



**Annual Report on Financial Assurance Plans and
the Watershed Protection and Restoration
Program
-2018-**

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Prepared for:
Governor Larry Hogan
The Senate Education, Health, and Environmental Affairs Committee
The House Environment and Transportation Committee

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I. Introduction

Maryland's stormwater management (SWM) program includes fiscal reporting requirements for Maryland's 10 Largest urban jurisdictions, which are Baltimore City and Anne Arundel, Baltimore, Carroll, Charles, Frederick, Harford, Howard, Montgomery, and Prince George's counties. One of these reporting requirements, financial assurance plans (FAPs), needs to demonstrate how stormwater restoration projects are going to be funded. These plans, submitted every two years, are to be completed by each National Pollutant Discharge Elimination System (NPDES) Phase I municipal separate storm sewer system (MS4) jurisdiction. The plans must include the following: all actions required to meet MS4 permit requirements; annual and projected 5-year costs and revenues necessary to meet the impervious surface restoration plan (ISRP) requirements; any and all sources of funds used toward meeting MS4 permit requirements; and all specific actions and expenditures undertaken in the previous fiscal years to meet the ISRP requirement.

FAPs due between December 2018 and February 2019 for all 10 jurisdictions are required to demonstrate sufficient funding for meeting 100% of the projected ISRP costs for the 2-year period immediately following the filing of the plan. Local governing bodies are required to hold public hearings and sign the plans for accuracy prior to submitting them to the Maryland Department of the Environment (MDE) for review. The law requires that MDE shall: post FAPs on its website within 14 days of receipt; make a decision regarding the adequacy of these plans within 90 days of receipt; and submit an annual evaluation of these plans to the governor and the General Assembly by Sept. 1 each year.

A second reporting requirement for each MS4 jurisdiction, excluding Montgomery County, is to submit a Watershed Protection and Restoration Program (WPRP) Annual Report on the anniversary date of its MS4 permit. The Annual Report requires the following items:

- The number of properties, if any, subject to a stormwater remediation fee
- Any funding structure developed, if any, including the amount of money collected
- The amount of money deposited into the Watershed Protection and Restoration Fund (WPRF) in the previous fiscal year by source
- The percentage and amount of funds in the WPRF spent on purposes defined in the law
- All SWM projects implemented in the previous fiscal year for the ISRP requirement

This Annual Report on Financial Assurance Plans and the Watershed Protection and Restoration Program, 2018, (FAP Annual Report), fulfills the requirement of § 4-202.1(j)(7), Environment Article of the Annotated Code of Maryland. MDE's Executive Summary is included below, followed by a statewide analysis of BMPs. Next are summaries of each MS4's current implementation status. Because FAPs are only required biennially, implementation updates in this report come from the most recent MS4 annual reports submitted to MDE. Finally, MDE provides a summary of where Maryland's stormwater community stands in relation to milestones and the challenges ahead. The citizens of Maryland, and local, state, and federal partners are commended for their effort in developing and implementing these very important environmental programs for improving local water resources and restoring the Chesapeake Bay.

II. Primary Information

Table 1: Significant Dates for Financial Assurance Plans (FAPs) and Watershed Protection and Restoration Program (WPRP) Annual Reports

| MS4 Jurisdiction | FAP Submission Date | WPRP Annual Report Submission Date | Date of Public Hearing for FAP | FAP Approved by Local Governing Body (Y/N) | MDE Determination of Sufficient Funding (75%) |
|------------------------|---------------------|------------------------------------|--------------------------------|--|---|
| Anne Arundel County | 6/28/2016 | 2/12/2018 | 7/5/2016 | Y | 10/17/2016 |
| Baltimore City | 7/1/2016 | 12/27/2017 | 6/8/2016 | Y | 10/17/2016 |
| Baltimore County | 7/13/2016 | 12/22/2017 | 9/13/2016 | Y | 10/17/2016 |
| Carroll County | 6/30/2016 | 12/15/2017 | 6/9/2016 | Y | 10/17/2016 |
| Charles County | 6/29/2016 | 12/21/2017 | 6/7/2016 | Y | 10/17/2016 |
| Frederick County | 6/28/2016 | 12/29/2017 | 8/15/2016 | Y | 10/17/2016 |
| Harford County | 6/24/2016 | 7/2/2018 | 6/14/2016 | Y | 10/17/2016 |
| Howard County | 7/1/2016 | 12/18/2017 | 6/20/2016 | Y | 10/17/2016 |
| Montgomery County | 7/1/2016 | n/a | 6/14/2016 | Y | 10/17/2016 |
| Prince George's County | 6/30/2016 | 6/18/2018 | 10/11/2016 | Y | 10/17/2016 |

III. Executive Summary

Anne Arundel, Baltimore, Carroll, Charles, Frederick, Harford, Howard, Montgomery, and Prince George’s counties, and Baltimore City submitted comprehensive information on local projects for meeting ISRP requirements, including:

- Upland Practices: wet ponds, swales, infiltration, dry wells, rain gardens, green roofs, permeable pavement, rainwater harvesting, submerged gravel wetlands
- In-Stream Practices: shoreline management, outfall stabilization, stream restoration
- Programmatic Practices: street sweeping, inlet cleaning, storm drain vacuuming

MDE approved each MS4’s impervious acre baseline analysis which sets the 20% level of restoration required under the stormwater permits. MDE also determined that each MS4’s FAP had sufficient revenue for funding at least 75% of the ISRP requirements during state fiscal years (FY) 2017 and 2018.

Current Implementation

- Statewide, the specific actions implemented by the MS4s for meeting ISRP requirements through FY17 are 39% completed (see Table 2).

Table 2: Specific Actions Completed Through FY17 to Meet ISRP Permit Requirements

| MS4 | Impervious Acre (IA) Baseline ¹ | Acres Restored as of | | Restoration Complete ³ |
|------------------------|--|----------------------|-------------------|-----------------------------------|
| | | FY16 ² | FY17 ³ | |
| Anne Arundel County | 5,862 | 912 | 1,680 | 28.7% |
| Baltimore City | 4,291 | 3,624 | 3,953 | 92.1% |
| Baltimore County | 6,036 | 983 | 1,033 | 17.1% |
| Carroll County | 2,032 | 1,247 | 1,369 | 67.4% |
| Charles County | 1,480 | 253 | 310 | 21.0% |
| Frederick County | 2,620 | 161 | 186 | 7.1% |
| Harford County | 2,218 | 453 | 478 | 21.6% |
| Howard County | 2,460 | 1,028 | 1,434 | 58.3% |
| Montgomery County | 3,778 | 1,918 | 2,927 | 77.5% |
| Prince George's County | 6,105 | 225 | 937 | 15.3% |
| Totals: | 36,882 | 10,804 | 14,307 | 38.8% |

1. Updated baseline from FY16 MS4 Annual Reports. All impervious acre baselines have been approved.
2. Restoration data from FY16 MS4 Annual Reports (covering the end of the previous permit term up to June 30, 2016). Some FY16 data has been updated to reflect annual report review findings.
3. Restoration data from FY17 MS4 Annual Reports (covering the end of the previous permit term up to June 30, 2017).

- Overall, the MS4s are projecting completion of 91% of the ISRP requirement by the end of their permits’ 5-year terms.

Closing the Implementation Gap

- The next FAP submittals to MDE, due between December - February FY19, must show how each jurisdiction can fund 100% of its ISRP requirement by the end of its permit term.
- On July 16, 2018, trading regulations were officially adopted that have the potential of lowering MS4 implementation costs through the purchase of less expensive nutrient credits from the agriculture and wastewater treatment sectors.
- MS4s that have projected trading with local wastewater treatment plants in their FAPs have shown that the cost per impervious acre treated can be reduced from \$42,092 to \$25,383 (see Table 3 below).
- While innovative strategies and pollutant trading show great promise in closing the MS4 permit implementation gap, there are other rising costs on the horizon. These include the long-term maintenance of BMPs and the eventual replacement of BMPs (facility life spans average 20 to 30 years). These costs will need to be accounted for in future FAPs.

Table 3: Cost per Acre for Counties With and Without Proposed Trading*

| MS4 | Projected Permit Term Restoration (Acres) ¹ | Cost | Cost per Acre | |
|---------------------|--|--------|------------------|----------|
| Trading Proposed | Anne Arundel County | 4,682 | \$94,117,808 | \$20,102 |
| | Baltimore County | 6,061 | \$148,596,014 | \$24,519 |
| | Charles County | 1,500 | \$34,902,646 | \$23,261 |
| | Frederick County | 746 | \$28,837,574 | \$38,680 |
| | Harford County | 2,279 | \$46,388,000 | \$20,354 |
| Subtotal Trading | | 15,268 | \$352,842,042 | \$25,383 |
| No Proposed Trading | Baltimore City | 4,588 | \$112,040,918 | \$24,420 |
| | Carroll County | 1,964 | \$30,386,235 | \$15,468 |
| | Howard County | 1,745 | \$105,838,122 | \$60,661 |
| | Montgomery County | 3,629 | \$230,814,187 | \$63,604 |
| | Prince George's County | 6,211 | \$287,603,535 | \$46,309 |
| Subtotal No Trading | | 18,137 | \$766,682,997 | \$42,092 |

* Trading regulations to allow for this treatment option were officially adopted on July 16, 2018.

1. Restoration data obtained from the 2016 FAPs. Only 75% funding was required. More restoration and funding will be submitted with the next FAP submissions.

IV. Statewide BMP Analysis

BMPs

MDE has encouraged MS4s to implement a wide range of BMPs that are effective for pollutant removal and meeting restoration requirements. Restoration may be achieved by a suite of practices that fall into one of three general categories: upland, in-stream, and programmatic. Figure 1 shows an analysis of the BMPs being implemented in the 10 Phase I MS4s during the current 5-year permit term. Based on the impervious acres restored, there are similar rates of implementation for programmatic and upland practices, 39% and 38%, respectively, while 23% is being restored through in-stream practices.

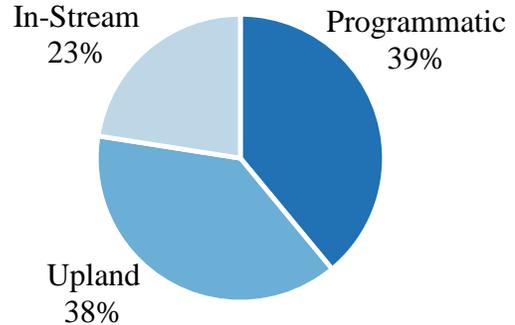


Figure 1: BMP Implementation by Category during the Permit Term (Completed and Projected)

The following is an analysis of the BMP diversity within each category of BMP.

Upland BMPs

- The three groups of upland BMPs with the greatest sum of impervious area treated are ponds (2,628 acres), filtering practices (1,842 acres), and wetlands (1,526 acres).
- Environmental site design (ESD) practices (i.e., micro-scale practices, nonstructural techniques, and alternative surfaces) only account for approximately 3% of the total impervious acres treated in the 10 Phase I MS4s.

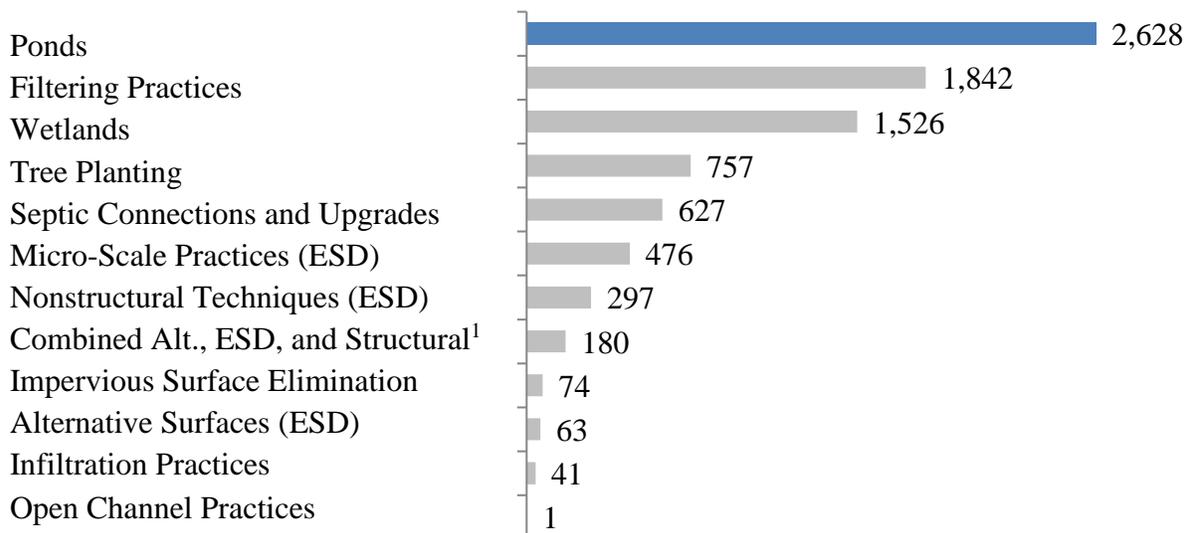


Figure 2: Impervious Acres to be Restored by Upland BMPs*

* Restoration data obtained from FY16 FAPs.

** A total of 3,591 acres of restoration were reported as unspecified upland practices that are part of volunteer, retrofit, conversion, redevelopment, and new BMP projects.

¹ “Combined [Alternative], ESD, and Structural” practices were reported as projects with different combinations of BMPs and could not be separated into individual groups.

In-Stream BMPs

- Stream restoration is the most abundant in-stream practice and accounts for 4,725 acres of restored acres in the 10 jurisdictions. This is equivalent to approximately 15% of the treated impervious acres in the 10 MS4s.

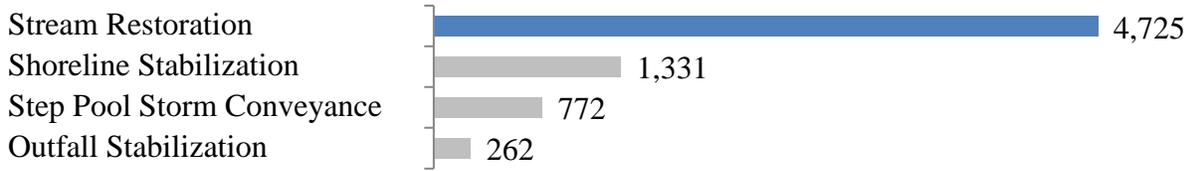


Figure 3: Impervious Acres to be Restored by In-Stream BMPs*

*Restoration data obtained from FY16 FAPs.

Programmatic BMPs

- Street sweeping is the most widely used programmatic BMP and accounts for approximately 6,024 of the impervious acres being treated throughout the 10 MS4s. This is equivalent to 19% of the treated impervious acres in the 10 MS4s.

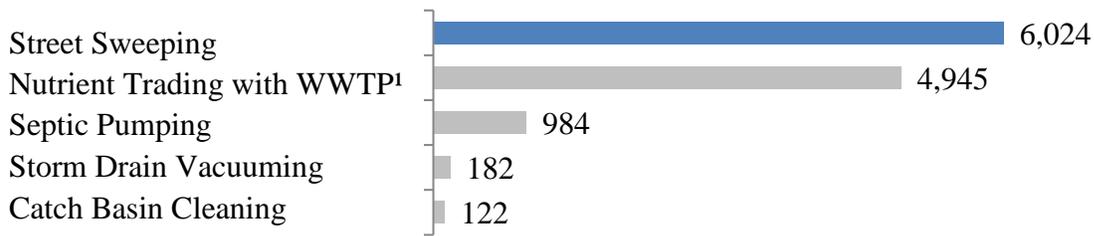


Figure 4: Impervious Acres to be Restored by Programmatic BMPs*

*Restoration data obtained from FY16 FAPs.

1. Trading regulations were officially adopted to allow for this treatment option.

V. County Analyses

Anne Arundel County

Impervious Acre Baseline: 5,862 **Restored Acres:** 1,680 **Remaining Restoration Acres:** 4,182

- Percent of restoration requirement met to date: 29%
- Projected acres to be restored by the county by the end of permit: 4,682
- Projected restoration cost for entire permit term: \$94,117,808
- Cost per acre for completed and projected projects during the entire permit term: \$20,102
- Projected impervious acre restoration requirement met by end of permit term: 80%
- Estimated funding gap to complete MS4 restoration requirements: \$22,959,635

Current Implementation

MDE determined that Anne Arundel County's FAP demonstrated sufficient funding to meet 75% of its projected ISRP costs for FY17 and FY18. The county is required to submit a FAP to MDE on Feb. 12, 2019 that shows sufficient funding for implementing 100% of its ISRP. While the county is still experiencing significant implementation and funding gaps toward meeting 100% of its ISRP, the next FAP should detail how these gaps will be met.



Figure 5: Outfall Stabilization - Anne Arundel County
(Anne Arundel County WPRP)

Baltimore City

Impervious acre baseline: 4,291

Restored acres: 3,953

Remaining Restoration Acres: 338

- Percent of restoration requirement met to date: 92%
- Projected acres to be restored by the city by the end of permit: 4,588
- Projected restoration cost for entire permit term: \$112,040,918
- Cost per acre for completed and projected projects during the entire permit term: \$24,420
- Projected impervious acre requirement met by end of permit term: 107%
- Estimated funding gap to meet MS4 restoration requirements: None

Current Implementation

MDE determined that Baltimore City's FAP demonstrated sufficient funding to meet 75% of its projected ISRP costs for FY17 and FY18. The city is required to submit a FAP to MDE on Dec. 27, 2018 that shows sufficient funding for implementing 100% of its ISRP. The city appears to have the wherewithal to meet 100% of its ISRP, which is attributable to an aggressive street sweeping program.



Figure 6: Micro-Bioretention at Library Square

Baltimore County

Impervious acre baseline: 6,036 **Restored acres:** 1,033 **Remaining Restoration Acres:** 5,003

- Percent of restoration requirement met to date: 17%
- Projected acres to be restored by the county by the end of permit: 6,061
- Projected restoration cost for entire permit term: \$148,596,014
- Cost per acre for completed and projected projects during the entire permit term: \$24,519
- Projected impervious acre requirement met by end of permit term: 100%
- Existing funding gap to meet MS4 restoration requirements: None

Current Implementation

MDE determined that Baltimore County's FAP demonstrated sufficient funding to meet 75% of its projected ISRP costs for FY17 and FY18. While the county appears to have the fiscal wherewithal to meet its ISRP, the county is required to submit a FAP to MDE on Dec. 23, 2018 that confirms sufficient funding for implementing 100% of its ISRP.



Figure 7: Essex Skypark Shoreline Stabilization (Before and After)

Carroll County

Impervious Acre Baseline: 2,032 **Restored Acres:** 1,369 **Remaining Restoration Acres:** 663

- Percent of restoration requirement met to date: 67%
- Projected acres to be restored by the county by the end of permit: 1,964
- Projected restoration cost for entire permit term: \$30,386,235
- Cost per acre for completed and projected projects during the entire permit term: \$15,468
- Projected impervious acre requirement met by end of permit term: 97%
- Existing funding gap to meet MS4 restoration requirements: \$701,923

Current Implementation

MDE determined that Carroll County's FAP demonstrated sufficient funding to meet 75% of its projected ISRP costs for FY17 and FY18. The county has largely met its ISRP through an aggressive stormwater management pond retrofit program. The county is required to submit a FAP to MDE on Dec. 29, 2018 that shows sufficient funding for implementing 100% of its ISRP. This FAP should detail how funding gaps will be reduced.



Figure 8: Westminster Community Pond (Before and After)

Charles County

Impervious Acre Baseline: 1,480 **Restored Acres:** 310 **Remaining Restoration Acres:** 1,170

- Percent of restoration requirement met to date: 21%
- Projected acres to be restored by the county by the end of permit: 1,500
- Projected restoration cost for entire permit term: \$34,902,646
- Cost per acre for completed and projected projects during the entire permit term: \$23,268
- Projected impervious acre requirement met by end of permit term: 101%
- Existing funding gap to meet MS4 restoration requirements: \$3,242,200

Current Implementation

MDE determined that Charles County's FAP demonstrated sufficient funding to meet 75% of its projected ISRP costs for FY17 and FY18. The county is required to submit a FAP to MDE on Dec. 26, 2018 that shows sufficient funding for implementing 100% of its ISRP. While the county is still experiencing a significant implementation and funding gap toward meeting 100% of its ISRP, it continues to explore how alternative strategies may help to increase efficiencies and further drive costs down. The next FAP is expected to detail how these and other projects are expected to meet the restoration requirement while eliminating the funding gap.



Figure 9: Shallow Marsh, Dr. Gustavus Brown Elementary School

Frederick County

Impervious Acre Baseline: 2,620 **Restored Acres:** 186 **Remaining Restoration Acres:** 2,434

- Percent of restoration requirement met to date: 7%
- Projected acres to be restored by the county by the end of permit: 746
- Projected restoration cost for entire permit term: \$28,837,574
- Cost per acre for completed and projected projects during the entire permit term: \$38,860
- Projected impervious acre requirement met by end of permit term: 28%
- Existing funding gap to meet MS4 restoration requirements: \$72,486,320

Current Implementation

MDE determined that Frederick County's FAP demonstrated sufficient funding to meet 75% of its projected ISRP costs for FY17 and FY18. The county is required to submit a FAP to MDE on Dec. 30, 2018 that shows sufficient funding for implementing 100% of its ISRP. While the county is still experiencing a significant implementation and funding gap toward meeting 100% of its ISRP, the next FAP should document increased funding and planning.



Figure 10: Englandtowne Stream Restoration (Before and After)

Harford County

Impervious Acre Baseline: 2,218 **Restored Acres:** 478 **Remaining Restoration Acres:** 1,740

- Percent of restoration requirement met to date: 22%
- Projected acres to be restored by the county by the end of permit: 2,279
- Projected restoration cost for entire permit term: 46,388,000
- Cost per acre for completed and projected projects during the entire permit term: \$20,354
- Projected impervious acre requirement met by end of permit term: 103%
- Existing funding gap to meet MS4 restoration requirements: \$2,920,000

Current Implementation

MDE determined that Harford County's FAP demonstrated sufficient funding to meet 75% of its projected ISRP costs for FY17 and FY18. The county is required to submit a FAP to MDE on Dec. 30, 2018 that shows sufficient funding for implementing 100% of its ISRP. While the county is still experiencing a significant implementation and funding gap toward meeting 100% of its ISRP, it continues to explore how innovative procurement practices may help to increase efficiencies and further drive costs down.



Figure 11: Laurel Valley Restoration
(Harford County Bureau of Stormwater Management)

Howard County

Impervious Acre Baseline: 2,460 **Restored Acres:** 1,434 **Remaining Restoration Acres:** 1,027

- Percent of restoration requirement met to date: 58%
- Projected acres to be restored by the county by the end of permit: 1,745
- Projected restoration cost for entire permit term: \$105,838,122
- Cost per acre for completed and projected projects during the entire permit term: \$60,661
- Projected impervious acre requirement met by end of permit term: 71%
- Existing funding gap to meet MS4 restoration requirements: \$39,471,345

Current Implementation

MDE determined that Howard County's FAP demonstrated sufficient funding to meet 75% of its projected ISRP costs for FY17 and FY18. The county has made significant progress toward meeting its restoration goals through the construction of wet ponds, ESD facilities, filtering practices, and swales. The county is required to submit a FAP to MDE on Dec. 18, 2018 that not only shows a reduced funding gap but also details sufficient funding for implementing 100% of its ISRP.

