Town of Vienna, Virginia

Final Phase III Chesapeake Bay TMDL Action Plan

November 1, 2024 – DEQ Submittal

Town of Vienna
Department of Public Works
127 Center Street, South
Vienna, Virginia 22180

Prepared with assistance by:
WSP USA Earth & Environment
Chantilly, Virginia

Prepared in Compliance with Municipal Separate Storm Sewer System (MS4)
Permit No. VAR040066

CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name	Title	Date
[signature]	TOWN MANAGER	10/30/24

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Town of Vienna, Virginia

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ACRONYMS AND TERMS

Acronym	Explanation	Definition
BANCS	Bank Assessment for Non-Point Source Consequences of Sediment	A methodology used to assess streambank erosion and predict future erosion rates. Used to estimate pollutant reductions from stream restoration projects.
BMP	Best Management Practice	Structural or non-structural techniques used to reduce pollution at its source or to capture and treat stormwater runoff.
DEQ	Virginia Department of Environmental Quality	The state regulatory agency responsible for issuance of VPDES permits.
IDDE	Illicit Discharge Detection and Elimination	An IDDE plan is developed and implemented to identify and eliminate illicit discharges to the MS4.
MCM	Minimum Control Measures	Minimum measures that must be implemented to reduce and eliminate sources of pollution. There are six MCMs in the Town's MS4 VPDES permit.
MS4	Municipal Separate Storm Sewer System	A conveyance or system of conveyances that is owned and/or operated by a public entity.
NMP	Nutrient Management Plan	A BMP to reduce the amount of fertilizer while ensuring that adequate nutrients are available to maintain healthy turf and other vegetation.
TMDL	Total Maximum Daily Load	The maximum amount of a pollutant that can enter a water body without violating water quality standards.
TN	Total Nitrogen	One of three primary pollutants affecting the health of the Chesapeake Bay for which WLAs have been established.
TP	Total Phosphorus	One of three primary pollutants affecting the health of the Chesapeake Bay for which WLAs have been established.

Acronym	Explanation	Definition
TSS	Total Suspended Solids	Generally interchangeable with sediment for pollutant reduction purposes. One of three primary pollutants affecting the health of the Chesapeake Bay for which WLAs have been established.
VESMA	Virginia Erosion and Stormwater Management Act	The state law that requires land disturbing activities to meet certain performance standards for construction and post-construction. The state law is implemented through the Virginia Erosion and Stormwater Management Regulation (9VAC25-875-10 *et seq*).
VPDES	Virginia Pollutant Discharge Elimination System	The permit issued to an entity that allows for the discharge of stormwater to waters of the state under prescribed conditions. The Town of Vienna holds a VPDES permit for its MS4.
USEPA	United States Environmental Protection Agency	The federal agency responsible for environmental regulation and enforcement.
WLA	Wasteload Allocation	The portion of a receiving water's loading capacity that is allocated to a specific source (such as an MS4).

Final Phase III Chesapeake Bay TMDL Action Plan
Town of Vienna, Virginia

TOWN OF
VIENNA

1. Introduction

1.1. Purpose

This final Phase III Chesapeake Bay TMDL Action Plan meets the requirements of Part II A 12 b of the Virginia General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4 permit) that became effective November 1, 2023. The 2023 MS4 permit provides that the Town of Vienna must submit a "a third phase Chesapeake Bay TMDL action plan for the reductions required in Part II A 3, A 4, and A 5" no later than 12 months after permit effective date. Plan requirements are contained in Part II A "Chesapeake Bay TMDL special condition."

The Virginia Department of Environmental Quality (DEQ) approved the Town's Phase I Chesapeake Bay TMDL Action Plan on December 28, 2015. Draft and final Phase II plans were submitted to DEQ in May 2018 and October 2019, respectively. A draft Phase III plan was submitted to DEQ on September 27, 2023. This final Phase III plan builds on and supersedes previous strategies to meet TMDL pollutant reduction targets.

The Town's MS4 permit requires the development and implementation of action plans for impaired streams where a Total Maximum Daily Load (TMDL) assigns a Waste Load Allocation (WLA) to the Town that has been approved by the State Water Control Board. A TMDL establishes the maximum amount of a pollutant that can enter a water body without violating water quality standards. A WLA is the portion of a water body's TMDL that is allocated to a specific permitted source.

A TMDL for the Chesapeake Bay was established by the U.S. Environmental Protection Agency in 2010. Pollutants of concern (POCs) identified for the Chesapeake Bay include total nitrogen (TN), total phosphorus (TP), and total suspended solids (TSS). The 2023 MS4 permit removes TSS from the definition of POC (Part II A 2) and from the pollutant reduction requirements (Part

II A 3). Virginia has adopted a Watershed Implementation Plan (WIP) that establishes the framework for meeting the Chesapeake Bay TMDL. The Virginia WIP states that MS4 permit holders will implement a phased approach for meeting required reductions over three five-year permit cycles in accordance with the following: 5% by the end of the first permit cycle (June 30, 2018); 40% by the end of the second permit cycle (2023); and, 100% by the end of the third permit cycle (2028).

The Town met and exceeded the 5% and 40% reduction requirements for the first and second permit cycles. This final Phase III Chesapeake Bay TMDL Action Plan establishes the Town's 100% reduction target and identifies the Best Management Practices (BMPs) for achieving the target in accordance with the 2023 MS4 permit, DEQ Guidance Memo No. 20-2003, and additional communications provided by DEQ.

1.2. Cooperative Approach to Implementation

The Town has entered into a cooperative agreement with Fairfax County and the Town of Herndon to share pollutant reductions from certain jointly implemented projects. The agreement, included as Appendix A, was originally adopted by the Town of Vienna on October 28, 2013 and by Fairfax County on April 1, 2014. The agreement was updated by all parties effective March 8, 2017.

The agreement provides that the Town receives 3.5% credit for any project funded by the County's Stormwater Service District Fee starting July 1, 2009. This is regardless of the project's location in Vienna, Herndon, or Fairfax County. The credit is in proportion to the percentage of the total load reductions that have been established for each locality. The Town's proportion of the load reduction was averaged among TN, TP, and TSS. Shared credit projects include Structural Retrofits, Stream Restoration, and In-Lake Forebay Retrofits. The County's DEQ-approved Chesapeake Bay TMDL Action Plan also reflects this credit-sharing approach.

1.3. Summary of Required Reductions and BMPs to Achieve Reductions

The 100% reduction calculation is presented in Section 3. This includes reductions from existing sources as of June 30, 2009, offsets to account for increases in pollutant loads due to new sources initiating construction between July 1, 2009 and June 30, 2014, and offsets to account for grandfathered projects commencing construction after July 1, 2014.

Reductions and offsets are calculated based on the extent of the MS4 service area within the 2020 Census Urban Area. The Town performed an update of its MS4 service area map as part of the development of this Phase III plan. The map is shown in Appendix B.

The next step is to identify the BMPs to achieve the required POC reductions. The Town's overall strategy for achieving the reductions is presented in Section 4 and summarized below:

- Redevelopment since July 1, 2009 that has resulted in a decrease in pollutant loads.
- Shared credit projects under the cooperative agreement with Fairfax County.
- Street sweeping.
- Purchased nutrient credits.
- More stringent regulation of single-family residential development under one acre.
- Additional BMPs that may be implemented in accordance with DEQ Guidance Memo No. 20-2003.

Section 5 summarizes reductions achieved prior to November 1, 2023. Section 6 describes the BMPs that have been or will be implemented within 60 months of the permit effective date to meet the required 100% POC reductions.

Table 1.A summarizes the required reductions and BMPs implemented and planned to meet the 100% reduction target.

Table 1.A – Summary of Required Reductions and Implemented and Planned BMPs

	Total Nitrogen (lbs/year)	**Total Phosphorus (lbs/year)**
Required Reductions from Existing Sources	1,962.31	230.62
+ New Source Offsets	18.19	2.64
+ Grandfathered Offsets	51.34	7.44
= Total Required Reductions and Offsets	2,031.85	240.70
- BMPs Prior to November 1, 2023	2,754.32	668.93
- BMPs November 1, 2023 and On (Implemented)	532.32	214.46
- BMPs November 1, 2023 and On (Planned)	To be determined.	To be determined.
= Total BMPs Implemented	3,286.64	883.39
Final Remainder/(Excess)	(1,254.79)	(642.69)
Achieved Toward 2028 Target	161.8%	367.0%

1.4. Permit Compliance Crosswalk

Table 1.B provides each of the requirements for this action plan from Part II A 12 b of the 2023 MS4 permit and the specific sections where the requirements are addressed.

Table 1.B – Action Plan and Permit Compliance Crosswalk

Action Plan Section	MS4 Permit Part II A 12	MS4 Permit Requirement
Section 2	b (1)	Any new or modified legal authorities, such as ordinances, permits, policy, specific contract language, orders, and interjurisdictional agreements, implemented or needing to be implemented to meet the requirements of Part II A 3, 4, and 5.
Section 3	b (2)	The load and cumulative reduction calculations for each river basin calculated in accordance with Part II A 3, 4, and 5.
Section 5	b (3)	The total reductions achieved as of November 1, 2023 for each pollutant of concern in each river basin.
Section 5 and Appendix C	b (4)	A list of BMPs implemented prior to November 1, 2023 to achieve reductions associated with the Chesapeake Bay TMDL including: (1) The date of implementation; and, (2) The reductions achieved.
Section 6 and Appendix D	b (5)	The BMPs to be implemented by the permittee within 60 months of the effective date of this permit to meet the cumulative reductions calculated in Part II A 3, 4, and 5, including as applicable: (1) Type of BMP; (2) Project name; (3) Location; (4) Percent removal efficiency for each pollutant of concern; and, (5) Calculation of the reduction expected to be achieved by the BMP calculated and reported in accordance with the methodologies established in Part II A 9 for each pollutant of concern.
Section 8 and Appendix E	b (6)	A summary of any comments received as a result of public participation required in Part II A 13, the permittee's response, identification of any public meetings to address public concerns, and any revisions made to the Chesapeake Bay TMDL action plan as a result of public participation.

2. Program and Legal Authority

The Town has adopted an MS4 Program Plan that documents implementation of all MS4 permit requirements, including the programmatic and legal authorities required to meet the "Chesapeake Bay TMDL special condition." The full MS4 Program Plan, which has been updated in accordance with the 2023 MS4 permit, can be found at https://www.viennava.gov/stormwater.

Table 2.A provides a summary of elements of the six minimum control measures (MCMs) implemented by the Town that relate to controlling total nitrogen and total phosphorus.

Table 2.A – MS4 Program Plan Components Related to the Chesapeake Bay TMDL

Minimum Control Measure	MS4 Program Plan Elements Related to Controlling Nitrogen and Phosphorus
Public Education and Outreach on Stormwater Impacts	The Town's MS4 Public Education and Outreach Plan identifies Chesapeake Bay nutrients as one of its three high-priority pollutants for the focus of the Town's public education program. Actions include: • At least once annually, distribute information on proper fertilizing techniques using one of the following: (1) seasonally appropriate press release; (2) article in the Vienna Voice newsletter; (3) message in the Town Calendar; or, (4) message in the quarterly residential water bill. • At least once annually, include a message about the proper use and application of fertilizers using a social media platform. • In FY26, mail information to HOA and condominium contacts about proper use and application of fertilizers and how to ensure contractors are using water friendly practices.
Public Involvement and Participation	The Town has designed a program to involve the public in the decision-making process by meeting all public notice requirements and to provide an opportunity for public involvement to improve water quality and support local restoration and clean-up projects.
Illicit Discharge Detection and Elimination	The Town has integrated into its MS4 Program Plan an Illicit Discharge Detection and Elimination Program. This program includes preventing, identifying, and eliminating sources of pollutants, including total nitrogen and total phosphorus.

Minimum Control Measure	MS4 Program Plan Elements Related to Controlling Nitrogen and Phosphorus
Construction Site Stormwater Runoff Control	The Town's construction site stormwater runoff control program is fully consistent with the requirements of the Virginia Erosion and Stormwater Management Act and its attendant regulations. The Town Code (Chapter 23, Environmental Controls) was most recently updated June 3, 2024.
Post-Construction Stormwater Management	The Town's post-construction stormwater runoff control program is fully consistent with the requirements of the Virginia Erosion and Stormwater Management Act and its attendant regulations. The Town Code (Chapter 23, Environmental Controls) was most recently updated June 3, 2024.
Pollution Prevention and Good Housekeeping for Municipal Operations	The Town has included in its MS4 Program Plan actions to meet the pollution prevention and good housekeeping requirements for municipal operations. This includes implementing SWPPPs for the Northside Property Yard and Nutley Street Maintenance Yard, employee training, and ensuring proper staff and contractor certifications for erosion and sediment control.

The Town has reviewed its existing MS4 Program Plan and legal authorities and finds that no additional legal authorities are required for compliance with the "Chesapeake Bay TMDL special condition" at this time.

3. Load and Cumulative Reduction Calculations

The following sections describe the methodology used by the Town to determine the load and cumulative reduction calculations in accordance with Part II A 3, 4, and 5 of the 2023 MS4 permit.

3.1. MS4 Service Area Delineation Methodology

Reductions and offsets are calculated based on the extent of the MS4 service area within the 2020 Census Urban Area. The Town performed an update of its MS4 service area map as part of the development of this Phase III plan.

Storm sewer pipes, outfall locations, and elevation data have been analyzed by qualified engineers in a GIS environment to delineate the watershed boundaries of the Town's regulated storm sewer system. Artificial conveyances and natural drainage features were thoroughly reviewed to accurately account for storm sewer drainage areas and determine break points between the manmade and natural hydrologic systems. Sheet flow crossing the Town boundary was also considered and analyzed. This approach rendered a delineation of regulated and unregulated areas within the Town. With the exception of two natural stream valleys, the vast majority of Vienna's total land area consists of regulated impervious and pervious cover. Note that much of the area comprising Westwood Country Club drains directly to a tributary of Wolftrap Creek without going through the Town's MS4.

In accordance with DEQ Guidance Memo No. 20-2003, the Town of Vienna and Fairfax County have cooperatively agreed to utilize the following methodology for allocating pollutant loadings where drainage flows across jurisdictional boundaries:

- *Town MS4 Draining to the County MS4 Through a Pipe:* Any pollutant loading from the Town's MS4 that drains through a pipe or other conveyance to the County's MS4 is the responsibility of the Town up-flow of the interconnection.
- *County MS4 Draining to the Town MS4 Through a Pipe:* Any pollutant loading from the County's MS4 that drains through a pipe or other conveyance to the Town's MS4 is the responsibility of the County up-flow of the interconnection.
- *Town Sheetflow Draining to the County MS4:* Any pollutant loading from an area of the Town that sheet flows across jurisdictional boundaries to the County's MS4 is the responsibility of the Town within the Town's boundary.
- *County Sheetflow Draining to the Town MS4:* Any pollutant loading from an area of the County that sheet flows across jurisdictional boundaries to the Town's MS4 is the responsibility of the County within the County's boundary.

- *Fairfax County Public Schools Property:* Fairfax County Public Schools is covered under the County's MS4 permit. Any pollutant loading from property owned by Fairfax County Public Schools within the Town is not the responsibility of the Town.

The Virginia Department of Transportation's MS4 service area, identified as its right-of-way in the VDOT Chesapeake Bay TMDL Action Plan, is excluded from the Town's MS4 service area. This represents only a very small area of the Town.

The Town may exclude from its MS4 service area land regulated under any general VPDES permit that addresses industrial stormwater and forested land that meets the criteria in Part II.2 of the Chesapeake Bay TMDL Special Guidance. The Town does not have within its boundary any property with a VPDES industrial stormwater permit. The Town has identified potential qualifying forested area within the MS4. However, further analysis would be required to determine whether these areas meet the requirements for exclusion in accordance with the DEQ guidance. The Town has opted not to exclude these areas for this plan but may choose to conduct the additional analysis at a later date.

The Town's MS4 service area map is presented in Appendix B. Based on the above analysis, the Town has determined that a total of 2,149.69 acres is served by the regulated MS4.

3.2. Pervious and Impervious Surface Delineation Methodology

A GIS approach was used to determine the Town's regulated urban impervious and regulated urban pervious acres. Planimetric impervious cover GIS data was developed by Fairfax County from 2009 aerial imagery. This impervious cover dataset contains the entire Town as well as areas within the County. Impervious cover surfaces include buildings, roads, parking lots, sidewalks, recreational surfaces, and other similar features. To calculate the 2009 impervious regulated area, the 2009 planimetric impervious cover features were clipped using the MS4 boundary polygon layer and the resulting acres were totaled. Regulated pervious acres were calculated by subtracting the regulated impervious acres from the total MS4 acres.

Based on the above analysis the Town's MS4 service area of 2,149.69 acres is divided into 726.53 impervious acres and 1,423.16 pervious acres.

3.3. Reduction Requirements

The Town is located within the Potomac River Basin. Therefore, reduction requirements are calculated in accordance with Part II A 3, Table 3b of the 2023 MS4 permit.

Table 3.A presents the estimated existing source loads in accordance with the MS4 permit and DEQ Guidance Memo No. 20-2003.

Table 3.A – Calculation Sheet for Estimating Existing Source Loads and Reduction Requirements for the Potomac River Basin

Pollutant	Subsource	A. Loading Rate (lbs/ac/yr)	B. Existing Developed Land 2009 (acres)	C. Loading (lbs/yr)	D. MS4 Required Bay Total L2 Loading Rate Reduction	E. 100% Cumulative Reduction Required by 2028	F. Sum of 100% Cumulative Reduction (lbs/yr)
TN	Imp.	16.86	726.53	12,249.30	0.09	1,102.44	1,962.31
TN	Perv.	10.07	1,423.16	14,331.22	0.06	859.87	
TP	Imp.	1.62	726.53	1,176.98	0.16	188.32	230.62
TP	Perv.	0.41	1,423.16	583.50	0.07	42.30	

3.4. New Source Offset

Part II A 4 of the 2023 MS4 permit requires the Town to offset 100% of increases from new sources initiating construction between July 1, 2009 and June 30, 2014 that disturb one acre or greater as a result of the utilization of an average land cover condition greater than 16% impervious cover for the design of post-development stormwater management facilities.

During the period of July 1, 2009 and June 30, 2014, one project with a land disturbance of one acre or greater resulted in increases in pollutant loadings. The Town calculates total required offsets as follows: 18.19 pounds for TN and 2.64 pounds for TP. Detailed calculations are in the initial action plan submitted to and approved by DEQ.

3.5. Grandfathered Projects Offset

Part II A 5 of the 2023 MS4 permit requires the Town to offset any grandfathered projects that disturb one acre or greater that begin construction after July 1, 2014 and where the project utilizes an average land cover condition greater than 16%. The Town identified three grandfathered projects during the Phase II planning process. The Town calculates total required offsets as follows: 51.34 pounds for TN and 7.44 pounds for TP. Detailed calculations are in the Phase II action plan.

3.6 Total Reduction and Offset Requirements

Table 3.B presents the total reduction and offset requirements that the Town must achieve in accordance with the 2023 MS4 permit.

Table 3.B – Total Reduction and Offset Requirements

Reductions and Offsets	**TN (lbs/year)**	**TP (lbs/year)**
Required Reductions from Existing Sources	1,962.31	230.62
+ New Source Offsets	18.19	2.64
+ Grandfathered Offsets	51.34	7.44
Total Reductions and Offsets	**2,031.85**	**240.70**

4. Overall Strategy for Achieving Reductions

The Town's overall strategy for achieving POC reductions includes a combination of BMPs as described below:

4.1. Redevelopment

The Town will take credit for pollutant reductions from redevelopment regardless of the initial land cover condition of the site in accordance with DEQ Guidance Memo No. 20-2003. This includes any redevelopment project initiated after July 1, 2009. For any portion of redevelopment that results in a direct impervious surface reduction, Table 4 from the 2023 MS4 permit will be used to determine the equivalent credit for TN associated with the TP reduction. For the portion of redevelopment that results in a reduction due to a stormwater management facility, the methodology described in Appendix V.E of the DEQ guidance will be utilized.

4.2. Shared Credit Projects

The Town receives 3.5% credit for any project funded by the County's Stormwater Service District Fee starting July 1, 2009 in accordance with the cooperative agreement with Fairfax County. This is regardless of the project's location in Vienna, Herndon, or Fairfax County. These projects include Structural Retrofits, Stream Restoration, and In-Lake Forebay Retrofits.

Top: Wolftrap Creek restoration during construction. Bottom: Piney Branch one year after restoration. Both projects are part of the shared credit program with Fairfax County.

4.3. Street Sweeping

Street sweeping programs that meet certain requirements can be used to achieve POC reductions. The methodology described in Appendix V.G of DEQ Guidance Memo No. 20-2003 (Expert Panel to Define Removal Rates for Street and Storm Drain Cleaning Practices) will be used to calculate pollutant reduction credit

4.4. Purchased Off-Site Nutrient Credits

The Town has the option of purchasing off-site nutrient credits under the provisions of §62.1-44.15:35 of the Code of Virginia. Any off-site nutrient credits purchased by the Town will be documented to DEQ in the Town's annual reports.

4.5. More Stringent Regulation of Land Disturbing Activities

The Town has adopted stormwater quality requirements for single family residential development under one acre that are more stringent than minimum state regulatory requirements. While the Virginia Erosion and Stormwater Management Regulation and the Chesapeake Bay Preservation Act regulate land disturbing activities 2,500 square feet and greater, localities may exempt single family residential development under one acre not part of a common plan of development. Town Code Chapter 23 "Environmental Controls" applies water quality control performance standards to single family residential development 2,500 square feet and greater.

One of the Town's street sweepers.

In accordance with DEQ Guidance Memo No. 20-2003, the Town will take credit for the difference between the pollutant load that could have been allowed for single family residential property under the state's minimum water quality criteria and the pollutant load that was actually allowed for the property under the Town's more stringent requirements. These include reductions from structural retrofits and credit purchased by the developer.

4.6. Additional BMPs

The Town reserves the right to implement and take credit for additional creditable facilities or practices as provided for in DEQ Guidance Memo No. 20-2003. The guidance document specifically references the work of the Chesapeake Bay Urban Stormwater Workgroup, which includes credits for urban nutrient management and homeowner best management practices such as rainwater harvesting, downspout disconnection, permeable hard-scapes, tree planting, and impervious cover removal. Reductions achieved will be documented to DEQ in the Town's annual reports.

5. BMPs Implemented Prior to November 1, 2023

Part II A 12 b (3) and (4) of the 2023 MS4 permit requires the Town to provide a list of the BMPs implemented prior to November 1, 2023[1] to achieve the reductions. The list of BMPs, including the date of implementation and the reductions achieved, is included in Appendix C.

Table 5.A documents that the Town exceeded the 100% pollutant reduction targets prior to November 1, 2023.

Table 5.A – Summary of BMPs Implemented Prior to November 1, 2023

BMPs	TN (lbs/year)	TP (lbs/year)
Redevelopment	98.90	15.95
Shared Credit Projects	2,319.34	610.72
Street Sweeping	0.00	0.10
Purchased Nutrient Credits	0.00	0.00
More Stringent Development	336.08	42.16
Additional BMPs	0.00	0.00
Total BMPs	2,754.32	668.93
Total Required Reductions and Offsets	2,031.85	240.70
Remainder/(Excess) To Meet Cumulative Reduction Target	(722.47)	(428.23)

[1] BMPs implemented prior to November 1, 2023 include those BMPs reported to DEQ up through the Town's FY23 MS4 annual report.

6. BMPs Implemented and Planned After November 1, 2023

This section describes the BMPs that the Town has implemented or plans to implement within 60 months after the effective date of the permit in accordance with Part II A 12 b (5). As noted in Section 5, the Town has already implemented sufficient BMPs to exceed the 100% cumulative reduction targets calculated in Table 3C.

6.1. Redevelopment

The Town will take credit for additional pollutant reductions from redevelopment. Project details, including calculations, will be reported to DEQ in the Town's MS4 annual reports.

Table 6.A – Summary of Reductions from Redevelopment

	TN (lbs/year)	TP (lbs/year)
Prior to November 1, 2023	98.90	15.95
Additional Planned	To be determined.	To be determined.
Total	98.90	15.95

6.2. Shared Credit Projects

The Town will take credit for additional pollutant reductions from the shared credit program with Fairfax County. Shared credit projects reported by the Town to DEQ in its FY24 MS4 annual report are included in Appendix D. Future shared credit projects will be reported to DEQ in the Town's MS4 annual reports.

Table 6.B – Summary of Reductions from Shared Credit Projects

	TN (lbs/year)	TP (lbs/year)
Prior to November 1, 2023	2,319.34	610.72
Additional Implemented	502.20	207.29
Additional Planned	To be determined.	To be determined.
Total	2,821.54	818.01

6.3. Street Sweeping

The Town will take credit for its street sweeping program. The Expert Panel to Define Removal Rates for Street and Storm Drain Cleaning Practices requires vacuum assisted sweeper technology and assigns a removal efficiency based on the number of passes per year. The Town meets the technology requirement and typically achieves at least four passes annually. As a result, the Town meets the efficiencies associated with practice SPC-6 from Table 17 of the Expert Panel report.

Table 6.C – Summary of Reductions from Street Sweeping

	TN (lbs/year)	TP (lbs/year)
Prior to November 1, 2023	0.00	0.10
Additional Planned	Same level of effort.	Same level of effort.
Total	0.00	0.10

6.4. Purchased Off-Site Nutrient Credits

The Town is not currently proposing to take credit for the purchase of off-site nutrient credits. Any purchase of off-site nutrient credits will be reported in the Town's annual reports to DEQ.

Table 6.D – Summary of Reductions from Off-Site Nutrient Credits

	TN (lbs/year)	TP (lbs/year)
Prior to November 1, 2023	0.00	0.00
Additional Planned	0.00	0.00
Total	0.00	0.00

6.5. More Stringent Regulation of Land Disturbing Activities

The Town will take credit for pollutant reductions as a result of more stringent regulation of land disturbing activities. More stringent regulation pollutant reductions reported by the Town to DEQ in its FY2024 MS4 annual report are included in Appendix D. Future more stringent regulation pollutant reductions will be reported to DEQ in the Town's MS4 annual reports.

Table 6.E – Summary of Reductions from More Stringent Regulation of Land Disturbing Activities

	TN (lbs/year)	TP (lbs/year)
Prior to November 1, 2023	336.08	42.16
Additional Implemented	30.12	7.17
Additional Planned	To be determined.	To be determined.
Total	366.20	49.33

6.6. Additional BMPs

The Town initiated a combination traffic calming/bioretention project at the intersection of Tapawingo Road and Kingsley Road in FY2024. Credit calculations for this and any other additional projects will be reported in the Town's annual reports to DEQ.

Table 6.F – Summary of Reductions from Additional BMPs

	TN (lbs/year)	TP (lbs/year)
Prior to November 1, 2023	0.00	0.00
Additional Planned	To be determined.	To be determined.
Total	0.00	0.00

6.7. Summary of BMPs

Tables 6.G provides a summary of the total implemented and planned reductions as a result of BMPs described in sections 6.1 through 6.6.

Table 6.G – Summary of BMPs

BMP	TN (lbs/year)	TP (lbs/year)
Redevelopment	98.90	15.95
Shared Credit Projects	2,821.54	818.01
Street Sweeping	0.00	0.10
Purchased Nutrient Credits	0.00	0.00
More Stringent Development	366.20	49.33
Additional BMPs	0.00	0.00
Total BMPs	**3,286.64**	**883.39**

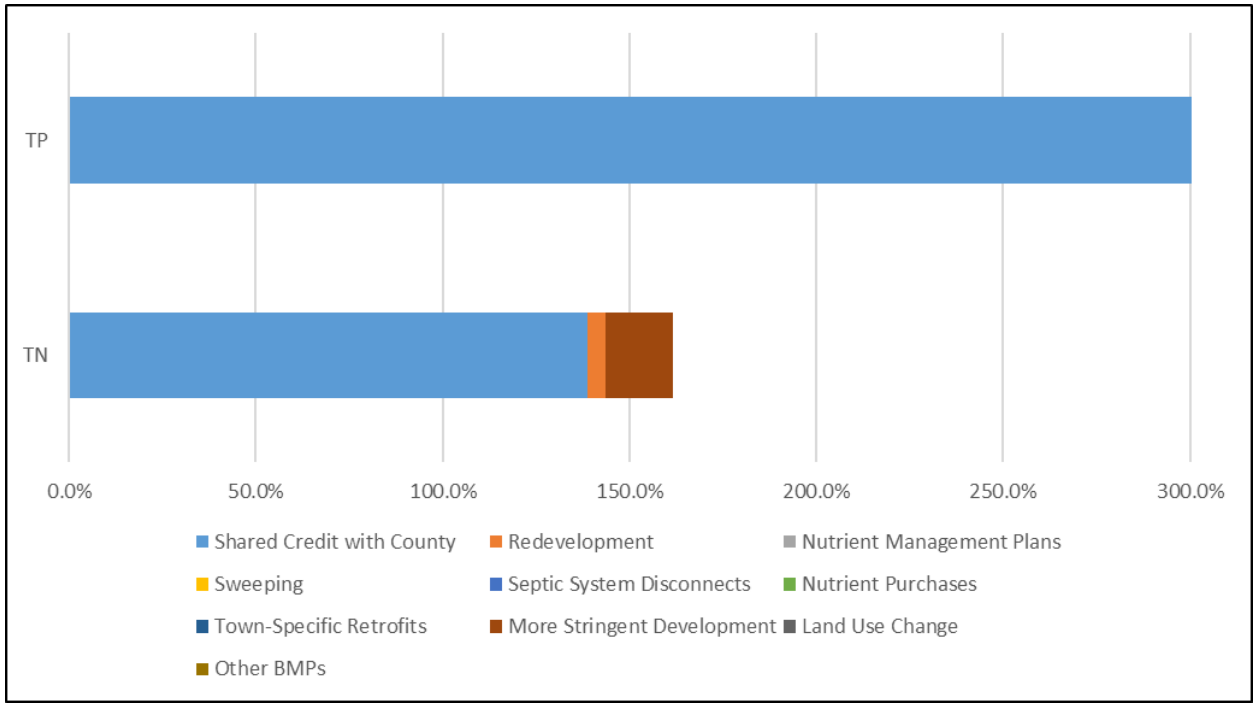
7. Overall Compliance Ledger

Table 7.A provides an overall compliance ledger demonstrating how the Town meets the Chesapeake Bay TMDL conditions in accordance with the MS4 permit. The ledger shows the reductions required from Section 3 and the total credit achieved by BMPs identified in Section 6. The last row shows the percent progress toward achieving the 100% reduction target.

Table 7.A – Overall Compliance Ledger – Table

	TN (lbs/year)	TP (lbs/year)
Required Reductions from Existing Sources	1,962.31	230.62
+ New Source Offsets	18.19	2.64
+ Grandfathered Offsets	51.34	7.44
= Total Required Reductions and Offsets	2,031.85	240.70
- Total BMPs from Section 6	3,286.64	883.39
Redevelopment	98.90	15.95
Shared Credit Projects	2,821.54	818.01
Street Sweeping	0.00	0.10
Purchased Nutrient Credits	0.00	0.00
More Stringent Development	366.20	49.33
Additional BMPs	0.00	0.00
= Remainder/(Excess)	(1,254.79)	(642.69)
Progress Toward 100% Target	161.8%	367.0%

Table 7.B – Overall Compliance Ledger – Chart



8. Public Comments

The Town is required to provide an opportunity for public comment on new components of this plan in accordance with Part II A 13 of the 2023 MS4 permit. The final Phase III plan was posted to the Town's website with an invitation and instructions for public comment. A notice was also posted to the Town's social media (Facebook and X). The deadline for receiving comments was October 29, 2024. No public comments were received. A snapshot of the webpage and public notice are provided in Appendix E.

Appendix A

Cooperative Agreement with Fairfax County and the Town of Herndon

COOPERATIVE AGREEMENT BETWEEN THE FAIRFAX COU7.NTY BOARD OF SUPERVISORS, THE TOWN OF VIENNA, and TOWN OF HERNDON TO SHARE CERTAIN STORMWATER SERVICE DISTRICT FEES AND RESPONSIBILITY FOR RELATED SERVICES

This Agreement ("Agreement") is entered into on this 8TH day of MARCH, 2017, by and between the BOARD OF SUPERVISORS OF FAIRFAX COUNTY, VIRGINIA ("FAIRFAX"), the TOWN COUNCIL OF VIENNA, VIRGINIA ("VIENNA"), and the TOWN COUNCIL OF HERNDON, VIRGINIA ("HERNDON") (referenced collectively as the "Parties" or "the Governing Bodies", and individually as the "Party").

