

County Council of Howard County, Maryland

2016 Legislative Session

Legislative Day No. 7

Resolution No. 92 -2016

Introduced by: The Chairperson at the request of the County Executive

A RESOLUTION approving a financial assurance plan for Howard County's National Pollutant Discharge Elimination System, Municipal Separate Storm Sewer System permit programs, in accordance with Section 4-202.1 of the Environment Article of the Annotated Code of Maryland; indicating certain endorsement by the County Executive; and requiring certain copies be sent to the Maryland Department of the Environment.

Introduced and read first time June 16, 2016.

By order Jessica Feldmark
Jessica Feldmark, Administrator

Read for a second time at a public hearing on June 20, 2016.

By order Jessica Feldmark
Jessica Feldmark, Administrator

This Resolution was read the third time and was Adopted , Adopted with amendments , Failed , Withdrawn , by the County Council on July 8, 2016.

Certified By Jessica Feldmark
Jessica Feldmark, Administrator

Approved by the County Executive on July 4, 2016.

Allan H. Kittleman
Allan H. Kittleman, County Executive

NOTE: [[text in brackets]] indicates deletions from existing law; TEXT IN SMALL CAPITALS indicates additions to existing law; Strike-out indicates material deleted by amendment; Underlining indicates material added by amendment

1 **WHEREAS**, related to the Watershed Protection and Restoration Fee, Howard County is
2 required to file a financial assurance plan (“Plan”), approved by the local governing bodies, with
3 the Maryland Department of the Environment (“MDE”), in accordance with § 4-202.1 of the
4 Environment Article of the Annotated Code of Maryland (the “State Law”); and
5

6 **WHEREAS**, the County has worked with the MDE over the past several months to craft a
7 Plan that projects and describes actions and financial resources and costs related to stormwater
8 management in Howard County over the two-year period following the filing date of the Plan, and
9

10 **WHEREAS**, the State law requires that the County file a Plan with MDE and that the
11 governing bodies of the County approve the Plan prior to filing with MDE.
12

13 **NOW, THEREFORE, BE IT RESOLVED** by the County Council of Howard County,
14 Maryland, this 8th day of July, 2016, that it hereby approves the
15 Plan, substantially in the form attached, as a projection of actions, funding, and costs of Howard
16 County’s stormwater management program over the two-year period following the filing date of
17 the Plan,
18

19 **AND BE IT FURTHER RESOLVED**, that the County Executive be, and is hereby,
20 requested to endorse this Resolution, thereby indicating his approval of the Plan.
21

22 **AND BE IT FURTHER RESOLVED** that a copy of this Resolution and the Plan be
23 sent to the Maryland Department of the Environment, 1800 Washington Boulevard, Baltimore,
24 MD 21230.

Howard County Financial Assurance Plan 2016: Executive Summary

Permit Overview

The National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit issued to Howard County, hereinafter “the County”, on December 18, 2014, mandated that the County implement restoration efforts for 20% of its total impervious surface area, that has not already been restored to the maximum extent practicable (MEP), by December 17, 2019. In December 2015, the County submitted its *Countywide Implementation Strategy* (CIS) which included a detailed impervious surface area assessment and restoration plan that calculated the Countywide impervious surface area not restored to the MEP as 10,222 acres. Thus, the County’s target 20% restoration requirement is 2,044 acres. State law requires that the County approve and file a financial assurance plan (Plan) with the Maryland Department of the Environment (MDE) that describes actions, revenues, and costs required to meet the 20% restoration requirement.

Howard County implemented its stormwater utility fee, the Watershed Protection and Restoration Fee (WPRF), on July 1, 2013, as required by State law. Upon implementation of the Fee and the Watershed Protection and Restoration Fund, the County increased existing efforts to plan, design, construct and monitor restoration projects necessary to meet the NPDES MS4 permit’s 20% restoration goal. As detailed in the CIS, all restoration projects implemented following July 1, 2013 are considered restoration that applies to the County’s 20% restoration goal. From July 2013 through December 2015, the County has restored approximately 157 acres, leaving the total amount of impervious acreage needed to be restored at approximately 1,887 acres by December 17, 2019.

The County received comments on the CIS from MDE on May 27, 2016. The County requested that MDE delay the deadline for the filing of the Plan so that the County could address MDE’s comments on the CIS in the Plan, but MDE denied this request. The Plan has been developed based on the impervious surface area assessment and strategies outlined in the December 2015 CIS and MDE has assured the County that the development of its Plan has been laudatory.

Actions Required to Meet Permit

The County will continue to implement the numerous programs required by the MS4 permit, including development of restoration plans that will identify projects to restore impervious surface area. Best management practices (BMPs) will continue to be utilized to complete the restoration work and improve water quality, including stream restoration, outfall stabilization, tree planting, construction of new BMPs, and retrofitting existing BMPs. The County also continues to research and develop the voluminous electronic data necessary to meet the ever-expanding Geodatabase reporting requirements of the MS4 permit.

The work required by the MS4 permit will be difficult to complete within the allotted timeframe due to the sheer volume of design and construction required, the large resource demand related to maintaining current BMPs, and the necessity of utilizing private property to meet the 20% requirement. There is not enough public land to meet the impervious acreage requirement. Private property owners are not required to work with the County in meeting the 20% requirement and there are currently few incentives for them to do so. The County is proactively pioneering Public-Private Partnerships in order to complete some of the work, but in the end, this will not completely solve the larger issue of gaining access to private land, a fundamental weakness of MDE's stormwater management approach that may require legislative action by the General Assembly to address.

Total Permit Cost and Fund Sources

The County appreciates the importance of working to meet the restoration requirement of its permit. Utilizing current project cost estimates for restoring impervious acreage, as well as including the acres calculated in the CIS, the County believes that the 20% restoration requirement of its MS4 permit will cost approximately \$137,948,680 beginning in Fiscal Year (FY) 2015 through FY 2020. Over the next two fiscal years, FY 2017 and FY 2018, the cost to the County will be approximately \$40,760,000. These cost estimates include the engineering design, construction, and monitoring costs associated with commencing and completing the implementation of the 20% restoration requirement.

The County will use the following revenue sources for FY 2017 and FY 2018 in funding the costs of the MS4 permit over the next two fiscal years:

Grants- The County typically receives funding from various State and Federal grant programs to conduct stormwater restoration work. There is also the potential to work with private entities in conducting stormwater restoration work.

Watershed Protection and Restoration Fee- The County currently collects approximately \$10.8 million from the Watershed Protection and Restoration Fee. This amount will decrease steadily over the next three years, as the Fee for commercial properties begins to decline, as specified in Council Resolution 37-2016.