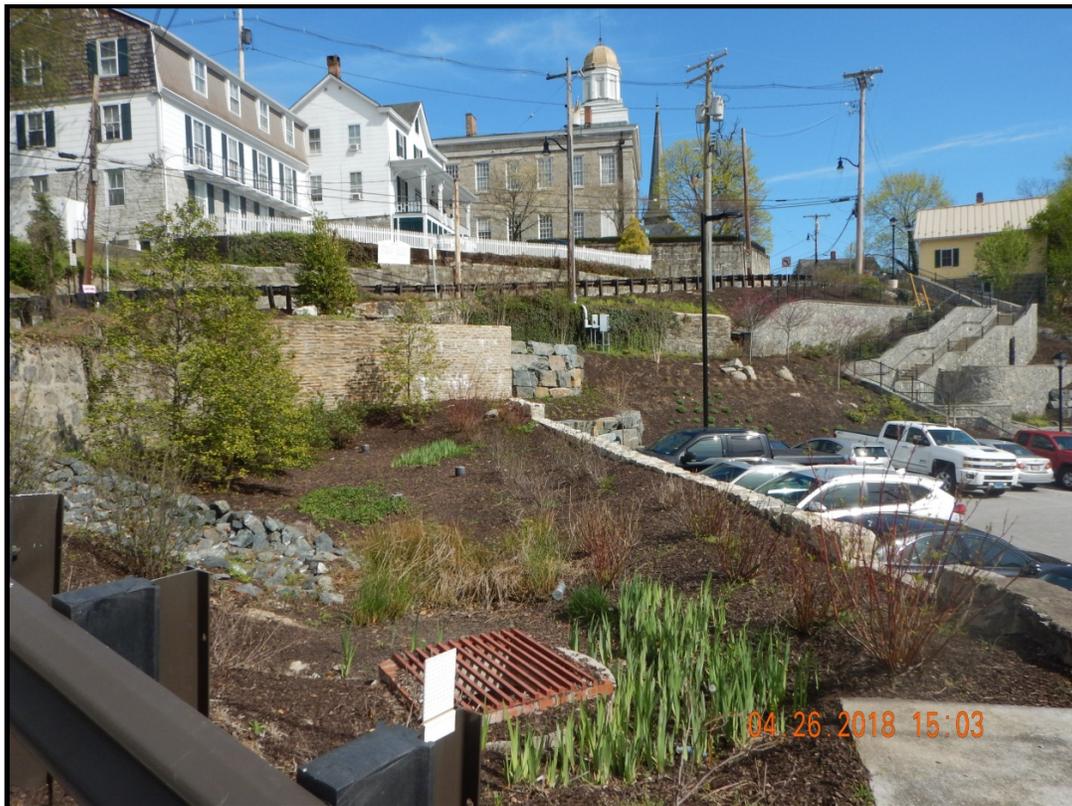


Figure 12: Bioretention in Ellicott City, MD

Montgomery County

Impervious Acre Baseline: 3,778 **Restored Acres:** 2,927 **Remaining Restoration Acres:** 851

- Percent of restoration requirement met to date: 77%
- Projected 5-year acres to be restored by the county: 3,629
- Projected 5-year restoration cost: \$230,814,187
- Cost per acre for completed and projected projects: \$63,604
- Projected 5-year impervious acre requirement met: 96%
- Existing funding gap to meet MS4 restoration requirements: \$9,476,996

Current Implementation

Montgomery County did not meet the 20% ISRP by the end of its 5-year permit term on Feb. 15, 2015. The county restored 1,744 impervious acres resulting in a restoration deficit of 2,004 impervious acres. Subsequently, MDE and Montgomery County entered into a court-sanctioned Consent Decree on April 13, 2018 formally establishing implementation schedules and annual milestones, subject to penalties of \$2,000 per violation per day if missed, for the completion of the county's ISRP by Dec. 31, 2020. Additionally, a judgment in favor of MDE against the county, in the amount of \$300,000 is due on Dec. 31, 2020, unless the county completes supplemental environmental projects (SEPs) at a cost of \$300,000 by this date. To achieve these significant requirements and to remain in compliance with the Consent Decree, the county is utilizing new contracting methods for increasing cost and implementation efficiencies.



Figure 13: Bioretention, Denis Avenue Green Streets

Prince George's County

Impervious Acre Baseline: 6,105 **Restored Acres:** 937 **Remaining Restoration Acres:** 5,168

- Percent of restoration requirement met to date: 15%
- Projected acres to be restored by the county by the end of permit: 6,211
- Projected restoration cost for entire permit term: \$287,603,535
- Cost per acre for completed and projected projects during the entire permit term: \$46,309
- Projected impervious acre requirement met by end of permit term: 102%
- Existing funding gap to meet MS4 restoration requirements: \$40,444,420

Current Implementation

MDE determined that Prince George's County's FAP demonstrated sufficient funding to meet 75% of its projected ISRP costs for FY17 and FY18. The county is required to submit a FAP to MDE on Jan. 2, 2019 that shows sufficient funding for implementing 100% of its ISRP. While the county is still experiencing a significant implementation and funding gap toward meeting 100% of its ISRP, the next FAP should show how these gaps will be reduced.



Figure 14: ESD Practice Installed Through the Partnership
(Clean Water Partnership)

VI. Watershed Protection and Restoration Program Annual Reports

- Stormwater remediation fees are now optional for MS4 jurisdictions.
- Eight MS4 jurisdictions have fees; two obtain funds through taxes.
- Residential fees range from \$0.01 to \$170.
- For the jurisdictions that have a fee, the number of properties subject to fees range from 48,746 to 262,650.

Table 4: FY17 Sources of Funds for the WPRF

| Jurisdiction | Properties Subject to a Stormwater Remediation Fee | Total Stormwater Remediation Fees | Total Additional Sources of Funds | Total |
|--------------------------------|--|-----------------------------------|-----------------------------------|----------------------|
| Anne Arundel County | 212,980 | \$20,968,236 | \$1,958,118 | \$22,926,353 |
| Baltimore City | 223,623 | 30,895,440 | 106,010 | 31,001,450 |
| Baltimore County ¹ | 259,737 | 10,895,147 | 21,071,453 | 31,966,601 |
| Carroll County | 0 | 0 | 2,160,120 | 2,160,120 |
| Charles County | 51,204 | 1,981,534 | 293,475 | 2,275,009 |
| Frederick County | 48,746 | 487 | 0 | 487 |
| Harford County ² | 0 | 0 | 0 | 0 |
| Howard County | 107,774 | 11,287,333 | 0 | 11,287,333 |
| Montgomery County ³ | n/a | n/a | n/a | n/a |
| Prince George's County | 262,650 | 14,567,923 | 0 | 14,567,923 |
| Total | 1,166,714 | \$90,596,101 | \$25,589,176 | \$116,185,277 |

*For further details on the WPRP, refer to the WPRP Annual Reports in the Appendix D.

1. Baltimore County provided estimates of fees collected.
2. Harford County does not collect a stormwater remediation fee and does not maintain a separate WPRF. Funds are obtained from other sources.
3. Montgomery County was not required to report this data.

VII. Summary

Maryland's MS4 permits and ISRP requirements are an integral part of the state's strategy to ensure that all pollution control measures needed to restore the Chesapeake Bay are in place by 2025. Maryland's 10 largest urban jurisdictions have been tasked with reducing their stormwater pollutant loads even as their communities continue to grow. Indeed, the restoration requirements in the MS4 permits have stretched these local jurisdictions to the fullest extent of their capabilities. Even so, Maryland's MS4s in aggregate have completed 39% of their ISRP requirement and are projecting to meet 91% of the ISRP requirement by permits' end.

A critical concept for each of these jurisdictions to meet their restoration goal is adaptive management, which requires making an informed projection of what is required to achieve the final goal. As implementation progresses, goal achievement should be evaluated by each jurisdiction and its ISRP should be modified in accordance with a better understanding of what is working and what is not.

MDE, in coordination with a broad stakeholder work group, is embarking upon nutrient trading as a new mechanism for meeting the significant pollutant load reductions needed for the restoration of the Chesapeake Bay. In fact, on July 16, 2018, MDE officially adopted trading regulations that will have the potential of lowering MS4 implementation costs through the purchase of less expensive nutrient credits from the agriculture and wastewater treatment sectors. While innovative strategies and nutrient trading show great promise in closing the MS4 permit implementation gap, there are other rising costs on the horizon. These include the long-term maintenance and eventual replacement of BMPs. These costs will need to be accounted for in future FAPs and strategies for maintaining Chesapeake Bay water quality.

VIII. Definitions

Annual escalation: The practice of adjusting current values to account for future increases. Annual escalation can account for increases in value of labor and materials.

Appropriation: Authorization from the legislation to spend money from a specific funding source for the purposes allowed by law. Appropriations specify both the amount and funding source. Appropriations must be approved before a contract mechanism can be approved.

BMP: Best Management Practice; these include structural practices (e.g., filters, ponds, wetlands), ESD (e.g., grass swales, rain barrels, green roofs), and alternative practices (e.g., outfall stabilization, septic pumping, street sweeping, tree planting).

Budget: Plan or authorization for revenues and expenditures within a fixed period of time.

CIP: Capital improvement plan; A project must cost more than \$250,000 and be associated with a specific asset which will depreciate over time.

Debt service: Portion of capital expenditures which is paid using mechanisms to extend the payment over a specified period of time. Debt service mechanisms include bonds and loans, which include costs for administration and interest.

Encumbrance: Commitment of money to meet an obligation for goods and services. Once a contract or agreement is approved, the money is encumbered into the budget to secure those funds.

EPA: United States Environmental Protection Agency

ESD: Environmental site design (also referred to as Low Impact Development / LID), comprehensive strategy for maintaining pre-development runoff characteristics by integrating site design, natural hydrology, and smaller controls to capture and treat runoff at the source, like micro-bioretenion.

Expenditure: The amount of money that is actually spent.

FAP: Financial Assurance Plan; state required 5-year projection of funding and expenses related to the MS4 permit and impervious surface restoration requirements. These plans also require the reporting of specific actions and expenditures undertaken in previous fiscal years to meet impervious surface restoration requirements.

Fiscal year: July 1 to June 30

Grant: an amount of money given by an entity for a specific purpose, with no obligation of repayment. Grants can also be known as a gift. Grant agreements include matching commitments, either by cash or by in-kind services.

Impervious surface: a surface that does not allow stormwater to infiltrate into the ground. "Impervious surface" includes rooftops, driveways, sidewalks, or pavement.

ISRP: Impervious Surface Restoration Plan; can also mean MS4 WIP or implementation plan for qualitative controls. For the current MS4 permit, the impervious surface restoration requirement is 20% of the county or municipality's total impervious area that has not already been treated or restored to the MEP.

Loan: A debt service mechanism in which a governing body receives money from an external source with a commitment to repay both the principal and interest within a specific time frame.

MDE: Maryland Department of Environment

MEP: Maximum Extent Practicable

MS4: Municipal Separate Storm Sewer System

NPDES: National Pollutant Discharge Elimination System

Nutrients: Total phosphorus and total nitrogen

Paygo: Portion of capital expenditures which is paid directly when the expenditure is incurred.

Public-private partnership (P3s): An agreement between one or more public and private entities to do something better together than could be done individually. In many of these agreements, the local government provides one or a combination of tax incentives, public assets, or financing assistance. The private entity may contribute land, capital investments, a commitment to provide local jobs, or development expertise and usually, but not always, assumes most of the financial risk for the ultimate project outcomes.

Qualitative Control: A system of practices that reduces or eliminates pollutants that might otherwise be carried by surface runoff. Design parameters include water quality volume and recharge volume. Water quality volume can be converted into equivalent acreage of impervious surface restored.

Quantitative Control: A system of practices that controls the increased volume and rate of surface runoff caused by man-made changes to the land. Design parameters include channel protection volume and flood protection volumes.

Reserve: Amount of revenue held to demonstrate ability to repay a debt service mechanism or to hedge against an unforeseen economic downturn.

Revenue: Cash received from external sources to supply specific funds.

Revenue bond: An official document authorized by a governing body to complete CIP projects using a debt service, with a specific enterprise fund used as collateral.

Request for Proposal: a document used by a company or organization to procure a good or service, typically through a bidding process.

Runoff: The portion of water during a storm that runs over the land instead of evaporating or being soaked through the ground surface.

SRLF: State revolving loan fund

TMDL: Total Maximum Daily Load, the maximum amount of a pollutant a water body can receive and still meet water quality standards; “pollution diet”. Developed when a substance exceeds water quality standards.

Watershed: An area of land that drains down slope to the lowest point, discharging to a river or other body of water

WIP: Watershed Implementation Plan; document that sets the way an agency will meet the regulatory requirements.

WPRP Fund: Watershed Protection and Restoration Program Fund.

WQA: Water Quality Analysis, developed when supplemental data indicates the water body is meeting water quality standards for that substance

*Some definitions obtained from Baltimore City Department of Public Works Glossary of Terms

IX. Appendices

Appendix A: Abbreviations and Classifications of BMPs

Table A-1: BMP Classes

| Code | Code Description |
|-------------|-------------------------|
| A | Alternative BMP |
| E | ESD |
| S | Structural BMP |

Table A-2: Alternative BMPs

| Code | Code Description | Category |
|-------------|---|-----------------|
| CBC | Catch Basin Cleaning | Programmatic |
| FPU | Planting Trees or Forestation on Previous Urban | Upland |
| IMPF | Impervious Surface Elimination (to forest) | Upland |
| IMPP | Impervious Surface Elimination (to pervious) | Upland |
| MSS | Mechanical Street Sweeping | Programmatic |
| OUT | Outfall Stabilization | In-Stream |
| SDV | Storm Drain Vacuuming | Programmatic |
| SEPC | Septic Connections to WWTP | Upland |
| SEPD | Septic Denitrification | Upland |
| SEPP | Septic Pumping | Programmatic |
| SHST | Shoreline Stabilization | In-Stream |
| SPSC | Step Pool Storm Conveyance | In-Stream |
| STRE | Stream Restoration | In-Stream |
| VSS | Regenerative/Vacuum Street Sweeping | Programmatic |

Table A-3: Environmental Site Design (ESD) BMPs

| Code | Code Description | Category |
|---------------------------------|-------------------------------------|-----------------|
| Alternative Surfaces | | |
| AGRE | Green Roof – Extensive | Upland |
| AGRI | Green Roof – Intensive | Upland |
| APRP | Permeable Pavements | Upland |
| ARTF | Reinforced Turf | Upland |
| Micro-Scale Practices | | |
| MENF | Enhanced Filters | Upland |
| MIBR | Infiltration Berms | Upland |
| MIDW | Dry Well | Upland |
| MILS | Landscape infiltration | Upland |
| MMBR | Micro-Bioretenion | Upland |
| MRNG | Rain Gardens | Upland |
| MRWH | Rainwater Harvesting | Upland |
| MSGW | Submerged Gravel Wetlands | Upland |
| MSWB | Bioswale | Upland |
| MSWG | Grass Swale | Upland |
| MSWW | Wet Swale | Upland |
| Nonstructural Techniques | | |
| NDNR | Disconnection of Non-Rooftop Runoff | Upland |
| NDRR | Disconnection of Rooftop Runoff | Upland |
| NSCA | Sheetflow to Conservation Areas | Upland |

Table A-4: Structural BMPs

| Code | Code Description | Category |
|--------------------------|-----------------------------------|-----------------|
| Filtering Systems | | |
| FBIO | Bioretention | Upland |
| FORG | Organic Filter (Peat Filter) | Upland |
| FPER | Perimeter (Sand) Filter | Upland |
| FSND | Sand Filter | Upland |
| FUND | Underground Filter | Upland |
| Infiltration | | |
| IBAS | Infiltration Basin | Upland |
| ITRN | Infiltration Trench | Upland |
| Open Channels | | |
| ODSW | Dry Swale | Upland |
| OWSW | Wet Swale | Upland |
| Ponds | | |
| PMED | Micropool Extended Detention Pond | Upland |
| PMPS | Multiple Pond System | Upland |
| PPKT | Pocket Pond | Upland |
| PWED | Extended Detention Structure, Wet | Upland |
| PWET | Retention Pond (Wet Pond) | Upland |
| Wetlands | | |
| WEDW | Extended Detention - Wetland | Upland |
| WPKT | Pocket Wetland | Upland |
| WPWS | Wet Pond – Wetland | Upland |
| WSHW | Shallow Marsh | Upland |
| Other Practices | | |
| XDED | Extended Detention Structure, Dry | Upland |
| XDPD | Detention Structure (Dry Pond) | Upland |
| XFLD | Flood Management Area | Upland |
| XOGS | Oil Grit separator | Upland |
| OTH | Other | Upland |

Appendix B: Calculations

General

Impervious Acre Baseline = (total impervious acres not treated to the MEP jurisdiction-wide) * (20% MS4 permit restoration requirement)

Table 2: Restoration complete was determined by dividing the total acres restored (gathered from FY17 MS4 Annual Reports) by the total updated impervious acre baseline.

Percent of project completion by the end of the 5-year permit term was determined by dividing the total acres completed and projected to be restored (using the FY16 FAP data) by the total updated impervious acre baseline.

Tables 3: Cost per Acre = Cost/Total Projected Permit Term Restoration

Funding Gap Analysis

- Anne Arundel County
 - \$135,002,537 = FY19 - FY20 revenue (from FAP ISRP Revenue worksheet)
 - \$134,241,812 = FY19 - FY20 cost
 - \$760,725 = FY19 - FY20 remaining funds after cost
 - 1,180 = Remaining impervious acres to meet ISRP requirement (impervious acre baseline – projected acres to be restored)
 - \$20,102 = County restoration cost per impervious acre
 - \$23,720,360 = Funding gap for remaining acres (number of remaining acres * restoration cost/acre)
 - \$22,959,635 = Funding gap (funding gap for remaining acres - remaining funds)
- Baltimore City
 - \$64,514,600 = FY19 - FY20 revenue (from FAP ISRP Revenue worksheet)
 - \$43,036,901 = FY19 - FY20 cost
 - \$21,477,699 = FY19 - FY20 remaining funds after cost
- Baltimore County
 - \$37,187,525 = FY19 - FY20 revenue (from FAP ISRP Revenue worksheet)
 - \$37,187,525 = FY19 - FY20 cost
 - \$0 = FY19 - FY20 remaining funds after cost
- Carroll County
 - \$12,590,741 = FY19 - FY20 revenue (from FAP ISRP Revenue worksheet)
 - \$12,240,840 = FY19 - FY20 cost
 - \$349,901 = FY19 - FY20 remaining funds after cost
 - 68 = Remaining impervious acres to meet ISRP requirement (impervious acre baseline – projected acres to be restored)
 - \$15,468 = County restoration cost per impervious acre
 - \$1,051,824 = Funding gap for remaining acres (number of remaining acres * restoration cost/acre)
 - \$701,923 = Funding gap (funding gap for remaining acres - remaining funds)

- Charles County
 - \$29,775,400 = FY19 - FY20 revenue
 - \$33,017,600 = FY19 - FY20 cost
 - -\$3,242,200 = FY19 - FY20 remaining funds after cost
- Frederick County
 - \$17,696,666 = FY19 - FY20 revenue
 - \$17,696,666 = FY19 - FY20 cost
 - \$0 = FY19 - FY20 remaining funds after cost
 - 1,874 = Remaining impervious acres to meet ISRP requirement (impervious acre baseline – projected acres to be restored)
 - \$38,680 = County restoration cost per impervious acre
 - \$72,486,320 = Funding gap for remaining acres (number of remaining acres * restoration cost/acre)
 - \$72,486,320 = Funding gap (funding gap for remaining acres - remaining funds)
- Harford County
 - \$23,700,000 = FY19 - FY20 revenue
 - \$26,620,000 = FY19 - FY20 cost
 - -\$2,920,000 = FY19 - FY20 remaining funds after cost
- Howard County
 - \$71,523,375 = FY19 - FY20 revenue
 - \$67,622,105 = FY19 - FY20 cost
 - \$3,901,270 = FY19 - FY20 remaining funds after cost
 - 715 = Remaining impervious acres to meet ISRP requirement (impervious acre baseline – projected acres to be restored)
 - \$60,661 = County restoration cost per impervious acre
 - \$43,372,615 = Funding gap for remaining acres (number of remaining acres * restoration cost/acre)
 - \$39,471,345 = Funding gap (funding gap for remaining acres - remaining funds)
- Montgomery County
 - \$150,791,470 = FY19 - FY20 revenue
 - \$150,791,470 = FY19 - FY20 cost
 - \$0 = FY19 - FY20 remaining funds after cost
 - 149 = Remaining impervious acres to meet ISRP requirement (impervious acre baseline – projected acres to be restored)
 - \$63,604 = County restoration cost per impervious acre
 - \$9,476,996 = Funding gap for remaining acres (number of remaining acres * restoration cost/acre)
 - \$9,476,996 = Funding gap (funding gap for remaining acres - remaining funds)
- Prince George's County
 - \$139,181,119 = FY19 - FY20 revenue
 - \$179,625,539 = FY19 - FY20 cost
 - -\$40,444,420 = FY19 - FY20 remaining funds after cost

BMP Analysis

- The pie chart for implemented BMPs was created using the total impervious acres restored during the reported permit term. If necessary, the impervious acres used factored in corrections for formula errors and/or improperly placed BMPs.
- Permit term implementation amounts for the specific types, or groups, of BMPs were calculated by using the total impervious area treated and total cost of each BMP type/group implemented in all 10 MS4s. When a project was reported with multiple BMP types and/or classes but only a single cost and impervious acres treated, the project cost and impervious acres treated were not separated for each specific BMP. Instead, the groups were reported as “Combined [Alternative], ESD, and Structural” practices.
- Specific corrections for the BMP and funding analyses were:
 - Anne Arundel County
 - Removed BMP type “BASE” for FY16 and FY17 as this was not a valid BMP.
 - Excluded duplicate restoration projects that were reported in both the All Actions and Specific Actions worksheets.
 - Baltimore County
 - Used the average impervious acres for septic pumping instead of the sum. Septic pumping is an annual practice and may not be summed.
 - Carroll County
 - Practices that do not provide water quality treatment (i.e., XFLD) were excluded from the analysis.
 - Charles County
 - When single projects included multiple BMPs, the project was reported as “Combined ESD and Structural Practices”, “Combined Structural Practices”, or “Micro-scale Practices”.
 - One project, reported as “PWED, ODSW, FPU”, treats 26 impervious acres and was placed in the “Combined Structural Practices” category.
 - Frederick County
 - Removed BMP “Operating Support of CIP” from restoration cost since a specific BMP type was not identified.
 - Street sweeping costs were excluded from the restoration analysis since no credit was claimed.
 - Howard County
 - Excluded MS4 Program data costs not associated with the ISRP. These costs were subtracted from the county ISRP costs to bring it into alignment with the other jurisdictions and the formulas used.
 - Costs associated with practices that do not provide water quality treatment (e.g., XDED, XOTH) were excluded from the analysis.
 - Used the average implementation for Septic pumping instead of the sum. Septic pumping is an annual practice and may not be summed.

- Montgomery County
 - Practices that do not provide water quality treatment (e.g., XDED, XDPD) were not included in the analysis.
 - Costs for future street sweeping efforts were excluded from the restoration analysis since no credit was claimed.
 - Operating costs for debt service payments and the RainScapes program were excluded from the analysis since they are associated with a specific BMP and no impervious acres were claimed.
- Prince George's County
 - A BMP that does not provide water quality treatment, i.e., XDED, was not included in the analysis.
 - For the funding analysis, debt service installments were subtracted.

Appendix C: Additional Tables from Analysis

Table C-1: Impervious Acres Completed and Projected to be Restored by Upland BMPs

| BMP Type ¹ | Total Impervious Acres Treated ¹ | Total Cost ¹ | Cost/Acre ² |
|--|--|-------------------------|------------------------|
| Generic BMPs ³ | 3591 | \$140,522,127 | \$47,196 |
| Ponds | 2628 | \$106,609,086 | \$42,141 |
| Filtering Practices | 1842 | \$128,949,150 | \$73,756 |
| Wetlands | 1526 | \$38,102,126 | \$26,445 |
| Tree Planting | 757 | \$25,554,288 | \$36,312 |
| Septic Connections and Upgrades | 627 | \$8,738,534 | \$19,292 |
| Micro-scale Practices | 476 | \$41,277,601 | \$111,749 |
| Nonstructural Techniques | 297 | \$357,604 | \$67,109 |
| Combined ESD and Structural Practices | 88 | \$11,709,476 | \$132,355 |
| Impervious Surface Elimination | 74 | \$789,267 | \$321,459 |
| Combined Structural Practices | 63 | \$1,382,217 | \$21,909 |
| Alternative Surfaces | 63 | \$27,442,140 | \$449,831 |
| Infiltration Practices | 41 | \$1,441,837 | \$39,212 |
| Combined Alt., ESD, and Structural Practices | 25 | \$6,367,508 | \$254,741 |
| Combined Alt. and ESD Practices | 3 | \$846,279 | \$278,932 |
| Open Channel Practices | 1 | \$119,814 | \$164,129 |
| <hr/> | | | |
| 12,103 | | | |

1. Restoration data obtained from FY16 FAPs. BMPs were grouped based on their class, type, and function.
2. The cost per acre was calculated by dividing the total cost of the specific BMP type in the 10 MS4s by the total impervious acres treated by the specific BMP type in the 10 MS4s. Impervious acres treated from BMPs with a cost of \$0 were excluded from the cost per acre analysis. Therefore, the total impervious acres treated reflects all of the acres treated by a specific BMP type while the cost per acre represents the cost per acre for only those BMPs with actual costs.
3. Generic BMPs includes unspecified Alternative, ESD, and Structural practices that are part of retrofit, conversion, redevelopment, watershed association, and new BMP projects.

