incremental costs associated with TMDLs, Act 64 (2015) and CSO Policy (2016).	
Unshaded lines are "Tier 2" costs, costs that support, enhance and catalyze compliance.	
Tan shaded lines represent total of "Tier 1" and "Tier 2"	
<b>Municipal Wastewater Sector</b>	
<b>Costs &amp; Financing Sources</b>	
Tier 1 Muni. Wastewater Control: Costs, Required by TMDL, Act 64, CSO	
Tier 1 Muni. Wastewater Control: Funding Sources, Req. by TMDL, Act 64, CSO	
Tier 1 Municipal Wastewater Control: Gap, Required by TMDL, Act 64, CSO	
Tier 2 Municipal Wastewater Control: Costs that Support Compliance	
Tier 2 Municipal Wastewater Control: Funding Sources to Support Compliance	
Tier 2 Municipal Wastewater Control: Gap, to Support Compliance	
Municipal Wastewater Control: Total Costs	
Municipal Wastewater Control: Total Funding Sources	
Municipal Wastewater Control: Total Gap	
<b>Agricultural Sector</b>	
<b>Costs &amp; Funding Sources</b>	
Tier 1 Agriculture Pollution Control: Costs, Required by TMDL, Act 64	
Tier 1 Agriculture Pollution Control: Funding Sources, Required by TMDL, Act 64	
Tier 1 Agriculture Pollution Control: Gap, Required by TMDL, Act 64	
Tier 2: Agriculture Pollution Control: Costs that Support Compliance	
Tier 2 Agriculture Pollution Control: Funding Sources to Support Compliance	
Tier 2 Agriculture Pollution Control: Gap, to Support Compliance	
Agriculture Pollution Control: Total Costs	
Agriculture Pollution Control: Total Funding Sources	
Agriculture Pollution Control: Total Gap	
<b>Stormwater/Developed Lands Sector</b>	
<b>Costs &amp; Funding Sources</b>	
Tier 1 Stormwater Pollution Control: Costs, Required by TMDL, Act 64	
Tier 1 Stormwater Pollution Control: Funding Sources Required by TMDL, Act 64	
Tier 1 Stormwater Pollution Control: Gap, Required by TMDL, Act 64	
Tier 2 Stormwater Pollution Control: Costs that Support Compliance	
Tier 2 Stormwater Pollution Control: Funding Sources to Support Compliance	
Tier 2 Stormwater Pollution Control: Gap, to Support Compliance	
Stormwater Pollution Control: Total Costs	
Stormwater Pollution Control: Total Funding Sources	
Stormwater Pollution Control: Total Gap	
<b>Natural Resources Sector</b>	
<b>Costs &amp; Funding Sources</b>	
Tier 1 Natural Resources Restoration: Costs, Required by TMDL, Act 64	
Tier 1 Nat. Resources Restoration: Funding Sources, Required by TMDL, Act 64	
Tier 1 Natural Resources Restoration: Gap, Required by TMDL, Act 64	
Tier 2 Natural Resources Restoration: Costs that Support Compliance	
Tier 2 Natural Resources Restoration: Funding Sources to Support Compliance	
Tier 2 Natural Resources Restoration: Gap, to Support Compliance	
Natural Resources Restoration: Total Costs	
Natural Resources Restoration: Total Funding Sources	
Natural Resources Restoration: Total Gap	
<b>Summary of Broad Categories - TMDL, Act 64, CSO</b>	
Municipal Water Pollution Control Infrastructure (WWTF)	
Non-Wastewater Pollution Control (Precipitation-Based)	
Total	
<b>Summary of Broad Categories - Other</b>	
Municipal Water Pollution Control Infrastructure (WWTF)	
Non-Wastewater Pollution Control (Precipitation-Based)	
Total	

Abbreviations	
BMP:	Best Management Practice
CSO:	Combined Sewer Overflows
CWF:	Clean Water Fund
CWIP:	Clean Water Initiative Program
CWSRF:	Clean Water State Revolving Fund
ER:	Ecosystem Restoration Grants (of CWIP)
FWD:	Fish & Wildlife Department
LC TMDL:	Lake Champlain Total Max Daily Load
NPS:	NonPoint Source (not wastewater & reg. stormwater)
PO4:	Phosphorus
REAP Zone:	Rural Economic Area Program Grants
USDA RD:	US Dept of Agriculture Rural Development
VTrans:	Vermont Agency of Transportation
WEP:	Water Environment Program
WPC:	Water Pollution Control
WW:	Wastewater

Sector #1: Clean Water Infrastructure - Municipal Wastewater, Combined Sewer and Other Categories

Table with columns for funding years (FY18-FY37), funding source, and total funding. Rows include various funding categories like 'Tier 1 Costs', 'Tier 2 Costs', and 'Summary'. Subtotal for Tier 1 is 115.18 and for Tier 2 is 122.78.

Summary table with 4 columns: Category, Projected Costs, Projected Funding, Total 20-Year Gap, and Amortized Gap. Shows total projected costs of 237,971,000 and total projected funding of 579,603,565.

- List of acronyms and their corresponding program names, including BMP, CSO, CWF, CWRF, ER, FWD, LCTMDL, NPS, NRI, USDA RD, WPC, WEP, and WW.

Table showing the allocation of the total 20-year gap funding across various funding sources and categories, with a total of 115.18 for Tier 1 and 122.78 for Tier 2.

Sector #2: Agriculture Pollution Control

Funding Need, 20-Year Projection (\$ in millions, unless otherwise indicated)

	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	20-Year Total	Notes	
<b>Agricultural Sector</b>																							
<b>Costs &amp; Funding Sources</b>																							
<b>Tier 1 Costs: Required by TMDL, Act 64</b>																							
7 Production Area BMP Implementation	9.00	10.00	11.00	12.00	12.00	11.00	10.00	9.00	8.00	7.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	119.0	e.g. silage leachate, manure pits, manure stacking sites, barnyards
8 Cropland BMP Implementation (Farm Agronomic Practices)	7.00	10.00	12.00	12.00	12.00	10.00	9.00	7.00	6.00	5.00	3.00	3.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	113.0	e.g. riparian buffers, cover cropping, grassed waterways
9 Livestock exclusion (includes CREP)	3.00	4.00	4.00	5.00	4.00	3.00	2.00	1.00	1.00	1.00	1.00	1.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	34.5	total cost is based off of livestock exclusion report
10 NMP & CNMP Development	3.00	4.00	4.00	3.00	3.00	2.00	2.00	2.00	2.50	2.50	1.75	1.50	1.50	1.50	2.50	1.75	1.50	1.50	2.50	1.50	1.50	45.5	assumes NMP standard changes every 5 years
11 NMP Plan Implementation (NRCS Practice Code 590)	9.75	12.00	9.75	8.65	7.90	6.40	6.40	4.90	4.90	3.40	3.40	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	97.3	assumes NMP standard changes every 5 years
12 NMP Classes for Farmers	0.50	0.50	0.50	0.50	0.40	0.40	0.40	0.40	0.40	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	7.4	Supports training courses for farmers
13 Manure Applicator Training Program	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	3.0	Support administration of training courses and provide regulatory oversight
14 NMP Classes for Technical Service Providers	0.25	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	2.0	1 FTE manage train & regulate Tech Service Providers to assist for NMPs (incl support for non-certified SFOs interested in NMP)
15 Tech. Assist.-BMPs (production area, cropland, livestock exclusion)	4.75	6.00	6.75	7.25	7.00	6.00	5.25	4.25	3.75	3.25	1.50	1.50	1.50	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	66.6	100% of total costs to provide assistance, e.g., engineering, project mgmt
16 Tech. Assist.-NMPs (development and implementation)	3.41	4.19	3.63	3.10	2.91	2.26	2.26	1.88	2.01	1.61	1.42	1.06	1.06	1.06	1.31	1.12	1.06	1.06	1.31	1.06	1.06	38.8	100% of total costs to provide assistance
17 Tech. Assist.-manure and soil testing	0.15	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.6	Soil testing support
<b>Subtotal</b>	<b>41.0</b>	<b>51.1</b>	<b>52.0</b>	<b>51.9</b>	<b>49.6</b>	<b>41.3</b>	<b>37.5</b>	<b>30.7</b>	<b>28.8</b>	<b>24.3</b>	<b>14.6</b>	<b>12.8</b>	<b>12.8</b>	<b>10.9</b>	<b>12.2</b>	<b>11.2</b>	<b>10.9</b>	<b>10.9</b>	<b>12.2</b>	<b>10.9</b>	<b>527.6</b>		
<b>Tier 1 Funding Sources: To support TMDL, Act 64</b>																							
20 USDA 5-year Grant, BMP Implementation (VT RCPP)	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	RCPP-State of VT
21 Agriculture Technical Assistance (VACD RCPP)	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	VACD for NMP
22 USDA BMP Implementation (NRCS Base Funding)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	100.0	USDA
23 AAFF Capital Funds - Agriculture Implementation	2.5	3.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	94.5	assumes level funding each year (FY19-FY35)
24 AAFF General Fund	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	10.0	assumes level funding each year (FY17-FY35)
25 Clean Water Fund	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	Does not include CWF operating for FY16,FY17; includes approx 10% partner funds
<b>Subtotal</b>	<b>10.1</b>	<b>9.9</b>	<b>10.9</b>	<b>10.7</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>10.5</b>	<b>209.5</b>	
<b>Tier 1 Gap: To support TMDL, Act 64</b>	<b>(30.9)</b>	<b>(41.2)</b>	<b>(41.2)</b>	<b>(41.2)</b>	<b>(39.1)</b>	<b>(30.8)</b>	<b>(27.0)</b>	<b>(20.2)</b>	<b>(18.3)</b>	<b>(13.8)</b>	<b>(4.1)</b>	<b>(2.3)</b>	<b>(2.3)</b>	<b>(0.4)</b>	<b>(1.7)</b>	<b>(0.7)</b>	<b>(0.4)</b>	<b>(0.4)</b>	<b>(1.7)</b>	<b>(0.4)</b>	<b>(318.1)</b>		
<b>Tier 2 Costs: Costs that Support, Enhance &amp; Catalyze Compliance</b>																							
28 Capital Equipment Assistance Program	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	20.5	enhanced equipment to implement practices
29 Manure and soil tests	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	10.1	Base information for nutrient management plans
30 Incentive Payments	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	6.0	goal is to have additional \$200,000 per year in private match
32 Farm relocation	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	10.2	assume, took middle value, based on range VAARM provide
<b>Subtotal</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>46.8</b>	
<b>Tier 2 Funding Sources: Funding Sources to Support Compliance</b>																							
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	
<b>Tier 2 Gap: to Support, Enhance &amp; Catalyze Compliance</b>	<b>(2.3)</b>	<b>(2.3)</b>	<b>(2.3)</b>	<b>(2.3)</b>	<b>(2.3)</b>	<b>(2.3)</b>	<b>(2.3)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(46.8)</b>	

