Town of Vienna, Virginia

Final Phase III Chesapeake Bay TMDL Action Plan

A stream with rocks and trees

Description automatically generated**October 10, 2024 – Public Comment Draft**



**Town of Vienna**

**Department of Public Works**

**127 Center Street, South**

**Vienna, Virginia 22180**

**A red and white logo

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**WSP USA Earth & Environment**

**Chantilly, Virginia**

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

**CERTIFICATION**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
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| Name |  | Title |  | Date |

**Final Phase III Chesapeake Bay TMDL Action Plan**

**Town of Vienna, Virginia**

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**Acronyms and Terms**

| Acronym | Explanation | Definition |
| --- | --- | --- |
| BANCS | Bank Assessment for Non-Point Source Consequences of Sediment | A methodology used to assess streambank erosion and predict future erosion rates. Used to estimate pollutant reductions from stream restoration projects. |
| BMP | Best Management Practice | Structural or non-structural techniques used to reduce pollution at its source or to capture and treat stormwater runoff. |
| DEQ | Virginia Department of Environmental Quality | The state regulatory agency responsible for issuance of VPDES permits. |
| IDDE | Illicit Discharge Detection and Elimination | An IDDE plan is developed and implemented to identify and eliminate illicit discharges to the MS4. |
| MCM | Minimum Control Measures | Minimum measures that must be implemented to reduce and eliminate sources of pollution. There are six MCMs in the Town’s MS4 VPDES permit. |
| MS4 | Municipal Separate Storm Sewer System | A conveyance or system of conveyances that is owned and/or operated by a public entity. |
| NMP | Nutrient Management Plan | A BMP to reduce the amount of fertilizer while ensuring that adequate nutrients are available to maintain healthy turf and other vegetation. |
| TMDL | Total Maximum Daily Load | The maximum amount of a pollutant that can enter a water body without violating water quality standards. |
| TN | Total Nitrogen | One of three primary pollutants affecting the health of the Chesapeake Bay for which WLAs have been established. |
| TP | Total Phosphorus | One of three primary pollutants affecting the health of the Chesapeake Bay for which WLAs have been established. |
| TSS | Total Suspended Solids | Generally interchangeable with sediment for pollutant reduction purposes. One of three primary pollutants affecting the health of the Chesapeake Bay for which WLAs have been established. |
| VESMA | Virginia Erosion and Stormwater Management Act | The state law that requires land disturbing activities to meet certain performance standards for construction and post-construction. The state law is implemented through the Virginia Erosion and Stormwater Management Regulation (9VAC25-875-10 *et seq*). |
| VPDES | Virginia Pollutant Discharge Elimination System | The permit issued to an entity that allows for the discharge of stormwater to waters of the state under prescribed conditions. The Town of Vienna holds a VPDES permit for its MS4. |
| USEPA | United States Environmental Protection Agency | The federal agency responsible for environmental regulation and enforcement. |
| WLA | Wasteload Allocation | The portion of a receiving water’s loading capacity that is allocated to a specific source (such as an MS4). |

**Final Phase III Chesapeake Bay TMDL Action Plan**

**Town of Vienna, Virginia**



# Introduction

## Purpose

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

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

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

A TMDL for the Chesapeake Bay was established by the U.S. Environmental Protection Agency in 2010. Pollutants of concern (POCs) identified for the Chesapeake Bay include total nitrogen (TN), total phosphorus (TP), and total suspended solids (TSS). The 2023 MS4 permit removes TSS from the definition of POC (Part II A 2) and from the pollutant reduction requirements (Part II A 3). Virginia has adopted a Watershed Implementation Plan (WIP) that establishes the framework for meeting the Chesapeake Bay TMDL. The Virginia WIP states that MS4 permit holders will implement a phased approach for meeting required reductions over three five-year permit cycles in accordance with the following: 5% by the end of the first permit cycle (June 30, 2018); 40% by the end of the second permit cycle (2023); and, 100% by the end of the third permit cycle (2028).

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

## Cooperative Approach to Implementation

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

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

## Summary of Required Reductions and BMPs to Achieve Reductions

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

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

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

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

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

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

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

|  | **Total Nitrogen (lbs/year)** | **Total Phosphorus (lbs/year)** |
| --- | --- | --- |
| Required Reductions from Existing Sources | 1,962.31 | 230.62 |
| + New Source Offsets | 18.19 | 2.64 |
| + Grandfathered Offsets | 51.34 | 7.44 |
| = Total Required Reductions and Offsets | 2,031.85 | 240.70 |
| - BMPs Prior to November 1, 2023 | 2,754.32 | 668.95 |
| - BMPs November 1, 2023 and On (Implemented) | 532.32 | 214.46 |
| - BMPs November 1, 2023 and On (Planned) | To be determined. | To be determined. |
| = Total BMPs Implemented | 3,286.64 | 883.41 |
| Final Remainder/(Excess) | (1,254.79) | (642.71) |
| Achieved Toward 2028 Target | 161.8% | 367.0% |

## Permit Compliance Crosswalk

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

Table 1.B – Action Plan and Permit Compliance Crosswalk

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

# Program and Legal Authority

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

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

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

| **Minimum Control Measure** | **MS4 Program Plan Elements Related to Controlling  Nitrogen and Phosphorus** |
| --- | --- |
| Public Education and Outreach on Stormwater Impacts | The Town’s MS4 Public Education and Outreach Plan identifies Chesapeake Bay nutrients as one of its three high-priority pollutants for the focus of the Town’s public education program. Actions include:   * At least once annually, distribute information on proper fertilizing techniques using one of the following: (1) seasonally appropriate press release; (2) article in the Vienna Voice newsletter; (3) message in the Town Calendar; or, (4) message in the quarterly residential water bill. * At least once annually, include a message about the proper use and application of fertilizers using a social media platform. * In FY26, mail information to HOA and condominium contacts about proper use and application of fertilizers and how to ensure contractors are using water friendly practices. |
| Public Involvement and Participation | The Town has designed a program to involve the public in the decision-making process by meeting all public notice requirements and to provide an opportunity for public involvement to improve water quality and support local restoration and clean-up projects. |
| Illicit Discharge Detection and Elimination | The Town has integrated into its MS4 Program Plan an Illicit Discharge Detection and Elimination Program. This program includes preventing, identifying, and eliminating sources of pollutants, including total nitrogen and total phosphorus. |
| Construction Site Stormwater Runoff Control | The Town’s construction site stormwater runoff control program is fully consistent with the requirements of the Virginia Erosion and Stormwater Management Act and its attendant regulations. The Town Code (Chapter 23, Environmental Controls) was most recently updated June 3, 2024. |
| Post-Construction Stormwater Management | The Town’s post-construction stormwater runoff control program is fully consistent with the requirements of the Virginia Erosion and Stormwater Management Act and its attendant regulations. The Town Code (Chapter 23, Environmental Controls) was most recently updated June 3, 2024. |
| Pollution Prevention and Good Housekeeping for Municipal Operations | The Town has included in its MS4 Program Plan actions to meet the pollution prevention and good housekeeping requirements for municipal operations. This includes implementing SWPPPs for the Northside Property Yard and Nutley Street Maintenance Yard, employee training, and ensuring proper staff and contractor certifications for erosion and sediment control. |

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

# 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.

## MS4 Service Area Delineation Methodology

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

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

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

* *Town MS4 Draining to the County MS4 Through a Pipe:* Any pollutant loading from the Town’s MS4 that drains through a pipe or other conveyance to the County’s MS4 is the responsibility of the Town up-flow of the interconnection.
* *County MS4 Draining to the Town MS4 Through a Pipe:* Any pollutant loading from the County’s MS4 that drains through a pipe or other conveyance to the Town’s MS4 is the responsibility of the County up-flow of the interconnection.
* *Town Sheetflow Draining to the County MS4:*  Any pollutant loading from an area of the Town that sheet flows across jurisdictional boundaries to the County’s MS4 is the responsibility of the Town within the Town’s boundary.
* *County Sheetflow Draining to the Town MS4:* Any pollutant loading from an area of the County that sheet flows across jurisdictional boundaries to the Town’s MS4 is the responsibility of the County within the County’s boundary.
* *Fairfax County Public Schools Property:*  Fairfax County Public Schools is covered under the County’s MS4 permit. Any pollutant loading from property owned by Fairfax County Public Schools within the Town is not the responsibility of the Town.

