

Municipal Stormwater Program Overview

City of South Burlington, Vermont



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City of South Burlington, Vermont

South Burlington & Stormwater

- Created Vermont's First Stormwater Utility in 2005.
- Drains to Lake Champlain (Phosphorous TMDL) and five stormwater impaired streams (Stormwater TMDLs).
- Subject to the Vermont's MS4 permit.
 - MS4 Permit includes many requirements: Implement the “six minimum measures”, stormwater maintenance, tracking and reporting, Municipal Roads General Permit (MRGP), development of Flow Restoration Plans (FRPs) & Phosphorous Control Plan (PCP), etc.

South Burlington Stormwater Utility Revenue

\$4,000,000

\$3,500,000

\$3,000,000

\$2,500,000

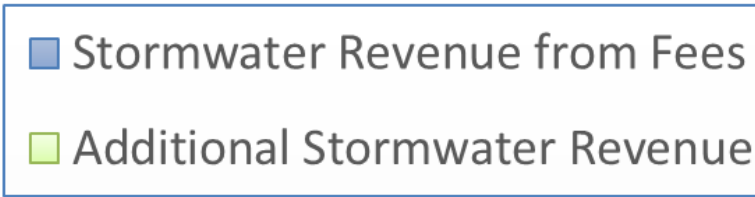
\$2,000,000

\$1,500,000

\$1,000,000

\$500,000

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FY10

FY11

FY12

FY13

FY14

FY15

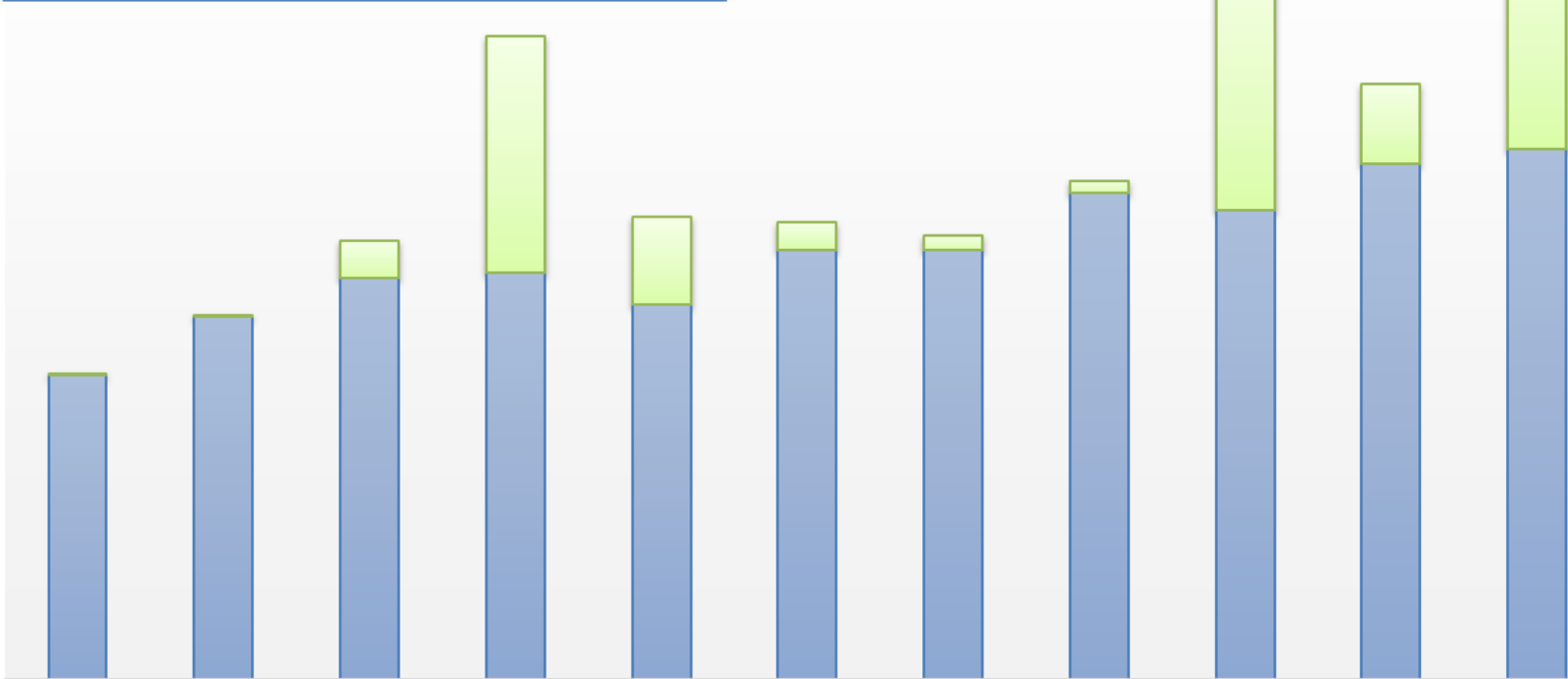
FY16

FY17

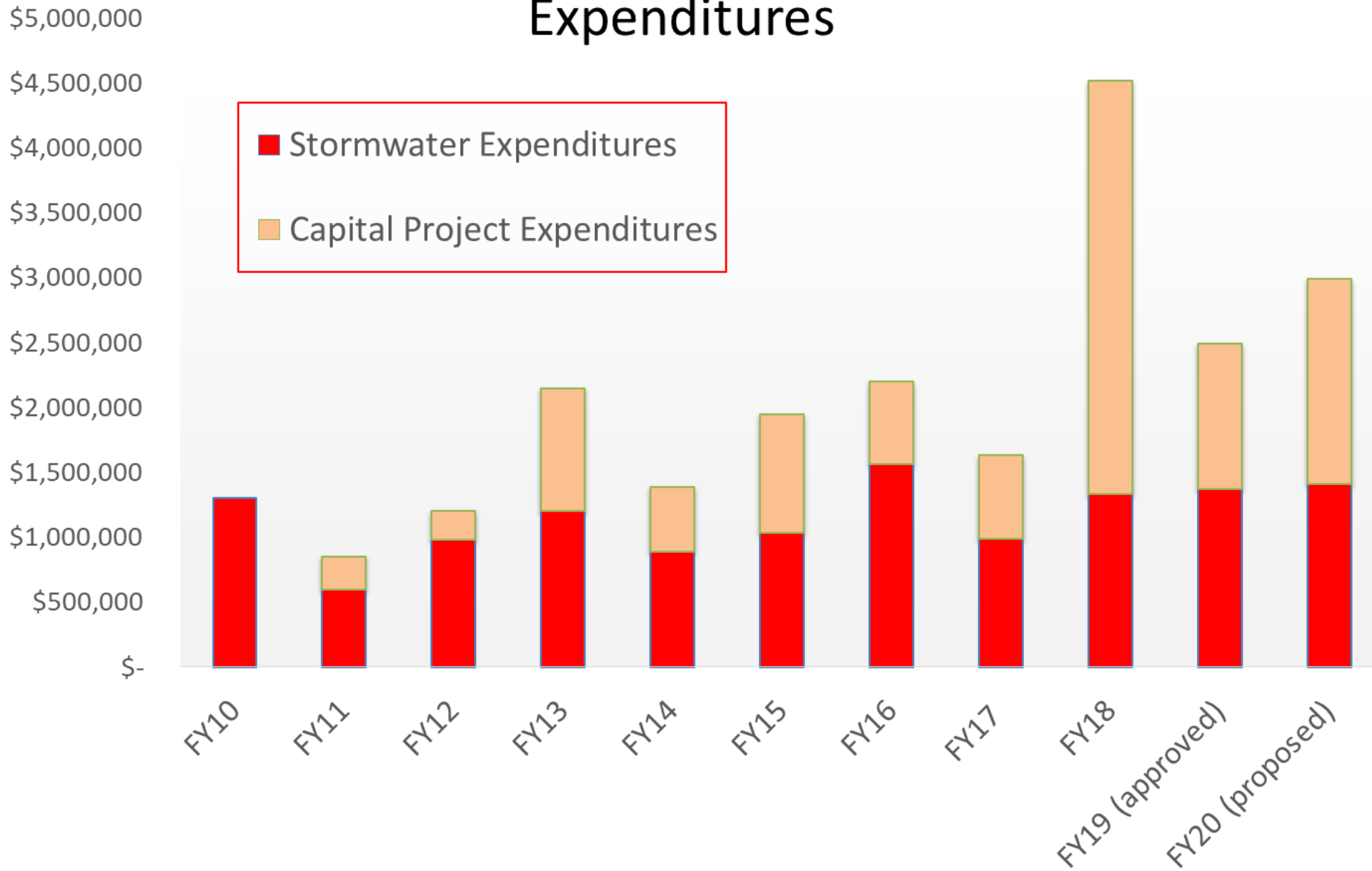
FY18

FY19 (approved)

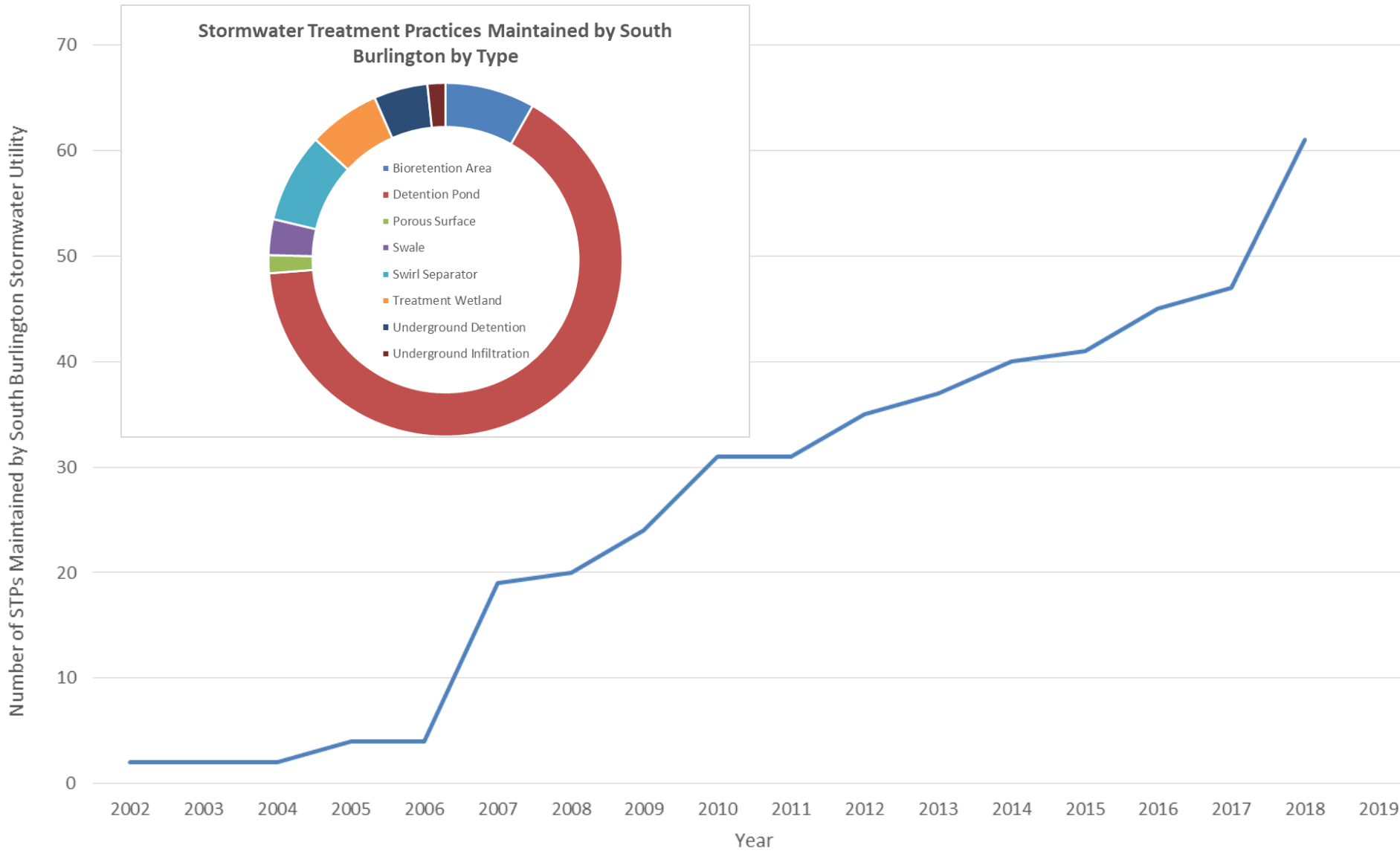
FY20 (proposed)