	Projected Costs	Projected Funding	Total 20-Year Gap	Annualized Gap
Tier 1 Agriculture: Required for TMDL, Act 64	\$527,633,654	\$209,505,000	(\$318,128,654)	(\$15,906,433)
Tier 2 Agriculture: to Support, Enhance & Catalyze Compliance	\$46,766,538	\$0	(\$46,766,538)	(\$2,338,327)
<b>Agriculture: Total</b>	<b>\$574,400,192</b>	<b>\$209,505,000</b>	<b>(\$364,895,192)</b>	<b>(\$18,244,760)</b>

**Tier 1 and Tier 2 Legend**  
 Blue Shaded lines are "Tier 1" costs, the incremental costs associated with TMDLs, Act 64 (2015) and CSO Policy (2016).  
 Unshaded lines are "Tier 2" costs, costs that support, enhance and catalyze compliance.

Abbreviations	
BMP:	Best Management Practice
CSO:	Combined Sewer Overflows
CWF:	Clean Water Fund
CWIP:	Clean Water Initiative Program
CWSRF:	Clean Water State Revolving Fund
ER:	Ecosystem Restoration Grants (of CWIP)
FWD:	Fish & Wildlife Department
LC TMDL:	Lake Champlain Total Max Daily Load
NPS:	NonPoint Source (not wastewater & reg. stormwater)
PO4:	Phosphorus
REAP Zone:	Rural Economic Area Program Grants
USDA RD:	US Dept of Agriculture Rural Development
VTrans:	Vermont Agency of Transportation
WEP:	Water Environment Program
WPC:	Water Pollution Control
WW:	Wastewater

**Sector #3: Stormwater, Road Infrastructure Runoff and Erosion Control**  
**Funding Need, 20-Year Projection (\$\$ in millions, unless otherwise indicated)**

	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	30-Year Total	Notes
4 Stormwater/Developed Lands Sector																						
5 Costs & Funding Sources																						
6 Tier 1 Costs: Required by TMDL Act 64, CSO																						
7 Inventory to Identify Stormwater "Critical Source Areas" for Treatment	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	10.0	Municipal inventories; WSMO estimate
8 Non-Road Stormwater/Developed Land Implementation	4.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	30.0	30.0	30.0	30.0	30.0	30.0	4.4	4.4	4.4	4.4	432.1	DEC estimate; used \$30K/acre estimate
9 Municipal Roads Implementation	3.6	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	161.4	Municipal Roads Implementation using DEC estimates
10 State (VTrans): (a) Roads & (b) Non-Road Developed Land-Implement	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	91.1	VTrans implementation using DEC estimates
11 Funding Need Subtotal	13.25	38.93	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	43.3	43.3	43.3	43.3	43.3	43.3	17.8	17.8	17.8	17.8	694.7	
12 Tier 1 Funding Sources: To support TMDL Act 64, CSO																						
13 State Municipal Mitigation-VT better Roads-Municipal Support	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	8.8	Former Better Back Roads Grants; Assumes Level Funding
14 State Transportation Funds-Municipal Support	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	20.0	Assumes continuation of funds after FY19
15 Fed Highway Admin Transportation Alternatives-Municipal Support	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	22.0	assume Fed Highway/Transpo Alternatives will continue and first two years, full amount of funds dedicated to clean water improvements
16 Federal Highway Administration - Project Dev., Construction	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	91.1	Assumes linear sources are priority over non-highway sources; 100% of VTrans road-related costs are covered by FHA and state funds
17 Lake Champlain Basin Program	0.0	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	4.8	Assume level funding from Federal partners (EPA, Great Lakes Fishery Commission)
18 CWIP Ecosystem Restoration	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	62.1	
19 Clean Water Fund	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	DEC estimate; 90% of available funds after FY18
20 Subtotal	11.01	10.40	10.5	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	13.6	215.8	
21 Tier 1 Gap: To support TMDL Act 64, CSO	(2.24)	(28.5)	(28.4)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)	(28.5)	(32.9)	(32.9)	(32.9)	(32.9)	(32.9)	(32.9)	(7.3)	(7.3)	(7.3)	(4.2)	(478.9)	
22 Tier 2 Costs: Costs that Support, Enhance & Catalyze Compliance																						
23 Non-Road Stormwater Implementation (below regulatory thresholds)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	10.0	Stormwater controls for properties below 3 acres
24 Municipal Capital Equipment Assistance Program	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	20.0	enhanced equipment for municipalities to implement practices
25 Stormwater Technical Assistance	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.5	WSMO estimate to support VLCT, SeaGrant techn assistance
26 Subtotal	1.60	1.60	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	32.5	
27 Tier 2 Funding Sources: Funding Sources to Support Compliance																						
28 CWIP Ecosystem Restoration	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	6.2	WSMO Estimate; assumes 83% for life of RCPP match, then 10% of available funds
29 Subtotal	0.10	0.10	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	6.2	
30 Tier 2 Gap: To Support, Enhance & Catalyze Compliance	(1.50)	(1.5)	(1.5)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(1.3)	(26.4)	
31																						
32 Summary																						
33 Tier 1 Stormwater: Required by TMDL Act 64																						
34 Tier 2 Stormwater: to Support, Enhance & Catalyze Compliance																						
35 Stormwater: Total																						

36  
 37 Tier 1 and Tier 2 Legend  
 38 Blue Shaded lines are "Tier 1" costs, the incremental costs associated with TMDLs, Act 64 (2015) and CSO Policy (2016).  
 39 Unshaded lines are "Tier 2" costs, costs that support, enhance and catalyze compliance.