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

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

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

## Pervious and Impervious Surface Delineation Methodology

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

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

## Reduction Requirements

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

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

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

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

## New Source Offset

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

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

## Grandfathered Projects Offset

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

3.6 Total Reduction and Offset Requirements

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

Table 3.B – Total Reduction and Offset Requirements

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

# Overall Strategy for Achieving Reductions

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

## Redevelopment

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



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



## Shared Credit Projects

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

## Street Sweeping

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

## 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.

## More Stringent Regulation of Land Disturbing Activities

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



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

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

## Additional BMPs

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

# BMPs Implemented Prior to November 1, 2023

Part II A 12 b (3) and (4) of the 2023 MS4 permit requires the Town to provide a list of the BMPs implemented prior to November 1, 2023[[1]](#footnote-2) to achieve the reductions. The list of BMPs, including the date of implementation and the reductions achieved, is included in Appendix C.

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

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

| **BMPs** | **TN (lbs/year)** | **TP (lbs/year)** |
| --- | --- | --- |
| Redevelopment | 98.90 | 15.95 |
| Shared Credit Projects | 2,319.34 | 610.72 |
| Street Sweeping | 0.00 | 0.12 |
| Purchased Nutrient Credits | 0.00 | 0.00 |
| More Stringent Development | 336.08 | 42.16 |
| Additional BMPs | 0.00 | 0.00 |
| **Total BMPs** | 2,754.32 | 668.95 |
| **Total Required Reductions and Offsets** | 2,031.85 | 240.70 |
| **Remainder/(Excess) To Meet Cumulative Reduction Target** | (722.47) | (428.25) |

# BMPs Implemented and Planned After November 1, 2023

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

## Redevelopment

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

Table 6.A – Summary of Reductions from Redevelopment

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

## Shared Credit Projects

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

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

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

## Street Sweeping

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

Table 6.C – Summary of Reductions from Street Sweeping

|  | **TN (lbs/year)** | **TP (lbs/year)** |
| --- | --- | --- |
| **Prior to November 1, 2023** | 0.00 | 0.12 |
| **Additional Planned** | Same level of effort. | Same level of effort. |
| **Total** | 0.00 | 0.12 |

## Purchased Off-Site Nutrient Credits

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

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

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

## More Stringent Regulation of Land Disturbing Activities

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

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

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

## Additional BMPs

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

Table 6.F – Summary of Reductions from Additional BMPs

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

## Summary of BMPs

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

Table 6.G – Summary of BMPs

| **BMP** | **TN (lbs/year)** | **TP (lbs/year)** |
| --- | --- | --- |
| Redevelopment | 98.90 | 15.95 |
| Shared Credit Projects | 2,821.54 | 818.01 |
| Street Sweeping | 0.00 | 0.12 |
| Purchased Nutrient Credits | 0.00 | 0.00 |
| More Stringent Development | 366.20 | 49.33 |
| Additional BMPs | 0.00 | 0.00 |
| **Total BMPs** | **3,286.64** | **883.41** |

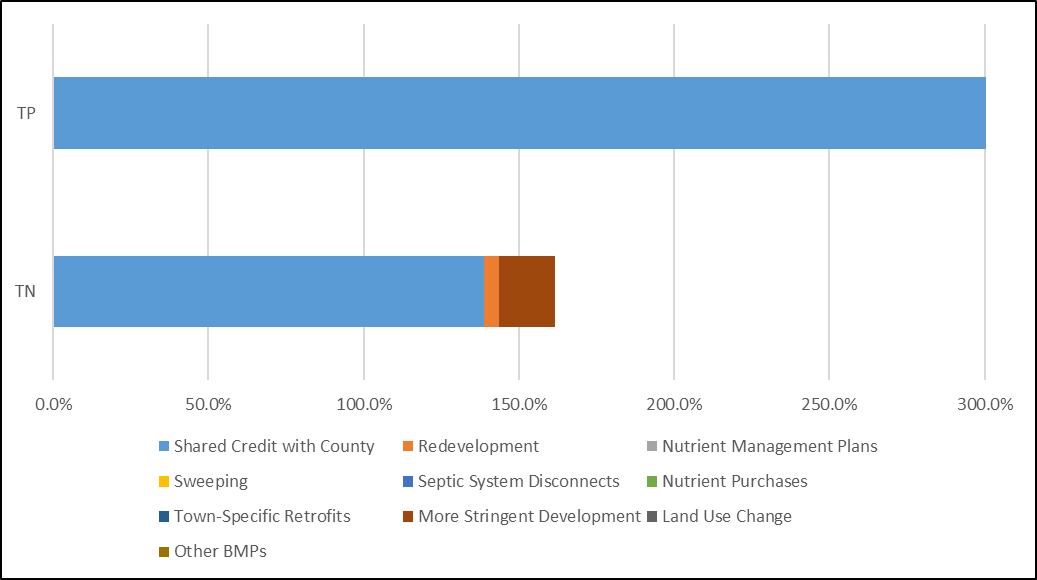
# Overall Compliance Ledger

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

Table 7.A – Overall Compliance Ledger – Table

|  | **TN (lbs/year)** | **TP (lbs/year)** |
| --- | --- | --- |
| Required Reductions from Existing Sources | 1,962.31 | 230.62 |
| + New Source Offsets | 18.19 | 2.64 |
| + Grandfathered Offsets | 51.34 | 7.44 |
| = Total Required Reductions and Offsets | 2,031.85 | 240.70 |
| - Total BMPs from Section 6 | 3,286.64 | 883.41 |
| *Redevelopment* | 98.90 | 15.95 |
| *Shared Credit Projects* | 2,821.54 | 818.01 |
| *Street Sweeping* | 0.00 | 0.12 |
| *Purchased Nutrient Credits* | 0.00 | 0.00 |
| *More Stringent Development* | 366.20 | 49.33 |
| *Additional BMPs* | 0.00 | 0.00 |
| = Remainder/(Excess) | (1,254.79) | (642.71) |
| Progress Toward 100% Target | 161.8% | 367.0% |