Transfer Tax- Of the transfer tax that the County currently collects, a quarter is awarded to the County's Agricultural Land Preservation Program. The County believes that this program is reaching its peak and the Agricultural Land Preservation Fund will grow a significant positive balance in the near future. The County believes that allocating \$1 million in FY 2018 to the Watershed Protection and Restoration Fund from the portion of the proceeds that the Agricultural Land Preservation Program currently receives is appropriate, but State legislation is required for this to occur.

General Fund- The County will utilize its General Fund to absorb operating costs in administering stormwater restoration projects and also to provide debt service for General Obligation Bonds issued to fund the stormwater restoration projects.

General Obligation Bonds- The County will issue General Obligation Bonds to fund necessary stormwater restoration projects required by the MS4 permit.

Future Considerations

The Plan describes projected actions, revenues, and costs to meet stormwater management requirements based on the current policy and regulatory environment established by MDE. As the County moves forward in its program, it will continue to gain a better understanding of the costs associated with completing the necessary stormwater restoration work. In addition, the County expects that several factors to be determined at the State level will influence the costs of meeting the MS4 permit:

New Crediting Methods - There is an expectation that new crediting methods related to outfall stabilization, street sweeping, inlet cleaning, public education, and more will allow the County credits for treating impervious acres based on existing and developing programs.

Nutrient Trading Program- MDE and the Maryland Department of Agriculture are dedicating considerable resources to the expansion of existing nutrient trading programs that should allow nutrient trades that will help the County meet its 20% restoration requirement in a cost-effective manner.

Summary

The Plan presented is a projected spending plan that will assist the County in meeting its MS4 permit restoration requirement.

MS4 Information

| | |
|----------------|--|
| Jurisdiction | Howard County |
| Contact Name | Mark S. Richmond, P.E., Chief |
| Phone | 410-313-6413 |
| Address | Howard County Government, Department of Public Works, Bureau of Environmental Services, Stormwater Management Division, 6751 Columbia Gateway Drive, Suite 514 |
| City | Columbia |
| State | MD |
| Zip | 21046 |
| Email | msrichmond@howardcountymd.gov |
| Baseline Acres | 10221.60 |
| Permit Num | 11-DP-3318 |
| Reporting Year | 2016 |

Check with MDE Geodatabase:

Should match Permit info table of Geodatabase, except for Impervious Acre Baseline—that should match Impervious Surface Table.

VERSION 4-7-16

Article 4-202.1(j)(1)(i)1: Actions that will be required of the county or municipality to meet the requirements of its National Pollutant Discharge Elimination System Phase I Municipal Separate Storm Sewer System Permit.

Note: To identify all "actions" required under the MS4 permit, provide an executive summary of the jurisdiction's MS4 programs. See MDE's FAP Guidance. For proposed actions to meet the impervious surface restoration plan, fill in the table below.

Baseline: 10,222 Requirement: 20%

| REST BMP TYPE*, # | BMP CLASS | IMP ACRES | IMPL COST ### | % ISRP COMPLETE | IMPL STATUS** | PROJECTED IMPL YR |
|----------------------------|-----------|-----------|---------------|-----------------|---------------|-------------------|
| Operation Programs | | | | | | |
| Source ID | | 0 | \$ 95,000 | 0.0% | Planning | 2016 |
| SW Management | | 0 | \$ 5,253,473 | 0.0% | Planning | 2016 |
| IDDE | A | 0 | \$ 80,000 | 0.0% | Planning | 2016 |
| Inlet Cleaning | A | 0 | \$ 10,000 | 0.0% | Planning | 2016 |
| Street Sweeping | A | 0 | \$ 400,000 | 0.0% | Planning | 2016 |
| Public Education | | 0 | \$ 1,102,000 | 0.0% | Planning | 2016 |
| Watershed Assessment | | 0 | \$ 1,169,370 | 0.0% | Planning | 2016 |
| TMDL Assessment Monitoring | | 0 | \$ 417,000 | 0.0% | Planning | 2016 |
| Chemical Monitoring | | 0 | \$ 37,000 | 0.0% | Planning | 2016 |
| Biomonitoring | | 0 | \$ 125,000 | 0.0% | Planning | 2016 |
| Physical Stream Assessment | | 0 | \$ 37,000 | 0.0% | Planning | 2016 |
| Design Manual Monitoring | | 0 | \$ 64,000 | 0.0% | Planning | 2016 |
| Source ID | | 0 | \$ 100,000 | 0.0% | Proposed | 2017 |
| SW Management | | 0 | \$ 5,780,687 | 0.0% | Proposed | 2017 |
| IDDE | A | 0 | \$ 85,000 | 0.0% | Proposed | 2017 |
| Inlet Cleaning | A | 0 | \$ 10,000 | 0.0% | Proposed | 2017 |
| Street Sweeping | A | 0 | \$ 400,000 | 0.0% | Proposed | 2017 |
| Public Education | | 0 | \$ 1,110,000 | 0.0% | Proposed | 2017 |
| Watershed Assessment | | 0 | \$ 500,000 | 0.0% | Proposed | 2017 |
| TMDL Assessment Monitoring | | 0 | \$ 500,000 | 0.0% | Proposed | 2017 |
| Chemical Monitoring | | 0 | \$ 40,000 | 0.0% | Proposed | 2017 |
| Biomonitoring | | 0 | \$ 125,000 | 0.0% | Proposed | 2017 |
| Physical Stream Assessment | | 0 | \$ 50,000 | 0.0% | Proposed | 2017 |
| Design Manual Monitoring | | 0 | \$ 64,000 | 0.0% | Proposed | 2017 |
| Source ID | | 0 | \$ 100,000 | 0.0% | Proposed | 2018 |
| SW Management | | 0 | \$ 5,954,108 | 0.0% | Proposed | 2018 |