WITNESSETH:

WHEREAS the Towns of Vienna and Herndon (also referenced herein as "the Towns") are located within Fairfax County (also referenced herein as "the County"); and

WHEREAS Fairfax County, the Town of Vienna, and the Town of Herndon each maintain, operate, and improve stormwater systems that affect one another; and

WHEREAS Fairfax County and the Towns are each subject to a Municipal Separate Storm Sewer System ("MS4") permit issued by the Virginia Department of Environmental Quality ("DEQ"); and

WHEREAS FAIRFAX has cooperated with VIENNA and HERNDON to maintain, operate, and improve their respective stormwater systems and wish to continue such cooperation in the future in the best interests of their residents; and

WHEREAS pursuant to Va. Code Ann. § 15.2-2400 (2012), FAIRFAX has established a Stormwater Service District ("Service District"), and is authorized, pursuant to Va. Code Ann. § 15.2403(6) (Supp. 2016) to levy and collect an annual fee upon any property located within such Service District ("the Service District Fee"); and

WHEREAS the Towns of Vienna and Herndon are located within Fairfax County's Service District; and

WHEREAS, pursuant to Va. Code Ann. § 15.2-2403(6), Fairfax County collects revenues from properties located within the Towns of Vienna and Herndon; and

WHEREAS, pursuant to Va. Code Ann. § 15.2-2403.3 (Supp. 2016), by virtue of the Towns' maintenance of separate MS4 permits and their location within the Service District, the Towns are entitled to the Service District Fee revenues collected by Fairfax County within their respective jurisdictions; and

WHEREAS, the actual amount of revenues collected from the Service District Fee will vary from year to year; and

WHEREAS, each MS4 permit, among other things, assigns jurisdiction-specific, pollutant load reduction requirements for nitrogen, phosphorus, and sediment to address the Chesapeake Bay Total Maximum Daily Load (referred to herein as "TMDL"), and requires each MS4-permit jurisdiction to develop a Chesapeake Bay TMDL Action Plan that identifies the practices, means, and methods that are to be implemented by the permittee to achieve the required pollutant reductions; and

WHEREAS, the Commonwealth's Chesapeake Bay TMDL Watershed Implementation Plan (referred to herein as "the WIP") establishes the total pollutant reduction loads required to achieve the Chesapeake Bay TMDL and the timeframe for MS4-permit jurisdictions to achieve their assigned pollutant reductions; and

WHEREAS, each MS4 permit also requires the development of action plans for other pollutants where a TMDL assigns a wasteload allocation ("WLA") to the permittee; and

WHEREAS, pursuant to their respective MS4 permits, the Towns submitted their initial Chesapeake Bay TMDL Action Plans to DEQ prior to the deadline of October 1, 2015 while the County's initial Chesapeake Bay TMDL Action Plan will be submitted to DEQ prior to the deadline of April 1, 2017. Action plans for other TMDLs are submitted in accordance with the schedule contained in each MS4 permit; and

WHEREAS, while each MS4-permit jurisdiction is ultimately responsible for compliance with its MS4 permit, MS4 permits allow and encourage cooperation and coordination among permit holders, and such cooperation and coordination can mutually benefit MS4-permit jurisdictions through more effective and cost-efficient protection of water resources in each jurisdiction; and

WHEREAS, the purpose this Agreement, in part, is for the Parties to work cooperatively to satisfy the pollutant load reduction requirements of their current and future MS4 permits by implementing stormwater management practices within the Parties' jurisdiction that reduce the discharge of pollutants; and

WHEREAS, FAIRFAX, VIENNA, or HERNDON may terminate this Agreement as set forth by the terms herein if, pursuant to applicable law, either locality chooses not to participate under this Agreement or chooses not to share the Stormwater Service District Fees; and

WHEREAS FAIRFAX, VIENNA, and HERNDON have determined and agreed that the best interests of each locality's residents are fulfilled if FAIRFAX utilizes a portion of the Service District Fees collected by FAIRFAX from properties within the Towns to assist the Towns in maintaining, operating, and improving their respective stormwater systems to achieve the goals of effective regional water quality improvement and local initiatives in these localities and to satisfy certain MS4 permit requirements;

NOW, THEREFORE, in consideration of the mutual obligations set forth herein and other good and valuable consideration, so long as FAIRFAX continues to administer the Service District in FAIRFAX that encompasses VIENNA and HERNDON, and so long as VIENNA and HERNDON qualify to receive the Service District Fees collected by FAIRFAX from properties within the Towns, FAIRFAX, VIENNA, and HERNDON agree as follows:

1. FAIRFAX will continue to engage in a coordinated approach with VIENNA, and HERNDON to maintain and operate their respective stormwater systems throughout the incorporated and unincorporated parts of FAIRFAX. Moreover, FAIRFAX, VIENNA, and HERNDON will engage in a coordinated approach for future improvements to their respective stormwater systems.

2. This Agreement's duration shall be for one fiscal year and shall renew at the beginning of each fiscal year thereafter unless terminated pursuant to the terms set forth herein below. For the purposes of this Agreement, "fiscal year" shall mean Fairfax County's fiscal year, which, at the time of the execution of this agreement, ends on June 30.

3. This Agreement's purpose is to set forth how the Parties shall share revenues to be collected pursuant to the Service District Fee, including revenues collected from properties within VIENNA and HERNDON, and the respective obligations of the Parties with respect to the stormwater management services described herein.

STORMWATER FEE REVENUE SHARING

4. FAIRFAX shall collect all revenues to be collected pursuant to the Service District Fee, including revenues collected from properties within the Towns.

5. Revenues actually collected throughout the Service District are referred to herein as "STORMWATER FEE REVENUES."

6. At the end of each fiscal year, FAIRFAX shall calculate separately the total amount of stormwater fee revenues that were actually collected from properties within VIENNA and HERNDON from the amount of stormwater fee revenues collected elsewhere in FAIRFAX (the "VIENNA STORMWATER FEE" and "HERNDON STORMWATER FEE").

7. On or before October 30th of each fiscal year, FAIRFAX shall estimate the anticipated VIENNA STORMWATER FEE and HERNDON STORMWATER FEE for that year, and shall pay to VIENNA and HERNDON an amount equal to twenty-five percent (25%) of the estimated VIENNA STORMWATER FEE and HERNDON STORMWATER FEE, respectively, for that fiscal year, rounded to the nearest penny (the "PAID VIENNA REVENUES" and "PAID HERNDON REVENUES").

8. The Parties acknowledge and agree that PAID VIENNA REVENUES and/or PAID HERNDON REVENUES may be more or less than the amount that is actually due and owing to either or both of the Towns, and which amount is calculated at the end of each fiscal year.

9. If the PAID VIENNA REVENUES for a particular fiscal year are determined to have been less than 25% of the actual VIENNA STORMWATER FEE actually collected for that fiscal year, then FAIRFAX shall pay VIENNA the difference between the PAID VIENNA REVENUES and 25% of the VIENNA STORMWATER FEE actually collected for that fiscal year. FAIRFAX shall pay this difference at the same time as it pays the next fiscal year's PAID VIENNA REVENUES.

10. If the PAID HERNDON REVENUES for a particular fiscal year are determined to have been less than 25% of the actual stormwater fee actually collected for that fiscal year in HERNDON, then FAIRFAX shall pay HERNDON the difference between the PAID

HERNDON REVENUES and 25% of the HERNDON STORMWATER FEE actually collected for that fiscal year in HERNDON. FAIRFAX shall pay this difference at the same time as it pays the next fiscal year's PAID HERNDON REVENUES.

11. If the PAID VIENNA REVENUES for a particular fiscal year are determined to have been more than 25% of the actual VIENNA STORMWATER FEE actually collected for that fiscal year, then FAIRFAX shall deduct the difference between the PAID VIENNA REVENUES and 25% of the VIENNA STORMWATER FEE actually collected for that fiscal year from the amount that FAIRFAX pays for the next fiscal year's PAID VIENNA REVENUES.

12. If the PAID HERNDON REVENUES for a particular fiscal year are determined to have been more than 25% of the actual HERNDON STORMWATER FEE actually collected for that fiscal year, then FAIRFAX shall deduct the difference between the PAID HERNDON REVENUES and 25% of the HERNDON STORMWATER FEE actually collected for that fiscal year from the amount that FAIRFAX pays for the next fiscal year's PAID HERNDON REVENUES.

13. Once FAIRFAX has determined the amount of the actual VIENNA STORMWATER FEE and HERNDON STORMWATER FEE, which shall occur within 90 days of the fiscal year end, FAIRFAX shall forward the respective amounts to the Towns' Mayors in writing ("FINAL ACCOUNTING"). If VIENNA and/or HERNDON disputes the amount of the FINAL ACCOUNTING, then within 30 days of the Mayors' receipt of this FINAL ACCOUNTING, VIENNA and/or HERNDON, shall state the complete factual basis for any such dispute in writing to the Fairfax County Executive, and the Parties shall endeavor in good faith to resolve any such dispute. Upon the resolution of any such dispute, or if VIENNA and/or

HERNDON fails to dispute the amount of the FINAL ACCOUNTING within 30 days of either Mayor's receipt thereof, then VIENNA and/or HERNDON shall be deemed to have accepted payment of the respective fiscal year's PAID VIENNA REVENUES or PAID HERNDON REVENUES, which shall result in the waiver of any right to request from FAIRFAX any additional amount of the collected STORMWATER FEE REVENUES. VIENNA's and/or HERNDON's waiver of any such balance, however, is conditioned upon FAIRFAX's obligations to VIENNA and/or HERNDON pursuant to this Agreement.

14. Pursuant to Va. Code Ann. § 15.2-2403.3 VIENNA and HERNDON shall expend the PAID VIENNA REVENUES and PAID HERNDON REVENUES, respectively, only for costs directly related to the Towns' stormwater systems and not for non-stormwater-system costs, such as public safety, schools, or road maintenance.

15. Under this Agreement, neither VIENNA nor HERNDON is required to expend any of the paid revenues within any specific amount of time. This Agreement does not affect any other authority that VIENNA or HERNDON might have to carry over revenues from year-to-year or to expend revenues in one fiscal year when the revenues were collected in a previous fiscal year.

16. If, at any time in the future, either VIENNA or HERNDON becomes unincorporated or ceases to qualify to receive paid revenues for any reason or terminates its stormwater program or ceases to maintain its stormwater systems, none of the previously paid revenues shall be expended for anything other than the maintenance, operation, and improvement of such Town's stormwater systems. If any such amounts are returned to FAIRFAX they may be used for other qualified uses in the Service District as FAIRFAX, or its designee, in its or his sole discretion, deems appropriate.

TMDL COMPLIANCE AND THE TMDL ADVISORY COMMITTEE

17. Fairfax, Vienna, and Herndon agree that Fairfax will implement stormwater management practices throughout the County and in the Towns sufficient to achieve the TMDL pollutant load reduction requirements that are incorporated into each Party's respective current and future MS4 permit.

18. A TMDL Compliance Advisory Committee (hereinafter referred to as the "Advisory Committee") shall be established and shall be comprised of one or more representatives from each governing body.

19. Regardless of the number of representatives appointed by each governing body, each locality will have one vote on the Advisory Committee.

20. The Advisory Committee shall:

a. establish, pursuant to each Party's respective MS4 permit, the nitrogen, phosphorus, and sediment (referred to as "pollutants of concern" or "POCs") load reductions necessary for each individual Party to achieve full compliance with the Chesapeake Bay TMDL and the WIP (referred to herein as "the Chesapeake Bay TMDL Endpoint").

b. establish the "TOTAL POLLUTANT REDUCTION," which is the total amount of each POC that the Parties must reduce in order to reach the Chesapeake Bay TMDL Endpoint.

c. establish the percentage of the TOTAL POLLUTANT REDUCTION for which each locality is responsible. That percentage assigned to each Party shall hereinafter be referred to, respectively, as the "FAIRFAX PERCENTAGE," "VIENNA PERCENTAGE," and "HERNDON PERCENTAGE."

d. as determined by the Advisory Committee, the FAIRFAX PERCENTAGE, VIENNA PERCENTAGE, and the HERNDON PERCENTAGE may be established for each POC, an average of POCs, or by another mutually agreed upon methodology that will allocate pollutant reduction credits for projects completed under this Agreement as provided for in paragraph 27 below, in a manner necessary to meet the Chesapeake Bay TMDL Endpoint.

e. establish a watershed-specific FAIRFAX PERCENTAGE, VIENNA PERCENTAGE, and HERNDON PERCENTAGE to allocate pollutant reduction credits for projects implemented within a watershed to meet a non-Chesapeake Bay TMDL Endpoint.

21. VIENNA and HERNDON may at any time provide FAIRFAX with a list of stormwater management projects to be considered for implementation. Before submitting any such project, the submitting Town must thoroughly investigate and analyze each project to ensure that any such project is feasible. Any project submitted before June 30 of each year will be considered by FAIRFAX for implementation during the following fiscal year. If a project is not implemented, it will continue to be considered for implementation in subsequent fiscal years until such time that the project is determined to be infeasible. Selection of projects for implementation and determination of final feasibility are at the sole discretion of the Director of the Fairfax County Department of Public Works and Environmental Services ("Director").

22. By April 1 of each year, the Director will send to the Towns of VIENNA and HERNDON and/or their designees a proposed list of projects within their jurisdiction.

23. Within 30 days after each Mayors' receipt of this list, the Towns shall provide comments and suggestions regarding each project, its timing, and its costs for implementation,

lifetime maintenance, and replacement. If the Towns provide any comments or suggestions, the Director shall fully consider any such comments, and may, but shall not be obligated to implement or adhere to them. In the event that a dispute exists regarding implementation of any project on the list sent by the Director, the Director and the disputing Town shall endeavor in good faith to resolve any such dispute, but final authority for the implementation of any such projects rests solely with Fairfax County and the Director.

24. FAIRFAX will pay for the development of the updated Chesapeake Bay TMDL Action Plan for each Town that is due at the beginning of each new MS4 permit cycle. Each Town will be responsible for routine annual updates as required in the MS4 permits. FAIRFAX will also pay for the initial development of other TMDL action plans necessary for compliance with each Town's MS4 permit and any substantial updates to these action plans required in future permit cycles. The action plans will include all information necessary to demonstrate compliance with MS4 permit requirements. Changes or additions to projects identified in the action plans will be reported to each Town annually in accordance with paragraph 31.

25. FAIRFAX shall be solely responsible for implementing projects under this Agreement, excluding the acquisition of any permanent or temporary land rights necessary to construct and maintain a project located within a Town. The Parties may, as necessary, have agreements that are separate from this Agreement that address the Parties' responsibilities over specific projects, facilities, and other funding.

26. A project is subject to this Agreement if it is funded in whole or in part by the Service District Fee and substantially completed on or after July 1, 2009.

27. For each project substantially completed under this Agreement on or after July 1, 2009, whether the project or facility is located within VIENNA, HERNDON, or elsewhere

within Fairfax County, the Parties will receive a pollutant reduction credit for each POC. The reduction credit is determined by applying the VIENNA PERCENTAGE and the HERNDON PERCENTAGE to the estimated total POC load reductions for each project that is substantially completed pursuant to this Agreement (the "VIENNA CREDIT," "HERNDON CREDIT," "FAIRFAX CREDIT," and collectively "REDUCTION CREDITS"). For completed projects and facilities, the REDUCTION CREDITS shall survive any termination of this Agreement unless otherwise agreed to by the Parties or in the event that a constructed facility or improvement is not maintained in accordance with paragraph 28 of this Agreement.

28. The Party in whose jurisdiction any stormwater management facility or improvement is constructed under this Agreement shall ensure that the long-term maintenance of such facility or improvement is performed as necessary to maintain the functionality and performance thereof. Each party shall ensure long-term maintenance in accordance with Va. Code Ann. § 62.1-44.15.15:27(E)(2) and 9 Va. Admin. Code §§ 25-870-58 and 112. In the event that a Party's failure to maintain a project completed under this Agreement results in a decrease in the amount of POCs removed therefrom, as determined by DEQ, then that Party shall, at its sole cost, maintain or improve the facility to restore the facility to its original functionality.

29. In the event that a Party is unable to meet its load reduction requirement for a specific reporting period, and another Party has exceeded its load reduction requirement, the Director may, with written notification to the Parties, transfer credit from shared credit projects among Parties in a manner to ensure that each Party is able to meet its load reduction requirement. Any such transfer shall be temporary and last only as long as it is needed to address the immediate shortfall. Further, no transfer will occur or stay in force that would result in a donating Party being in non-compliance with an MS4 permit condition.

30. Any Party that completes a stormwater management project from funds not generated by or transferred through Fairfax County shall be entitled to claim all resulting load reduction credits for purposes of satisfying its MS4 permit requirements.

31. FAIRFAX will prepare an annual report that details the activities performed under this Agreement. The report will provide sufficient detail so that each locality may use it to meet their respective MS4 permit reporting obligations to DEQ. Fairfax will provide the report annually no later than one month before the date the annual report is due to DEQ.

STAFF TRAINING

32. Without any additional invitation or payment, VIENNA's and/or HERNDON's staff may attend MS4 permit-related training programs that are conducted or hosted by FAIRFAX. FAIRFAX will provide VIENNA and HERNDON with at least one-month's advance notice of such training opportunities.

TERMINATION

33. Any Party may terminate this Agreement by resolution of that Party's governing body. Any such resolution shall be at a public meeting with notice in writing to the non-terminating Parties. Notice shall be made at least three weeks in advance of any such meeting to the Mayor(s) or, as applicable, the County Executive, of Fairfax County. After adoption of any such resolution, the terminating Party shall notify the remaining Parties. The termination shall be effective no earlier than the end of the fiscal year in which the governing body's vote for the resolution for the termination occurs.

34. If this Agreement is terminated by any party other than FAIRFAX, the Agreement shall remain in force as to the remaining parties. The terminating Town shall have responsibility to maintain and replace, as necessary, any facility constructed under this Agreement that is

located within its boundaries and shall assume all liability for such facility. Unless otherwise agreed to by the Parties, neither Town shall have any liability or responsibility for any facility that is located outside of its jurisdictional boundaries and was developed and implemented under this Agreement.

ADDITIONAL PROVISIONS

35. This Agreement is integrated and contains all provisions of the Agreement between the Parties.

36. In the event of a conflict between any term(s) of this Agreement and either of the Parties' MS4 permits or other permit requirements, either Party's respective permit provision(s), shall control.

37. Any provision or term of this Agreement may be modified only by a writing that is approved by resolution at a public meeting of each of the localities' respective governing bodies.

38. This Agreement shall be binding on the Parties' respective agencies, employees, agents, and successors-in-interests.

39. This Agreement shall not be assigned by either of the Parties unless both of the Parties agree to such an assignment in writing.

40. Nothing in this Agreement otherwise limits the respective regulatory and police powers of the Parties.

41. The Parties agree that nothing in this Agreement creates a third-party beneficiary. The Parties also agree that this Agreement does not confer any standing or right to sue or to enforce any provision of this Agreement or any other right or benefit to any person who is not a

party to this Agreement, including but not limited to a citizen, resident, private entity, or local, state, or federal governmental or public body.

42. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one in the same Agreement.

43. This Agreement shall be governed by Virginia law, and any litigation relating to this Agreement shall be brought and/or maintained only in the Circuit Court of Fairfax County, Virginia.

IN WITNESS WHEREOF, the Parties have executed this Agreement, as verified by their signatures below.

[Signatures appear on the following pages.]

TOWN OF VIENNA

By: Laurie A DiRocco
Laurie A. DiRocco
Mayor
Town of Vienna, VA

STATE OF VIRGINIA :
: to-wit
COUNTY OF FAIRFAX :

The foregoing Agreement was acknowledged before me by Laurie A. DiRocco of the Town of VIENNA, this 21st day of February 2017 on behalf of the Town of VIENNA.

MELANIE J. CLARK
NOTARY PUBLIC
REGISTRATION # 7290978
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES
JUNE 30, 2017

Melanie J Clark
Notary Public

My commission expires: June 30, 2017
Notary Registration Number: 7290978

TOWN OF HERNDON

By:_____
(Name and Title)
Lisa C. Merkel
Mayor

STATE OF VIRGINIA :
: to-wit
COUNTY OF FAIRFAX :

The foregoing Agreement was acknowledged before me by Lisa C. Merkel of the Town of HERNDON, this 2nd day of March 2017 on behalf of the Town of HERNDON.

Cynthia M. Yurewicz
Notary Public

My commission expires: 11/30/2018
Notary Registration Number: 325308

CYNTHIA M. YUREWICZ
NOTARY PUBLIC
REGISTRATION # 325308
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES
NOVEMBER 30, 2018

APPROVED AS TO FORM:

Lesa J. Yeatts
Town Attorney

BOARD OF SUPERVISORS OF
FAIRFAX COUNTY, VIRGINIA

By: Edward L Long Jr.
Edward L. Long Jr.
County Executive
Fairfax County, Virginia

STATE OF VIRGINIA :
: to-wit
COUNTY OF FAIRFAX :

The foregoing Agreement was acknowledged before me by Edward L. Long Jr., ~~of the~~ County Executive, on behalf of the Board of Supervisors of Fairfax County, Virginia this 9th day of March ~~2016~~. 2017

SUSAN STANNERS ROBINSON
Registration # 7646782
My Commission Expires
March 31, 2019

Susan Stanners Robinson
Notary Public

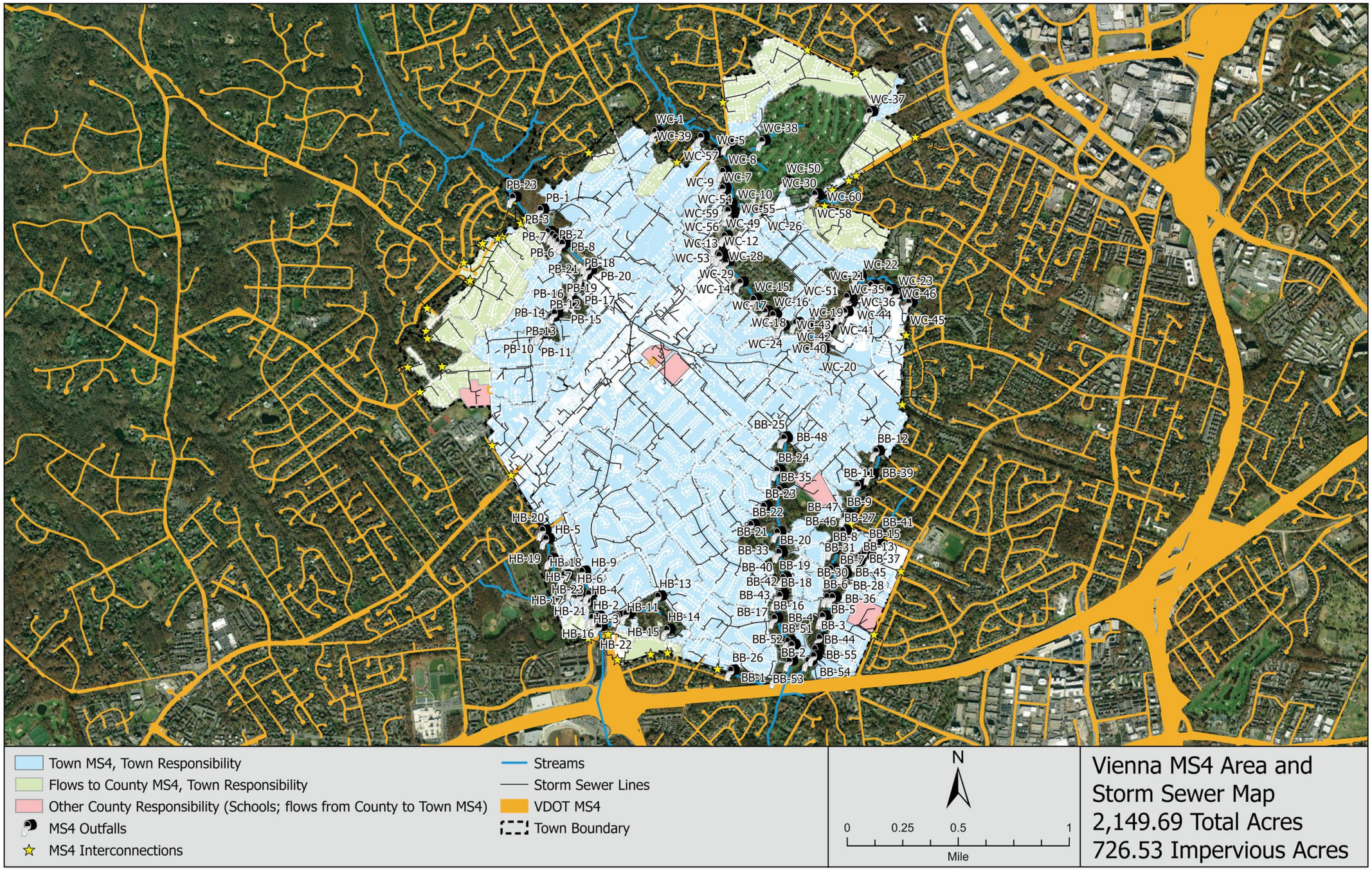
My commission expires: March 31, 2019

Notary Registration Number: 7642019

Approved as to form: _____
Office of the County Attorney
Fairfax, Virginia

Appendix B

Town of Vienna MS4 Service Area Delineation


WC-37
WC-1
WC-38
WC-39
WC-5
WC-57
WC-8
WC-50
WC-9
WC-7
WC-30
PB-23
PB-1
WC-54
WC-10
WC-60
WC-59
WC-55
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PB-3
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PB-2
WC-13
WC-12
PB-8
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PB-11
WC-20
BB-25
BB-48
BB-12
BB-24
BB-35
BB-11
BB-39
BB-23
BB-9
BB-47
BB-22
BB-27
BB-46
BB-41
HB-20
HB-5
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BB-20
BB-8
BB-15
BB-33
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BB-13
HB-19
HB-18
HB-9
BB-7
BB-37
BB-40
BB-19
HB-7
HB-6
BB-30
BB-45
BB-42
BB-18
HB-13
BB-6
BB-28
HB-23
HB-4
BB-43
BB-36
HB-17
HB-2
HB-11
BB-16
BB-5
HB-21
BB-17
BB-4
HB-3
HB-14
BB-3
BB-51
HB-16
HB-15
BB-52
BB-44
HB-22
BB-2
BB-55
BB-26
BB-54
BB-1
BB-53
Town MS4, Town Responsibility
Flows to County MS4, Town Responsibility
Other County Responsibility (Schools; flows from County to Town MS4)
MS4 Outfalls
MS4 Interconnections
Streams
Storm Sewer Lines
VDOT MS4
Town Boundary
N
0
0.25
0.5
1
Mile
Vienna MS4 Area and
Storm Sewer Map
2,149.69 Total Acres
726.53 Impervious Acres

Appendix C

List of BMPs Implemented Prior to November 1, 2023

All calculations and supporting documentation were included in the Phase I and Phase II Chesapeake Bay TMDL action plan and/or MS4 annual reports provided to DEQ.

Redevelopment

The following redevelopment projects were implemented and reported to DEQ in annual reports prior to November 1, 2023.

Redevelopment Project	TN Credit	TP Credit	TSS Credit	Year
Vienna Community Center	12.04	2.15	1,271.28	2018
135 Center Street S	0.63	0.18	86.32	2018
1008 Electric Ave	48.64	7.52	3,451.19	2018
Vienna Town Hall - IA Reduction	0.48	0.07	32.84	2019
Vienna Town Hall - BMP Retrofits	2.97	0.37	259.84	2019
Wawa - 465 Maple Ave W	-	0.06	-	2020
Flagship - 540 Maple Ave W	2.55	0.63	311.93	2020
Holy Comforter - 543 Beulah Rd NE	1.02	0.15	71.89	2020
200 Maple Avenue E	0.33	0.09	45.03	2021
Cedar Park Shopping Center - 260 Cedar Lane	9.46	1.27	731.31	2021
Malcolm Subdivision - 424-440 Malcolm Road	1.62	0.26	183.07	2021
CubeSmart - 223 Mill Street NE	4.81	0.92	527.57	2022
Parkwood Oaks - Marshall and Ware	4.52	0.64	383.92	2022
Westwood Country Club - Clubhouse, Tennis	9.83	1.64	1,476.19	2022

Street Sweeping

Street sweeping is an annual BMP. Changes in the amount swept will be reported to DEQ in annual reports.

Street Sweeping Calculations

Notes: Updated calculation based on 2019 DEQ guidance. Must be vacuum assisted sweeper and utilize efficiencies from the Expert Panel Report (May 19, 2016). Figures are for a minimum of four passes a year (SCP-6) from Table 17 of the Expert Panel report.

TN Efficiency	0.0%	**Load per Acre**	16.86	Table 3b MS4 permit.
TP Efficiency	1.0%	**Load per Acre**	1.62	Table 3b MS4 permit.
TSS Efficiency	2.0%	**Load per Acre**	1171.32	Table 3b MS4 permit.
Accotink Creek %	0.384			
Difficult Run %	0.616	Percent of total impervious area in Accotink Creek watershed.		

Year	Centerline Miles	Curb Miles
FY18	0	-
FY19	0	-
FY20	6.49	12.98
FY21	1.5	3.00
FY22	1.6	3.20
FY23	3.2	6.40
FY24	3.2	6.40
FY25	3.2	6.40
FY26	3.2	6.40
FY27	3.2	6.40
FY28	3.2	6.40

Enter estimate for out-years.
One curb mile equals one acre per Table 17 of Expert Panel.

Town Wide Reductions

Pollutant	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	0.21	0.05	0.05	0.10	0.10	0.10	0.10	0.10	0.10
TSS	-	-	304.07	70.28	74.96	149.93	149.93	149.93	149.93	149.93	149.93

More Stringent Development

FY2015 Structural Facilities

More Stringent Single Family Residential Development -- Structural Facilities

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. Reductions are from structcural facilities designed in accordance with the VRRM.

Long	Lat	6th order HUC	Watershed1	Watershed2	HOUSE#	STREET	OWNER	BMP_NAME	AGREEMENT	OPERATION	3rd PARTY INSPECTION_DATE	IA TREATED (ACRES)	TOTAL_ACRES_TREATED	RUNOFF_CAPTURED (CU FT)	TP_LOAD_REQUIRED	TOTAL_TP LOAD_BMP_ACHIEVED	TN_LOAD_ACHIEVED_BMP
-77.2558	38.88658	PL30	Accotink	Bear Branch	1024	Hillcrest Dr	Private	Bioretention	Yes	6/15/2015	5/12/2015	0.03	0.09	80.0	0.06	0.07	0.53

Total Credit **0.07** **0.53**

FY2015 Purchased Credit

Street Address	Unit Number	Redevelopment Load lbs	New Impervious Load lbs	Total Load Reduction lbs	Credit Purchase Date	Nitrogen	Phosphorus
Windover Ave NW	428	0.01	0.17	0.18	9-Oct-14	2.42	0.18
Birch St SW	602	0.02	0.05	0.07	27-Oct-14	0.68	0.05
Timber Lane SW	904	0.02	0.04	0.06	3-Dec-14	0.54	0.04
Walker St SW	510	0.02	0.04	0.07	5-Dec-14	0.94	0.07
Druid Hill NE	512	0.04	0.07	0.11	8-Dec-14	2.42	0.18
Battle St SW	214	0.02	0.07	0.09	8-Dec-14	1.21	0.09
John Marshall Dr NE	302	0.03	0.02	0.04	18-Dec-14	0.54	0.04
Kingsley Rd SW	131	0.04	0.05	0.09	26-Jan-15	1.21	0.09
Orchard St NW	449			0.07	28-Apr-15	1.1	0.07
West St NW	331			0.07	28-Apr-15	1.1	0.07
Berry St SE	416	0.04	0.07	0.11	9-Jun-15	0.44	0.1
Cottage St SW	800	0.02	0.05	0.07	11-Jun-15	0.94	0.07
Westbriar Ct NE	1110	0.04	0.14	0.18	19-Jun-15	2.42	0.18
Mashie Dr SE	405	0.04	0.07	0.11	23-Jun-15	1.48	0.11
Desale St SW	922	0.02	0.04	0.06	15-Jul-15	0.8	0.06
Oak St SW	207	0.02	0.05	0.07	14-Aug-15	1.2	0.09
					Sum	19.44	1.49

FY2016 Structural Facilities

More Stringent Single Family Residential Development -- Structural Facilities

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. Reductions are from structcural facilities designed in accordance with the VRRM.

Long	Lat	6th order HUC	Watershed1	Watershed2	HOUSE#	STREET	OWNER	BMP_NAME	AGREEMENT	OPERATION	3rd PARTY INSPECTION_ DATE	IA TREATED (ACRES)	TOTAL_ACRES _TREATED	RUNOFF_C APTURED (CU FT)	TP_LOAD_RE QUIRED	TOTAL_TP LOAD_BMP _ACHIEVED	NITROGEN_LOA D_ACHIEVED_B MP
-77.2629	38.91159	PL22	Difficult Run	Wolftrap Cree	425	Nelson Dr NE	Private	Dry Well	YES	9/23/2015	9/4/2015	0.05	0.05	91.0	0.07	0.07	0.47
-77.2569	38.89156	PL30	Accotink	Bear Branch	905	Plum St SE	Private	Infiltration Trench	YES	10/15/2015	6/10/2015	0.03	0.10	79.0	0.05	0.06	0.41
-77.2587	38.89407	PL30	Accotink	Bear Branch	800	Desale St SW	Private	Infiltration Trench	YES	2/1/2016	10/18/2015	0.03	0.14	103.0	0.06	0.08	0.53
															Total Credit	**0.21**	**1.41**

FY2016 Purchased Credit

Street Address	Unit Number	Redevelopment Load lbs	New Impervious Load lbs	Total Load Reduction lbs	Credit Purchase Date	Nitrogen	Phosphorus
Patrick St SW	303	0.02	0.04	0.05	1-Jul-15	0.67	0.05
Olympian Cir SW	908	0.02	0.04	0.06	10-Jul-15	0.54	0.04
Desale St SW	922	0.02	0.04	0.06	15-Jul-15	0.8	0.06
Dogwood St SW	108			0.04	24-Jul-15	0.63	0.04
Oak St SW	207	0.02	0.05	0.07	14-Aug-15	1.2	0.09
Valley Dr SE	517	0.02	0.02	0.05	18-Aug-15	0.67	0.05
Albrecht Cir SW	314	0.04	0.02	0.05	29-Aug-15	0.27	0.02
Cottage St SW	1115	0.02	0.04	0.06	1-Sep-15	0.8	0.06
Johnson St SW	306	0.03	0.01	0.04	1-Sep-15	0.53	0.04
Moore Ave SW	104	0.02	0.02	0.04	9-Sep-15	0.53	0.04
Nelson Dr NE	405	0.03	0.1	0.11	9-Sep-15	1.47	0.11
Johnson St SW	307	0.03	0.05	0.08	22-Sep-15	1.07	0.08
Ware St SW	1203	0.02	0.03	0.05	25-Sep-15	0.67	0.05
Nelson Dr NE	517	0.04	0.02	0.06	2-Oct-15	0.8	0.06
Hillcrest Dr SW	705	0.03	0.13	0.16	5-Oct-15	2.14	0.16
Orrin St SE	505	0.02	0	0.02	6-Oct-15	0.27	0.02
Berry St SW	308	0.03	0.11	0.14	19-Oct-15	1.87	0.14
Battle St SW	213	0.02		0.02	11-Nov-15	0.4	0.03
Delano Dr SE	509	0.03	0.02	0.05	19-Nov-15	0.67	0.05
Glyndon St SE	301	0.03	0.07	0.11	30-Nov-15	1.72	0.11
Park St NE	331	0.03	0.09	0.12	9-Dec-15	1.6	0.12
Alma St SE	507			0.2	22-Dec-15	0.27	0.02
Cottage St SW	1404	0.02	0.05	0.06	4-Jan-16	0.8	0.06
Park St SE	609	0.04	0.06	0.09	5-Jan-16	1.2	0.09
Cottage St SW	926	0.03	0.05	0.09	8-Jan-16	1.2	0.09
Melody Lane SW	120	0.02	0	0.02	8-Jan-16	0.27	0.02
Battle St SW	119	0.02	0	0.02	20-Jan-16	0.4	0.03
Drake St SW	1202	0.02	0.05	0.07	5-Feb-16	0.94	0.07
Johnson St SW	401	0.02	0.06	0.08	5-Feb-16	1.07	0.08
Kibler Cir SW	501	0.02	0.03	0.06	5-Feb-16	0.8	0.06
Hillcrest Dr SW	504	0.03	0.04	0.07	8-Feb-16	1.1	0.07
Hickory Cir SW	119	0.02	0.01	0.03	21-Mar-16	0.33	0.03
Plum St SW	511	0.02	0.02	0.04	21-Mar-16	0.44	0.04
Orchard St NW	343	0.02	0.08	0.09	31-Mar-16	0.98	0.09
Yeonas Dr SW	415	0.02	0.05	0.07	14-Apr-16	0.76	0.07
Yeonas Dr SW	100	0.02	0.05	0.08	28-Apr-16	0.87	0.08
Center St S	710	0.02	0	0.02	20-May-16	1.47	0.11
Niblick Dr SE	607	0.04	0.06	0.11	25-May-16	1.72	0.11
Lakewood Dr SW	1105	0.02	0.03	0.05	1-Jun-16	0.37	0.05
					Total	34.31	2.59

FY2017 Structural Facilities

More Stringent Single Family Residential Development -- Structural Facilities

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. Reductions are from structcural facilities designed in accordance with the VRRM.