Table C-2: Impervious Acres Completed and Projected to be Restored by In-Stream BMPs

| BMP Type ¹ | Total Impervious Acres Treated ¹ | Total Cost ¹ | Cost/Acre ² |
|---|---|-------------------------|------------------------|
| Stream Restoration ³ | 4,725 | \$312,002,733 | \$66,354 |
| Shoreline Stabilization | 1,331 | \$15,828,261 | \$23,226 |
| Step Pool Storm Conveyance ⁴ | 772 | \$52,556,681 | \$68,116 |
| Outfall Stabilization | 262 | \$11,675,083 | \$47,229 |
| | 7,090 | | |

1. Restoration data obtained from FY16 FAPs. BMPs were grouped based on their class, type, and function.
2. The cost per acre was calculated by dividing the total cost of the specific BMP type in the 10 MS4s by the total impervious acres treated by the specific BMP type in the 10 MS4s. Impervious acres treated from BMPs with a cost of \$0 were excluded from the cost per acre analysis. Therefore, the total impervious acres treated reflects all of the acres treated by a specific BMP type while the cost per acre represents the cost per acre for only those BMPs with actual costs.
3. Includes projects reported as a combination of STRE and FPU
4. Includes projects reported as a combination of SPSC and MENF, MRNG, or STRE.

Table C-3: Impervious Acres Completed and Projected to be Restored by Programmatic BMPs

| BMP Type ¹ | Total Impervious Acres Treated ¹ | Total Cost ¹ | Cost/Acre ² |
|---|---|-------------------------|------------------------|
| Street Sweeping ³ | 6,024 | \$32,370,189 | \$5,373 |
| Nutrient Trading with WWTP ⁴ | 4,945 | \$0 | \$0 |
| Septic Pumping | 984 | \$1,048,755 | \$3,556 |
| Storm Drain Vacuuming | 182 | \$17,253,432 | \$94,756 |
| Catch Basin Cleaning | 122 | \$1,562,764 | \$12,810 |
| | 12,257 | | |

1. Restoration data obtained from FY16 FAPs. BMPs were grouped based on their class, type, and function.
2. The cost per acre was calculated by dividing the total cost of the specific BMP type in the 10 MS4s by the total impervious acres treated by the specific BMP type in the 10 MS4s. Except for nutrient trading with WWTP, impervious acres treated from BMPs with a cost of \$0 were excluded from the cost per acre analysis. Therefore, the total impervious acres treated reflects all of the acres treated by a specific BMP type while the cost per acre represents the cost per acre for only those BMPs with actual costs.
3. Street sweeping includes regenerative/vacuum and mechanical street sweeping as well as an unspecified type of street sweeping.
4. While proposed by several MS4s, trading regulations were officially adopted to allow for this treatment option

**Appendix D: FY17 *Watershed Protection and Restoration*
*Program Annual Reports***

Watershed Protection and Restoration Program Annual Report Table

Article 4-201.1(i)(4): "The percentage and amount of funds in the local watershed protection and restoration fund spent on each of the purposes provided in subsection (h)(4) of this section;"

| Program Element | Cost | Percent of WPRF |
|--|------------------------|-----------------|
| Capital Improvements for Stormwater Management | \$6,470,043.43 | 39.84% |
| Property Management | \$5,700,717.10 | 35.11% |
| Public Education and Outreach | \$405,633.80 | 2.50% |
| Stormwater Management Planning (see Md. Environment Code Ann. § 4-202.1(h)(4)(iv)) | \$3,133,496.36 | 19.30% |
| Review of Stormwater Management Plans and Permit Applications for New Development | | 0.00% |
| Grants to Nonprofit Organizations | \$77,328.95 | 0.48% |
| Adminstration of WPRF | \$451,058.12 | 2.78% |
| TOTAL | \$16,238,277.76 | 100.00% |

Number of Properties Subject to Fee 212,980
 Reporting Year 2017
 Permit Number 11-DP-3316 MD0068306
 Comments:

| Jurisdiction | Agency | Local Ordinance Submitted to MDE | MDE Approval of Fee Reduction Policy |
|---|----------------------------|----------------------------------|--|
| Anne Arundel County | Department of Public Works | Yes | |
| <p>Directions:</p> <p>Notes:</p> <p>ERU = Equivalent residential unit</p> | | <p>Use: Yes or No</p> | <p>Use the approval date or N/A</p> <p>N/A</p> |

| Fee Reduction Amount | Annual Single Family Residential Rate | Annual Commercial Rate | Equivalent Residential Unit (ERU) impervious | Commercial Capped Rates |
|-----------------------|---------------------------------------|------------------------|--|-------------------------|
| 80% phase in for FY15 | 34-170 | \$85 per ERU | 2,940 | 25% of property tax |

Reduction amount(s), if any, with reason for reduction(s)

Use: N/A, amount of flate rate, rate amount per ERU, etc.

| Rate Structures | | |
|--------------------------------------|------------|---------------------------|
| Non-profits, Religious Organizations | Exemptions | Federal Facilities Status |
| \$1 | | |

General description of exemption(s), if any

Use: No Facilities,
Exempt, or Charged

| | Additional Sources of Funds | |
|--|------------------------------------|----------------------------|
| Federal Facility Fee(s)/Rate(s) | Additional Source 1 | Additional Source 2 |
| | | |

Use: N/A or the fee and rate structures for federal facilities

| Additional Source 3 | Estimated Annual Revenue |
|---------------------|--------------------------|
| | \$22,029,455.33 |
| | |
| | |

Notes

Article 4-201.1(i)(3): The amount of money deposited into the watershed protection and restoration fund in the previous fiscal year by source

| Source | Amount |
|---|------------------|
| Annual Single Family Residential Fees Collected | \$ 12,588,909.73 |
| Annual Commercial Fees Collected | \$ 8,378,572.84 |
| Non-profits, Religious Orgs Fees Collected | \$ 752.94 |
| Additional Source 1-HOA, multifamily, private roads | \$ 853,566.10 |
| Additional Source 2-Interfund recoveries* | \$ 767,730.83 |
| Additional Source 3- Investment income | \$ 336,820.72 |
| | \$ 22,926,353.16 |

All SWM Projects Implemented in Previous FY for the 20% Restoration Requirement

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST | PROJECTED IMPL YR | IMPL STATUS | IMPL COMP YR |
|---------------|---------------|-----------|---------|-----------|------------|-----------|----------------------|----------------|-----------------------|
| AA17RST000051 | SPSC | A | | 3.1 | 6/30/2014 | \$114,083 | 2017 | Complete | |
| AA17RST000050 | SPSC | A | | 4.84 | 7/16/2017 | \$425,189 | 2017 | Complete | |
| AA17RST000033 | FBIO | S | | 0.46 | 2/1/2012 | \$72,585 | 2017 | Complete | |
| AA17RST000034 | FBIO | S | | 3.78 | 2/1/2012 | \$72,585 | 2017 | Complete | |
| AA17RST000035 | PWET | S | | 11.19 | 8/13/2013 | \$324,787 | 2017 | Complete | |
| AA17RST000049 | SPSC | A | | 3.9 | 7/25/2013 | \$267,992 | 2017 | Complete | |
| AA16RST000072 | SPSC | A | | 2.7 | 12/9/2016 | \$310,117 | 2017 | Complete | |
| AA16RST000036 | PWET | S | | 13.7 | 10/22/2016 | \$455,727 | 2017 | Complete | |
| AA16RST000037 | IBAS | S | | 5.7 | 3/10/2017 | \$471,842 | 2017 | Complete | |
| AA17RST000012 | MRNG | E | | 0.3 | 7/1/2016 | \$14,360 | 2017 | Complete | |
| AA17RST000013 | MRNG | E | | 0.5 | 7/1/2016 | \$14,360 | 2017 | Complete | |
| AA17RST000014 | MRNG | E | | 0.3 | 7/1/2016 | \$14,360 | 2017 | Complete | |
| AA16RST000045 | IBAS | S | | 4.5 | 11/22/2016 | \$187,063 | 2017 | Complete | |
| AA17RST000026 | PWET | S | | 3.6 | 7/30/2016 | \$249,583 | 2017 | Complete | |
| AA16RST000041 | IBAS | S | | 5.4 | 1/6/2017 | \$282,566 | 2017 | Complete | |
| AA17RST000027 | FSND | S | | 0.3 | 1/2/2017 | \$161,026 | 2017 | Complete | |
| AA17RST000029 | ITRN | S | | 0.2 | 3/7/2017 | \$161,026 | 2017 | Complete | |
| AA17RST000017 | SPSC | A | | 0.3 | 1/1/2017 | \$55,255 | 2017 | Complete | |
| AA16RST000070 | PWET | S | | 17 | 8/3/2016 | \$400,681 | 2017 | Complete | |
| AA16RST000067 | WEDW | S | | 13.4 | 1/31/2017 | \$589,841 | 2017 | Complete | |
| AA17RST000020 | MSWB | E | | 0.61 | 8/17/2016 | \$45,000 | 2017 | Complete | |
| AA16RST000075 | MSWB | E | | 0.4 | 9/1/2016 | | 2017 | Complete | NGO Project |
| AA16RST000078 | APRP | E | | 0.8 | 9/1/2016 | | 2017 | Complete | NGO Project |
| AA16RST000079 | APRP | E | | 1.2 | 9/1/2016 | | 2017 | Complete | NGO Project |
| AA16RST000080 | APRP | E | | 1.4 | 9/1/2016 | | 2017 | Complete | NGO Project |
| AA16RST000081 | APRP | E | | 0.3 | 9/1/2016 | | 2017 | Complete | NGO Project |
| AA17RST000030 | APRP | E | | 1.5 | 9/1/2016 | | 2017 | Complete | NGO Project |
| AA17RST000031 | MRNG | E | | 0.04 | 9/1/2016 | | 2017 | Complete | NGO Project |
| AA16RST000040 | WEDW | S | | 4.4 | 1/6/2017 | \$776,740 | 2017 | Complete | |
| AA16RST000086 | SPSC | A | | 8.82 | 4/15/2017 | \$485,312 | 2017 | Complete | |
| AA17RST000025 | PWET | S | | 4.6 | 10/24/2016 | \$312,398 | 2017 | Complete | |
| AA16RST000068 | IBAS | S | | 7.0 | 4/28/2017 | \$370,778 | 2017 | Complete | |
| AA16RST000038 | PWET | S | | 4.6 | 7/19/2016 | \$339,092 | 2017 | Complete | |
| AA17RST000016 | SPSC | A | | 0.4 | 3/1/2017 | \$102,390 | 2017 | Complete | |
| AA17RST000019 | MRNG | E | | 0.4 | 3/1/2017 | \$15,000 | 2017 | Complete | |
| AA17RST000028 | FBIO | S | | 0.3 | 11/21/2016 | \$161,026 | 2017 | Complete | |
| AA16RST000035 | PWET | S | | 36.5 | 4/28/2017 | \$754,381 | 2017 | Complete | |
| AA17ALN000006 | STRE | A | | 1.50 | 2/21/2017 | \$336,490 | 2017 | Complete | |
| AA17ALN000005 | STRE | A | | 10.11 | 4/2/2017 | | 2017 | Complete | NGO Project |
| | SHST | A | 45 | 318.12 | | | 2017 | Complete | Shoreline Restoration |
| | MSS | S | | 239.81 | | \$224,527 | 2017 | Complete | Street Sweeping |

| | | | | | | | | | |
|--|------|---|-----|---------|--|----------------|------|----------|--|
| | SEPD | A | 190 | 40.56 | | | 2017 | Complete | Septic Conversion Septic Pump Out Inlet Cleaning |
| | SEPC | A | 32 | 12.48 | | | 2017 | Complete | |
| | SEPP | A | | 171.50 | | | 2017 | Complete | |
| | VSS | S | | 96.50 | | \$59,739 | 2017 | Complete | |
| | OUT | A | 4 | 2.50 | | \$213,608 | 2017 | Complete | |
| | | | | 1,061.1 | | \$8,841,511.16 | | | |

Watershed Protection and Restoration Program Annual Report Table

Article 4-202.1(i)(4): "The percentage and amount of funds in the local watershed protection and restoration fund spent on each of the purposes provided in subsection (h)(4) of this section;"

| Program Element | Cost | Percent of WPRF |
|--|------------------------|-----------------|
| Capital Improvements for Stormwater Management | \$7,249,705.00 | 35.37% |
| Operation and maintenance of stormwater management systems and facilities | \$10,602,486.00 | 51.72% |
| Public Education and Outreach | \$414,161.00 | 2.02% |
| Stormwater Management Planning (see Md. Environment Code Ann. § 4-202.1(h)(4)(iv)) | \$739,208.00 | 3.61% |
| Review of Stormwater Management Plans and Permit Applications for New Development | \$1,121,548.00 | 5.47% |
| Grants to Nonprofit Organizations | \$101,341.00 | 0.49% |
| Administration of WPRF | \$270,039.00 | 1.32% |
| TOTAL | \$20,498,488.00 | 100.00% |

Number of Properties Subject to Fee 223,623
 Reporting Year 207
 Permit Number 11-DP-3315
 Comments: Includes payment of debt service.

VERSION 3-8-16

| Jurisdiction | Agency | Local Ordinance Submitted to MDE | MDE Approval of Fee Reduction Policy |
|--|----------------------------|----------------------------------|--------------------------------------|
| Baltimore City | Department of Public Works | Yes | NA |
| <p style="text-align: right;">Use: Yes or No Use the approval date or N/A</p> <p>Directions:</p> | | | |
| <p>Notes:</p> <p>ERU = Equivalent residential unit</p> <p>2 - SFR Rate structure is 3 tiered based on impervious area: \$40 / yr for less than 820 sf IA, \$60 / yr for 820 to 1,500 sf IA, \$120 / yr for more than 1,500</p> <p>3 -Estimated annual revenue listed includes the amount billed for the stormwater fee, plus the miscellaneous fees collected.</p> <p>Fee structure and rate established in July 2013 to remain constant for at least 4 years (July 2017).</p> <p>VERSION 3-8-16</p> | | | |

| Fee Reduction Amount | Annual Single Family Residential Rate | Annual Commercial Rate | Equivalent Residential Unit (ERU) impervious | Commercial Capped Rates |
|----------------------|---------------------------------------|------------------------|--|---|
| NA | \$30 - 120 ² | \$60 / ERU | 1,050 sf | Capped at 20% of all State and local property taxes |

Reduction amount(s), if any, with reason for reduction(s)

Use: N/A, amount of flate rate, rate amount per ERU, etc.

sf IA

| Rate Structures | | |
|---|--|----------------------------------|
| Non-profits, Religious Organizations | Exemptions | Federal Facilities Status |
| \$12 / ERU on religious and K-12 education structures | IA permitted to public ww system; streets privately maintained and open to public in SFR communities, IA requires as a superfund cap, solar panel bases. | Charged |

General description of exemption(s), if any

Use: No Facilities,
Exempt, or Charged

| Additional Sources of Funds | | |
|--|---|----------------------------|
| Federal Facility Fee(s)/Rate(s) | Additional Source 1 | Additional Source 2 |
| \$60 / yr / ERU | SWM/ESC Misc. Fees for permitting and penalties: \$50,000 | |

Use: **N/A** or the fee and rate structures for federal facilities

| Additional Source 3 | Estimated Annual Revenue |
|---------------------|--------------------------|
| | \$ 31,001,450.00 |
| | |
| | |
| | |

Notes

Article 4-202.1(i)(3): "The amount of money deposited into the watershed protection and restoration fund in the previous fiscal year by source;"

| Source | Amount |
|-----------------------------|------------------|
| Stormwater Remediation Fee | \$30,895,440.00 |
| SWM/ ESC Miscellaneous Fees | \$ 106,010.00 |
| | <hr/> |
| | \$ 31,001,450.00 |

VERSION 3-8-16

All SWM Projects Implemented in Previous FY for the 20% Restoration Requirement

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST | IMPL STATUS | IMPL COMP YR |
|---------------|---------------|-----------|---------|-----------|------------|-------------|-------------|--------------|
| BC16APY000036 | VSS | A | 1 | 3,400 | 6/30/2017 | \$4,942,590 | 79.2% | 2016 |
| | | | | 3,400 | | \$4,942,590 | | |

VERSION 3-8-16

Baltimore County

Watershed Protection and Restoration Program Annual Report Table

Article 4-202.1(i)(4): "The percentage and amount of funds in the local watershed protection and restoration fund spent on each of the purposes provided in subsection (h)(4) of this section;"

| Program Element | Cost | Percent of WPRF |
|--|---------------------|-----------------|
| Capital Improvements for Stormwater Management | \$12,366,794 | 38.69% |
| O & M of SWM Systems and Facilities | \$523,976 | 1.64% |
| Public Education and Outreach | \$0 | 0.00% |
| Stormwater Management Planning (see Md. Environment Code Ann. § 4-202.1(h)(4)(iv)) | \$1,362,114 | 4.26% |
| Review of Stormwater Management Plans and Permit Applications for New Development | \$0 | 0.00% |
| Grants to Nonprofit Organizations | \$240,646 | 0.75% |
| Adminstration of WPRF | \$0 | 0.00% |
| TOTAL | \$14,493,531 | 45.34% |

Number of Properties Subject to Fee 259,737
 Reporting Year 2017
 11-DP-3317
 Permit Number MD0068314

Comments:
 Cost information is FY2017.
 Percent of WPRF calculated as FY2017 cost divided by FY2017 funds deposited.

| Jurisdiction | Agency | Local Ordinance Submitted to MDE | MDE Approval of Fee Reduction Policy |
|------------------|---|----------------------------------|--------------------------------------|
| Baltimore County | Department of Environmental Protection and Sustainability | Yes | N/A |

Use: Yes or No Use the approval date or N/A

Directions:

Notes:

ERU = Equivalent residential unit

VERSION 4-7-16

Fee Reduction Amount

1. SWM BMPs: Impervious treated by SWM BMPs discharge less pollution into water bodies, and require expenditures for construction and maintenance. In recognition of the water quality benefits and financial costs of SWM BMPs, impervious surfaces draining to a SWM BMP are discounted. The rate of discount based on SWM BMP efficiencies used by the Chesapeake Bay Program at the time the fee program was developed. This SWM BMP reduction is only available to Commercial and Institutional properties. SWM BMPs constructed and maintained with exclusively County or State funding do not provide a discount. Discount for a property cannot exceed 74% of ERUs, as 26% of the impervious surfaces in Baltimore County are on public land and every property should help pay for those shared impervious surfaces.

- 1.1. Detention or Hydrodynamic Structures: 8.3% reduction of ERUs.
- 1.2. Extended Detention: 33.3% reduction of ERUs.
- 1.3. Wet Ponds and Wetlands: 41.6% reduction of ERUs.
- 1.4. Infiltration Practices: 88.6% reduction of ERUs.
- 1.5. Filtration Practices: 60.0% reduction of ERUs.
- 1.6. ESD Practices: 66.6% reduction of ERUs.

2. Clean Marina participation: The DNR Clean Marina program reduces pollution that is discharged directly into the Chesapeake Bay through direct and indirect mechanisms. To encourage and reward Clean Marina participation, certified Clean Marinas receive a 50% reduction of ERUs.

3. Commercial-Residential primary residence credit: When a property supports both the owner's primary residence and a commercial business, it is unfair to bill the single family dwelling at the higher commercial rate. Therefore, the fee is reduced by an amount equal to the difference between 1 ERU at the commercial rate and 1 single family dwelling rate, subject to a minimum fee of 1 single family dwelling.

4. Mobile Home Parks: Instead of billing based on the impervious surface on site, mobile home parks are billed by tallying the number of mobile homes in the park and multiplying by the single family detached fee rate.

Reduction amount(s), if any, with reason for reduction(s)

| | | | | Rate |
|---|--|--|-------------------------|--------------------------------------|
| Annual Single Family Residential Rate | Annual Commercial Rate | Equivalent Residential Unit (ERU) impervious | Commercial Capped Rates | Non-profits, Religious Organizations |
| Detached: \$17.00 per dwelling Attached: \$9.00 per dwelling Condo: \$15.00 per dwelling unit | \$31.00 per ERU Note that commercial includes non-condo multifamily dwellings (e.g. apartment buildings). | 2000 sq ft | N/A | \$9.00 per ERU |

Use: N/A, amount of flate rate, rate amount per ERU, etc.

| Structures | | | |
|---|----------------------------------|--|--------------------------------------|
| Exemptions | Federal Facilities Status | Federal Facility Fee(s)/Rate(s) | Additional Source 1: Interest |
| 1. Agricultural land without a dwelling is exempt. 2. Single Family Residential with no dwelling is exempt. 3. Financial Hardship exemption: primary residence of a person who receives one or more of the following: <ul style="list-style-type: none"> • the Local Supplement to the Homeowner's Tax Credit (section 9-104 of Tax-Property Article of the Annotated Code of Maryland), • the property tax exemption for a disabled veteran or the surviving spouse of a disabled veteran (Section 7-208 of the Tax-Property Article of the Annotated Code of Maryland), • the property tax credit for surviving spouses of fallen law enforcement officers or rescue workers (section 11-2-109 of the Baltimore County Code 2003), or • the property tax credit for disabled law enforcement officers or rescue workers (section 11-2-109.1 of the Baltimore County Code 2003). | Charged | \$9.00 per ERU | \$ 206,453 |

| | | |
|--|---|---|
| General description of exemption(s), if any | Use: No Facilities, Exempt, or Charged | Use: N/A or the fee and rate structures for federal facilities |
| | | |
| | | |

| Additional Sources of Funds | | | | Estimated Annual Revenue |
|-------------------------------------|--|-----------------------------------|---------------------------------------|--------------------------|
| Additional Source 2: Metro Funds | Additional Source 3: General Obligation Bonds | Additional Source 4: State Aid | Additional Source 5: General Funds | |
| \$ 10,000,000 | \$ 2,115,000 | \$ 6,650,000 | \$ 2,100,000 | \$ 31,966,601 |
| | | | | |
| | | | | |
| | | | | |

Notes
 Estimated Annual Revenue is actual total cash collection of fees in FY2017, plus the additional sources.

Article 4-202.1(i)(3): "The amount of money deposited into the watershed protection and restoration fund in the previous fiscal year by source;"

| Source | Amount |
|--|----------------------|
| Cash Collections of Fee to Fund | \$ 10,895,147 |
| Estimated Annual Single Family Detached Fees Collected | \$ 2,718,454 |
| Estimated Annual Single Family Attached Fees Collected | \$ 599,964 |
| Estimated Annual Single Family Condo Fees Collected | \$ 302,499 |
| Estimated Annual Commercial Fees Collected | \$ 7,025,889 |
| Estimated Non-profits, Religious Orgs Fees Collected | \$ 248,341 |
| Estimated Interest | \$ 206,453 |
| Metro Funds Made Available | \$ 10,000,000 |
| General Funds (9331R) | \$ - |
| Reallocated General Funds (9339R) | \$ 2,100,000 |
| Current/Future G O Bonds (9441R) | \$ - |
| Reallocated G O Bonds (9449R) | \$ 2,115,000 |
| Storm Water Waiver Fee (9650R) | \$ - |
| State Aid (9229R) | \$ 6,650,000 |
| Reallocated State Aid (9236R) | \$ - |
| St Waterway Improve Fund (9226R) | \$ - |
| Department Natural Resources (9222R) | \$ - |
| Federal/State Aid (9119R) | \$ - |
| Other (9679R) | \$ - |
| | \$ 31,966,601 |

Estimates calculated as percent of fees billed per category multiplied by cash collections of fee to fund.