Abbreviations	
BMP:	Best Management Practice
CSO:	Combined Sewer Overflows
CWF:	Clean Water Fund
CWIP:	Clean Water Initiative Program
CWSRF:	Clean Water State Revolving Fund
ER:	Ecosystem Restoration Grants (of CWIP)
FWD:	Fish & Wildlife Department
LCTMDL:	Lake Champlain Total Max Daily Load
NPS:	NonPoint Source (not wastewater & reg. stormwater)
PDA:	Phosphorus
REAP Zone:	Rural Economic Area Program Grants
USDA RD:	US Dept of Agriculture Rural Development
VTrans:	Vermont Agency of Transportation
WEP:	Water Environment Program
WPC:	Water Pollution Control
WW:	Wastewater

Sector #4: Restoration of Natural Resources (River Corridors, Floodplains, Wetlands, Forest Management) for Pollution Control

Funding Need, 20-Year Projection (\$\$ in millions, unless otherwise indicated)

4	Natural Resources Sector: Pollution Reduction																							20-Year	Notes
5	Costs & Funding Sources	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	Total			
6	<b>Tier 1 Costs: Required by TMDL, Act 64</b>																								
7	Passive restoration projects (easements) Rivers (LC TMDL)	0.60	0.72	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	17.52	water quality & flood resilience	
8	Passive restoration projects (easements) Wetlands (LCTMDL)	0.00	0.30	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	10.38	water quality & flood resilience	
9	Floodplain restoration projects (LC TMDL)	0.60	0.80	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	23.00	water quality & flood resilience	
10	Wetland restoration projects (LC TMDL)	0.49	1.28	1.28	1.28	1.28	1.50	1.50	1.88	1.88	2.03	1.88	1.88	1.50	1.50	1.28	1.28	1.28	1.28	1.28	1.28	1.28	28.79	water quality & flood resilience	
11	Forestry Technical Assistance & Implementation	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	4.20	DFPR for TMDL (AMP training, publication), forest buffer restoration, BMP incentives	
12	<b>Funding Need Subtotal</b>	1.9	3.3	4.1	4.1	4.2	4.4	4.4	4.7	4.8	4.9	4.7	4.8	4.4	4.4	4.1	4.1	4.1	4.1	4.1	4.1	4.1	83.9		
13	<b>Tier 1 Funding Sources: To support TMDL, Act 64</b>																								
14	CWIP - Ecosystem Restoration	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	3.4	DEC estimate; Assume half of available funds	
15	CWIP-Ecosystem Restoration RCPP Match-Wetland Restoration	0.3	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1		
16	Clean Water Fund-Implementation, Tech Assistance	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	Assume half of available funds	
17	Lake Champlain Basin Program	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	3.8	Assume alignment of funds to help meet need	
18	FWD License Plate Grants-Implementation, Tech Assistance	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.35	Assume half of available funds	
19	USDA WRE Program	0.50	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	17.60	Assume 90% of available funds	
20	US Fish and Wildlife Service - Partners for Fish & Wildlife	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	6.00		
21	<b>Subtotal</b>	1.9	1.9	1.8	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	32.93		
22	<b>Tier 1 Gap: To support TMDL, Act 64</b>	(0.00)	(1.4)	(2.31)	(2.3)	(2.6)	(2.8)	(2.8)	(3.2)	(3.2)	(3.2)	(3.2)	(2.8)	(2.8)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(51.0)		
23	<b>Tier 2 Costs: Costs that Support, Enhance &amp; Catalyze Compliance</b>																								
24	Assessments to identify priority Rivers and Wetlands projects	0.25	0.41	0.41	0.41	0.36	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	5.58	DEC estimate-river corridor & wetland restoration assessments	
25	Clean Water restoration projects (easements) - Rivers	0.30	0.38	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	9.68	water quality & flood resilience	
26	Clean Water Restoration projects (easements) - Wetlands	0.00	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	3.61	water quality & flood resilience	
27	Clean Water Restoration projects - Floodplains	0.28	0.50	0.50	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	13.18	water quality & flood resilience	
28	Wetland restoration projects	0.12	0.33	0.33	0.33	0.33	0.50	0.40	0.53	0.53	0.53	0.53	0.40	0.50	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	7.82	water quality & flood resilience; added 0.3 fro first 2	
29	Loggers Capital Equipment Assistance Program	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	19.00	DFPR estimate for new logger capital equipment assistance program	
30	<b>Subtotal</b>	1.0	2.8	2.9	3.1	3.1	3.0	3.2	3.2	3.2	3.2	3.2	3.0	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	58.9		
31	<b>Tier 2 Funding Sources: Funding Sources to Support Compliance</b>																								
32	CWIP - Ecosystem Restoration	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	3.4	DEC estimate; assume 10% of avail. funds	
33	Clean Water Fund-Implementation, Tech Assistance	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	includes 20% of partner funds for FY17	
34	FWD License Plate Grants-Implementation, Tech Assistance	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.35	Assume 50% of available funds	
35	USDA WRE Program	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	2.00	Assume 10% of funding of Farm Bill program	
36	<b>Subtotal</b>	0.9	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	6.44		
37	<b>Tier 2 Gap: to Support, Enhance &amp; Catalyze Compliance</b>	(0.00)	(2.5)	(2.6)	(2.8)	(2.8)	(2.9)	(2.8)	(2.9)	(2.9)	(2.9)	(2.9)	(2.8)	(2.8)	(2.7)	(2.7)	(2.7)	(2.7)	(2.7)	(2.7)	(2.7)	(2.7)	(52.4)		

39	Summary	Projected Costs	Projected Funding	Total 20-Year Gap	Annualized Gap
40	Tier 1 Natural Resources: Required for TMDL, Act 64	\$83,885,000	\$32,927,000	(\$50,958,000)	(\$2,547,900)
41	Tier 2 Natural Resources: to Support, Enhance & Catalyze Compliance	\$58,868,000	\$6,435,000	(\$52,433,000)	(\$2,621,650)
42	Natural Resources: Total	\$142,753,000	\$39,362,000	(\$103,391,000)	(\$5,169,550)

**Tier 1 and Tier 2 Legend**

Blue Shaded lines are "Tier 1" costs, the incremental costs associated with TMDLs, Act 64 (2015) and CSO Policy (2016).

Unshaded lines are "Tier 2" costs, costs that support, enhance and catalyze compliance.

Abbreviations	
BMP:	Best Management Practice
CSC:	Combined Sewer Overflows
CWF:	Clean Water Fund
CWIP:	Clean Water Initiative Program
CWSRF:	Clean Water State Revolving Fund
ER:	Ecosystem Restoration Grants (of CWIP)
FWD:	Fish & Wildlife Department
LC TMDL:	Lake Champlain Total Max Daily Load
NPS:	NonPoint Source (not wastewater & reg. stormwater)
PdA:	Phosphorus
REAP Zone:	Rural Economic Area Program Grants
USDA RD:	US Dept of Agriculture Rural Development
VTrans:	Vermont Agency of Transportation
WEP:	Water Environment Program
WPC:	Water Pollution Control
WW:	Wastewater



## **Appendix B**

### Review of Bonding Options

**B.1. Capital Expenditure Analysis and Remaining Bond Balances**

**B.2. Treasurer's Request for Capital Project Funds for Clean Water Purposes**

2015 A & B Issue (October 2015)	Par Bonds	Premium	Total
Series A	28,515,000	4,263,849.90	32,778,849.90
Series B	61,345,000	5,134,903.45	66,479,903.45
<b>Total for new projects</b>	<b>89,860,000</b>	<b>9,398,753</b>	<b>99,258,753.35</b>
Series C (Refunding)	25,720,000	2,727,443.45	28,447,443.45
<b>Total</b>	<b>115,580,000</b>	<b>12,126,196.80</b>	<b>127,706,196.80</b>

2015 Series A	Act 26 of 2015	Section	Spent	Remaining
State Buildings	19,294,837	2	17,552,609.49	1,742,227.51
Natural Resources	8,731,601	11	5,210,468.58	3,521,132.42
Agriculture	2,002,412	14	173,420.18	1,828,991.82
VHCB	2,750,000	18	2,488,924.12	261,075.88
	<u>32,778,850</u>		<u>25,425,422.37</u>	<u>7,353,427.63</u>

2015 Series B	Act 26 of 2015		Spent	Remaining
State Buildings	20,357,673	2	8,483,793.45	11,873,879.55
Administration	5,125,000	3	275,169.00	4,849,831.00
Human Services	300,000	4	95,043.30	204,956.70
Judiciary	5,880,000	5	5,372,196.99	507,803.01
Commerce & Comm Dev	393,000	6	280,039.06	112,960.94
Grant Programs	1,400,000	7	888,181.70	511,818.30
Education	4,057,688	8	20,426.00	4,037,262.00
UVM	1,400,000	9	1,399,999.78	0.22
State Colleges	2,400,000	10	2,400,000.00	-
Natural Resources	4,150,000	11	3,037,348.18	1,112,651.82
Military	809,759	12	547,595.13	262,163.87
Public Safety	300,000	13	1,510.00	298,490.00
Agriculture	200,000	14	93,611.94	106,388.06
Vt Rural Fire Protection	125,000	15	125,000.00	-
Vt Veterans Home	500,000	16	2,517.00	497,483.00
Vt Historical Society	50,000	17	50,000.00	-
VHCB	1,800,000	18	1,118,103.56	681,896.44
Vt Interactive Tech	220,000	19	110,810.64	109,189.36
General Assembly	180,000	20	148,802.00	31,198.00
	<u>49,648,120</u>		<u>24,450,147.73</u>	<u>25,197,972.27</u>