HOUSE_NUMB	OWNER	DATE_INSTA	BMP_NAME	IMPERVIOUS	TOTAL_ACRE	RUNOFF_CAP	MEASUREMEN	AMOUNT_APP	LATITUDE	LONGITUDE	LIFESPAN	NITROGEN_L	REMAININ G_	HUC	Watershed	Public or Private	VRRM Nitrogen Load Reduction Achieved	VRRM Phosphorous Load Reduction Achieved
202	Owner	8/19/2016	Urban Biore	0.0400	0.0400	51	CF	51	38.8976	-77.2643	20	0.00	0.00	PL22	Piney Branch	Private	0.37	0.04
366	Owner	8/25/2016	Urban Biore	0.0600	0.0600	83	CF	83	38.9047	-77.2720	20	0.00	0.00	PL22	Piney Branch	Private	0.81	0.1
208	Owner	8/25/2016	Infiltration	0.4800	0.7300	116	CG	116	38.8910	-77.2591	20	0.00	0.00	PL30	Bear Branch	Private	0.00	0.2
903	Owner	8/26/2016	Infiltratioin	0.0542	0.0880	108	CF	108	38.8856	-77.2670	20	0.00	0.00	PL30	Hunters Branch	Private	0.56	0.09
121	Owner	9/16/2016	Soil Amend	0.0200	0.1200	97	CF	97	38.8928	-77.2572	20	0.00	0.00	PL30	Bear Branch	Private	0.44	0.06
912	Owner	9/26/2016	Urban Biore	0.0170	0.0170	43	CF	0	38.8852	-77.2662	20	0.00	0.00	PL30	Hunters Branch	Private	0.28	0.04
305	Owner	9/28/2016	Urban Biore	0.0200	0.0200	25	CF	2	38.9058	-77.2542	20	0.00	0.00	PL22	Wolftrap Creek	Private	0.18	0.02
404	Owner	10/18/2016	Soils Amend	0.0700	0.0000	91	CF	91	38.9063	-77.2514	20	0.00	0.00	PL22	Wolftrap Creek	Private	0.58	0.08
606	Owner	10/18/2016	Infiltration	0.0600	0.3600	240	CF	240	38.9071	-77.2448	20	0.00	0.00	PL22	Wolftrap Creek	Private	1.24	0.19
402	Owner	10/18/2016	Infiltration	0.1100	0.4000	321	CF	321	38.9011	-77.2731	20	0.00	0.00	PL22	Piney Branch	Private	1.66	0.31
925	Owner	10/26/2016	Urban Biore	0.0400	0.0400	55	CF	55	38.8881	-77.2587	20	0.40	2.99	PL30	Bear Branch	Private	0.4	0.05
600	Owner	12/1/2016	Soil Amend	0.0200	0.0200	41	CF	41	38.8932	-77.2644	20	0.19	0.00	PL22	Piney Branch	Private	0.19	0.03
929	Owner	12/1/2016	Urban Biore	0.0400	0.0400	61	CF	61	38.8949	-77.2482	20	0.00	0.00	PL30	Bear Branch	Private	0.17	0.05
504	Owner	12/9/2016	Amended S	0.0580	0.0580	125	CF	125	38.8932	-77.2663	20	0.56	1.69	PL30	Hunters Branch	Private	0.56	0.08
200	Owner	12/15/2016	Bioretention	0.0260	0.0720	74	CF	74	38.9098	-77.2518	20	0.47	3.28	PL22	Wolftrap Creek	Private	0.47	0.06
120	Owner	12/19/2016	Infiltraton T	0.0200	0.0300	55	CF	55	38.8974	-77.2629	20	0.00	0.19	PL22	Piney Branch	Private	0.00	0.04
605	Owner	1/5/2017	Urban Biore	0.0600	0.0600	109	CF	109	38.8948	-77.2617	20	0.64	1.14	PL22	Piney Branch	Private	0.64	0.08
231	Owner	1/24/2017	Urban Biore	0.0100	0.0100	20	CF	20	38.8992	-77.2542	20	0.14	1.46	PL22	Wolftrap Creek	Private	0.14	0.02
438	Owner	1/26/2017	Infiltration	0.0900	0.1600	187	CF	187	38.9130	-77.2641	20	0.97	3.54	PL22	Wolftrap Creek	Private	0.97	0.15
106	Owner	2/2/2017	Infiltration	0.1300	0.3000	299	CF	299	38.8901	-77.2515	20	1.43	2.97	PL30	Bear Branch	Private	1.43	0.22
615	Owner	2/3/2017	Urban Biore	0.0400	0.0400	55	CF	55	38.9084	-77.2535	20	0.40	2.60	PL22	Wolftrap Creek	Private	0.40	0.05
802	Owner	2/7/2017	Permeable	0.0400	0.0000	60	CF	60	38.8929	-77.2597	20	0.35	0.00	PL30	Bear Branch	Private	0.35	0.05
625	Owner	2/8/2017	Infiltration	0.0400	0.0400	63	CG	63	38.9055	-77.2732	20	0.33	1.62	PL22	Piney Branch	Private	0.33	0.05
410	Owner	3/3/2017	Amended S	0.1010	0.1010	261	CF	261	38.9042	-77.2527	20	1.17	2.32	PL22	Wolftrap Creek	Private	1.17	0.16
212	Owner	3/3/2017	Infiltration	0.0296	0.0920	93	CF	93	38.8891	-77.2571	20	0.48	1.22	PL30	Bear Branch	Private	0.48	0.07
508	Owner	3/13/2017	Bioretentio	0.0300	0.0900	103	CF	103	38.8880	-77.2628	20	0.58	1.30	PL30	Hunters Branch	Private	0.58	0.08
211	Owner	3/13/2017	Urban Biore	0.0500	0.0500	65	CF	65	38.8974	-77.2656	20	0.47	1.48	PL22	Piney Branch	Private	0.47	0.06
400	Owner	3/21/2017	Bioretentio	0.0476	0.0996	85	CF	85	38.9038	-77.2532	20	0.00	0.00	PL22	Wolftrap Creek	Private	0.00	0.07
504	Owner	3/23/2017	Urban Biore	0.0800	0.0800	282	CF	282	38.9066	-77.2477	20	0.00	0.00	PL22	Wolftrap Creek	Private	0.00	0.09
410	Owner	3/27/2017	Infiltratoin	0.1700	0.4200	337	CF	337	38.9083	-77.2663	20	0.00	0.00	PL22	Piney Branch	Private	0.00	0.26
914	Owner	3/30/2017	Infiltration	0.0500	0.0700	98	CF	98	38.8919	-77.2557	20	0.51	1.26	PL30	Bear Branch	Private	0.51	0.08
333	Owner	4/10/2017	Soil Amend	0.1200	0.2900	293	CF	293	38.9076	-77.2620	20	1.32	3.00	PL22	Piney Branch	Private	1.32	0.18
512	Owner	4/24/2017	Disconnect	0.0400	0.1600	118	CF	118	38.8824	-77.2538	20	0.53	1.35	PL30	Bear Branch	Private	0.53	0.07
1006	Owner	5/3/2017	Planter Box	0.0460	0.0460	63	CF	63	0.0000	0.0000	20	0.00	0.00	PL30	Bear Branch	Private	0.46	0.05
405	Owner	6/15/2017	Urban Biore	0.0450	0.2147	62	CF	62	38.8862	-77.2574	20	0.45	1.06	PL30	Bear Branch	Private	0.45	0.05
110	Owner	6/15/2017	Bioretentio	0.0300	0.0400	103	CF	103	38.8927	-77.2537	20	0.53	0.00	PL30	Bear Branch	Private	0.53	0.07
917	Owner	6/15/2017	Dry Well	0.0500	0.0500	169	CF	169	38.8953	-77.2495	20	0.77	0.99	PL30	Bear Branch	Private	0.77	0.11
520	Owner	6/15/2017	Infiltration	0.0700	0.2700	221	CF	221	38.9033	-77.2742	20	1.14	1.44	PL22	Piney Branch	Private	1.14	0.17
212	Owner	6/15/2017	Urban Biore	0.0200	0.0200	28	CF	28	38.8875	-77.2546	20	0.20	1.52	PL30	Bear Branch	Private	0.2	0.02
200	Owner	6/15/2017	Urban Biore	0.0600	0.0600	25	CF	25	38.9052	-77.2565	20	0.57	0.57	PL22	Wolftrap Creek	Private	0.57	0.07
622	Owner	6/26/2017	Dry Swale	0.0300	0.1400	81	CF	81	38.8870	-77.2674	20	0.50	1.68	PL30	Hunters Branch	Private	0.5	0.07
617	Owner	6/26/2017	Bioretentio	0.0500	0.1000	82	CF	82	38.9052	-77.2736	20	0.59	1.05	PL22	Piney Branch	Private	0.59	0.07
309	Owner	6/26/2017	Urban Biore	0.0400	0.0400	49	CF	49	38.8816	-77.2471	20	0.35	0.20	PL30	Bear Branch	Private	0.35	0.04
215	Owner	6/26/2017	Infiltration	0.0300	0.0400	107	CF	0	38.8957	-77.2638	20	0.49	0.49	PL22	Piney Branch	Private	0.49	0.07
107	Owner	6/26/2017	Infiltration	0.0400	0.0500	104	CF	104	38.8855	-77.2480	20	0.56	0.10	PL30	Bear Branch	Private	0.56	0.05
300	Owner	6/26/2017	Bioretentio	0.0200	0.0600	40	CF	40	38.9119	-77.2710	20	0.28	2.54	PL22	Piney Branch	Private	0.28	0.03
311	Owner	6/26/2017	Urban Biore	0.0500	0.0500	69	CF	69	38.9119	-77.2676	20	0.50	2.34	PL22	Piney Branch	Private	0.5	0.06
																	24.62	**4.11**

FY2017 Purchased Credit

More Stringent Single Family Residential Development -- Purchased Credit

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. All reductions consist of purchased off-site nutrient credits.

Street	Unit #	Redevelopment Load (lbs)	New Impervious Load (lbs)	Total Reduction Needed (lbs)	Credit Purchase Date	Purchased TN (lbs)	Purchased TP (lbs)
Echols St SW	904	0.03	0.09	0.12	7/5/2016	0.89	0.12
Pleasant St SW	227	0.05	0.21	0.26	7/28/2016	3.48	0.26
Battle St SW	122	0.03	0.06	0.09	8/11/2016	0.52	0.07
Moore Ave SW	105	0.02	0.02	0.04	8/19/2016	0.30	0.04
Desale St SW	908	0.02	0.04	0.06	8/22/2016	0.45	0.06
Wilmar Pl NW	109	0.01	0.04	0.05	8/25/2016	0.37	0.05
George St SW	304	0.03	0.03	0.06	9/21/2016	0.37	0.05
Mashie Dr SE	504	0.04	0.10	0.14	9/28/2016	0.30	0.04
Kelley St SW	1212	0.01	0.00	0.01	10/6/2016	0.13	0.01
Plum St SW	403	0.03	0.01	0.04	10/21/2016	0.30	0.04
Courthouse Rd SW	369	0.04	0.06	0.10	11/23/2016	1.56	0.10
Creek Crossing Rd NE	435	0.07	0.16	0.23	1/12/2017	2.01	0.27
Druid Hill NE	438	0.03	0.14	0.17	1/27/2017	0.22	0.03
Ross St SW	1211	0.02	0.00	0.02	2/13/2017	0.15	0.02
Church St NE	248	0.04	0.00	0.04	6/7/2017	0.30	0.04
Park St SE	400	0.01	0.00	0.01	6/13/2017	0.07	0.01
Total						**11.42**	**1.21**

FY2018 Structural Facilities

More Stringent Single Family Residential Development -- Structural Facilities

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. Reductions are from structcural facilities designed in accordance with the VRRM.

Watershed	DATE_INSTA	BMP_NAME	IMPERVIOUS	TOTAL_ACRE	RUNOFF_CAP	MEASUREN	AMOUNT_A	LATITUDE	LONGITUDE	NITROGEN_L	REMAINING_	VRRM Nitrogen	VRRM Phosphoru	Ownership
Piney Branch	7/11/2017	Urban Bioretentio	0.05	0.05	69.00	CF	69.00	38.89454000	-77.26410600	0.50000000	1.25000000	0.50000000	0.06000000	Private
Hunters Branch	7/13/2017	Infiltration	0.02	0.06	57.00	CF	57.00	38.88959300	-77.26642200	0.30000000	1.39000000	0.29500000	0.04480000	Private
Wolftrap Creek	7/14/2017	Urban Bioretentio	0.03	0.03	41.00	CF	41.00	38.90371700	-77.25026100	0.29000000	2.02000000	0.29000000	0.04000000	Private
Piney Branch	7/21/2017	Bioretention	0.03	0.03	19.00	CF	19.00	38.90173600	-77.27360200	0.27000000	0.27000000	0.27000000	0.03000000	Private
Wolftrap Creek	7/27/2017	Infiltration Trench	0.02	0.05	55.00	CF	55.00	38.91423200	-77.24628100	0.28000000	1.39000000	0.28	0.04000000	Private
Bear Branch	8/1/2017	Urban Bioretentio	0.03	0.03	35.00	CF	35.00	38.88704800	-77.25048000	0.25000000	1.48000000	0.25000000	0.03000000	Private
Piney Branch	8/10/2017	Bioretention	0.04	0.04	55.00	CF	55.00	38.89509600	-77.26275600	0.40000000	1.45000000	0.40000000	0.05000000	Private
Hunters Branch	8/11/2017	Infiltration 2	0.03	0.04	110.00	CF	110.00	38.88561400	-77.26462600	0.50000000	1.48000000	0.50000000	0.07000000	Private
Bear Branch	9/8/2017	Urban Bioretentio	0.02	0.02	28.00	CF	28.00	38.88254500	-77.25479500	0.00000000	0.00000000	0.20000000	0.02000000	Private
Bear Branch	9/8/2017	Urban Bioretentio	0.03	0.03	47.00	CF	47.00	38.89483300	-77.25838300	0.34000000	1.60000000	0.34000000	0.04000000	Private
Bear Branch	9/8/2017	Infiltration Trench	0.06	0.08	105.00	CF	105.00	38.89215000	-77.25875500	0.54000000	1.55000000	0.59000000	0.09000000	Private
Wolftrap Creek	9/25/2017	Infiltration	0.03	0.11	265.00	CF	265.00	38.90857800	-77.25031300	1.21000000	2.47000000	1.21000000	0.17000000	Private
Wolftrap Creek	9/27/2017	Urban Bioretentio	0.02	0.02	28.00	CF	28.00	38.91695800	-77.25394800	0.20000000	1.91000000	0.20000000	0.02000000	Private
Piney Branch	9/28/2017	Bioretention	0.04	0.08	80.00	CF	80.00	38.90059600	-77.27623600	0.53000000	1.97000000	0.53000000	0.06000000	Private
Bear Branch	10/17/2017	Urban Bioretentio	0.03	0.03	49.31	CF	49.31	38.89473400	-77.24689600	0.25460000	1.86930000	0.25460000	0.03870000	Private
Bear Branch	10/18/2017	Urban Bioretentio	0.05	0.05	87.00	CF	87.00	38.88822900	-77.25970800	0.57000000	1.17000000	0.57000000	0.07000000	Private
Wolftrap Creek	10/18/2017	Conserved Open S	0.05	0.10	94.00	CF	94.00	38.90318100	-77.25219200	0.42000000	1.20000000	0.42000000	0.06000000	Private
Bear Branch	10/19/2017	Urban Bioretentio	0.04	0.04	54.00	CF	54.00	38.89075800	-77.25906700	0.39000000	1.68000000	0.39000000	0.05000000	Private
Hunters Branch	10/19/2017	Urban Bioretentio	0.06	0.06	89.00	CF	89.00	38.88550500	-77.26488600	0.64000000	1.48000000	0.64000000	0.08000000	Private
Hunters Branch	10/26/2017	Urban Bioretentio	0.06	0.06	86.00	CF	86.00	38.88874000	-77.26688000	0.61000000	1.65000000	0.61000000	0.07000000	Private
Bear Branch	10/31/2017	Urban Bioretentio	0.04	0.04	59.00	CF	59.00	38.89472200	-77.25635000	0.43000000	1.24000000	0.43000000	0.05000000	Private
Bear Branch	11/16/2017	Urban Bioretentio	0.05	0.05	83.00	CF	83.00	38.89520000	-77.25478300	0.53000000	1.22000000	0.53000000	0.07000000	Private
Bear Branch	11/20/2017	Infiltration Trench	0.03	0.06	102.00	CF	102.00	38.88656700	-77.25657300	0.47000000	1.45000000	0.47000000	0.07000000	Private
Bear Branch	12/11/2017	Bioretention	0.04	0.06	74.00	CF	74.00	38.88230500	-77.24864800	0.53000000	1.36000000	0.53000000	0.06000000	Private
Piney Branch	12/14/2017	Bioretention	0.01	0.01	19.00	CF	19.00	38.91182600	-77.26523900	0.13650000	1.89830000	0.13650000	0.01640000	Private
Wolftrap Creek	12/15/2017	Infiltration	0.02	0.05	96.00	CF	96.00	38.92136400	-77.25200200	0.44000000	1.63000000	0.44000000	0.06000000	Private
Piney Branch	1/19/2018	Infiltration Trench	0.03	0.03	107.00	CF	107.00	38.91217300	-77.27103700	0.80000000	1.59000000	0.80000000	0.11000000	Private
Wolftrap Creek	1/19/2018	Rain Garden	0.07	0.09	52.00	CF	52.00	38.91362400	-77.24522100	1.08000000	1.41000000	1.08000000	0.15000000	Private
Hunters Branch	2/2/2018	Infiltration Trench	0.04	0.13	101.00	CF	101.00	38.88128900	-77.26572000	0.56520000	1.36380000	0.56520000	0.08590000	Private
Bear Branch	2/9/2018	Infiltration Trench	0.04	0.04	120.00	CF	120.00	38.89053800	-77.25903700	0.55000000	1.43000000	0.55000000	0.08000000	Private
Hunters Branch	2/9/2018	Infiltration Trench	0.04	0.04	121.00	CF	121.00	38.88789400	-77.26082100	0.55000000	1.43000000	0.55000000	0.08000000	Private
Bear Branch	3/6/2018	Infiltration Trench	0.02	0.06	109.00	CF	109.00	38.88543400	-77.25064100	0.50000000	1.46000000	0.50000000	0.07000000	Private
Bear Branch	3/13/2018	Urban Bioretentio	0.06	0.06	83.00	CF	83.00	38.89307100	-77.25288600	0.59000000	2.16000000	0.59000000	0.07000000	Private
Piney Branch	3/23/2018	Soils Amendment	0.05	0.13	0.00		0.00	38.89711600	-77.26395400	0.00000000	0.00000000	0.61000000	0.08000000	Private
Piney Branch	3/26/2018	Infiltration	0.15	0.15	78.00	CF	78.00	38.89813000	-77.26195500	0.39000000	1.29000000	0.39000000	0.06000000	Private
Bear Branch	4/9/2018	Infiltration	0.04	0.06	136.00	CF	136.00	38.88875000	-77.26029400	0.62260000	1.13550000	0.62260000	0.08800000	Private
Piney Branch	4/9/2018	Urban Bioretentio	0.03	0.03	46.52	CF	46.52	38.89790100	-77.26106800	0.33420000	1.48370000	0.33420000	0.04010000	Private
Hunters Branch	4/12/2018	Urban Bioretentio	0.03	0.03	46.00	CF	46.00	38.88621900	-77.26756700	0.33000000	1.39000000	0.33000000	0.04000000	Private
Piney Branch	4/18/2018	Infiltration Trench	0.05	0.16	131.00	CF	131.00	38.89812400	-77.26262800	0.68000000	0.94000000	0.68000000	0.10000000	Private
Bear Branch	4/25/2018	Stormwater Plant	0.04	0.04	56.72	CF	56.72	38.88618300	-77.24942800	0.40750000	1.28160000	0.40750000	0.04890000	Private
Wolftrap Creek	4/27/2018	Urban Bioretentio	0.05	0.05	64.14	CF	61.14	38.90202700	-77.25202200	0.48950000	1.14600000	0.48950000	0.05880000	Private
Wolftrap Creek	5/2/2018	Sheetflow Conser	0.05	0.05	117.00	CF	117.00	38.90346000	-77.24987700	0.53000000	1.18000000	0.53000000	0.07000000	Private
Bear Branch	5/7/2018	Urban Bioretentio	0.03	0.03	40.00	CF	40.00	38.89191000	-77.25836300	0.28000000	0.00000000	0.28000000	0.03000000	Private
Wolftrap Creek	5/14/2018	Infiltration #2	0.07	0.12	258.00	CF	258.00	38.90786200	-77.26173000	1.18000000	2.67000000	1.18000000	0.17000000	Private
Piney Branch	6/5/2018	Soils Compost RR	0.05	0.13	120.00	CF	120.00	38.89593000	-77.26276300	0.00000000	0.00000000	0.54000000	0.08000000	Private
Piney Branch	6/18/2018	Urban Bioretentio	0.06	0.06	77.00	CF	77.00	38.89670400	-77.26177500	0.55000000	1.44000000	0.55000000	0.07000000	Private
Piney Branch	6/21/2018	Urban Bioretentio	0.04	0.04	53.00	CF	53.00	38.89646200	-77.26613000	0.38000000	1.39000000	0.38000000	0.05000000	Private
Piney Branch	6/27/2018	Infiltration	0.06	0.16	149.00	CF	149.00	38.90885100	-77.26886900	0.77000000	1.46000000	0.77000000	0.12000000	Private
Wolftrap Creek	5/18/2018	Grass Channel	0.07	0.21	317.00	CF	0.00	38.90703333	-77.25444444	0.00000000	0.00000000	0.68000000	0.09000000	Private

Total	24.69	3.3

FY2018 Purchased Credit

More Stringent Single Family Residential Development -- Purchased Credit

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. All reductions consist of purchased off-site nutrient credits.

Street	Unit #	Credit Purchase Date	Purchased TN (lbs)	Purchased TP (lbs)
Cherry Street SW	208	7/27/2017	0.07	0.01
Elm Street SW	106	11/15/2017	0.07	0.01
Elm Street SW	205	3/2/2018	0.30	0.04
Battle Street SW	204	3/2/2018	0.45	0.06
Total			**0.89**	**0.12**

FY2019 Structural Facilities

More Stringent Single Family Residential Development -- Structural Facilities

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. Reductions are from structcural facilities designed in accordance with the VRRM.

Long	Lat	6th Order HUC	Watershed	House #	Street	Owner	BMP Type	Operation Date	IA Treated (Acres)	Total Treated (Acres)	Runoff Captured (CU FT)	TN Reduction	TP Reduction
-77.26366818	38.9138348	PL22	Difficult Run	500	Druid Hill Rd NE	Private	Infiltration Trench,	7/10/2018	0.15	0.40	335.4	1.79	0.27
-77.28124605	38.9030647	PL22	Difficult Run	531	Highland St NW	Private	Urban Bioretention	7/27/2018	0.05	0.05	65.9	0.47	0.06
-77.25623966	38.9017249	PL22	Difficult Run	500	Valley Dr SE	Private	Urban Bioretention	7/27/2018	0.02	0.02	29.4	0.21	0.03
-77.26962579	38.9128109	PL22	Difficult Run	400	John Marshall Dr NE	Private	Infiltration Trench	8/1/2018	0.01	0.01	31.0	0.14	0.02
-77.27593259	38.9042169	PL22	Difficult Run	403	Colin Ln NE	Private	Infiltration Trench	8/2/2018	0.04	0.16	123.0	0.64	0.10
-77.27075866	38.9115774	PL22	Difficult Run	301	Roosevelt Ct NE	Private	Infiltration Trench	8/3/2018	0.03	0.03	107.0	0.49	0.07
-77.26751115	38.9021467	PL22	Difficult Run	118	Wilmar Pl NW	Private	Infiltration Trench	9/27/2018	0.05	0.15	129.6	0.67	0.10
-77.25109851	38.8868993	PL30	Accotink	1204	Kelley St SW	Private	Infiltration Trench	10/1/2018	0.06	0.06	183.1	0.84	0.12
-77.25860059	38.8923968	PL30	Accotink	818	Plum St SW	Private	Infiltration Trench	10/3/2018	0.03	0.10	85.0	0.44	0.07
-77.25717085	38.8920307	PL30	Accotink	901	Plum St SW	Private	Bioretention - Rain	10/3/2018	0.03	0.03	89.0	0.46	0.06
-77.2509175	38.8995629	PL22	Difficult Run	827	Ninovan Rd SE	Private	Infiltration Trench	10/4/2018	0.07	0.10	104.6	0.75	0.09
-77.25872423	38.8873921	PL30	Accotink	1003	Hillcrest Dr SW	Private	Urban Bioretention	10/22/2018	0.04	0.04	53.0	0.38	0.05
-77.24631916	38.909492	PL22	Difficult Run	408	Kramer Dr SE	Private	Infiltration Trench	10/23/2018	0.07	0.31	235.1	1.21	0.18
-77.2438419	38.914769	PL22	Difficult Run	105	St Andrews Dr NE	Private	Infiltration Trench	11/1/2018	0.03	0.05	104.0	0.47	0.07
-77.24715961	38.8857153	PL30	Accotink	1401	Desale St SW	Private	Infiltration Trench	11/2/2018	0.04	0.17	130.7	0.67	0.10
-77.27404278	38.9046255	PL22	Difficult Run	605	John Marshall Dr NW	Private	Urban Bioretention	11/9/2018	0.02	0.02	28.0	0.20	0.02
-77.27645408	38.9020665	PL22	Difficult Run	468	West St NW	Private	Infiltration Trench a	11/9/2018	0.03	0.04	53.0	0.27	0.04
-77.25948925	38.8880588	PL30	Accotink	922	Hillcrest Dr SW	Private	Urban Bioretention	11/13/2018	0.04	0.04	53.0	0.38	0.05
-77.2641107	38.8857998	PL30	Accotink	603	Kingsley Rd SW	Private	Infiltration Trench	11/15/2018	0.03	0.03	82.6	0.38	0.05
-77.25760042	38.8897812	PL30	Accotink	916	Timber Ln SW	Private	Infiltration Trench	11/16/2018	0.05	0.11	111.0	0.57	0.09
-77.26412572	38.911952	PL22	Difficult Run	411	Druid Hill Rd NE	Private	Infiltration Trench	12/6/2018	0.08	0.08	131.0	0.68	0.10
-77.25114416	38.8887161	PL30	Accotink	104	Yeonas Dr SE	Private	Infiltration Trench	12/7/2018	0.04	0.11	173.4	0.79	0.11
-77.26455289	38.9087634	PL22	Difficult Run	321	Sherwood Dr NE	Private	Bioretention - Rain	12/20/2018	0.05	0.13	177.0	0.92	0.13
-77.25618551	38.8803808	PL30	Accotink	1201	Ware St SW	Private	Bioretention - Rain	1/15/2019	0.07	0.13	117.0	0.84	0.10
-77.2545149	38.8968072	PL30	Accotink	807	Park St SE	Private	Urban Bioretention	1/22/2019	0.04	0.04	59.0	0.42	0.05
-77.26880318	38.9034292	PL22	Difficult Run	107	Ayr Hill Ave NW	Private	Infiltration Trench	1/28/2019	0.03	0.28	157.4	0.81	0.12
-77.2513287	38.9052505	PL22	Difficult Run	504	Echols St SE	Private	Urban Bioretention	1/28/2019	0.04	0.04	50.0	0.36	0.04
-77.26771579	38.8915002	PL30	Accotink	514	Meadow Ln SW	Private	Urban Bioretention	2/4/2019	0.05	0.05	70.6	0.51	0.06
-77.27221972	38.8998196	PL22	Difficult Run	303	Windover Ave NW	Private	Infiltration Trench	2/13/2019	0.14	0.14	238.0	1.23	0.19
-77.28149145	38.9021515	PL22	Difficult Run	524	Highland St NW	Private	Infiltration Trench	3/8/2019	0.08	0.22	194.0	1.00	0.15
-77.25542064	38.8975106	PL22	Difficult Run	713	Park St SE	Private	Urban Bioretention	3/14/2019	0.05	0.05	74.0	0.51	0.06
-77.2500133	38.8997609	PL22	Difficult Run	836	Ninovan Rd SE	Private	Infiltration Trench	3/14/2019	0.01	0.01	13.0	0.06	0.01
-77.25680449	38.8938188	PL30	Accotink	108	Elmar Dr SW	Private	Infiltration Trench	3/26/2019	0.03	0.12	91.4	0.47	0.07
-77.25503143	38.8891833	PL30	Accotink	121	Kingsley Rd SW	Private	Bioretention - Rain	3/29/2019	0.09	0.09	253.0	1.31	0.18
-77.26908425	38.8900941	PL30	Accotink	605	Meadow Ln SW	Private	Urban Bioretention	4/11/2019	0.05	0.05	79.7	0.43	0.06
-77.25826361	38.8943344	PL30	Accotink	112	Moore Ave SW	Private	Infiltration Trench	4/19/2019	0.03	0.06	63.5	0.33	0.05
-77.25091723	38.908286	PL22	Difficult Run	303	Mashie Dr SE	Private	Infiltration Trench	4/19/2019	0.07	0.07	178.0	0.81	0.11
-77.26677755	38.8901254	PL30	Accotink	703	Ware St SW	Private	Infiltration Trench	4/23/2019	0.04	0.04	74.0	0.38	0.06
-77.27162966	38.889662	PL30	Accotink	505	Princess St SW	Private	Urban Bioretention	4/25/2019	0.06	0.06	81.0	0.58	0.07
-77.26693319	38.9135148	PL22	Difficult Run	599	McKinley St NE	Private	Infiltration Trench	6/5/2019	0.04	0.04	71.0	0.37	0.06
-77.26587503	38.8884627	PL30	Accotink	603	Tapawingo Rd SW	Private	Infiltration Trench	6/6/2019	0.03	0.15	107.1	0.55	0.08
-77.26238043	38.9136818	PL22	Difficult Run	507	Druid Hill Rd NE	Private	Infiltration Trench	6/7/2019	0.04	0.17	119.3	0.62	0.09
											Total Reduction	**25.41**	**3.60**

FY2019 Purchased Credit

More Stringent Single Family Residential Development -- Purchased Credit

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. All reductions consist of purchased off-site nutrient credits.

Street	Unit #	Credit Purchase Date	Purchased TN (lbs)	Purchased TP (lbs)
Elmar Dr SE	105	3/22/2018	0.3	0.04
Niblick Dr SE	405	3/22/2018	1.04	0.14
MacArthur Ave NE	401	6/21/2018	0.45	0.06
West St NW	468	2/2/2018	0.22	0.03
Branch Rd SE	204	2/5/2019	0.89	0.12
Elm St SW	221	6/6/2019	0.81	0.07
Total			**3.71**	**0.46**

FY2020 Structural Facilities

More Stringent Single Family Residential Development -- Structural Facilities

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. Reductions are from structcural facilities designed in accordance with the VRRM.