This is an environmental fund as per Article 4-202.1(h)(5). Some of these funds are to be expended on purposes other than those authorized in 4-202.1(h)(4).

All SWM Projects Implemented in Previous FY for the 20% Restoration Requirement

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST | IMPL STATUS | IMPL COMP YR |
|---|---------------|-----------|---------|-----------|------------|--------------|-------------|--------------|
| Reforestation at Dulaney Springs Park | FPU | A | | 2.01 | 3/31/2016 | \$50,419.00 | Complete | 2017 |
| Reforestation at Heller Property | FPU | A | | 1.18 | 3/31/2016 | \$31,794.00 | Complete | 2017 |
| BA-10408.01: Conversion of Pond #408 | SF | S | 1 | 4.25 | 5/4/16 | \$95,701.93 | Complete | 2017 |
| BA-11112.01: Conversion of Pond #1112 | SF | S | 1 | 2.90 | 5/4/16 | \$63,120.86 | Complete | 2017 |
| BA-10270.01: Conversion of Pond #270 | SF | S | 1 | 2.80 | 5/4/16 | \$62,080.52 | Complete | 2017 |
| BA-10157.01: Conversion of Pond #157 | SF | S | 1 | 11.69 | 5/4/16 | \$70,069.02 | Complete | 2017 |
| BA-13478.01: Conversion of Pond #3478 | SF | S | 1 | 1.10 | 6/22/16 | \$130,209.84 | Complete | 2017 |
| BA-10850.01: Conversion of Pond #850 | SF | S | 1 | 8.80 | 7/11/16 | \$60,500.15 | Complete | 2017 |
| Conversion of Pond #1054 | SF | S | 1 | 4.20 | 7/11/16 | \$91,013.46 | Complete | 2017 |
| Part of facility #5529 | IMPP | A | 1 | 0.02 | 8/12/2016 | | Complete | 2017 |
| Part of facility #4199 | IMPP | A | 1 | 0.07 | 8/15/2016 | | Complete | 2017 |
| Part of facility #5498 | IMPP | A | 1 | 0.02 | 8/30/2016 | | Complete | 2017 |
| Reforestation at Tufon Springs | FPU | A | | 0.53 | 9/15/2016 | \$39,900.00 | Complete | 2017 |
| Part of facility #5549 | IMPP | A | 1 | 0.03 | 9/22/2016 | | Complete | 2017 |
| Part of facility #4816 | IMPP | A | 1 | 0.02 | 10/13/2016 | | Complete | 2017 |
| Part of facility #5445 | IMPP | A | 1 | 0.41 | 10/13/2016 | | Complete | 2017 |
| Part of facility #5428.5 | IMPP | A | 1 | 0.11 | 10/24/2016 | | Complete | 2017 |
| Reforestation at Cromwell | FPU | A | | 0.72 | 10/28/2016 | \$245,420.00 | Complete | 2017 |
| Reforestation at Cromwell | FPU | A | | 9.23 | 10/28/2016 | | Complete | 2017 |
| Reforestation at Rost Property | FPU | A | | 0.68 | 11/4/2016 | \$19,000.00 | Complete | 2017 |
| Reforestation at Foreston Rd2 | FPU | A | | 0.61 | 11/5/2016 | \$16,796.00 | Complete | 2017 |
| Reforestation at Shaper Property | FPU | A | | 1.38 | 11/7/2016 | \$42,795.00 | Complete | 2017 |
| Reforestation at Rollins-Frank Property2 | FPU | A | | 1.66 | 11/11/2016 | \$46,575.00 | Complete | 2017 |
| BA-56081 & 56106: Reforestation at Hernwood ES | FPU | A | 1 | 1.31 | 11/19/16 | \$24,046.00 | Complete | 2017 |
| Reforestation at Foxhall Sec 1 | FPU | A | | 0.48 | 11/22/2016 | \$15,400.00 | Complete | 2017 |
| Part of facility #5427 | IMPP | A | 1 | 0.25 | 11/28/2016 | | Complete | 2017 |
| Reforestation at Strathy Property | FPU | A | | 0.26 | 11/30/2016 | \$8,081.00 | Complete | 2017 |
| BA-57132 & 57144: Reforestation at Charlestown Retirement Community (not part of 2017 NPDES Report) | FPU | A | 1 | 0.20 | 12/1/16 | \$18,191.53 | Complete | 2017 |
| BA-57134 & 57145: Reforestation at Evergreen at Putty Hill (not part of 2017 NPDES Report) | FPU | A | 1 | 0.10 | 12/2/16 | \$9,936.81 | Complete | 2017 |

| | | | | | | | | |
|--|------|---|-------|------|-----------|--------------|----------|--|
| Reforestation at Brooke Property | FPU | A | | 0.41 | 12/2/2016 | \$10,308.00 | Complete | 2017 Reforestation at Brooke Property |
| BA-57244: Reforestation at Ballards Garden | FPU | A | | | | | | |
| BA-56086: Reforestation at Page Property | FPU | A | 1 | 0.05 | 12/3/16 | \$9,916.00 | Complete | 2017 Reforestation at Ballards Garden |
| Reforestation at Seventh District and Warnick Property | FPU | A | 1 | 0.38 | 12/5/16 | \$12,659.00 | Complete | 2017 Reforestation at Page Property Reforestation at Seventh District and Warnick Property |
| Reforestation at Clemments | FPU | A | | 0.48 | 12/5/2016 | \$13,544.00 | Complete | 2017 Reforestation at Clemments |
| Reforestation at Coats | FPU | A | | 0.07 | 12/7/2016 | \$2,198.00 | Complete | 2017 Reforestation at Coats |
| BA-11732.01: Conversion of Pond #1732 | SF | S | 1 | 2.90 | 12/9/16 | \$183,778.24 | Complete | 2017 Conversion of Pond #1732 |
| BA-11744.01: Conversion of Pond #1744 | SF | S | 1 | 2.28 | 12/27/16 | \$99,773.00 | Complete | 2017 Conversion of Pond #1744 |
| Part of facility #5125 | IMPP | A | 1 | 1.02 | 1/9/17 | | Complete | 2017 Part of facility #5125 |
| Part of facility #5150 | IMPP | A | 1 | 0.00 | 1/24/17 | | Complete | 2017 Part of facility #5150 |
| Part of facility #5150 | IMPP | A | 1 | 0.01 | 1/24/2017 | | Complete | 2017 Part of facility #5150 |
| Reforestation at Burton | FPU | A | | 0.17 | 3/29/2017 | \$4,751.00 | Complete | 2017 Reforestation at Burton |
| Reforestation at Stead | FPU | A | | 0.21 | 3/29/2017 | \$4,751.00 | Complete | 2017 Reforestation at Stead |
| Reforestation at Meadowcroft | FPU | A | | 0.38 | 3/31/2017 | \$9,484.00 | Complete | 2017 Reforestation at Meadowcroft |
| Part of facility #5303 | IMPP | A | 1 | 0.07 | 3/31/2017 | | Complete | 2017 Part of facility #5303 |
| BA-56025: Reforestation at Brich Property | FPU | A | 1 | 0.08 | 4/7/17 | \$1,596.00 | Complete | 2017 Reforestation at Brich Property |
| BA-56037: Reforestation at Seligson Property | FPU | A | 1 | 0.19 | 4/7/17 | \$2,362.00 | Complete | 2017 Reforestation at Seligson Property |
| Part of facility #4593 | IMPP | A | 1 | 0.28 | 4/12/2017 | | Complete | 2017 Part of facility #4593 Reforestation at Harris Mill Property (Wood) |
| Reforestation at Harris Mill Property (Wood) | FPU | A | | 0.38 | 4/22/2017 | \$11,410.00 | Complete | 2017 Part of facility #5479 |
| Part of facility #5479 | IMPP | A | 1 | 0.40 | 4/26/2017 | | Complete | 2017 Part of facility #5479 |
| Part of facility #5479 | IMPP | A | 1 | 0.15 | 4/26/2017 | | Complete | 2017 Part of facility #5479 |
| Reforestation at Springfield Farm | FPU | A | | 1.22 | 4/28/2017 | \$23,283.00 | Complete | 2017 Reforestation at Springfield Farm |
| Reforestation at FOP Lodge #34 | FPU | A | | 0.45 | 5/1/2017 | \$16,611.00 | Complete | 2017 Reforestation at FOP Lodge #34 |
| Part of facility #5568 | IMPP | A | 1 | 0.02 | 5/10/2017 | | Complete | 2017 Part of facility #5568 |
| BA-56083: Reforestation at Joppa View ES | FPU | A | 1 | 0.48 | 5/16/17 | \$12,316.00 | Complete | 2017 Reforestation at Joppa View ES |
| 5 giveaways in FY17, last giveaway date used | FPU | A | 2,590 | 9.84 | 5/19/17 | \$0.00 | Complete | 2017 Reforestation at Joppa View ES 5 giveaways in FY17, last giveaway date used |
| BA-10596.01: Conversion of Pond #596 | SF | S | 1 | 3.80 | 5/24/17 | \$173,044.07 | Complete | 2017 Conversion of Pond #596 |
| Reforestation at Cogan | FPU | A | | 0.56 | 6/9/2017 | \$13,804.00 | Complete | 2017 Reforestation at Cogan |
| Part of facility #5483 | IMPP | A | 1 | 0.13 | 6/20/2017 | | Complete | 2017 Part of facility #5483 |
| IMPP | IMPP | A | 1 | 0.06 | 6/20/2017 | | Complete | 2017 IMPP |

| | | | | | | | |
|---|------|---|-----|--------|------------|-------------------------|--|
| Part of facility #4911 | IMPP | A | 1 | 0.05 | 6/21/2017 | Complete | 2017 Part of facility #4911 |
| Watershed Association Projects (mixed types) | | A | | | | | Watershed Association Projects |
| Septic Connections | SEPC | A | 103 | 40.17 | 6/30/17 | \$240,000.00 Complete | 2017 (mixed types) |
| Septic Denitrifying Systems | SEPD | A | 19 | 4.94 | 6/30/17 | \$410,000.00 Complete | 2017 Septic Connections |
| BA_00244: Long Quarter @ Shetland Stream Restoration | STRE | A | | | | \$180,000.00 Complete | 2017 Septic Denitrifying Systems |
| BA-56079 & 57247: Reforestation at Hebbville ES | FPU | A | 1 | 15.00 | 7/5/17 | \$1,748,081.00 Complete | 2017 Septic Denitrifying Systems Long Quarter @ Shetland Stream |
| Reforestation at Collins Property | FPU | A | | | | \$15,554.00 Complete | 2017 Restoration |
| REDE: Based on one project completed and analyzed in FY17 | REDE | | | 0.24 | 11/11/2017 | \$7,490.00 Complete | 2017 Reforestation at Hebbville ES |
| | | | 1 | 0.08 | | \$0.00 Complete | 2017 Reforestation at Collins Property |
| | | | | | | | Based on one project completed 2017 and analyzed in FY17 |
| | | | | 151.68 | | \$4,349,444.43 | |

NOTE:

Other capital projects have allotments, allocations or encumbrances and are in progress. Due to field evaluations, engineering design, permitting and construction restrictions and timelines, these projects will be reported in future years but are funded by carryover funds from FY2017 and/ or prior years.

VERSION 12-21-2017

Watershed Protection and Restoration Program Annual Report Table

Article 4-202.1(i)(4): "The percentage and amount of funds in the local watershed protection and restoration fund spent on each of the purposes provided in subsection (h)(4) of this section;"

| Program Element | Cost | Percent of WPRF | |
|--|-----------------------|-----------------|-----------------------------|
| Capital Improvements for Stormwater Management | \$911,992.45 | 42.50% | 589102/589202 |
| Property Management | \$124,786.80 | 5.81% | 544304/566501/566603/566449 |
| Public Education and Outreach | \$4,943.86 | 0.23% | 566486/566499 |
| Stormwater Management Planning (see Md. Environment Code Ann. § 4-202.1(h)(4)(iv)) | \$65,543.03 | 3.05% | 544323/544608/566439 |
| Review of Stormwater Management Plans and Permit Applications for New Development | | 0.00% | |
| Grants to Nonprofit Organizations | | 0.00% | |
| Adminstration of WPRF | \$1,038,813.63 | 48.41% | Salaries/Etc./577503 |
| TOTAL | \$2,146,079.77 | 100.00% | |
| Number of Properties Subject to Fee | 0 | | |
| Reporting Year | 2017 | | |
| Permit Number | 11-DP-3319 | | |
| Comments: | | | |

VERSION12/5/17

| Jurisdiction | Agency | Local Ordinance Submitted to MDE | MDE Approval of Fee Reduction Policy | Fee Reduction Amount |
|--------------|--------|----------------------------------|--------------------------------------|----------------------|
| | | | | |

Use: Yes or No

Use the approval date or N/A

Reduction amount(s), if any, with reason for reduction(s)

Directions:

Notes:

ERU = Equivalent residential unit

VERSION 12/5/17

NOT APPLICABLE TO CARROLL COUNTY

Article 4-202.1(i)(3): "The amount of money deposited into the watershed protection and restoration fund in the previous fiscal year by source;"

| Source | Amount |
|------------------------|-------------|
| Dedicated Property Tax | \$2,160,120 |

\$2,160,120

VERSION 12/5/17

All SWM Projects Implemented in Previous FY for the 20% Restoration Requirement

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST | IMPL STATUS | IMPL COMP YR |
|---------------|---------------|-----------|---------|-----------|------------|----------------|-------------|--------------|
| CR16RST000007 | FBIO | S | 1 | 0.5 | 6/21/2016 | \$78,471.00 | Complete | 2016 |
| CR16RST000002 | PWED | S | 1 | 35.24 | 11/22/2016 | \$1,253,668.00 | Complete | 2017 |
| CR16RST000003 | FSND | S | 1 | 34.44 | 12/9/2016 | \$876,727.00 | Complete | 2017 |
| CR17RST000001 | FBIO | S | 1 | 2.55 | 6/2/2017 | \$174,000.00 | Complete | 2017 |
| CR17RST000002 | MRNG | E | 1 | 0.05 | 6/2/2017 | \$8,000.00 | Complete | 2017 |
| CR17RST000003 | MILS | E | 1 | 0.06 | 6/2/2017 | \$25,000.00 | Complete | 2017 |
| CR17RST000004 | MIDW | E | 1 | 0.03 | 6/2/2017 | \$6,000.00 | Complete | 2017 |
| CR17RST000005 | MRWH | E | 1 | 0.01 | 6/2/2017 | \$1,250.00 | Complete | 2017 |
| CR16RST000001 | PWED | S | 1 | 22.34 | 7/10/2017 | \$2,470,982.00 | Complete | 2017 |
| | | | | 95.22 | | \$4,894,098.00 | | |

VERSON 12/6/17

Watershed Protection and Restoration Program Annual Report - TABLE 1

Article 4-202.1(i)(4): "The percentage and amount of funds in the local watershed protection and restoration fund spent on each of the purposes provided in subsection (h)(4) of this section;"

| Program Element | Cost | Percent of WPRF |
|--|------------------|-----------------|
| Capital Improvements for Stormwater Management | \$895,379.00 | 36.86% |
| O & M of SWM Systems and Facilities | \$468,404.31 | 19.28% |
| Public Education and Outreach | \$62,998.34 | 2.59% |
| Stormwater Management Planning (see Md. Environment Code Ann. § 4-202.1(h)(4)(iv)) | \$950,544.87 | 39.13% |
| Review of Stormwater Management Plans and Permit Applications for New Development | 0 | 0.00% |
| Grants to Nonprofit Organizations | \$38,512.48 | 1.59% |
| Adminstration of WPRF | \$13,400.00 | 0.55% |
| TOTAL | \$2,429,239.00 | 100.00% |
| Number of Properties Subject to Fee | 51,204 | |
| Reporting Year | Fiscal Year 2017 | |
| Permit Number | 11-DP-3322 | |
| Comments: | | |

Watershed Protection and Restoration Program Annual Report - TABLE 2

| Juris | Agency | Local Ordinance Submitted to MDE | MDE Approval of Fee Reduction Policy | Fee Reduction Amount | Rate Structures for Fiscal Year 2017 | | | | | | | | Additional Sources of Funds | | Estimated Annual Revenue |
|----------------|--------------------|----------------------------------|--------------------------------------|---|---------------------------------------|------------------------|--|-------------------------|--------------------------------------|---|---------------------------|---------------------------------|--|--|--------------------------|
| | | | | | Annual Single Family Residential Rate | Annual Commercial Rate | Equivalent Residential Unit (ERU) Impervious | Commercial Capped Rates | Non-profits, Religious Organizations | Exemptions | Federal Facilities Status | Federal Facility Fee(s)/Rate(s) | Additional Source 1 | Additional Source 2 | |
| Charles County | Charles County Gov | Yes | 4/2/2014 | 50% reduction of fee for properties that meet or exceed the 2000 MD Stormwater Design Manual; or covered by an approved Soil Conservation & Water Quality Plan or Forest Management Plan. | \$39 | \$39 | N/A | N/A | \$39 | Exempt properties are: owned by federal, state, county or municipal government; within a municipality if has a stormwater fee; owned by a disabled veteran; with no impervious surface; subject to an industrial stormwater permit; or owned by person(s) demonstrating financial hardship. | Exempt | N/A | Lot Recordation Fee: \$138 per new lot recorded in the Development District. | Miscellaneous: includes interest and stormwater facility maintenance fees. | \$1,981,534.00 |

Watershed Protection and Restoration Program Annual Report - TABLE 3

Article 4-202.1(i)(3): "The amount of money deposited into the watershed protection and restoration fund in the previous fiscal year by source;"

| Fiscal Year 2017 | |
|--|-----------------|
| Source | Amount |
| Stormwater Remediation Fees Collected | \$ 1,981,534.25 |
| Additional Source 1 - General Fund Subsidy | \$ 236,579.26 |
| Additional Source 2 - Lot Recordation Fees | \$ 50,094.00 |
| Additional Source 3 - Miscellaneous | \$ 6,801.81 |
| | \$ 2,275,009.32 |

Watershed Protection and Restoration Program Annual Report - TABLE 4

All stormwater projects implemented in Fiscal Year 2017 to meet the impervious surface restoration plan.

| REST BMP ID | REST BMP TYPE ¹ | BMP CLASS ² | NUM BMP | IMP ACRES ³ | BUILT DATE | IMPL COST ⁴ | IMPL STATUS | IMPL COMP YR |
|----------------------------|----------------------------|------------------------|--------------|------------------------|------------|------------------------|-------------|--------------|
| Mechanical Street Sweeping | MSS | A | 1 | 76.8 | 6/30/2017 | \$50,705 | Complete | 2017 |
| Storm Drain Vacuuming | SDV | A | 121 | 12.24 | 6/30/2017 | \$78,104 | Complete | 2017 |
| Septic Pump-Out | SEPP | A | 649 | 19.47 | 6/30/2017 | \$82,261 | Complete | 2017 |
| Septic Denitrification | SEPD | A | 35 | 9.1 | 6/30/2017 | \$375,008 | Complete | 2017 |
| White Plains (8034) | MSGW | S | 1 | 5.8 | 1/5/2017 | \$522,169 | Complete | 2017 |
| Tanglewood (8050) | SPSC | S | 1 | 21.32 | 8/31/2016 | \$1,297,360 | Complete | 2017 |
| Tenth District VFD (8052) | MSGW | S | 1 | 2.6 | 5/18/207 | \$97,239.00 | Complete | 2017 |
| Totals | | | 1,293 | 147.33 | | \$2,502,846.00 | | |

¹ See attached list of Restoration BMP Type Codes.

² BMP CLASSES are: A - Alternative BMP, E - Environmental Site Design, or S - Structural BMP.

³ IMP ACRES per MDE guide "Accounting for Stormwater Wasteload Allocations & Imp Acres Treated, Guidance for NPDES Stormwater Permits" (Aug 2014).

⁴ When multiple capital projects under one budget, multiply total cost by percent acres treated for each project.

Frederick County

Watershed Protection and Restoration Program Annual Report Table

Article 4-202.1(i)(4): "The percentage and amount of funds in the local watershed protection and restoration fund spent on each of the purposes provided in subsection (h)(4) of this section;"

| Program Element | Cost | Percent of WPRF |
|--|---------------|-----------------|
| Capital Improvements for Stormwater Management | \$0.00 | 0.00% |
| O & M of SWM Systems and Facilities | \$0.00 | 0.00% |
| Public Education and Outreach | \$0.00 | 0.00% |
| Stormwater Management Planning (see Md. Environment Code Ann. § 4-202.1(h)(4)(iv)) | \$0.00 | 0.00% |
| Review of Stormwater Management Plans and Permit Applications for New Development | \$0.00 | 0.00% |
| Grants to Nonprofit Organizations | \$0.00 | 0.00% |
| Adminstration of WPRF | \$0.00 | 0.00% |
| TOTAL | \$0.00 | 0.00% |

Number of Properties Subject to Fee 48,746
 Reporting Year 2017
 Permit Number 11-DP-3321 MD0068357
 Comments:

VERSION 4-7-16

| Jurisdiction | Agency | Local Ordinance Submitted to MDE | MDE Approval of Fee Reduction Policy |
|---|--|----------------------------------|--------------------------------------|
| Frederick County | Planning and Permitting Division, Office of Sustainability and Environmental Resources | Yes | 3/26/2015 |
| <p style="text-align: right;">Use: Yes or No Use the approval date or N/A</p> | | | |
| <p>Directions:</p> <p>Notes:</p> <p>ERU = Equivalent residential unit</p> <p>VERSION 4-7-16</p> | | | |

| Fee Reduction Amount | Annual Single Family Residential Rate | Annual Commercial Rate | Equivalent Residential Unit (ERU) impervious | Commercial Capped Rates |
|---|---------------------------------------|------------------------|--|-------------------------|
| 30% or 60% for homeowners based on documented practices | \$0.01 | 0.01 | NA | NA |

Reduction amount(s), if any, with reason for reduction(s)

Use: N/A, amount of flate rate, rate amount per ERU, etc.

| Rate Structures | | |
|---|-------------------|----------------------------------|
| Non-profits, Religious Organizations | Exemptions | Federal Facilities Status |
| NA | NA | Charged |

General description of exemption(s), if any

Use: No Facilities,
Exempt, or Charged

| | Additional Sources of Funds | |
|--|------------------------------------|----------------------------|
| Federal Facility Fee(s)/Rate(s) | Additional Source 1 | Additional Source 2 |
| NA | NA | NA |

Use: N/A or the fee and rate structures for federal facilities

| Additional Source 3 | Estimated Annual Revenue |
|---------------------|--------------------------|
| NA | \$487.46 |
| | |
| | |

Notes

Article 4-202.1(i)(3): "The amount of money deposited into the watershed protection and restoration fund in the previous fiscal year by source;"

| Source | Amount |
|---|-----------|
| Annual Single Family Residential Fees Collected | \$ 448.16 |
| Annual Commercial Fees Collected | \$ 37.10 |
| Non-profits, Religious Orgs Fees Collected | \$ 2.20 |
| Unnamed Additional Source 1 | \$ - |
| | \$ 487.46 |