Table 7.B – Overall Compliance Ledger – Chart



# Public Comments

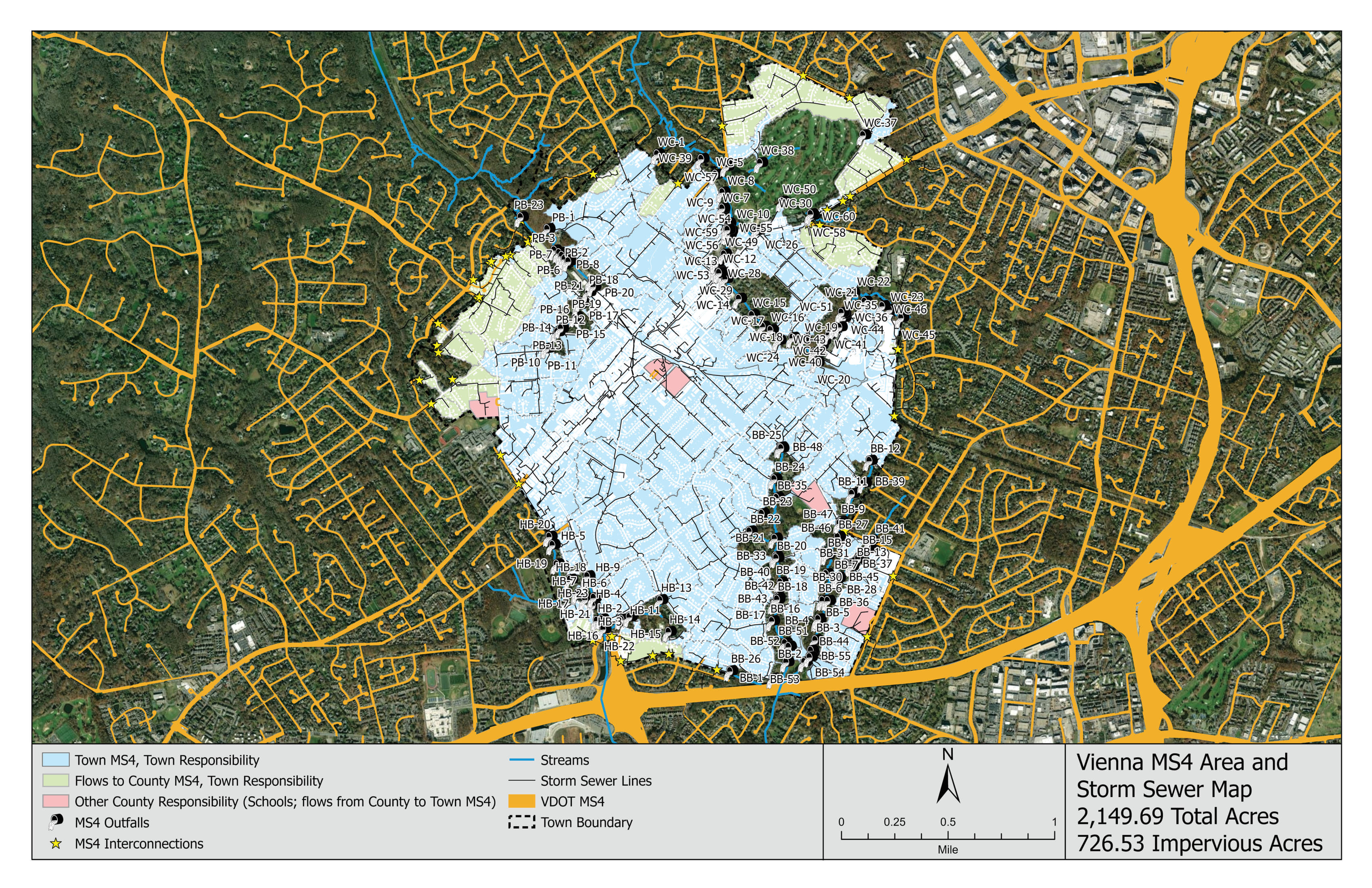
The Town is required to provide an opportunity for public comment on new components of this plan in accordance with Part II A 13 of the 2023 MS4 permit. The final Phase III plan was posted to the Town’s website on October X, 2024. The deadline for receiving comments was October X, 2024. A snapshot of the public notice and a summary of comments received, the Town’s response, any public meetings to address public concerns, and any revisions made to the plan as a result of public participation are provided in Appendix E.

