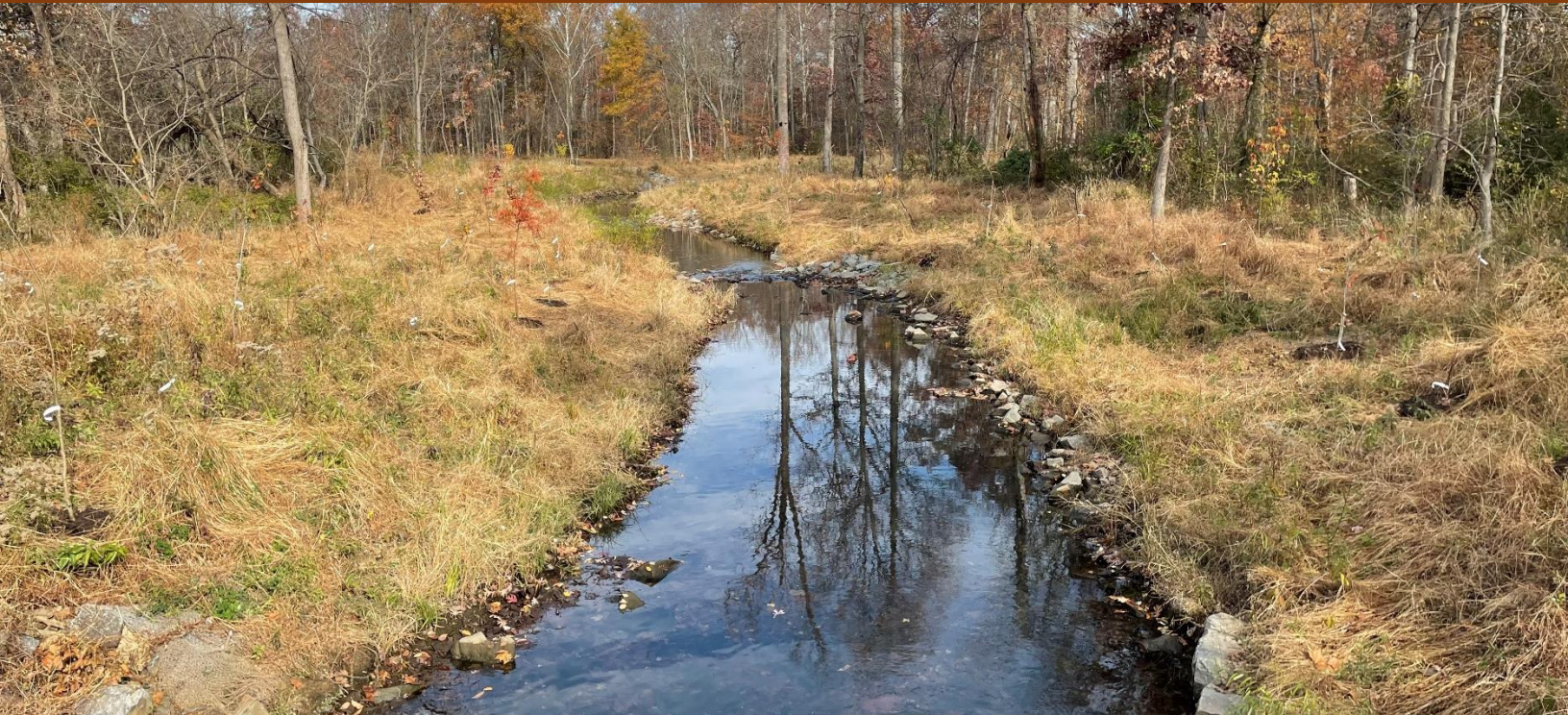


# Town of Herndon, Virginia

## Final Phase III Chesapeake Bay TMDL Action Plan

November 1, 2024 – DEQ Submittal



**Town of Herndon  
Department of Public Works  
777 Lynn Street  
Herndon, Virginia 20170**



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



**Prepared in Compliance with Municipal Separate Storm Sewer System (MS4)  
Permit No. VAR040060**

# 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

ACTING DEPUTY TOWNMANAGER

Title

10/31/24

Date

# Final Phase III Chesapeake Bay TMDL Action Plan

## Town of Herndon, 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.

Acronym	Explanation	Definition
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.
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 <i>et seq.</i> ).
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 Herndon, Virginia



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## 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 Herndon 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 21, 2015. Draft and final Phase II plans were submitted to DEQ in May 2018 and November 2019, respectively. A draft Phase III was submitted to DEQ on September 14, 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).<sup>1</sup> Virginia has adopted a Watershed Implementation Plan (WIP) that establishes the framework for meeting the

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<sup>1</sup> The 2023 MS4 permit removes TSS from the definition of pollutant of concern (Part II A 2) and from the pollutant load reduction requirements (Part II A 3).

Chesapeake Bay TMDL. The Virginia WIP states that MS4 permit holders will implement a phased approach for meeting 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, the Chesapeake Bay TMDL Special Condition Guidance developed by DEQ (Guidance Memo No 20-2003), and additional policy 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 Vienna to share pollutant reductions from certain jointly implemented projects. The agreement, included as Appendix A, was originally adopted by Herndon on January 6, 2014 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 4.2% 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 Herndon, Vienna, 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. Fairfax 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 the draft Phase III plan. Town staff has verified that no additional regulated outfalls have been added since that time. 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.
- Eligible projects installed on or after January 1, 2006 and before July 1, 2009.
- More stringent regulation of single family residential development under one acre.
- Additional BMPs that may be implemented in accordance with DEQ’s Chesapeake Bay TMDL Special Conditions Guidance.