VERSION 4-7-16

All SWM Projects Implemented in Previous FY for the 20% Restoration Requirement

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST | IMPL STATUS | IMPL COMP YEAR |
|--|---------------|-----------|---------|-----------|------------|-------------|-------------|----------------|
| Operation Programs | | | | | | | | |
| Street Sweeping | VSS | A | 1 | 12.52 | 6/30/2015 | \$184,764 | C | 2015 |
| Street Sweeping | VSS | A | 1 | 27.45 | 6/30/2016 | \$42,153 | C | 2016 |
| Street Sweeping | VSS | A | 1 | 28.73 | 6/30/2017 | \$34,956 | C | 2017 |
| Inlet Cleaning | CBC | A | 1 | 0 | 6/30/2015 | \$368,886 | C | 2015 |
| Inlet Cleaning | CBC | A | 1 | 0 | 6/30/2016 | \$387,561 | C | 2016 |
| Inlet Cleaning | CBC | A | 1 | 0 | 6/30/2017 | \$276,636 | C | 2017 |
| Septic Pumping | SEPP | A | | | | N/A | C | 2014 |
| Average Operations Complete To Date* | | | | 25.00 | | \$1,294,956 | | |
| Capital Projects | | | | | | | | |
| Ballenger Stream Restoration | STRE | A | 1 | 6.05 | 5/1/2007 | \$355,832 | C | 2007 |
| Englandtowne Stream Restoration | STRE | A | 1 | 7.3 | 12/1/2014 | \$247,920 | C | 2015 |
| Pinecliff Stream Stabilization | STRE | A | 1 | 10 | 11/12/2010 | \$312,520 | C | 2011 |
| FC - Englandtowne SWM - Retrofit | WPWS | S | 1 | 12.10 | 3/17/2017 | \$584,645 | C | 2017 |
| Subtotal Capital Complete To Date | | | | 35.45 | | \$1,500,916 | | |
| Other | | | | | | | | |
| OSER - Urbana Community Park - Bioretention | FBIO | S | 1 | 1.70 | 12/1/2013 | \$11,440 | C | 2014 |
| OSER - Urbana Elementary School - Stormwater | MSWB | E | 1 | 3.30 | 12/1/2001 | \$176 | C | 2002 |
| OSER - Urbana High School - Bioretentions & R | FBIO | E | 2 | 2.30 | 10/1/2007 | \$249,069 | C | 2008 |
| Trout Unlimited Stream Restoration | STRE | A | 1 | 11.2 | 1/1/2013 | \$0 | C | 2013 |
| Little Tuscarora Creek | STRE | A | 1 | 15 | 10/15/2015 | \$0 | C | 2016 |
| Cooperative Extension Building - Tree Planting | FPU | A | 1 | 0.35 | 1/1/2005 | \$0 | C | 2005 |
| Cloverhill - Urban Forest Buffer | FPU | A | 1 | 0.51 | 1/1/2006 | \$16,830 | C | 2006 |
| Liberty Village Cohousing Community - Urban | FPU | A | 1 | 1.08 | 1/1/2006 | \$23,100 | C | 2006 |
| Libertytown Park - Tree Planting | FPU | A | 1 | 2.67 | 1/1/2006 | \$25,740 | C | 2006 |
| Libertytown Park - Urban Forest Buffer | FPU | A | 1 | 0.78 | 1/1/2006 | \$25,740 | C | 2006 |
| St. Peter the Apostle Roman Catholic Church - | FPU | A | 1 | 0.47 | 1/1/2006 | \$6,600 | C | 2006 |

| | | | | | | | | |
|---|------|---|-----|--------|-----------|-------------|---|------|
| Ballenger Creek Elementary School - Urban Forest Buffer | FPU | A | 1 | 0.58 | 1/1/2007 | \$19,140 | C | 2007 |
| Fred Archibald Sanctuary - Urban Forest Buffer | FPU | A | 1 | 2.58 | 1/1/2007 | \$85,140 | C | 2007 |
| Holly Hills Country Club - Urban Forest Buffer | FPU | A | 1 | 5.79 | 1/1/2007 | \$191,070 | C | 2007 |
| Holly Hills HOA - Urban Forest Buffer | FPU | A | 1 | 0.44 | 1/1/2007 | \$14,520 | C | 2007 |
| Utica Park - Urban Forest Buffer | FPU | A | 1 | 0.29 | 1/1/2007 | \$9,570 | C | 2007 |
| Urbana Community Park - Riparian Forest Buffer | FPU | A | 1 | 0.9 | 1/1/2009 | \$29,700 | C | 2009 |
| Urbana Middle School - Tree Planting | FPU | A | 1 | 0.46 | 1/1/2009 | \$15,180 | C | 2009 |
| Valley Elementary School - Tree Planting | FPU | A | 1 | 0.79 | 1/1/2009 | \$26,070 | C | 2009 |
| Pinecliff Park - Urban Forest Buffer | FPU | A | 1 | 0.51 | 1/1/2010 | \$27,000 | C | 2010 |
| Wolfsville Elementary School - Tree Planting | FPU | A | 1 | 0.41 | 1/1/2010 | \$13,530 | C | 2010 |
| Old National Pike Park - Riparian Forest Buffer | FPU | A | 1 | 1.83 | 1/1/2011 | \$60,390 | C | 2011 |
| Urbana Elementary School - Urban Forest Buffer | FPU | A | 1 | 0.13 | 1/1/2011 | \$4,290 | C | 2011 |
| Windsor Knolls Middle School - Tree Planting | FPU | A | 1 | 1.41 | 1/1/2011 | \$75,240 | C | 2011 |
| Windsor Knolls Middle School - Urban Forest Buffer | FPU | A | 1 | 3.29 | 1/1/2011 | \$75,240 | C | 2011 |
| Worthington Manor Golf Course - Urban Forest Buffer | FPU | A | 1 | 3.47 | 1/1/2011 | \$0 | C | 2011 |
| New Market Middle School - Tree Planting | FPU | A | 1 | 1.22 | 1/1/2012 | \$40,260 | C | 2012 |
| Pinecliff Park - Riparian Forest Buffer | FPU | A | 1 | 0.28 | 1/1/2012 | \$26,070 | C | 2012 |
| Crestwood Middle School - Urban Forest Buffer | FPU | A | 1 | 0.79 | 1/1/2013 | \$26,070 | C | 2013 |
| Deer Crossing Elementary School - Tree Planting | FPU | A | 1 | 1.09 | 1/1/2013 | \$35,970 | C | 2013 |
| Orchard Grove Elementary School - Tree Planting | FPU | A | 1 | 0.32 | 1/1/2013 | \$10,560 | C | 2013 |
| Spring Ridge Elementary School - Tree Planting | FPU | A | 1 | 1.05 | 1/1/2013 | \$34,650 | C | 2013 |
| Monocacy Elementary School - Urban Forest Buffer | FPU | A | 1 | 0.19 | 1/1/2014 | \$1,320 | C | 2014 |
| Mountain Village HOA - Urban Forest Buffer | FPU | A | 1 | 1.22 | 1/1/2014 | \$40,260 | C | 2014 |
| Englandtowne Retrofit Project Tree Planting | FPU | A | 1 | 0.28 | 3/17/2017 | \$18,787 | C | 2017 |
| Septic Denitrification (BRF) | SEPD | A | 184 | 47.84 | 6/30/2016 | \$2,539,200 | C | 2016 |
| Septic Denitrification (BRF) | SEPD | A | 26 | 6.76 | 6/30/2017 | \$364,000 | C | 2017 |
| Septic Connections to WWTP | SEPC | A | 7 | 2.73 | 6/30/2016 | \$350,000 | C | 2016 |
| Subtotal Other Complete to Date | | | | 126.01 | | \$4,491,922 | | |
| Total Complete to Date | | | | 186.46 | | \$7,287,794 | | |

*The County is conservatively estimating credit of street sweeping activities for this reporting year based on average tons swept in FY15-FY17.

VERSION 4-7-16

Watershed Protection and Restoration Program Annual Report Table

Article 4-202.1(i)(4): "The percentage and amount of funds in the local watershed protection and restoration fund spent on each of the purposes provided in subsection (h)(4) of this section;"

| Program Element | Cost | Percent of WPRF |
|--|-----------------------|-----------------|
| Capital Improvements for Stormwater Management | \$3,018,000.00 | 66% |
| O & M of SWM Systems and Facilities | \$347,000.00 | 8% |
| Public Education and Outreach | \$9,000.00 | 0% |
| Stormwater Management Planning (see Md. Environment Code Ann. § 4-202.1(h)(4)(iv)) | \$1,211,000.00 | 26% |
| Review of Stormwater Management Plans and Permit Applications for New Development | \$0.00 | |
| Grants to Nonprofit Organizations | \$0.00 | |
| Adminstration of WPRF | \$0.00 | |
| TOTAL | \$4,585,000.00 | 100.00% |
| Number of Properties Subject to Fee | - | |
| Reporting Year | 2017 | |
| Permit Number | 11-DP3310 | |
| Comments: | - | |

1. Expenditures above represent dedicated capital funds for WPRP
2. An additional \$1.3 M is allocated from General Funds for operating expenditures including salaries
3. Expenditures for education and outreach were not included in the 2017 Annual Report program funding
4. \$688,132 of the expenditures were from grants

VERSION 2-28-18

| Jurisdiction | Agency | Local Ordinance Submitted to MDE | MDE Approval of Fee Reduction Policy |
|--------------|--------|----------------------------------|--------------------------------------|
| | | | |

Use: Yes or No

Use the approval date or N/A

Directions:

Notes:

ERU = Equivalent residential unit

VERSION 2-28-18

| Fee Reduction Amount | Annual Single Family Residential Rate | Annual Commercial Rate | Equivalent Residential Unit (ERU) impervious | Commercial Capped Rates |
|----------------------|---------------------------------------|------------------------|--|-------------------------|
| | | | | |

Reduction amount(s), if any, with reason for reduction(s)

Use: N/A, amount of flate rate, rate amount per ERU, etc.

| Rate Structures | | |
|---|--|---|
| Non-profits, Religious Organizations | Exemptions | Federal Facilities Status |
| | | |
| | General description of exemption(s), if any | Use: No Facilities, Exempt, or Charged |

| | Additional Sources of Funds | |
|--|------------------------------------|----------------------------|
| Federal Facility Fee(s)/Rate(s) | Additional Source 1 | Additional Source 2 |
| | | |

Use: **N/A** or the fee and rate structures for federal facilities

| Additional Source 3 | Estimated Annual Revenue | |
|----------------------------|---------------------------------|--------------|
| | | Notes |
| | | |
| | | |

Article 4-202.1(i)(3): "The amount of money deposited into the watershed protection and restoration fund in the previous fiscal year by source;"

| Source | Amount |
|---|-----------------|
| Annual Single Family Residential Fees Collected | \$ - |
| Annual Commercial Fees Collected | \$ - |
| Non-profits, Religious Orgs Fees Collected | \$ - |
| Unnamed Additional Source 1 | \$ 8,100,000.00 |
| | \$ 8,100,000.00 |

VERSION 2-28-18

comments:

1. \$6.1 M (\$0.2 M paygo / \$5.9 M bonds)
2. \$2.0 M grant award Trust Fund 14-17-2178 TRF 15

All SWM Projects Implemented in Previous FY for the 20% Restoration Requirement

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST | IMPL STATUS | IMPL COMP YR |
|-------------|---------------|-----------|---------|-----------|------------|----------------|-------------|--------------|
| CIP0036 | STRE | A | 1 | 20.9 | 4/1/2017 | \$903,000.00 | COMPLETE | 2017 |
| CIP0097 | WPKT | E | 1 | 0.3 | 4/1/2017 | \$13,000.00 | COMPLETE | 2017 |
| CIP0025 | PPKT | S | 1 | 3.66 | 6/1/2017 | \$530,000.00 | COMPLETE | 2017 |
| | | | | 24.86 | | \$1,446,000.00 | | |

VERSION 2-28-28

Howard County

15-Dec-17 Howard County Watershed Protection and Restoration Program Annual Report

Notes:

Howard County's first WPRP Annual Report submitted in July 2016 reflected Fiscal Year 2015.

This WPRP Annual Report includes reporting for Fiscal Years 2016 and 2017.

The ISRP BMPs Implemented table includes all restoration BMPs implemented between June of 2010 and the end of Fiscal Year 2017.

Watershed Protection and Restoration Program Annual Report Table

Article 4-202.1(i)(4): "The percentage and amount of funds in the local watershed protection and restoration fund spent on each of the purposes provided in subsection (h)(4) of this section;"

| Program Element | Cost | Percent of WPRF |
|--|----------------------|-----------------|
| Capital Improvements for Stormwater Management - Expended | \$ 6,829,239 | 60.50% |
| Capital Improvements for Stormwater Management - Encumbered | \$ 769,055 | 6.81% |
| O & M of SWM Systems and Facilities* | \$ 2,030,730 | 17.99% |
| Public Education and Outreach | \$ 382,468 | 3.39% |
| Stormwater Management Planning (see Md. Environment Code Ann. § 4-202.1(h)(4)(iv)) | \$ - | - |
| Review of Stormwater Management Plans and Permit Applications for New Development* | \$ - | 0.00% |
| Grants to Nonprofit Organizations* | \$ 713,342 | 6.32% |
| Administration of WPRF | \$ 128,450 | 1.14% |
| Fund Balance | \$ 434,049 | 3.85% |
| TOTAL | \$ 11,287,333 | 100.00% |
| Number of Properties Subject to Fee | 107,774 | |
| Reporting Year | FY 2017 | |
| Permit Number | 11-DP-3318 | |
| Comments: | | |

Notes

- *This includes inspections, enforcement, and other contingencies for operating the programs
- *This function is performed by Dept of Planning and Zoning and no WPRF Funds are allocated to this department
- *This also includes reimbursements issued as part of our residential programs, such as rain gardens and septic maintenance

VERSION 12-12-17

| Jurisdiction | Agency | Local Ordinance Submitted to MDE | MDE Approval of Fee Reduction Policy |
|--|--|----------------------------------|--------------------------------------|
| Howard County | Department of Public Works, Office of Community Sustainability | Yes | N/A |
| <p style="text-align: right;">Use: Yes or No Use the approval date or N/A</p> <p>Directions:</p> | | | |
| | | | |

VERSION 12-12-17

| Fee Reduction Amount | Annual Single Family Residential Rate | Annual Commercial Rate | Equivalent Residential Unit (ERU) impervious | Commercial Capped Rates |
|----------------------|---------------------------------------|----------------------------|--|---|
| N/A | \$15, \$45, \$90 based on lot size | \$15 per 500 sf impervious | NA | Capped at 20% of all State and local property taxes for FY 16, decreasing by 5% each fiscal year (15% cap in FY 17). The final cap is 5% in FY 19 and beyond. |

Reduction amount(s), if any, with reason for reduction(s)

Use: N/A, amount of flate rate, rate amount per ERU, etc.

Rate Structures

| Non-profits, Religious Organizations | Exemptions | Federal Facilities Status |
|---|--------------------|----------------------------------|
| 100% credit if in the Nonprofit Partnership, otherwise charged at the commercial rate | Financial Hardship | Not Exempt |

General description of exemption(s), if any

Use: No Facilities,
Exempt, or Charged

| Federal Facility Fee(s)/Rate(s) | Additional Sources of Funds | |
|---|-----------------------------|---------------------|
| | Additional Source 1 | Additional Source 2 |
| subject to the commercial rate and the commercial tax cap. Since most don't pay taxes, most don't have a fee. | | |

Use: N/A or the fee and rate structures for federal facilities

| Additional Source 3 | Estimated Annual Revenue |
|---------------------|--------------------------|
| | \$11,105,687.00 |
| | |
| | |

Notes

Article 4-202.1(i)(3): "The amount of money deposited into the watershed protection and restoration fund in the previous fiscal year by source;"

| Source | Fiscal Year 2017 Fees Collected |
|--|--|
| Single Family Residential | \$4,552,290 |
| Commercial | \$5,406,050 |
| Non- Profits / Religious Organizations | \$415,272 |
| Agricultural Properties | \$148,766 |
| Apartments | \$278,145 |
| Condominium | \$111,960 |
| Townhomes | \$374,850 |
| Total | \$11,287,333 |

All SWM Projects Implemented for the 20% Restoration Requirement
See the Howard County FY2017 MS4 Geodatabase for Individual BMP Details

Baseline: 12,299

Requirement: 20% 2460 acres

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST | % ISRP Complete | IMPL STATUS | IMPL COMP YR | GEN COMMENTS |
|---------------------------------------|---------------|-----------|---------|-----------|------------|-----------|-----------------|-------------|--------------|--|
| Operation Programs | | | | | | | | | | |
| 5-year Average Street Sweeping | MSS | A | 1 | 324.00 | 6/30/2017 | \$400,000 | 2.6% | Complete | 2017 | Average of 2013-2017 Street Sweeping |
| FY17 Inlet Cleaning | SDV | A | 70 | 34.65 | 1/1/2017 | \$97,650 | 0.3% | Complete | 2017 | Inlet Cleaning |
| Subtotal Operations Complete To Date* | | | 71 | 358.65 | | \$497,650 | 2.9% | | | |
| Capital Projects | | | | | | | | | | |
| HO13RST000060 | APRP | E | 1 | 0.20 | 8/23/2013 | \$17,751 | 0.0% | Complete | 2014 | Ellicott City Lot B Permeable Pavement Construction |
| HO15RST000312 | APRP | E | 1 | 0.15 | 11/10/2015 | \$1,300 | 0.0% | Complete | 2016 | Permeable pavers |
| HO15RST000306 | APRP | E | 1 | 0.15 | 12/5/2015 | \$1,300 | 0.0% | Complete | 2016 | Impervious surface removal, permeable pavers |
| HO10RST000053 | FBIO | S | 1 | 1.06 | 9/1/2010 | \$153,725 | 0.0% | Complete | 2011 | Cedar Lane Park - North |
| HO11RST000052 | FBIO | S | 1 | 0.42 | 6/1/2011 | \$206,792 | 0.0% | Complete | 2011 | Atholton Park |
| HO10RST000053 | FBIO | S | 1 | 1.06 | 9/1/2010 | \$153,725 | 0.0% | Complete | 2011 | Cedar Lane Park - North |
| HO11RST000071 | FBIO | S | 1 | 2.27 | 9/1/2011 | \$188,922 | 0.0% | Complete | 2012 | Dorsey Building Parking Lot |
| HO15RST000401 | FBIO | S | 1 | 1.02 | 7/21/2015 | \$100,000 | 0.0% | Complete | 2016 | Ellicott City Parking Lot E |
| HO15RST000402 | FBIO | S | 1 | 0.22 | 7/21/2015 | \$100,000 | 0.0% | Complete | 2016 | Ellicott City Parking Lot E |
| HO15RST000403 | FBIO | S | 1 | 0.76 | 7/21/2015 | \$100,000 | 0.0% | Complete | 2016 | Ellicott City Parking Lot E |
| HO15RST000404 | FBIO | S | 1 | 0.76 | 7/21/2015 | \$100,000 | 0.0% | Complete | 2016 | Ellicott City Parking Lot E |
| HO16RST000025 | FBIO | S | 1 | 0.73 | 12/6/2016 | \$62,541 | 0.0% | Complete | 2017 | Rockburn Park Retrofit |
| HO16RST000036 | FBIO | S | 1 | 2.07 | 8/10/2016 | \$433,580 | 0.0% | Complete | 2017 | Rusty Rim Pond Retrofit |
| HO11RST000077 | FBIO | S | 3 | 3.82 | 5/1/2011 | \$300,000 | 0.0% | Complete | 2011 | Savage Park |
| HO11RST000058 | FSND | S | 1 | 3.25 | 5/1/2011 | \$290,548 | 0.0% | Complete | 2011 | Stratford Downs |
| HO13RST000072 | FSND | S | 1 | 2.37 | 5/1/2013 | \$291,090 | 0.0% | Complete | 2013 | Oak West Dr SW Pond Retro Retrofit from dry pond to sand filter |
| MTBMP4 | FSND | S | 1 | 4.58 | 7/26/2017 | \$721,655 | 0.0% | Complete | 2018 | Velvet Path Pond Principal Spillway Replacement |
| RestBMP_1 | FSND | S | 1 | 12.92 | 8/8/2017 | \$478,652 | 0.1% | Complete | 2018 | Howard County General Hospital |
| HO13RST000069 | IBAS | S | 1 | 5.70 | 3/1/2013 | \$247,520 | 0.0% | Complete | 2013 | Country Lane Pond #1 |
| HO13RST000070 | IBAS | S | 1 | 3.28 | 3/1/2013 | \$247,520 | 0.0% | Complete | 2013 | Country Ln Pond Enhance Retrofit WQ enhance, forebays, add'l infiltr, new r* |
| HO14RST000068 | IBAS | S | 1 | 2.43 | 1/30/2014 | \$219,557 | 0.0% | Complete | 2014 | Ashmede Road |
| HO13RST000067 | IMPP | A | 1 | 9.82 | 5/1/2013 | \$228,392 | 0.1% | Complete | 2013 | Dower Drive |
| HO14RST000064 | MMBR | E | 1 | 0.18 | 9/30/2014 | \$70,213 | 0.0% | Complete | 2015 | Stevens Forest Elementary School - MB-1 |
| HO14RST000065 | MMBR | E | 1 | 0.14 | 9/30/2014 | \$70,213 | 0.0% | Complete | 2015 | Stevens Forest Elementary School - MB-2A |
| HO14RST000066 | MMBR | E | 1 | 0.08 | 9/30/2014 | \$70,213 | 0.0% | Complete | 2015 | Stevens Forest Elementary School - MB-2B |
| HO14RST000063 | MSWB | E | 1 | 0.02 | 9/30/2014 | \$70,213 | 0.0% | Complete | 2015 | Stevens Forest Elementary School - Bioswale |
| FY11 Outfall Stabilization | OUT | A | 3 | 0.65 | 1/1/2011 | \$150,000 | 0.0% | Complete | 2011 | Outfall Stabilization |
| FY12 Outfall Stabilization | OUT | A | 6 | 2.17 | 1/1/2012 | \$300,000 | 0.0% | Complete | 2012 | Outfall Stabilization |
| FY13 Outfall Stabilization | OUT | A | 7 | 2.54 | 1/1/2013 | \$350,000 | 0.0% | Complete | 2013 | Outfall Stabilization |
| FY14 Outfall Stabilization | OUT | A | 2 | 0.50 | 1/1/2014 | \$100,000 | 0.0% | Complete | 2014 | Outfall Stabilization |
| FY15 Outfall Stabilization | OUT | A | 1 | 0.28 | 1/1/2015 | \$50,000 | 0.0% | Complete | 2015 | Outfall Stabilization |
| FY16 Outfall Stabilization | OUT | A | 6 | 1.78 | 1/1/2016 | \$300,000 | 0.0% | Complete | 2016 | Outfall Stabilization |
| FY17 Outfall Stabilization | OUT | A | 9 | 8.41 | 1/1/2017 | \$450,000 | 0.1% | Complete | 2017 | Outfall Stabilization |
| HO11RST000074 | PWED | S | 1 | 3.85 | 12/1/2011 | \$45,541 | 0.0% | Complete | 2012 | Saint John's Green |
| HO12RST000078 | PWED | S | 1 | 4.18 | 3/1/2012 | \$184,142 | 0.0% | Complete | 2012 | Waverly Woods |
| HO12RST000075 | PWED | S | 1 | 3.28 | 7/1/2012 | \$443,506 | 0.0% | Complete | 2013 | Salterforth Pl Pond Enh Retrofit both ponds for WQ, new riser for Cpv, all* |
| HO12RST000076 | PWED | S | 1 | 4.11 | 7/1/2012 | \$354,624 | 0.0% | Complete | 2013 | Salterforth Pl Pond Enh Retrofit both ponds for WQ, new riser for Cpv, all* |