Long	Lat	6th Order HUC	Watershed	House #	Street	Owner	BMP Type	Operation Date	IA Treated (Acres)	Total Treated (Acres)	Runoff Captured (CU FT)	TN Reduction	TP Reduction
-77.26234969	38.91198882	PL22	Difficult Run	445	Nelson Dr NE	Private	Infiltration Trench	6/30/2020	0.03	0.03	94	0.43	0.06
-77.25436919	38.90180346	PL22	Difficult Run	511	Valley Dr SE	Private	Urban Bioretention P	6/29/2020	0.03	0.03	39	0.28	0.06
-77.24876212	38.90905442	PL22	Difficult Run	304	Niblick Dr SE	Private	Infiltration Trench	6/23/2020	0.08	0.16	318	1.45	0.21
-77.26150915	38.88671806	PL30	Accotink	509	Kingsley Rd SW	Private	Urban Bioretention P	6/23/2020	0.02	0.02	28	0.20	0.02
-77.25574500	38.88165728	PL30	Accotink	1203	Drake St SW	Private	Compost Soil Amend	6/23/2020			86		
-77.25255163	38.88589504	PL30	Accotink	207	Ross Dr SW	Private	Infiltration Trench	6/11/2020	0.03	0.03	44	0.23	0.03
-77.25775185	38.89301678	PL30	Accotink	812	Desale St SW	Private	Compost Soil Amend	6/11/2020					
-77.26465821	38.89566957	PL22	Difficult Run	220	Elm St SW	Private	Compost Soil Amend	6/9/2020	0.04	0.04	89		
-77.25621787	38.88575796	PL30	Accotink	408	Yeonas Dr SW	Private	Infiltration Trench	6/8/2020	0.03	0.03	44	0.23	0.03
-77.25788461	38.90204560	PL22	Difficult Run	309/311	Glyndon St SE	Private	Compost Soil Amend	5/29/2020	0.22	0.22	379		
-77.26347202	38.89023895	PL30	Accotink	711	Frederick St SW	Private	Infiltration Trench	5/27/2020	0.05	0.05	158		
-77.26458794	38.89543623	PL22	Difficult Run	223	Battle St SW (formerly 4	Private	Infiltration Trench	5/22/2020	0.04	0.09	89	0.46	0.07
-77.26490127	38.89666688	PL22	Difficult Run	215	Elm St SW	Private	Infiltration Trench	5/6/2020	0.02	0.09	74	0.38	0.06
-77.26689704	38.89087613	PL30	Accotink	512	Adelman Cir SW	Private	Infiltration Trench	4/27/2020	0.02	0.10	77	0.40	0.06
-77.26666193	38.88404980	PL30	Accotink	706	Kingsley Rd SW	Private	Infiltration Trench	4/24/2020	0.04	0.08	150	0.69	0.10
-77.25953698	38.88788302	PL30	Accotink	403	Kingsley Rd SW	Private	Infiltration Trench	4/24/2020	0.02	0.08	61	0.31	0.05
-77.25373070	38.89434051	PL30	Accotink	108	Melody Ln SE	Private	Infiltration Trench	4/23/2020	0.03	0.05	66	0.34	0.05
-77.27646466	38.90357777	PL22	Difficult Run	407	Colin Ln NW	Private	Infiltration Trench	4/20/2020	0.04	0.09	85	0.44	0.07
-77.24930805	38.88538330	PL30	Accotink	114	James Dr SW	Private	Compost Soil Amend	4/13/2020	0.02	0.02	52		
-77.26263522	38.88848317	PL30	Accotink	503	Kibler Cir SW	Private	Infiltration Trench	4/10/2020	0.03	0.10	144	0.66	0.09
-77.26963618	38.90016465	PL22	Difficult Run	222	Lovers Ln NW	Private	Infiltration Trench	4/8/2020	0.09	0.23	224	1.16	0.18
-77.24926693	38.90682037	PL22	Difficult Run	407	Mashie Dr SE	Private	Infiltration Trench	4/2/2020	0.14	0.33	590	2.69	0.38
-77.25608791	38.90318008	PL22	Difficult Run	313	Cabin Rd SE	Private	Urban Bioretention P	4/2/2020	0.03	0.03	36	0.26	0.03
-77.26797661	38.90882323	PL22	Difficult Run	205	Hill Top Rd NE	Private	Infiltration Trench	3/27/2020	0.04	0.12	103	0.53	0.08
-77.24556876	38.89301925	PL30	Accotink	201	Audreys Ct SE	Private	Urban Bioretention P	3/25/2020	0.03	0.03	46	0.33	0.04
-77.26213124	38.91316527	PL22	Difficult Run	504	Nelson Dr NE	Private	Dry Swale	3/23/2020	0.04	0.15	90	0.56	0.07
-77.25718445	38.88535817	PL22	Difficult Run	412	Orleans Cir SW	Private	Infiltration Trench	3/9/2020	0.10	0.12	320	1.46	0.21
-77.27577403	38.90509438	PL22	Difficult Run	600	Tazewell Rd NW	Private	Bioretention	3/6/2020	0.03	0.06	108	0.56	0.08
-77.25618766	38.88640097	PL30	Accotink	401	Yeonas Dr SW	Private	Urban Bioretention P	3/5/2020	0.05	0.05	67	0.48	0.06
-77.25548578	38.90158827	PL22	Difficult Run	503	Valley Dr SE	Private	Urban Bioretention P	3/4/2020	0.05	0.05	71	0.51	0.06
-77.25381671	38.88511604	PL30	Accotink	304	Walker St SW	Private	Compost Soil Amend	2/28/2020	0.06	0.20	189		
-77.26467265	38.88937005	PL30	Accotink	508	Gibson Dr SW	Private	Compost Soil Amend	2/27/2020	0.07	0.07	112		
-77.27432629	38.90074306	PL22	Difficult Run	411	Orchard St NW	Private	Infiltration Trench	2/24/2020	0.07	0.12	130	0.78	0.11
-77.25628389	38.89540736	PL30	Accotink	4	Elaine Cir SE	Private	Urban Bioretention P	2/11/2020	0.06	0.13	122	0.71	0.10
-77.26102867	38.88911325	PL30	Accotink	907	Frederick St SW	Private	Infiltration Trench	2/11/2020	0.03	0.03	84	0.38	0.05
-77.25224983	38.88975401	PL30	Accotink	102	Kingsley Rd SE	Private	Compost Soil Amend	2/5/2020	0.04	0.04	68		
-77.25812151	38.89507501	PL30	Accotink	107	Moore Ave SW	Private	Urban Bioretention P	2/5/2020	0.05	0.05	63	0.45	0.05
-77.26499206	38.89906879	PL22	Difficult Run	121	Locust St SW	Private	Compost Soil Amend	1/29/2020	0.03	0.03	59		
-77.24797383	38.88063958	PL30	Accotink	1416	Ross Dr SW	Private	Infiltration Trench	1/23/2020	0.04	0.04	111		
-77.25502164	38.89394936	PL30	Accotink	102	Tapawingo Rd SW	Private	Soil Compost Amend	1/7/2020	0.58	0.58	92	0.50	0.07
-77.25588886	38.90416553	PL22	Difficult Run	303	Branch Rd SE	Private	Soil Compost Amend	12/30/2019	0.02	0.02	40		
-77.25599885	38.89312096	PL30	Accotink	114	Tapawingo Rd SW	Private	Urban Bioretention P	12/24/2019	0.05	0.05	69	0.49	0.06
-77.25624590	38.88435433	PL30	Accotink	420	Yeonas Dr SW	Private	Infiltration Trench	12/20/2019	0.05	0.17	146	0.75	0.11
-77.25646483	38.90242291	PL22	Difficult Run	305/307	Cabin Rd SE	Private	Infiltration Trench, U	11/22/2019	0.13	0.51	714	3.26	0.46
-77.26602371	38.89780061	PL22	Difficult Run	212	Locust St SW	Private	Bioretention	12/12/2019	0.03	0.04	78	0.40	0.06
-77.25291222	38.89523409	PL22	Difficult Run	115	Tapawingo Rd SE	Private	Infiltration Trench	12/12/2019	0.07	0.18	303	1.38	0.20
-77.24893162	38.88777795	PL30	Accotink	107	James Dr SE	Private	Soil Compost Amend	12/4/2019	0.05	0.05	87		
-77.25606658	38.89300510	PL30	Accotink	116	Tapawingo Rd SW	Private	Urban Bioretention P	12/4/2019	0.03	0.03	40	0.28	0.03
-77.26648648	38.89220378	PL30	Accotink	502	Meadow Ln SW	Private	Bioretention	11/27/2019	0.06	0.08	88	0.63	0.08
-77.25891639	38.88931292	PL30	Accotink	916	Cottage St SW	Private	Soil Compost Amend	11/27/2019	0.06	0.06	96		
-77.26684601	38.89039074	PL30	Accotink	701	Ware St SW	Private	Bioretention	11/19/2019	0.02	0.03	59	0.30	0.04
-77.25872423	38.88739205	PL30	Accotink	1003	Hillcrest Dr SW	Private	Urban Bioretention -	11/12/2019	0.04	0.04	53	0.38	0.05
-77.25731931	38.90474897	PL22	Difficult Run	315	Locust St SE	Private	Infiltration Trench	10/24/2019	0.05	0.05	148		
-77.27544832	38.90026479	PL22	Difficult Run	432	Orchard St NW	Private	Bioretention	10/24/2019	0.04	0.07	121	0.63	0.09
-77.26579451	38.89381169	PL30	Accotink	503	Nanterry Cir SW	Private	Infiltration Trench	10/11/2019	0.05	0.05	164		
-77.26747728	38.89183529	PL30	Accotink	510	Meadow Ln SW	Private	Bioretention	10/11/2019	0.02	0.03	61	0.32	0.04
-77.24656198	38.91435509	PL22	Difficult Run	1015	Westbriar Dr NE	Private	Infiltration Trench, U	10/10/2019	0.03	0.14	117	0.62	0.09
-77.25532443	38.89379835	PL30	Accotink	106	Tapawingo Rd SW	Private	Infiltration Trench	10/7/2019	0.03	0.04	97	0.44	0.06
-77.24871061	38.88873765	PL30	Accotink	105	Yeonas Cir SE	Private	Bioretention	10/3/2019	0.06	0.12	112	0.80	0.10
-77.26866928	38.91197844	PL22	Difficult Run	405	MacArthur Ave NE	Private	Urban Bioretention P	10/2/2019	0.07	0.07	97	0.70	0.08
-77.25181374	38.88742306	PL30	Accotink	102	Ross Dr SW	Private	Infiltration Trench	10/1/2019	0.06	0.06	107	0.55	0.08
-77.24952351	38.90831568	PL22	Difficult Run	305	Niblick Dr SE	Private	Infiltration Trench	9/25/2019	0.04	0.13	192	0.88	0.12
-77.24734584	38.89312683	PL30	Accotink	212	Audreys Ct SE	Private	Soil Compost Amend	9/19/2019	0.04	0.04	68	0.08	
-77.25868622	38.88136801	PL30	Accotink	1106	Pekay St SW	Private	Urban Bioretention P	9/19/2019	0.05	0.05	71	0.51	0.06
-77.25660340	38.88250539	PL30	Accotink	1107	Drake St SW	Private	Infiltration Trench	9/13/2019	0.04	0.12	188	0.86	0.12
-77.25363926	38.88588265	PL30	Accotink	1114	Cottage St SW	Private	Urban Bioretention P	9/12/2019	0.04	0.04	49	0.35	0.04
-77.25427964	38.88842923	PL30	Accotink	118	Kingsley Rd SW	Private	Infiltration Trench	8/30/2019	0.06	0.06	99	0.51	0.08
-77.26998014	38.90416096	PL22	Difficult Run	102	Sharon Ln NW	Private	Urban Bioretention P	8/16/2019	0.03	0.03	40	0.29	0.03
-77.24718203	38.88799441	PL30	Accotink	101	Fardale St SE	Private	Bioretention	8/13/2019	0.06	0.08	187	0.97	0.13
-77.24494988	38.89642881	PL30	Accotink	1011	Aponi Rd SE	Private	Permeable Pavement	8/2/2019	0.02	0.02	93		
-77.25082518	38.89930388	PL22	Difficult Run	831	Ninovan Rd SE	Private	Infiltration Trench	7/30/2019	0.06	0.11	219	1.00	0.14
-77.26866237	38.89099461	PL22	Difficult Run	601	Meadow Ln SW	Private	Infiltration Trench	7/29/2019	0.02	0.09	66	0.34	0.05
-77.26148768	38.89700469	PL22	Difficult Run	114	Battle St SW	Private	Urban Bioretention P	7/19/2019	0.06	0.06	80	0.57	0.07
-77.27176944	38.88892707	PL30	Accotink	502	Moorefield Rd SW	Private	Infiltration Trench	7/18/2019	0.05	0.17	141	0.73	0.11
-77.24517208	38.91424618	PL22	Difficult Run	105	St Bernard Dr NE	Private	Urban Bioretention P	7/15/2019	0.03	0.03	38	0.27	0.03
-77.25376462	38.89470218	PL30	Accotink	107	Tapawingo Rd SE	Private	Infiltration Trench	7/11/2019	0.02	0.10	76	0.39	0.06
-77.25600349	38.88083478	PL30	Accotink	1200	Ware St SW	Private	Permeable Pavement	7/2/2019	0.05	0.05	43	0.19	0.03
											Total Reduction	**37.73**	**5.25**

FY2020 Purchased Credit

More Stringent Single Family Residential Development -- Purchased Credit

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. All reductions consist of purchased off-site nutrient credits.

Street	Unit #	Credit Purchase Date	Purchased TN (lbs)	Purchased TP (lbs)
Valley Dr SE	511	6/24/2020	0.26	0.03
Drake St SW	1203	10/29/2019	0.31	0.02
Desale St SW	812	5/26/2020	1.88	0.12
Elm St SW	220	4/27/2020	1.41	0.04
Glyndon St SE	309/311	11/6/2019	1.16	0.1
Frederick St SW	711	5/22/2020	1.41	0.09
James Dr SW	114	4/7/2020	0.32	0.02
Nelson Dr NE	504	6/11/2019	0.30	0.03
Walker St SW	304	11/1/2019	1.56	0.1
Gibson Dr SW	508	12/26/2019	0.78	0.05
Kingsley Rd SE	102	1/2/2020	0.47	0.03
Harmony Dr SE	106	8/12/2019	0.50	0.05
Locust St SW	121	1/13/2020	0.17	0.01
Ross Dr SW	1416	5/22/2019	0.63	0.04
Battle St SW	110	9/12/2019	0.35	0.03
Branch Rd SE	303	11/19/2019	0.69	0.06
Casmar St SE	119	12/5/2019	0.19	0.02
James Dr SE	107	9/18/2019	0.63	0.04
Cottage St SW	916	2/4/2019	0.15	0.02
Locust St SE	315	1/22/2019	0.45	0.06
Nanterry Cir SW	503	1/4/2019	0.64	0.04
Aponi Rd SE	1011	6/25/2019	0.78	0.05
Ware St SW	1200	4/24/2019	0.78	0.05
Total			**15.82**	**1.10**

FY2021 Structural Facilities

More Stringent Single Family Residential Development -- Structural Facilities

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. Reductions are from structcural facilities designed in accordance with the VRRM.

Long	Lat	6th Order HUC	Watershed	House #	Street	Owner	BMP Type	Operation Date	IA Treated (Acres)	Total Treated (Acres)	Runoff Captured (CU FT)	TN Reduction	TP Reduction
-77.25639434	38.89218748	PL30	Accotink	909	Desale St SW	Private	Urban Bioretention	6/25/2021	0.41	0.41	57	0.41	0.05
-77.26163111	38.89685851	PL22	Difficult Run	116	Battle St SW	Private	Urban Bioretention	6/25/2021	0.04	0.04	56	0.4	0.05
-77.26830629	38.88854602	PL30	Accotink	706	Meadow Lane SW	Private	Infiltration Trench	6/24/2021	0.03	0.03	91	0.42	0.06
-77.26819866	38.88943905	PL30	Accotink	615	Gibson Dr SW	Private	Urban Bioretention	6/24/2021	0.02	0.02	30	0.22	0.03
-77.26413156	38.90515815	PL22	Difficult Run	212	Church St NE	Private	Infiltration Trench	6/8/2021	0.04	0.1	93	0.48	0.07
-77.26804712	38.88450572	PL30	Accotink	910	Nutley St SW	Private	Urban Bioretention	6/2/2021	0.04	0.04	62	0.44	0.05
-77.24812501	38.88341703	PL30	Accotink	1403	Cottage St SW	Private	Urban Bioretention	5/25/2021	0.03	0.03	39	0.28	0.03
-77.25120821	38.90432259	PL22	Difficult Run	506	Orrin St SE	Private	Urban Bioretention	5/20/2021	0.02	0.02	24	0.17	0.02
-77.25565975	38.89470974	PL30	Accotink	103	Elmar St SE	Private	Urban Bioretention	5/19/2021	0.04	0.04	58	0.42	0.05
-77.26276182	38.88417108	PL30	Accotink	1007	Ware St SW	Private	Bioretention	5/19/2021	0.08	0.16	139	1	0.12
-77.25622201	38.88790245	PL30	Accotink	1008	Cottage St SW	Private	Urban Bioretention	5/18/2021	0.03	0.03	35	0.25	0.03
-77.26799381	38.90289826	PL22	Difficult Run	115	Wilmar Pl NW	Private	Infiltration Trench	5/14/2021	0.03	0.11	88	0.45	0.07
-77.28024999	38.90038583	PL22	Difficult Run	553	Orchard St NW	Private	Urban Bioretention	5/11/2021	0.06	0.06	78	0.56	0.07
-77.25102417	38.90889497	PL22	Difficult Run	300	Mashie Dr SE	Private	Infiltration Trench	5/7/2021	0.07	0.07	228	1.04	0.15
-77.24524147	38.91882406	PL22	Difficult Run	1124	Westbriar Ct NE	Private	Infiltration Trench	5/7/2021	0.04	0.24	160	0.82	0.13
-77.25467103	38.9037246	PL22	Difficult Run	404	Branch Rd SE	Private	Urban Bioretention	4/23/2021	0.05	0.05	70	0.5	0.06
-77.24458542	38.91910729	PL22	Difficult Run	1118	Westbriar Ct NE	Private	Infiltration Trench	4/23/2021	0.04	0.04	133	0.61	0.09
-77.26286752	38.88441635	PL30	Accotink	1005	Ware St SW	Private	Bioretention	4/21/2021	0.09	0.14	138	0.99	0.12
-77.2545178	38.88525885	PL30	Accotink	1114	Hillcrest Dr SW	Private	Urban Bioretention	4/16/2021	0.04	0.04	62	0.44	0.05
-77.24566677	38.91000447	PL22	Difficult Run	501	Wolftrap Rd SE	Private	Urban Bioretention	4/15/2021	0.04	0.04	54	0.39	0.05
-77.26222714	38.88810244	PL30	Accotink	504	Kibler Cir SW	Private	Urban Bioretention	3/26/2021	0.03	0.03	36	0.26	0.03
-77.25850147	38.8911459	PL30	Accotink	902	Timber Ln SW	Private	Infiltration Trench	3/26/2021	0.04	0.04	71	0.37	0.06
-77.26429052	38.89027632	PL30	Accotink	500	Ridge Rd SW	Private	Infiltration Trench	3/12/2021	0.04	0.04	71	0	0
-77.25580786	38.90460427	PL22	Difficult Run	302	Branch Rd SE	Private	Urban Bioretention	3/11/2021	0.05	0.05	74	0.54	0.06
-77.2819615	38.8999191	PL22	Difficult Run	501	Roberts Dr NW	Private	Soils Amendments	3/8/2021	0.05	0.05	99	0	0
-77.25774676	38.88112696	PL30	Accotink	1114	Pekay St SW	Private	Urban Bioretention	3/4/2021	0.03	0.03	38	0.27	0.03
-77.26656813	38.89174142	PL30	Accotink	507	Adelman Cir SW	Private	Infiltration Trench	3/4/2021	0.02	0.07	57	0.3	0.04
-77.27291298	38.90594135	PL22	Difficult Run	633	John Marshall Dr NW	Private	Urban Bioretention	2/22/2021	0.05	0.05	69	0.5	0.06
-77.26831852	38.89079856	PL30	Accotink	602	Meadow Ln SW	Private	Bioretention	2/19/2021	0.01	0.01	43	0.22	0.03
-77.25402587	38.91593717	PL22	Difficult Run	917	Fairway Dr NE	Private	Bioretention	2/16/2021	0.06	0.07	181	0.94	0.13
-77.2671355	38.88768588	PL30	Accotink	615	Tapawingo Rd SW	Private	Infiltration Trench	2/12/2021	0.02	0.02	36	0.19	0.03
-77.26377997	38.89465	PL22	Difficult Run	507	Plum St SW	Private	Infiltration Trench	2/9/2021	0.03	0.03	47	0	0
-77.27350357	38.89998087	PL22	Difficult Run	337	Lewis St NW	Private	Urban Bioretention	1/27/2021	0.03	0.03	37	0.27	0.03
-77.26895069	38.90789954	PL22	Difficult Run	436	Park St NE	Private	Infiltration Trench	1/21/2021	0.04	0.09	78	0.4	0.06
-77.27229909	38.90414592	PL22	Difficult Run	340	Holmes Dr NW	Private	Urban Bioretention	1/8/2021	0.03	0.03	37	0.26	0.03
-77.24702178	38.89449742	PL30	Accotink	1004	Glyndon St SE	Private	Infiltration Trench	1/5/2021	0.05	0.05	87	0.45	0.07
-77.25487814	38.8808977	PL30	Accotink	1213	Drake St SW	Private	Dry Swale	12/9/2020	0.02	0.07	46	0.28	0.04
-77.25268024	38.88802342	PL30	Accotink	106	Yeonas Dr SW	Private	Urban Bioretention, Permeable Pavement	12/7/2020	0.08	0.08	108	0.75	0.09
-77.24821434	38.89493246	PL30	Accotink	929	Glyndon St SE	Private	Urban Bioretention	12/1/2020	0.04	0.04	61	0	0.05
-77.27495255	38.90273474	PL22	Difficult Run	431	West St NW	Private	Infiltration Trench	11/24/2020	0.05	0.05	140	0.64	0.09
-77.26411813	38.90547276	PL22	Difficult Run	224	Church St NE	Private	Infiltration Trench	11/20/2020	0.18	0.52	471	2.43	0.37
-77.25062198	38.88310562	PL30	Accotink	1306	Ross Dr SW	Private	Infiltration Trench	11/20/2020	0.07	0.16	149	0.77	0.12
-77.26477507	38.89373984	PL22	Difficult Run	506	Hillcrest Dr SW	Private	Soils Amendments	11/6/2020	0.07	0.07	122	0	0
-77.27327692	38.89683365	PL30	Accotink	134	Lewis St NW	Private	Bioretention	11/2/2020	0.02	0.07	88	0.46	0.06
-77.26222983	38.89886864	PL22	Difficult Run	105	Elm St SW	Private	Infiltration Trench	10/28/2020	0.02	0.1	80	0.41	0.06
-77.26470366	38.88763688	PL30	Accotink	907	Ware St SW	Private	Urban Bioretention	10/21/2020	0.03	0.03	38	0.28	0.03
-77.2603646	38.89229053	PL30	Accotink	302	Arcadian Cir SW	Private	Infiltration Trench	10/15/2020	0.05	0.05	159	0.73	0.1
-77.25480991	38.90340379	PL22	Difficult Run	405	Branch Rd SE	Private	Bioretention	10/14/2020	0.06	0.06	176	0.91	0.12
-77.25627817	38.8829718	PL30	Accotink	1104	Drake St SW	Private	Soils Amendments	10/14/2020	---	---	---	0	0
-77.25768247	38.89042442	PL30	Accotink	911	Cottage St SW	Private	Infiltration Trench	10/14/2020	0.04	0.12	193	0.88	0.12
-77.25545557	38.88187544	PL30	Accotink	1204	Drake St SW	Private	Bioretention	10/2/2020	0.03	0.06	103	0.53	0.07
-77.25567283	38.8935224	PL30	Accotink	110	Tapawingo Rd SW	Private	Infiltration Trench	10/1/2020	0.04	0.06	124	0.56	0.08
-77.24700116	38.90949038	PL22	Difficult Run	404	Kramer Dr SE	Private	Urban Bioretention	9/24/2020	0.07	0.07	98	0.7	0.08
-77.26383412	38.89402203	PL22	Difficult Run	303	Meadow Ln SW	Private	Urban Bioretention	9/18/2020	0.03	0.03	35	0.25	0.03
-77.24689362	38.89743315	PL30	Accotink	325	Owaissa Rd SE	Private	Infiltration Trench	9/16/2020	0.07	0.11	143	0.74	0.11
-77.25090059	38.88471828	PL30	Accotink	1208	Cottage St SW	Private	Infiltration Trench	9/16/2020	0.02	0.02	77	0.35	0.05
-77.26715486	38.88472022	PL30	Accotink	914	Myers Cir SW	Private	Infiltration Trench	9/15/2020	0.05	0.1	187	0.85	0.12
-77.24876614	38.90765601	PL22	Difficult Run	404	Mashie Dr SE	Private	Infiltration Trench	9/14/2020	0.1	0.12	320	1.46	0.21
-77.26902311	38.91308278	PL22	Difficult Run	405	John Marshall Dr NE	Private	Soils Amendments	9/10/2020	0.06	0.06	108	0	0
-77.26317505	38.91120311	PL22	Difficult Run	415	Nelson Dr NE	Private	Infiltration Trench	8/19/2020	0.08	0.08	261	1.19	0.17
-77.24535697	38.90925036	PL22	Difficult Run	414	Kramer Dr SE	Private	Soils Amendments	8/11/2020	0.07	0.07	151	0	0
-77.25618689	38.90398095	PL22	Difficult Run	315	Charles St SE	Private	Infiltration Trench	7/28/2020	0.04	0.14	208	0.95	0.13
-77.26075754	38.89695209	PL22	Difficult Run	111	Dogwood St SW	Private	Infiltration Trench	7/28/2020	0.03	0.11	88	0.45	0.07
-77.26792038	38.88942822	PL30	Accotink	613	Gibson Dr SW	Private	Urban Bioretention	7/28/2020	0.06	0.06	87	0.63	0.08
-77.25984475	38.89505916	PL22	Difficult Run	118	Oak St SW	Private	Bioretention	7/23/2020	0.04	0.04	120	0.62	0.08
-77.2628837	38.89751617	PL22	Difficult Run	118	Elm St SW	Private	Infiltration Trench	7/23/2020	0.02	0.11	82	0.42	0.06
-77.26279418	38.89295039	PL22	Difficult Run	627	Hillcrest Dr SW	Private	Infiltration Trench	7/6/2020	0.04	0.14	128	0.68	0.1
-77.25994391	38.89552061	PL22	Difficult Run	117	Oak St SW	Private	Bioretention	11/17/2019	0.07	0.1	105	0.75	0.09
-77.27983068	38.90309307	PL22	Difficult Run	533	Lincoln St NW	Private	Bioretention	9/27/2019	0.10	0.26	196	1.41	0.17
											Total Reduction	**36.34**	**4.96**

FY2021 Purchased Credit

More Stringent Single Family Residential Development -- Purchased Credit

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. All reductions consist of purchased off-site nutrient credits.

House #	Street	Credit Purchase Date	Purchased TN (lbs)	Purchased TP (lbs)
905	Ware St SW	11/25/2020	3.13	0.2
315	Albrecht Cir SW	9/25/2020	1.25	0.08
910	Nutley St SW	8/25/2020	0.94	0.06
630	Hillcrest Dr SW	6/10/2020	2.19	0.14
506	Orrin St SE	4/27/2021	0.63	0.04
1007	Ware St SW	10/22/2020	1.11	0.07
1005	Ware St SW	10/22/2020	1.11	0.07
500	Ridge Rd SW	5/7/2020	0.94	0.06
507	Plum St SW	8/8/2020	0.35	0.03
506	Hillcrest Dr SW	4/27/2020	0.89	0.07
1104	Drake St SW	6/9/2020	0.78	0.05
405	John Marshall Dr NE	2/24/2020	0.76	0.06
414	Kramer Dr SE	4/29/2020	0.89	0.07
533	Lincoln St NW	6/22/2018	0.45	0.06
Total			**15.42**	**1.06**

FY2022 Structural Facilities

More Stringent Single Family Residential Development -- Structural Facilities

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. Reductions are from structcural facilities designed in accordance with the VRRM.

Long	Lat	6th Order HUC	Watershed	House #	Street	Owner	BMP Type	Operation Date	IA Treated (Acres)	Total Treated (Acres)	Runoff Captured (CU FT)	TN Reduction	TP Reduction
-77.24693788	38.88325476	PL30	Accotink	1411	Cottage St SW	Private	Micro Bioretention	6/29/2022	0.05	0.08	79.00	0.56	0.07
-77.26422673	38.89525395	PL22	Difficult Run	221	Battle St SW	Private	Infiltration Trench	6/24/2022	0.02	0.02	60.00	0.27	0.04
-77.25708074	38.89535756	PL30	Accotink	100	Moore Ave SW	Private	Urban Bioretention	6/21/2022	0.04	0.04	60.00	0.43	0.05
-77.2467767	38.90878915	PL22	Difficult Run	904	Kramer Ct SE	Private	Infiltration	6/21/2022	0.04	0.04	114.00	0.52	0.07
-77.2453967	38.8945936	PL30	Accotink	308	Ayito Rd SE	Private	Urban Bioretention	6/16/2022	0.06	0.06	86.00	0.62	0.07
-77.25960503	38.89404965	PL30	Accotink	709	Cottage St SW	Private	Urban Bioretention	6/14/2022	0.01	0.01	18.70	0.14	0.02
-77.25975255	38.89411646	PL22	Difficult Run	709	Cottage St SW	Private	Urban Bioretention	6/14/2022	0.03	0.03	36.30	0.26	0.03
-77.25889006	38.89310533	PL30	Accotink	807	Plum St SW	Private	Infiltration Trench	6/8/2022	0.02	0.11	80.00	0.41	0.06
-77.25118616	38.88712336	PL30	Accotink	1108	Desale St SW	Private	Infiltration Trench	5/27/2022	0.02	0.06	53.00	0.27	0.04
-77.25541794	38.89934981	PL22	Difficult Run	218	Talahi Rd SE	Private	Infiltration Trench	5/26/2022	0.03	0.08	81.00	0.42	0.06
-77.25450128	38.90219476	PL30	Accotink	512	Valley Dr SE	Private	Urban Bioretention	5/20/2022	0.09	0.09	130.00	0.93	0.11
-77.2540687	38.9193913	PL22	Difficult Run	916	Country Club Dr NE	Private	Infiltration Trench	5/19/2022	0.04	0.09	91.66	0.47	0.07
-77.26237466	38.88600507	PL30	Accotink	516	Kingsley Rd SW	Private	Urban Bioretention	5/19/2022	0.03	0.03	35.00	0.25	0.03
-77.27847605	38.90318766	PL22	Difficult Run	512	Woodland Ct NW	Private	Urban Bioretention	5/12/2022	0.02	0.02	31.00	0.23	0.03
-77.26399145	38.89241801	PL22	Difficult Run	622	Hillcrest Dr SW	Private	Infiltration Trench	5/10/2022	0.04	0.15	119.00	0.61	0.09
-77.25805044	38.88121011	PL30	Accotink	1112	Pekay St SW	Private	Urban Bioretention	5/9/2022	0.05	0.05	62.35	0.45	0.05
-77.25040095	38.89985842	PL22	Difficult Run	832	Ninovan Rd SE	Private	Dry Swale	5/3/2022	0.05	0.07	76.23	0.47	0.06
-77.26532233	38.89060403	PL30	Accotink	505	Ridge Rd SW	Private	Infiltration Trench	4/27/2022	0.06	0.06	172.00	0.79	0.11
-77.27455483	38.89861715	PL22	Difficult Run	302	Jade Ct NW	Private	Infiltration Trench	4/27/2022	0.01	0.07	44.00	0.23	0.03
-77.24763802	38.89279286	PL30	Accotink	215	Audreys Ct SE	Private	Urban Bioretention	3/29/2022	0.02	0.02	33.00	0.24	0.03
-77.25417356	38.90224694	PL22	Difficult Run	514	Valley Dr SE	Private	Bioretention	3/24/2022	0.04	0.04	52.00	0.37	0.04
-77.25150166	38.88344345	PL30	Accotink	1300	Ross Dr SW	Private	Infiltration Trench	3/18/2022	0.05	0.05	171.00	0.78	0.11
-77.25494042	38.90171919	PL22	Difficult Run	507	Valley Dr SE	Private	Urban Bioretention	1/20/2022	0.05	0.05	69.00	0.50	0.06
-77.24736259	38.88969597	PL30	Accotink	116	Fardale St SE	Private	Urban Bioretention	1/20/2022	0.06	0.06	113.00	0.73	0.09
-77.26500222	38.89511181	PL22	Difficult Run	406	Plum St SW	Private	Infiltration	1/12/2022	0.02	0.04	44.00	0.22	0.03
-77.2466539	38.88526026	PL30	Accotink	1407	Desale St SW	Private	Infiltration	12/27/2021	0.03	0.11	92.00	0.48	0.07
-77.26441088	38.8910893	PL30	Accotink	635	Frederick St SW	Private	Infiltration	12/22/2021	0.04	0.25	156.00	0.80	0.12
-77.24453613	38.89765474	PL30	Accotink	408	Adahi Rd SE	Private	Urban Bioretention	12/21/2021	0.03	0.03	35.45	0.25	0.03
-77.24722362	38.89514734	PL30	Accotink	305	Adahi Rd SE	Private	Infiltration	12/14/2021	0.08	0.18	188.46	0.97	0.15
-77.2608769	38.90182702	PL22	Difficult Run	120	Park St SE	Private	ıred Treatment, Devic	12/14/2021	0.26	0.32	0.00	0.00	0.24
-77.24708381	38.89408037	PL30	Accotink	1009	Glyndon St SE	Private	Urban Bioretention	12/9/2021	0.04	0.04	53.55	0.38	0.05
-77.24693629	38.89782544	PL30	Accotink	327	Owaissa Rd SE	Private	Urban Bioretention	12/3/2021	0.11	0.11	158.08	1.14	0.14
-77.25753462	38.88210216	PL30	Accotink	1106	Ware St SW	Private	Urban Bioretention	11/24/2021	0.02	0.02	27.59	0.20	0.02
-77.25167919	38.88949991	PL30	Accotink	103	Kingsley Rd SE	Private	Infiltration Permeable Pavement	11/23/2021	0.08	0.08	215.00	1.02	0.14
-77.24973182	38.90484036	PL22	Difficult Run	517	Orrin St SE	Private	ɔil Amended Filter Pat	11/23/2021	0.05	0.05	87.00	0.39	0.05
-77.26872327	38.88892454	PL30	Accotink	701	Meadow Ln SW	Private	Bioretention	10/21/2021	0.10	0.16	130.00	0.84	0.10
-77.26249251	38.8977761	PL22	Difficult Run	114	Elm St SW	Private	Soils Amendments	10/21/2021	0.03	0.03	48.00	0.21	0.03
-77.24605367	38.91003271	PL22	Difficult Run	409	Wolftrap Rd SE	Private	Urban Bioretention	10/14/2021	0.08	0.08	106.35	0.76	0.09
-77.25897438	38.89820708	PL22	Difficult Run	511	Spring St SE	Private	Planter Box	10/14/2021	0.03	0.03	47.00	0.34	0.04
-77.26216193	38.88418605	PL30	Accotink	1009	Ware St SW	Private	Bioretention	10/14/2021	0.06	0.10	99.32	0.71	0.09
-77.27136902	38.89174802	PL30	Accotink	322	Nutley St SW	Private	Infiltration Trench	10/8/2021	0.08	0.34	261.47	1.35	0.21
-77.26336641	38.89463678	PL22	Difficult Run	509	Plum St SW	Private	Urban Bioretention	10/8/2021	0.02	0.02	34.00	0.25	0.03
-77.24657738	38.90903823	PL22	Difficult Run	407	Kramer Dr SE	Private	Urban Bioretention	10/6/2021	0.02	0.02	32.00	0.23	0.03
-77.26392641	38.8974831	PL22	Difficult Run	203	Elm St SW	Private	Infiltration Trench	9/24/2021	0.07	0.07	113.46	0.59	0.09
-77.27186231	38.89212758	PL30	Accotink	320	Nutley St SW	Private	Infiltration Trench	8/31/2021	0.08	0.34	261.47	1.35	0.21
-77.25891763	38.89625586	PL22	Difficult Run	105	Oak St SE	Private	Urban Bioretention	8/27/2021	0.05	0.05	69.00	0.49	0.06
-77.25858772	38.89297002	PL30	Accotink	811	Plum St SW	Private	Soils Amendments	8/26/2021	0.01	0.01	20.00	0.09	0.01
-77.25051452	38.89861225	PL30	Accotink	316	Tapawingo Rd SE	Private	Infiltration Trench	8/24/2021	0.19	0.19	592.00	2.70	0.38
-77.26787059	38.88428325	PL30	Accotink	713	Kinglsey Rd SW	Private	Urban Bioretention	8/24/2021	0.06	0.06	76.00	0.55	0.07
-77.26727799	38.90326058	PL22	Difficult Run	211	Center St N	Private	Permeable Pavement	8/23/2021	0.01	0.01	17.00	0.10	0.01
-77.25933765	38.88745223	PL30	Accotink	1002	Frederick St SW (formerly, 402 Kingsley Rd SW)	Private	Bioretention Basin	8/12/2021	0.03	0.06	113.00	0.58	0.08
-77.26627988	38.88492649	PL30	Accotink	911	Meadow Ln SW	Private	Soils Amendments	7/29/2021	0.07	0.07	79.00	0.54	0.08
-77.24865374	38.88449273	PL30	Accotink	205	Patrick St SW	Private	Infiltration Trench	7/29/2021	0.02	0.03	46.00	0.20	0.03
-77.2654991	38.89333205	PL22	Difficult Run	507	Nanterry Cir SW	Private	Infiltration Trench Infiltration Trench	7/28/2021	0.06	0.06	178.00	0.83	0.12
-77.25144148	38.88569396	PL30	Accotink	1215	Kelley St SW	Private	Infiltration Trench	7/27/2021	0.02	0.08	61.00	0.31	0.05
-77.27133691	38.89231272	PL30	Accotink	441	Courthouse Rd SW	Private	Infiltration Trench	7/23/2021	0.13	0.42	632.25	2.89	0.41
-77.26977329	38.89495772	PL30	Accotink	311	Albrecht Cir SW	Private	Dry Swale	7/21/2021	0.02	0.11	58.81	0.36	0.05
-77.2546012	38.89247961	PL30	Accotink	914	Symphony Cir SW	Private	Infiltration Trench	7/14/2021	0.03	0.13	97.10	0.50	0.08
-77.25226232	38.89499203	PL30	Accotink	114	Harmony Dr SE	Private	Bioretention Basin	7/7/2021	0.04	0.14	188.00	0.97	0.13
-77.25739975	38.8849361	PL30	Accotink	414	Orleans Cir SW	Private	Infiltration Trench	7/7/2021	0.03	0.14	182.00	0.83	0.12
-77.25810584	38.90219876	PL22	Difficult Run	309	Glyndon St SE	Private	Soils Amendments	2/25/2021	0.11	0.11	189.00	0.85	0.12
											Total Reduction	**36.23**	**5.16**

FY2022 Purchased Credit

More Stringent Single Family Residential Development -- Purchased Credit

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance. All reductions consist of purchased off-site nutrient credits.