**Total - Act 26 of 2015** **82,426,970** **49,875,570.10** **32,551,399.90**

	Act 51 of 2013		Spent	Remaining
State Buildings	12,198,051	2	8,305,711.23	3,892,339.77
Grant Programs	500,000	7	445,687.44	54,312.56
Natural Resources	3,000,000	11	2,173,120.40	826,879.60
Agriculture	1,000,000	14	472,999.45	527,000.55
<b>Total Act 51 of 2013 (178 of 2014)</b>	<b>16,698,051</b>		<b>11,397,518.52</b>	<b>5,300,532.48</b>

**TOTAL** **99,125,021** **61,273,089** **37,851,932**

2015 A & B Issue (October 2015)	Par Bonds	Premium	Total
Series A	28,515,000	4,263,849.90	32,778,849.90
Series B	61,345,000	5,134,903.45	66,479,903.45
<b>Total for new projects</b>	<b>89,860,000</b>	<b>9,398,753</b>	<b>99,258,753.35</b>
Series C (Refunding)	25,720,000	2,727,443.45	28,447,443.45
<b>Total</b>	<b>115,580,000</b>	<b>12,126,196.80</b>	<b>127,706,196.80</b>

Capital Bill Section		Act 26 of 2015	Spent through		Act 160 of 2016	Spent through	
		Act 51 of 2013	Dec. 8, 2016	Remaining		Jan. 5, 2017	Remaining
2	State Buildings	51,850,561	34,342,114	17,508,447	33,265,235	535,876.32	32,729,358.68
3	Administration	5,125,000	275,169	4,849,831	11,277,092	125,000.00	11,152,092.00
4	Human Services	300,000	95,043	204,957	200,000	-	200,000.00
5	Judiciary	5,880,000	5,372,197	507,803	4,830,000	-	4,830,000.00
6	Commerce & Comm Dev	393,000	280,039	112,961	420,000	22,842.00	397,158.00
7	Grant Programs	1,900,000	1,333,869	566,131	1,600,000	437,889.59	1,162,110.41
8	Education	4,057,688	20,426	4,037,262	60,000	-	60,000.00
9	UVM	1,400,000	1,400,000	0	1,900,000	1,882,698.00	17,302.00
10	State Colleges	2,400,000	2,400,000	-	3,050,000	1,982,698.00	1,067,302.00
11	Natural Resources	15,881,601	10,420,937	5,460,664	18,094,494	4,753,846.14	13,340,647.86
12	Military	809,759	547,595	262,164	1,058,000	159,555.50	898,444.50
13	Public Safety	300,000	1,510	298,490	1,180,000	152,030.41	1,027,969.59
14	Agriculture	3,202,412	740,032	2,462,380	2,370,000	78,334.82	2,291,665.18
15	Vt Rural Fire Protection	125,000	125,000	-	125,000	-	125,000.00
16	Vt Veterans Home	500,000	2,517	497,483	-	-	-
17	Vt Historical Society	50,000	50,000	-	-	-	-
18	VHCB	4,550,000	3,607,028	942,972	4,000,000	773,346.79	3,226,653.21
19	Vt Interactive Tech	220,000	110,811	109,189	-	-	-
20	General Assembly	180,000	148,802	31,198	145,000	-	145,000.00
20a	Public Service				300,000	-	300,000.00
	<b>TOTAL</b>	<b>\$ 99,125,021</b>	<b>\$ 61,273,089</b>	<b>\$ 37,851,932</b>	<b>83,874,821</b>	<b>10,904,117.57</b>	<b>72,970,703.43</b>

Act 26 projects	82,426,970
Act 51 projects	16,698,051
	<u>99,125,021</u>

Act 26 Projects (2015)	82,426,970
Act 51 Projects (2013)	<u>16,698,051</u>
Total 2015 A&B Issue	99,125,021

Act 160 Projects (2016)	83,874,821
-------------------------	------------

<b>Total 2015 &amp; 2016 projects</b>	<b>166,301,791</b>
---------------------------------------	--------------------

Reallocations - 2016	1,847,575
Engineering costs (not bonded)	(612,824)
Section 19 adj.	<u>109,189</u>
	1,343,940

<b>Agrees to 2 yr Capital Bill</b>	<b>164,957,851</b>
------------------------------------	--------------------

**ELIZABETH A. PEARCE**  
STATE TREASURER

RETIREMENT DIVISION  
TEL: (802) 828-2305  
FAX: (802) 828-5182



UNCLAIMED PROPERTY DIVISION  
TEL: (802) 828-2407

ACCOUNTING DIVISION  
TEL: (802) 828-2301  
FAX: (802) 828-2884

**STATE OF VERMONT**  
**OFFICE OF THE STATE TREASURER**

**TO:** Andy Pallito, Commissioner, Department of Finance and Management

**FROM:** Beth Pearce, Vermont State Treasurer 

**RE:** Act 64 Capital Budget Recommendation

**DATE:** December 27, 2016

---

Act 64 of 2015 directs the Office of the State Treasurer, in consultation with the Secretary of Administration, the Commissioner of Environmental Conservation, the Commissioner of Taxes as well as other agencies of jurisdiction, to prepare a legislative report on financing and funding recommendations to the General Assembly to continue to fund the Clean Water Fund and support clean water initiatives across the State. Act 64 directed the Treasurer's Office to include the following in the report:

- (1) Proposed revenue sources
- (2) Recommendation for incentivizing Best Management Practices
- (3) Estimated amount of revenue to be generated by source
- (4) Summary of how each source will be administered, collected and enforced
- (5) Assessment of whether the State should use bonds to finance water quality improvements
- (6) Legislative proposal to implement each of the proposed revenue sources

First, I would like to thank the Administration for all the research completed by the Agencies of Administration, Natural Resources, Agriculture, Transportation and Commerce and Economic Development. The efforts are greatly appreciated and, while the Treasurer's Office is the primary author of the report, any resulting steps will ultimately rest with capable staff in these agencies/departments.

As we have moved forward with the project, we have been guided by the following concepts.

- (1) Reduce overlapping fee structures to minimize entities paying twice for the same service/activity,

- (2) Incentivize local and regional decision making and implementation,
- (3) Incentivize public and private entities to make water quality improvements, and,
- (4) Maximize on-going funding opportunities in the form of utility programs and revolving funding sources.

A program for effectively funding and financing clean water will require development of new technologies and structures at both the state and local level. At the same time, we are cognizant of the need to move quickly on this project given the EPA directives, requirements in state statute, the threat of litigation and most importantly, the need to invest in an asset that is so vital to our economy. We also recognize that tax and fee revenues are a limited commodity and have looked to use existing resources and to bend the cost curve downward wherever feasible.

Therefore, the Treasurer's office has developed the following goals:

- (1) Establish a two-year interim funding plan for the high priority projects to facilitate water quality implement efforts and create momentum for a more comprehensive funding plan,
- (2) Establish a base for a long-term funding plan that is targeted to start, beginning in year three,
- (3) To the extent possible, use existing resources.

While we are still working on some of the specifics of the recommendation, I believe that this can be achieved without raising taxes or fees over the next two years while we develop a model that maximizes cost efficiency and incentivizes local and regional decision making and implementation while providing adequate resources.

To accomplish this without raising taxes, but at the same time providing a glide path to the long-term model, we will be recommending the following, among others:

- (1) Reallocate/Secure/Prioritize State capital money from general obligation bond program consistent with CDAAC recommendations;
  - \$15 million annually for two years
- (2) Reallocate transportation infrastructure bond fund capital money, either in the form of pay-go capital or future issue of bond funds;
  - \$5 million annually, initially for two years

There exists a temporary window for the use of significant bonded dollars within the existing general obligation bond program due to a high level of authorized but unissued debt, i.e. there is a lag in the current spenddown of these dollars that would permit a "shifting" of cash

December 27, 2016  
Office of the State Treasurer

expenditures for some existing capital authorizations to later years making dollars available in the next two years. In addition, the Treasurer's Office and its legal and financial advisors believe that the current Transportation Infrastructure Bond program has, in its current authorization, ability to extend this program to culvert and related work at the municipal level that would provide relief to municipalities.

We have previously discussed this with Administration staff but at this time are submitting a formal request for consideration as part of the capital plan. I am also sending a copy of this request to the Transition Team. In the end, the decisions will be up to the Administration and the General Assembly. We believe this approach does, however, offer the best opportunity to meet our statutory requirements and maintain the best value to the taxpayer.

I am prepared to discuss the specifics of the current bonding authorizations and expenses at your convenience.

Thank you for your consideration.

CC: Trey Martin, Secretary, Agency of Administration

## **Appendix C**

### **Review of Revenue Options**

**C.1. Revenue Review Criteria**

**C.2. Abbreviated List of Revenue Sources Reviewed  
at the November 16<sup>th</sup> Public Meeting**

**C.3. Description of Revenue Sources Reviewed at the  
November 16<sup>th</sup> Public Meeting**

**C.4. Full list of Stakeholder Revenue Recommendations**



# CLEAN WATER FUND REVENUE SOURCE CRITERIA

Criteria used as a general framework to evaluate revenue sources for water quality improvements.