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 Planned BMPs**

	<b>Total Nitrogen (lbs/year)</b>	<b>Total Phosphorus (lbs/year)</b>
Required Reductions from Existing Sources	2,395.02	314.22
+ New Source Offsets	55.12	7.99
+ Grandfathered Offsets	0.00	0.00
= Total Required Reductions and Offsets	2,450.14	322.21
- BMPs Prior to November 1, 2023	3,304.03	824.48
- BMPs November 1, 2023 and On (Implemented)	602.66	248.74
- BMPs November 1, 2023 and On (Planned)	To be determined.	To be determined.
Final Remainder/(Excess)	(1,456.55)	(751.01)
Progress Toward 2028 Target	159.4%	333.1%

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**

<b>Action Plan Section</b>	<b>MS4 Permit Part II A 12</b>	<b>MS4 Permit Requirement</b>
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 8 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 [www.herndon-va.gov/departments/public-works/stormwater-management](http://www.herndon-va.gov/departments/public-works/stormwater-management).

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	<p>The Town’s MS4 Public Education and Outreach Plan identifies Chesapeake Bay nutrients as one of its three high-priority pollutants. Actions specific to nutrients and their impact on the Chesapeake Bay include:</p> <ul style="list-style-type: none"> <li>• At least annually, provide information on proper fertilizing techniques in one of the following: the “What’s On in Herndon: News You Can Use” newsletter; the Mayor’s quarterly newsletter; or, Herndon’s annual Water Quality Report.</li> <li>• Include a message about proper fertilizing techniques in the annual Town Calendar and Events Guide.</li> <li>• At least once annually, post on social media about proper fertilizing techniques.</li> </ul> <p>In addition, the Town will continue to participate in the Northern Virginia Regional Commission’s Clean Water Partners program, which includes proper application of fertilizers.</p>
Public Involvement and Participation	<p>The Town has designed a program to provide an opportunity for the public to become involved with local water quality improvement and stream clean-up projects.</p>
Illicit Discharge Detection and Elimination	<p>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.</p>

<b>Minimum Control Measure</b>	<b>MS4 Program Plan Elements Related to Controlling Nitrogen and Phosphorus</b>
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 updated its ordinance to comply with VESMA on September 24, 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 updated its ordinance to comply with VESMA on September 24, 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 general good housekeeping, as well as specific requirements to develop nutrient management plans for all properties where nutrients are applied to more than one contiguous acre.

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 updated the MS4 service area map as part of the development of the draft Phase III plan and has verified that no additional outfalls have been added since that time.

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.

Significant areas of the Town that do not drain to the regulated MS4 include areas that drain directly to Sugarland Run (along the eastern boundary of the Town), Folly Lick Branch (including a large area of Herndon Centennial Golf Course), and Spring Branch (a tributary of Folly Lick Branch roughly bounded by Ferndale Avenue and Cavalier Drive).

In accordance with the Chesapeake Bay TMDL Special Conditions Guidance, the Town of Herndon 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 permit. Any pollutant loading from property owned by Fairfax County Public Schools within the Town is the responsibility of Fairfax County.

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.

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 has not identified within its boundary any property with a VPDES industrial stormwater permit. While the Town has identified potential forest area within the MS4, 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 2,355.5 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 2,355.5 acres is divided into 1,064.2 impervious acres and 1,291.3 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 the Chesapeake Bay TMDL Special Conditions Guidance.

**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	1,064.20	17,942.41	0.09	1,614.82	2,395.02
TN	Perv.	10.07	1,291.30	13,003.39	0.06	780.20	
TP	Imp.	1.62	1,064.20	1,724.00	0.16	275.84	314.22
TP	Perv.	0.41	1,291.30	529.43	0.07	38.38	

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, two projects with a land disturbance of one acre or greater resulted in increases in pollutant loadings. The Town calculated total required offsets as follows: 55.12 pounds for TN and 7.99 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 than begin construction after July 1, 2014 and where the project utilizes an average land cover condition greater than 16%. The Town has not identified any existing projects that meet this criteria and therefore no offset is required.

3.6. Total Reduction and Offset Requirements

Table 3.B presents the total cumulative reduction and offset requirements that the Town must achieve within 60 months of the MS4 permit effective date.

**Table 3.B – Total Reduction and Offset Requirements**

<b>Reductions and Offsets</b>	<b>TN (lbs/year)</b>	<b>TP (lbs/year)</b>
Required Reductions from Existing Sources	2,395.02	314.22
+ New Source Offsets	55.12	7.99
+ Grandfathered Offsets	0.00	0.00
<b>Total Reductions and Offsets</b>	<b>2,450.14</b>	<b>322.21</b>

## 4. Overall Strategy for Achieving Reductions

The Town’s overall strategy for achieving POC reductions includes a combination of BMPs as described in the following sections.



### 4.1. Redevelopment

In accordance with the Chesapeake Bay TMDL Special Condition Guidance, the Town will take credit for pollutant reductions from redevelopment regardless of the initial land cover condition of the site. 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 MS4 permit is 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 is utilized.

### 4.2. Shared Credit Projects

In accordance with the cooperative agreement with Fairfax County, the Town receives 4.2% 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 Herndon, Vienna, or Fairfax County. These projects include Structural Retrofits, Stream Restoration, and In-Lake Forebay Retrofits. Table 4.A shows the shared credit projects that have been implemented within the Town.