| | | | | | | | | | | |
|---------------|------|---|---|-------|------------|-------------|------|----------|------|---|
| HO15RST000005 | PWED | S | 1 | 43.29 | 5/8/2015 | \$1,275,340 | 0.4% | Complete | 2015 | Red Cravat Pond Repair and Retrofit |
| HO17RST000022 | PWED | S | 1 | 9.15 | 11/22/2016 | \$345,789 | 0.1% | Complete | 2017 | Mary Lee Lane Pond Repair |
| HO15RST000002 | PWET | S | 1 | 3.26 | 4/20/2015 | \$305,652 | 0.0% | Complete | 2015 | Towering Oaks Pond Repair |
| MTBMP3 | PWET | S | 1 | 5.10 | 3/22/2016 | \$194,698 | 0.0% | Complete | 2016 | Townhomes of Timberland |
| HO17RST000029 | PWET | S | 1 | 3.14 | 7/15/2016 | \$66,827 | 0.0% | Complete | 2017 | Longridge Knolls Pond Repair |
| HO16RST000027 | PWET | S | 1 | 0.77 | 10/5/2016 | \$560,283 | 0.0% | Complete | 2017 | Montgomery Run Pond 2 Repair |
| PWET1 | PWET | S | 1 | 5.17 | 11/30/2016 | \$504,678 | 0.0% | Complete | 2017 | Lynnwood Manor Retrofit |
| MTBMP2 | PWET | S | 1 | 13.02 | 5/19/2017 | \$473,333 | 0.1% | Complete | 2017 | Golden Star Pond Retrofit #2 |
| HO16RST000034 | PWET | S | 1 | 16.38 | 6/29/2017 | \$718,487 | 0.1% | Complete | 2017 | Long Meadow Pond Repair 1 |
| MTBMP6 | PWET | S | 1 | 6.87 | 8/23/2017 | \$505,890 | 0.1% | Complete | 2018 | Fairest Dreams Pond Retrofit |
| HO15RST000322 | SPSC | A | 1 | 3.04 | 2/15/2013 | \$291,090 | 0.0% | Complete | 2013 | Oak West Drive |
| HO15RST000405 | SPSC | A | 1 | 3.26 | 4/20/2015 | \$305,652 | 0.0% | Complete | 2015 | Towering Oaks SPSC |
| HO15RST000323 | SPSC | A | 1 | 0.00 | 11/3/2015 | \$290,743 | 0.0% | Complete | 2016 | Dorsey Hall VC Outfall B Stabilization |
| HO15RST000324 | SPSC | A | 1 | 0.00 | 11/3/2015 | \$290,743 | 0.0% | Complete | 2016 | Dorsey Hall VC Outfall C Stabilization |
| HO15RST000325 | SPSC | A | 1 | 0.00 | 11/3/2015 | \$290,743 | 0.0% | Complete | 2016 | Dorsey Hall VC Outfall E Stabilization |
| HO15RST000326 | SPSC | A | 1 | 0.00 | 11/3/2015 | \$290,743 | 0.0% | Complete | 2016 | Dorsey Hall VC Outfall D Stabilization |
| HO16RST000035 | SPSC | A | 1 | 10.13 | 6/16/2017 | \$844,796 | 0.1% | Complete | 2017 | Long Meadow Pond Repair 2 |
| HO10ALN000071 | STRE | A | 1 | 4.79 | 8/31/2010 | \$309,064 | 0.0% | Complete | 2011 | Paul Mill Road |
| HO10ALN000014 | STRE | A | 1 | 0.68 | 12/15/2010 | \$50,000 | 0.0% | Complete | 2011 | Hickory Ridge Village Center |
| HO11ALN000015 | STRE | A | 1 | 4.45 | 1/31/2011 | \$521,967 | 0.0% | Complete | 2011 | Old Willow Way |
| HO11ALN000049 | STRE | A | 1 | 5.00 | 3/22/2011 | \$500,000 | 0.0% | Complete | 2011 | LPPSI Stream Mitigation - A |
| HO11ALN000048 | STRE | A | 1 | 1.00 | 4/4/2011 | \$94,650 | 0.0% | Complete | 2011 | Autumn Harvest - Phase 2 |
| HO11ALN000056 | STRE | A | 1 | 6.00 | 11/30/2011 | \$100,000 | 0.0% | Complete | 2012 | Savage Park |
| HO11ALN000045 | STRE | A | 1 | 2.55 | 12/16/2011 | \$216,776 | 0.0% | Complete | 2012 | Hi Tech Road |
| HO12ALN000051 | STRE | A | 1 | 13.00 | 2/17/2012 | \$1,232,322 | 0.1% | Complete | 2012 | Meadowbrook Park |
| HO12ALN000075 | STRE | A | 1 | 15.05 | 2/20/2012 | \$869,669 | 0.1% | Complete | 2012 | Threshfield Stream Rest |
| HO12ALN000057 | STRE | A | 1 | 16.61 | 2/21/2012 | \$1,584,055 | 0.1% | Complete | 2012 | Red Hill Branch |
| HO12ALN000058 | STRE | A | 1 | 16.61 | 2/21/2012 | | 0.1% | Complete | 2012 | Red Hill Branch |
| HO12ALN000088 | STRE | A | 1 | 4.75 | 2/29/2012 | \$200,000 | 0.0% | Complete | 2012 | Little Patuxent Parallel Interceptor |
| HO12ALN000052 | STRE | A | 1 | 0.88 | 3/2/2012 | \$82,104 | 0.0% | Complete | 2012 | Great Oaks Way |
| HO12ALN000046 | STRE | A | 1 | 10.86 | 3/23/2012 | \$927,366 | 0.1% | Complete | 2012 | Bramhope Lane |
| HO12ALN000029 | STRE | A | 1 | 2.05 | 6/30/2012 | \$100,000 | 0.0% | Complete | 2012 | Trotter Road |
| HO13ALN000054 | STRE | A | 1 | 1.84 | 1/1/2013 | \$234,278 | 0.0% | Complete | 2013 | Dower Drive |
| HO13ALN000050 | STRE | A | 1 | 6.30 | 1/9/2013 | \$500,000 | 0.1% | Complete | 2013 | LPPSI Stream Mitigation - B |
| HO13ALN000091 | STRE | A | 1 | 3.25 | 1/17/2013 | \$200,000 | 0.0% | Complete | 2013 | Little Patuxent Parallel Interceptor |
| HO13ALN000031 | STRE | A | 1 | 1.15 | 2/17/2013 | \$0 | 0.0% | Complete | 2013 | Bugledrum Way |
| HO13ALN000032 | STRE | A | 1 | 2.01 | 2/17/2013 | \$0 | 0.0% | Complete | 2013 | Dobbin Road |
| HO13ALN000033 | STRE | A | 1 | 0.32 | 2/17/2013 | \$0 | 0.0% | Complete | 2013 | Queen Maria Court |
| HO13ALN000034 | STRE | A | 1 | 0.86 | 2/17/2013 | \$0 | 0.0% | Complete | 2013 | Spinning Seed Road |
| HO13ALN000068 | STRE | A | 1 | 11.50 | 3/18/2013 | \$715,509 | 0.1% | Complete | 2013 | Elmmede Road |
| HO13ALN000053 | STRE | A | 1 | 14.20 | 3/21/2013 | \$1,031,583 | 0.1% | Complete | 2013 | Stone Trail Court Stream Restoration |
| HO13ALN000019 | STRE | A | 1 | 4.67 | 4/10/2013 | \$322,458 | 0.0% | Complete | 2013 | Wheatfield Way |
| HO13ALN000020 | STRE | A | 1 | 15.65 | 5/13/2013 | \$659,141 | 0.1% | Complete | 2013 | Windflower Drive |
| HO13ALN000090 | STRE | A | 1 | 1.86 | 10/10/2013 | \$50,000 | 0.0% | Complete | 2014 | Furnace Ave Sewer Siphon Improvements |
| HO14ALN000021 | STRE | A | 1 | 3.39 | 1/21/2014 | \$291,113 | 0.0% | Complete | 2014 | Tuscany Road Stream Restoration |
| HO14ALN000017 | STRE | A | 1 | 6.93 | 3/11/2014 | \$485,934 | 0.1% | Complete | 2014 | Whiterock Court Stream Restoration |
| HO14ALN000018 | STRE | A | 1 | 2.58 | 6/16/2014 | \$206,852 | 0.0% | Complete | 2014 | Tiller Drive Phase 2 |
| HO15ALN000006 | STRE | A | 1 | 10.54 | 5/1/2015 | \$1,057,858 | 0.1% | Complete | 2015 | Pinehurst Court Stream Rehabilitation |
| HO15ALN000030 | STRE | A | 1 | 2.13 | 9/3/2015 | \$100,000 | 0.0% | Complete | 2016 | Trotter Road Stream Stabilization - Phase 2 |
| HO16ALN000096 | STRE | A | 1 | 28.12 | 2/10/2016 | \$1,357,294 | 0.2% | Complete | 2016 | Southview Road Stream Restoration |
| HO16ALN000100 | STRE | A | 1 | 2.09 | 3/1/2016 | \$50,000 | 0.0% | Complete | 2016 | Shallow Run Sewer Relocation & Stream Restoration |
| HO16ALN000101 | STRE | A | 1 | 1.03 | 3/1/2016 | \$50,000 | 0.0% | Complete | 2016 | Deep Run Sewer Relocation & Stream Restoration |
| HO16ALN000001 | STRE | A | 1 | 6.50 | 10/31/2016 | \$719,801 | 0.1% | Complete | 2017 | Bonnie Branch Stream Restoration |
| HO15ALN000002 | STRE | A | 1 | 14.25 | 12/6/2016 | \$1,301,086 | 0.1% | Complete | 2017 | Dorsey Hall Village Center Stream Restoration |

| | | | | | | | | | | |
|-----------------------------------|------|---|-----|--------|------------|--------------|-------|----------|------|---|
| HO16ALN000004 | STRE | A | 1 | 1.02 | 3/1/2017 | \$330,780 | 0.0% | Complete | 2017 | Swansfield Road Trail Stream Restoration |
| HO17ALN000005 | STRE | A | 1 | 19.71 | 3/1/2017 | \$963,797 | 0.2% | Complete | 2017 | Woodstock Park (Davis Branch) Stream Restoration |
| HO17ALN000064 | STRE | A | 1 | 27.08 | 3/1/2017 | \$1,246,061 | 0.2% | Complete | 2017 | Rockburn Branch Park - Mainstem and Tributary |
| HO18ALN000037 | STRE | A | 1 | 16.86 | 3/29/2017 | \$1,019,340 | 0.1% | Complete | 2017 | Howard Community College Stream Restoration |
| HO15RST000031 | WEDW | S | 1 | 2.08 | 6/8/2015 | \$296,949 | 0.0% | Complete | 2015 | Pebble Beach Pond #2 Retrofit |
| HO14RST000044 | WPWS | S | 1 | 97.88 | 2/25/2014 | \$831,073 | 0.8% | Complete | 2014 | Shadow Ln Pond Dredging - Pond Retrofit |
| HO17RST000012 | WPWS | S | 1 | 10.97 | 6/24/2016 | \$52,569 | 0.1% | Complete | 2016 | Turf Valley Overlook Pond #3 Retrofit / Excelsior Springs Court |
| HO10RST000059 | WSHW | S | 1 | 3.85 | 8/1/2010 | \$114,194 | 0.0% | Complete | 2011 | Village of River Hill Shallow Marsh |
| HO13RST000054 | WSHW | S | 1 | 6.43 | 1/24/2013 | \$303,010 | 0.1% | Complete | 2013 | Cypress Bay Clogged Dry Pond Restoration/Conversion to Shallow Marsh Wetla* |
| HO14RST000047 | WSHW | S | 1 | 0.98 | 7/17/2014 | \$309,255 | 0.0% | Complete | 2015 | Wimbledon Dry Pond Restoration/Conversion to Shallow Marsh |
| HO15RST000049 | WSHW | S | 1 | 1.69 | 6/1/2015 | \$1,041,526 | 0.0% | Complete | 2015 | Pinehurst Court Shallow Marsh |
| HO16RST000006 | WSHW | S | 1 | 17.86 | 2/29/2016 | \$117,436 | 0.1% | Complete | 2016 | Whitworth Way Pond Enhancements |
| HO16RST000023 | WSHW | S | 1 | 17.46 | 11/22/2016 | \$745,868 | 0.1% | Complete | 2017 | Deep Earth Lane Repair and Retrofit |
| HO12RST000056 | XDED | S | 1 | 3.68 | 9/1/2012 | \$231,060 | 0.0% | Complete | 2013 | Mount Hebron HS |
| HO14RST000001 | XDED | S | 1 | 1.80 | 11/18/2014 | \$367,499 | 0.0% | Complete | 2015 | Old Mill Pond Retrofit |
| Subtotal Capital Complete To Date | | | 135 | 688.58 | | \$39,300,021 | 5.60% | | | |
| Other | | | | | | | | | | |
| HO14RST600521 | APRP | E | 1 | 0.15 | 10/16/2014 | \$0 | 0.0% | Complete | 2015 | A1-05 |
| HO14RST600523 | APRP | E | 1 | 0.15 | 10/16/2014 | \$0 | 0.0% | Complete | 2015 | A1-05 |
| HO14RST600524 | FBIO | S | 1 | 0.18 | 10/16/2014 | \$0 | 0.0% | Complete | 2015 | A1-05 |
| HO14RST600527 | FBIO | S | 1 | 0.09 | 10/16/2014 | \$0 | 0.0% | Complete | 2015 | A1-05 |
| HO16RST600339 | FBIO | S | 1 | 0.76 | 7/1/2016 | \$0 | 0.0% | Complete | 2017 | A2-06 |
| HO16RST600340 | FBIO | S | 1 | 0.76 | 7/1/2016 | \$0 | 0.0% | Complete | 2017 | A2-06 |
| HO16RST600341 | FBIO | S | 1 | 1.02 | 7/1/2016 | \$0 | 0.0% | Complete | 2017 | A2-06 |
| HO16RST600343 | FBIO | S | 1 | 0.22 | 7/1/2016 | \$0 | 0.0% | Complete | 2017 | A2-06 |
| HO11RST600877 | FBIO | S | 1 | 0.20 | 4/23/2011 | \$0 | 0.0% | Complete | 2011 | A3-02 |
| GRNT0107 | FBIO | S | 1 | 0.00 | 5/19/2017 | \$0 | 0.0% | Complete | 2017 | Green Leaf Community Assoc Inc |
| RDY0097 | FBIO | S | 1 | 0.00 | 7/19/2016 | \$12,170 | 0.0% | Complete | 2017 | Lakeside Associates |
| CA_1 | FBIO | S | 1 | 1.05 | 7/1/2017 | \$0 | 0.0% | Complete | 2018 | Long Look Bioretention |
| CA_2 | FBIO | S | 1 | 0.42 | 7/1/2017 | \$0 | 0.0% | Complete | 2018 | Snowy Reach Bioretention |
| HO16RST000325 | FBIO | S | 1 | 1.38 | 4/30/2016 | \$106 | 0.0% | Complete | 2016 | |
| HO16RST000326 | FBIO | S | 1 | 0.40 | 4/30/2016 | \$47 | 0.0% | Complete | 2016 | |
| HO16RST000327 | FBIO | S | 1 | 0.33 | 5/31/2016 | \$74 | 0.0% | Complete | 2016 | |
| HO16RST000328 | FBIO | S | 1 | 1.99 | 5/31/2016 | \$133 | 0.0% | Complete | 2016 | |
| FY2011 Stream Buffer Planting | FPU | A | 53 | 2.79 | 1/1/2011 | \$18,340 | 0.0% | Complete | 2011 | Stream Buffer Planting |
| FY2012 Stream Buffer Planting | FPU | A | 10 | 0.27 | 1/1/2012 | \$4,832 | 0.0% | Complete | 2012 | Stream Buffer Planting |
| FY2013 Stream Buffer Planting | FPU | A | 68 | 4.73 | 1/1/2013 | \$41,778 | 0.0% | Complete | 2013 | Stream Buffer Planting |
| FY2014 Stream Buffer Planting | FPU | A | 42 | 3.58 | 1/1/2014 | \$39,660 | 0.0% | Complete | 2014 | Stream Buffer Planting |
| FY2015 Stream Buffer Planting | FPU | A | 24 | 1.69 | 1/1/2015 | \$17,065 | 0.0% | Complete | 2015 | Stream Buffer Planting |
| FY13 Tree Canopy | FPU | A | 597 | 2.14 | 1/1/2013 | \$35,820 | 0.0% | Complete | 2013 | Tree Canopy |
| FY14 Tree Canopy | FPU | A | 372 | 1.37 | 1/1/2014 | \$22,320 | 0.0% | Complete | 2014 | Tree Canopy |
| FY15 Tree Canopy | FPU | A | 455 | 55.70 | 1/1/2015 | \$26,526 | 0.5% | Complete | 2015 | Tree Canopy |
| FY11 Reforestation | FPU | A | 31 | 7.80 | 1/1/2011 | \$1,458,839 | 0.1% | Complete | 2011 | Reforestation |
| FY12 Reforestation | FPU | A | 40 | 6.05 | 1/1/2012 | \$2,681,956 | 0.0% | Complete | 2012 | Reforestation |
| FY13 Reforestation | FPU | A | 43 | 10.57 | 1/1/2013 | \$1,834,296 | 0.1% | Complete | 2013 | Reforestation |
| FY14 Reforestation | FPU | A | 65 | 11.31 | 1/1/2014 | \$712,903 | 0.1% | Complete | 2014 | Reforestation |
| FY15 Reforestation | FPU | A | 67 | 15.96 | 1/1/2015 | \$1,887,377 | 0.1% | Complete | 2015 | Reforestation |
| FY16 Reforestation | FPU | A | 23 | 4.02 | 1/1/2016 | \$163,669 | 0.0% | Complete | 2016 | Reforestation |
| FY17 Reforestation | FPU | A | 13 | 2.05 | 1/1/2017 | \$50,773 | 0.0% | Complete | 2017 | Reforestation |
| HO15RST000287 | MIDW | E | 1 | 0.15 | 1/2/2015 | \$1,300 | 0.0% | Complete | 2015 | Dry wells |
| HO15RST000248 | MIDW | E | 1 | 0.15 | 2/10/2015 | \$1,040 | 0.0% | Complete | 2015 | Dry wells |

| | | | | | | | | | | |
|---------------------------------|------|---|---------------|----------------|------------|---------------------|--------------|----------|------|----------------------------|
| HO15RST00090 | MIDW | E | 1 | 0.15 | 10/15/2015 | \$2,500 | 0.0% | Complete | 2016 | |
| HO15RST600962 | MIBR | E | 1 | 0.15 | 6/30/2015 | \$0 | 0.0% | Complete | 2015 | R2-01 |
| FY12 Voluntary Rain Gardens | MRNG | E | 2 | 0.30 | 1/1/2012 | \$5,800 | 0.0% | Complete | 2012 | Voluntary Rain Gardens |
| FY13 Voluntary Rain Gardens | MRNG | E | 15 | 2.25 | 1/1/2013 | \$58,000 | 0.0% | Complete | 2013 | Voluntary Rain Gardens |
| FY14 Voluntary Rain Gardens | MRNG | E | 32 | 4.80 | 1/1/2014 | \$373,153 | 0.0% | Complete | 2014 | Voluntary Rain Gardens |
| FY15 Voluntary Rain Gardens | MRNG | E | 71 | 10.65 | 1/1/2015 | \$160,206 | 0.1% | Complete | 2015 | Voluntary Rain Gardens |
| FY16 Voluntary Rain Gardens | MRNG | E | 135 | 20.25 | 1/1/2016 | \$254,205 | 0.2% | Complete | 2016 | Voluntary Rain Gardens |
| FY17 Voluntary Rain Gardens | MRNG | E | 45 | 6.75 | 1/1/2017 | \$57,924 | 0.1% | Complete | 2017 | Voluntary Rain Gardens |
| FY10 Rain Barrels | MRWH | E | 41 | 0.08 | 6/30/2010 | \$4,000 | 0.0% | Complete | 2010 | Rain Barrels |
| FY11 Rain Barrels | MRWH | E | 175 | 0.35 | 6/30/2011 | \$4,000 | 0.0% | Complete | 2011 | Rain Barrels |
| FY12 Rain Barrels | MRWH | E | 48 | 0.10 | 6/30/2012 | \$4,000 | 0.0% | Complete | 2012 | Rain Barrels |
| FY13 Rain Barrels | MRWH | E | 199 | 0.40 | 6/30/2013 | \$4,000 | 0.0% | Complete | 2013 | Rain Barrels |
| FY14 Rain Barrels | MRWH | E | 170 | 0.34 | 6/30/2014 | \$4,000 | 0.0% | Complete | 2014 | Rain Barrels |
| FY15 Rain Barrels | MRWH | E | 119 | 0.24 | 6/30/2015 | \$4,000 | 0.0% | Complete | 2015 | Rain Barrels |
| FY16 Rain Barrels | MRWH | E | 128 | 0.26 | 6/30/2016 | \$4,000 | 0.0% | Complete | 2016 | Rain Barrels |
| FY17 Rain Barrels | MRWH | E | 117 | 0.23 | 6/30/2017 | \$4,000 | 0.0% | Complete | 2017 | Rain Barrels |
| HO14RST600526 | ODSW | S | 1 | 5.00 | 10/16/2014 | \$0 | 0.0% | Complete | 2015 | A1-05 |
| FY14 Other | OTH | E | 5 | 5.00 | 1/1/2014 | \$0 | 0.0% | Complete | 2014 | Other |
| FY15 Other | OTH | E | 3 | 3.00 | 1/1/2015 | \$0 | 0.0% | Complete | 2015 | Other |
| FY6 Other | OTH | E | 2 | 2.00 | 1/1/2016 | \$1,918 | 0.0% | Complete | 2016 | Other |
| FY16 Septic Connections to WWTP | SEPC | A | 5 | 1.95 | 1/1/2016 | \$0 | 0.0% | Complete | 2016 | Septic Connections to WWTP |
| FY17 Septic Connections to WWTP | SEPC | A | 6 | 2.34 | 1/1/2017 | \$0 | 0.0% | Complete | 2017 | Septic Connections to WWTP |
| FY11 Septic Denitrification | SEPD | A | 3 | 0.78 | 1/1/2011 | \$0 | 0.0% | Complete | 2011 | Septic Denitrification |
| FY12 Septic Denitrification | SEPD | A | 3 | 0.78 | 1/1/2012 | \$0 | 0.0% | Complete | 2012 | Septic Denitrification |
| FY13 Septic Denitrification | SEPD | A | 2 | 0.52 | 1/1/2013 | \$0 | 0.0% | Complete | 2013 | Septic Denitrification |
| FY14 Septic Denitrification | SEPD | A | 27 | 7.02 | 1/1/2014 | \$0 | 0.1% | Complete | 2014 | Septic Denitrification |
| FY15 Septic Denitrification | SEPD | A | 101 | 26.26 | 1/1/2015 | \$0 | 0.2% | Complete | 2015 | Septic Denitrification |
| FY16 Septic Denitrification | SEPD | A | 31 | 8.06 | 1/1/2016 | \$0 | 0.1% | Complete | 2016 | Septic Denitrification |
| FY17 Septic Denitrification | SEPD | A | 64 | 16.64 | 1/1/2017 | \$0 | 0.1% | Complete | 2017 | Septic Denitrification |
| FY12 Septic Pumping | SEPP | A | 1 | 0.03 | 1/1/2012 | \$0 | 0.0% | Complete | 2012 | Septic Pumping |
| FY13 Septic Pumping | SEPP | A | 835 | 25.05 | 1/1/2013 | \$0 | 0.2% | Complete | 2013 | Septic Pumping |
| FY14 Septic Pumping | SEPP | A | 2268 | 68.04 | 1/1/2014 | \$0 | 0.6% | Complete | 2014 | Septic Pumping |
| FY15 Septic Pumping | SEPP | A | 1299 | 38.97 | 1/1/2015 | \$0 | 0.3% | Complete | 2015 | Septic Pumping |
| FY16 Septic Pumping | SEPP | A | 1086 | 32.58 | 1/1/2016 | \$0 | 0.3% | Complete | 2016 | Septic Pumping |
| FY17 Septic Pumping | SEPP | A | 1275 | 38.25 | 1/1/2017 | \$0 | 0.3% | Complete | 2017 | Septic Pumping |
| HO16RST600752 | XOGS | S | | 1.50 | 6/20/2016 | \$0 | 0.0% | Complete | 2016 | BR3 |
| HO16RST600754 | XOGS | S | | 1.50 | 6/20/2016 | \$0 | 0.0% | Complete | 2016 | BR3 |
| Subtotal Other Complete To Date | | | 10238 | 472.01 | | \$9,956,730 | 3.8% | | | |
| Total Complete to Date | | | 10,444 | 1519.25 | | \$49,754,401 | 12.4% | | | |

VERSION 12-15-17



Prince George's County, Maryland



| WPRP FY2017 Annual Report | |
|---------------------------|--|
| Jurisdiction | Prince George's County, Maryland |
| Contact Name | Jerry Maldonado |
| Phone | (301) 883-5943 |
| Address | 1801 McCormick Dr., Suite 500 |
| City | Landover |
| State | Maryland |
| Zip | 20774 |
| Email | jgmalconado@co.pg.md.us |
| Baseline Acres | 30,524 |
| Permit Num | 11-DP-3314 |
| Reporting Year | FY2017 (July 1, 2016 through June 30, 2017) |



Prince George's County, Maryland



WPRP FY2017 Annual Report

Article 4-202.1(i)(4): "The percentage and amount of funds in the local watershed protection and restoration fund spent on each of the purposes provided in subsection (h)(4) of this section;"

| Program Element (Restoration) | Cost | Percent of WPRF |
|---|----------------------------------|-----------------|
| Capital Improvements for Stormwater Management ¹ | \$31,183,711.35 | 10.84% |
| Property Management ² | \$9,088,150.59 | 3.16% |
| Public Education and Outreach ³ | \$3,874,382.00 | 1.35% |
| Stormwater Management Planning (see Md. Environment Code Ann. § 4-202.1(h)(4)(iv)) ⁴ | \$2,858,831.65 | 0.99% |
| Review of Stormwater Management Plans and Permit Applications for New Development ⁵ | \$8,518,700.00 | 2.96% |
| Grants to Nonprofit Organizations | \$722,718.00 | 0.25% |
| Administration of WPRF | \$875,512.00 | 0.30% |
| TOTAL | \$57,122,005.59 | 19.86% |
| Number of Properties Subject to Fee | 262,650 | |
| Reporting Year | 2017 | |
| Permit Number | 11-DP-3314 | |
| Total Restoration Costs Projected to Permit Term (Jan 2, 2017 to Jan 1, 2019) | \$287,603,535 (Source: FAP 2016) | |

Note:

¹ Capital improvement cost represents the total expenditure for FY2017 that includes completed projects (including completion certification) and active projects under planning, design, and construction.