South Burlington Stormwater Utility Expenditures



Number of Stormwater Treatment Practices (STPs) Maintained by South Burlington Stormwater Utility by Year



Village at Dorset Park - 2017



View of Village at Dorset Park Pond 3 – Project included the upgrade of 3 stormwater treatment ponds to current standards.

- State Stormwater Permit Issue Resolved
- Stormwater Flow To Potash Brook Reduced
- Reduced TSS and TP Reaching Potash Brook and Lake Champlain
- Project Cost: \$520,000
 - ERP Grant: \$250,000

Market Street Culvert Replacement – 2017



View of Replaced Culvert Facing Upstream

- Replaced Aging and Undersized Infrastructure
- Improved Aquatic Organism Passage (AOP)
- Increased Culvert Size to Address Climate Change
- Project Cost: \$634,000

Replacement of Two Culverts in Oak Creek Village – 2017



Placing Precast Culvert Sections Under Moss Glen Lane – The project included replacement of two undersized culverts in Oak Creek Village

- Replaced Aging and Undersized Infrastructure
- Improved Aquatic Organism Passage
- Increased Culvert Size to Address Climate Change
- Reduced Risk of Flooding
- Project Cost: \$ 515,000
 - TAP Grant: \$ 300,000

Stonehedge Stormwater Project – 2017



- Project Included: Construction of a Stormwater Pond, Installation of 3 Bio-Retention Areas, and Drainage Improvements
- Reduced TSS and TP to Potash Brook and Lake Champlain
- Reduced Risk of Flooding
- Project Cost: \$543,730
 - Project Partnership Agreement with U.S. Army Corp of Engineers



Laurel Hill South Drainage Improvements - 2017



Dual Pipe Installation – The project replaced old and undersized drainage pipe to prevent flooding and slow the rate at which stormwater flows to Bartlett Brook

- Reduced risk of neighborhood flooding
 - Allowed some homes to obtain homeowners insurance again!
- Slightly reduced TSS and TP reaching Bartlett Brook
- Slight reduction in stormwater flow to Bartlett Brook
- Project Cost: \$745,429
 - Project Partnership Agreement with U.S. Army Corp of Engineers

Bartlett Brook Central Treatment Wetland – 2017



- Significant Reduction in Stormwater Flow To Bartlett Brook
- Significant Reduction in TSS and TP Reaching Bartlett Brook and Lake Champlain
- Project Cost: \$785,000
 - ERP Grant: \$ 400,000

The Bartlett Brook Central Stormwater Treatment Wetland Shortly After Construction – The project included construction of the treatment wetland and drainage improvements to direct additional water to treatment.