**Table 4.A – Shared Credit Projects Located in Herndon**

<b>Runnymede Bioretention 1</b>	<b>Runnymede Bioretention 2</b>
<p>This project consisted of the design of two bioretention facilities. The design also included a kiosk for educational information about the bioretention facilities.</p>	<p>This project consisted of the design of two bioretention facilities. The design also included a kiosk for educational information about the bioretention facilities.</p>
	

Runnymede Filtering Device	Golf Course Pond Retrofit
<p>This project is associated with the two bioretention facilities at Runnymede and involved the design and construction of a 12x6 Filterra tree box filter.</p>	<p>This project involved expanding an existing facility to capture additional flow that was running parallel to the pond.</p>
	
Sugarland Run Stream Restoration	
<p>The Sugarland Run (South) stream restoration involves approximately 1,120 linear feet of highly degraded stream. The project was done in partnership with Fairfax County. Pictured below is Sugarland Run before (left) and after (right) restoration.</p>	
	

#### 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 the Chesapeake Bay TMDL Special Conditions Guidance (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. Stormwater Facilities Installed Between January 2006 and July 2009

In accordance with the Chesapeake Bay TMDL Special Condition Guidance (Part IV.2 and Appendix VI), the Town receives full credit for stormwater management facilities initially installed on or after January 1, 2006 and prior to July 1, 2009 within the regulated MS4 service area provided that the Town submitted a full account of stormwater facilities to DEQ as part of the "Historical Data Clean-Up" effort. The Town documented credit in the Town's Fiscal Year 2016 annual report to DEQ.

#### 4.6. More Stringent Regulation of Land Disturbing Activities

The Town has adopted stormwater quality requirements for single family residential (SFR) development under one acre that are more stringent than minimum state regulatory requirements. While the Virginia Erosion and Stormwater Management Regulations and the Chesapeake Bay Preservation Act regulate land disturbing activities 2,500 square feet and greater, localities may exempt SFR development under one acre not part of a common plan of development. Town Code Chapter 26, "Environment" applies water quality performance standards to SFR development 2,500 square feet and greater.

In accordance with the Chesapeake Bay TMDL Special Condition Guidance the Town may take credit for the difference between the pollutant load that could have been allowed for SFR 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. At this time, the Town has decided not to separately track this credit for Chesapeake Bay TMDL compliance purposes but reserves the right to do so in the future.

#### 4.7. Additional BMPs

The Town reserves the right to implement and take credit for additional creditable facilities or practices as provided for in the Chesapeake Bay TMDL Special Condition Guidance. 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<sup>2</sup> 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**

<b>BMPs</b>	<b>TN (lbs/year)</b>	<b>TP (lbs/year)</b>
Redevelopment	47.38	6.75
Shared Credit Projects	2,783.20	732.86
Street Sweeping	0.71	0.17
Purchased Nutrient Credits	0.00	0.00
2006-2009 Stormwater Facilities	472.74	84.70
More Stringent Development	0.00	0.00
Additional BMPs	0.00	0.00
<b>Total BMPs</b>	3,304.03	824.48
<b>Total Required Reductions and Offsets</b>	2,450.14	322.21
<b>Remainder/(Excess) to Meet Cumulative Reduction Target</b>	(853.89)	(502.27)

<sup>2</sup> BMPs implemented prior to November 1, 2023 are those BMPs reported to DEQ 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 of the permit effective date 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**

	<b>TN (lbs/year)</b>	<b>TP (lbs/year)</b>
<b>Prior to November 1, 2023</b>	47.38	6.75
<b>Additional Planned</b>	To be determined.	To be determined.
<b>Total</b>	47.38	6.75

### 6.2. Shared Credit Projects

The Town will take credit for additional pollutant reductions from the shared credit program with Fairfax County. In addition to Sugarland Run (South), one additional shared credit project will occur within the Town of Herndon. The Town is moving ahead with the restoration of Sugarland Run (North), which will involve approximately 1,200 linear feet of stream and 1,150 linear feet of outfall channel.

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 in the Town’s MS4 annual reports.

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

	<b>TN (lbs/year)</b>	<b>TP (lbs/year)</b>
<b>Prior to November 1, 2023</b>	2,783.20	732.86
<b>Additional Implemented</b>	602.66	248.74
<b>Additional Planned</b>	To be determined.	To be determined.
<b>Total</b>	3,385.86	981.60

6.3. Street Sweeping

The Town anticipates that it will maintain its current program of sweeping 2.12 curb miles per year. 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 sweeps downtown weekly, with approximately 15 weeks of no sweeping during the winter months. This results in approximately 37 passes per year, qualifying for practice SCP-3 from Table 17 of the Expert Panel report. Changes in the level of service will be reported in the Town’s annual reports to DEQ.



**One of the Town’s street sweepers.**

**Table 6.C – Summary of Reductions from Street Sweeping**

	<b>TN (lbs/year)</b>	<b>TP (lbs/year)</b>
<b>Prior to November 1, 2023</b>	0.71	0.17
<b>Additional Planned</b>	Same level of effort.	Same level of effort.
<b>Total</b>	0.71	0.17

6.4. Purchased Off-Site Nutrient Credits

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

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

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

6.5. Stormwater Facilities Installed Between January 2006 and July 2009

The Town will take credit from stormwater facilities installed between January 2006 and July 2009. This credit is calculated once and was previously submitted to DEQ for approval. The Town conducted a comprehensive assessment of all public and private stormwater management facilities in 2020 and 2021 and has verified that these 2006-2009 facilities remain in service.

**Table 6.E – Summary of Reductions from Facilities Installed Between 2006 and 2009**

	<b>TN (lbs/year)</b>	<b>TP (lbs/year)</b>
<b>Prior to November 1, 2023</b>	472.74	84.70
<b>Additional Planned</b>	0.00	0.00
<b>Total</b>	472.74	84.70

6.6. More Stringent Regulation of Land Disturbing Activities

The Town has the option to take credit for pollutant reductions as a result of more stringent regulation of single family residential development. The Town is not currently tracking these projects separately for Chesapeake Bay TMDL compliance. Should the Town decide to take credit, project details will be reported to DEQ in the Town’s MS4 annual reports.