| | | | | | | |
|---|---|-----|---------------|------|----------|------|
| IDDE | A | 0 | \$ 85,000 | 0.0% | Proposed | 2018 |
| Inlet Cleaning | A | 0 | \$ 10,000 | 0.0% | Proposed | 2018 |
| Street Sweeping | A | 0 | \$ 400,000 | 0.0% | Proposed | 2018 |
| Public Education | | 0 | \$ 1,150,000 | 0.0% | Proposed | 2018 |
| Watershed Assessment | | 0 | \$ 500,000 | 0.0% | Proposed | 2018 |
| TMDL Assessment Monitoring | | 0 | \$ 500,000 | 0.0% | Proposed | 2018 |
| Chemical Monitoring | | 0 | \$ 40,000 | 0.0% | Proposed | 2018 |
| Biomonitoring | | 0 | \$ 125,000 | 0.0% | Proposed | 2018 |
| Physical Stream Assessment | | 0 | \$ 100,000 | 0.0% | Proposed | 2018 |
| Design Manual Monitoring | | 0 | \$ 64,000 | 0.0% | Proposed | 2018 |
| Source ID | | 0 | \$ 100,000 | 0.0% | Proposed | 2019 |
| SW Management | | 0 | \$ 6,132,731 | 0.0% | Proposed | 2019 |
| IDDE | A | 0 | \$ 85,000 | 0.0% | Proposed | 2019 |
| Inlet Cleaning | A | 0 | \$ 10,000 | 0.0% | Proposed | 2019 |
| Street Sweeping | A | 0 | \$ 400,000 | 0.0% | Proposed | 2019 |
| Public Education | | 0 | \$ 1,150,000 | 0.0% | Proposed | 2019 |
| Watershed Assessment | | 0 | \$ 500,000 | 0.0% | Proposed | 2019 |
| TMDL Assessment Monitoring | | 0 | \$ 500,000 | 0.0% | Proposed | 2019 |
| Chemical Monitoring | | 0 | \$ 40,000 | 0.0% | Proposed | 2019 |
| Biomonitoring | | 0 | \$ 125,000 | 0.0% | Proposed | 2019 |
| Physical Stream Assessment | | 0 | \$ 150,000 | 0.0% | Proposed | 2019 |
| Design Manual Monitoring | | 0 | \$ 64,000 | 0.0% | Proposed | 2019 |
| Source ID | | 0 | \$ 100,000 | 0.0% | Proposed | 2020 |
| SW Management | | 0 | \$ 6,316,713 | 0.0% | Proposed | 2020 |
| IDDE | A | 0 | \$ 85,000 | 0.0% | Proposed | 2020 |
| Inlet Cleaning | A | 0 | \$ 10,000 | 0.0% | Proposed | 2020 |
| Street Sweeping | A | 0 | \$ 400,000 | 0.0% | Proposed | 2020 |
| Public Education | | 0 | \$ 1,150,000 | 0.0% | Proposed | 2020 |
| Watershed Assessment | | 0 | \$ 500,000 | 0.0% | Proposed | 2020 |
| TMDL Assessment Monitoring | | 0 | \$ 500,000 | 0.0% | Proposed | 2020 |
| Chemical Monitoring | | 0 | \$ 40,000 | 0.0% | Proposed | 2020 |
| Biomonitoring | | 0 | \$ 125,000 | 0.0% | Proposed | 2020 |
| Physical Stream Assessment | | 0 | \$ 200,000 | 0.0% | Proposed | 2020 |
| Design Manual Monitoring | | 0 | \$ 64,000 | 0.0% | Proposed | 2020 |
| Subtotal Operations Next Two Years (FY2017-FY2018)*** | | 0.0 | \$ 17,792,795 | 0.0% | | |
| Subtotal Operations Permit Term (FY2015-FY2019)*** | | 0.0 | \$46,294,369 | 0.0% | | |

| | | | | | | |
|--|---|------|--------------|-------|--------------|------|
| Subtotal Operations Permit Term and Projected Years (FY2015-FY2020)*** | | 0.0 | \$55,785,082 | 0.0% | | |
| Capital Projects | | | | | | |
| BR | S | 1.0 | \$ 187,342 | 0.01% | Planning | 2016 |
| EDSW | S | 2.9 | \$ 380,000 | 0.03% | Planning | 2016 |
| FPU | A | 5 | \$ 163,000 | 0.05% | Construction | 2016 |
| OUTS | A | 2.0 | \$ 240,000 | 0.02% | Planning | 2016 |
| OUTS | A | 1.0 | \$ 60,000 | 0.01% | Planning | 2016 |
| OUTS | A | 1.8 | \$ 311,000 | 0.02% | Planning | 2016 |
| OUTS | A | 2.0 | \$ 460,000 | 0.02% | Planning | 2016 |
| Pond Conversion | S | 7 | \$ 250,000 | 0.07% | Construction | 2016 |
| Pond Conversion | S | 6.7 | \$ 350,000 | 0.07% | Construction | 2016 |
| Pond Maintenance | S | 0 | \$ 350,000 | 0.00% | Construction | 2016 |
| Pond Maintenance | S | 0 | \$ 600,000 | 0.00% | Construction | 2016 |
| Pond Maintenance | S | 0 | \$ 400,000 | 0.00% | Construction | 2016 |
| Pond Maintenance | S | 0 | \$ 1,350,000 | 0.00% | Construction | 2016 |
| Pond Maintenance | S | 0 | \$ 350,000 | 0.00% | Construction | 2016 |
| SF | S | 3.5 | \$ 233,660 | 0.03% | Planning | 2016 |
| STRE | A | 10.0 | \$ 650,000 | 0.10% | Planning | 2016 |
| STRE | A | 3.0 | \$ 656,484 | 0.03% | Planning | 2016 |
| STRE | A | 3.5 | \$ 830,000 | 0.03% | Planning | 2016 |
| STRE | A | 5.0 | \$ 365,000 | 0.05% | Planning | 2016 |
| STRE | A | 7.0 | \$ 541,202 | 0.07% | Planning | 2016 |
| STRE | A | 17.0 | \$ 965,000 | 0.17% | Planning | 2016 |
| STRE | A | 7.0 | \$ 576,430 | 0.07% | Planning | 2016 |
| STRE | A | 11.1 | \$ 650,000 | 0.11% | Planning | 2016 |
| STRE | A | 0 | \$ 650,000 | 0.00% | Planning | 2016 |
| WP | S | 1.0 | \$ 400,000 | 0.01% | Planning | 2016 |
| WP | S | 7.5 | \$ 80,000 | 0.07% | Planning | 2016 |
| WP | S | 6.4 | \$ 71,172 | 0.06% | Planning | 2016 |
| WP | S | 5.8 | \$ 316,995 | 0.06% | Planning | 2016 |
| ESDRG | E | 5 | \$ 500,000 | 0.05% | Construction | 2017 |
| OUTS | A | 2 | \$ 100,000 | 0.02% | Planning | 2017 |
| Pond Conversion | S | 13.8 | \$ 700,000 | 0.14% | Construction | 2017 |
| Pond Conversion | S | 4.7 | \$ 500,000 | 0.05% | Construction | 2017 |
| Pond Conversion | S | 5 | \$ 300,000 | 0.05% | Construction | 2017 |