House #	Street	Credit Purchase Date	Purchased TN (lbs)	Purchased TP (lbs)
1009	Glyndon St SE	12/1/2021	0.439	0.044
832	Ninovan Rd SE	10/13/2021	0.27	0.02
1108	Desale St SW	9/27/2021	0.16	0.01
504	Roberts Dr NW	9/13/2021	0.99	0.09
215	Audreys Ct SE	8/27/2021	0.16	0.01
1101	Redwood Dr SE	6/15/2021	0.47	0.03
308	Ayito Rd SE	4/12/2021	1.18	0.09
1106	Ware St SW	3/17/2021	0.47	0.03
409	Wolftrap Rd SE	2/7/2021	0.13	0.02
512	Valley Dr SE	1/29/2021	0.66	0.06
517	Orrin St SE	1/29/2021	0.67	0.05
103	Kingsley Rd SE	12/18/2020	0.79	0.05
811	Plum St SW	12/15/2020	0.16	0.01
911	Meadow Ln SW	11/17/2020	0.78	0.05
301	Mashie St SE	8/28/2020	0.88	0.1
504	Roberts Dr NW	8/24/2021	0.99	0.06
101	Casmar St SE	8/17/2021	0.95	0.06
114	Elm St SW	2/22/2020	0.11	0.01
1002	Echols St SE	2/11/2020	0.67	0.05
309	Glyndon St SE	11/1/2019	0.58	0.05
Total			**11.51**	**0.89**

FY2023 Structural Facilities and Purchased Credit

More Stringent Single Family Residential Development - Structural Facilities

The following table demonstrates pollutant reductions achieved as a result of more stringent regulation of single family residential development under one acre as required by the Town's Stormwater Management Ordinance.

Long	Lat	6th Order HUC	Watershed	Bay or Local TMDL Compliance	House #	Street	Owner	BMP Type	Operation Date	IA Treated (Acres)	Total Treated (Acres)	Runoff Captured (CU FT)	TN Reduction	TP Reduction
-77.26146076	38.88736175	PL30	Accotink	Both	904	Olympian Cir SW	Private	Infiltration	10/4/2022	0.06	0.07	108.63	0.54	0.08
-77.26645513	38.88594110	PL30	Accotink	Both	904	Meadow Ln SW	Private	Infiltration	9/15/2022	0.06	0.25	90.00	0.65	0.09
-77.25406373	38.88490855	PL30	Accotink	Both	400	Walker St SW	Private	Detention and Nutrient Credits	8/19/2022	0.07	0.28	96.00	0.00	0.05
-77.25403155	38.89485318	PL30	Accotink	Both	105	Tapawingo Rd SE	Private	Infiltration	7/6/2022	0.05	0.09	50.00	0.54	0.08
-77.25346056	38.88791125	PL30	Accotink	Both	202	Yeonas Drive SW	Private	Infiltration	7/1/2022	0.03	0.12	207.00	0.85	0.12
-77.27445531	38.90582497	PL22	Difficult Run	Both	608	John Marshall Dr NW	Private	Bioretention	7/28/2022	0.02	0.02	40.00	0.24	0.02
-77.28015776	38.90507535	PL22	Difficult Run	Both	416	Blair Rd NW	Private	Bioretention	7/14/2022	0.05	0.05	69.00	0.49	0.06
-77.26557193	38.89684917	PL22	Difficult Run	Both	218	Cherry Street SW	Private	Bioretention	7/11/2022	0.07	0.26	68.00	0.49	0.06
-77.25116559	38.89439078	PL30	Accotink	Both	923	Park Street SE	Private	Impervious Runoff Reduction	7/8/2022	0.06	0.23	65.00	0.00	0.00
-77.26922541	38.90332671	PL22	Difficult Run	Both	115	Ayr Hill Ave NW	Private	Bioretention	7/14/2022	0.06	0.22	103.00	0.30	0.04
-77.25098719	38.88287236	PL30	Accotink	Both	1308	Ross Dr SW	Private	Nutrient Credit	7/28/2022	0.12	0.55	0.00	0.00	0.17
-77.26857586	38.88864904	PL30	Accotink	Both	705	Meadow Ln SW	Private	Infiltration	7/29/2022	0.06	0.06	140.00	0.55	0.08
-77.26823146	38.88596855	PL30	Accotink	Both	901	Myers Circle SW	Private	Bioretention	8/11/2022	0.03	0.04	120.00	0.42	0.06
-77.25531219	38.89446003	PL30	Accotink	Both	103	Tapawingo SW	Private	Bioretention	8/22/2022	0.03	0.03	40.00	0.30	0.04
-77.25978918	38.89163474	PL30	Accotink	Both	812	Cottage St SW	Private	Bioretention	8/11/2022	0.03	0.16	40.00	0.63	0.08
-77.26655566	38.88893144	PL30	Accotink	Both	606	Gibson Dr SW	Private	Bioretention and Nutrient Credit	9/7/2022	0.03	0.03	90.00	0.26	0.05
-77.25429022	38.89319638	PL30	Accotink	Both	107	Melody Lane SW	Private	Impervious Runoff Reduction	9/9/2022	0.07	0.24	50.00	0.00	0.00
-77.24774846	38.89788962	PL30	Accotink	Both	318	Owaissa Rd. SE	Private	Impervious Runoff Reduction	8/19/2022	0.11	0.36	60.00	0.00	0.00
-77.24906046	38.90930074	PL22	Difficult Run	Both	300	Niblick Dr. SE	Private	Infiltration	8/18/2022	0.10	0.10	299.00	1.36	0.00
-77.24704662	38.88792104	PL30	Accotink	Both	113	Casmar St SE	Private	Bioretention	12/14/2022	0.02	0.27	100.00	0.20	0.00
-77.26157832	38.88610151	PL30	Accotink	Both	1012	Mountfort Court, SW	Private	Bioretention	9/6/2022	0.08	0.37	157.00	0.45	0.00
-77.26649129	38.88833739	PL30	Accotink	Both	609	Tapawingo Rd SW	Private	Bioretention	9/15/2022	0.03	0.03	120.00	0.31	0.04
-77.26363756	38.89334813	PL22	Difficult Run	Both	611	Hillcrest Drive, SW	Private	Dry Swale	9/26/2022	0.07	0.15	40.00	0.84	0.11
-77.24687297	38.88200702	PL30	Accotink	Both	307	George St SW	Private	Infiltration	11/16/2022	0.04	0.11	140.00	0.80	0.11
-77.26205543	38.89533633	PL22	Difficult Run	Both	601	Birch St SW	Private	Bioretention	12/5/2022	0.05	0.05	40.00	0.60	0.06
-77.25633208	38.88635975	PL30	Accotink	Both	403	Yeonas Dr SW	Private	Infiltration	4/18/2023	0.03	0.04	90.00	0.48	0.00
-77.25343712	38.89531233	PL30	Accotink	Both	111	Tapawingo Road SE	Private	Bioretention	10/3/2022	0.07	0.08	40.00	0.69	0.08
-77.25460055	38.90832894	PL22	Difficult Run	Both	121	East St SE	Private	s Runoff Reduction and Nutrie	10/12/2022	0.11	0.50	56.00	0.00	0.00
-77.24768992	38.88839535	PL30	Accotink	Both	102	Fardale St SE	Private	Bioretention	11/15/2022	0.05	0.05	40.00	0.53	0.06
-77.25798463	38.88565116	PL30	Accotink	Both	413	Orleans Circle, SW	Private	Bioretention	11/10/2022	0.04	0.05	120.00	0.65	0.09
-77.24940593	38.90592164	PL22	Difficult Run	Both	606	Orrin St SE	Private	Bioretention	10/20/2022	0.04	0.04	40.00	0.36	0.04
-77.27335989	38.90557024	PL22	Difficult Run	Both	621	ohn Marshall Drive NW	Private	Infiltration	10/20/2022	0.02	0.07	140.00	0.30	0.04
-77.24874219	38.8892927	PL30	Accotink	Both	107	Yeonas Circle SE	Private	Bioretention	12/1/2022	0.08	0.11	40.00	0.90	0.11
-77.26461652	38.91633228	PL22	Difficult Run	Both	611	John Marshall Dr NE	Private	Infiltration	11/9/2022	0.07	0.07	140.00	0.61	0.09
-77.26751118	38.91087684	PL22	Difficult Run	Both	320	John Marshall Dr NE	Private	Bioretention	11/10/2022	0.03	0.03	40.00	0.33	0.04
-77.25567139	38.90053981	PL22	Difficult Run	Both	209	hispering Wind Court	Private	Nutrient Credit	11/8/2022	0.15	0.39	49.00	0.00	0.03
-77.2600244	38.91247731	PL22	Difficult Run	Both	505	Creek Crossing Rd NE	Private	Bioretention	11/15/2022	0.05	0.12	120.00	0.64	0.08
-77.26637146	38.89705432	PL22	Difficult Run	Both	206	Courthouse Road, SW	Private	Impervious Runoff Reduction	11/10/2022	0.06	0.24	95.00	0.00	0.00
-77.25895565	38.88559991	PL30	Accotink	Both	416	Marshall Rd SW	Private	Infiltration	11/17/2022	0.05	0.05	140.00	0.00	0.06
-77.26531649	38.88663645	PL30	Accotink	Both	903	Potterton Circle SW	Private	Infiltration	11/15/2022	0.03	0.03	140.00	0.42	0.06
-77.26771412	38.89755407	PL22	Difficult Run	Both	214	Pleasant St SW	Private	Detention and Nutrient Credits	11/22/2022	0.10	0.42	212.50	0.00	0.09
-77.25600516	38.89086669	PL30	Accotink	Both	915	Plum St SW	Private	Bioretention	11/23/2022	0.07	0.27	58.00	0.42	0.21
-77.25423062	38.89642747	PL30	Accotink	Both	116	Elmar Street, SE	Private	Detention and Nutrient Credits	12/21/2022	0.07	0.28	133.00	0.00	0.07
-77.26686122	38.89231599	PL30	Accotink	Both	506	Meadow Lane, SW	Private	Bioretention	11/22/2022	0.06	0.23	62.00	0.18	0.02
-77.26279331	38.91204078	PL22	Difficult Run	Both	435	Nelson Drive NE	Private	Soil Amendments and Nutrient Credits	12/5/2022	0.13	0.50	207.00	0.00	0.21
-77.24967833	38.89392818	PL30	Accotink	Both	932	Park St SE	Private	Infiltration	12/13/2022	0.07	0.29	55.00	0.28	0.04
-77.2696921	38.89679512	PL22	Difficult Run	Both	220	Courthouse Cir SW	Private	Bioretention	12/7/2022	0.08	0.31	151.00	0.78	0.11
-77.26990319	38.89374253	PL30	Accotink	Both	245	Hillside Circle SW	Private	Infiltration	1/31/2023	0.07	0.31	71.00	0.36	0.06
-77.25502809	38.88712106	PL30	Accotink	Both	1101	Cottage St SW	Private	Impervious Runoff Reduction	12/9/2022	0.08	0.29	77.00	0.00	0.00
-77.26684652	38.88666515	PL30	Accotink	Both	617	Truman Circle SW	Private	Infiltration	1/17/2023	0.07	0.24	178.00	0.81	0.12
-77.25413208	38.90238721	PL22	Difficult Run	Both	514	Valley Drive SE	Private	Bioretention	12/7/2022	0.05	0.25	52.00	0.37	0.04
-77.24977403	38.88756095	PL30	Accotink	Both	100	James Drive SE	Private	ioretention and Nutrient Credi	1/17/2023	0.06	0.28	28.00	0.20	0.02
-77.26579246	38.91355898	PL22	Difficult Run	Both	534	Beulah Road, NE	Private	s Runoff Reduction and Nutrie	12/16/2022	0.12	0.53	0.00	0.00	0.04
-77.24674503	38.88709795	PL30	Accotink	Both	108	Patrick St SE	Private	Bioretention	1/10/2023	0.06	0.24	52.00	0.37	0.00
-77.25274028	38.88490854	PL30	Accotink	Both	1201	Ross Dr SW	Private	Bioretention	12/30/2022	0.07	0.29	30.50	0.22	0.03
-77.26209159	38.89809887	PL22	Difficult Run	Both	110	Elm St SW	Private	Impervious Runoff Reduction	1/19/2023	0.06	0.24	15.00	0.00	0.02
-77.28226652	38.90028111	PL22	Difficult Run	Both	503	Roberts Dr NW	Private	Bioretention	1/30/2023	0.10	0.38	114.00	0.82	0.10
-77.26623086	38.89760222	PL22	Difficult Run	Both	214	Locust Street SW	Private	Bioretention	3/31/2023	0.06	0.23	41.00	0.30	0.04
-77.25323805	38.90074191	PL22	Difficult Run	Both	618	Ninovan SE	Private	Bioretention	1/26/2023	0.08	0.29	58.00	0.42	0.05
-77.25466691	38.89397403	PL30	Accotink	Both	905	Lullaby Lane SE	Private	ioretention and Nutrient Credi	1/26/2023	0.08	0.30	66.00	0.48	0.07
-77.27340479	38.90640329	PL22	Difficult Run	Both	632	ohn Marshall Drive, NW	Private	tion and Impervious Runoff Re	2/1/2023	0.06	0.23	13.00	0.00	0.00
-77.26562161	38.89698987	PL22	Difficult Run	Both	216	Cherry Street SW	Private	Bioretention	2/8/2023	0.07	0.27	48.00	0.34	0.04
-77.25634479	38.90519676	PL22	Difficult Run	Both	202	Branch Rd SE	Private	Nutrient Credits	3/23/2023	0.10	0.40	0.00	0.00	0.16
-77.25253723	38.89415723	PL30	Accotink	Both	104	Harmony Dr SE	Private	Infiltration	4/4/2023	0.07	0.28	66.00	0.34	0.05
-77.25340493	38.88211597	PL30	Accotink	Both	518	Walker Street SW	Private	Soil Amendments and Nutrient Credits	3/16/2023	0.09	0.38	100.00	0.00	0.08
-77.25758729	38.88631956	PL30	Accotink	Both	407	Orleans Cir SW	Private	Infiltration	3/16/2023	0.06	0.23	65.00	0.33	0.05
-77.26071062	38.91252168	PL22	Difficult Run	Both	508	Creek Crossing Rd NE	Private	Amendments and Nutrient Cre	3/27/2023	0.06	0.20	103.00	0.00	0.04
-77.25600318	38.88356881	PL30	Accotink	Both	1107	Lakewood Drive SW	Private	Bioretention	4/13/2023	0.08	0.30	66.00	0.48	0.06
-77.26819729	38.90190175	PL22	Difficult Run	Both	132	Wilmar Place NW	Private	Infiltration	4/13/2023	0.08	0.35	105.00	0.54	0.08
-77.25682399	38.88191252	PL30	Accotink	Both	1114	Ware St SW Vienna	Private	Bioretention	3/30/2023	0.11	0.29	30.00	0.22	0.03
-77.24860672	38.92012501	PL22	Difficult Run	Both	430	ld Court House Rd NE	Private	Bioretention	4/12/2023	0.07	0.29	113.00	0.81	0.10
-77.26349412	38.89246143	PL30	Accotink	Both	626	Hillcrest Dr. SW	Private	Infiltration and Nutrient Credits	4/28/2023	0.14	0.54	166.00	0.86	0.20
-77.25678306	38.89096924	PL30	Accotink	Both	912	Plum Street SW	Private	Bioretention	4/21/2023	0.08	0.32	31.00	0.22	0.03
-77.2624635	38.89237904	PL30	Accotink	Both	639	Hillcrest Dr SW	Private	Infiltration	4/24/2023	0.12	0.50	84.00	0.43	0.07
-77.25393528	38.88133995	PL30	Accotink	Both	1216	Drake St SW	Private	Infiltration	6/9/2023	0.08	0.31	83.00	0.43	0.07
-77.25808119	38.89960827	PL22	Difficult Run	Both	503	Park St SE	Private	Bioretention	4/14/2023	0.13	0.38	112.00	0.80	0.10
-77.27032678	38.91243186	PL22	Difficult Run	Both	305	Roosevelt Ct NE	Private	Soil Amendments	4/25/2023	0.08	0.29	132.00	0.00	0.00
-77.26867441	38.90376856	PL22	Difficult Run	Both	103	Ayr Hill Ave NW	Private	Infiltration	4/27/2023	0.11	0.50	132.00	0.10	0.68
-77.26896725	38.88930784	PL30	Accotink	Both	615	Meadow Lane SW	Private	Bioretention	5/2/2023	0.08	0.35	83.00	0.59	0.05
-77.26715396	38.88941414	PL30	Accotink	Both	607	Gibson Dr SW	Private	Infiltration	5/22/2023	0.09	0.34	209.00	0.13	0.05
-77.26033474	38.91028403	PL22	Difficult Run	Both	420	Ayr Hill Ave NE	Private	Infiltration	6/2/2023	0.39	1.50	1016.00	4.64	0.66
-77.25110918	38.88850349	PL30	Accotink	Both	103	Yeonas DR SE	Private	Infiltration	6/20/2023	0.07	0.24	46.00	0.24	0.04
-77.27020478	38.90320086	PL22	Difficult Run	Both	246	Lawyers Rd NE	Private	Impervious Runoff Reduction	5/23/2023	0.11	0.44	178.00	0.00	0.00
-77.25161579	38.88383546	PL30	Accotink	Both	1216	Ross Dr SW	Private	Amendments and Nutrient Cre	5/25/2023	0,07	0.27	96.00	0.00	0.06
-77.24774555	38.88301856	PL30	Accotink	Both	1408	Cottage St, SW	Private	Bioretention	6/26/2023	0.08	0.29	14.00	0.10	0.01
-77.26346869	38.89719342	PL22	Difficult Run	Both	202	Elm Street SW	Private	Infiltration	6/9/2023	0.09	0.34	328.00	1.50	0.21
-77.25373456	38.91901778	PL22	Difficult Run	Both	100	Overlook Ln NE	Private	Impervious Runoff Reduction	6/8/2023	0.07	0.32	102.00	0.00	0.00
-77.25133572	38.88489181	PL30	Accotink	Both	1206	Cottage St SW	Private	Detention and Nutrient Credits	6/30/2023	0.06	0.23	84.00	0.00	0.04
-77.26311148	38.91474859	PL22	Difficult Run	Both	413	Cynthia Lane NE	Private	Soil Amendments	6/28/2023	0.08	0.28	103.00	0.46	0.06
-77.26432169	38.88823495	PL30	Accotink	Both	904	Ware Street SW	Private	Bioretention	6/20/2023	0.07	0.29	41.00	0.30	0.04
												TOTAL REDUCTION	**36.60**	**6.58**

Shared Credit Projects

Below is a summary of shared credit projects with Fairfax County followed by a detailed list of projects, including BMP type, implementation date, and pollutant reduction achieved.

Total Cumulative Town Credit

Pollutant	Through FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
TN	1399.55	1585.67	1865.20	1953.60	2163.05	2319.34	2319.34	2319.34	2319.34	2319.34	2319.34
TP	314.40	364.03	457.76	499.72	562.83	610.72	610.72	610.72	610.72	610.72	610.72
TSS	117440.10	135381.95	164911.98	176188.46	198547.72	211104.18	211104.18	211104.18	211104.18	211104.18	211104.18

Total Cumulative County-Wide Credit

Pollutant	Through FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
TN	39987.24	45304.76	53291.43	55817.13	61801.40	66266.81	66266.81	66266.81	66266.81	66266.81	66266.81
TP	8982.73	10400.82	13078.98	14277.58	16080.98	17449.05	17449.05	17449.05	17449.05	17449.05	17449.05
TSS	3355431.36	3868055.72	4711770.85	5033955.98	5672792.02	6031548.06	6031548.06	6031548.06	6031548.06	6031548.06	6031548.06

Implemented Structural Retrofits - Insert Cumulative Reductions Each Year

Pollutant	Through FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
TN	6421.36	6979.75	7482.99	7739.69	8039.59	9166.24	9166.24	9166.24	9166.24	9166.24	9166.24
TP	614.62	667.58	719.97	738.17	769.48	879.93	879.93	879.93	879.93	879.93	879.93
TSS	749226.15	794588.14	836945.06	857976.89	883033.58	969970.77	969970.77	969970.77	969970.77	969970.77	969970.77

Implemented Stream Retrofits - Insert Cumulative Reductions Each Year

Pollutant	Through FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
TN	26398.07	31157.20	38640.63	40909.63	45850.63	49189.39	49189.39	49189.39	49189.39	49189.39	49189.39
TP	7943.54	9308.67	11934.44	13114.84	14840.04	16097.66	16097.66	16097.66	16097.66	16097.66	16097.66
TSS	2437149.69	2904412.06	3705770.27	4006923.57	4600374.67	4872193.52	4872193.52	4872193.52	4872193.52	4872193.52	4872193.52

Implemented In-Lake Forebays - Insert Cumulative Reductions Each Year

Pollutant	Through FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
TN	7167.81	7167.81	7167.81	7167.81	7911.18	7911.18	7911.18	7911.18	7911.18	7911.18	7911.18
TP	424.57	424.57	424.57	424.57	471.46	471.46	471.46	471.46	471.46	471.46	471.46
TSS	169055.52	169055.52	169055.52	169055.52	189383.77	189383.77	189383.77	189383.77	189383.77	189383.77	189383.77

Structural Retrofit Projects

Project Name	Completion Date	Long.	Lat.	Type of Project or BMP	Treated (Ac)	Impervious Treated (Ac)	Pervious Treated (Ac)	Estimated TN Reduction (lbs/yr)	Estimated TP Reduction (lbs/yr)	Pollutant Reduction Calculation Method	% Treated Area Outside Regulated MS4	Baseline Reduction for TN (lb/yr)	Baseline Reduction for TP (lb/yr)	Bay Credit for TN (lb/yr)	Bay Credit for TP (lb/yr)
Willoughby's Ridge Pond Retrofit(0944DP)	9/4/2009	-77.429377	38.845618	Extended Detention Pond	17.03	7.82	9.21	33.69	1.64	CBP Established Efficiency, Dry Extended Detention Ponds	82%	27.49	1.34	6.20	0.30
Englewood Mews Pond Retrofit(0786DP)	9/4/2009	-77.428622	38.846256	Extended Detention Pond	46.42	21.63	24.79	92.15	4.52	CBP Established Efficiency, Dry Extended Detention Ponds	90%	41.38	4.07	50.77	0.45
Franklin Middle School	9/14/2009	-77.422277	38.907540	Constructed Wetland	54.40	10.10	44.30	179.34	15.78	CBP Retrofits Expert Panel, ST, 0.62 inches of runoff treated		0.00	0.00	179.34	15.78
Franklin Middle School	9/14/2009	-77.422277	38.907540	Bioretention	1.41	1.09	0.32	12.44	1.34	CBP Retrofits Expert Panel, RR, 1.05 inches of runoff treated		0.00	0.00	12.44	1.34
McLean Community Center Retrofit	12/1/2009	-77.184438	38.941016	Permeable Pavement	1.50	0.95	0.55	4.31	0.35	CBP Established Efficiency, Permeable Pavement w/Sand, Veg. C/D soils, underdrain	0%	0.00	0.00	4.31	0.35
McLean Community Center Retrofit	12/1/2009	-77.183929	38.940133	Bioretention	1.50	1.00	0.50	5.47	0.82	CBP Established Efficiency, Bioretention C/D soils, underdrain	0%	0.00	0.00	5.47	0.82
McLean Community Center Retrofit	12/1/2009	-77.184263	38.941070	Bioretention	15.00	9.25	5.75	53.46	7.80	CBP Established Efficiency, Bioretention C/D soils, underdrain	0%	0.00	0.00	53.46	7.80
Fair Ridge Richmond American Pond	12/15/2009	-77.374687	38.871101	Constructed Wetland	41.50	31.22	10.28	148.16	20.25	CBP Retrofits Expert Panel, ST, 0.42 inches of runoff treated	10%	10.05	1.08	138.11	19.17
Foxfield Pond D	12/15/2009	-77.405292	38.894870	Extended Detention Pond	111.00	22.77	88.23	190.86	7.31	CBP Established Efficiency, Dry Extended Detention Ponds	45%	56.16	3.31	134.70	4.00
Fair Ridge Pond A	12/15/2009	-77.370964	38.870001	Constructed Wetland	65.04	53.08	11.96	152.30	31.81	CBP Established Efficiency, Wet Ponds and Wetlands	Note 2	0.00	0.00	152.30	31.81
Vine Street Phase I	12/31/2009	-77.133934	38.798168	Constructed Wetland	228.20	43.31	184.89	388.81	51.09	CBP Established Efficiency, Wet Ponds and Wetlands	77%	132.98	14.24	255.83	36.85
Cinnamon Oaks (1072DP)	4/14/2010	-77.394661	38.915393	Extended Detention Pond	11.28	6.77	4.51	23.93	1.28	CBP Established Efficiency, Dry Extended Detention Ponds	1%	0.07	0.00	23.86	1.28
Sycamore Ridge Pond Retrofit	6/30/2010	-77.403287	38.936701	Constructed Wetland	72.48	13.20	59.28	283.38	24.83	CBP Retrofits Expert Panel, ST, 0.96 inches of runoff treated	1%	0.44	0.03	282.94	24.80
Woodstream Sec 1A	8/25/2010	-77.229493	38.743732	Extended Detention Pond	25.60	9.90	15.70	48.75	2.25	CBP Established Efficiency, Dry Extended Detention Ponds	26%	4.89	0.40	43.86	1.85
Armstrong Elementary School	8/31/2010	-77.357798	38.980773	Bioretention	1.55	1.10	0.45	10.10	1.22	CBP Retrofits Expert Panel, RR, 0.88 inches of runoff treated	0%	0.00	0.00	10.10	1.22
Armstrong Elementary School	8/31/2010	-77.358959	38.980773	Dry Swale	2.31	0.55	1.76	48.81	4.73	CBP Retrofits Expert Panel, RR, 1.7 inches of runoff treated	0%	0.00	0.00	48.81	4.73
Armstrong Elementary School	8/31/2010	-77.358243	38.979492	Bioretention	0.53	0.17	0.36	1.62	0.19	CBP Established Efficiency, Bioretention C/D soils, underdrain	0%	0.00	0.00	1.62	0.19
Carl Sandburg Middle School	9/1/2010	-77.063908	38.728623	Bioretention	0.62	0.62	0.00	4.52	0.53	CBP Retrofits Expert Panel, RR, 0.52 inches of runoff treated	0%	0.00	0.00	4.52	0.53
Weltman Estates	10/4/2010	-77.491502	38.838260	Extended Detention Pond	47.82	28.69	19.13	101.45	5.43	CBP Established Efficiency, Dry Extended Detention Ponds	79%	23.48	1.44	77.97	3.99
Oak Knoll Estates (0020DP)	11/16/2010	-77.179071	38.846017	Extended Detention Pond	4.64	1.12	3.52	8.15	0.33	CBP Established Efficiency, Dry Extended Detention Ponds	4%	0.15	0.01	8.00	0.31
University Square	12/22/2010	-77.323737	38.838279	Extended Detention Pond	18.40	5.80	12.60	33.70	1.46	CBP Established Efficiency, Dry Extended Detention Ponds	0%	0.00	0.00	33.70	1.46
Langley Oaks Sec 1 Pond 2	12/29/2010			Extended Detention Pond	68.75	12.50	56.25	116.58	4.33	CBP Established Efficiency, Dry Extended Detention Ponds	35%	16.73	1.39	99.85	2.94
Prosperity Heights	1/10/2011	-77.236636	38.858906	Extended Detention Pond	55.57	28.57	27.00	113.04	5.74	CBP Established Efficiency, Dry Extended Detention Ponds	11%	6.69	0.63	106.35	5.10
Langley Oaks Pond 1	4/26/2011	-77.162262	38.954522	Extended Detention Pond	56.00	12.50	43.50	97.32	3.81	CBP Established Efficiency, Dry Extended Detention Ponds	47%	17.32	1.37	80.00	2.44
Fred's Oak Pond Retrofit	6/11/2011	-77.319848	38.789504	Constructed Wetland	13.00	5.20	7.80	43.85	4.82	CBP Retrofits Expert Panel, ST, 0.51 inches of runoff treated	8%	1.02	0.14	42.83	4.68

Project Name	Completion Date	Long.	Lat.	Type of Project or BMP	Treated (Ac)	Impervious Treated (Ac)	Pervious Treated (Ac)	Estimated TN Reduction (lbs/yr)	Estimated TP Reduction (lbs/yr)	Pollutant Reduction Calculation Method	% Treated Area Outside Regulated MS4	Baseline Reduction for TN (lb/yr)	Baseline Reduction for TP (lb/yr)	Bay Credit for TN (lb/yr)	Bay Credit for TP (lb/yr)
Springhill Rec Center	7/15/2011	-77.227473	38.940809	Filtering Practices	0.10	0.10	0.00	0.67	0.10	CBP Established Efficiency, Filtering Practices	0%	0.00	0.00	0.67	0.10
Springhill Rec Center	7/15/2011	-77.228336	38.940650	Permeable Pavement	0.40	0.40	0.00	3.78	0.45	CBP Retrofits Expert Panel, RR, 0.95 inches of runoff treated	0%	0.00	0.00	3.78	0.45
Springhill Rec Center	7/15/2011	-77.227463	38.942894	Extended Detention Pond	14.10	8.04	6.06	29.48	1.55	CBP Established Efficiency, Dry Extended Detention Ponds	0%	0.00	0.00	29.48	1.55
Sequoia Section 2 Pond 1	8/1/2011	-77.440837	38.850177	Extended Detention Pond	92.25	30.00	62.25	169.90	7.41	CBP Established Efficiency, Dry Extended Detention Ponds	Note 2	0.00	0.00	169.90	7.41
Shrevewood Parking Lot Retrofit	8/18/2011	-77.205410	38.889235	Permeable Pavement	0.72	0.53	0.19	6.12	0.65	CBP Retrofits Expert Panel, RR, 0.97 inches of runoff treated		0.00	0.00	6.12	0.65
Bryant Towne Court	9/15/2011	-77.078668	38.765543	Extended Detention Pond	2.62	0.94	1.68	4.91	0.22	CBP Established Efficiency, Dry Extended Detention Ponds	0%	0.00	0.00	4.91	0.22
Barton Place Pond Retrofit (DEL 2011)	12/13/2011	-77.332450	38.806626	Wet Pond	65.92	24.39	41.53	219.05	23.46	CBP Retrofits Expert Panel, ST, 0.51 inches of runoff treated	29%	13.07	0.95	205.98	22.51
Patriot Village Sec 2	2/2/2012	-77.221133	38.822246	Extended Detention Pond	75.00	42.75	32.25	156.83	8.25	CBP Established Efficiency, Dry Extended Detention Ponds	5%	3.29	0.36	153.54	7.89
Villa D'Este Village Sec 3	5/18/2012	-77.288275	38.867642	Extended Detention Pond	14.70	5.88	8.82	28.19	1.31	CBP Established Efficiency, Dry Extended Detention Ponds	3%	0.38	0.04	27.81	1.27
Reston Section 41 - Basin Retrofit	6/19/2012	-77.356305	38.973989	Extended Detention Pond	19.54	4.30	15.24	33.89	1.32	CBP Established Efficiency, Dry Extended Detention Ponds	0%	0.00	0.00	33.89	1.32
Government Center Stormwater Retrofit	6/29/2012	-77.353366	38.853269	Constructed Wetland	4.28	3.12	1.16	25.59	3.46	CBP Retrofits Expert Panel, ST, 2.5 inches of runoff treated	Note 2	0.00	0.00	25.59	3.46
Government Center Stormwater Retrofit	6/29/2012	-77.355078	38.852334	Constructed Wetland	45.35	25.85	19.50	236.26	29.29	CBP Retrofits Expert Panel, ST, 1.39 inches of runoff treated	Note 2	0.00	0.00	236.26	29.29
Sheffield Hunt Outfall and Basin	6/30/2012	-77.201799	38.708821	Extended Detention Pond	29.25	13.02	16.23	57.44	2.77	CBP Established Efficiency, Dry Extended Detention Ponds	83%	25.81	2.29	31.63	0.49
Waples Mill ES Phase II	8/8/2012	-77.345172	38.875711	Permeable Pavement	0.82	0.71	0.11	8.28	0.93	CBP Retrofits Expert Panel, RR, 1.92 inches of runoff treated		0.00	0.00	8.28	0.93
Great Falls Nike Park #4	11/1/2012	-77.324875	38.992132	Infiltration	0.95	0.90	0.05	12.54	1.26	CBP Established Efficiency, Infiltration Practices w/o Sand, Veg.	0%	0.00	0.00	12.54	1.26
Great Falls Nike Park #4	11/1/2012	-77.324875	38.992132	Dry Swale	0.40	0.09	0.31	2.95	0.21	CBP Retrofits Expert Panel, RR, 2 inches of runoff treated	0%	0.00	0.00	2.95	0.21
Great Falls Nike Park #4	11/1/2012	-77.324875	38.992132	Infiltration	1.89	1.79	0.10	24.95	2.50	CBP Established Efficiency, Infiltration Practices w/o Sand, Veg.	0%	0.00	0.00	24.95	2.50
Marymead Section 1 & 2	12/14/2012	-77.362382	38.842760	Constructed Wetland	50.20	6.53	43.67	174.43	14.20	CBP Retrofits Expert Panel, ST, 0.75 inches of runoff treated	92%	33.24	2.75	141.19	11.45
Fairfax County Landbay C, Pond #4	3/20/2013	-77.355287	38.852875	Constructed Wetland	16.99	9.25	7.74	93.23	11.37	CBP Retrofits Expert Panel, ST, 2.31 inches of runoff treated	Note 2	0.00	0.00	93.23	11.37
Fair Woods, Section 9, Pond 2	4/10/2013	-77.386090	38.877209	Extended Detention Pond	26.99	14.91	12.08	55.95	2.91	CBP Established Efficiency, Dry Extended Detention Ponds	0%	0.00	0.00	55.95	2.91
Brentwood West	6/19/2013	-77.365386	38.837887	Extended Detention Pond	35.27	9.52	25.75	62.97	2.60	CBP Established Efficiency, Dry Extended Detention Ponds	5%	1.21	0.12	61.76	2.48
Noman Cole Plant Rain Garden	6/21/2013	-77.207250	38.702400	Bioretention	0.62	0.24	0.38	4.57	0.39	CBP Retrofits Expert Panel, RR, 1.08 inches of runoff treated	0%	0.00	0.00	4.57	0.39
Regional SWM Pond D-31	6/24/2013	-77.314594	38.892094	Extended Detention Pond	331.11	116.20	214.91	618.49	27.64	CBP Established Efficiency, Dry Extended Detention Ponds	39%	90.75	7.00	527.74	20.64
Lewinsville Park Stormwater Enhancements	11/6/2013	-77.188827	38.928566	Dry Swale	0.20	0.17	0.03	2.22	0.22	CBP Established Efficiency, Bioswale	0%	0.00	0.00	2.22	0.22
Lewinsville Park Stormwater Enhancements	11/6/2013	-77.191301	38.928092	Bioretention	0.90	0.74	0.16	7.95	0.88	CBP Retrofits Expert Panel, RR, 0.97 inches of runoff treated	0%	0.00	0.00	7.95	0.88