**Table 6.F – Summary of Reductions from More Stringent Regulation**

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

6.7. Additional BMPs

The Town is not currently proposing to take credit for additional BMPs. Any future credit will be reported in the Town’s annual reports to DEQ.

**Table 6.G – Summary of Reductions from Additional BMPs**

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

6.8. Summary of BMPs

Tables 6.H provides a summary of the total implemented and planned reductions as a result of BMPs described in sections 6.1 through 6.7.

**Table 6.H – Summary of BMPs**

<b>BMP</b>	<b>TN (lbs/year)</b>	<b>TP (lbs/year)</b>
Redevelopment	47.38	6.75
Shared Credit Projects	3,385.86	981.60
Street Sweeping	0.71	0.17
Purchased Nutrient Credits	0.00	0.00
2006-2009 Stormwater Facilities	472.74	84.70
More Stringent Development	0.00	0.00
Additional BMPs	0.00	0.00
<b>Total BMPs</b>	<b>3,906.69</b>	<b>1,073.22</b>

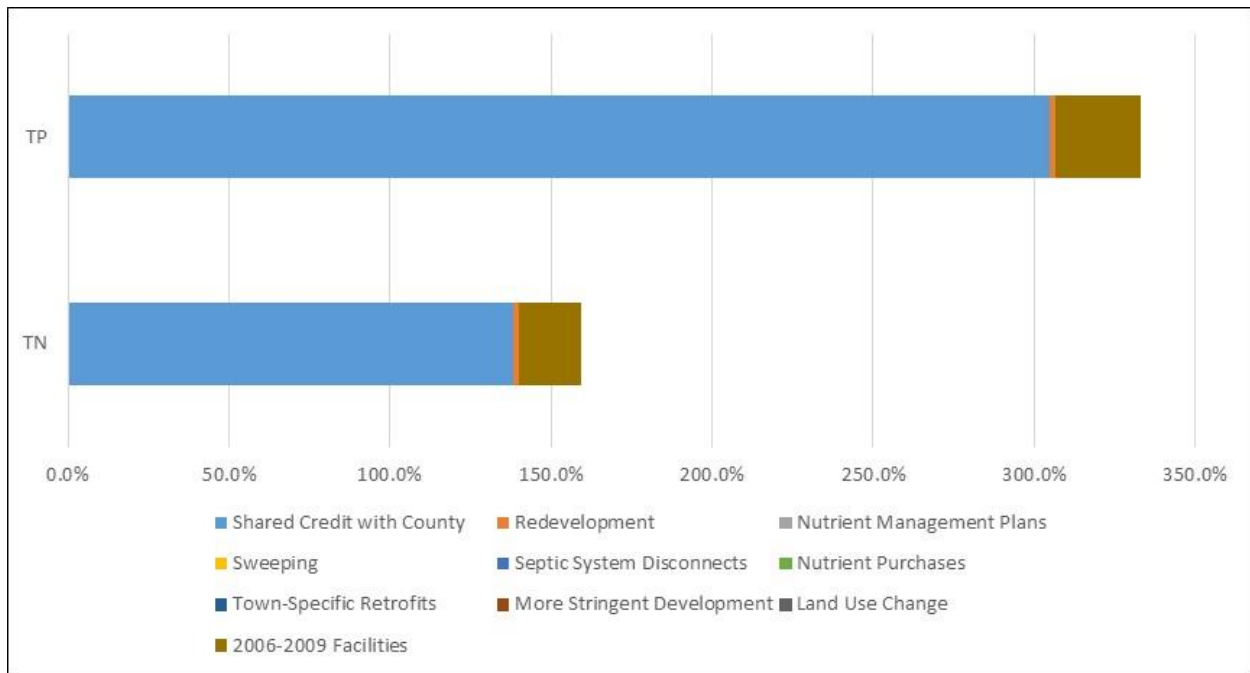
## 7. Overall Compliance Summary

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 – Compliance Summary – Table**

	<b>TN (lbs/year)</b>	<b>TP (lbs/year)</b>
Required Reductions from Existing Sources	2,395.02	314.22
+ New Source Offsets	55.12	7.99
+ Grandfathered Offsets	0.00	0.00
= Total Required Reductions and Offsets	2,450.14	322.21
- Total BMPs from Section 6	3,906.69	1,073.22
<i>Redevelopment</i>	47.38	6.75
<i>Shared Credit Projects</i>	3,385.86	981.60
<i>Street Sweeping</i>	0.71	0.17
<i>Purchased Nutrient Credits</i>	0.00	0.00
<i>2006-2009 Facilities</i>	472.74	84.70
<i>More Stringent Development</i>	0.00	0.00
<i>Additional BMPs</i>	0.00	0.00
= Remainder/(Excess)	(1,456.55)	(751.01)
Progress Toward 100% Target	159.4%	331.1%

**Table 7.B – Compliance Summary – 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 for public comment sent out by social media (Facebook) on October 15, 2024. The deadline for receiving comments was October 30, 2024. No public comments were received. A snapshot of the public notice is provided in Appendix E.

## **Appendix A**

# **Cooperative Agreement with Fairfax County and the Town of Vienna**

**COOPERATIVE AGREEMENT BETWEEN THE FAIRFAX COUNTY 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 8<sup>th</sup> 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 30<sup>th</sup> 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.

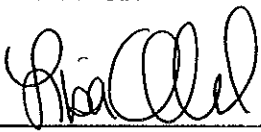
43. This Agreement shall be governed by Virginia law, and any litigation relating to this Agreement shall be brought and/or maintained only in the Circuit Court of Fairfax County, Virginia.