**Appendix A**

**Cooperative Agreement with Fairfax County and the   
Town of Herndon**

**Appendix B**

**Town of Vienna MS4 Service Area Delineation**



**Appendix C**

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

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

**Redevelopment**

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



**Street Sweeping**

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



**More Stringent Development**

FY2015 Structural Facilities



FY2015 Purchased Credit



FY2016 Structural Facilities



FY2016 Purchased Credit



FY2017 Structural Facilities



FY2017 Purchased Credit



FY2018 Structural Facilities



FY2018 Purchased Credit



FY2019 Structural Facilities



FY2019 Purchased Credit



FY2020 Structural Facilities



FY2020 Purchased Credit



FY2021 Structural Facilities



FY2021 Purchased Credit



FY2022 Structural Facilities



FY2022 Purchased Credit



FY2023 Structural Facilities and Purchased Credit



**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.



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 |
| Springhill Rec Center | 7/15/2011 | -77.227473 | 38.940809 | Filtering Practices | 0.10 | 0.10 | 0.00 | 0.67 | 0.10 | CBP Established Efficiency, Filtering Practices | 0% | 0.00 | 0.00 | 0.67 | 0.10 |
| Springhill Rec Center | 7/15/2011 | -77.228336 | 38.940650 | Permeable Pavement | 0.40 | 0.40 | 0.00 | 3.78 | 0.45 | CBP Retrofits Expert Panel, RR, 0.95 inches of runoff treated | 0% | 0.00 | 0.00 | 3.78 | 0.45 |
| Springhill Rec Center | 7/15/2011 | -77.227463 | 38.942894 | Extended Detention Pond | 14.10 | 8.04 | 6.06 | 29.48 | 1.55 | CBP Established Efficiency, Dry Extended Detention Ponds | 0% | 0.00 | 0.00 | 29.48 | 1.55 |
| Sequoia Section 2 Pond 1 | 8/1/2011 | -77.440837 | 38.850177 | Extended Detention Pond | 92.25 | 30.00 | 62.25 | 169.90 | 7.41 | CBP Established Efficiency, Dry Extended Detention Ponds | Note 2 | 0.00 | 0.00 | 169.90 | 7.41 |
| Shrevewood Parking Lot Retrofit | 8/18/2011 | -77.205410 | 38.889235 | Permeable Pavement | 0.72 | 0.53 | 0.19 | 6.12 | 0.65 | CBP Retrofits Expert Panel, RR, 0.97 inches of runoff treated |  | 0.00 | 0.00 | 6.12 | 0.65 |
| Bryant Towne Court | 9/15/2011 | -77.078668 | 38.765543 | Extended Detention Pond | 2.62 | 0.94 | 1.68 | 4.91 | 0.22 | CBP Established Efficiency, Dry Extended Detention Ponds | 0% | 0.00 | 0.00 | 4.91 | 0.22 |
| Barton Place Pond Retrofit (DEL 2011) | 12/13/2011 | -77.332450 | 38.806626 | Wet Pond | 65.92 | 24.39 | 41.53 | 219.05 | 23.46 | CBP Retrofits Expert Panel, ST, 0.51 inches of runoff treated | 29% | 13.07 | 0.95 | 205.98 | 22.51 |
| Patriot Village Sec 2 | 2/2/2012 | -77.221133 | 38.822246 | Extended Detention Pond | 75.00 | 42.75 | 32.25 | 156.83 | 8.25 | CBP Established Efficiency, Dry Extended Detention Ponds | 5% | 3.29 | 0.36 | 153.54 | 7.89 |
| Villa D'Este Village Sec 3 | 5/18/2012 | -77.288275 | 38.867642 | Extended Detention Pond | 14.70 | 5.88 | 8.82 | 28.19 | 1.31 | CBP Established Efficiency, Dry Extended Detention Ponds | 3% | 0.38 | 0.04 | 27.81 | 1.27 |
| Reston Section 41 - Basin Retrofit | 6/19/2012 | -77.356305 | 38.973989 | Extended Detention Pond | 19.54 | 4.30 | 15.24 | 33.89 | 1.32 | CBP Established Efficiency, Dry Extended Detention Ponds | 0% | 0.00 | 0.00 | 33.89 | 1.32 |
| Government Center Stormwater Retrofit | 6/29/2012 | -77.353366 | 38.853269 | Constructed Wetland | 4.28 | 3.12 | 1.16 | 25.59 | 3.46 | CBP Retrofits Expert Panel, ST, 2.5 inches of runoff treated | Note 2 | 0.00 | 0.00 | 25.59 | 3.46 |
| Government Center Stormwater Retrofit | 6/29/2012 | -77.355078 | 38.852334 | Constructed Wetland | 45.35 | 25.85 | 19.50 | 236.26 | 29.29 | CBP Retrofits Expert Panel, ST, 1.39 inches of runoff treated | Note 2 | 0.00 | 0.00 | 236.26 | 29.29 |
| Sheffield Hunt Outfall and Basin | 6/30/2012 | -77.201799 | 38.708821 | Extended Detention Pond | 29.25 | 13.02 | 16.23 | 57.44 | 2.77 | CBP Established Efficiency, Dry Extended Detention Ponds | 83% | 25.81 | 2.29 | 31.63 | 0.49 |
| Waples Mill ES Phase II | 8/8/2012 | -77.345172 | 38.875711 | Permeable Pavement | 0.82 | 0.71 | 0.11 | 8.28 | 0.93 | CBP Retrofits Expert Panel, RR, 1.92 inches of runoff treated |  | 0.00 | 0.00 | 8.28 | 0.93 |
| Great Falls Nike Park #4 | 11/1/2012 | -77.324875 | 38.992132 | Infiltration | 0.95 | 0.90 | 0.05 | 12.54 | 1.26 | CBP Established Efficiency, Infiltration Practices w/o Sand, Veg. | 0% | 0.00 | 0.00 | 12.54 | 1.26 |
| Great Falls Nike Park #4 | 11/1/2012 | -77.324875 | 38.992132 | Dry Swale | 0.40 | 0.09 | 0.31 | 2.95 | 0.21 | CBP Retrofits Expert Panel, RR, 2 inches of runoff treated | 0% | 0.00 | 0.00 | 2.95 | 0.21 |
| Great Falls Nike Park #4 | 11/1/2012 | -77.324875 | 38.992132 | Infiltration | 1.89 | 1.79 | 0.10 | 24.95 | 2.50 | CBP Established Efficiency, Infiltration Practices w/o Sand, Veg. | 0% | 0.00 | 0.00 | 24.95 | 2.50 |
| Marymead Section 1 & 2 | 12/14/2012 | -77.362382 | 38.842760 | Constructed Wetland | 50.20 | 6.53 | 43.67 | 174.43 | 14.20 | CBP Retrofits Expert Panel, ST, 0.75 inches of runoff treated | 92% | 33.24 | 2.75 | 141.19 | 11.45 |
| Fairfax County Landbay C, Pond #4 | 3/20/2013 | -77.355287 | 38.852875 | Constructed Wetland | 16.99 | 9.25 | 7.74 | 93.23 | 11.37 | CBP Retrofits Expert Panel, ST, 2.31 inches of runoff treated | Note 2 | 0.00 | 0.00 | 93.23 | 11.37 |
| Fair Woods, Section 9, Pond 2 | 4/10/2013 | -77.386090 | 38.877209 | Extended Detention Pond | 26.99 | 14.91 | 12.08 | 55.95 | 2.91 | CBP Established Efficiency, Dry Extended Detention Ponds | 0% | 0.00 | 0.00 | 55.95 | 2.91 |
| Brentwood West | 6/19/2013 | -77.365386 | 38.837887 | Extended Detention Pond | 35.27 | 9.52 | 25.75 | 62.97 | 2.60 | CBP Established Efficiency, Dry Extended Detention Ponds | 5% | 1.21 | 0.12 | 61.76 | 2.48 |
| Noman Cole Plant Rain Garden | 6/21/2013 | -77.207250 | 38.702400 | Bioretention | 0.62 | 0.24 | 0.38 | 4.57 | 0.39 | CBP Retrofits Expert Panel, RR, 1.08 inches of runoff treated | 0% | 0.00 | 0.00 | 4.57 | 0.39 |
| Regional SWM Pond D-31 | 6/24/2013 | -77.314594 | 38.892094 | Extended Detention Pond | 331.11 | 116.20 | 214.91 | 618.49 | 27.64 | CBP Established Efficiency, Dry Extended Detention Ponds | 39% | 90.75 | 7.00 | 527.74 | 20.64 |
| Lewinsville Park Stormwater Enhancements | 11/6/2013 | -77.188827 | 38.928566 | Dry Swale | 0.20 | 0.17 | 0.03 | 2.22 | 0.22 | CBP Established Efficiency, Bioswale | 0% | 0.00 | 0.00 | 2.22 | 0.22 |
| Lewinsville Park Stormwater Enhancements | 11/6/2013 | -77.191301 | 38.928092 | Bioretention | 0.90 | 0.74 | 0.16 | 7.95 | 0.88 | CBP Retrofits Expert Panel, RR, 0.97 inches of runoff treated | 0% | 0.00 | 0.00 | 7.95 | 0.88 |
| Lewinsville Park Stormwater Enhancements | 11/6/2013 | -77.190595 | 38.928332 | Bioretention | 1.30 | 1.10 | 0.20 | 11.25 | 1.25 | CBP Retrofits Expert Panel, RR, 0.88 inches of runoff treated | 0% | 0.00 | 0.00 | 11.25 | 1.25 |
| Freds Oak Bioretention | 12/16/2013 | -77.318822 | 38.788203 | Bioretention | 1.33 | 0.91 | 0.42 | 12.38 | 1.28 | CBP Retrofits Expert Panel, RR, 1.91 inches of runoff treated | 0% | 0.00 | 0.00 | 12.38 | 1.28 |
| Autumnwood Park SWM Regional Pond (0333DP) | 12/16/2013 | -77.356305 | 38.973989 | Constructed Wetland | 171.30 | 27.60 | 143.70 | 286.86 | 36.27 | CBP Established Efficiency, Wet Ponds and Wetlands | 36% | 43.19 | 3.86 | 243.67 | 32.41 |