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Lewinsville Park Stormwater Enhancements	11/6/2013	-77.190595	38.928332	Bioretention	1.30	1.10	0.20	11.25	1.25	CBP Retrofits Expert Panel, RR, 0.88 inches of runoff treated	0%	0.00	0.00	11.25	1.25
Freds Oak Bioretention	12/16/2013	-77.318822	38.788203	Bioretention	1.33	0.91	0.42	12.38	1.28	CBP Retrofits Expert Panel, RR, 1.91 inches of runoff treated	0%	0.00	0.00	12.38	1.28
Autumnwood Park SWM Regional Pond (0333DP)	12/16/2013	-77.356305	38.973989	Constructed Wetland	171.30	27.60	143.70	286.86	36.27	CBP Established Efficiency, Wet Ponds and Wetlands	36%	43.19	3.86	243.67	32.41
South Run Rec Center	12/17/2013	-77.275056	38.751328	Permeable Pavement	0.31	0.31	0.00	3.29	0.39	CBP Retrofits Expert Panel, RR, 1.85 inches of runoff treated	0%	0.00	0.00	3.29	0.39
South Run Rec Center	12/17/2013	-77.276122	38.748113	Infiltration	0.66	0.66	0.00	8.90	0.91	CBP Established Efficiency, Infiltration Practices w/o Sand, Veg.	0%	0.00	0.00	8.90	0.91
South Run Rec Center	12/17/2013	-77.276162	38.748209	Permeable Pavement	0.28	0.28	0.00	1.78	0.21	CBP Retrofits Expert Panel, RR, 0.41 inches of runoff treated	0%	0.00	0.00	1.78	0.21
Royal Court Section 1(0002DP)	12/20/2013	-77.199064	38.824586	Extended Detention Pond	78.00	54.60	23.40	173.43	9.80	CBP Established Efficiency, Dry Extended Detention Ponds	1%	0.68	0.07	172.75	9.73
Stuart Road Park	1/13/2014	-77.362697	38.979666	Dry Swale	0.70	0.31	0.39	5.95	0.53	CBP Retrofits Expert Panel, RR, 2.5 inches of runoff treated	0%	0.00	0.00	5.95	0.53
Towlston Meadow (0371DP)	4/4/2014	-77.265751	38.949846	Constructed Wetland	26.00	8.00	18.00	47.42	7.12	CBP Established Efficiency, Wet Ponds and Wetlands	0%	0.00	0.00	47.42	7.12
Springfield Forest Schupps Addition Pond 1115DP Retrofit (FX8000-AC010)	5/23/2014	-77.165459	38.777259	Constructed Wetland	4.67	1.17	3.50	21.88	2.08	CBP Retrofits Expert Panel, ST, 2.5 inches of runoff treated	2%	0.14	0.02	21.74	2.06
Sequoia Park Pond Retrofit(0705DP)	6/23/2014	-77.181129	38.807051	Constructed Wetland	144.00	65.00	79.00	283.71	48.19	CBP Established Efficiency, Wet Ponds and Wetlands	0%	0.00	0.00	283.71	48.19
Oak Marr Rec Center Stormwater Enhancements (DF87-0006)	8/1/2014	-77.316279	38.874842	Bioretention	0.95	0.75	0.20	5.38	0.58	CBP Retrofits Expert Panel, RR, 0.4 inches of runoff treated	0%	0.00	0.00	5.38	0.58
Crosspointe Sec 15 Pd 15A (0775DP)	8/23/2014	-77.264266	38.721316	Constructed Wetland	11.99	5.70	6.29	58.37	6.80	CBP Retrofits Expert Panel, ST, 1.23 inches of runoff treated	3%	0.25	0.02	58.12	6.78
Mount Vernon High School Practice Field	9/3/2014	-77.093643	38.728426	Infiltration	1.64	1.64	0.00	22.12	2.26	CBP Established Efficiency, Infiltration Practices w/o Sand, Veg.	0%	0.00	0.00	22.12	2.26
Oakton Library	9/15/2014	-77.302299	38.883608	Permeable Pavement	0.37	0.25	0.12	3.52	0.36	CBP Retrofits Expert Panel, RR, 2.5 inches of runoff treated	0%	0.00	0.00	3.52	0.36
Oakton Library	9/15/2014	-77.301820	38.883805	Bioretention	0.91	0.67	0.24	3.43	0.53	CBP Established Efficiency, Bioretention C/D soils, underdrain	0%	0.00	0.00	3.43	0.53
Oakton Library	9/15/2014	-77.301959	38.883783	Infiltration	0.50	0.42	0.08	6.31	0.61	CBP Established Efficiency, Infiltration Practices w/o Sand, Veg.	0%	0.00	0.00	6.31	0.61
Indian Run Stream Restoration	9/26/2014	-77.150551	38.801685	Bioretention	0.04	0.04	0.00	0.48	0.06	CBP Retrofits Expert Panel, RR, 2.5 inches of runoff treated	100%	0.07	0.01	0.41	0.04
Indian Run Stream Restoration	9/26/2014	-77.149489	38.799744	Bioretention	0.13	0.13	0.00	1.40	0.16	CBP Retrofits Expert Panel, RR, 1.91 inches of runoff treated	0%	0.20	0.03	1.20	0.13
Indian Run Stream Restoration	9/26/2014	-77.149373	38.799692	Bioretention	0.09	0.09	0.00	0.73	0.09	CBP Retrofits Expert Panel, RR, 0.67 inches of runoff treated	100%	0.13	0.02	0.59	0.06
Indian Run Stream Restoration	9/26/2014	-77.150102	38.801270	Bioretention	0.16	0.16	0.00	1.50	0.18	CBP Retrofits Expert Panel, RR, 1.03 inches of runoff treated	100%	0.24	0.04	1.26	0.14
Indian Run Stream Restoration	9/26/2014	-77.150568	38.802292	Bioretention	0.15	0.15	0.00	1.50	0.18	CBP Retrofits Expert Panel, RR, 1.18 inches of runoff treated	100%	0.23	0.04	1.27	0.14
Indian Run Stream Restoration	9/26/2014	-77.152795	38.803319	Bioretention	0.10	0.10	0.00	1.02	0.12	CBP Retrofits Expert Panel, RR, 1.16 inches of runoff treated	100%	0.16	0.03	0.87	0.09

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Indian Run Stream Restoration	9/26/2014	-77.149706	38.800292	Bioretention	0.14	0.14	0.00	1.54	0.18	CBP Retrofits Expert Panel, RR, 2.5 inches of runoff treated	100%	0.21	0.04	1.33	0.15
Indian Run Stream Restoration	9/26/2014	-77.153626	38.803747	Bioretention	0.20	0.20	0.00	1.59	0.19	CBP Retrofits Expert Panel, RR, 0.59 inches of runoff treated	100%	0.31	0.05	1.28	0.14
Fire and Rescue Training Academy II	9/27/2014	-77.374890	38.854557	Permeable Pavement	0.82	0.65	0.17	8.04	0.87	CBP Retrofits Expert Panel, RR, 1.94 inches of runoff treated	100%	1.09	0.17	6.95	0.70
Brookfield Park Dam	11/14/2014	-77.200901	38.788123	Wet Pond	48.69	18.57	30.12	245.37	26.54	CBP Retrofits Expert Panel, ST, 2.5 inches of runoff treated	80%	28.72	2.80	216.65	23.74
Brookfield Park Dam	11/14/2014	-77.200141	38.786728	Permeable Pavement	0.17	0.17	0.00	1.82	0.21	CBP Retrofits Expert Panel, RR, 1.97 inches of runoff treated	100%	0.26	0.04	1.56	0.17
Armfield Sec 5	11/15/2014	-77.418565	38.895334	Constructed Wetland	78.79	27.43	51.36	232.16	24.39	CBP Retrofits Expert Panel, ST, 0.43 inches of runoff treated	2%	1.04	0.12	231.12	24.27
Village Park, The Sec 2B, 3 (PC81-0001/0090DP)	11/17/2014	-77.294542	38.798033	Constructed Wetland	11.21	3.99	7.22	45.48	4.81	CBP Retrofits Expert Panel, ST, 0.8 inches of runoff treated	0%	0.00	0.00	45.48	4.81
Merrifield Human Services Center (Mid County)	11/21/2014	-77.234023	38.863721	Infiltration	0.15	0.06	0.09	1.53	0.11	CBP Established Efficiency, Infiltration Practices w/o Sand, Veg.	0%	0.00	0.00	1.53	0.11
Merrifield Human Services Center (Mid County)	11/21/2014	-77.234023	38.863721	Filtering Practices	0.14	0.03	0.11	0.65	0.06	CBP Established Efficiency, Filtering Practices	0%	0.00	0.00	0.65	0.06
Merrifield Human Services Center (Mid County)	11/21/2014	-77.234023	38.863721	Filtering Practices	0.12	0.04	0.08	0.59	0.06	CBP Established Efficiency, Filtering Practices	0%	0.00	0.00	0.59	0.06
Merrifield Human Services Center (Mid County)	11/21/2014	-77.234023	38.863721	Vegetated Roof	0.03	0.03	0.00	0.00	0.00	CBP Retrofits Expert Panel, RR, 0 inches of runoff treated	0%	0.00	0.00	0.00	0.00
Merrifield Human Services Center (Mid County)	11/21/2014	-77.234023	38.863721	Dry Swale	0.10	0.04	0.06	0.90	0.07	CBP Established Efficiency, Bioswale	0%	0.00	0.00	0.90	0.07
Merrifield Human Services Center (Mid County)	11/21/2014	-77.234023	38.863721	Permeable Pavement	0.48	0.30	0.18	0.69	0.11	CBP Established Efficiency, Permeable Pavement w/o Sand, Veg. C/D soils, underdrain	0%	0.00	0.00	0.69	0.11
Woodrow Wilson Library Stormwater Enhancements	1/13/2015	-77.143146	38.851594	Permeable Pavement	0.05	0.05	0.00	0.55	0.06	CBP Retrofits Expert Panel, RR, 2.5 inches of runoff treated	0%	0.00	0.00	0.55	0.06
Woodrow Wilson Library Stormwater Enhancements	1/13/2015	-77.143323	38.851510	Permeable Pavement	0.09	0.09	0.00	0.98	0.12	CBP Retrofits Expert Panel, RR, 2.5 inches of runoff treated	0%	0.00	0.00	0.98	0.12
Woodrow Wilson Library Stormwater Enhancements	1/13/2015	-77.143205	38.851222	Permeable Pavement	0.03	0.03	0.00	0.33	0.04	CBP Retrofits Expert Panel, RR, 2.5 inches of runoff treated	0%	0.00	0.00	0.33	0.04
Bradley Acres Section 2A Retrofit	3/16/2015	-77.401801	38.929260	Constructed Wetland	37.43	16.65	20.78	73.50	12.42	CBP Established Efficiency, Wet Ponds and Wetlands	83%	23.58	2.59	49.92	9.83
Rolling Valley West Synthetic Field (PC87-0002)	4/1/2015	-77.267215	38.772643	Dry Swale	1.45	0.00	1.45	10.22	0.45	CBP Established Efficiency, Bioswale	100%	0.88	0.04	9.34	0.40
Mason Neck West	5/1/2015	-77.226473	38.675419	Constructed Wetland	12.01	1.67	10.34	52.77	4.35	CBP Retrofits Expert Panel, ST, 2.46 inches of runoff treated	95%	7.77	0.74	45.00	3.61
Oakton Swim and Racquet Club (DF9045A6)	5/22/2015	-77.350396	38.880302	Bioretention	22.70	3.74	18.96	63.50	6.22	CBP Established Efficiency, Bioretention C/D soils, underdrain	0%	0.00	0.00	63.50	6.22
Oakton Swim and Racquet Club (DF9045A6)	5/22/2015	-77.350679	38.880300	Bioretention	18.87	2.47	16.40	51.70	4.83	CBP Established Efficiency, Bioretention C/D soils, underdrain	2%	0.66	0.11	51.04	4.72

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Oakton Swim and Racquet Club (DF9045A6)	5/22/2015	-77.350653	38.879188	Bioretention	5.32	2.18	3.14	17.09	2.17	CBP Established Efficiency, Bioretention C/D soils, underdrain	2%	0.16	0.03	16.93	2.14
Sunrise Valley ES	9/1/2015	-77.321300	38.941291	Permeable Pavement	0.21	0.14	0.07	1.99	0.20	CBP Retrofits Expert Panel, RR, 2.5 inches of runoff treated	0%	0.00	0.00	1.99	0.20
Sunrise Valley ES	9/1/2015	-77.320802	38.941418	Permeable Pavement	0.55	0.39	0.16	5.31	0.56	CBP Retrofits Expert Panel, RR, 2.5 inches of runoff treated	0%	0.00	0.00	5.31	0.56
Sunrise Valley ES	9/1/2015	-77.319947	38.941094	Dry Swale	0.33	0.19	0.14	3.23	0.27	CBP Established Efficiency, Bioswale	0%	0.00	0.00	3.23	0.27
Sunrise Valley ES	9/1/2015	-77.318977	38.939997	Infiltration	2.72	1.43	1.29	29.63	2.41	CBP Established Efficiency, Infiltration Practices w/o Sand, Veg.	0%	0.00	0.00	29.63	2.41
McLean Police Station	9/3/2015	-77.198050	38.932822	Permeable Pavement	2.30	2.00	0.30	19.40	2.18	CBP Retrofits Expert Panel, RR, 0.79 inches of runoff treated	0%	0.00	0.00	19.40	2.18
Hayfield HS (DC9510)	9/5/2015	-77.142496	38.752329	Infiltration	2.31	2.31	0.00	31.16	3.18	CBP Established Efficiency, Infiltration Practices w/o Sand, Veg.	0%	0.00	0.00	31.16	3.18
George Marshall High School	12/2/2015	-77.214078	38.903052	Rainwater Harvesting	16.32	10.12	6.20	114.20	9.28	CBP Retrofits Expert Panel, RR, 1.24 inches of runoff treated	0%	0.00	0.00	114.20	9.28
Terraset ES	12/15/2015	-77.343127	38.937057	Permeable Pavement	1.28	0.84	0.44	12.05	1.23	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	100%	1.54	0.23	10.51	1.00
Terraset ES	12/15/2015	-77.343622	38.935493	Permeable Pavement	0.69	0.35	0.34	6.05	0.56	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	100%	0.73	0.10	5.32	0.46
Ravensworth Elementary School	1/29/2016	-77.222624	38.803130	Bioretention	0.65	0.22	0.43	5.20	0.42	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	0%	0.00	0.00	5.20	0.42
Penderbrook (DF9045/0691DP)	3/8/2016	-77.362336	38.877710	Constructed Wetland	22.53	2.60	19.93	79.14	6.30	CBP Retrofits Expert Panel, ST, 0.79 inches of runoff treated	90%	15.11	1.14	64.03	5.16
Reston Police Station Stormwater Enhancements	3/17/2016	-77.360127	38.963288	Permeable Pavement	0.38	0.38	0.00	2.73	0.32	CBP Retrofits Expert Panel RR, 0.50 inches of runoff treated	100%	0.58	0.10	2.15	0.22
Reston Police Station Stormwater Enhancements	3/17/2016	-77.360127	38.963288	Permeable Pavement	0.53	0.53	0.00	5.10	0.60	CBP Retrofits Expert Panel RR, 1.01 inches of runoff treated	100%	0.80	0.14	4.29	0.46
Reston Police Station Stormwater Enhancements	3/17/2016	-77.360127	38.963288	Permeable Pavement	0.08	0.08	0.00	0.78	0.09	CBP Retrofits Expert Panel RR, 1.06 inches of runoff treated	100%	0.12	0.02	0.66	0.07
Reston Police Station Stormwater Enhancements	3/17/2016	-77.360127	38.963288	Permeable Pavement	0.15	0.15	0.00	1.43	0.17	CBP Retrofits Expert Panel RR, 0.98 inches of runoff treated	100%	0.23	0.04	1.20	0.13
Reston Police Station Stormwater Enhancements	3/17/2016	-77.360127	38.963288	Permeable Pavement	0.08	0.08	0.00	0.76	0.09	CBP Retrofits Expert Panel RR, 0.98 inches of runoff treated	100%	0.12	0.02	0.64	0.07
Reston Police Station Stormwater Enhancements	3/17/2016	-77.360127	38.963288	Permeable Pavement	0.23	0.23	0.00	2.22	0.26	CBP Retrofits Expert Panel RR, 1.02 inches of runoff treated	100%	0.35	0.06	1.87	0.20
Reston Police Station Stormwater Enhancements	3/17/2016	-77.360127	38.963288	Permeable Pavement	0.13	0.13	0.00	1.24	0.15	CBP Retrofits Expert Panel RR, 0.97 inches of runoff treated	100%	0.20	0.03	1.04	0.11
Reston Police Station Stormwater Enhancements	3/17/2016	-77.360127	38.963288	Permeable Pavement	0.23	0.23	0.00	1.63	0.19	CBP Retrofits Expert Panel RR, 0.49 inches of runoff treated	100%	0.35	0.06	1.28	0.13
Reston Police Station Stormwater Enhancements	3/17/2016	-77.360127	38.963288	Permeable Pavement	0.15	0.15	0.00	1.09	0.13	CBP Retrofits Expert Panel RR, 0.51 inches of runoff treated	100%	0.23	0.04	0.86	0.09

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Reston Police Station Stormwater Enhancements	3/17/2016	-77.360127	38.963288	Filtering Practices	0.03	0.03	0.00	0.20	0.03	CBP Established Efficiency, Filtering Practices	100%	0.05	0.01	0.16	0.02
Reston Police Station Stormwater Enhancements	3/17/2016	-77.360127	38.963288	Filtering Practices	0.03	0.03	0.00	0.20	0.03	CBP Established Efficiency, Filtering Practices	100%	0.05	0.01	0.16	0.02
Potomac Meadows Pond Retrofits	3/18/2016	-77.266997	39.009740	Constructed Wetland	30.02	5.49	24.53	50.94	6.63	CBP Established Efficiency, Wet Ponds and Wetlands	0%	0.00	0.00	50.94	6.63
Potomac Meadows Pond Retrofits	3/18/2016	-77.266793	39.008740	Constructed Wetland	2.98	0.60	2.38	5.11	0.68	CBP Established Efficiency, Wet Ponds and Wetlands	100%	2.39	0.17	2.72	0.51
Stringfellow Road - Park & Ride Stormwater Enhancements	5/11/2016	-77.405060	38.853782	Permeable Pavement	0.83	0.75	0.08	8.74	0.99	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	100%	1.19	0.20	7.55	0.80
Stringfellow Road - Park & Ride Stormwater Enhancements	5/11/2016	-77.404792	38.854064	Permeable Pavement	0.32	0.29	0.03	3.36	0.38	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	100%	0.46	0.08	2.90	0.31
Stringfellow Road - Park & Ride Stormwater Enhancements	5/11/2016	-77.405645	38.853421	Permeable Pavement	0.97	0.83	0.15	9.99	1.11	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	100%	1.34	0.22	8.65	0.89
Stringfellow Road - Park & Ride Stormwater Enhancements	5/11/2016	-77.405548	38.854177	Permeable Pavement	0.41	0.36	0.05	4.29	0.48	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	100%	0.58	0.10	3.71	0.39
Stringfellow Road - Park & Ride Stormwater Enhancements	5/11/2016	-77.405226	38.854651	Permeable Pavement	0.46	0.44	0.02	4.96	0.58	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	100%	0.68	0.12	4.27	0.46
Stringfellow Road - Park & Ride Stormwater Enhancements	5/11/2016	-77.404340	38.853796	Filtering Practices	0.03	0.03	0.00	0.18	0.03	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	100%	0.04	0.01	0.14	0.02
Stringfellow Road - Park & Ride Stormwater Enhancements	5/11/2016	-77.404202	38.853338	Filtering Practices	0.03	0.03	0.00	0.21	0.03	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	100%	0.05	0.01	0.16	0.02
Colony Park Sec 1 Rec Center Lower PD (PC9131/0175DP&0390 DP)	5/22/2016	-77.298599	38.799900	Constructed Wetland	68.65	19.31	49.34	123.36	18.03	CBP Established Efficiency, Wet Ponds and Wetlands	0%	0.00	0.00	123.36	18.03
Colony Park Sec 1 Rec Center Lower PD (PC9131/0175DP&0390 DP)	5/22/2016	-77.298203	38.799000	Constructed Wetland	68.65	19.31	49.34	123.36	18.03	CBP Established Efficiency, Wet Ponds and Wetlands	0%	0.00	0.00	123.36	18.03
Golden Woods	8/9/2016	-77.260902	39.017101	Constructed Wetland	30.00	4.50	25.50	129.34	10.84	CBP Retrofits Expert Panel, ST, 1.92 inches of runoff treated	1%	0.23	0.02	129.11	10.82
Broyhill McLean	8/12/2016	-77.186897	38.933102	Bioretention	26.51	10.12	16.39	83.92	10.40	CBP Established Efficiency, Bioretention C/D soils, underdrain	0%	0.00	0.00	83.92	10.40
Keene Mill ES	8/15/2016	-77.222504	38.780523	Permeable Pavement	0.42	0.27	0.15	3.93	0.40	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	100%	0.50	0.07	3.43	0.32
Keene Mill ES	8/15/2016	-77.221826	38.781915	Dry Swale	0.19	0.14	0.05	2.00	0.19	CBP Established Efficiency, Bioswale	0%	0.00	0.00	2.00	0.19

Project Name	Completion Date	Long.	Lat.	Type of Project or BMP	Treated (Ac)	Impervious Treated (Ac)	Pervious Treated (Ac)	Estimated TN Reduction (lbs/yr)	Estimated TP Reduction (lbs/yr)	Pollutant Reduction Calculation Method	% Treated Area Outside Regulated MS4	Baseline Reduction for TN (lb/yr)	Baseline Reduction for TP (lb/yr)	Bay Credit for TN (lb/yr)	Bay Credit for TP (lb/yr)
North Springfield ES	11/1/2016	-77.207982	38.802543	Bioretention	3.42	0.88	2.54	25.15	1.89	CBP Retrofits Expert Panel RR, 1.67 inches of runoff treated	100%	2.87	0.30	22.28	1.58
Flatlick Phase I	12/8/2016	-77.422712	38.887882	Constructed Wetland	8.39	3.59	4.80	42.18	4.74	CBP Retrofits Expert Panel, ST, 1.87 inches of runoff treated	1%	0.08	0.01	42.10	4.73
Patton Terrace (Franklin Park & Chesterbrook)	12/22/2016	-77.157362	38.915597	Infiltration	8.35	2.30	6.05	93.23	5.93	CBP Established Efficiencies Treatment Train of Bioswales and Infiltration Practices w/o Sand, Veg	0%	0.00	0.00	93.23	5.93
Patton Terrace (Franklin Park & Chesterbrook)	12/22/2016	-77.158408	38.914437	Infiltration	1.14	0.35	0.79	10.37	0.70	CBP Established Efficiencies Treatment Train of Bioswales and Infiltration Practices w/o Sand, Veg	0%	0.00	0.00	10.37	0.70
Patton Terrace (Franklin Park & Chesterbrook)	12/22/2016	-77.158863	38.913539	Infiltration	9.58	2.89	6.69	109.84	7.15	CBP Established Efficiencies Treatment Train of Bioswales and Infiltration Practices w/o Sand, Veg	0%	0.00	0.00	109.84	7.15
Herndon Fire Station	3/31/2017	-77.385884	38.969017	Vegetated Roof	0.13	0.13	0.00	1.34	0.16	CBP Retrofits Expert Panel RR, 1.45 inches of runoff treated	0%	0.00	0.00	1.34	0.16
Retrofit Facility DP0625 West Potomac High School	5/18/2017	-77.069702	38.773499	Constructed Wetland	38.25	18.19	20.06	76.30	13.19	CBP Established Efficiency, Wet Ponds and Wetlands	0%	0.00	0.00	76.30	13.19
West Ox Bus Operations Center Expansion (CU87-0001)	7/21/2017	-77.377953	38.848160	Permeable Pavement	0.08	0.08	0.00	0.80	0.09	CBP Retrofits Expert Panel RR, 1.21 inches of runoff treated	100%	0.12	0.02	0.68	0.07
West Ox Bus Operations Center Expansion (CU87-0001)	7/21/2017	-77.377953	38.848160	Permeable Pavement	0.42	0.42	0.00	4.16	0.49	CBP Retrofits Expert Panel RR, 1.17 inches of runoff treated	100%	0.63	0.11	3.53	0.38
Mantua ES	8/21/2017	-77.258500	38.847300	Infiltration	4.99	3.25	1.74	57.85	5.08	CBP Established Efficiency, Infiltration Practices w/o Sand, Veg.	37%	1.65	0.28	41.16	3.77
Mantua ES	8/21/2017	-77.258597	38.847374	Dry Swale	0.65	0.20	0.45	5.53	0.38	CBP Established Efficiency, Bioswale	0%	0.00	0.00	5.53	0.38
Bucknell ES (LH9828B)	11/30/2017	-77.074070	38.766991	Grass Channel	0.14	0.04	0.10	1.04	0.08	CBP Retrofits Expert Panel RR, 1.58 inches of runoff treated	100%	0.12	0.01	0.92	0.07
Bucknell ES (LH9828B)	11/30/2017	-77.074070	38.766991	Grass Channel	0.24	0.04	0.20	1.74	0.12	CBP Retrofits Expert Panel RR, 2.20 inches of runoff treated	100%	0.18	0.02	1.55	0.10
Bucknell ES (LH9828B)	11/30/2017	-77.074070	38.766991	Grass Channel	0.13	0.10	0.03	1.39	0.13	CBP Established Efficiency, Bioswale	100%	0.17	0.03	1.22	0.10
Bucknell ES (LH9828B)	11/30/2017	-77.074070	38.766991	Permeable Pavement	0.16	0.12	0.04	1.39	0.15	CBP Retrofits Expert Panel RR, 1.03 inches of runoff treated	100%	0.21	0.03	1.19	0.12
Bucknell ES (LH9828B)	11/30/2017	-77.074070	38.766991	Bioretention	0.10	0.07	0.03	0.86	0.09	CBP Retrofits Expert Panel RR, 1.06 inches of runoff treated	100%	0.12	0.02	0.73	0.07
Bucknell ES (LH9828B)	11/30/2017	-77.074070	38.766991	Bioretention	0.40	0.00	0.40	1.01	0.07	CBP Established Efficiency, Bioretention C/D soils, underdrain	100%	0.24	0.01	0.77	0.06
Park Forest	5/10/2018	-77.254205	38.772988	Infiltration	0.72	0.51	0.21	6.95	0.73	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	100%	0.90	0.14	6.05	0.59
Park Forest	5/10/2018	-77.254205	38.772988	Infiltration	0.13	0.06	0.07	1.12	0.10	CBP Retrofits Expert Panel RR, 2.41 inches of runoff treated	100%	0.13	0.02	0.99	0.08
Park Forest	5/10/2018	-77.254205	38.772988	Infiltration	0.07	0.06	0.01	0.72	0.08	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	100%	0.10	0.02	0.62	0.06
Park Forest	5/10/2018	-77.254205	38.772988	Infiltration	0.20	0.13	0.07	1.72	0.17	CBP Retrofits Expert Panel RR, 1.2 inches of runoff treated	100%	0.24	0.04	1.48	0.13
Park Forest	5/10/2018	-77.254205	38.772988	Infiltration	0.13	0.10	0.03	1.29	0.14	CBP Retrofits Expert Panel RR, 2.5 inches of runoff treated	100%	0.17	0.03	1.12	0.11

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McLean Hunt Estates 0271DP	5/25/2018	-77.222678	38.945389	Extended Detention Pond	13.50	6.52	6.98	36.05	2.69	CBP Established Efficiency, Dry Extended Detention Ponds	8%	1.67	0.29	34.38	2.40
Newington Forest ES (PC9508)	6/30/2018	-77.240205	38.739225	Infiltration	0.67	0.67	0.00	9.04	0.92	CBP Established Efficiency, Infiltration Practices w/o Sand, Veg.	0%	0.00	0.00	9.04	0.92
Public Safety Headquarters Building Stormwater Enhancements	8/30/2017	-77.362589	38.857386	Dry Swale	3.10	2.54	0.56	33.92	3.26	CBP Established Efficiency, Bioswale	0%	0.00	0.00	33.92	3.26
Public Safety Headquarters Building Stormwater Enhancements	8/30/2017	-77.362589	38.857386	Dry Swale	0.26	0.20	0.06	2.77	0.26	CBP Established Efficiency, Bioswale	0%	0.00	0.00	2.77	0.26
Public Safety Headquarters Building Stormwater Enhancements	8/30/2017	-77.362589	38.857386	Permeable Pavement	0.24	0.24	0.00	2.42	0.27	CBP Retrofits Expert Panel RR, 1.0 inches of runoff treated	0%	0.00	0.00	2.42	0.27
Public Safety Headquarters Building Stormwater Enhancements	8/30/2017	-77.362589	38.857386	Vegetated Roof	0.53	0.53	0.00	5.34	0.60	CBP Retrofits Expert Panel, RR, 1.0 inches of runoff treated	0%	0.00	0.00	5.34	0.60
Public Safety Headquarters Building Stormwater Enhancements	8/30/2017	-77.362589	38.857386	Rainwater Harvesting	0.61	0.61	0.00	6.69	0.75	CBP Retrofits Expert Panel, RR, 1.51 inches of runoff treated	0%	0.00	0.00	6.69	0.75
Public Safety Headquarters Building Stormwater Enhancements	8/30/2017	-77.362589	38.857386	Biofilter # 1	0.09	0.02	0.07	0.36	0.03	CBP Retrofits Expert Panel, ST, 1.0 inches of runoff treated	0%	0.00	0.00	0.36	0.03
Public Safety Headquarters Building Stormwater Enhancements	8/30/2017	-77.362589	38.857386	Biofilter # 2	0.26	0.15	0.11	1.27	0.16	CBP Retrofits Expert Panel, ST, 1.0 inches of runoff treated	0%	0.00	0.00	1.27	0.16
Evermay	7/11/2018	-77.153344	38.944220	Manufactured Treatment Device (MTD)	6.47	3.12	3.34	22.56	2.57	CBP Retrofits Expert Panel RR, 0.5 inches of runoff treated	0%	0.00	0.00	22.56	2.57
Herrity Pond Retrofit	8/8/2018	-77.361313	38.857138	Wet Pond	33.90	17.43	16.47	3.95	0.49	CBP Retrofits Expert Panel RR, 0.48 inches of runoff treated	0%	0.00	0.00	3.95	0.49
Waynewood ES (LH9812)	12/19/2018	-77.055978	38.725330	Bioretention	0.56	0.47	0.09	2.21	0.36	CBPEE Bioretention C/D Soils, Underdrain	0%	0.00	0.00	2.21	0.36
Centreville Greene Pond 1 (LR81-0001)	2/4/2019	-77.413883	38.83876	Constructed Wetland	57.52	24.22	33.29	46.56	5.21	CBP Retrofits Expert Panel, ST, 0.09 inches of runoff treated	0%	0.15	0.02	46.42	5.19
Centreville Greene Pond 2 (LR81-0002)	2/4/2019	-77.416088	38.836768	Constructed Wetland	27.96	16.43	11.53	42.25	5.29	CBP Retrofits Expert Panel ST, 0.15 inches of runoff treated	1%	0.33	0.04	41.91	5.26
Meadow Run (0273DP) Pond Improvement	2/25/2019	-77.222468	38.953880	Extended Detention Pond	20.48	5.51	14.97	36.54	1.51	CBP Established Efficiency, Dry Extended Detention Ponds	3%	0.62	0.05	35.92	1.46
Cherry Run ES (9517)	3/18/2019	-77.283126	38.767929	Bioretention	0.53	0.17	0.36	1.62	0.19	CBEE, Bioretention C/D Soils, Underdrain	100%	0.48	0.05	1.14	0.14
Cherry Run ES (9517)	3/18/2019			Grass Channel 1	1.44	0.05	1.39	1.48	0.07	CBEE Vegetated Channel C/D soils no underdrain	0%	0.00	0.00	1.48	0.07
Cherry Run ES (9517)	3/18/2019	-77.285253	38.768214	Grass Channel 2	0.59	0.48	0.11	0.92	0.08	CBEE Vegetated Channel C/D soils no underdrain	0%	0.00	0.00	0.92	0.08
Browns Chapel Pond & Outfall Improvement	4/20/2019	-77.308138	38.970711	Extended Detention Pond	81.66	20.07	61.59	75.16	7.12	CBP Retrofits Expert Panel, ST curve (wet ponds) for forebay only, 0.14 inches of runoff treated	27%	15.54	1.22	59.62	5.90