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

**[Signatures appear on the following pages.]**

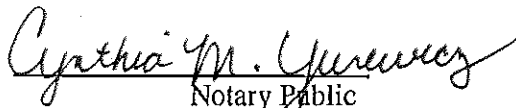


TOWN OF HERNDON

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.

  
Notary Public

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



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  
9<sup>th</sup> day of March 2016  
2017



Susan Stanners Robinson  
Notary Public

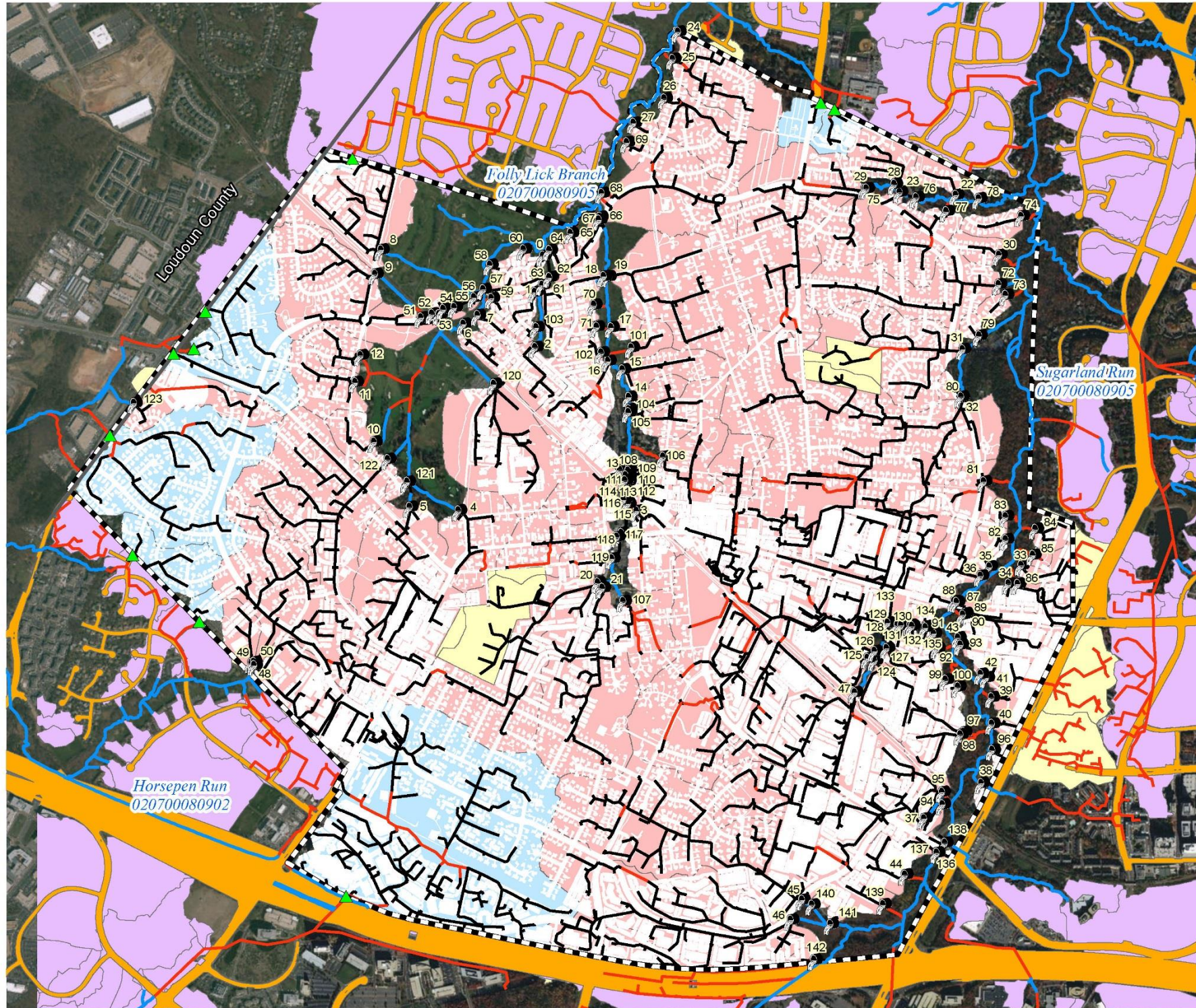
My commission expires: March 31, 2019  
Notary Registration Number: 7642019

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

## **Appendix B**

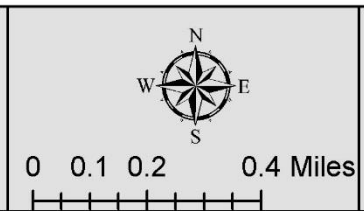
### **Town of Herndon MS4 Service Area Delineation**