| South Run Rec Center | 12/17/2013 | -77.275056 | 38.751328 | Permeable Pavement | 0.31 | 0.31 | 0.00 | 3.29 | 0.39 | CBP Retrofits Expert Panel, RR, 1.85 inches of runoff treated | 0% | 0.00 | 0.00 | 3.29 | 0.39 |
| South Run Rec Center | 12/17/2013 | -77.276122 | 38.748113 | Infiltration | 0.66 | 0.66 | 0.00 | 8.90 | 0.91 | CBP Established Efficiency, Infiltration Practices w/o Sand, Veg. | 0% | 0.00 | 0.00 | 8.90 | 0.91 |
| South Run Rec Center | 12/17/2013 | -77.276162 | 38.748209 | Permeable Pavement | 0.28 | 0.28 | 0.00 | 1.78 | 0.21 | CBP Retrofits Expert Panel, RR, 0.41 inches of runoff treated | 0% | 0.00 | 0.00 | 1.78 | 0.21 |
| Royal Court Section 1(0002DP) | 12/20/2013 | -77.199064 | 38.824586 | Extended Detention Pond | 78.00 | 54.60 | 23.40 | 173.43 | 9.80 | CBP Established Efficiency, Dry Extended Detention Ponds | 1% | 0.68 | 0.07 | 172.75 | 9.73 |
| Stuart Road Park | 1/13/2014 | -77.362697 | 38.979666 | Dry Swale | 0.70 | 0.31 | 0.39 | 5.95 | 0.53 | CBP Retrofits Expert Panel, RR, 2.5 inches of runoff treated | 0% | 0.00 | 0.00 | 5.95 | 0.53 |
| Towlston Meadow (0371DP) | 4/4/2014 | -77.265751 | 38.949846 | Constructed Wetland | 26.00 | 8.00 | 18.00 | 47.42 | 7.12 | CBP Established Efficiency, Wet Ponds and Wetlands | 0% | 0.00 | 0.00 | 47.42 | 7.12 |
| Springfield Forest Schupps Addition Pond 1115DP Retrofit (FX8000-AC010) | 5/23/2014 | -77.165459 | 38.777259 | Constructed Wetland | 4.67 | 1.17 | 3.50 | 21.88 | 2.08 | CBP Retrofits Expert Panel, ST, 2.5 inches of runoff treated | 2% | 0.14 | 0.02 | 21.74 | 2.06 |
| Sequoia Park Pond Retrofit(0705DP) | 6/23/2014 | -77.181129 | 38.807051 | Constructed Wetland | 144.00 | 65.00 | 79.00 | 283.71 | 48.19 | CBP Established Efficiency, Wet Ponds and Wetlands | 0% | 0.00 | 0.00 | 283.71 | 48.19 |
| Oak Marr Rec Center Stormwater Enhancements (DF87-0006) | 8/1/2014 | -77.316279 | 38.874842 | Bioretention | 0.95 | 0.75 | 0.20 | 5.38 | 0.58 | CBP Retrofits Expert Panel, RR, 0.4 inches of runoff treated | 0% | 0.00 | 0.00 | 5.38 | 0.58 |
| Crosspointe Sec 15 Pd 15A (0775DP) | 8/23/2014 | -77.264266 | 38.721316 | Constructed Wetland | 11.99 | 5.70 | 6.29 | 58.37 | 6.80 | CBP Retrofits Expert Panel, ST, 1.23 inches of runoff treated | 3% | 0.25 | 0.02 | 58.12 | 6.78 |
| Mount Vernon High School Practice Field | 9/3/2014 | -77.093643 | 38.728426 | Infiltration | 1.64 | 1.64 | 0.00 | 22.12 | 2.26 | CBP Established Efficiency, Infiltration Practices w/o Sand, Veg. | 0% | 0.00 | 0.00 | 22.12 | 2.26 |
| Oakton Library | 9/15/2014 | -77.302299 | 38.883608 | Permeable Pavement | 0.37 | 0.25 | 0.12 | 3.52 | 0.36 | CBP Retrofits Expert Panel, RR, 2.5 inches of runoff treated | 0% | 0.00 | 0.00 | 3.52 | 0.36 |
| Oakton Library | 9/15/2014 | -77.301820 | 38.883805 | Bioretention | 0.91 | 0.67 | 0.24 | 3.43 | 0.53 | CBP Established Efficiency, Bioretention C/D soils, underdrain | 0% | 0.00 | 0.00 | 3.43 | 0.53 |
| Oakton Library | 9/15/2014 | -77.301959 | 38.883783 | Infiltration | 0.50 | 0.42 | 0.08 | 6.31 | 0.61 | CBP Established Efficiency, Infiltration Practices w/o Sand, Veg. | 0% | 0.00 | 0.00 | 6.31 | 0.61 |
| Indian Run Stream Restoration | 9/26/2014 | -77.150551 | 38.801685 | Bioretention | 0.04 | 0.04 | 0.00 | 0.48 | 0.06 | CBP Retrofits Expert Panel, RR, 2.5 inches of runoff treated | 100% | 0.07 | 0.01 | 0.41 | 0.04 |
| Indian Run Stream Restoration | 9/26/2014 | -77.149489 | 38.799744 | Bioretention | 0.13 | 0.13 | 0.00 | 1.40 | 0.16 | CBP Retrofits Expert Panel, RR, 1.91 inches of runoff treated | 0% | 0.20 | 0.03 | 1.20 | 0.13 |
| Indian Run Stream Restoration | 9/26/2014 | -77.149373 | 38.799692 | Bioretention | 0.09 | 0.09 | 0.00 | 0.73 | 0.09 | CBP Retrofits Expert Panel, RR, 0.67 inches of runoff treated | 100% | 0.13 | 0.02 | 0.59 | 0.06 |
| Indian Run Stream Restoration | 9/26/2014 | -77.150102 | 38.801270 | Bioretention | 0.16 | 0.16 | 0.00 | 1.50 | 0.18 | CBP Retrofits Expert Panel, RR, 1.03 inches of runoff treated | 100% | 0.24 | 0.04 | 1.26 | 0.14 |
| Indian Run Stream Restoration | 9/26/2014 | -77.150568 | 38.802292 | Bioretention | 0.15 | 0.15 | 0.00 | 1.50 | 0.18 | CBP Retrofits Expert Panel, RR, 1.18 inches of runoff treated | 100% | 0.23 | 0.04 | 1.27 | 0.14 |
| Indian Run Stream Restoration | 9/26/2014 | -77.152795 | 38.803319 | Bioretention | 0.10 | 0.10 | 0.00 | 1.02 | 0.12 | CBP Retrofits Expert Panel, RR, 1.16 inches of runoff treated | 100% | 0.16 | 0.03 | 0.87 | 0.09 |
| 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 |
| 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 |
| 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&0390DP) | 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&0390DP) | 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 |
| 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 |
| 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 |
| 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 |
| Peyton Run @ Longwood Knolls | 6/27/2022 | -77.275278 | 38.762889 | Constructed Wetland | 133.82 | 41.75 | 92.07 | 375.18 | 38.10 | CBP Retrofits Expert Panel, ST curve, for 0.4 inches of runoff | 49% | 57.80 | 6.95 | 317.38 | 31.15 |
| Nutley Pond @ Virginia Center | 11/14/2022 | -77.268687 | 38.87994 | Dredging to restore pond volume | 749.00 | 253.20 | 495.80 | 963.04 | 100.23 | CBP Retrofits Expert Panel, ST curve, for 0.3 inches of runoff | 87% | 603.67 | 73.67 | 359.37 | 26.56 |
| Mt Vernon Government Center | 11/11/2022 | -77.077567 | 38.74202 | Bioretention | 1.73 | 1.04 | 0.69 | 6.12 | 0.89 | CBPEE, Bioretention | 0% | - | - | 6.12 | 0.89 |
| Mt Vernon Government Center | 11/11/2022 | -77.077697 | 38.742013 | MTD | 0.36 | 0.36 | - | 1.59 | 0.29 | CBP Retrofits, 0.5" runoff credit | 0% | - | - | 1.59 | 0.29 |
| Mt Vernon Government Center | 11/11/2022 | -77.078051 | 38.741954 | Grass Channel | 2.80 | 1.87 | 0.93 | 4.09 | 0.34 | CBPEE, Grass Channel | 0% | - | - | 4.09 | 0.34 |
| Mt Vernon Government Center | 11/11/2022 | -77.078193 | 38.741413 | Bioretention | 1.65 | 1.32 | 0.33 | 6.39 | 1.02 | CBPEE, Bioretention | 0% | - | - | 6.39 | 1.02 |
| Mt Vernon Government Center | 11/11/2022 | -77.076445 | 38.742194 | MTD | 0.66 | 0.35 | 0.31 | 2.36 | 0.35 | CBP Retrofits, 0.5" runoff credit | 0% | - | - | 2.36 | 0.35 |
| Mt Vernon Government Center | 11/11/2022 | -77.0744 | 38.7433 | Bioretention | 1.47 | 0.94 | 0.53 | 5.30 | 0.78 | CBP Retrofits, 0.5" runoff credit | 0% | - | - | 5.30 | 0.78 |
| Crosspointe Pond Improvements | 2/1/2023 | -77.251923 | 38.731306 | Forebay / Micropools | 104.14 | 32.80 | 71.34 | 106.58 | 10.86 | CBP Retrofits, ST curve, 0.1" runoff | 39% | 42.00 | 4.28 | 64.58 | 6.58 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **TOTAL CREDIT** |  |  |  |  |  |  |  | **10685.18** | **1039.64** |  |  | **1503.89** | **158.69** | **9166.24** | **879.93** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | **Fairfax Credit** |  |  |  | **8460.44** | **812.18** |
|  |  |  |  |  |  |  |  |  |  | **Herndon Credit** |  |  |  | **384.98** | **36.96** |
|  |  |  |  |  |  |  |  |  |  | **Vienna Credit** |  |  |  | **320.82** | **30.80** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Stream Restoration Projects