| | | | | | | |
|------------------|---|-------|---------------|-------|--------------|------|
| Pond Maintenance | S | 0 | \$ 400,000 | 0.00% | Construction | 2017 |
| Pond Maintenance | S | 0 | \$ 350,000 | 0.00% | Construction | 2017 |
| Pond Maintenance | S | 2 | \$ 600,000 | 0.02% | Construction | 2017 |
| Pond Maintenance | S | 0 | \$ 400,000 | 0.00% | Construction | 2017 |
| SPSC | A | 7.2 | \$ 90,000 | 0.07% | Planning | 2017 |
| SPSC | A | 3.89 | \$ 230,000 | 0.04% | Planning | 2017 |
| SPSC | A | 5.5 | \$ 300,000 | 0.05% | Construction | 2017 |
| STRE | A | 64 | \$ 3,200,000 | 0.63% | Planning | 2017 |
| STRE | A | 2 | \$ 100,000 | 0.02% | Planning | 2017 |
| STRE | A | 14 | \$ 600,000 | 0.14% | Construction | 2017 |
| STRE | A | 18 | \$ 1,000,000 | 0.18% | Construction | 2017 |
| STRE | A | 18 | \$ 1,000,000 | 0.18% | Construction | 2017 |
| STRE | A | 126 | \$ 900,000 | 1.23% | Construction | 2017 |
| STRE | A | 20 | \$ 950,000 | 0.20% | Construction | 2017 |
| STRE | A | 7 | \$ 350,000 | 0.07% | Construction | 2017 |
| STRE | A | 17 | \$ 950,000 | 0.17% | Construction | 2017 |
| STRE | A | 1 | \$ 350,000 | 0.01% | Construction | 2017 |
| STRE | A | 10 | \$ 900,000 | 0.10% | Planning | 2017 |
| STRE | A | 1 | \$ 200,000 | 0.01% | Construction | 2017 |
| STRE | A | 1 | \$ 50,000 | 0.01% | Planning | 2017 |
| STRE | A | 1 | \$ 350,000 | 0.01% | Construction | 2017 |
| BMP Conversions | S | 27.7 | \$ 1,764,493 | 0.27% | Proposed | 2018 |
| FPU | A | 17.2 | \$ 1,962,677 | 0.17% | Proposed | 2018 |
| New BMPs | S | 10.0 | \$ 1,609,386 | 0.10% | Proposed | 2018 |
| OUTS | A | 5.2 | \$ 788,608 | 0.05% | Proposed | 2018 |
| SPSC | A | 19.8 | \$ 972,619 | 0.19% | Proposed | 2018 |
| STRE | A | 18 | \$ 1,350,075 | 0.18% | Planning | 2018 |
| STRE | A | 12.8 | \$ 1,047,045 | 0.13% | Planning | 2018 |
| STRE | A | 10 | \$ 1,500,000 | 0.10% | Planning | 2018 |
| STRE | A | 10 | \$ 803,081 | 0.10% | Proposed | 2018 |
| STRE | A | 10.7 | \$ 824,195 | 0.10% | Proposed | 2018 |
| STRE | A | 60 | \$ 2,000,000 | 0.59% | Planning | 2018 |
| STRE | A | 3 | \$ 500,000 | 0.03% | Planning | 2018 |
| STRE | A | 20 | \$ 1,000,000 | 0.20% | Planning | 2018 |
| STRE | A | 161.4 | \$ 12,389,091 | 1.58% | Proposed | 2018 |
| BMP Conversions | S | 30.9 | \$ 1,939,383 | 0.30% | Proposed | 2019 |
| FPU | A | 17.9 | \$ 2,041,769 | 0.18% | Proposed | 2019 |

| | | | | | | |
|---|---|----------|---------------|-------|----------|------|
| New BMPs | S | 11.4 | \$ 1,823,970 | 0.11% | Proposed | 2019 |
| OUTS | A | 5.9 | \$ 900,475 | 0.06% | Proposed | 2019 |
| SPSC | A | 20.8 | \$ 1,023,276 | 0.20% | Proposed | 2019 |
| STRE | A | 11.9 | \$ 998,490 | 0.12% | Planning | 2019 |
| STRE | A | 17.9 | \$ 1,344,810 | 0.18% | Planning | 2019 |
| STRE | A | 318.0 | \$ 24,599,374 | 3.11% | Proposed | 2019 |
| BMP Conversions | S | 35.6 | \$ 2,216,204 | 0.35% | Proposed | 2020 |
| FPU | A | 16.4 | \$ 1,873,403 | 0.16% | Proposed | 2020 |
| New BMPs | S | 15.4 | \$ 2,467,726 | 0.15% | Proposed | 2020 |
| OUTS | A | 4.7 | \$ 747,939 | 0.05% | Proposed | 2020 |
| SPSC | A | 36.9 | \$ 1,818,321 | 0.36% | Proposed | 2020 |
| STRE | A | 296.8 | \$ 22,986,965 | 2.90% | Proposed | 2020 |
| Subtotal Capital Next Two Years (FY2017-FY2018) | | 734.89 | \$43,881,270 | 7.2% | | |
| Subtotal Capital Permit Term (FY2015-FY2019) | | 1,362.53 | \$103,828,122 | 13.3% | | |
| Subtotal Capital Permit Term and Projected Years (FY2015-FY2020) | | 1,768.33 | \$135,938,680 | 17.3% | | |
| Other | | | | | | |
| SEPD | A | 7.8 | \$ 390,000 | 0.08% | Proposed | 2016 |
| SEPD | A | 7.8 | \$ 390,000 | 0.08% | Proposed | 2017 |
| SEPD | A | 7.8 | \$ 390,000 | 0.08% | Proposed | 2018 |
| SEPD | A | 7.8 | \$ 390,000 | 0.08% | Proposed | 2019 |
| SEPP | A | 270 | \$ 450,000 | 2.64% | Proposed | 2019 |
| Subtotal Other Next Two Years (FY2017-FY2018) | | 16 | \$780,000 | 0.15% | | |
| Subtotal Other Permit Term (FY2015-FY2019) | | 382 | \$2,010,000 | 3.7% | | |
| Subtotal Operations Permit Term and Projected Years (FY2015-FY2020) | | 382 | \$2,010,000 | 3.7% | | |
| Total Next Two Years (FY2017-FY2018) | | 750.5 | \$62,454,065 | 7.3% | | |
| Total Permit Term (FY2015-FY2019) | | 1744.7 | \$152,132,491 | 17.1% | | |

| | | | | | | |
|---|--|--------|---------------|-------|--|--|
| Total Permit Term and Projected Years (FY2015-FY2020) | | 2150.5 | \$193,733,762 | 21.0% | | |
|---|--|--------|---------------|-------|--|--|

Check with MDE Geodatabase:

Type, class, impervious acres, implementation cost and implementation status should match the various geodatabase tables for BMPs (AltBMPLine, AltBMPPoint,

*Use BMP domains from MDE Geodatabase.