ID	Outfall UniqueID	ID	Outfall UniqueID	ID	Outfall UniqueID
0	Sufl0006.OF02	48	HCHC0020.OF01	96	Susu0041.OF26
1	Sufl0006.OF07	49	HCHC0020.OF03	97	Susu0041.OF23
2	Sufl0006.OF09	50	HCHC0020.OF02	98	Susu0041.OF24
3	Sufl0008.OF26	51	Sufl0007.OF15	99	Susu0041.OF18
4	Sufl0007.OF08	52	Sufl0007.OF14	100	Susu0041.OF19
5	Sufl0007.OF10	53	Sufl0007.OF13	101	Sufl0008.OF09
6	Sufl0007.OF02	54	Sufl0007.OF12	102	Sufl0008.OF08
7	Sufl0007.OF01	55	Sufl0007.OF11	103	Sufl0006.OF08
8	Sufl0006.OF15	56	Sufl0006.OF14	104	Sufl0008.OF13
9	Sufl0007.OF16	57	Sufl0006.OF12	105	Sufl0008.OF14
10	Sufl0007.OF06	58	Sufl0006.OF11	106	Sufl0008.OF15
11	Sufl0007.OF05	59	Sufl0006.OF13	107	Sufl0009.OF04
12	Sufl0007.OF04	60	Sufl0006.OF10	108	Sufl0008.OF16
13	Sufl0008.OF17	61	Sufl0006.OF06	109	Sufl0008.OF18
14	Sufl0008.OF12	62	Sufl0006.OF04	110	Sufl0008.OF20
15	Sufl0008.OF11	63	Sufl0006.OF05	111	Sufl0008.OF19
16	Sufl0008.OF10	64	Sufl0006.OF03	112	Sufl0008.OF21
17	Sufl0008.OF07	65	Sufl0006.OF01	113	Sufl0008.OF23
18	Sufl0008.OF04	66	Sufl0008.OF01	114	Sufl0008.OF22
19	Sufl0008.OF03	67	Sufl0008.OF02	115	Sufl0008.OF25
20	Sufl0009.OF02	68	Sufl0004.OF06	116	Sufl0008.OF24
21	Sufl0009.OF03	69	Sufl0004.OF05	117	Sufl0008.OF27
22	Susu0034.OF02	70	Sufl0008.OF05	118	Sufl0008.OF28
23	Susu0034.OF05	71	Sufl0008.OF06	119	Sufl0009.OF01
24	Sufl0004.OF01	72	Susu0038.OF02	120	Sufl0007.OF03
25	Sufl0004.OF02	73	Susu0038.OF03	121	Sufl0007.OF09
26	Sufl0004.OF03	74	Susu0033.OF01	122	Sufl0007.OF07
27	Sufl0004.OF04	75	Susu0034.OF07	123	HCHC0017.OF01
28	Susu0034.OF06	76	Susu0034.OF04	124	Susu0041.OF13
29	Susu0034.OF08	77	Susu0034.OF03	125	Susu0041.OF12
30	Susu0038.OF01	78	Susu0034.OF01	126	Susu0041.OF11
31	Susu0039.OF02	79	Susu0039.OF01	127	Susu0041.OF10
32	Susu0039.OF04	80	Susu0039.OF03	128	Susu0041.OF08
33	Susu0040.OF06	81	Susu0040.OF01	129	Susu0041.OF09
34	Susu0040.OF08	82	Susu0040.OF04	130	Susu0041.OF07
35	Susu0040.OF09	83	Susu0040.OF02	131	Susu0041.OF06
36	Susu0040.OF10	84	Susu0040.OF03	132	Susu0041.OF05
37	Susu0043.OF02	85	Susu0040.OF05	133	Susu0041.OF04
38	Susu0044.OF01	86	Susu0040.OF07	134	Susu0041.OF02
39	Susu0041.OF22	87	Susu0040.OF12	135	Susu0041.OF03
40	Susu0041.OF25	88	Susu0040.OF11	136	Susu0043.OF04
41	Susu0041.OF21	89	Susu0040.OF13	137	Susu0043.OF05
42	Susu0041.OF20	90	Susu0040.OF14	138	Susu0043.OF06
43	Susu0041.OF15	91	Susu0041.OF01	139	Susu0043.OF08
44	Susu0043.OF07	92	Susu0041.OF16	140	Susu0043.OF10
45	Susu0043.OF11	93	Susu0041.OF17	141	Susu0043.OF09
46	Susu0043.OF13	94	Susu0043.OF03	142	Susu0043.OF12
47	Susu0041.OF14	95	Susu0043.OF01		

MS4 Inteconnection	VDOT MS4	County MS4, County Responsibility
MS4 Outfall	Streams	Flows to County MS4, Town Responsibility
Impervious Area	Hydrologic Connections	Town MS4, Town Responsibility
Town of Herndon	Storm Sewer	Other County Responsibility (Schools; Flow from County to Town MS4)



**Town of Herndon**  
**Town MS4 Responsibility**  
 - 2355.5 Acres  
 - 1064.2 Impervious Acres



# Appendix C

## List of BMPs Implemented Prior to November 1, 2023

All calculations and supporting documentation were included in the initial Chesapeake Bay TMDL Action Plan and/or MS4 annual reports provided to DEQ.

### Redevelopment

#### Redevelopment Pre-2014

Redevelopment Project	TN Credit	TP Credit	TSS Credit	Year
Wiygul Automotive	0.58	0.18	78.90	2011
Dranesville Road Median Improvements	18.26	2.65	1,241.48	2012
Van Buren Street Median Improvements	2.46	0.36	167.47	2010

#### Redevelopment Post-FY2014

Redevelopment Project	TN Credit	TP Credit	TSS Credit	Year
Fairfax Connector Bus Facility	12.58	1.70	1,707.07	2016
Junction Square	7.74	0.39		2016
Virginia Tire and Auto	1.47	0.41	200.10	2019
Residences at The Station	2.10	0.57	133.02	2019
Herndon Centre	2.19	0.49	298.30	2019

### Street Sweeping

Street Sweeping Calculations				Year	Centerline Miles	Curb Miles					
<b>Notes:</b> Updated calculation based on 2019 DEQ guidance. Must be vacuum assisted sweeper and utilize efficiencies from the Expert Panel Report (May 19, 2016). The Town sweeps downtown weekly, with ~15 weeks of no sweeping during the winter. This results in ~37 passes per year, qualifying for practice SCP-3 from Table 17 of the Expert Panel report.				FY18	0	-					
				FY19	0	-					
				FY20	1.06	2.12					
				FY21	1.06	2.12					
				FY22	1.06	2.12					
				FY23	1.06	2.12					
				FY24	1.06	2.12					
				FY25	1.06	2.12					
				FY26	1.06	2.12					
				FY27	1.06	2.12					
				FY28	1.06	2.12					
				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	-	-	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
TP	-	-	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
TSS	-	-	273.15	273.15	273.15	273.15	273.15	273.15	273.15	273.15	273.15