| **Project Name** | **Completion** | **Longitude** | **Latitude** | **Type of Project or BMP** | **Treated (Ac)** | **Impervious Treated (Ac)** | **Pervious Treated (Ac)** | **Restored Length (LF)** | **Estimated TN Reduction (lbs/yr)** | **Estimated TP Reduction (lbs/yr)** | **Pollutant Reduction Calculation Method** | **% Treated Area Outside Regulated Area** | **Baseline Reduction for TN (lb/yr)** | **Baseline Reduction for TP (lb/yr)** | **Bay Credit for TN (lb/yr)** | **Bay Credit for TP (lb/yr)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Dolley Madison Library - Dead Run Stream Restoration | 1/28/2010 | -77.186026 | 38.941846 | Urban Stream Restoration | 527.60 | 236.44 | 291.16 | 1400.00 | 551.60 | 98.12 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1400 LF, Average Stream Bank Height: 5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 10 ft | 11.2% | 46.43 | 4.42 | 505.17 | 93.71 |
| Big Rocky Tributary | 5/26/2010 | -77.44157452 | 38.84903181 | Urban Stream Restoration | 99.95 | 29.21 | 70.74 | 336.00 | 147.29 | 21.19 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 336 LF, Average Stream Bank Height: 4.5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 6.4 ft | 28.6% | 20.90 | 1.76 | 126.39 | 19.44 |
| Bridle Path Stream Restoration | 1/11/2011 | -77.20716113 | 38.94254629 | Urban Stream Restoration | 176.58 | 46.94 | 129.64 | 1650.00 | 841.70 | 138.77 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1650 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 7.82 ft | 56.6% | 77.54 | 7.29 | 764.16 | 131.48 |
| Flatlick Confluence Stream Restoration | 5/18/2011 | -77.47745761 | 38.86298545 | Urban Stream Restoration | 5016.42 | 1938.97 | 3077.45 | 1400.00 | 105.00 | 95.20 | CBP Urban Stream Restoration Interim Approved Removal Rates | 42.1% | 44.21 | 40.08 | 60.80 | 55.12 |
| Schneider Branch Stream Restoration | 5/31/2011 | -77.46708378 | 38.89304233 | Urban Stream Restoration | 1022.20 | 627.48 | 394.72 | 1000.00 | 298.73 | 26.21 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1000 LF, Average Stream Bank Height: 1.87 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 10 ft | 65.2% | 194.77 | 17.09 | 103.96 | 9.12 |
| Hunters Branch | 6/13/2011 | -77.2633 | 38.866006 | Outfall Restoration | 4.14 | 2.78 | 1.36 | 65.00 | 6.13 | 2.82 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 65 LF, Average Stream Bank Height: 65 ft, Sediment Delivery Ratio: 0.181 | 4.8% | 0.27 | 0.04 | 5.86 | 2.78 |
| Villa D'Este Village Sec 3 | 5/18/2012 | -77.28831562 | 38.86771963 | Urban Stream Restoration | 14.64 | 4.43 | 10.21 | 260.00 | 19.50 | 17.68 | CBP Urban Stream Restoration Interim Approved Removal Rates | 1.7% | 0.22 | 0.03 | 19.28 | 17.65 |
| Government Center Stormwater Retrofit | 6/29/2012 | -77.35337445 | 38.85410551 | Urban Stream Restoration | 148.14 | 74.73 | 73.41 | 1000.00 | 345.21 | 65.88 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1000 LF, Average Stream Bank Height: 4.7 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 1 ft | 15.8% | 20.08 | 2.17 | 325.13 | 63.71 |
| Sheffield Hunt Outfall and Basin | 6/30/2012 | -77.202392 | 38.708681 | Outfall Restoration | 32.05 | 16.29 | 15.76 | 940.00 | 70.50 | 63.92 | CBP Urban Stream Restoration Interim Approved Removal Rates | 82.8% | 26.41 | 3.40 | 44.09 | 60.52 |
| Old Gate Court Outfall | 10/11/2012 | -77.206946 | 38.942971 | Outfall Restoration | 4.80 | 1.12 | 3.68 | 392.00 | 47.73 | 21.98 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 392 LF, Average Stream Bank Height: 392 ft, Sediment Delivery Ratio: 0.181 | Note 1 | 0.00 | 0.00 | 47.73 | 21.98 |
| Tripps Run | 3/15/2013 | -77.19481404 | 38.88982444 | Urban Stream Restoration | 256.75 | 78.68 | 178.08 | 1430.00 | 839.32 | 120.27 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 1430 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 12 ft | 12.0% | 24.03 | 2.28 | 815.29 | 117.99 |
| Loft Ridge Outfall | 8/1/2013 | -77.108421 | 38.79514 | Outfall Restoration | 24.68 | 6.98 | 17.70 | 176.00 | 13.20 | 11.97 | CBP Urban Stream Restoration Interim Approved Removal Rates | 0.0% | 0.00 | 0.00 | 13.20 | 11.97 |
| 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 |  |  |  |  |  |
| 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: 0.065; Protocol 2 - Average Stream Bank Width: 5.5 ft | 24.5% | 8.42 | 0.70 | 186.71 | 40.66 |
| Crestleigh Way Outfall Restoration (AC83-0007) | 9/14/2015 | -77.1689987 | 38.7583008 | Outfall Restoration | 14.35 | 4.93 | 9.42 | 105.00 | 11.72 | 5.40 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 70 LF, Average Stream Bank Height: 105 ft, Sediment Delivery Ratio: 0.065 | 0.0% | 0.00 | 0.00 | 11.72 | 5.40 |
| Lenox Drive Outfall Restoration (AC83-0006) | 10/30/2015 | -77.2805023 | 38.8372002 | Outfall Restoration | 16.26 | 5.31 | 10.95 | 100.00 | 29.22 | 13.46 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 120 LF, Average Stream Bank Height: 100 ft, Sediment Delivery Ratio: 0.181 | 1.0% | 0.13 | 0.01 | 29.09 | 13.45 |
| Rainbow Bridge Lane Outfall Restoration (PC83-0003) | 12/15/2015 | -77.2342987 | 38.7363014 | Outfall Restoration | 2.23 | 1.59 | 0.64 | 100.00 | 11.72 | 5.40 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 70 LF, Average Stream Bank Height: 100 ft, Sediment Delivery Ratio: 0.181; Protocol 4: Runoff Depth Treated: 0.05in | 11.9% | 0.25 | 0.03 | 11.47 | 5.37 |
| 5216 Inverchapel Rd (AC83-0003) | 12/21/2015 | -77.23000389 | 38.80915889 | Outfall Restoration | 35.64 | 15.85 | 19.79 | 175.00 | 20.24 | 9.32 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 175 LF, Average Stream Bank Height: 175 ft, Sediment Delivery Ratio: 0.181; Protocol 4: Runoff Depth Treated: 1.16in | 1.6% | 0.32 | 0.08 | 19.92 | 9.24 |
| Colony Park Sec 1 Rec Center Lower PD (PC9131/0175DP&0390DP) | 5/22/2016 | -77.298105 | 38.798676 | Urban Stream Restoration | 68.65 | 19.31 | 49.34 | 310.00 | 56.61 | 26.07 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 310 LF, Average Stream Bank Height: 6 ft, Sediment Delivery Ratio: 0.181 | 0.0% | 0.00 | 0.00 | 56.61 | 26.07 |
| Accotink Tributary 9210(Wakefield Park South) | 8/17/2016 | -77.2276 | 38.813801 | Urban Stream Restoration | 271.49 | 108.84 | 162.65 | 2700.00 | 4446.74 | 1829.10 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 3484 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 4.55 ft | 67.8% | 156.89 | 16.96 | 4289.85 | 1812.14 |