² Total cost for tree maintenance including tree planting, litter control, and storm drain maintenance vacuuming.

³ Includes cost for public outreach and education and social economic development.

⁴ Stormwater management planning include mapping and assessment of impervious surfaces and monitoring, inspection, and enforcement activities to carry out the purposes of the watershed protection and restoration fund.

⁵ Department of Permitting, Inspection, and Enforcement staff salary.



Prince George's County, Maryland

WPRP FY2017 Annual Report



| WPRP FY2017 Annual Report | Agency | Local Ordinance Submitted to MDE | MDE Approval of Fee Reduction Policy | Fee Reduction Amount | Rate Structures | | | | | | | Additional Sources of Funds | | | | | Estimated Annual Revenue | | |
|---------------------------|-------------------------------|----------------------------------|--------------------------------------|--|--|--|--|--|---|--|--|---|--|--|------------------------------|--|--------------------------|---|--|
| | | | | | Annual Single Family Residential Rate Teir 1 | Annual Single Family Residential Rate Teir 2 | Annual Single Family Residential Rate Teir 3 | Annual Commercial Rate/ ESU* (Administrative Fee = \$20.58 and Impact Fee \$20.90) | Equivalent Service Unit (ESU) Impervious (in square feet) | Commercial Not Capped: Impact Fee is applied per ESU rate* | Non-profits, Religious Organizations/ ESU* | Exemptions** | Federal Facilities Status | Federal Facility Fee(s)/Rate(s) | Additional Source 1 (Grants) | Additional Source 2 (Clean Water Act Fees) | | Additional Source 3 (State Revolving Loans and Bonds) | Additional Source 4 (State Ad valorem Enterprise Fund) |
| Prince George's County | Department of the Environment | Yes | 6-Jul-2014 | \$ 1,032.00 | \$33.12 | \$41.48 | \$62.38 | 41.48 | 2,665 | 41.48 | 41.48 | See notes below | Exempt | N/A | \$849,503 | \$14,867,923 | \$0.00 | \$51,892,891 | \$67,310,227.00 |
| | | Use: Yes or No | Use the approval date or N/A | Reduction amount(s), if any, with reason for reduction(s)*** | | | | Use: N/A, amount of rate rate, rate amount per ERU, etc. | | | | General description of exemption(s), if any | Use: No Facilities, Exempt, or Charged | Use: N/A or the fee and rate structures for federal facilities | | | | | |

Notes:
 ESU* = Equivalent Service Unit = 2465 square feet untreated impervious surface
 ** Exemptions list (City of Bowie, Volunteer Fire Departments, State, Federal, County, and Municipal owned properties)
 *** DoE has established policies and procedures to allow County property owners to reduce the Clean Water Act fees. These policies account for on-site and off-site systems, facilities, services, or activities that reduce the quantity or improve the quality of stormwater discharged from County properties.



Prince George's County, Maryland



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| 2017 Source | Amount |
|---|------------------|
| Annual Single Family Residential Fees Collected | \$ 8,504,763.00 |
| Annual Commercial Fees Collected | \$ 5,516,877.00 |
| Non-profits, Religious Orgs Fees Collected | \$ 546,283.00 |
| Unnamed Additional Source 1 | |
| | \$ 14,567,923.00 |



Prince George's County, Maryland



WPRP FY2017 Annual Report

List of Completed Projects in FY2017

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST* | IMPL STATUS | IMPL COMP YR |
|---------------|---------------|-----------|---------|-----------|------------|-------------|-------------|--------------|
| PG17RST000079 | PWET | S | 1 | 42.94 | 02/01/17 | \$446,000 | Complete | 2017 |
| PG17RST000081 | PWET | S | 1 | 11.70 | 06/24/17 | \$336,432 | Complete | 2017 |
| PG17RST000123 | PWET | S | 1 | 26.24 | 06/28/17 | \$676,000 | Complete | 2017 |
| PG16RST101662 | MMBR | E | 1 | 0.22 | 03/13/17 | \$252,317 | Complete | 2017 |
| PG16RST100030 | NDNR | E | 1 | 0.02 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST100022 | MMBR | E | 1 | 0.28 | 10/03/16 | \$197,772 | Complete | 2016 |
| PG16RST107130 | MMBR | E | 1 | 0.23 | 04/13/17 | \$119,125 | Complete | 2017 |
| PG16RST100100 | PWET | S | 1 | 1.05 | 06/19/17 | \$58,212 | Complete | 2017 |
| PG16RST103150 | MMBR | E | 1 | 0.23 | 08/04/16 | \$59,361 | Complete | 2016 |
| PG16RST109160 | PWET | S | 1 | 82.04 | 06/30/17 | \$4,202,351 | Complete | 2017 |
| PG16RST100065 | MMBR | E | 1 | 0.55 | 08/08/16 | \$90,874 | Complete | 2016 |
| PG16RST103970 | MSGW | E | 1 | 1.49 | 12/12/16 | \$81,693 | Complete | 2016 |
| PG16RST100043 | NDRR | E | 1 | 0.01 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST101660 | MMBR | E | 1 | 0.20 | 03/13/17 | \$252,317 | Complete | 2017 |
| PG16RST101550 | FSND | S | 1 | 0.61 | 04/07/17 | \$167,322 | Complete | 2017 |
| PG16RST103070 | PWET | S | 1 | 10.63 | 06/02/17 | \$847,161 | Complete | 2017 |
| PG16RST103480 | MMBR | E | 1 | 0.41 | 12/21/16 | \$100,783 | Complete | 2016 |
| PG16RST100042 | NDRR | E | 1 | 0.01 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST100044 | NDRR | E | 1 | 0.01 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST107948 | NDRR | E | 1 | 0.01 | 10/12/16 | \$6,935 | Complete | 2016 |
| PG16RST101010 | MMBR | E | 1 | 0.20 | 09/12/16 | \$74,500 | Complete | 2016 |
| PG16RST100023 | MMBR | E | 1 | 0.45 | 10/03/16 | \$197,772 | Complete | 2016 |
| PG16RST106091 | FSND | S | 1 | 0.87 | 03/20/17 | \$281,308 | Complete | 2017 |
| PG16RST106141 | FSND | S | 1 | 0.40 | 11/28/16 | \$136,422 | Complete | 2016 |
| PG16RST107090 | MMBR | E | 1 | 0.19 | 05/18/17 | \$131,775 | Complete | 2017 |
| PG16RST102100 | NDNR | E | 1 | 0.02 | 09/08/16 | \$1,896 | Complete | 2016 |

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List of Completed Projects in FY2017

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST* | IMPL STATUS | IMPL COMP YR |
|---------------|---------------|-----------|---------|-----------|------------|------------|-------------|--------------|
| PG16RST102321 | MMBR | E | 1 | 0.12 | 11/29/16 | \$128,707 | Complete | 2016 |
| PG16RST106071 | FSND | S | 1 | 1.34 | 03/06/17 | \$409,397 | Complete | 2017 |
| PG16RST106072 | FSND | S | 1 | 2.01 | 03/06/17 | \$409,397 | Complete | 2017 |
| PG16RST100085 | MMBR | E | 1 | 0.26 | 11/03/16 | \$44,105 | Complete | 2016 |
| PG16RST100086 | MMBR | E | 1 | 0.23 | 11/03/16 | \$44,105 | Complete | 2016 |
| PG16RST100087 | MMBR | E | 1 | 0.30 | 11/03/16 | \$44,105 | Complete | 2016 |
| PG16RST102230 | NDNR | E | 1 | 0.02 | 09/08/16 | \$1,580 | Complete | 2016 |
| PG16RST102231 | NDNR | E | 1 | 0.02 | 09/08/16 | \$1,580 | Complete | 2016 |
| PG16RST102232 | NDNR | E | 1 | 0.02 | 09/08/16 | \$1,580 | Complete | 2016 |
| PG16RST102233 | NDNR | E | 1 | 0.02 | 09/08/16 | \$1,580 | Complete | 2016 |
| PG16RST102234 | NDNR | E | 1 | 0.02 | 09/08/16 | \$1,580 | Complete | 2016 |
| PG16RST102235 | NDNR | E | 1 | 0.02 | 09/08/16 | \$1,580 | Complete | 2016 |
| PG16RST106101 | MMBR | E | 1 | 0.35 | 12/12/16 | \$132,807 | Complete | 2016 |
| PG16RST106160 | MMBR | E | 1 | 0.35 | 04/04/17 | \$190,671 | Complete | 2017 |
| PG16RST106081 | MMBR | E | 1 | 0.31 | 12/21/16 | \$190,097 | Complete | 2016 |
| PG16RST103481 | MMBR | E | 1 | 0.37 | 12/21/16 | \$100,783 | Complete | 2016 |
| PG16RST107949 | NDRR | E | 1 | 0.01 | 10/12/16 | \$6,935 | Complete | 2016 |
| PG16RST107950 | NDRR | E | 1 | 0.01 | 10/12/16 | \$6,935 | Complete | 2016 |
| PG16RST101551 | MMBR | E | 1 | 0.14 | 04/07/17 | \$167,322 | Complete | 2017 |
| PG16RST124551 | MMBR | E | 1 | 0.20 | 04/07/17 | \$2,000 | Complete | 2017 |
| PG16RST107000 | NDNR | E | 1 | 0.02 | 01/17/17 | \$6,221 | Complete | 2017 |
| PG16RST107001 | NDNR | E | 1 | 0.02 | 01/17/17 | \$6,221 | Complete | 2017 |
| PG16RST107002 | NDNR | E | 1 | 0.02 | 01/17/17 | \$6,221 | Complete | 2017 |
| PG16RST107003 | NDRR | E | 1 | 0.01 | 01/17/17 | \$6,221 | Complete | 2017 |
| PG16RST107004 | NDRR | E | 1 | 0.01 | 01/17/17 | \$6,221 | Complete | 2017 |
| PG16RST107005 | NDRR | E | 1 | 0.01 | 01/17/17 | \$6,221 | Complete | 2017 |
| PG16RST107006 | NDRR | E | 1 | 0.01 | 01/17/17 | \$6,221 | Complete | 2017 |

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List of Completed Projects in FY2017

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST* | IMPL STATUS | IMPL COMP YR |
|---------------|---------------|-----------|---------|-----------|------------|------------|-------------|--------------|
| PG16RST107007 | NDRR | E | 1 | 0.01 | 01/17/17 | \$6,221 | Complete | 2017 |
| PG16RST107008 | NDNR | E | 1 | 0.02 | 01/17/17 | \$6,221 | Complete | 2017 |
| PG16RST107009 | NDNR | E | 1 | 0.02 | 01/17/17 | \$6,221 | Complete | 2017 |
| PG16RST107940 | NDNR | E | 1 | 0.02 | 01/17/17 | \$8,886 | Complete | 2017 |
| PG16RST107941 | NDNR | E | 1 | 0.02 | 01/17/17 | \$8,886 | Complete | 2017 |
| PG16RST102103 | NDNR | E | 1 | 0.02 | 09/08/16 | \$1,896 | Complete | 2016 |
| PG16RST102104 | NDNR | E | 1 | 0.02 | 09/08/16 | \$1,896 | Complete | 2016 |
| PG16RST106156 | NDNR | E | 1 | 0.01 | 09/12/16 | \$18,259 | Complete | 2016 |
| PG16RST106953 | NDNR | E | 1 | 0.02 | 09/12/16 | \$45,647 | Complete | 2016 |
| PG16RST107942 | NDNR | E | 1 | 0.02 | 01/17/17 | \$8,886 | Complete | 2017 |
| PG16RST107943 | NDNR | E | 1 | 0.02 | 01/17/17 | \$8,886 | Complete | 2017 |
| PG16RST107944 | NDNR | E | 1 | 0.02 | 01/17/17 | \$8,886 | Complete | 2017 |
| PG16RST107945 | NDNR | E | 1 | 0.02 | 01/17/17 | \$8,886 | Complete | 2017 |
| PG16RST107946 | NDNR | E | 1 | 0.01 | 01/17/17 | \$8,886 | Complete | 2017 |
| PG16RST107951 | NDRR | E | 1 | 0.01 | 10/12/16 | \$6,935 | Complete | 2016 |
| PG16RST124550 | MMBR | E | 1 | 0.06 | 04/07/17 | \$2,000 | Complete | 2017 |
| PG16RST114190 | PWET | S | 1 | 4.20 | 06/22/17 | \$206,000 | Complete | 2017 |
| PG16RST124560 | SPSC | E | 1 | 4.83 | 04/07/17 | \$5,500 | Complete | 2017 |
| PG16RST124561 | MSWB | E | 1 | 0.31 | 04/07/17 | \$5,500 | Complete | 2017 |
| PG16RST102320 | FBIO | S | 1 | 0.52 | 11/29/16 | \$128,707 | Complete | 2016 |
| PG16RST106952 | NDNR | E | 1 | 0.02 | 09/12/16 | \$45,647 | Complete | 2016 |
| PG16RST106951 | NDNR | E | 1 | 0.02 | 09/12/16 | \$45,647 | Complete | 2016 |
| PG16RST106950 | NDNR | E | 1 | 0.02 | 09/12/16 | \$45,647 | Complete | 2016 |
| PG16RST106159 | NDNR | E | 1 | 0.02 | 09/12/16 | \$18,259 | Complete | 2016 |
| PG16RST106158 | NDNR | E | 1 | 0.01 | 09/12/16 | \$18,259 | Complete | 2016 |
| PG16RST106157 | NDNR | E | 1 | 0.02 | 09/12/16 | \$18,259 | Complete | 2016 |
| PG16RST106155 | NDNR | E | 1 | 0.02 | 09/12/16 | \$18,259 | Complete | 2016 |

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List of Completed Projects in FY2017

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST* | IMPL STATUS | IMPL COMP YR |
|---------------|---------------|-----------|---------|-----------|------------|------------|-------------|--------------|
| PG16RST106154 | NDNR | E | 1 | 0.01 | 09/12/16 | \$18,259 | Complete | 2016 |
| PG16RST106153 | NDNR | E | 1 | 0.02 | 09/12/16 | \$18,259 | Complete | 2016 |
| PG16RST106151 | NDNR | E | 1 | 0.02 | 09/12/16 | \$18,259 | Complete | 2016 |
| PG16RST106152 | NDNR | E | 1 | 0.02 | 09/12/16 | \$18,259 | Complete | 2016 |
| PG16RST106030 | MMBR | E | 1 | 0.15 | 11/08/16 | \$95,534 | Complete | 2016 |
| PG16RST106040 | MMBR | E | 1 | 0.18 | 11/04/16 | \$72,293 | Complete | 2016 |
| PG16RST106050 | FSND | S | 1 | 4.89 | 03/06/17 | \$417,942 | Complete | 2017 |
| PG16RST106130 | FSND | S | 1 | 0.57 | 10/21/16 | \$274,155 | Complete | 2016 |
| PG16RST106150 | NDNR | E | 1 | 0.02 | 09/12/16 | \$18,259 | Complete | 2016 |
| PG16RST106100 | MMBR | E | 1 | 0.44 | 12/12/16 | \$132,807 | Complete | 2016 |
| PG16RST106161 | MSWG | E | 1 | 0.58 | 04/04/17 | \$190,671 | Complete | 2017 |
| PG16RST106090 | FSND | S | 1 | 2.12 | 03/20/17 | \$281,308 | Complete | 2017 |
| PG16RST106140 | MMBR | E | 1 | 0.31 | 11/28/16 | \$136,422 | Complete | 2016 |
| PG16RST106170 | FSND | S | 1 | 3.68 | 12/21/16 | \$700,065 | Complete | 2016 |
| PG16RST106080 | MMBR | E | 1 | 0.31 | 12/21/16 | \$190,097 | Complete | 2016 |
| PG16RST106070 | FSND | S | 1 | 0.89 | 03/06/17 | \$409,397 | Complete | 2017 |
| PG16RST115340 | PWET | S | 1 | 7.06 | 06/28/17 | \$260,000 | Complete | 2017 |
| PG16RST100031 | NDNR | E | 1 | 0.02 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST100032 | NDNR | E | 1 | 0.02 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST100033 | NDNR | E | 1 | 0.02 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST100034 | NDRR | E | 1 | 0.01 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST100035 | NDRR | E | 1 | 0.01 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST100036 | NDRR | E | 1 | 0.01 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST100037 | NDRR | E | 1 | 0.01 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST100038 | NDRR | E | 1 | 0.01 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST100039 | NDRR | E | 1 | 0.01 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST100040 | NDRR | E | 1 | 0.01 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST100041 | NDRR | E | 1 | 0.01 | 10/12/16 | \$1,849 | Complete | 2016 |
| PG16RST103450 | PWET | S | 1 | 27.50 | 04/07/17 | \$207,759 | Complete | 2017 |

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List of Completed Projects in FY2017

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST* | IMPL STATUS | IMPL COMP YR |
|---------------|---------------|-----------|---------|-----------|------------|-------------|-------------|--------------|
| PG16RST103151 | MMBR | E | 1 | 0.09 | 08/04/16 | \$59,361 | Complete | 2016 |
| PG16RST106033 | MMBR | E | 1 | 0.37 | 11/08/16 | \$95,534 | Complete | 2016 |
| PG16RST106031 | MMBR | E | 1 | 0.41 | 11/08/16 | \$95,534 | Complete | 2016 |
| PG16RST106041 | MMBR | E | 1 | 0.13 | 11/04/16 | \$72,293 | Complete | 2016 |
| PG16RST106042 | MMBR | E | 1 | 0.26 | 11/04/16 | \$72,293 | Complete | 2016 |
| PG16RST106043 | MMBR | E | 1 | 0.39 | 11/04/16 | \$72,293 | Complete | 2016 |
| PG16RST106021 | NDNR | E | 1 | 0.02 | 10/21/16 | \$34,992 | Complete | 2016 |
| PG16RST106022 | NDNR | E | 1 | 0.02 | 10/21/16 | \$34,992 | Complete | 2016 |
| PG16RST106023 | NDNR | E | 1 | 0.02 | 10/21/16 | \$34,992 | Complete | 2016 |
| PG16RST106024 | NDNR | E | 1 | 0.02 | 10/21/16 | \$34,992 | Complete | 2016 |
| PG16RST106025 | NDNR | E | 1 | 0.02 | 10/21/16 | \$34,992 | Complete | 2016 |
| PG16RST106026 | NDNR | E | 1 | 0.01 | 10/21/16 | \$34,992 | Complete | 2016 |
| PG16RST106020 | MMBR | E | 1 | 0.28 | 10/21/16 | \$34,992 | Complete | 2016 |
| PG16RST102101 | NDNR | E | 1 | 0.02 | 09/08/16 | \$1,896 | Complete | 2016 |
| PG16RST102102 | NDNR | E | 1 | 0.02 | 09/08/16 | \$1,896 | Complete | 2016 |
| PG16RST109100 | PWET | S | 1 | 241.00 | 11/09/16 | \$1,841,654 | Complete | 2016 |
| PG17ALN000005 | OUT | A | 1 | 1.50 | 05/17/17 | \$280,512 | Complete | 2017 |
| PG17ALN000007 | STRE | A | 1 | 3.71 | 05/24/17 | \$504,690 | Complete | 2017 |
| PG17ALN000024 | STRE | A | 1 | 6.04 | 06/24/17 | \$265,725 | Complete | 2017 |
| PG16ALN000028 | STRE | A | 1 | 2.05 | 09/01/16 | \$0 | Complete | 2016 |
| PG16ALN000054 | STRE | A | 1 | 1.49 | 09/01/16 | \$0 | Complete | 2016 |
| PG16ALN000055 | STRE | A | 1 | 0.75 | 08/01/16 | \$0 | Complete | 2016 |
| PG16ALN000063 | STRE | A | 1 | 1.48 | 08/01/16 | \$0 | Complete | 2016 |
| PG16ALN000064 | STRE | A | 1 | 3.84 | 08/01/16 | \$0 | Complete | 2016 |
| PG17ALN000065 | STRE | A | 1 | 6.62 | 01/01/17 | \$0 | Complete | 2017 |
| PG17ALN000068 | STRE | A | 1 | 3.61 | 03/01/17 | \$0 | Complete | 2017 |
| PG16ALN000069 | STRE | A | 1 | 1.13 | 08/01/16 | \$0 | Complete | 2016 |
| PG17ALN000073 | STRE | A | 1 | 1.50 | 03/01/17 | \$0 | Complete | 2017 |
| PG17ALN000077 | STRE | A | 1 | 4.00 | 03/01/17 | \$0 | Complete | 2017 |

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List of Completed Projects in FY2017