<u>Criteria</u>	<u>Explanation</u>
<b>Revenue Potential</b>	The amount of revenue that a source generates to support the Clean Water Fund or debt service on a bond for clean water improvements.
<b>Predictability</b>	The degree to which a revenue source fluctuates and/or is predictable over time.
<b>Sufficiency</b>	The degree to which a revenue source provides the dollars necessary to finance the desired rate of spending.
<b>Effect on Outside Dollars</b>	The degree of impact and leverage on outside dollars, such as Federal government contributions for a project.
<b>Economic Impact</b>	The entities that revenue sources target and the potential economic consequences of those sources.
<b>Nexus to Water Quality</b>	The degree to which a tax or fee bears a relationship to water quality and sources of pollution.
<b>Promotes Mitigation</b>	The degree to which a tax or fee encourages individuals and businesses to perform on-site mitigation to improve water quality.
<b>Administration and Compliance</b>	The degree to which: 1) revenues can be collected effectively, 2) the provision can be enforced, and 3) payers can easily comply.
<b>Accountability</b>	The degree of transparency/explicitness to payers of a revenue source.
<b>Geographic Distribution</b>	The degree to which a tax or fee applies across Vermont.
<b>Income Equity</b>	The degree to which a tax or fee is based on ability to pay.

## Abbreviated List of Sources Considered

	Revenue Source	Annual Amount
<b>Category One: Existing Revenue Source</b>		
1	Clean Water Surcharge on Property Transfers	Current 0.2% surcharge on the transfer of certain properties = \$4.7M-\$5M
<b>Sources Proposed During Stakeholder Process</b>		
<b>Category Two: Act 138 (2013) and Act 97 (2014) Legislative Reports</b>		
2	\$50 Annual Flat Parcel Fee	\$16.7 million
3	\$3 Per Acre Per Parcel Fee	\$15 million
4	Impervious Surface Tiered Acreage Fee	\$18 million
5	Impervious Surface Tiered Parcel Fee	\$18 million
6	Excise Tax on Pesticides	\$70,000-\$140,000
7	Property tax	\$0.01 property tax increase = \$8M annually
8	Personal Income Tax	\$7M: 1% of current revenues; \$13.3M: .1% increase applied to the rate of each tax bracket (i.e. 3.55% increased to 3.65%); \$5.5M: Bottom tax rate remains at 3.55% and other rates increased by .1%; \$2.8M: Bottom two brackets remain at 3.55%
9	Gas tax	\$0.01 increase / gallon of gas = \$3M; \$0.01 tax/gallon of diesel = \$690,000
10	Fertilizer tonnage fee	<ul style="list-style-type: none"> <li>▪ Doubling the Ag fertilizer tonnage fee from \$0.50 to \$1 = \$19,000 in new revenue</li> <li>▪ Increasing the Ag fee to \$25 = \$930,000 in new revenue</li> <li>▪ Increasing the non-Ag fee by \$1 = \$6,000 in new revenue</li> </ul>
11	Excise Tax on Flushable Consumer Products	1% excise tax = \$1.35M
12	Excise Tax on Bottled Water Containers	\$0.01 per container = \$1M
13	Escheating Unclaimed Beverage Container Deposits	\$1.5M-\$2M annually.
14	DEC Fines for non-compliance	\$200,000
15	Agency of Agriculture Food and Markets Fines for non-compliance	Agency of Agriculture penalties = \$175K-\$230K; Vermont Office of Attorney General Water quality violations totaled \$24.75K in 2016 and \$118K in 2014
<b>Category Three: Stakeholder Suggestions</b>		
16	Sales Tax on Nail Salons	\$2.23M
17	Sales Tax on Beauty Salon Services	\$4.3M
18	End education property tax Exemption on Ski Lifts and Snowmaking Equipment	\$1.5-\$2M
19	Current Use: Apply a 90% discount to all property enrolled in current use.	\$4.5M
20	Sales Tax on Marinas	\$210,00

21	<b>Pharmaceutical Medicine Excise Tax</b>	1% excise tax on prescription drugs = \$5.5M; 1% excise tax on non-prescription drugs = \$600,000
22	<b>Sales Tax on Parking (Lots and Garages)</b>	\$280,000
23	<b>Sales Tax on Limousine Services</b>	\$610,000
24	<b>Sales Tax on Storage Units</b>	\$940,000
25	<b>Sales tax on new car dealer labor charges, work under warranty, and value of service contracts</b>	\$4.8M
26	<b>Sales Tax on General Auto Repair</b>	\$6.2M
27	<b>Inspection Sticker Fee</b>	\$1 increase = \$585K.
28	<b>Surtax on Rental Cars</b>	1% surtax on rental vehicles = \$480,000.
29	<b>Surtax/Increase to Sales &amp; Use Tax</b>	0.1% increase = \$6M.
30	<b>Dollar Surcharge on Rooms</b>	\$1 surcharge on rooms = \$3.6M
31	<b>Surtax/Increase to Meals, Rooms, and Alcoholic Beverages</b>	25% increase = \$4.2M <ul style="list-style-type: none"> <li>▪ \$2.5M – Meals</li> <li>▪ \$1.2M - Rooms</li> <li>▪ \$500K - Alcohol</li> </ul>
32	<b>Voluntary Contribution Line Item on the Personal Income Tax Form</b>	\$30K-\$100K
<b>Category Four: Reappropriation of Existing Source/Other Concepts</b>		
33	<b>Affinity Card</b>	Minimal
34	<b>Reappropriation of Current Expenditures</b>	Varies

## Categories of Revenue Sources

Category 1	Existing Revenue Source
Category 2	Revenue Options: Act 138 (2013) and Act 97 (2014) Legislative Reports
Category 3	Revenue Options: Stakeholder Suggestions
Category 4	Re-Appropriation of Existing Funds/Other Concepts

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

## Category 1: Existing Revenue Source

### Clean Water Surcharge on Property Transfers

**Annual Revenue Amount:**

- 0.2 Percent surcharge on the transfer of certain properties = \$4.7Million - \$5 Million

**Notes:**

- The existing revenue source for the Clean Water Fund.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

## Category 2

### Revenue Options: Act 138 (2013) and Act 97 (2014) Legislative Reports

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 2

### **\$50 Annual Flat Parcel Fee**

**Annual Revenue Amount:**

- \$50 annual flat parcel fee = \$16.7 Million

**Notes:**

- Applies annually to all parcels regardless of their acreage and impervious surface.
- The above fee would be collected at the municipal level, where property taxes are collected. The Tax Department does not collect property taxes and is therefore not positioned to collect property fees.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 2

## \$3 Per Acre Per Parcel Fee

### Annual Revenue Amount:

\$3 per acre per parcel fee = \$15 Million.

### Notes:

- Applies annually to all parcels.
- Does not account for impervious surface.
- Applies annually to all parcels regardless of their acreage and impervious surface.
- The above fee would be collected at the municipal level, where property taxes are collected. The Tax Department does not collect property taxes and is therefore not positioned to collect property fees.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 2

## Impervious Surface Tiered Acreage Fee

### Annual Revenue Amount:

- \$18 Million

### Notes:

- Based on the amount of impervious surface per acre per parcel.
- Applies annually to all parcels regardless of their acreage and impervious surface.
- This source is based on the amount of impervious surface per acre per parcel. The Tax Department matched impervious surface data to 46,000 parcels (14% of the state) in 46 towns. The department then grouped parcel use codes from the Grand List based on the median amount of impervious surface per acre of the parcels within each use code. The tax is then applied at increasing rates based on per-acre impervious surface percentages per use code, and it is applied based on the acreage of parcels within each use code.
- The above fee would be collected at the municipal level, where property taxes are collected. The Tax Department does not collect property taxes and is therefore not positioned to collect property fees.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 2

## Impervious Surface Tiered Parcel Fee

**Annual Revenue Amount:**

- \$18 Million

**Notes:**

- Uses the same general approach as tiered acreage impervious surface fee.
- Applies to parcels based on their use code.
- Does not account for acreage.
- Applies annually to all parcels regardless of their acreage and impervious surface.
- The above fee would be collected at the municipal level, where property taxes are collected. The Tax Department does not collect property taxes and is therefore not positioned to collect property fees.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 2

## Excise Tax on Pesticides

**Annual Revenue Amount:**

- \$70,000-\$140,000

**Notes:**

- Difficult to estimate based on the limited and disparate data on these sales.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 2

## Property Tax

### Annual Revenue Amount:

- \$0.01 property tax increase = \$8 Million

### Notes:

- Increases Vermont property taxes by \$0.01 per \$100 of property value.
- \$4 Million would come from the homestead property tax.
- Remaining \$4 Million would come from the nonresident property tax.
- Revenues currently applied to the Education Fund.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 2

## Surtax on Personal Income Tax Liability

### Annual Revenue Amount (4 Options):

- \$7 Million – 1 percent of current revenues.
- \$13.3 Million - 0.1 percent increase applied to the rate of each tax bracket (i.e. 3.55 percent increased to 3.65 percent).
- \$5.5 Million: Bottom tax rate remains at 3.55 percent; other rates increased by 0.1 percent.
- \$2.8 Million: Bottom two brackets remain at 3.55 percent and 7.8 percent and other rates raised by 0.1 percent.