| Pratt Street Outfall Restoration | 8/30/2016 | -77.1341205619662 | 38.7866248822265 | Outfall Restoration | 89.57 | 42.25 | 47.32 | 108.00 | 28.76 | 13.25 | CBP Urban Stream Restoration Expert Panel: Protocol 1 - Existing Length: 105 LF, Average Stream Bank Height: 9 ft, Sediment Delivery Ratio: 0.181 | 0.7% | 0.20 | 0.07 | 28.56 | 13.18 |
| Hunters Branch Restoration | 10/1/2016 | -77.272799 | 38.887594 | Urban Stream Restoration | 388.72 | 124.83 | 263.89 | 2067.00 | 155.03 | 140.56 | CBP Urban Stream Restoration Interim Approved Removal Rates | 28.0% | 43.41 | 5.84 | 111.62 | 134.71 |
| Accotink Tributary 9232(Wakefield Park North) | 10/6/2016 | -77.225601 | 38.820702 | Urban Stream Restoration | 113.37 | 46.43 | 66.94 | 865.00 | 458.47 | 153.83 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 293 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 1.9 ft | 21.9% | 17.31 | 17.31 | 441.16 | 136.51 |
| Bush Hill Drive | 10/6/2016 | -77.1211662109644 | 38.795642854292 | Urban Stream Restoration | 35.91 | 13.48 | 22.43 | 310.00 | 279.47 | 96.60 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 184 tons/yr, Sediment Delivery Ratio: 0.181 | 1.5% | 0.50 | 0.06 | 278.97 | 96.54 |
| Accotink Tributary at Daventry | 10/25/2016 | -77.209548 | 38.765789 | Urban Stream Restoration | 133.89 | 39.68 | 94.21 | 153.10 | 57.78 | 11.76 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 152.53 LF, Average Stream Bank Height: 5.5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 7.42 ft | 25.3% | 25.15 | 2.18 | 103.32 | 24.86 |
| 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 | -77.2319724441059 | 38.7663158895432 | 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 | -77.2258231378881 | 38.8234086031456 | 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 |  |  |  |  |  |
| Colvin Run Ph I | 8/9/2017 | -77.313468 | 38.964642 | Urban Stream Restoration |  |  |  | 350.00 | 131.06 | 33.08 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 63 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 4 ft |  |  |  |  |  |
| Lazy Creek Outfall Restoration | 8/18/2017 | -77.22583748 | 38.72917459 | Outfall Restoration | 5.37 | 2.48 | 2.88 | 159.00 | 19.36 | 8.92 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 159 LF, Average Stream Bank Height: 4 ft, Sediment Delivery Ratio: 0.181 | 5.5% | 0.23 | 0.02 | 19.13 | 8.89 |
| Tysons Galleria Outfall Restoration | 10/13/2017 | -77.224451 | 38.927591 | Outfall Restoration | 70.07 | 54.09 | 15.98 | 188.47 | 28.92 | 13.32 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 190 LF, Average Stream Bank Height: 5 ft, Sediment Delivery Ratio: 0.181 | 2.4% | 0.70 | 0.32 | 28.22 | 13.00 |
| Turkey Run at Truro | 10/19/2017 | -77.245164 | 38.828326 | Urban Stream Restoration | 259.23 | 67.48 | 191.75 | 3581.50 | 1682.29 | 774.74 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 1,475.69 tons/yr, Sediment Delivery Ratio: 0.181 | 10.9% | 20.72 | 1.77 | 1661.57 | 772.97 |
| Crestmont Circle Outfall Restoration | 11/7/2017 | -77.22942916 | 38.73279478 | Outfall Restoration | 3.61 | 1.20 | 2.41 | 146.00 | 26.44 | 8.94 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 146 LF, Average Stream Bank Height: 4 ft, Sediment Delivery Ratio: 0.181; Protocol 4: Runoff Depth Treated: 0.26in | 34.2% | 0.91 | 0.08 | 25.53 | 8.86 |
| Nottoway Park Retrofit Ph I | 2/15/2018 | -77.189617 | 38.938023 | Outfall Restoration | 47.14 | 16.06 | 31.08 | 248.00 | 57.34 | 12.54 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 18.42 tons/yr, Sediment Delivery Ratio: 0.181; Protocol 4 - Treated Runoff Depth: 0.0626 in | 81.7% | 31.85 | 3.30 | 3.29 | 12.69 |
| Nottoway Park Retrofit Ph I | 2/15/2018 | -77.192597 | 38.937042 | Outfall Restoration | 20.10 | 6.74 | 13.36 | 213.00 | 22.31 | 10.27 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -BANCS Sediment Load Estimate: 19.57 tons/yr, Sediment Delivery Ratio: 0.181 | 77.1% | 12.51 | 1.25 | 9.80 | 9.02 |
| Harvest Green Court Outfall Restoration | 3/27/2018 | -77.353822 | 38.976308 | Outfall Restoration | 33.47 | 10.78 | 22.69 | 402.30 | 60.88 | 28.04 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 400 LF, Average Stream Bank Height: 5 ft, Sediment Delivery Ratio: 0.181 | 30.3% | 7.42 | 0.63 | 53.46 | 27.41 |
| Stone Mill Court Reach 2 | 4/24/2018 | -77.342058 | 38.879321 | Outfall Restoration | 32.96 | 7.76 | 25.20 | 262.79 | 32.02 | 14.75 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 263 LF, Average Stream Bank Height: 4 ft, Sediment Delivery Ratio: 0.181 | 4.3% | 1.02 | 0.08 | 31.01 | 14.66 |
| Flatlick Ph II | 4/26/2018 | -77.434525 | 38.881297 | Urban Stream Restoration | 3331.06 | 1117.71 | 2213.35 | 3560.00 | 3146.99 | 339.22 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 4400 LF, Average Stream Bank Height: 5.5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 46 ft | 37.9% Note 1 | 269.39 | 22.49 | 3257.65 | 378.73 |
| Flatlick Ph II | 4/26/2018 | -77.434525 | 38.881297 | Urban Stream Restoration |  |  |  | 340.00 | 155.43 | 24.25 | CBP Urban Stream Restoration Expert Panel: Protocol 1 -Existing Length: 346 LF, Average Stream Bank Height: 5 ft, Sediment Delivery Ratio: 0.181; Protocol 2 - Average Stream Bank Width: 15 ft |  |  |  |  |  |
| 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 |  |  |  |  |  |
| 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 |
| 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 |
| 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 |
| 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 Stream Bank Width: 1.8 ft, Sediment Delivery Ratio: 0.0651 | 53.9% | 142.34 | 19.70 | 633.00 | 282.20 |
| 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 |
| 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, Protocol 2 - Restored Length 1992 lf, Average Stream Bank Width: 15 ft | 49.3% | 57.80 | 6.95 | 564.44 | 239.38 |
| 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 |
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| **TOTAL CREDIT** |  |  |  |  |  |  |  |  | **57140.17** | **17149.03** |  |  | **7929.67** | **981.63** | **49189.39** | **16097.66** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  | **Fairfax Credit** |  |  |  | **45401.81** | **14858.14** |
|  |  |  |  |  |  |  |  |  |  |  | **Herndon Credit** |  |  |  | **2065.95** | **676.10** |
|  |  |  |  |  |  |  |  |  |  |  | **Vienna Credit** |  |  |  | **1721.63** | **563.42** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