Commerce Square Detention Pond – 2017 to 2018



Commerce Square Detention Pond After Construction – The project included construction of the detention pond, installation of a swirl separator, and reconfiguration of drainage pipe to bring additional water to treatment.

- Resolved State Stormwater Permit Issue
- Significant Reduction in Stormwater Flow to Potash Brook
- Reduction in TSS and TP Reaching Potash Brook and Lake Champlain
- Project Cost: \$475,000

Iby Street Gravel Wetland - 2018



- Reduced TSS and TP Reaching Potash Brook and Lake Champlain
- Flow reduction benefits to Potash Brook
- Provides Opportunity for Water Quality Education at Park Entrance
- Project Cost: \$91,326
 - ERP Grant: \$ 83,497

Iby Street Gravel Wetland During Construction – Project included construction of a small gravel wetland at the entrance to Dumont Park. Stormwater from the street and neighborhood previously discharged untreated to Potash Brook

Pinnacle at Spear – 2018 to 2019



Placing Stone As Part of Treatment Wetland Construction – Project included retrofit of two existing stormwater ponds to stormwater treatment wetlands, and retrofit of two existing stormwater detention ponds to meet current standards

- Will Resolve A State Stormwater Permit Issue
- Will Reduce TSS and TP Reaching Lake Champlain
- Will Provide Flow Reduction Benefits To Munroe and Bartlett Brooks (SW Impaired)
- Project Cost: \$498,300
 - ERP Grant: \$109,612
 - LCBP Grant: \$125,000
 - CW Block Grant: \$85,100
 - Total Grants: ~\$319,712

Picard Circle - 2019



Picard Circle in Fall 2016 – Homes along the Picard Circle cul-de-sac were removed. The cul-de-sac will be removed and the space will be used to treat stormwater runoff from City owned streets.

- The Project Will Reduce The Amount of TSS and TP Reaching Centennial Brook and Lake Champlain.
- The Project Will Provide Flow Reduction Benefits To Centennial Brook (SW Impaired)
- Project Cost: \$500,000 (est.)
 - Vtrans Grant: \$229,600

Kennedy Drive Pond 3 - 2019



- The Project Will Reduce The Amount Of TSS and TP Reaching Potash Brook and Lake Champlain.
- The Project Will Provide Flow Reduction Benefits To Potash Brook (SW Impaired)
- Project Cost: \$300,000 (est.)
 - DEC Grant: \$ 298,000

Existing Kennedy Drive Pond 3 – Retrofit and expansion of the Kennedy Drive Pond to a treatment wetland will provide better treatment of stormwater to a larger drainage area

What's Next?

FRP Projects & Cost

Watershed	Total Number of STPs in Flow Restoration Plan	Number of STPs Remaining w/City Responsibility	Number of STPs Installed by City (Feb 2019)	Original Cost Estimate of South Burlington's "Share"	Cost Incurred By South Burlington to Date
Bartlett Brook	18	3	4	\$3,450,000	\$1,161,141
Centennial Brook	27	14	0	\$6,694,000	\$0
<u>Englesby</u> Brook	5	1	0	\$128,700	\$0
Munroe Brook	3	0	2	\$48,000	\$270,924
Potash Brook	109	69	3	\$13,750,000	\$1,740,688
Total	162	87	9	\$24,070,700	\$3,172,753

Comments on Current Legislative Topics

- Wetlands Statutes
 - Municipalities need to be able to repair and replace existing infrastructure (WW/SW/DW).
 - Statutes need to clearly define how stormwater improvement projects will be regulated. For example, installation of stormwater treatment practices should be allowed in managed wetland buffers.
- Water Quality Funding – The State of Vermont needs to fund work required by regulation as well as the non-required work.
 - Implementation of water quality improvement projects is getting pushed to municipalities. Funding must come with requirements or we're setting ourselves up for failure.
- PFOAs – Proposed requirements to treat landfill leachate to drinking water standards feels rushed. This would put a high burden on rate/tax payers.

Contact Information

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