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Bailey's Shelter Vegetated Roof	10/31/2019	-77.129159	38.849110	Vegetated Roof	0.03	0.03	0.00	0.34	0.04	CBP Retrofits Expert Panel, RR curve, for 3.1 in runoff treated	100%	0.05	0.01	0.29	0.03
Lorton Athletic Fields @ Lower Potomac Ballpark	3/1/2020	-77.210964	38.698586	Constructed Wetland	29.50	8.20	21.30	71.41	7.00	CBP Retrofits Expert Panel, ST curve, for 0.3 in runoff treated	2%	0.28	0.02	71.13	6.98
Luther Jackson IS	12/6/2019	-77.230507	38.868246	Infiltration	0.45	0.41	0.04	5.85	0.58	CBEE Infiltration w/o sand	0%	0.00	0.00	5.85	0.58
Luther Jackson IS	12/6/2019	-77.231643	38.866938	Extended Detention Pond	43.39	34.93	8.46	209.81	29.37	CBP Retrofits Expert Panel, ST curve, for 0.7 inches runoff	0%	0.00	0.00	209.81	29.37
Nottoway Park Phase 2	3/16/2020	-77.274818	38.885919	Dry Swale	3.98	0.42	3.56	30.05	1.61	CBEE Dry Swale	100%	2.79	0.21	27.26	1.40
Nottoway Park Phase 2	3/16/2020	-77.274906	38.884787	Bioretention	1.23	0.51	0.72	20.11	1.24	CBEE Bioretention A/B soils, underdrain	100%	1.21	0.15	18.90	1.09
Nottoway Park Phase 2	3/16/2020	-77.273892	38.885178	Dry Swale	0.69	0.05	0.64	5.10	0.26	CBEE Dry Swale	100%	0.46	0.03	4.64	0.23
Nottoway Park Phase 2	3/16/2020	-77.274973	38.885071	Dry Swale	1.58	0.64	0.94	14.18	1.07	CBEE Dry Swale	100%	1.54	0.19	12.64	0.88
Nottoway Park Phase 2	3/16/2020	-77.274906	38.884787	Bioretention	1.27	0.07	1.20	9.28	0.45	CBEE Bioretention A/B soils, underdrain	100%	0.83	0.05	8.45	0.40
Nottoway Park Phase 2	3/16/2020	-77.274254	38.884998	Constructed Wetland	28.58	1.87	26.71	93.91	6.87	CBP Retrofits Expert Panel, ST curve, for 0.7 inches of runoff	92%	16.35	1.14	77.56	5.73
Nottoway Park Phase 2	3/16/2020	-77.272714	38.885142	Bioretention	0.96	0.35	0.61	8.43	0.61	CBEE Bioretention A/B soils, underdrain	100%	0.90	0.11	7.53	0.50
Nottoway Park Phase 2	3/16/2020	-77.273789	38.884902	Dry Swale	0.35	0.11	0.24	2.99	0.21	CBEE Dry Swale	100%	0.31	0.04	2.68	0.17
Nottoway Park Phase 2	3/16/2020	-77.272805	38.884910	Dry Swale	0.35	0.10	0.25	2.94	0.20	CBEE Dry Swale	100%	0.30	0.03	2.64	0.17
Langston Hughes MS	6/30/2020	-77.338308	38.934725	Infiltration	2.00	1.90	0.10	26.43	2.65	CBEE Infiltration w/o sand	0%	0.00	0.00	26.43	2.65
Willow Springs ES	8/16/2019	-77.378390	38.831059	Filtering Practices	7.36	1.24	6.12	33.01	2.71	CBEE Filtering Practices	100%	5.58	0.50	27.43	2.21
Runnymede Bioretention 1	11/10/2011	-77.370247	38.971078	Bioretention	2.02	0.91	1.11	17.76	1.51	CBP Retrofits Expert Panel, RR curve, for 2.11 in runoff treated	0%	0.00	0.00	17.76	1.51
Runnymede Bioretention 2	11/10/2011	-77.370247	38.971078	Bioretention	1.68	0.57	1.11	13.96	1.08	CBP Retrofits Expert Panel, RR curve, for 2.32 in runoff treated	0%	0.00	0.00	13.96	1.08
Runnymede Filtering Device	11/10/2011	-77.370247	38.971078	Filtering Practices	0.31	0.27	0.04	1.29	0.23	TP: VA BMP Clearinghouse, TN and TSS: CBP Retrofits Expert Panel, ST curve, 0.5 in runoff treated	0%	0.00	0.00	1.29	0.23
Herndon Golf Course Pond Retrofit	11/10/2011	-77.394194	38.978665	Extended Detention Pond	31.40	18.88	12.52	88.88	7.14	CBEE Dry Extended Detention, only includes new MS4 treatment area	0%	0.00	0.00	88.88	7.14
Herrity Concrete Fountain Replacement	1/29/2021	-77.362500	38.856500	Rainwater Harvesting	2.20	1.87	0.33	10.80	0.98	VA Rainwater Harvesting Spreadsheet	0%	-	-	10.80	0.98
Herrity Concrete Fountain Replacement	1/29/2021	-77.362500	38.856500	Bioretention	0.10	0.08	0.02	0.39	0.06	CBEE Bioretention C/D soils, underdrain	0%	-	-	0.39	0.06
Ben Franklin Park Sec 1	11/25/2020	-77.189329	38.770513	Constructed Wetland	58.30	16.45	41.85	89.57	8.83	CBP Retrofits Expert Panel, ST curve, for 0.2 inches of runoff	92%	45.31	5.28	44.26	3.55
Foulger and Boldog	1/15/2021	-77.390302	38.847329	Wet Pond	51.30	14.56	41.85	103.74	6.41	CBP Retrofits Expert Panel, ST curve, for 0.67 inches of runoff w/ forebay	53%	24.38	2.76	79.36	3.65
Leigh Meadow & Towlston	10/29/2021	-77.2691	38.95174	Filtering Practices	19.42	6.73	12.69	77.97	6.07	CBEE Filtering Practices	27%	1.97	0.24	76.00	5.83
Sully Basins	4/19/2022	-77.4575	38.8469	Constructed Wetland	40.35	15.03	25.32	89.70	9.63	CBP Retrofits Expert Panel, ST curve, for 0.3 inches of runoff	0%	0.09	0.01	89.61	9.62
Sully Basins	4/19/2022	-77.4582	38.8475	Constructed Wetland	59.48	30.70	28.78	112.89	13.52	CBP Retrofits Expert Panel, ST curve, for 0.2 inches of runoff	0%	0.05	0.01	112.84	13.51
Sully Basins	4/19/2022	-77.4594	38.8475	Constructed Wetland	7.49	3.04	4.45	21.69	2.39	CBP Retrofits Expert Panel, ST curve, for 0.4 inches of runoff	3%	0.24	0.04	21.45	2.35
Gunston Corner @ Laurel Hill	1/6/2023	-77.23108	38.71077	Constructed Wetland	23.30	17.28	6.02	123.08	16.74	CBP Retrofits Expert Panel, ST curve, for 1.0 inches of runoff	99%	21.29	2.52	101.79	14.22
Centre Ridge Bason Retrofit	1/20/2023	-77.445937	38.821486	Constructed Wetland	52.37	21.42	30.95	262.99	29.14	CBT Retrofits Expert Panel, ST curve, for 2.0 inches of runoff	8%	5.31	0.87	257.68	28.27

Project Name	Completion Date	Long.	Lat.	Type of Project or BMP	Treated (Ac)	Impervious Treated (Ac)	Pervious Treated (Ac)	Estimated TN Reduction (lbs/yr)	Estimated TP Reduction (lbs/yr)	Pollutant Reduction Calculation Method	% Treated Area Outside Regulated MS4	Baseline Reduction for TN (lb/yr)	Baseline Reduction for TP (lb/yr)	Bay Credit for TN (lb/yr)	Bay Credit for TP (lb/yr)
Peyton Run @ Longwood Knolls	6/27/2022	-77.275278	38.762889	Constructed Wetland	133.82	41.75	92.07	375.18	38.10	CBP Retrofits Expert Panel, ST curve, for 0.4 inches of runoff	49%	57.80	6.95	317.38	31.15
Nutley Pond @ Virginia Center	11/14/2022	-77.268687	38.87994	Dredging to restore pond volume	749.00	253.20	495.80	963.04	100.23	CBP Retrofits Expert Panel, ST curve, for 0.3 inches of runoff	87%	603.67	73.67	359.37	26.56
Mt Vernon Government Center	11/11/2022	-77.077567	38.74202	Bioretention	1.73	1.04	0.69	6.12	0.89	CBPEE, Bioretention	0%	-	-	6.12	0.89
Mt Vernon Government Center	11/11/2022	-77.077697	38.742013	MTD	0.36	0.36	-	1.59	0.29	CBP Retrofits, 0.5" runoff credit	0%	-	-	1.59	0.29
Mt Vernon Government Center	11/11/2022	-77.078051	38.741954	Grass Channel	2.80	1.87	0.93	4.09	0.34	CBPEE, Grass Channel	0%	-	-	4.09	0.34
Mt Vernon Government Center	11/11/2022	-77.078193	38.741413	Bioretention	1.65	1.32	0.33	6.39	1.02	CBPEE, Bioretention	0%	-	-	6.39	1.02
Mt Vernon Government Center	11/11/2022	-77.076445	38.742194	MTD	0.66	0.35	0.31	2.36	0.35	CBP Retrofits, 0.5" runoff credit	0%	-	-	2.36	0.35
Mt Vernon Government Center	11/11/2022	-77.0744	38.7433	Bioretention	1.47	0.94	0.53	5.30	0.78	CBP Retrofits, 0.5" runoff credit	0%	-	-	5.30	0.78
Crosspointe Pond Improvements	2/1/2023	-77.251923	38.731306	Forebay / Micropools	104.14	32.80	71.34	106.58	10.86	CBP Retrofits, ST curve, 0.1" runoff	39%	42.00	4.28	64.58	6.58
TOTAL CREDIT								**10685.18**	**1039.64**			**1503.89**	**158.69**	**9166.24**	**879.93**
										Fairfax Credit				**8460.44**	**812.18**
										Herndon Credit				**384.98**	**36.96**
										Vienna Credit				**320.82**	**30.80**

Stream Restoration Projects

Project Name	Completion	Longitude	Latitude	Type of Project or BMP	Treated (Ac)	Impervious Treated (Ac)	Pervious Treated (Ac)	Restored Length (LF)	Estimated TN Reduction (lbs/yr)	Estimated TP Reduction (lbs/yr)	Pollutant Reduction Calculation Method	% Treated Area Outside Regulated Area	Baseline Reduction for TN (lb/yr)	Baseline Reduction for TP (lb/yr)	Bay Credit for TN (lb/yr)	Bay Credit for TP (lb/yr)
Dolley Madison Library - Dead Run Stream Restoration	1/28/2010	-77.186026	38.941846	Urban Stream Restoration	527.60	236.44	291.16	1400.00	551.60	98.12	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1400 LF, Average Stream Bank Height: 5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 10 ft	11.2%	46.43	4.42	505.17	93.71
Big Rocky Tributary	5/26/2010	-77.44157452	38.84903181	Urban Stream Restoration	99.95	29.21	70.74	336.00	147.29	21.19	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 336 LF, Average Stream Bank Height: 4.5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 6.4 ft	28.6%	20.90	1.76	126.39	19.44
Bridle Path Stream Restoration	1/11/2011	-77.20716113	38.94254629	Urban Stream Restoration	176.58	46.94	129.64	1650.00	841.70	138.77	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1650 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 7.82 ft	56.6%	77.54	7.29	764.16	131.48
Flatlick Confluence Stream Restoration	5/18/2011	-77.47745761	38.86298545	Urban Stream Restoration	5016.42	1938.97	3077.45	1400.00	105.00	95.20	CBP Urban Stream Restoration Interim Approved Removal Rates	42.1%	44.21	40.08	60.80	55.12
Schneider Branch Stream Restoration	5/31/2011	-77.46708378	38.89304233	Urban Stream Restoration	1022.20	627.48	394.72	1000.00	298.73	26.21	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1000 LF, Average Stream Bank Height: 1.87 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 10 ft	65.2%	194.77	17.09	103.96	9.12
Hunters Branch	6/13/2011	-77.2633	38.866006	Outfall Restoration	4.14	2.78	1.36	65.00	6.13	2.82	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 65 LF, Average Stream Bank Height: 65 ft, Sediment Delivery Ratio: 0.181	4.8%	0.27	0.04	5.86	2.78
Villa D'Este Village Sec 3	5/18/2012	-77.28831562	38.86771963	Urban Stream Restoration	14.64	4.43	10.21	260.00	19.50	17.68	CBP Urban Stream Restoration Interim Approved Removal Rates	1.7%	0.22	0.03	19.28	17.65
Government Center Stormwater Retrofit	6/29/2012	-77.35337445	38.85410551	Urban Stream Restoration	148.14	74.73	73.41	1000.00	345.21	65.88	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1000 LF, Average Stream Bank Height: 4.7 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 1 ft	15.8%	20.08	2.17	325.13	63.71
Sheffield Hunt Outfall and Basin	6/30/2012	-77.202392	38.708681	Outfall Restoration	32.05	16.29	15.76	940.00	70.50	63.92	CBP Urban Stream Restoration Interim Approved Removal Rates	82.8%	26.41	3.40	44.09	60.52
Old Gate Court Outfall	10/11/2012	-77.206946	38.942971	Outfall Restoration	4.80	1.12	3.68	392.00	47.73	21.98	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 392 LF, Average Stream Bank Height: 392 ft, Sediment Delivery Ratio: 0.181	Note 1	0.00	0.00	47.73	21.98
Tripps Run	3/15/2013	-77.19481404	38.88982444	Urban Stream Restoration	256.75	78.68	178.08	1430.00	839.32	120.27	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1430 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 12 ft	12.0%	24.03	2.28	815.29	117.99
Loft Ridge Outfall	8/1/2013	-77.108421	38.79514	Outfall Restoration	24.68	6.98	17.70	176.00	13.20	11.97	CBP Urban Stream Restoration Interim Approved Removal Rates	0.0%	0.00	0.00	13.20	11.97

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Beach Mill Road Stream Restoration	10/1/2013	-77.274287	39.021675	Urban Stream Restoration	25.40	3.03	22.37	250.00	80.26	10.51	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 250 LF, Average Stream Bank Height: 3 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 9 ft	94.4%	16.53	1.23	63.73	9.29
Wolftrap Creek	10/19/2013	-77.25065238	38.90247256	Urban Stream Restoration	755.57	350.97	404.60	2089.00	1101.33	90.78	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 2089 LF, Average Stream Bank Height: 3.1 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 25.8 ft	26.0%	164.27	17.37	937.06	73.41
Sandy Run Stream Restoration	12/1/2013	-77.29934	38.711556	Urban Stream Restoration	71.13	4.76	66.36	300.00	145.21	8.41	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 300 LF, Average Stream Bank Height: 2 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 25 ft	100.0%	47.32	3.21	97.89	5.20
Wakefield Run Stream Restoration	3/25/2014	-77.224239	38.825398	Urban Stream Restoration	106.50	52.53	53.97	816.00	382.91	40.03	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 816 LF, Average Stream Bank Height: 3.5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 20 ft	16.5%	14.77	1.57	368.14	38.46
Rabbit Branch Tributary(PC9263)	4/24/2014	-77.28990716	38.81597269	Urban Stream Restoration	125.60	36.01	89.59	1067.00	384.13	22.44	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1067 LF, Average Stream Bank Height: 1.5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 16 ft	6.5%	5.62	0.42	458.88	26.15
Rabbit Branch Tributary(PC9263)	4/24/2014	-77.28941667	38.80145278	Urban Stream Restoration				328.00	80.37	4.14	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 328 LF, Average Stream Bank Height: 0.9 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 8 ft					
Rabbit Branch Tributary(PC9263)	4/24/2014	-77.2901748	38.81568826	Urban Stream Restoration	1297.96	490.73	807.24	120.00	29.42	2.86	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 120 LF, Average Stream Bank Height: 1.7 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 6 ft	23.5%	6.91	0.67	22.51	2.19
Pohick Creek Tributary Stream Restoration (PC9257)	5/22/2014	-77.26907981	38.81060774	Urban Stream Restoration	37.72	19.24	18.47	900.00	272.27	15.14	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 900 LF, Average Stream Bank Height: 1.2 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 12 ft	0.0%	0.00	0.00	425.91	23.48
Pohick Creek Tributary Stream Restoration (PC9257)	5/22/2014	-77.26907981	38.81060774	Urban Stream Restoration				64.00	19.17	0.99	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 64 LF, Average Stream Bank Height: 1.1 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 12 ft					

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Pohick Creek Tributary Stream Restoration (PC9257)	5/22/2014	-77.26907981	38.81060774	Urban Stream Restoration				350.00	134.47	7.36	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 350 LF, Average Stream Bank Height: 1.5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 18 ft					
Scotts Run at Arbor Row Hanover Parcel	6/6/2014	-77.222391	38.930111	Urban Stream Restoration	95.18	71.50	23.68	790.00	258.15	64.34	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1020 LF, Average Stream Bank Height: 4.5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 2.4 ft	2.0%	2.67	0.44	255.48	63.90
Big Rocky Run Phase II	6/25/2014	-77.43889112	38.84856752	Urban Stream Restoration	4400.40	1809.78	2590.63	2550.00	1139.27	212.30	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 2330 LF, Average Stream Bank Height: 6.5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 12 ft	44.9%	511.53	95.32	627.74	116.97
Indian Run Stream Restoration	9/26/2014	-77.182714	38.826407	Urban Stream Restoration	1574.32	607.05	907.26	590.00	229.02	49.62	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 590 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 7 ft	44.4%	101.68	22.03	127.34	27.59
Miller Heights Outfall	8/7/2014	-77.325369	38.888489	Outfall Restoration	23.83	5.34	18.49	233.00	73.87	34.02	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 64.8 tons/yr, Sediment Delivery Ratio: 0.181	6.2%	0.96	0.06	72.91	33.96
South Lakes Stream Restoration	10/1/2014	-77.33658495	38.93207598	Urban Stream Restoration	37.23	19.79	17.43	660.00	153.01	12.77	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 660 LF, Average Stream Bank Height: 1.38 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 5.7 ft	14.3%	3.92	0.33	149.09	12.44
Banks Property Stream Restoration	11/7/2014	-77.14326518	38.75524481	Urban Stream Restoration	147.39	73.34	74.05	1142.00	428.52	32.02	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1142 LF, Average Stream Bank Height: 2 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 16 ft	0.0%	0.00	0.00	428.52	32.02
Difficult Run Tributary at Oakton Estates (DF9045)	6/26/2015	-77.35026779	38.87799459	Urban Stream Restoration	55.97	10.65	45.33	300.00	129.30	18.92	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 300 LF, Average Stream Bank Height: 4.5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 6 ft	6.6% Note 1	1.90	0.10	127.40	18.83
Green Hollow Court Maintenance Improvements	8/28/2015	-77.2472992	38.7845001	Outfall Restoration	0.60	0.46	0.14	100.00	20.93	9.64	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 110 LF, Average Stream Bank Height: 100 ft, Sediment Delivery Ratio: 0.181	0.0%	0.00	0.00	20.93	9.64
Paul Spring Branch Tributary at GMP	9/10/2015	-77.0530172	38.7532179	Urban Stream Restoration	47.31	14.59	32.72	562.00	195.13	41.36	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 562 LF, Average Stream Bank Height: 5.25 ft, Sediment Delivery Ratio:	24.5%	8.42	0.70	186.71	40.66

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											0.065; Protocol 2 - Average Stream Bank Width: 5.5 ft					
Crestleigh Way Outfall Restoration (AC83-0007)	9/14/2015	-77.1689987	38.7583008	Outfall Restoration	14.35	4.93	9.42	105.00	11.72	5.40	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 70 LF, Average Stream Bank Height: 105 ft, Sediment Delivery Ratio: 0.065	0.0%	0.00	0.00	11.72	5.40
Lenox Drive Outfall Restoration (AC83-0006)	10/30/2015	-77.2805023	38.8372002	Outfall Restoration	16.26	5.31	10.95	100.00	29.22	13.46	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 120 LF, Average Stream Bank Height: 100 ft, Sediment Delivery Ratio: 0.181	1.0%	0.13	0.01	29.09	13.45
Rainbow Bridge Lane Outfall Restoration (PC83-0003)	12/15/2015	-77.2342987	38.7363014	Outfall Restoration	2.23	1.59	0.64	100.00	11.72	5.40	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 70 LF, Average Stream Bank Height: 100 ft, Sediment Delivery Ratio: 0.181; Protocol 4: Runoff Depth Treated: 0.05in	11.9%	0.25	0.03	11.47	5.37
5216 Inverchapel Rd (AC83-0003)	12/21/2015	-77.23000389	38.80915889	Outfall Restoration	35.64	15.85	19.79	175.00	20.24	9.32	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 175 LF, Average Stream Bank Height: 175 ft, Sediment Delivery Ratio: 0.181; Protocol 4: Runoff Depth Treated: 1.16in	1.6%	0.32	0.08	19.92	9.24
Colony Park Sec 1 Rec Center Lower PD (PC9131/0175DP&0390DP)	5/22/2016	-77.298105	38.798676	Urban Stream Restoration	68.65	19.31	49.34	310.00	56.61	26.07	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 310 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181	0.0%	0.00	0.00	56.61	26.07
Accotink Tributary 9210(Wakefield Park South)	8/17/2016	-77.2276	38.813801	Urban Stream Restoration	271.49	108.84	162.65	2700.00	4446.74	1829.10	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 3484 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 4.55 ft	67.8%	156.89	16.96	4289.85	1812.14
Pratt Street Outfall Restoration	8/30/2016	-77.1341205619662	38.7866248822265	Outfall Restoration	89.57	42.25	47.32	108.00	28.76	13.25	CBP Urban Stream Restoration Expert Panel: Protocol 1 - Existing Length: 105 LF, Average Stream Bank Height: 9 ft, Sediment Delivery Ratio: 0.181	0.7%	0.20	0.07	28.56	13.18
Hunters Branch Restoration	10/1/2016	-77.272799	38.887594	Urban Stream Restoration	388.72	124.83	263.89	2067.00	155.03	140.56	CBP Urban Stream Restoration Interim Approved Removal Rates	28.0%	43.41	5.84	111.62	134.71
Accotink Tributary 9232(Wakefield Park North)	10/6/2016	-77.225601	38.820702	Urban Stream Restoration	113.37	46.43	66.94	865.00	458.47	153.83	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 293 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 1.9 ft	21.9%	17.31	17.31	441.16	136.51
Bush Hill Drive	10/6/2016	-77.1211662109644	38.795642854292	Urban Stream Restoration	35.91	13.48	22.43	310.00	279.47	96.60	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 184 tons/yr, Sediment Delivery Ratio: 0.181	1.5%	0.50	0.06	278.97	96.54
Accotink Tributary at Daventry	10/25/2016	-77.209548	38.765789	Urban Stream Restoration	133.89	39.68	94.21	153.10	57.78	11.76	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 152.53 LF, Average Stream Bank Height: 5.5 ft, Sediment Delivery	25.3%	25.15	2.18	103.32	24.86

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											Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 7.42 ft					
Accotink Tributary at Daventry	10/25/2016	-77.209548	38.765789	Urban Stream Restoration				185.35	70.69	15.29	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 181.76 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 6.73 ft					
Flatlick Phase I	12/8/2016	-77.423793	38.887072	Urban Stream Restoration	2417.60	831.78	1585.82	1772.00	1635.04	200.45	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 2600 LF, Average Stream Bank Height: 5.5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 46 ft	41.1%	672.00	73.10 Note 1	963.04	127.35
Barnack Drive Outfall Stabilization	1/30/2017	-77.231972444 1059	38.766315889 5432	Outfall Restoration	24.69	8.10	16.60	221.00	28.76	13.25	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 210 LF, Average Stream Bank Height: 4.5 ft, Sediment Delivery Ratio: 0.181	4.7%	0.81	0.06	27.95	13.19
Quander Road outfall	2/23/2017	-77.063321	38.769236	Urban Stream Restoration	13.87	3.82	10.05	688.00	2869.50	1286.78	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 2451 tons/yr, Sediment Delivery Ratio: 0.065; Protocol 2 - Average Stream Bank Width: 1.5 ft, Qualifying Restored Length: 542 LF	82.1%	8.50	0.75	3010.34	1354.80
Quander Road outfall	2/23/2017	-77.063321	38.769236	Urban Stream Restoration				149.00	149.34	68.78	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 131 tons/yr, Sediment Delivery Ratio: 0.065					
Toll House Road Outfall Restoration	3/31/2017	-77.225823137 8881	38.823408603 1456	Outfall Restoration	24.39	7.26	17.13	227.19	38.00	17.50	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 227 LF, Average Stream Bank Height: 5.5 ft, Sediment Delivery Ratio: 0.181	0.0%	0.00	0.00	38.00	17.50
Dead Run at Dominican Retreat	6/27/2017	-77.189617	38.938023	Urban Stream Restoration	149.30	62.53	86.76	1650.00	331.74	152.78	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 291 tons/yr, Sediment Delivery Ratio: 0.181	Note 1	0.00	0.00	331.74	152.78
Babson Court Outfall Restoration	7/21/2017	-77.271345	38.817677	Outfall Restoration	12.96	3.74	9.22	383.21	69.40	31.96	CBP Urban Stream Restoration Expert Panel: Protocol 1 - Existing Length: 380 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181	30.8%	2.71	0.20	66.68	31.76
Colvin Run Ph I	8/9/2017	-77.311688	38.965054	Urban Stream Restoration	2776.59	947.96	1828.63	2175.00	2037.36	444.15	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 846 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 30.8 ft	43.2%	902.94	80.27	1304.28	405.88
Colvin Run Ph I	8/9/2017	-77.314909	38.963992	Urban Stream Restoration				110.00	38.80	8.93	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 17 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 4.6 ft					

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Colvin Run Ph I	8/9/2017	-77.313468	38.964642	Urban Stream Restoration				350.00	131.06	33.08	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 63 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 4 ft					
Lazy Creek Outfall Restoration	8/18/2017	-77.22583748	38.72917459	Outfall Restoration	5.37	2.48	2.88	159.00	19.36	8.92	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 159 LF, Average Stream Bank Height: 4 ft, Sediment Delivery Ratio: 0.181	5.5%	0.23	0.02	19.13	8.89
Tysons Galleria Outfall Restoration	10/13/2017	-77.224451	38.927591	Outfall Restoration	70.07	54.09	15.98	188.47	28.92	13.32	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 190 LF, Average Stream Bank Height: 5 ft, Sediment Delivery Ratio: 0.181	2.4%	0.70	0.32	28.22	13.00
Turkey Run at Truro	10/19/2017	-77.245164	38.828326	Urban Stream Restoration	259.23	67.48	191.75	3581.50	1682.29	774.74	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 1,475.69 tons/yr, Sediment Delivery Ratio: 0.181	10.9%	20.72	1.77	1661.57	772.97
Crestmont Circle Outfall Restoration	11/7/2017	-77.22942916	38.73279478	Outfall Restoration	3.61	1.20	2.41	146.00	26.44	8.94	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 146 LF, Average Stream Bank Height: 4 ft, Sediment Delivery Ratio: 0.181; Protocol 4: Runoff Depth Treated: 0.26in	34.2%	0.91	0.08	25.53	8.86
Nottoway Park Retrofit Ph I	2/15/2018	-77.189617	38.938023	Outfall Restoration	47.14	16.06	31.08	248.00	57.34	12.54	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 18.42 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 4 - Treated Runoff Depth: 0.0626 in	81.7%	31.85	3.30	3.29	12.69
Nottoway Park Retrofit Ph I	2/15/2018	-77.192597	38.937042	Outfall Restoration	20.10	6.74	13.36	213.00	22.31	10.27	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 19.57 tons/yr, Sediment Delivery Ratio: 0.181	77.1%	12.51	1.25	9.80	9.02
Harvest Green Court Outfall Restoration	3/27/2018	-77.353822	38.976308	Outfall Restoration	33.47	10.78	22.69	402.30	60.88	28.04	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 400 LF, Average Stream Bank Height: 5 ft, Sediment Delivery Ratio: 0.181	30.3%	7.42	0.63	53.46	27.41
Stone Mill Court Reach 2	4/24/2018	-77.342058	38.879321	Outfall Restoration	32.96	7.76	25.20	262.79	32.02	14.75	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 263 LF, Average Stream Bank Height: 4 ft, Sediment Delivery Ratio: 0.181	4.3%	1.02	0.08	31.01	14.66
Flatlick Ph II	4/26/2018	-77.434525	38.881297	Urban Stream Restoration	3331.06	1117.71	2213.35	3560.00	3146.99	339.22	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 4400 LF, Average Stream Bank Height: 5.5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 46 ft	37.9% Note 1	269.39	22.49	3257.65	378.73
Flatlick Ph II	4/26/2018	-77.434525	38.881297	Urban Stream Restoration				340.00	155.43	24.25	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 346 LF, Average Stream Bank Height: 5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 15 ft					

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Flatlick Ph II	4/26/2018	-77.434525	38.881297	Urban Stream Restoration				175.00	98.49	21.97	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 285 LF, Average Stream Bank Height: 5.5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 14 ft					
Flatlick Ph II	4/26/2018	-77.434525	38.881297	Urban Stream Restoration				200.00	126.13	15.77	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 225 LF, Average Stream Bank Height: 5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 28 ft					
Oakford Drive Stream Restoration	4/27/2018	-77.230847	38.757118	Urban Stream Restoration	97.59	41.28	56.31	1302.00	501.89	231.13	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 440.25 tons/yr, Sediment Delivery Ratio: 0.181	8.3%	6.36	0.61	495.53	230.52
Robinson, PCL 19 @ 0723DP (DF82-03)	5/22/2018	-77.293272	38.9708	Outfall Restoration	34.33	5.08	29.25	260.00	7.91	3.64	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 260 LF, Average Stream Bank Height: 1.0 ft, Sediment Delivery Ratio: 0.181	93.6%	7.41	1.90	0.51	1.74
McLean Hunt Estates 0271DP	5/25/2018	-77.222678	38.945389	Outfall Restoration	7.40	1.86	5.54	138.00	13.00	5.99	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 120 LF, Average Stream Bank Height: 3.56 ft, Sediment Delivery Ratio: 0.181	15%	1.67	0.29	11.33	5.70
Turkeycock Run at Mason District Park	5/25/2018	-77.171226	38.83211	Urban Stream Restoration	108.85	27.84	81.01	259.00	48.29	5.08	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 9.67 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 1.9 ft	71.8%	32.75	2.44	467.39	127.63
Turkeycock Run at Mason District Park	5/25/2018	-77.171226	38.83211	Urban Stream Restoration				1194.00	451.85	124.99	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 238.07 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 2.5 ft					
Shetland Court Outfall Restoration	9/7/2018	-77.230357	38.960351	Outfall Restoration	4.30	1.03	3.27	188.00	34.88	16.06	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 191 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181	63.0%	2.01	0.17	32.87	15.89
Lake Martin Tributaries	10/23/2018	-77.341165	38.88487	Outfall Restoration	29.48	5.24	24.24	1363.00	317.11	99.47	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 175 tons/yr, Sediment Delivery Ratio: 0.181, Protocol 4 - a RSC with 6,534 cf of runoff treated	10.57%	2.17	0.17	314.94	99.31
Long Branch at Long Branch Falls Park	11/20/2018	-77.259204	38.815669	Urban Stream Restoration	79.94	27.44	52.50	533.00	206.62	63.28	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 120.53 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 4.46 ft	0.1%	0.09	0.01	220.19	69.56
Long Branch at Long Branch Falls Park	11/20/2018							227.00	13.66	6.29	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 11.98 tons/yr, Sediment Delivery Ratio: 0.181					

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Pohick Creek at Queen Victoria	12/7/2018	-77.260975	38.798807	Urban Stream Restoration	211.21	83.28	127.93	1654.00	431.36	103.50	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 197.15 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 3.3 ft	32.38%	62.58	7.38	1098.61	334.15
Pohick Creek at Queen Victoria	12/7/2018							858.00	471.83	171.27	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 326.23 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 2.4 ft					
Pohick Creek at Queen Victoria	12/7/2018							510.00	162.93	43.27	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 82.42 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 4.4 ft					
Pohick Creek at Queen Victoria	12/7/2018							110.00	15.19	1.43	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 2.72 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 1.7 ft					
Pohick Creek at Queen Victoria	12/7/2018							85.00	16.80	3.58	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 6.82 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 1.3 ft					
Pohick Creek at Queen Victoria	12/7/2018							110.00	21.18	4.33	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 8.25 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 1.4 ft					
Pohick Creek at Queen Victoria	12/7/2018							135.00	19.14	5.33	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 10.15 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 0.4 ft					
Pohick Creek at Queen Victoria	12/7/2018							37.00	22.77	8.82	CBP Urban Stream Restoration Expert Panel: Protocol 1 - BANCS Sediment Load Estimate , Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 0.4 ft					
Innisvale Drive Outfall Restoration	12/7/2018	-77.354019	38.803831	Outfall Restoration	17.18	3.13	14.05	475.00	50.18	23.11	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 471 LF, Average Stream Bank Height: 3.5 ft, Sediment Delivery Ratio: 0.181	36.3%	4.42	0.35	45.76	22.76
Glenbrook Road Outfall Restoration	12/11/2018	-77.25341	38.851399	Outfall Restoration	15.84	3.24	12.60	274.00	33.48	15.42	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 275 LF, Average Stream Bank Height: 4.0 ft, Sediment Delivery Ratio: 0.181	0.7%	0.08	0.01	33.40	15.41