**2006-2009 Facilities**

<b>Eligible 2006-2009 Facility</b>	<b>TN Credit</b>	<b>TP Credit</b>	<b>TSS Credit</b>
Dry Extended Detention Ponds	3.51	0.51	716.75
Infiltration Practices w/o Sand, Veg.	34.97	5.39	2,824.19
Dry Extended Detention Ponds	15.15	2.20	3,091.55
Dry Detention Ponds and Hydrodynamic Structures	2.86	0.83	389.18
Infiltration Practices w/o Sand, Veg.	18.80	2.90	1,518.26
StormFilter	3.10	0.71	422.14
Bioretention C/D soils, underdrain	0.93	0.24	138.61
Dry Extended Detention Ponds	1.52	0.22	309.45
StormFilter	35.29	8.05	4,809.05
StormFilter	14.85	3.39	2,022.99
Dry Detention Ponds and Hydrodynamic Structures	1.97	0.57	267.74
Bioretention C/D soils, underdrain	8.18	2.14	1,224.45
Dry Detention Ponds and Hydrodynamic Structures	4.97	1.44	675.26
Infiltration Practices w/o Sand, Veg.	2.34	0.36	189.18
StormFilter	0.47	0.11	63.90
Bioretention C/D soils, underdrain	0.05	0.01	6.87
Bioretention C/D soils, underdrain	0.58	0.15	86.88
Bioretention C/D soils, underdrain	0.46	0.12	68.57
Bioretention C/D soils, underdrain	0.01	0.00	1.72
Bioretention C/D soils, underdrain	0.33	0.09	48.90
Bioretention C/D soils, underdrain	1.75	0.46	262.33
Bioretention C/D soils, underdrain	0.00	0.00	0.14
Bioretention C/D soils, underdrain	0.01	0.00	1.64
Dry Detention Ponds and Hydrodynamic Structures	0.99	0.29	135.11
Dry Detention Ponds and Hydrodynamic Structures	0.04	0.01	5.60
StormFilter	31.16	7.11	4,246.24
Dry Detention Ponds and Hydrodynamic Structures	0.01	0.00	1.79
Dry Detention Ponds and Hydrodynamic Structures	3.86	1.12	525.22
Bioretention C/D soils, underdrain	3.31	0.86	495.33
Bioretention C/D soils, underdrain	0.01	0.00	1.18
Bioretention C/D soils, underdrain	0.00	0.00	0.49
Bioretention C/D soils, underdrain	0.67	0.18	100.52
Bioretention C/D soils, underdrain	1.57	0.41	235.04
Bioretention C/D soils, underdrain	0.38	0.10	56.51
Bioretention C/D soils, underdrain	2.25	0.59	336.93
Bioretention C/D soils, underdrain	0.00	0.00	0.47
Bioretention C/D soils, underdrain	0.87	0.23	129.74
Infiltration Practices w/o Sand, Veg.	22.77	3.51	1,838.80
StormFilter	20.34	4.64	2,771.79
Infiltration Practices w/o Sand, Veg.	232.38	35.78	18,764.70

## 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	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
TN	1679.46	1902.80	2238.24	2344.32	2595.66	2783.21	2783.21	2783.21	2783.21	2783.21	2783.21
TP	377.27	436.83	549.32	599.66	675.40	732.86	732.86	732.86	732.86	732.86	732.86
TSS	140928.12	162458.34	197894.38	211426.15	238257.26	253325.02	253325.02	253325.02	253325.02	253325.02	253325.02

### Total Cumulative County-Wide Credit

Pollutant	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 (Update with Most Recent Cumulative Data from County)

Pollutant	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 (Update with Most Recent Cumulative Data from County)

Pollutant	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 (Update with Most Recent Cumulative Data from County)

Pollutant	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

Final Phase III Town of Herndon Chesapeake Bay TMDL Action Plan

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
Shrewewood 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
Fred's 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

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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

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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
<b>TOTAL CREDIT</b>								<b>10685.18</b>	<b>1039.64</b>			<b>1503.89</b>	<b>158.69</b>	<b>9166.24</b>	<b>879.93</b>
										<b>Fairfax Credit</b>				<b>8460.44</b>	<b>812.18</b>
										<b>Herndon Credit</b>				<b>384.98</b>	<b>36.96</b>
										<b>Vienna Credit</b>				<b>320.82</b>	<b>30.80</b>

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&039 ODP)	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	38.76631588 95432	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	38.82340860 31456	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
Tyson's 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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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)
											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

Final Phase III Town of Herndon Chesapeake Bay TMDL Action Plan

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

Final Phase III Town of Herndon Chesapeake Bay TMDL Action Plan

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
<b>TOTAL CREDIT</b>									<b>57140.17</b>	<b>17149.03</b>			<b>7929.67</b>	<b>981.63</b>	<b>49189.39</b>	<b>16097.66</b>
											<b>Fairfax Credit</b>				<b>45401.81</b>	<b>14858.14</b>
											<b>Herndon Credit</b>				<b>2065.95</b>	<b>676.10</b>
											<b>Vienna Credit</b>				<b>1721.63</b>	<b>563.42</b>