### Notes:

- Vermont's Personal Income Tax features a progressive rate schedule that ranges from 3.55 percent to 8.95 percent.
- Applies at an increasingly higher rate as a filer's taxable income increases.
- This estimate is based on TY13 data.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.



Category 2

## Excise Tax on Motor Fuels

### Annual Revenue Amount:

- \$0.01 increase per gallon of gas = \$3 Million.
- \$0.01 tax per gallon of diesel = less than \$690,000.

### Notes:

- Increases the tax rates on motor fuels.
- Targets the additional revenues for the Clean Water Fund.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 2

## Fertilizer Tonnage Fee

### Annual Revenue Amount:

- Doubling the agriculture fertilizer tonnage fee from \$0.50 to \$1 = \$19,000.
- Increasing the agriculture fertilizer tonnage fee to \$25 = \$930,000.
- Increasing the non-Agriculture fertilizer fee by \$1 = \$6,000.

### Notes:

- Administered by the Agency of Agriculture, Food & Markets.
- Supports AAFM capacity.
- Applies to fertilizer distributors.
- Based on the volume (tons) of fertilizer distributed.
- Was doubled at the 2016 legislative session from \$0.25 to \$0.50 per ton, and the non-ag fee increased from \$0.25 to \$30 per ton.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 2

## Excise Tax on Flushable Consumer Products

### Annual Revenue Amount:

- Excise tax of 1 percent = \$1.35 Million

### Notes:

- Applies to flushable products due to contribution to wastewater stream.
- Includes soaps, shampoos, toothpastes, detergents, cooking oils, lotions, perfumes and other products that are deemed “safe” for flushing down a toilet.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer’s Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 2

## Excise Tax on Bottled Water Containers

### Annual Revenue Amount:

- \$0.01 per container = \$1 Million

### Notes:

- No bottled water excise tax in Vermont.
- Bottled water is exempt from the state’s general sales & use tax and the bottle redemption fee.
- 17 states and D.C. apply a sales tax to bottled water sold through food stores; 34 states and D.C. apply a sales tax to bottled water sold through vending machines; 2 states apply fees at the manufacturer, distributor, wholesaler, and/or retailer levels (DEC).

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer’s Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 2

## Escheating Unclaimed Beverage Container Deposits

**Annual Revenue Amount:**

- \$1.5 Million - \$2 Million

**Notes:**

- collects the unclaimed beverage container deposit fees from distributors.
- Are fees that consumers, who purchased beverages and paid a deposit fee to distributors, did not receive, because they chose not to return the beverage container to collect the deposit fee.
- This would collect those unclaimed beverage container deposit fees from distributors. These are the fees that customers, who purchased beverages and paid a deposit fee to distributors, did not receive because they did not redeem their used containers for the receipt of this fee.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 2

## DEC Fines for Non-Compliance

**Annual Revenue Amount:**

- \$200,000

**Notes:**

- Relates to environmental violations, including water quality violations.
- Diverts revenues from the General Fund to the Clean Water Fund.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 2

## Agency of Agriculture Fines for Non-Compliance

**Annual Revenue Amount:**

- Agency of Agriculture penalties = \$175,000 - \$230,000.
- Vermont Office of Attorney General agriculture water quality violations in 2016 = \$24,750; in 2014=\$118,000.

**Notes:**

- AAFM penalties go into an Agency of Agriculture special fund.
- Attorney General-generated penalties go to the General Fund.
- Diverts revenues to the Clean Water Fund.
- Agency of Agriculture penalties are applied to special Agency funds. The water quality violation revenues generated via the Attorney General's Office were applied to the General Fund. This proposal would divert those revenues to the Clean Water Fund.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

## Category 3

### Revenue Options: Stakeholder Suggestions

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## Sales Tax on Nail Salons

### Annual Revenue Amount:

- \$2.23 Million

### Notes:

- Sales tax does not currently apply to these services.
- Extends the sales tax to these services due to contribution to wastewater stream.
- Clear nexus to water quality regarding chemical usage.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## Pharmaceutical Medicine Excise Tax

### Annual Revenue Amount:

- 1% excise tax on prescription drugs=\$5.5 million; 1% excise tax on non-prescription drugs=\$600,000.

### Notes:

- May negatively impact individuals in need of prescription and non-prescription drugs (and that the cost of prescription and non-prescription drugs is already prohibitively high); however, it was noted by stakeholders that there is a nexus to water quality for this revenue source.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## Sales Tax on Beauty Salon Services

**Annual Revenue Amount:**

\$4.3 Million

**Notes:**

- Sales tax does not currently apply to these services.
- Extends the sales tax to these services due to contribution to wastewater stream.
- Clear nexus to water quality regarding chemicals.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## End Education Property Tax Exemption on Ski Lifts and Snowmaking Equipment

**Annual Revenue Amount:**

- \$1.5 Million - \$2 Million

**Notes:**

- Property tax does not currently apply to ski lifts and snowmaking equipment.
- Directs revenues to the Clean Water Fund.
- It was noted through the stakeholder process that this revenue source did have a nexus to water usage; however, it was also noted by some stakeholders that separating this exemption from other "equipment" exemptions may not be equitable.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## **Current Use: Apply a 90% Discount to all Property Enrolled in Current Use**

### **Annual Revenue Amount:**

- \$4.5 Million

### **Notes:**

- Replaces current system with simpler model.
- Current system applies use values determined by the UVA board.
- New model applies a tax to all enrolled property at 10% of its listed value (90% discount).
- Instead of using use values determined by the UVA board (ag:\$306/acre, Forest \$135/acre, Forest >1M from road \$101/acre, farm buildings \$0), this would simply tax all enrolled property at 10% of its listed value -- a 90% discount.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## **Sales Tax on Marinas**

### **Annual Revenue Amount:**

- \$210,000

### **Notes:**

- Sales tax does not currently apply to these services.
- Extends the sales tax to these services.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## Sales Tax on Parking (Lots and Garages)

**Annual Revenue Amount:**

- \$280,000

**Notes:**

- Sales tax does not currently apply to these services.
- Extends the sales tax to these properties due to the impervious surfaces that generate stormwater runoff.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## Sales Tax on Limousine Services

**Annual Revenue Amount:**

- \$610,000

**Notes:**

- Sales tax does not currently apply to these services.
- Extends the sales tax to these services.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.



Category 3

## Sales Tax on Storage Units

**Annual Revenue Amount:**

- \$940,000

**Notes:**

- Sales tax does not currently apply to these services.
- Extends the sales tax to the rental of these storage units due to the impervious surfaces that generate stormwater runoff.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## Sales Tax on New Car Dealer Labor Charges, Work Under Warranty, and Value of Service Contracts

**Annual Revenue Amount:**

- \$4.8 Million

**Notes:**

- Sales tax does not currently apply to these services.
- Extends the sales tax to the these services.
- Nexus related to impact on the roads which cause runoff.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## Sales Tax on General Auto Repair

**Annual Revenue Amount:**

- \$6.2 Million

**Notes:**

- Sales tax does not currently apply to these services.
- Extends the sales tax to these services.
- Nexus related to impact on the roads which cause runoff.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## Automobile Inspection Sticker Fee

**Annual Revenue Amount:**

- \$1 increase = \$585,000.

**Notes:**

- Increases fee from \$6 to \$7.
- Directs revenues to the Clean Water Fund.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## Surtax on Rental Cars

### Annual Revenue Amount:

- 1 percent surtax on rental cars = \$480,000.

### Notes:

- Raises the rental vehicle tax from 9 percent to 10 percent.
- Based on FY15 data in the VT Transportation Funding Options Report.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## Surtax on the Sales & Use Tax

### Annual Revenue Amount:

- 0.1 percent increase = \$6 Million.

### Notes:

- Increase Sales & Use Tax from 6 percent to 6.1 percent.
- 35 percent of current revenues is applied to the Education Fund.
- 65 percent of current revenues goes to the General Fund.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## Surcharge on Rooms

### Annual Revenue Amount:

- \$1 per night surcharge on rooms = \$3.6 Million.