**Complete, Under Construction, Planning, or Proposed

***IMPL COST is a summation and not an average.

General REST BMP TYPES are included for future projects for which the specific BMP TYPE has yet to be determined designed

Costs of \$0 are for restoration projects implemented in Howard County by other non-government groups

Street Sweeping and Inlet cleaning are currently not performed at the frequency required to qualify for credit.

VERSION 4-7-16

Article 4-202.1(j)(1)(i)2: Projected annual and 5-year costs for the county or municipality to meet the impervious surface restoration plan requirements of its National Pollutant Discharge Elimination System Phase I Municipal Separate Storm Sewer System Permit.

| DESCRIPTION | PAST UP THRU FY 2015 | CURRENT/PROJECTED YEAR 1 FY 2016 | PROJECTED YEAR 2 FY 2017 | PROJECTED YEAR 3 FY 2018 | PROJECTED YEAR 4 FY 2019 | PROJECTED YEAR 5 FY 2020 | TOTAL COSTS |
|---------------------------------|----------------------|----------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------|
| Operating Expenditures (costs)* | | | | | | | |
| Capital Expenditures (costs)** | | | | | | | |
| Stream Restoration BMPs | \$1,576,862 | \$6,425,318 | \$10,900,000 | \$21,413,487 | \$26,942,674 | \$22,986,965 | \$90,245,306 |
| Outfall Stabilization BMPs | \$0 | \$1,071,000 | \$100,000 | \$788,608 | \$900,475 | \$747,939 | \$3,608,022 |
| Other BMPs | \$5,872,589 | \$10,719,536 | \$4,760,000 | \$6,699,175 | \$7,668,398 | \$8,375,654 | \$44,095,352 |
| Subtotal operation and paygo: | \$7,449,451 | \$18,215,854 | \$15,760,000 | \$28,901,270 | \$35,511,547 | \$32,110,558 | \$137,948,680 |
| Total expenditures: | \$7,449,451 | \$18,215,854 | \$15,760,000 | \$28,901,270 | \$35,511,547 | \$32,110,558 | \$137,948,680 |

Total ISRP costs except debt service: \$137,948,680

*The County currently does not receive ISRP credit for operating expenditures

Compare ISRP costs (except debt service) / total NPDES MS4 proposed actions: 71%

**See All Actions and Specific Actions for a full list of BMPs

Check with MDE Geodatabase:

The total current FY 2015 expenditure should be less than the combined total of the "OP_cost" and "CAP_Cost" fields in the fiscal analyses table of the geodatabase.

The total projected FY 2016 expenditure should be less than the combined total of the "OP_budget" and "CAP_budget" fields in the fiscal analyses table of the geodatabase.

*Insert additional rows as necessary.

Article 4-202.1(j)(1)(i)3: Projected annual and 5-year revenues or other funds that will be used to meet the cost for the county or municipality to meet the impervious surface restoration plan requirements under the National Pollutant Discharge Elimination System Phase I Municipal Separate Storm Sewer System Permit.

| DESCRIPTION | PAST UP THRU FY 2015 | CURRENT/PROJECTED YEAR 1 FY 2016 | PROJECTED YEAR 2 FY 2017 | PROJECTED YEAR 3 FY 2018 | PROJECTED YEAR 4 FY 2019 | PROJECTED YEAR 5 FY 2020 | TOTAL NEXT 2-YEARS FY 17-18* | TOTAL CURRENT + PROJECTED |
|--|----------------------|----------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------------------------|---------------------------|
| Annual Revenue** Appropriated for ISRP | \$7,449,451 | \$18,215,854 | \$15,760,000 | \$25,000,000 | \$34,900,000 | \$36,623,375 | \$40,760,000 | \$137,948,680 |
| Annual Costs towards ISRP*** | \$7,449,451 | \$18,215,854 | \$15,760,000 | \$28,901,270 | \$35,511,547 | \$32,110,558 | \$44,661,270 | \$137,948,680 |

Compare annual costs / revenue appropriated: 91%
WPRP 2016 Reporting Criteria 75%

ISRP = Impervious Surface Restoration Program, or 20% Restoration Requirement

* Article 4-202.1(j)(2): Demonstration that county or municipality has sufficient funding in the current fiscal year and subsequent fiscal year budgets to meet its estimated cost for the 2-year period immediately following the filing date of the FAP. Note that the appropriations and expenditures include time period up to FY 2018.

** Revenue means "dedicated revenues, funds, or sources of funds (per Article 4-202.1(j)(4)(ii)). Note that budget appropriations have only been approved by governing bodies through FY 2016 at the time of FAP reporting.

*** See table of ISRP Cost.

VERSION 4-7-16

Article 4-202.1(j)(1)(i)4: Any sources of funds that will be utilized by the county or municipality to meet the requirements of its National Pollutant Discharge Elimination System Phase I Municipal Separate Storm Sewer System Permit.

| SOURCE | PAST UP THRU FY 2015 | CURRENT/PROJECTED YEAR 1 FY 2016 | PROJECTED YEAR 2 FY 2017 | PROJECTED YEAR 3 FY 2018 | PROJECTED YEAR 4 FY 2019 | PROJECTED YEAR 5 FY 2020 | TOTAL PERMIT CYCLE |
|---|----------------------------|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------|
| Paygo Sources | | | | | | | |
| Stormwater Remediation Fees for Capital (WPR Fund) | \$ 10,012,839 | \$ 7,811,883 | \$ 7,980,000 | \$ 6,000,000 | \$ 3,110,000 | \$ 3,173,813 | \$ 38,088,535 |
| General Fund (Operating) | \$ 3,600,000 | \$ 1,800,000 | \$ 1,800,000 | \$ 1,854,000 | \$ 1,909,620 | \$ 1,966,909 | \$ 12,930,529 |
| Transfer Tax | | | | \$ 1,000,000 | \$ 1,000,000 | \$ 1,000,000 | \$ 3,000,000 |
| Stormwater Remediation Fees for Operating (WPR Fund) | \$ 4,798,693 | \$ 3,435,473 | \$ 3,980,687 | \$ 4,100,108 | \$ 4,223,111 | \$ 4,349,804 | \$ 24,887,876 |
| Subtotal Paygo Sources | \$ 18,411,532 | \$ 13,047,356 | \$ 13,760,687 | \$ 12,954,108 | \$ 10,242,731 | \$ 10,490,526 | \$ 78,906,939 |
| Bonds Issued | | | | | | | |
| General Obligation Bonds | \$ 11,627,908 | \$ 9,679,100 | \$ 7,413,000 | \$ 17,000,000 | \$ 16,400,000 | \$ 17,300,000 | \$ 79,420,008 |
| Revenue (Utility) Bonds | | | | | \$ 13,000,000 | \$ 14,483,625 | \$ 27,483,625 |
| State Revolving Loan Fund | | | \$ 3,200,000 | | | | \$ 3,200,000 |
| Subtotal Bonds Issued | \$ 11,627,908 | \$ 9,679,100 | \$ 10,613,000 | \$ 17,000,000 | \$ 29,400,000 | \$ 31,783,625 | \$ 110,103,633 |
| Grants and Partnerships (no payment is expected) | | | | | | | |
| State funded grants | \$ 2,791,279 | \$ 1,777,400 | \$ 1,450,000 | \$ 1,000,000 | \$ 1,000,000 | \$ 1,000,000 | \$ 9,018,679 |
| Public-private partnership (matched grant) | | | \$ 500,000 | | | | \$ 500,000 |
| Subtotal Grants and Partnerships | \$ 2,791,279 | \$ 1,777,400 | \$ 1,950,000 | \$ 1,000,000 | \$ 1,000,000 | \$ 1,000,000 | \$ 9,518,679 |
| Total Annual Sources of Funds | \$ 32,830,719 | \$ 24,503,856 | \$ 26,323,687 | \$ 30,954,108 | \$ 40,642,731 | \$ 43,274,151 | \$ 198,529,251 |
| Percent of Funds Directed Toward ISRP | | 74.34% | 59.87% | 80.76% | 85.87% | 84.63% | |