In-Lake Forebay Projects

Project	Substantial Completion	Drainage Area (ac)	Impervious Area (ac)	Lake Volume [VI] (ac-ft)	Forebay area volume [Vf](ac-ft)	In-Lake Volume [Vlf] (ac-ft)	Vol Between 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)	
<b>Barton (Dredging &amp; Forebay)</b>	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	
<b>Huntsman</b>	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	
<b>Woodglen</b>	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	
<b>Royal Lake</b>	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	
<b>Barton (Dredge/Enh F.Bay)</b>	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	
<b>TOTAL</b>											<b>7911.18</b>	<b>471.46</b>	
											<b>Fairfax Credit</b>	<b>7302.02</b>	<b>435.16</b>
											<b>Herndon Credit</b>	<b>332.27</b>	<b>19.80</b>
											<b>Vienna Credit</b>	<b>276.89</b>	<b>16.50</b>

## **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.

### 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
<b>Shared Credit Projects</b>											
TN	1,679.47	1,902.80	2,238.25	2,344.32	2,595.66	2,783.20	3,385.86	3,385.86	3,385.86	3,385.86	3,385.86
TP	377.27	436.83	549.32	599.65	675.40	732.86	981.60	981.60	981.60	981.60	981.60
TSS	140,928.12	162,458.34	197,894.37	211,426.15	238,257.27	253,325.02	344,962.00	344,962.00	344,962.00	344,962.00	344,962.00
<b>Redevelopment</b>											
TN	41.62	47.38	47.38	47.38	47.38	47.38	47.38	47.38	47.38	47.38	47.38
TP	5.28	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75
TSS	3,194.92	3,826.34	3,826.34	3,826.34	3,826.34	3,826.34	3,826.34	3,826.34	3,826.34	3,826.34	3,826.34
<b>Nutrient Management Plans</b>											
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	-	-	-	-	-	-	-	-	-
TSS	-	-	-	-	-	-	-	-	-	-	-
<b>Sweeping</b>											
TN	-	-	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
TP	-	-	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
TSS	-	-	273.15	273.15	273.15	273.15	273.15	273.15	273.15	273.15	273.15
<b>Septic System Disconnects</b>											
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	-	-	-	-	-	-	-	-	-
TSS	-	-	-	-	-	-	-	-	-	-	-
<b>Nutrient Purchases</b>											
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	-	-	-	-	-	-	-	-	-
TSS	-	-	-	-	-	-	-	-	-	-	-
<b>Town-Specific Retrofits</b>											
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	-	-	-	-	-	-	-	-	-
TSS	-	-	-	-	-	-	-	-	-	-	-
<b>More Stringent Development</b>											
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	-	-	-	-	-	-	-	-	-
TSS	-	-	-	-	-	-	-	-	-	-	-
<b>Landuse Conversion</b>											
TN	-	-	-	-	-	-	-	-	-	-	-
TP	-	-	-	-	-	-	-	-	-	-	-
TSS	-	-	-	-	-	-	-	-	-	-	-
<b>2006-2009 Facilities</b>											
TN	472.74	472.74	472.74	472.74	472.74	472.74	472.74	472.74	472.74	472.74	472.74
TP	84.70	84.70	84.70	84.70	84.70	84.70	84.70	84.70	84.70	84.70	84.70
TSS	48,785.23	48,785.23	48,785.23	48,785.23	48,785.23	48,785.23	48,785.23	48,785.23	48,785.23	48,785.23	48,785.23
<b>Total Reductions</b>											
TN	2,193.83	2,422.92	2,759.08	2,865.15	3,116.49	3,304.03	3,906.69	3,906.69	3,906.69	3,906.69	3,906.69
TP	467.25	528.28	640.94	691.27	767.02	824.48	1,073.22	1,073.22	1,073.22	1,073.22	1,073.22
TSS	192,908.27	215,069.91	250,779.09	264,310.87	291,141.99	306,209.74	397,846.72	397,846.72	397,846.72	397,846.72	397,846.72

**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	
					<b>Subtotal:</b>		<b>30.40</b>	<b>11.77</b>	<b>18.63</b>	<b>51.39</b>	<b>5.59</b>	<b>4,542.68</b>			<b>10.94</b>	<b>1.63</b>	<b>1,339.67</b>	<b>40.45</b>	<b>3.96</b>	<b>3,203.01</b>	
																	<b>Fairfax Credit</b>	<b>92.3%</b>	<b>37.34</b>	<b>3.66</b>	<b>2,956.38</b>
																	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





Final Phase III Town of Herndon Chesapeake Bay TMDL Action Plan


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
				<b>Subtotal:</b>	<b>3410.46</b>	<b>1120.75</b>	<b>2289.72</b>	<b>22864.79</b>	<b>15495.51</b>	<b>5928.63</b>	<b>2324465.08</b>			<b>1,428.67</b>	<b>194.39</b>	<b>128,502.35</b>	<b>14,308.35</b>	<b>5,918.52</b>	<b>2,178,629.87</b>
															<b>Fairfax Credit</b>	<b>92.3%</b>	<b>13,206.61</b>	<b>5,462.79</b>	<b>2,010,875.37</b>
															<b>Herndon Credit</b>	<b>4.2%</b>	<b>600.95</b>	<b>248.58</b>	<b>91,502.45</b>
															<b>Vienna Credit</b>	<b>3.5%</b>	<b>500.79</b>	<b>207.15</b>	<b>76,252.05</b>

# Appendix E

## Public Comments




No public comments were received on the final Phase III plan by the October 30, 2024 deadline. A snapshot of the public notice on social media is provided below.




 **Town of Herndon Government**   
October 15 at 1:28 PM ·  

The town's draft plan to reduce pollutants entering the Chesapeake Bay is now online. Feedback is appreciated! Please provide comments by October 30th, to publicworks@[herndon-va.gov](mailto:publicworks@herndon-va.gov): 

HERNDON-VA.GOV  
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1 comment

 Like       Comment       Share

  **Town of Herndon Government**   
"Access denied" is a Facebook quirk. The link works, and your review and feedback are appreciated!

2w Like Reply