### Notes:

- Applies to all rooms or units that are rented by Rooms Tax filers.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## Surtax/Increase to Meals, Rooms, and Alcoholic Beverages

### Annual Revenue Amount:

- 25% increase = \$4.2M
  - \$2.5M - Meals
  - \$1.2M - Rooms
  - \$500K - Alcohol

### Notes:

- This estimate is based on raising the Meals and Rooms tax from 9% to 9.25% and the Alcoholic Beverages Tax from 10% to 10.25%.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 3

## **Voluntary Contribution Line Item on the Personal Income Tax Form**

**Annual Revenue Amount:**

- \$30,00 - \$100,000

**Notes:**

- Current tax form includes four items for voluntary contribution.
- Adds a fifth line-item for the Clean Water Fund.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

## **Category 4**

### **Re-Appropriation of Existing Funds/Other Concepts**

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 4

## Affinity Card

### Annual Revenue Amount:

- Minimal but un-projected

### Notes:

- The Treasurer's Office could consider offering a State-sponsored Affinity Program pursuant to 32 V.S.A. § 584. Current statute permits issuance to support public purpose projects in the areas of sustainable agriculture, renewable energy, state parks and forestland, or any combination of these, as authorized during the 2009 legislative session. May provide a marketing base to residents of Vermont, the other New England states and the other states on the east coast of the United States, who enjoy Vermont's natural resources.

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

Category 4

## Reappropriation of Current Expenditures

### Annual Revenue Amount:

- Varies

### Notes:

- Review of authorized but unissued debt, capacity in current general obligation debt authorizations; potential use of funds in Transportation Infrastructure program, use of income in CWSRF program, potential use of Municipal Equipment Loan Fund dollars.
- It was noted by stakeholders that clean water improvements and projects be seen as an infrastructural investment with many benefits and therefore appropriate for capital funds

NOTE: These sources were proposed through the stakeholder process and are not recommendations or endorsements by the Treasurer's Office. The projections and descriptions are provided for the purpose of public information and discussion.

# Complete List of Sources Considered

	Revenue Source	Annual Amount	Description
<b>Initial List of Sources - March 2016</b>			
1	Clean Water Surcharge on Property Transfers	Current 0.2% surcharge on the transfer of certain properties = \$4.7M-\$5M	This is the existing revenue source for the Clean Water Fund.
2	Excise Tax on Bottled Water Containers	\$0.01 per container tax would generate approximately \$1M	17 states and D.C. apply a sales tax to bottled water sold through food stores; 34 states and D.C. apply a sales tax to bottled water sold through vending machines; 2 states apply fees at the manufacturer, distributor, wholesaler, and/or retailer levels (DEC).
3	Excise Tax on Flushable Consumer Products	1% excise tax = \$1.35M	This would apply a 1% excise tax to products such as soaps, shampoos, detergents, cooking oils, lotions, and perfumes.
4	Surtax/Increase to Meals, Rooms, and Alcoholic Beverages	25% increase = \$4.2M <ul style="list-style-type: none"> <li>▪ \$2.5M - Meals</li> <li>▪ \$1.2M - Rooms</li> <li>▪ \$500K - Alcohol</li> </ul>	This estimate is based on raising the Meals and Rooms tax from 9% to 9.25% and the Alcoholic Beverages Tax from 10% to 10.25%.
5	Surtax on Rental Cars	1% surtax on rental vehicles = \$480,000.	This would raise the rental vehicle tax from 9% to 10%.
6	Escheating Unclaimed Beverage Container Deposits	\$1.5M-\$2M	Connecticut, Massachusetts; New York, Maine, Michigan. This would collect those unclaimed beverage container deposit fees from distributors. These are the fees that customers, who purchased beverages and paid a deposit fee to distributors, did not receive because they did not redeem their used containers for the receipt of this fee.
7	Surtax/Increase to Sales & Use Tax	.1% increase = \$6M.	This would increase Vermont's Sales and Use Tax from 6% to 6.1%. 35% of Sales Tax revenue is applied to the Education Fund and 65% goes to the General Fund.
8	Parcel Fee	\$4.50/month fee = 17,820,000	
9	DEC Fines for non-compliance Should be: "Sewer, Septic, Water Surcharge"	\$8M annually (based on 1-cent property tax rate and commensurate septic charges).	<ul style="list-style-type: none"> <li>▪ Sewer and water surcharges are generally collected based on property value, so they are paid as property taxes. For example, Montpelier residents who are connected to sewer pay a \$0.02 (per \$100 of property value) sewer and water benefit charge and a \$0.07 sewer separation charge on their municipal property tax bills. Commensurate septic fees could be applied, too.</li> <li>▪ It does not seem that this approach is administratively feasible.</li> </ul>
10	Excise Tax on Fertilizers & Pesticides	1% Excise Tax = \$650,000	An excise tax is already applied by the Agency of Agriculture Food and Markets to fertilizers based on volume. This excise tax and a separate excise tax on pesticides are modeled below.
11	Special License Plate Fee	\$28,000 for every \$1 increase above the current \$48 rate for vanity plates.	Many states, including Ohio, Michigan, Missouri, California, Connecticut, Maryland, Massachusetts, North Carolina use this approach (DEC)
12	Mitigation or Impact Fees	Uncertain as they are tied to new development.	
13	Lottery Game	1% of lottery revenues = \$260,000.	Minnesota; Oregon Watershed Enhancement Board
<b>Sources Proposed During Stakeholder Process</b>			
<b>General Revenues</b>			

14	<b>Personal Income Tax</b>	<ul style="list-style-type: none"> <li>▪ \$7M - 1% of current revenues.</li> <li>▪ \$13.3M - .1% increase applied to the rate of each tax bracket (i.e. 3.55% increased to 3.65%)</li> <li>▪ \$5.5M: Bottom tax rate remains at 3.55% and other rates increased by .1%.</li> <li>▪ \$2.8M: Bottom two brackets remain at 3.55% and 7.8% and other rates raised by .1%.</li> </ul>	Vermont's Personal Income Tax features a progressive rate schedule that ranges from 3.55% to 8.95%. It is applied at an increasingly higher rate as a filer's taxable income increases. This estimate is based on TY13 data.
15	<b>Voluntary Contribution Line Item on the Personal Income Tax Form</b>	\$30K-\$100K	The Personal Income Tax form currently includes four line-items for voluntary contributions to support initiatives such as the Nongame Wildlife Fund and the Children's Trust Fund. This would add a fifth line-item for the Clean Water Fund.
16	<b>Reappropriation of Current Expenditures</b>	Varies	Review of authorized but unissued debt, capacity in current general obligation debt authorizations; potential use of finds in Transportation Infrastructure program, use of income in CWSRF program, potential sue of Municipal Equipment Loan Fund dollars.
17	<b>Dollar Surcharge on Rooms</b>	\$1 surcharge on rooms = \$3.6M	This revenue source would assess a \$1 per night charge on all rooms/units that are rented by Rooms Tax filers.
18	<b>Property tax</b>	\$0.01 property tax increase = \$8M annually.	This proposal would increase Vermont property taxes by \$0.01 per \$100 of property value. The \$4M would come from the homestead property tax and the other \$4M would come from the nonresident property tax. All of these revenues are currently applied to the Education Fund.
19	<b>Affinity Card</b>	Minimal but un-projected	Treasurer's Office could consider offering a State-sponsored Affinity Program pursuant to 32 V.S.A. § 584. Current statute permits issuance to support public purpose projects in the areas of sustainable agriculture, renewable energy, state parks and forestland, or any combination of these, as authorized during the 2009 legislative session. May provide a marketing base to residents of Vermont, the other New England states and the other states on the east coast of the United States, who enjoy Vermont's natural resources.
20	<b>Energy consumption tax</b>	1% of gross revenue tax on electricity producers would yield \$55K.	State implements a gross rev tax on electric, telephone, cable, gas, and private water utilities. While there might be an argument for a nexus with water utilities, public water utilities would be the place to look for revenues, as these private utilities generate a mere \$1,000 in revenue each year. The revenues from this tax are split 60/40 to the Public Service Department and Public Service Board. These are their primary revenues, and many PSD programs are underfunded.
<b>Agriculture Nexus</b>			
21	<b>Agency of Agriculture Food and Markets Penalties for non-compliance</b>	<ul style="list-style-type: none"> <li>▪ Agency of Agriculture penalties = \$175K-\$230K.</li> <li>▪ Vermont Office of Attorney General Water quality violations totaled \$24.75K in 2016 and \$118K in 2014.</li> </ul>	Agency of Agriculture penalties are applied to special Agency funds. The water quality violation revenues generated via the Attorney General's Office were applied to the General Fund. This proposal would divert those revenues to the Clean Water Fund.
22	<b>Fertilizer tonnage fee</b>	<ul style="list-style-type: none"> <li>▪ Doubling the Ag fertilizer tonnage fee from \$0.50 to \$1 = \$19,000 in new revenue.</li> <li>▪ Increasing the Ag fee to \$25 = \$930,000 in new revenue.</li> <li>▪ Increasing the non-Ag fee by \$1 = \$6,000 in new revenue.</li> </ul>	Fertilizer fees are administered by the Agency of Agriculture and apply to distributors of fertilizer. The fees are based on the volume (tons) of fertilizer distributed. The agriculture fertilizer fee was doubled last legislative session from \$0.25 to \$0.5, and the non-ag fee increased 120x from \$0.25-\$30.