In-Lake Forebay Projects

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

**Appendix D**

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

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

**Summary of All Implemented and Planned BMPs Through FY2028**



**FY2024 Shared Credit Projects**

Structural BMPs and Retrofits

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

Stream Restoration

| **Project Name** | **Substantial  Completion** | **Longitude** | **Latitude** | **Type of Project or BMP** | **Acres Treated (Ac)** | **Imp Acres Treated (Ac)** | **Pervious Acres Treated (Ac)** | **Restored Length (LF)** | **Estimated Amount of Total Pollutant Reduction (lbs/yr)** | | | **Pollutant Reduction Calculation Method** | **% Out of MS4** | **Baseline Reduction Provided for Unregulated Areas (lb/yr)** | | | **Total Credit Received (lb/yr)** | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **TN** | **TP** | **TSS** | **TN** | **TP** | **TSS** | **TN** | **TP** | **TSS** |
| Accotink Trib @ Danbury Forest | 4/9/2024 | 38.802252 | -77.235134 | Urban Stream Restoration | 244 | 73.7 | 170.3 | 2851.79 | 1646.87 | 618.43 | 213210.76 | CBP USREP: P1: BANCS 1,177.96 ton/yr, SDR 0.181, P2: Restored Length 2577 ft, Average Width 7.17 ft | 0.32 | 73.78 | 9.24 | 7,825.70 | 1,573.10 | 609.19 | 205,385.06 |
| Crook Branch @ Mantua Hills | 9/27/2023 | 38.845084 | -77.250742 | Urban Stream Restoration | 827.8 | 287.25 | 540.55 | 3756 | 7325.51 | 2985.74 | 1029370.53 | CBP USREP: P1: BANCS 5,687.13 ton/yr, SDR 0.181, P2: Restored Length 3266 ft, Average Width 7.78 ft | 0.43 | 391.45 | 54.29 | 47,102.79 | 6,934.06 | 2,931.45 | 982,267.74 |
| Popes Head Tributary @ Havenner Road | 4/30/2024 | 38.792348 | -77.354182 | Urban Stream Restoration | 367.9 | 44.1 | 323.8 | 4152 | 1068.51 | 264.36 | 91142.55 | CBP USREP: P1: BANCS 503.55 ton/yr, SDR 0.181, P2: Restored Length 4152 ft, Average Width 5.13 ft | 0.81 | 205.31 | 16.32 | 11,817.05 | 863.20 | 248.05 | 79,325.50 |
| Popes Head Tributary @ Havenner Road Seg2 | 4/30/2024 | 38.791352 | -77.356859 | Urban Stream Restoration | 378.3 | 44.1 | 334.2 | 998 | 211.25 | 27.47 | 27131.21 | CBP USREP: P1: BANCS 255 tons/yr. 0.52 lb/ton TP, 2.8 lb/ton TN, SDR: 0.181 TSS | 0.81 | 219.98 | 17.36 | 12,531.57 | 137.02 | 48.94 | 33,623.43 |
| Rabbit Branch @ Collingham Drive | 10/30/2023 | 38.805317 | -77.292888 | Urban Stream Restoration | 431.4 | 135.9 | 295.5 | 4481 | 3908.5 | 1517.9 | 523314.44 | CBP USREP: P1: BANCS 2,891.24 ton/yr, SDR 0.181, P2: Restored Length 4481 ft, Avg Width 4.12 ft | 0.3 | 133.53 | 17.00 | 14,462.08 | 3,774.98 | 1,500.90 | 508,852.36 |
| Rocky Branch Trib @ Ashlawn Park | 5/30/2024 | 38.898411 | -77.299658 | Urban Stream Restoration | 34.6 | 9.5 | 25.1 | 1529 | 714.64 | 329.11 | 113465.28 | CBP USREP: P1: BANCS 626.88 ton/yr, SDR 0.181 | 0.48 | 28.35 | 2.79 | 2,204.95 | 686.30 | 326.32 | 111,260.33 |
| Schneider Branch Segment 1 @ Sully Road | 9/28/2023 | 38.892995 | -77.444264 | Urban Stream Restoration | 344.8 | 201.02 | 143.78 | 1048 | 180.89 | 32.55 | 11222 | CBP USREP: P1: BANCS 62 ton/yr, SDR 0.181, P2: Restored Length 1048 ft, Average Width 6.34 ft | 0.58 | 104.48 | 18.80 | 6,481.67 | 76.41 | 13.75 | 4,740.33 |
| Rocky Run Tributary @ Dulles Access Road | 9/21/2023 | 38.937639 | -77.241625 | Urban Stream Restoration | 303.62 | 170.94 | 132.68 | 1186 | 217.6 | 50.67 | 17470.12 | CBP USREP: P1: BANCS 96.52 ton/yr, SDR 0.181, P2: Restored Length 875 ft, Average Width 10.5 ft | 0.86 | 186.65 | 43.47 | 14,985.33 | 30.95 | 7.21 | 2,484.79 |
| Madison Meadows Lane | 4/20/2023 | 38.903593 | -77.336358 | Outfall Restoration | 47.8 | 10.52 | 37.28 | 816 | 42.16 | 68.24 | 140704.59 | CBP USREP: P1: BANCS 313.7 tons/yr. 0.97 lb/ton TP, 0.37 lb/ton TN, SDR 0.181 TSS, P5: Prevented Volume 14,280 cf | 0.47 | 18.44 | 1.92 | 1,539.83 | 43.32 | 159.99 | 75,374.67 |
| Wellfleet Court | 12/7/2022 | 38.908469 | -77.168938 | Outfall Restoration | 24.9 | 10.11 | 14.79 | 159 | 11.07 | 3.04 | 17386.21 | CBP USREP: P5 Prevented Volume 28,450 cf, 0.35 lb/ton TP, 0.73 lb/ton TN | 0.32 | 4.48 | 1.13 | 970.40 | 9.40 | 5.53 | 37,057.76 |
| Sorrel Ridge Lane | 11/10/2023 | 38.889493 | -77.334108 | Outfall Restoration | 36.7 | 5.51 | 31.2 | 199 | 4.46 | 0.82 | 4548.11 | CBP USREP: P5 Prevented Volume 6932 cf, 0.36 lb/ton TP, 1.21 lb/ton TN | 0.73 | 4.79 | 1.42 | 1,211.00 | 1.74 | 0.52 | 9,579.81 |
| Montgomery Street | 6/18/2024 | 38.81581 | -77.17924 | Outfall Restoration | 106 | 24 | 82 | 257 | 6.82 | 1.13 | 7071.13 | CBP USREP: P1: BANCS 23.7 tons/yr. 0.32 lb/ton TP, 1.13 lb/ton TN, SDR: 0.181 TSS | 0.15 | 2.05 | 0.58 | 658.22 | 11.34 | 3.21 | 3,631.48 |
| Brawner Street | 9/23/2022 | 38.93134 | -77.167765 | Outfall Restoration | 19.74 | 7.3 | 12.44 | 300 | 32.93 | 10.27 | 33132.47 | CBP USREP: P1: BANCS 62.2 tons/yr. SDR: 0.181 TSS P5: Prevented Volume 8406 cf, 0.62 lb/ton TP, 1.14 lb/ton TN | 0.4 | 7.62 | 0.98 | 838.12 | 33.69 | 21.48 | 20,689.41 |
| Crown Royal Drive | 6/18/2024 | 38.78912 | -77.13714 | Outfall Restoration | 152 | 65.4 | 86.6 | 505 | 27.3 | 3.11 | 18289.46 | CBP USREP: P1: BANCS 61.3 tons/yr. 0.34 lb/ton TP, 1.75 lb/ton TN, SDR 0.061 TSS | 0.35 | 18.53 | 3.60 | 1,291.81 | 35.11 | 6.82 | 2,447.49 |
| Boehms Court | 3/26/2024 | 38.994653 | -77.284452 | Outfall Restoration | 53.9 | 17.3 | 36.6 | 309 | 15.89 | 7.45 | 36332.16 | CBP USREP: P5: Prevented Volume 57,918 cf. 0.41 lb/ton TP, 0.54 lb/ton TN | 0.67 | 15.67 | 3.57 | 2,904.22 | 7.60 | 14.10 | 83,297.22 |
| Bracksford Court | 5/4/2024 | 38.74053 | -77.268386 | Outfall Restoration | 37 | 14.1 | 22.9 | 318 | 81.11 | 8.34 | 40674.06 | CBP USREP: P1: BANCS 112.1 tons/yr. 0.41 lb/ton TP, 1.85 lb/ton TN, SDR: 0.181 TSS | 0.33 | 13.56 | 1.92 | 1,677.61 | 90.13 | 21.06 | 18,612.49 |
|  |  |  |  | **Subtotal:** | **3410.46** | **1120.75** | **2289.72** | **22864.79** | **15495.51** | **5928.63** | **2324465.08** |  |  | **1,428.67** | **194.39** | **128,502.35** | **14,308.35** | **5,918.52** | **2,178,629.87** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **Fairfax Credit** | **92.3%** | **13,206.61** | **5,462.79** | **2,010,875.37** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **Herndon Credit** | **4.2%** | **600.95** | **248.58** | **91,502.45** |
|  | | | |  |  |  |  |  |  |  |  |  |  |  | **Vienna Credit** | **3.5%** | **500.79** | **207.15** | **76,252.05** |

**Appendix E**

**Public Comments**

1. BMPs implemented prior to November 1, 2023 include those BMPs reported to DEQ up through the Town’s FY23 MS4 annual report. [↑](#footnote-ref-2)