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Pohick Tributary at Green Tree Village	3/15/2019	-77.252042	38.773445	Urban Stream Restoration	208.14	67.20	140.94	425.00	224.41	68.62	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 131 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 4.3 ft	13.8%	19.77	1.46	2258.07	817.82
Pohick Tributary at Green Tree Village	3/15/2019							1137.00	586.19	175.11	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 334 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 4.6 ft					
Pohick Tributary at Green Tree Village	3/15/2019							622.00	331.31	99.62	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 190 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 4.9 ft					
Pohick Tributary at Green Tree Village	3/15/2019							733.00	1135.93	475.92	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 907 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 2.8 ft					
Dead Run Segments 2 and 3	3/22/2019	-77.18349	38.944932	Urban Stream Restoration	717.53	303.45	414.08	2105.00	1575.62	403.58	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 712.15 tons/yr, Protocol 2 - Average Stream Bank Width: 12 ft, Sediment Delivery Ratio: 0.181	18.23% Note 1	57.25	5.70	1518.37	397.88
Dead Run Segments 2 and 3	3/22/2019			Urban Stream Restoration				98.00			CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 41.9 tons/yr, Sediment Delivery Ratio: 0.181					
Dead Run Segments 2 and 3	3/22/2019			Urban Stream Restoration				319.00			CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 8.9 tons/yr, Protocol 2 - Average Stream Bank Width: 6.6 ft, Sediment Delivery Ratio: 0.181					
Dead Run Segments 2 and 3	3/22/2019			Urban Stream Restoration				310.00			CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 5.8 tons/yr, Protocol 2 - Average Stream Bank Width: 10.1 ft, Sediment Delivery Ratio: 0.181					
Dead Run Segments 2 and 3	3/22/2019			Urban Stream Restoration				111.00			No credits claimed as it is newly constructed channel (not the improvement or stabilization of existing channel)					
Browns Chapel Pond & Outfall Improvement	4/20/2019	-77.307614	38.96985	Outfall Restoration	91.58	22.42	69.16	145.00	32.33	14.89	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 180 LF, Average Stream Bank Height: 5.9 ft, Sediment Delivery Ratio: 0.181	26.1%	8.45	1.37	23.88	13.51
Ulysses Court Outfall Restoration	4/26/2019	-77.272383	38.804836	Outfall Restoration	93.73	30.78	62.95	367.00	63.69	29.33	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 465 LF, Average Stream Bank Height: 4.5 ft, Sediment Delivery Ratio: 0.181	9.2%	5.87	0.54	57.82	28.79

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Woodgate Lane Outfall Restoration	6/3/2019	-77.187574	38.91369	Outfall Restoration	87.90	31.48	56.42	480.00	88.42	40.72	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 581 LF, Average Stream Bank Height: 5.0 ft, Sediment Delivery Ratio: 0.181	79.3%	59.47	6.44	28.96	34.28
Scotts Run Tributary at Windy Hill Road Stream Restoration	6/10/2019	-77.203435	38.936572	Urban Stream Restoration	31.79	9.37	22.42	665.00	260.76	49.40	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 665 LF, Average Stream Bank Height: 5.3 ft , Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 9.29 ft	87.8%	23.00	2.37	237.76	47.03
Bullneck at Springhill Rec Center	6/11/2019	-77.223049	38.948493	Urban Stream Restoration	102.27	30.58	71.69	1455.00	634.21	156.13	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 297.4 tons/yr, , Average Stream Bank Height: 3.47 ft , Protocol 2 - Average Stream Bank Width: 6.78 ft. Sediment Delivery Ratio: 0.181	38.5%	27.65	2.08	813.94	209.22
Bullneck at Springhill Rec Center	6/11/2019			Urban Stream Restoration				340.00	67.70	3.16	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 6.02 tons/yr, , Average Stream Bank Height: 2.35 ft , Protocol 2 - Average Stream Bank Width: 4.8 ft, Sediment Delivery Ratio: 0.181					
Bullneck at Springhill Rec Center	6/11/2019			Urban Stream Restoration				158.00	94.84	31.36	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 59.73 tons/yr, Average Stream Bank Height: 7 ft , Protocol 2 - Average Stream Bank Width: 4 ft, Sediment Delivery Ratio: 0.181					
Bullneck at Springhill Rec Center	6/11/2019			Urban Stream Restoration				121.00	44.83	20.65	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 59.33 tons/yr, Average Stream Bank Height: 8 ft , Sediment Delivery Ratio: 0.181					
Robey Avenue Outfall Restoration	6/12/2019	-77.231483	38.846742	Outfall Restoration	24.68	6.61	18.07	163.00	15.61	7.19	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 171 LF, Average Stream Bank Height: 3.0 ft, Sediment Delivery Ratio: 0.181	2.0%	0.32	0.04	15.30	7.16
Wolftrap Creek Phase 2	10/18/2017	-77.246262	38.90577	Urban Stream Restoration	693.74	268.15	425.59	1020.00	76.50	69.36	CBP Urban Stream Restoration Interim Approved Removal Rates	12.0%	9.18	5.69	67.32	63.67
Pike Branch Tributary @ Ridgeview Park	3/1/2020	-77.097927	38.785388	Urban Stream Restoration	451.61	149.00	302.61	3136.00	1564.81	415.28	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 791 tons/yr, Average Stream Bank Height: 6.6 ft , Protocol 2 - Restored Length 2843 lf, Average Stream Bank Width: 9.29 ft, Sediment Delivery Ratio: 0.0651	26.2%	86.90	7.64	1477.91	407.64
Indian Run @ Indian Run Court	11/8/2019	-77.17744	38.822846	Urban Stream Restoration	509.16	202.45	306.71	1499.00	388.29	80.18	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 152.72 tons/yr, Average Stream Bank Height: 6.2 ft , Protocol 2 - Restored Length 1197 lf, Average Stream Bank Width: 4.8 ft, Sediment Delivery Ratio: 0.181	44.5%	172.85	29.44	215.44	50.74

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Indian Run @ Columbia Road	11/8/2019	-77.176211	38.821069	Urban Stream Restoration	516.35	175.69	340.66	430.00	105.72	19.43	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 37 tons/yr, Average Stream Bank Height: 4.25 ft , Protocol 2 - Restored Length 430 lf, Average Stream Bank Width: 5.4 ft, Sediment Delivery Ratio: 0.181	45.2%	47.83	8.79	57.89	10.64
Difficult Run Tributary @ Brittenford Drive	3/1/2020	-77.297957	38.943905	Urban Stream Restoration	459.20	112.42	346.78	5402.00	4472.27	1830.85	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 3487.33 tons/yr, Average Stream Bank Height: 4.7 ft , Protocol 2 - Restored Length 5486 lf, Average Stream Bank Width: 3.9 ft, Sediment Delivery Ratio: 0.181	36.4%	127.01	9.96	4345.26	1820.89
Brevity Drive Outfall	11/27/2019	-77.30877	38.98328	Outfall Restoration	88.90	14.20	74.70	540.00	98.62	45.42	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 540 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181	77.1%	55.80	4.53	42.82	40.89
Four Stairs Court & Sandy Folly Court Outfall	11/8/2019	-77.32923	38.809097	Outfall Restoration	27.60	4.80	22.80	1070.00	149.75	68.97	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1070 LF, Average Stream Bank Height: 4.5 ft, Sediment Delivery Ratio: 0.181	89.1%	17.62	1.48	132.14	67.48
Lorton Athletic Fields @ Lower Potomac Ballpark	3/1/2020	-77.210964	38.698586	Outfall Restoration	29.50	8.20	21.30	150.00	15.98	7.36	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 150 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181	0.0%	0.00	0.00	15.98	7.36
Reseca Lane Outfall	11/27/2019	-77.247155	38.790435	Outfall Restoration	22.90	9.60	13.30	475.00	86.75	39.95	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 475 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181	21.5%	4.01	0.44	82.74	39.51
Cork County Court Outfall	5/31/2020	-77.249277	38.775766	Outfall Restoration	323.00	129.00	194.00	336.00	61.36	28.26	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 336 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181	21.6%	13.27	4.32	48.10	23.94
Deerfield Pond Court Outfall	5/31/2020	-77.288055	39.003044	Outfall Restoration	103.75	22.80	80.95	225.00	27.39	12.62	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 225 LF, Average Stream Bank Height: 4 ft, Sediment Delivery Ratio: 0.181	1.8%	0.49	0.14	26.90	12.48
Flatlick PhIII	4/10/2020	-77.448606	38.878373	Urban Stream Restoration	3989.40	1333.50	2655.90	3895.20	1644.36	228.38	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 435 tons/yr, Average Stream Bank Height: 4.6 ft , Protocol 2 - Restored Length 3794 lf, Average Stream Bank Width: 16.2 ft, Sediment Delivery Ratio: 0.181	36.9%	606.11	84.18	1038.25	144.20
Flag Run at Elgar St	10/21/2020	-77.21222	38.80581	Urban Stream Restoration	207.68	66.46	141.20	3245.00	261.00	120.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 229.06 tons/yr, Sediment Delivery Ratio: 0.181	49.9%	107.09	14.16	154.00	106.10
Hunting Creek @ Fairchild	1/19/2021	-77.075361	38.779639	Urban Stream Restoration	125.80	70.20	55.60	1187.00	775.00	302.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 575 tons/yr, Protocol 2 - Restored Length 955 lf, Average	53.9%	142.34	19.70	633.00	282.20

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											Stream Bank Width: 1.8 ft, Sediment Delivery Ratio: 0.0651					
Old Courthouse Spring Branch - Phase I @ Gosnell Road	1/29/2021	-77.247156	38.925587	Urban Stream Restoration	369.25	259.69	109.60	3236.00	519.00	239.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 454.88 tons/yr, Sediment Delivery Ratio: 0.181	39.2%	147.29	19.37	371.30	219.40
Snakeden Branch Tributary @ Lake Audubon	1/15/2021	-77.335564	38.929434	Urban Stream Restoration	46.76	22.44	24.30	863.00	134.00	62.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 117.92 tons/yr, Sediment Delivery Ratio: 0.181	28.2% Note 1	6.79	0.74	127.60	61.20
Newington Commons	1/11/2021	-77.2453	38.7299	Urban Stream Restoration	18.88	2.67	16.20	351.00	27.00	12.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Restored Length: 351.2ft, Bank Height: 2.5ft, Sediment Delivery Ratio: 0.181	21.6%	2.37	0.27	24.40	12.00
Abington Court Outfall	11/5/2020	-77.29017	38.821201	Outfall Restoration	85.00	21.25	63.80	254.00	31.00	14.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 254 LF, Average Stream Bank Height: 4 ft, Sediment Delivery Ratio: 0.181	93.7%	28.98	7.21	2.00	7.00
Gainsborough Drive Outfall Restoration	1/1/2021	-77.28908	38.811902	Outfall Restoration	19.40	6.20	13.20	366.00	56.00	26.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 366 LF, Average Stream Bank Height: 5 ft, Sediment Delivery Ratio: 0.181	31.4%	6.93	0.96	48.80	24.70
Gillings Road Outfall	7/24/2020	-77.240234	38.767722	Outfall Restoration	19.80	6.90	12.90	316.00	38.00	18.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 316 LF, Average Stream Bank Height: 4 ft, Sediment Delivery Ratio: 0.181	5.7%	0.76	0.06	37.70	17.70
Miller Heights Outfall	3/11/2021	-77.32549	38.888567	Outfall Restoration	31.00	5.89	25.10	403.00	58.00	27.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 403 LF, Average Stream Bank Height: 4.75 ft, Sediment Delivery Ratio: 0.181	36.7%	9.66	1.08	48.60	25.80
Rabbit Branch @ Gainsborough Drive	1/1/2021	-77.28898	38.811793	Outfall Restoration	1515.50	312.20	1203.30	505.00	92.00	42.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 505 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181	66.9% Note 1	61.67	15.06	30.60	27.40
Raindrop Way Outfall Restoration	1/1/2021	-77.22535	38.728641	Outfall Restoration	40.00	11.60	28.40	1088.00	99.00	46.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1088 LF, Average Stream Bank Height: 3 ft, Sediment Delivery Ratio: 0.181	64.4%	20.92	2.20	78.40	43.60
Rockport Road	11/11/2020	-77.27333	38.913687	Outfall Restoration	39.70	13.10	26.60	378.00	92.00	42.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 378 LF, Average Stream Bank Height: 8 ft, Sediment Delivery Ratio: 0.181	47.9%	18.82	2.44	73.20	40.00
Brooktrail Court	6/10/2021	-77.28009	38.928154	Outfall Restoration	39.11	7.04	32.10	300.00	37.00	17.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 300 LF, Average Stream Bank Height: 4 ft, Sediment Delivery Ratio: 0.181	77.5%	21.23	1.99	15.30	14.80
Piney Branch	3/25/2021	-77.111759	38.814183	Urban Stream Restoration	688.50	249.80	438.70	1525.00	655.00	302.00	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 574.81 tons/yr, Sediment Delivery Ratio: 0.181	8.4%	31.18	3.27	624.10	298.50

Project Name	Completion	Longitude	Latitude	Type of Project or BMP	Treated (Ac)	Impervious Treated (Ac)	Pervious Treated (Ac)	Restored Length (LF)	Estimated TN Reduction (lbs/yr)	Estimated TP Reduction (lbs/yr)	Pollutant Reduction Calculation Method	% Treated Area Outside Regulated Area	Baseline Reduction for TN (lb/yr)	Baseline Reduction for TP (lb/yr)	Bay Credit for TN (lb/yr)	Bay Credit for TP (lb/yr)
Accotink Creek @ Wakefield Park	11/23/2021	-77.2286111	38.815725	Urban Stream Restoration	15296.00	5292.00	10004.00	4878.00	2631.99	257.78	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 491 tons/yr, Sediment Delivery Ratio: 0.181	66.8%	1758.88	172.26	873.11	85.52
Leigh Meadow & Towlston	10/29/2021	-77.27115	38.95121	Urban Stream Restoration	117.87	41.42	76.45	1686.56	528.80	243.53	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 463.86 tons/yr, Average Stream Bank Height: 6.2 ft, Sediment Delivery Ratio: 0.181	26.5%	9.69	0.83	519.11	242.70
Leigh Meadow & Towlston	10/29/2021	-77.27115	38.95121	Outfall Restoration	9.55	2.73	6.82	186.56	77.66	5.69	CBP Urban Stream Restoration Expert Panel: Protocol 4 -Proposed treatment volume: 26,764 cf, Sediment Delivery Ratio: 0.181	26.5%	1.87	0.16	75.79	5.53
Scotts Run @ Old Meadow Road	2/1/2022	-77.211	38.918806	Urban Stream Restoration	693.40	405.10	288.30	3699.00	3018.52	1159.20	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 2208 tons/yr, Average Stream Bank Height: 6.3 ft, Sediment Delivery Ratio: 0.181	7.9%	21.70	2.22	2996.82	1156.98
Chestnut Burr Court	10/17/2021	-77.34433	38.930976	Outfall Restoration	10.70	4.60	6.10	654.00	54.97	25.32	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 654 LF, Average Stream Bank Height: 3 ft, Sediment Delivery Ratio: 0.181	31.3%	2.20	0.23	52.77	25.09
Murray Lane	4/4/2022	-77.19106	38.843278	Outfall Restoration	182.90	45.73	137.17	722.00	169.14	77.89	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 722 LF, Average Stream Bank Height: 6.76 ft, Sediment Delivery Ratio: 0.181	14.9%	22.21	2.31	146.93	75.58
Cedar Chase	6/30/2022	-77.346	38.997	Outfall Restoration	10.70	4.60	6.10	712.00	151.70	69.86	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 712 LF, Average Stream Bank Height: 7 ft, Sediment Delivery Ratio: 0.181	70.5%	10.61	0.86	141.10	69.01
Shouse Village	3/11/2022	-77.27026	38.944231	Outfall Restoration	117.93	37.69	80.24	1035.00	141.76	65.29	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1035 LF, Average Stream Bank Height: 4.5 ft, Sediment Delivery Ratio: 0.181	8.1%	6.36	0.49	135.40	64.80
Cameron Run Tributary @ La Vista Drive	9/9/2022	-77.12145	38.796402	Urban Stream Restoration	121.75	35.70	86.05	907.00	314.28	69.23	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 131.86 tons/yr, Sediment Delivery Ratio: 0.0651, Protocol 2 - Restored Length 907 lf, Average Stream Bank Width: 10.7 ft	24.9%	17.23	4.26	297.05	64.97
Paul Springs Branch Seg 1 @ Hollin Hills	6/29/2022	-77.0631	38.7601	Urban Stream Restoration	34.24	7.90	26.34	886.00	253.21	116.61	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 222.11 tons/yr, Sediment Delivery Ratio: 0.0651	65.7%	18.50	1.98	234.71	114.63
Paul Springs Branch Seg 2 @ Hollin Hills	6/29/2022	-77.0655	38.7605	Urban Stream Restoration	22.58	5.47	17.11	908.00	572.77	263.78	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 502.43 tons/yr, Sediment Delivery Ratio: 0.0651	100.0%	12.68	1.13	560.09	262.65
Peyton Run @ Longwood Knolls	6/27/2022	-77.2752778	38.76288889	Urban Stream Restoration	51.17	13.46	37.71	2841.00	622.24	246.34	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 469.21 tons/yr, Sediment Delivery Ratio: 0.181,	49.3%	57.80	6.95	564.44	239.38

Project Name	Completion	Longitude	Latitude	Type of Project or BMP	Treated (Ac)	Impervious Treated (Ac)	Pervious Treated (Ac)	Restored Length (LF)	Estimated TN Reduction (lbs/yr)	Estimated TP Reduction (lbs/yr)	Pollutant Reduction Calculation Method	% Treated Area Outside Regulated Area	Baseline Reduction for TN (lb/yr)	Baseline Reduction for TP (lb/yr)	Bay Credit for TN (lb/yr)	Bay Credit for TP (lb/yr)
											Protocol 2 - Restored Length 1992 lf, Average Stream Bank Width: 15 ft					
Piney Run @ Lake Wereowance	1/23/2023	-77.2864	38.983	Urban Stream Restoration	2601.60	520.32	2081.28	3267.00	1765.19	578.43	CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 708.53 tons/yr, Sediment Delivery Ratio: 0.181, Protocol 2 - Restored Length 3267 lf, Average Stream Bank Width: 8.8 ft	63.3%	366.16	126.93	1399.03	451.50
Rolling Creek Way	2/21/2023	-77.17531	38.74366	Regenerative Storm Conveyance	90.50	32.00	58.50	1193.00	145.25	66.89	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1193 LF, Average Stream Bank Height: 4 ft, Sediment Delivery Ratio: 0.181	24.2%	19.75	2.41	125.50	64.48
Woodland Stream Drive	1/10/2023	-77.15104	38.78498	Regenerative Storm Conveyance	95.39	5.90	89.49	524.00	71.77	33.05	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 524 LF, Average Stream Bank Height: 4.5 ft, Sediment Delivery Ratio: 0.181	18.9%	13.56	3.66	58.22	29.39
Crosspointe Pond Outfall	2/1/2023	-77.251917	38.731313	Regenerative Storm Conveyance	104.14	32.80	71.34	147.00	9.71	4.47	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 147 LF, Average Stream Bank Height: 2.17 ft, Sediment Delivery Ratio: 0.181	0.0%	-	-	9.71	4.47
Terra Grande Outfall	6/1/2021	-77.203492	38.73463	Regenerative Storm Conveyance	11.97	3.33	8.64	325.00	49.46	22.78	CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 325 LF, Average Stream Bank Height: 5 ft, Sediment Delivery Ratio: 0.181	15.7%	4.83	0.74	44.64	22.04
Gunston Corner @ Laurel Hill	1/6/2023	-77.231319	38.710031	Regenerative Storm Conveyance	5.50	2.95	2.55	N/A	45.34	4.10	CBP Urban Stream Restoration Expert Panel: Protocol 4 -Runoff Depth-1.0232 inches, 10957 cf storage	0.0%	-	-	45.34	4.10
TOTAL CREDIT									**57140.17**	**17149.03**			**7929.67**	**981.63**	**49189.39**	**16097.66**
											Fairfax Credit				**45401.81**	**14858.14**
											Herndon Credit				**2065.95**	**676.10**
											Vienna Credit				**1721.63**	**563.42**

In-Lake Forebay Projects

Project	Substantial Completion	Drainage Area (ac)	Impervious Area (ac)	Lake Volume [Vl] (ac-ft)	Forebay area volume [Vf](ac-ft)	In-Lake Volume [Vlf] (ac-ft)	Vol Btwn Normal Pool /Top of Forebay [Vf'] (ac-ft)	% of Treated Area Outside the Regulated Area	Baseline Reduction for TN (lb/yr)	Baseline Reduction for TP (lb/yr)	Bay Credit for TN (lb/yr)	Bay Credit for TN (lb/yr)
Barton (Dredging & Forebay)	6/21/2011	571.62	176.51	42.83	3.00	39.35	0.48	34.9%	156.34	15.30	482.69	28.52
Huntsman	9/30/2014	1482.04	421.93	189.77	29.88	108.57	51.32	38.7%	404.00	34.76	3184.64	187.51
Woodglen	11/18/2015	740.55	218.02	101.30	5.90	92.11	3.30	19.7%	94.58	7.37	979.95	59.69
Royal Lake	7/18/2017	2456.92	750.83	256.16	15.54	226.71	13.91	23.9%	413.17	36.08	2520.54	148.84
Barton (Dredge/Enh F.Bay)	12/29/2021	571.62	176.51	42.83	10.97	30.10	1.76	0.0%	0.00	0.00	743.37	46.90
TOTAL											**7911.18**	**471.46**
										Fairfax Credit	**7302.02**	**435.16**
										Herndon Credit	**332.27**	**19.80**
										Vienna Credit	**276.89**	**16.50**

Appendix D

Calculations and Supporting Documents for BMPs Implemented and Planned After November 1, 2023

Projects in Appendix C exceed cumulative pollutant reduction targets required in the 2023 MS4 permit. Appendix D shows cumulative implemented and planned reductions through FY2028 and lists shared credit projects with Fairfax County that were reported to DEQ in the Town's FY2024 MS4 annual report. Any additional reductions will be reported to DEQ in the Town's MS4 annual reports.

Summary of All Implemented and Planned BMPs Through FY2028

	Cumulative Reductions from Worksheets										
	Through FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Shared Credit Projects											
TN	1,399.55	1,585.66	1,865.19	1,953.60	2,163.05	2,319.34	2,821.54	2,821.54	2,821.54	2,821.54	2,821.54
TP	314.39	364.03	457.77	499.72	562.83	610.72	818.01	818.01	818.01	818.01	818.01
TSS	117,440.10	135,381.94	164,911.98	176,188.45	198,547.72	211,104.18	287,468.33	287,468.33	287,468.33	287,468.33	287,468.33
Redevelopment Post-2014											
TN	61.31	64.76	68.33	79.74	98.90	98.90	98.90	98.90	98.90	98.90	98.90
TP	9.85	10.29	11.13	12.75	15.95	15.95	15.95	15.95	15.95	15.95	15.95
TSS	4,808.79	5,101.47	5,485.29	6,444.70	8,832.38	8,832.38	8,832.38	8,832.38	8,832.38	8,832.38	8,832.38
Nutrient Management Plans											
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	-	-	-	-	-	-	-	-	-
TSS	-	-	-	-	-	-	-	-	-	-	-
Sweeping											
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	0.21	0.05	0.05	0.10	0.10	0.10	0.10	0.10	0.10
TSS	-	-	304.07	70.28	74.96	149.93	149.93	149.93	149.93	149.93	149.93
Septic System Disconnects											
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	-	-	-	-	-	-	-	-	-
TSS	-	-	-	-	-	-	-	-	-	-	-
Nutrient Purchases											
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	-	-	-	-	-	-	-	-	-
TSS	-	-	-	-	-	-	-	-	-	-	-
Other Structural Retrofits											
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	-	-	-	-	-	-	-	-	-
TSS	-	-	-	-	-	-	-	-	-	-	-
More Stringent Development											
TN	117.31	146.43	199.98	251.74	299.48	336.08	366.20	366.20	366.20	366.20	366.20
TP	13.10	17.16	23.51	29.53	35.58	42.16	49.33	49.33	49.33	49.33	49.33
TSS	-	-	-	-	-	-	-	-	-	-	-
Landuse Conversion											
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	-	-	-	-	-	-	-	-	-
TSS	-	-	-	-	-	-	-	-	-	-	-
Other BMPs											
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	-	-	-	-	-	-	-	-	-
TSS	-	-	-	-	-	-	-	-	-	-	-
Total Reductions											
TN	1,578.17	1,796.85	2,133.50	2,285.08	2,561.43	2,754.32	3,286.64	3,286.64	3,286.64	3,286.64	3,286.64
TP	337.34	391.48	492.62	542.05	614.41	668.93	883.39	883.39	883.39	883.39	883.39
TSS	122,248.89	140,483.41	170,701.34	182,703.43	207,455.06	220,086.49	296,450.64	296,450.64	296,450.64	296,450.64	296,450.64

FY2024 Shared Credit Projects

Structural BMPs and Retrofits

Project Name	Facility ID	Substantial Completion	Long.	Lat.	Type of Project or BMP	Retrofit Details	Treated (Ac)	Impervious Treated (Ac)	Pervious Treated (Ac)	Estimated Incremental Amount of Total Pollutant Reduction (lbs/yr)*			Pollutant Reduction Calculation Method	% Treated Area Outside Regulated MS4	Baseline Reduction Provided for Unregulated Areas (lb/yr)			Total Credit Received (lb/yr)		
										TN	TP	TSS			TN	TP	TSS	TN	TP	TSS
Ashburton Manors Sec 1 & 2 (1001DP)	1001DP	10/25/2023	-77.393707	38.914469	Constructed Wetland	Urban Retrofit: Dry Pond to Constructed Wetland	18.40	7.08	11.32	31.89	3.46	2,811.00	CBP Retrofits Panel, ST curve, for 0.2 inches of runoff. Eff: TN 13.7% TP 21.5% TSS 27.3%	35%	7.59	1.18	972.32	24.30	2.28	1,838.68
Ashburton Manors Sec 1 & 2 (1116DP)	1116DP	10/25/2023	-77.394122	38.912643	Constructed Wetland	Urban Retrofit: Dry Pond to Constructed Wetland	12.00	4.69	7.31	19.50	2.13	1,731.68	CBP Retrofits Panel, ST curve, for 0.2 inches of runoff. Eff: TN 12.8% TP 20.1% TSS 25.5%	21%	3.35	0.45	367.35	16.15	1.68	1,364.33
					Subtotal:		**30.40**	**11.77**	**18.63**	**51.39**	**5.59**	**4,542.68**			**10.94**	**1.63**	**1,339.67**	**40.45**	**3.96**	**3,203.01**
																Fairfax Credit	**92.3%**	**37.34**	**3.66**	**2,956.38**
																Herndon Credit	4.2%	1.70	0.17	134.53
																Vienna Credit	3.5%	1.42	0.14	112.11

Stream Restoration

Project Name	Substantial Completion	Longitude	Latitude	Type of Project or BMP	Acres Treated (Ac)	Imp Acres Treated (Ac)	Pervious Acres Treated (Ac)	Restored Length (LF)	Estimated Amount of Total Pollutant Reduction (lbs/yr)			Pollutant Reduction Calculation Method	% Out of MS4	Baseline Reduction Provided for Unregulated Areas (lb/yr)			Total Credit Received (lb/yr)		
									TN	TP	TSS			TN	TP	TSS	TN	TP	TSS
Accotink Trib @ Danbury Forest	4/9/2024	38.802252	-77.235134	Urban Stream Restoration	244	73.7	170.3	2851.79	1646.87	618.43	213210.76	CBP USREP: P1: BANCS 1,177.96 ton/yr, SDR 0.181, P2: Restored Length 2577 ft, Average Width 7.17 ft	0.32	73.78	9.24	7,825.70	1,573.10	609.19	205,385.06
Crook Branch @ Mantua Hills	9/27/2023	38.845084	-77.250742	Urban Stream Restoration	827.8	287.25	540.55	3756	7325.51	2985.74	1029370.53	CBP USREP: P1: BANCS 5,687.13 ton/yr, SDR 0.181, P2: Restored Length 3266 ft, Average Width 7.78 ft	0.43	391.45	54.29	47,102.79	6,934.06	2,931.45	982,267.74
Popes Head Tributary @ Havenner Road	4/30/2024	38.792348	-77.354182	Urban Stream Restoration	367.9	44.1	323.8	4152	1068.51	264.36	91142.55	CBP USREP: P1: BANCS 503.55 ton/yr, SDR 0.181, P2: Restored Length 4152 ft, Average Width 5.13 ft	0.81	205.31	16.32	11,817.05	863.20	248.05	79,325.50
Popes Head Tributary @ Havenner Road Seg2	4/30/2024	38.791352	-77.356859	Urban Stream Restoration	378.3	44.1	334.2	998	211.25	27.47	27131.21	CBP USREP: P1: BANCS 255 tons/yr. 0.52 lb/ton TP, 2.8 lb/ton TN, SDR: 0.181 TSS	0.81	219.98	17.36	12,531.57	137.02	48.94	33,623.43
Rabbit Branch @ Collingham Drive	10/30/2023	38.805317	-77.292888	Urban Stream Restoration	431.4	135.9	295.5	4481	3908.5	1517.9	523314.44	CBP USREP: P1: BANCS 2,891.24 ton/yr, SDR 0.181, P2: Restored Length 4481 ft, Avg Width 4.12 ft	0.3	133.53	17.00	14,462.08	3,774.98	1,500.90	508,852.36
Rocky Branch Trib @ Ashlawn Park	5/30/2024	38.898411	-77.299658	Urban Stream Restoration	34.6	9.5	25.1	1529	714.64	329.11	113465.28	CBP USREP: P1: BANCS 626.88 ton/yr, SDR 0.181	0.48	28.35	2.79	2,204.95	686.30	326.32	111,260.33
Schneider Branch Segment 1 @ Sully Road	9/28/2023	38.892995	-77.444264	Urban Stream Restoration	344.8	201.02	143.78	1048	180.89	32.55	11222	CBP USREP: P1: BANCS 62 ton/yr, SDR 0.181, P2: Restored Length 1048 ft, Average Width 6.34 ft	0.58	104.48	18.80	6,481.67	76.41	13.75	4,740.33
Rocky Run Tributary @ Dulles Access Road	9/21/2023	38.937639	-77.241625	Urban Stream Restoration	303.62	170.94	132.68	1186	217.6	50.67	17470.12	CBP USREP: P1: BANCS 96.52 ton/yr, SDR 0.181, P2: Restored Length 875 ft, Average Width 10.5 ft	0.86	186.65	43.47	14,985.33	30.95	7.21	2,484.79
Madison Meadows Lane	4/20/2023	38.903593	-77.336358	Outfall Restoration	47.8	10.52	37.28	816	42.16	68.24	140704.59	CBP USREP: P1: BANCS 313.7 tons/yr. 0.97 lb/ton TP, 0.37 lb/ton TN, SDR 0.181 TSS, P5: Prevented Volume 14,280 cf	0.47	18.44	1.92	1,539.83	43.32	159.99	75,374.67
Wellfleet Court	12/7/2022	38.908469	-77.168938	Outfall Restoration	24.9	10.11	14.79	159	11.07	3.04	17386.21	CBP USREP: P5 Prevented Volume 28,450 cf, 0.35 lb/ton TP, 0.73 lb/ton TN	0.32	4.48	1.13	970.40	9.40	5.53	37,057.76
Sorrel Ridge Lane	11/10/2023	38.889493	-77.334108	Outfall Restoration	36.7	5.51	31.2	199	4.46	0.82	4548.11	CBP USREP: P5 Prevented Volume 6932 cf, 0.36 lb/ton TP, 1.21 lb/ton TN	0.73	4.79	1.42	1,211.00	1.74	0.52	9,579.81
Montgomery Street	6/18/2024	38.81581	-77.17924	Outfall Restoration	106	24	82	257	6.82	1.13	7071.13	CBP USREP: P1: BANCS 23.7 tons/yr. 0.32 lb/ton TP, 1.13 lb/ton TN, SDR: 0.181 TSS	0.15	2.05	0.58	658.22	11.34	3.21	3,631.48
Brawner Street	9/23/2022	38.93134	-77.167765	Outfall Restoration	19.74	7.3	12.44	300	32.93	10.27	33132.47	CBP USREP: P1: BANCS 62.2 tons/yr. SDR: 0.181 TSS P5: Prevented	0.4	7.62	0.98	838.12	33.69	21.48	20,689.41

Project Name	Substantial Completion	Longitude	Latitude	Type of Project or BMP	Acres Treated (Ac)	Imp Acres Treated (Ac)	Pervious Acres Treated (Ac)	Restored Length (LF)	Estimated Amount of Total Pollutant Reduction (lbs/yr)			Pollutant Reduction Calculation Method	% Out of MS4	Baseline Reduction Provided for Unregulated Areas (lb/yr)			Total Credit Received (lb/yr)		
									TN	TP	TSS			TN	TP	TSS	TN	TP	TSS
												Volume 8406 cf, 0.62 lb/ton TP, 1.14 lb/ton TN							
Crown Royal Drive	6/18/2024	38.78912	-77.13714	Outfall Restoration	152	65.4	86.6	505	27.3	3.11	18289.46	CBP USREP: P1: BANCS 61.3 tons/yr. 0.34 lb/ton TP, 1.75 lb/ton TN, SDR 0.061 TSS	0.35	18.53	3.60	1,291.81	35.11	6.82	2,447.49
Boehms Court	3/26/2024	38.994653	-77.284452	Outfall Restoration	53.9	17.3	36.6	309	15.89	7.45	36332.16	CBP USREP: P5: Prevented Volume 57,918 cf. 0.41 lb/ton TP, 0.54 lb/ton TN	0.67	15.67	3.57	2,904.22	7.60	14.10	83,297.22
Bracksford Court	5/4/2024	38.74053	-77.268386	Outfall Restoration	37	14.1	22.9	318	81.11	8.34	40674.06	CBP USREP: P1: BANCS 112.1 tons/yr. 0.41 lb/ton TP, 1.85 lb/ton TN, SDR: 0.181 TSS	0.33	13.56	1.92	1,677.61	90.13	21.06	18,612.49
				Subtotal:	**3410.46**	**1120.75**	**2289.72**	**22864.79**	**15495.51**	**5928.63**	**2324465.08**			**1,428.67**	**194.39**	**128,502.35**	**14,308.35**	**5,918.52**	**2,178,629.87**
															Fairfax Credit	**92.3%**	**13,206.61**	**5,462.79**	**2,010,875.37**
															Herndon Credit	**4.2%**	**600.95**	**248.58**	**91,502.45**
															Vienna Credit	**3.5%**	**500.79**	**207.15**	**76,252.05**

Appendix E

Public Comments

The final Phase III plan was posted to the Town's website with an invitation and instructions for public comment. A notice was also posted to the Town's social media (Facebook and X). The deadline for receiving comments was October 29, 2024. No public comments were received.

Phase III TMDL Action Plan

The Town of Vienna would like to invite all residents to provide feedback on the Final Phase III Chesapeake Bay TMDL Action Plan, which details the Town of Vienna's overall strategy for pollutant reductions to the Chesapeake Bay through street sweeping, more stringent redevlopment requirements, and the implementation of stormwater management Best Management Practices (BMPs). This comment period will be open until October 29, 2024 and please provide all comments via email.