23	<b>Excise Tax on Pesticides</b>	\$70K-\$140K	Difficult to estimate based on the limited and disparate data on these sales.
24	<b>Manure per ton fee for all animals (even pets)</b>		Part of this is captured in fertilizer tonnage fee.
25	<b>Licensing fee for technical service providers (i.e. manure applicator fee)</b>	A \$1 increase to the \$960 manure applicator fee would raise about \$30.	Agency of Ag data.
26	<b>Exporting waste as a value-added product (i.e. fertilizer)</b>	Not clear how this would work. Therefore, couldn't model estimates.	
27	<b>Tax farm buildings enrolled in current use at 10% of assessed value.</b>	\$6.4M <ul style="list-style-type: none"> <li>▪ \$4.8M in new revenue to Ed Fund</li> <li>▪ \$1.6M in savings to GF</li> </ul>	Farm buildings currently enrolled in current use are not taxed. Prior to 2003, they were assessed at 30% of their value. This proposal would assess them at 10% of their value.
28	<b>Unenroll from current use ag land within x distance of waterways and apply estimated tax dollars to improvements</b>	Net negative	<ul style="list-style-type: none"> <li>▪ Very complex and controversial from a legal and administrative standpoint and a very minor amount of revenue (wouldn't even cover expected legal cost to state).</li> <li>▪ Easier solution would be to expand riparian buffers along ag land by allowing more ag land to enroll this buffer area in current use.</li> </ul>
<b>Developed Lands/Roads/Stormwater Nexus</b>			
29	<b>Impervious Surface Tiered Acreage Fee</b>	\$18 million	This source is based on the amount of impervious surface per acre per parcel. The Tax Department matched impervious surface data to 46,000 parcels (14% of the state) in 46 towns. The department then grouped parcel use codes from the Grand List based on the median amount of impervious surface per acre of the parcels within each use code. The tax is then applied at increasing rates based on per-acre impervious surface percentages per use code, and it is applied based on the acreage of parcels within each use code. These fees would be collected at the municipality level.
30	<b>Impervious Surface Tiered Parcel Fee</b>	\$18 million	This source uses the same general approach as the tiered acreage impervious surface fee, but applies to parcels based solely on their use code. It, therefore, does not account for acreage. These fees would be collected at the municipality level.
31	<b>\$3 Per Acre Per Parcel Fee</b>	\$15 million	This source is a flat \$3/acre fee applied annually to parcels. It does not account for impervious surface. These fees would be collected at the municipality level.
32	<b>\$50 Annual Flat Parcel Fee</b>	\$16.7 million	This source is a flat \$50 fee applied annually to all parcels regardless of their acreage and impervious surface. These fees would be collected at the municipality level.
33	<b>Excise Tax on Motor Fuels</b>	<ul style="list-style-type: none"> <li>▪ \$0.01 increase / gallon of gas = \$3M.</li> <li>▪ \$0.01 tax/gallon of diesel = \$690,000</li> </ul>	An additional \$0.01 tax/gallon of gas would generate about \$3M per year. A \$0.01 tax on diesel would yield less than \$690,000
34	<b>Inspection Sticker Fee</b>	\$1 increase = \$585K.	Increasing the automobile inspection sticker price from \$6-\$7.
35	<b>Sales Tax on General Auto Repair</b>	\$6.2M	The 6% Sales and Use Tax does not currently apply to services related to general auto repair. This would apply the Sales and Use Tax to those services.
36	<b>Sales tax on new car dealer labor charges, work under warranty, and value of service contracts</b>	\$4.8M	The 6% Sales and Use Tax does not currently apply to services performed at new car dealerships.
37	<b>Sales Tax on Storage Units</b>	\$940,000	The 6% Sales and Use Tax does not currently apply to storage units. This would apply the Sales and Use Tax to the rental of those units.
38	<b>Sales Tax on Limousine Services</b>	\$610,000	The 6% Sales and Use Tax does not currently apply to limousines.

39	Sales Tax on Parking (Lots and Garages)	\$280,000	The 6% Sales and Use Tax does not currently apply to parking lot and garage fees.
40	Sales Tax on Marinas	\$210,000	The 6% Sales and Use Tax does not currently apply to marina services.
41	Tour bus per-passenger fee	Not clear how this would be implemented. Therefore, can't estimate.	
42	Toll on Champlain Bridge and other gateways to VT	AOT has explored this and found that it is not cost effective.	
43	Vehicle Registration fee	\$1 increase to vehicle registration fees would yield about \$800K	These fees were increased by 6%-183% (depending on the fee) last year. This model includes registration for: automobiles, Jitneys, motorcycles, trucks, special purpose trucks, trailers, contractor trailers, motor buses, and diesel-powered pleasure cars.
44	Vehicle Miles Traveled Fee	\$0.01 per mile generates \$63.5M per year.	Modeled by JFO and AOT in Sec. 10 Funding Options report submitted to Leg in 2016. Very difficult to implement and administer. Might involve agreements with other states. Would exempt out-of-state drivers from contributing if Vermont implemented this on its own. Also, how to assess for miles traveled on other states' roads?
45	Stormwater permit fees	DEC does not want to change these, as they were recently increased.	
46	Lake-related purchase fees (dock fees, lakeshore frontage fee, etc.)	DEC does not want to change these, as they were recently increased.	
47	Land Gains Surtax	1% surtax would generate an estimated \$6,000- \$15,000 annually	Very unreliable and difficult to administer tax.
48	Sales tax on landscaping services (residential and commercial)	\$8M if sales tax were applied.	Sales Tax on Services Report
49	Tax on products that use phosphorous and nitrogen during production/tax incentive for those that don't	Not clear how this would or could be implemented.	
<b>Natural Resources Nexus</b>			
50	DEC Fines for non-compliance	\$200,000	These are penalties for compliance violations. This proposal would divert these revenues from the General Fund to the Clean Water Fund.
51	Current Use: Apply a 90% discount to all property enrolled in current use.	\$4.5M	Instead of using use values determined by the UVA board (ag:\$306/acre, Forest \$135/acre, Forest >1M from road \$101/acre, farm buildings \$0), this would simply tax all enrolled property at 10% of its listed value -- a 90% discount.
52	Current Use: Increase Use Values for Ag and Forest per acre by \$100	\$5M	\$3.8M increase to ed fund and \$1.2M in savings to GF to reimburse towns for muni taxes.
53	Taxes on water-reliant recreation equipment (winter skiing, boats, etc.)	Sales tax already applies to many ski-related and boat-related purchases that stakeholders supported. Other taxes were modeled separately and are included in this matrix.	
54	End Property Tax Exemption on Ski Lifts and Snowmaking Equipment	\$1.5-\$2M	Ski lifts and snowmaking equipment at Vermont ski resorts are exempt from statewide property taxes, which fund the Education Fund. This would end that that property tax exemption and send these revenues to the Clean Water Fund.
55	Increased recreation fees (state parks)	Varies	
56	Raising permit fees	Varies	DEC does not want to adjust its permit fees.
57	Boat Fees	\$1 increase to all motorized boat fees would yield about \$25k.	Fees vary in size based on the type of boat and timeline.
<b>Wastewater Nexus</b>			

58	<b>Sales Tax on Beauty Salon Services</b>	\$4.3M	The 6% Sales and Use Tax does not currently apply to beauty salon services. This would apply the tax to those services.
59	<b>Sales Tax on Nail Salons</b>	\$2.23M	The 6% Sales and Use Tax does not currently apply to nail salons. This would apply the tax to those services.
60	<b>Pharmaceutical Medicine Excise Tax</b>	1% excise tax on prescription drugs = \$5.5M; 1% excise tax on non-prescription drugs = \$600,000	May negatively impact individuals in need of prescription/non-prescription drugs; however, it was noted by stakeholders that there is a nexus to water quality for this revenue source.
61	<b>Excise Tax on water appliances and plumbing fixtures</b>	1% Excise Tax would yield roughly \$500,000	Possible disincentive to public health/water quality improvements.
62	<b>Sales Tax on Pet Care (except vet services)</b>	\$710,000 if sales tax were applied	Sales Tax on Services Report
63	<b>Septage Pumping Fees</b>	Varies	Fees were recently raised
64	<b>Other septic related fees</b>	Varies	Lake George has a current model