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST* | IMPL STATUS | IMPL COMP YR |
|---------------|---------------|-----------|---------|-----------|------------|------------|-------------|--------------|
| PG16ALN000080 | STRE | A | 1 | 1.25 | 08/01/16 | \$0 | Complete | 2016 |
| PG17ALN000086 | STRE | A | 1 | 1.25 | 02/01/17 | \$0 | Complete | 2017 |
| PG17ALN000089 | STRE | A | 1 | 6.00 | 01/01/17 | \$0 | Complete | 2017 |
| PG16ALN000092 | STRE | A | 1 | 4.25 | 12/01/16 | \$0 | Complete | 2016 |
| PG16ALN000095 | STRE | A | 1 | 3.50 | 10/01/16 | \$0 | Complete | 2016 |
| PG16ALN000097 | STRE | A | 1 | 2.00 | 12/01/16 | \$0 | Complete | 2016 |
| PG16ALN000101 | STRE | A | 1 | 3.00 | 10/01/16 | \$0 | Complete | 2016 |
| PG16ALN000106 | STRE | A | 1 | 3.00 | 10/01/16 | \$0 | Complete | 2016 |
| PG17ALN000107 | STRE | A | 1 | 6.50 | 04/01/17 | \$0 | Complete | 2017 |
| PG17ALN000110 | STRE | A | 1 | 9.00 | 03/01/17 | \$0 | Complete | 2017 |
| PG16ALN000112 | STRE | A | 1 | 0.50 | 09/01/16 | \$0 | Complete | 2016 |
| PG16ALN000119 | STRE | A | 1 | 0.75 | 08/01/16 | \$0 | Complete | 2016 |
| PG16ALN000120 | STRE | A | 1 | 1.00 | 10/01/16 | \$0 | Complete | 2016 |
| PG16ALN000121 | STRE | A | 1 | 0.75 | 10/01/16 | \$0 | Complete | 2016 |
| PG16APT000085 | SEPC | A | 1 | 0.39 | 08/09/16 | \$0 | Complete | 2016 |
| PG16APT000137 | SEPC | A | 1 | 0.39 | 09/23/16 | \$0 | Complete | 2016 |
| PG16APT000138 | SEPC | A | 1 | 0.39 | 08/24/16 | \$0 | Complete | 2016 |
| PG16APT000147 | SEPC | A | 1 | 0.39 | 09/20/16 | \$0 | Complete | 2016 |
| PG16APT000148 | SEPC | A | 1 | 0.39 | 08/01/16 | \$0 | Complete | 2016 |
| PG16APT000151 | SEPC | A | 1 | 0.39 | 08/10/16 | \$0 | Complete | 2016 |
| PG16APT000152 | SEPC | A | 1 | 0.39 | 08/12/16 | \$0 | Complete | 2016 |
| PG16APT000155 | SEPC | A | 1 | 0.39 | 08/17/16 | \$0 | Complete | 2016 |
| PG16APT000156 | SEPC | A | 1 | 0.39 | 09/23/16 | \$0 | Complete | 2016 |
| PG16APT000157 | SEPC | A | 1 | 0.39 | 08/17/16 | \$0 | Complete | 2016 |
| PG16APT000158 | SEPC | A | 1 | 0.39 | 08/04/16 | \$0 | Complete | 2016 |
| PG16APT000159 | SEPC | A | 1 | 0.39 | 08/19/16 | \$0 | Complete | 2016 |
| PG16APT000160 | SEPC | A | 1 | 0.39 | 08/31/16 | \$0 | Complete | 2016 |
| PG16APT000161 | SEPD | A | 1 | 0.26 | 09/14/16 | \$0 | Complete | 2016 |
| PG16APT000162 | SEPD | A | 1 | 0.26 | 08/08/16 | \$0 | Complete | 2016 |

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List of Completed Projects in FY2017

| REST BMP ID | REST BMP TYPE | BMP CLASS | NUM BMP | IMP ACRES | BUILT DATE | IMPL COST* | IMPL STATUS | IMPL COMP YR |
|---------------|---------------|-----------|---------|-----------|------------|------------|-------------|--------------|
| PG16APT000163 | SEPD | A | 1 | 0.26 | 08/03/16 | \$0 | Complete | 2016 |
| PG16APT000221 | SEPD | A | 1 | 0.26 | 09/09/16 | \$0 | Complete | 2016 |
| PG16APT000222 | SEPD | A | 1 | 0.26 | 08/03/16 | \$0 | Complete | 2016 |
| PG16APT000223 | SEPD | A | 1 | 0.26 | 08/08/16 | \$0 | Complete | 2016 |
| PG16APT000224 | SEPD | A | 1 | 0.26 | 10/19/16 | \$0 | Complete | 2016 |
| PG16APT000225 | SEPD | A | 1 | 0.26 | 09/23/16 | \$0 | Complete | 2016 |
| PG16APT000226 | SEPD | A | 1 | 0.26 | 11/28/16 | \$0 | Complete | 2016 |
| PG16APT000227 | SEPD | A | 1 | 0.26 | 12/28/16 | \$0 | Complete | 2016 |
| PG17APT000228 | SEPD | A | 1 | 0.26 | 03/02/17 | \$0 | Complete | 2017 |
| PG16APT000229 | SEPD | A | 1 | 0.26 | 10/07/16 | \$0 | Complete | 2016 |
| PG16APT000230 | SEPD | A | 1 | 0.26 | 09/28/16 | \$0 | Complete | 2016 |
| PG16APT000231 | SEPD | A | 1 | 0.26 | 12/13/16 | \$0 | Complete | 2016 |
| PG16APT000232 | SEPD | A | 1 | 0.26 | 09/09/16 | \$0 | Complete | 2016 |
| PG17APT000233 | SEPD | A | 1 | 0.26 | 01/10/17 | \$0 | Complete | 2017 |
| PG16APT000234 | SEPD | A | 1 | 0.26 | 09/09/16 | \$0 | Complete | 2016 |
| PG16APT000235 | SEPD | A | 1 | 0.26 | 09/14/16 | \$0 | Complete | 2016 |
| PG17APY000001 | FPU | A | 1 | 0.76 | | \$36,000 | Complete | 2017 |
| PG17APY000002 | FPU | A | 1 | 1.14 | | \$65,000 | Complete | 2017 |
| PG17APY000003 | FPU | A | 1 | 2.28 | | \$101,000 | Complete | 2017 |
| PG17APY000004 | FPU | A | 1 | 8.74 | | \$380,600 | Complete | 2017 |
| PG17APY000005 | FPU | A | 1 | 4.56 | | \$182,000 | Complete | 2017 |
| PG16APY000006 | IMPF | A | 1 | 0.42 | | \$68,918 | Complete | 2016 |
| PG17APY000007 | FPU | A | 1 | 1.00 | | \$160,000 | Complete | 2017 |
| PG17APY000008 | IMPP | A | 1 | 0.00 | | \$0 | Complete | 2017 |
| PG17APY000009 | IMPP | A | 1 | 0.04 | | \$0 | Complete | 2017 |
| PG17APY000010 | IMPP | A | 1 | 0.00 | | \$0 | Complete | 2017 |
| PG17APY000011 | IMPP | A | 1 | 0.02 | | \$0 | Complete | 2017 |
| PG17APY000012 | IMPP | A | 1 | 0.06 | | \$0 | Complete | 2017 |
| PG16APY000013 | IMPP | A | 1 | 0.04 | | \$7,000 | Complete | 2016 |

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List of Completed Projects in FY2017

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|---------------|---------------|-----------|---------|-----------|------------|------------|-------------|--------------|
| PG17APY000014 | SDV | A | 1 | 0.23 | | \$3,147 | Complete | 2017 |
| PG17APY000015 | SDV | A | 1 | 0.68 | | \$9,266 | Complete | 2017 |
| PG17APY000016 | SDV | A | 1 | 3.69 | | \$50,350 | Complete | 2017 |
| PG17APY000017 | SDV | A | 1 | 1.51 | | \$20,629 | Complete | 2017 |
| PG17APY000018 | SDV | A | 1 | 1.82 | | \$24,825 | Complete | 2017 |
| PG17APY000019 | SDV | A | 1 | 0.33 | | \$4,545 | Complete | 2017 |
| PG17APY000020 | SDV | A | 1 | 0.04 | | \$524 | Complete | 2017 |
| PG17APY000021 | SDV | A | 1 | 1.04 | | \$14,161 | Complete | 2017 |
| PG17APY000022 | SDV | A | 1 | 1.76 | | \$23,951 | Complete | 2017 |
| PG17APY000023 | SDV | A | 1 | 0.92 | | \$12,587 | Complete | 2017 |
| PG17APY000024 | SDV | A | 1 | 0.55 | | \$7,517 | Complete | 2017 |
| PG17APY000025 | SDV | A | 1 | 1.14 | | \$15,559 | Complete | 2017 |
| PG17APY000026 | SDV | A | 1 | 1.78 | | \$24,301 | Complete | 2017 |
| PG17APY000027 | SDV | A | 1 | 0.53 | | \$7,168 | Complete | 2017 |
| PG17APY000028 | SDV | A | 1 | 2.29 | | \$31,294 | Complete | 2017 |
| PG17APY000029 | SDV | A | 1 | 3.28 | | \$44,755 | Complete | 2017 |
| PG17APY000030 | SDV | A | 1 | 0.99 | | \$13,462 | Complete | 2017 |
| PG17APY000031 | SDV | A | 1 | 1.88 | | \$25,699 | Complete | 2017 |
| PG17APY000032 | SDV | A | 1 | 1.54 | | \$20,979 | Complete | 2017 |
| PG17APY000033 | SDV | A | 1 | 3.01 | | \$41,084 | Complete | 2017 |
| PG17APY000034 | SDV | A | 1 | 0.85 | | \$11,538 | Complete | 2017 |
| PG17APY000035 | SDV | A | 1 | 0.04 | | \$524 | Complete | 2017 |
| PG17APY000036 | SDV | A | 1 | 1.77 | | \$24,126 | Complete | 2017 |
| PG17APY000037 | SDV | A | 1 | 0.04 | | \$524 | Complete | 2017 |
| PG17APY000038 | SDV | A | 1 | 0.03 | | \$350 | Complete | 2017 |
| PG17APY000039 | SDV | A | 1 | 1.38 | | \$18,881 | Complete | 2017 |
| PG17APY000040 | SDV | A | 1 | 0.31 | | \$4,196 | Complete | 2017 |
| PG17APY000041 | SDV | A | 1 | 2.29 | | \$31,294 | Complete | 2017 |
| PG17APY000042 | SDV | A | 1 | 4.18 | | \$56,993 | Complete | 2017 |

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List of Completed Projects in FY2017

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|---------------|---------------|-----------|---------|-----------|------------|------------|-------------|--------------|
| PG17APY000043 | SDV | A | 1 | 0.19 | | \$2,622 | Complete | 2017 |
| PG17APY000044 | SDV | A | 1 | 4.19 | | \$57,168 | Complete | 2017 |
| PG17APY000045 | SDV | A | 1 | 0.76 | | \$10,315 | Complete | 2017 |
| PG17APY000046 | SDV | A | 1 | 1.00 | | \$13,636 | Complete | 2017 |
| PG17APY000047 | SDV | A | 1 | 1.31 | | \$17,832 | Complete | 2017 |
| PG17APY000048 | SDV | A | 1 | 0.06 | | \$874 | Complete | 2017 |
| PG17APY000049 | SDV | A | 1 | 0.41 | | \$5,594 | Complete | 2017 |
| PG17APY000050 | SDV | A | 1 | 1.33 | | \$18,182 | Complete | 2017 |
| PG17APY000051 | SDV | A | 1 | 1.63 | | \$22,203 | Complete | 2017 |
| PG17APY000052 | SDV | A | 1 | 2.14 | | \$29,196 | Complete | 2017 |
| PG17APY000053 | SDV | A | 1 | 0.47 | | \$6,469 | Complete | 2017 |
| PG17APY000054 | SDV | A | 1 | 1.92 | | \$26,224 | Complete | 2017 |
| PG17APY000055 | SDV | A | 1 | 2.04 | | \$27,797 | Complete | 2017 |
| PG17APY000056 | SDV | A | 1 | 0.85 | | \$11,538 | Complete | 2017 |
| PG17APY000057 | SDV | A | 1 | 0.69 | | \$9,441 | Complete | 2017 |
| PG17APY000058 | SDV | A | 1 | 1.45 | | \$19,755 | Complete | 2017 |
| PG17APY000059 | SDV | A | 1 | 0.01 | | \$175 | Complete | 2017 |
| PG17APY000060 | SDV | A | 1 | 0.59 | | \$8,042 | Complete | 2017 |
| PG17APY000061 | SDV | A | 1 | 0.13 | | \$1,748 | Complete | 2017 |
| PG17APY000062 | SDV | A | 1 | 0.94 | | \$12,762 | Complete | 2017 |
| PG17APY000063 | SDV | A | 1 | 1.17 | | \$15,909 | Complete | 2017 |
| PG17APY000064 | SDV | A | 1 | 1.91 | | \$26,049 | Complete | 2017 |
| PG17APY000065 | SDV | A | 1 | 0.95 | | \$12,937 | Complete | 2017 |
| PG17APY000066 | SDV | A | 1 | 2.68 | | \$36,538 | Complete | 2017 |
| PG17APY000067 | SDV | A | 1 | 2.09 | | \$28,497 | Complete | 2017 |
| PG17APY000068 | SDV | A | 1 | 0.36 | | \$4,895 | Complete | 2017 |
| PG17APY000069 | SDV | A | 1 | 0.24 | | \$3,322 | Complete | 2017 |
| PG17APY000070 | SDV | A | 1 | 1.13 | | \$15,385 | Complete | 2017 |
| PG17APY000097 | FPU | A | 1 | 0.11 | | \$10,892 | Complete | 2017 |

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List of Completed Projects in FY2017

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|---------------|---------------|-----------|---------|-----------|------------|------------|-------------|--------------|
| PG17APY000098 | FPU | A | 1 | 0.60 | | \$61,462 | Complete | 2017 |
| PG17APY000099 | FPU | A | 1 | 0.34 | | \$35,010 | Complete | 2017 |
| PG17APY000100 | FPU | A | 1 | 1.17 | | \$119,423 | Complete | 2017 |
| PG17APY000101 | FPU | A | 1 | 0.78 | | \$79,745 | Complete | 2017 |
| PG17APY000102 | FPU | A | 1 | 1.01 | | \$103,863 | Complete | 2017 |
| PG17APY000103 | FPU | A | 1 | 0.54 | | \$54,849 | Complete | 2017 |
| PG17APY000104 | FPU | A | 1 | 1.78 | | \$182,441 | Complete | 2017 |
| PG17APY000105 | FPU | A | 1 | 0.04 | | \$4,279 | Complete | 2017 |
| PG17APY000106 | FPU | A | 1 | 0.11 | | \$10,892 | Complete | 2017 |
| PG17APY000107 | FPU | A | 1 | 0.49 | | \$50,181 | Complete | 2017 |
| PG17APY000108 | FPU | A | 1 | 1.21 | | \$123,702 | Complete | 2017 |
| PG17APY000109 | FPU | A | 1 | 0.63 | | \$64,185 | Complete | 2017 |
| PG17APY000110 | FPU | A | 1 | 0.60 | | \$61,462 | Complete | 2017 |
| PG17APY000111 | FPU | A | 1 | 1.11 | | \$113,199 | Complete | 2017 |
| PG17APY000112 | FPU | A | 1 | 1.46 | | \$149,765 | Complete | 2017 |
| PG17APY000113 | FPU | A | 1 | 1.46 | | \$149,765 | Complete | 2017 |
| PG17APY000114 | FPU | A | 1 | 0.14 | | \$14,004 | Complete | 2017 |
| PG17APY000115 | FPU | A | 1 | 0.13 | | \$12,837 | Complete | 2017 |
| PG17APY000116 | FPU | A | 1 | 1.35 | | \$138,095 | Complete | 2017 |
| PG17APY000117 | FPU | A | 1 | 0.33 | | \$33,454 | Complete | 2017 |
| PG17APY000118 | FPU | A | 1 | 0.15 | | \$15,560 | Complete | 2017 |
| PG17APY000119 | FPU | A | 1 | 0.60 | | \$61,073 | Complete | 2017 |
| PG17APY000120 | FPU | A | 1 | 0.59 | | \$60,295 | Complete | 2017 |
| PG17APY000121 | FPU | A | 1 | 0.14 | | \$14,004 | Complete | 2017 |
| PG17APY000122 | FPU | A | 1 | 0.29 | | \$29,564 | Complete | 2017 |
| PG17APY000123 | FPU | A | 1 | 0.57 | | \$58,350 | Complete | 2017 |
| PG17APY000124 | FPU | A | 1 | 0.30 | | \$31,120 | Complete | 2017 |
| PG17APY000125 | FPU | A | 1 | 0.27 | | \$27,230 | Complete | 2017 |
| PG17APY000126 | FPU | A | 1 | 0.19 | | \$19,061 | Complete | 2017 |

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|---------------|---------------|-----------|---------|-----------|------------|------------|-------------|--------------|
| PG17APY000127 | FPU | A | 1 | 0.21 | | \$21,784 | Complete | 2017 |
| PG17APY000128 | FPU | A | 1 | 0.46 | | \$46,680 | Complete | 2017 |
| PG17APY000129 | FPU | A | 1 | 0.08 | | \$8,558 | Complete | 2017 |
| PG17APY000130 | FPU | A | 1 | 0.05 | | \$5,446 | Complete | 2017 |
| PG17APY000131 | FPU | A | 1 | 0.36 | | \$36,955 | Complete | 2017 |
| PG17APY000132 | FPU | A | 1 | 0.05 | | \$4,668 | Complete | 2017 |
| PG17APY000133 | FPU | A | 1 | 0.24 | | \$24,118 | Complete | 2017 |
| PG17APY000134 | FPU | A | 1 | 1.66 | | \$169,993 | Complete | 2017 |
| PG17APY000135 | FPU | A | 1 | 0.22 | | \$22,951 | Complete | 2017 |
| PG17APY000136 | FPU | A | 1 | 0.49 | | \$49,792 | Complete | 2017 |
| PG17APY000137 | FPU | A | 1 | 1.57 | | \$160,657 | Complete | 2017 |
| PG17APY000138 | FPU | A | 1 | 0.34 | | \$34,621 | Complete | 2017 |
| PG17APY000139 | FPU | A | 1 | 0.17 | | \$17,505 | Complete | 2017 |
| PG17APY000140 | FPU | A | 1 | 0.55 | | \$56,016 | Complete | 2017 |
| PG17APY000141 | FPU | A | 1 | 0.87 | | \$89,081 | Complete | 2017 |
| PG17APY000142 | FPU | A | 1 | 0.50 | | \$50,959 | Complete | 2017 |
| PG17APY000143 | FPU | A | 1 | 0.80 | | \$81,690 | Complete | 2017 |
| PG16APY000179 | IMPP | A | 1 | 0.00 | | \$3,000 | Complete | 2016 |
| PG16APY000181 | IMPP | A | 1 | 0.02 | | \$89,000 | Complete | 2016 |
| PG16APY000182 | IMPP | A | 1 | 0.38 | | \$127,000 | Complete | 2016 |
| PG16APY000183 | IMPP | A | 1 | 0.01 | | \$10,000 | Complete | 2016 |
| PG16APY000184 | IMPP | A | 1 | 0.01 | | \$2,000 | Complete | 2016 |
| PG16APY000185 | IMPP | A | 1 | 0.01 | | \$2,000 | Complete | 2016 |
| PG16APY000186 | IMPP | A | 1 | 0.01 | | \$3,000 | Complete | 2016 |
| PG16APY000187 | IMPP | A | 1 | 0.03 | | \$1,000 | Complete | 2016 |
| PG16APY000188 | IMPP | A | 1 | 0.02 | | \$1,000 | Complete | 2016 |
| PG16APY000189 | IMPP | A | 1 | 0.09 | | \$45,000 | Complete | 2016 |
| PG16APY000190 | IMPP | A | 1 | 0.02 | | \$19,000 | Complete | 2016 |
| PG16APY000191 | IMPP | A | 1 | 0.03 | | \$17,000 | Complete | 2016 |

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|---------------|---------------|-----------|---------|-----------|------------|------------|-------------|--------------|
| PG17APY000192 | SDV | A | 1 | 2.42 | | \$33,042 | Complete | 2017 |
| PG17APY000193 | SDV | A | 1 | 0.41 | | \$5,594 | Complete | 2017 |
| PG17APY000194 | SDV | A | 1 | 2.94 | | \$40,035 | Complete | 2017 |
| PG17APY000195 | SDV | A | 1 | 1.99 | | \$27,098 | Complete | 2017 |
| PG17APY000196 | SDV | A | 1 | 0.69 | | \$9,441 | Complete | 2017 |
| PG17APY000197 | SDV | A | 1 | 0.26 | | \$3,497 | Complete | 2017 |
| PG17APY000198 | SDV | A | 1 | 0.54 | | \$7,343 | Complete | 2017 |
| PG17APY000199 | SDV | A | 1 | 1.77 | | \$24,126 | Complete | 2017 |
| PG17APY000200 | SDV | A | 1 | 0.87 | | \$11,888 | Complete | 2017 |
| PG17APY000201 | SDV | A | 1 | 1.10 | | \$15,035 | Complete | 2017 |
| PG17APY000202 | SDV | A | 1 | 0.21 | | \$2,797 | Complete | 2017 |
| PG17APY000203 | SDV | A | 1 | 1.35 | | \$18,357 | Complete | 2017 |
| PG17APY000204 | SDV | A | 1 | 0.65 | | \$8,916 | Complete | 2017 |
| PG17APY000205 | SDV | A | 1 | 0.17 | | \$2,273 | Complete | 2017 |
| PG17APY000206 | SDV | A | 1 | 0.09 | | \$1,224 | Complete | 2017 |
| PG17APY000207 | FPU | A | 1 | 0.08 | | \$8,169 | Complete | 2017 |
| PG17APY000208 | FPU | A | 1 | 0.92 | | \$94,527 | Complete | 2017 |
| PG17APY000209 | FPU | A | 1 | 1.31 | | \$134,205 | Complete | 2017 |
| PG17APY000210 | FPU | A | 1 | 0.46 | | \$47,458 | Complete | 2017 |
| PG17APY000211 | FPU | A | 1 | 2.35 | | \$240,402 | Complete | 2017 |
| PG17APY000212 | FPU | A | 1 | 0.14 | | \$14,004 | Complete | 2017 |
| PG17APY000213 | FPU | A | 1 | 1.53 | | \$156,767 | Complete | 2017 |
| PG17APY000214 | FPU | A | 1 | 0.33 | | \$34,232 | Complete | 2017 |
| PG17APY000215 | FPU | A | 1 | 0.17 | | \$17,894 | Complete | 2017 |
| PG17APY000216 | FPU | A | 1 | 0.23 | | \$23,729 | Complete | 2017 |
| PG17APY000217 | FPU | A | 1 | 1.09 | | \$112,032 | Complete | 2017 |
| PG17APY000218 | FPU | A | 1 | 0.67 | | \$68,464 | Complete | 2017 |
| PG17APY000219 | FPU | A | 1 | 1.04 | | \$106,586 | Complete | 2017 |
| PG17APY000220 | FPU | A | 1 | 1.04 | | \$106,197 | Complete | 2017 |

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|---------------|---------------|-----------|---------|-----------|------------|------------|-------------|--------------|
| PG16RST100021 | IMPP | A | 1 | 0.03 | | \$7,000 | Complete | 2016 |
| PG16RST103152 | IMPP | A | 1 | 0.01 | | \$3,000 | Complete | 2016 |
| PG16RST106142 | IMPP | A | 1 | 0.02 | | \$89,000 | Complete | 2016 |
| PG16RST106171 | IMPP | A | 1 | 0.37 | | \$127,000 | Complete | 2016 |
| PG16RST101011 | IMPP | A | 1 | 0.02 | | \$10,000 | Complete | 2016 |
| PG16RST100088 | IMPP | A | 1 | 0.01 | | \$2,000 | Complete | 2016 |
| PG16RST103971 | IMPP | A | 1 | 0.02 | | \$2,000 | Complete | 2016 |
| PG16RST106102 | IMPP | A | 1 | 0.01 | | \$3,000 | Complete | 2016 |
| PG16RST103482 | IMPP | A | 1 | 0.03 | | \$2,000 | Complete | 2016 |
| PG16RST103483 | IMPP | A | 1 | 0.01 | | \$1,000 | Complete | 2016 |
| PG16RST101661 | IMPP | A | 1 | 0.01 | | \$1,000 | Complete | 2017 |
| PG16RST101663 | IMPP | A | 1 | 0.01 | | \$1,000 | Complete | 2017 |
| PG16RST106027 | IMPP | A | 1 | 0.09 | | \$45,000 | Complete | 2016 |
| PG16RST102322 | IMPP | A | 1 | 0.03 | | \$19,000 | Complete | 2016 |
| PG16RST100024 | IMPP | A | 1 | 0.04 | | \$17,000 | Complete | 2016 |
| PG16RST106073 | IMPP | A | 1 | 0.17 | | \$81,000 | Complete | 2017 |

TOTAL (Impervious Surface Removal, Tree Planting, Storm Drain Vacuuming, ESD and Structural BMPs) = 726.88 IA \$25,323,428

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