**Compare total permit term paygo ISRP costs / subtotal permit term paygo sources: 69%
 Compare total permit term ISRP costs / total permit term annual sources of funds: 69%

* WPR Fund: Watershed Protection and Restoration Fund.

**All funding sources are included

Check with MDE Geodatabase:

The total sources related to WPR Funds in Current FY 2015 should march the "WPR_Fund" field of the geodatabase.

Howard County Notes

PAST UP THRU 2015 includes actions between July 1, 2013 and June 30, 2015

FY14 and FY15: WPR Fund, General Obligation Bonds, and State Funded Grants were calculated for all encumbered funds in FY14 and FY15 for Capital Projects D-1148, D-1158, D-1159, D-1160, D-1164, D-1165, C-0331 and C-0337

FY16: WPR Fund, General Obligation Bonds, and State Funded Grants were calculated for all encumbered funds and unencumbered funds in FY16 for Capital Projects D-1148, D-1158, D-1159, D-1160, D-1164, D-1165, C-0331 and C-0337

FY17: WPR Fund, General Obligation Bonds, and State Funded Grants were calculated for all unencumbered funds planned in the FY17 budget as of March 21, 2016 for Capital Projects D-1148, D-1158, D-1159, D-1160, D-1164, D-1165, C-0331 and C-0337

FY17: \$3.2M is included in the State Revolving Loan Fund - in the FY17 Budget this funding is listed as "Water Quality Loans" for Capital Project D-1158 Patrick Farm Restoration Project

Article 4-202.1(j)(1)(i)5: Specific actions and expenditures that the county or municipality implemented in the previous fiscal years to meet its impervious surface restoration plan requirements under its National Pollutant Discharge Elimination System Phase I Municipal Separate Storm Sewer System Permit.

Baseline:

10,222

Requirement:

20%

| REST.BMP.ID# | REST.BMP.TYPE | BMP CLASS | NUM.BMP | IMP.ACRES | BUILT DATE | IMPL.COST.## | % ISRP Complete | IMPL STATUS | GEN.COMMENTS |
|----------------------------|---------------|-----------|---------|-----------|------------|--------------|-----------------|-------------|---|
| Operation Programs | | | | | | | | | |
| Source ID | | | 0 | 0 | 2014 | \$ 79,000 | 0.0% | Complete | |
| SW Management | | | 0 | 0 | 2014 | \$ 2,517,000 | 0.0% | Complete | |
| IDDE | | A | 0 | 0 | 2014 | \$ 95,000 | 0.0% | Complete | |
| Inlet Cleaning | | A | 0 | 0 | 2014 | \$ 10,000 | 0.0% | Complete | not performed at the frequency required to qualify for credit |
| Street Sweeping | | A | 0 | 0 | 2014 | \$ 400,000 | 0.0% | Complete | not performed at the frequency required to qualify for credit |
| Public Education | | | 0 | 0 | 2014 | \$ 668,000 | 0.0% | Complete | |
| Watershed Assessment | | | 0 | 0 | 2014 | \$ 494,000 | 0.0% | Complete | |
| TMDL Assessment | | | 0 | 0 | 2014 | \$ 185,000 | 0.0% | Complete | |
| Chemical Monitoring | | | 0 | 0 | 2014 | \$ 40,000 | 0.0% | Complete | |
| Biomonitoring | | | 0 | 0 | 2014 | \$ 108,000 | 0.0% | Complete | |
| Physical Stream Assessment | | | 0 | 0 | 2014 | \$ 27,000 | 0.0% | Complete | |
| Design Manual Monitoring | | | 0 | 0 | 2014 | \$ 47,000 | 0.0% | Complete | |
| Source ID | | | 0 | 0 | 2015 | \$ 89,000 | 0.0% | Complete | |
| SW Management | | | 0 | 0 | 2015 | \$ 2,665,000 | 0.0% | Complete | |
| IDDE | | A | 0 | 0 | 2015 | \$ 67,000 | 0.0% | Complete | |
| Inlet Cleaning | | A | 0 | 0 | 2015 | \$ 10,000 | 0.0% | Complete | not performed at the frequency required to qualify for credit |
| Street Sweeping | | A | 0 | 0 | 2015 | \$ 400,000 | 0.0% | Complete | not performed at the frequency required to qualify for credit |
| Public Education | | | 0 | 0 | 2015 | \$ 443,000 | 0.0% | Complete | |
| Watershed Assessment | | | 0 | 0 | 2015 | \$ 1,572,000 | 0.0% | Complete | |
| TMDL Assessment | | | 0 | 0 | 2015 | \$ 318,000 | 0.0% | Complete | |
| Chemical Monitoring | | | 0 | 0 | 2015 | \$ 44,000 | 0.0% | Complete | |
| Biomonitoring | | | 0 | 0 | 2015 | \$ 96,000 | 0.0% | Complete | |
| Physical Stream Assessment | | | 0 | 0 | 2015 | \$ 28,000 | 0.0% | Complete | |
| Design Manual Monitoring | | | 0 | 0 | 2015 | \$ 53,000 | 0.0% | Complete | |
| Complete To Date* | | | 0 | 0 | | \$10,455,000 | 0.0% | | |
| Capital Projects | | | | | | | | | |
| Under Ground Filter | FUND | S | 1 | 12.75 | 2016 | \$ 1,256,553 | 0.1% | Complete | D-1160 Wilde Lake High School Retrofit |
| HO220006 | MMBR | E | 1 | 0.66 | 2016 | \$ 3,590,814 | 0.0% | Complete | |
| Stream Restoration | STRE | A | 1 | 7.0 | 2016 | \$ 541,202 | 0.1% | Complete | D-1163 Trotter Road Stream Stabilization |
| HO320001 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320002 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320003 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320004 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320005 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320006 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320007 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320008 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320009 | XOTH | S | 1 | 0.00 | 1/1/2014 | \$5,202 | 0.000% | Complete | READY FY14 |
| HO320010 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320011 | XOTH | S | 1 | 0.00 | 1/1/2014 | \$5,202 | 0.000% | Complete | READY FY14 |
| HO320012 | XOTH | S | 1 | 0.00 | 1/1/2014 | \$5,202 | 0.000% | Complete | READY FY14 |
| HO320013 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320014 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320015 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320016 | XOTH | S | 1 | 0.00 | 1/1/2014 | \$5,202 | 0.000% | Complete | READY FY14 |
| HO320017 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |

| | | | | | | | | | |
|----------|------|---|---|------|------------|-----------|--------|----------|---|
| HO320018 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320019 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320020 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320021 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320022 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320023 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320024 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320025 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320026 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320027 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320028 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320029 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320030 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320031 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$5,202 | 0.001% | Complete | READY FY14 |
| HO320032 | XOTH | S | 1 | 0.00 | 1/1/2014 | \$5,202 | 0.000% | Complete | READY FY14 |
| HO320033 | XOTH | S | 1 | 0.00 | 1/1/2014 | \$5,202 | 0.000% | Complete | READY FY14 |
| HO230021 | STRE | A | 1 | 3.39 | 1/21/2014 | \$283,113 | 0.033% | Complete | D-1158 Tuscany Road Stream Restoration |
| HO220042 | IBAS | S | 1 | 2.58 | 1/30/2014 | \$321,887 | 0.025% | Complete | D-1160 Ashmede Road Pond Retrofit |
| HO230017 | STRE | A | 1 | 6.93 | 3/11/2014 | \$477,055 | 0.068% | Complete | D-1158 Whiterock Court Stream Restortion |
| HO230018 | STRE | A | 1 | 2.58 | 6/16/2014 | \$295,931 | 0.025% | Complete | D-1158/D-1159 Tiller Drive Stream Restoration Phase 2 |
| HO210004 | FBIO | S | 1 | 0.09 | 9/4/2014 | \$446,772 | 0.001% | Complete | D-1164 Savage Library Water Quality Enhancements |
| HO210010 | MENF | E | 1 | 0.18 | 9/4/2014 | \$446,772 | 0.002% | Complete | D-1164 Savage Library Water Quality Enhancements |
| HO210011 | APRP | E | 1 | 0.66 | 9/4/2014 | \$446,772 | 0.006% | Complete | D-1164 Savage Library Water Quality Enhancements |
| HO220037 | MSWB | E | 1 | 0.27 | 9/30/2014 | \$70,213 | 0.003% | Complete | D-1160 Stevens Forest Elementary School - Bioswale |
| HO220038 | MMBR | E | 1 | 0.23 | 9/30/2014 | \$70,213 | 0.002% | Complete | D-1160 Stevens Forest Elementary School - MB-1 |
| HO220039 | MMBR | E | 1 | 0.13 | 9/30/2014 | \$70,213 | 0.001% | Complete | D-1160 Stevens Forest Elementary School - MB-2A |
| HO220040 | MMBR | E | 1 | 0.09 | 9/30/2014 | \$70,213 | 0.001% | Complete | D-1160 Stevens Forest Elementary School - MB-2B |
| HO210016 | XDED | S | 1 | 0.00 | 11/18/2014 | \$367,499 | 0.000% | Complete | D-1159 Old Mill Road Pond Repair |
| HO240006 | FPU | A | 1 | 0.74 | 1/1/2015 | \$22,212 | 0.007% | Complete | D-1160 SBO Polly Quarter MS |
| HO240008 | FPU | A | 1 | 0.22 | 1/1/2015 | \$7,491 | 0.002% | Complete | D-1160 SBO Waterloo MS |
| HO240009 | FPU | A | 1 | 2.83 | 1/1/2015 | \$86,101 | 0.028% | Complete | D-1160 SBO Glenwood MS, Bushy Park ES |
| HO240010 | FPU | A | 1 | 0.70 | 1/1/2015 | \$25,081 | 0.007% | Complete | D-1160 SBO Dunloggin MS, Northfield ES |
| HO240011 | FPU | A | 1 | 1.21 | 1/1/2015 | \$35,941 | 0.012% | Complete | D-1160 SBO BOE |
| HO240012 | FPU | A | 1 | 0.85 | 1/1/2015 | \$25,563 | 0.008% | Complete | D-1160 SBO Harpers Choice MS |
| HO240013 | FPU | A | 1 | 0.85 | 1/1/2015 | \$27,434 | 0.008% | Complete | D-1160 SBO Lisbon ES |
| HO240014 | FPU | A | 1 | 0.46 | 1/1/2015 | \$16,928 | 0.005% | Complete | D-1160 SBO Patapsco MS |
| HO320034 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320035 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320036 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320037 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320038 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320039 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320040 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320041 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320042 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320043 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320044 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320045 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320046 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320047 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320048 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320049 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320050 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320051 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320052 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320053 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |

| | | | | | | | | | |
|-----------------------------------|------|---|-----|-------|------------|--------------|--------|----------|--|
| HO320054 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320055 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320056 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320057 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320058 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320059 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320060 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320061 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320062 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320063 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320064 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320065 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320066 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320067 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320068 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320069 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320070 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320071 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320072 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320073 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320074 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320075 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320076 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320077 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320078 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320079 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320080 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320081 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320082 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO320083 | MRNG | E | 1 | 0.15 | 1/1/2015 | \$5,202 | 0.001% | Complete | READY FY15 |
| HO210029 | SPSC | A | 1 | 3.06 | 4/20/2015 | \$302,285 | 0.030% | Complete | D-1159 Towering Oak Path Pond Repair |
| HO230006 | STRE | A | 1 | 10.54 | 5/1/2015 | \$520,762.84 | 0.103% | Complete | D-1158 Pinhurst Court Stream Restoration |
| HO220007 | WSHW | S | 1 | 1.57 | 6/1/2015 | \$520,762.84 | 0.015% | Complete | D-1158 Pinhurst Court Shallow Wetland Marsh |
| HO210030 | XDPD | S | 1 | 0.00 | 6/3/2015 | \$538,438 | 0.000% | Complete | D-1159 Glenshire Town Pond Repair |
| HO220001 | SPSC | A | 1 | 3.63 | 6/30/2015 | \$1,522,008 | 0.036% | Complete | D-1159/1160 Dorsey Hall Outfall and Stream Restoration |
| Subtotal Capital Complete To Date | | | 111 | 75.74 | | \$12,838,020 | 0.74% | | |
| Other | | | | | | | | | |
| Planting Trees | FPU | A | 1 | 1.38 | 2016 | \$ | - | 0.0% | Complete |
| Planting Trees | FPU | A | 1 | 0.75 | 2016 | \$ | - | 0.0% | Complete |
| Planting Trees | FPU | A | 1 | 0.40 | 2016 | \$ | - | 0.0% | Complete |
| Rain Garden | MRNG | E | 1 | 0.15 | 2016 | \$ | - | 0.0% | Complete |
| Rain Garden | MRNG | E | 1 | 0.15 | 2016 | \$ | - | 0.0% | Complete |
| Rain Garden | MRNG | E | 1 | 0.15 | 2016 | \$ | - | 0.0% | Complete |
| HO342652 | FPU | A | 1 | 0.40 | 9/11/2013 | \$0 | 0.004% | Complete | DRP Project |
| HO341381 | FPU | A | 1 | 0.39 | 10/7/2013 | \$0 | 0.004% | Complete | DRP Project |
| HO105109 | ODSW | S | 1 | 0.22 | 10/9/2013 | \$0 | 0.002% | Complete | Development |
| HO105712 | MIDW | E | 1 | 0.03 | 10/9/2013 | \$0 | 0.000% | Complete | Development |
| HO105713 | MIDW | E | 1 | 0.02 | 10/9/2013 | \$0 | 0.000% | Complete | Development |
| HO105714 | MIDW | E | 1 | 0.01 | 10/9/2013 | \$0 | 0.000% | Complete | Development |
| HO106078 | MMBR | E | 1 | 0.15 | 10/12/2013 | \$0 | 0.001% | Complete | Development |
| HO342108 | FPU | A | 1 | 0.49 | 11/22/2013 | \$0 | 0.005% | Complete | DRP Project |
| HO101719 | PWED | S | 1 | 2.64 | 12/9/2013 | \$0 | 0.026% | Complete | Development |
| HO340179 | FPU | A | 1 | 0.88 | 12/17/2013 | \$0 | 0.009% | Complete | DRP Project |
| HO342010 | FPU | A | 1 | 1.64 | 12/17/2013 | \$0 | 0.016% | Complete | DRP Project |
| HO310001 | MRNG | E | 1 | 0.15 | 1/1/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |

| | | | | | | | | | |
|----------|------|---|---|------|------------|-----|--------|----------|------------------------------|
| HO105770 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO105771 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO105783 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO105791 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO105792 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO105793 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO105809 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO105914 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO105916 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO105917 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO105918 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO105919 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO105920 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO106128 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO106148 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO106160 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO106212 | MRWH | E | 1 | 0.11 | 1/11/2014 | \$0 | 0.001% | Complete | Development |
| HO310069 | MRNG | E | 1 | 0.15 | 4/9/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310060 | MRNG | E | 1 | 0.15 | 4/16/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO342665 | FPU | A | 1 | 3.75 | 4/30/2014 | \$0 | 0.037% | Complete | DRP Project |
| HO310076 | MRNG | E | 1 | 0.15 | 5/8/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310056 | MRNG | E | 1 | 0.15 | 5/21/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310070 | MRNG | E | 1 | 0.15 | 5/23/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO340784 | FPU | A | 1 | 0.49 | 6/25/2014 | \$0 | 0.005% | Complete | DRP Project |
| HO310062 | MRNG | E | 1 | 0.15 | 7/2/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310061 | MRNG | E | 1 | 0.15 | 7/3/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310090 | MRNG | E | 1 | 0.15 | 7/9/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310083 | MRNG | E | 1 | 0.15 | 8/12/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310072 | MRNG | E | 1 | 0.15 | 10/2/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310086 | MRNG | E | 1 | 0.15 | 10/10/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310071 | MRNG | E | 1 | 0.15 | 10/15/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310081 | MRNG | E | 1 | 0.15 | 10/15/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310085 | MRNG | E | 1 | 0.15 | 10/29/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310082 | MRNG | E | 1 | 0.15 | 10/31/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310058 | MRNG | E | 1 | 0.15 | 11/5/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310066 | MRNG | E | 1 | 0.15 | 11/14/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310091 | MRNG | E | 1 | 0.15 | 11/14/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310067 | MRNG | E | 1 | 0.15 | 11/25/2014 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO330009 | MSWG | E | 1 | 0.34 | 1/1/2015 | \$0 | 0.003% | Complete | CA Project |
| HO340956 | FPU | A | 1 | 0.38 | 1/20/2015 | \$0 | 0.004% | Complete | DRP Project |
| HO342424 | FPU | A | 1 | 0.85 | 1/20/2015 | \$0 | 0.008% | Complete | DRP Project |
| HO342735 | FPU | A | 1 | 0.42 | 1/20/2015 | \$0 | 0.004% | Complete | DRP Project |
| HO342787 | FPU | A | 1 | 2.29 | 1/20/2015 | \$0 | 0.022% | Complete | DRP Project |
| HO343044 | FPU | A | 1 | 1.50 | 1/20/2015 | \$0 | 0.015% | Complete | DRP Project |
| HO343075 | FPU | A | 1 | 0.38 | 1/20/2015 | \$0 | 0.004% | Complete | DRP Project |
| HO343077 | FPU | A | 1 | 2.97 | 1/20/2015 | \$0 | 0.029% | Complete | DRP Project |
| HO310065 | MRNG | E | 1 | 0.15 | 2/5/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO341408 | FPU | A | 1 | 0.69 | 4/13/2015 | \$0 | 0.007% | Complete | DRP Project |
| HO310087 | MRNG | E | 1 | 0.15 | 4/16/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310077 | MRNG | E | 1 | 0.15 | 4/22/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310080 | MRNG | E | 1 | 0.15 | 4/22/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310054 | MRNG | E | 1 | 0.15 | 4/23/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310073 | MRNG | E | 1 | 0.15 | 4/23/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310075 | MRNG | E | 1 | 0.15 | 4/28/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310079 | MRNG | E | 1 | 0.15 | 5/7/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310063 | MRNG | E | 1 | 0.15 | 5/13/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |

| | | | | | | | | | |
|---------------------------------|------|---|-----|-------|-----------|--------------|--------|----------|------------------------------|
| HO310089 | MRNG | E | 1 | 0.15 | 5/18/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310074 | MRNG | E | 1 | 0.15 | 6/10/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO341237 | FPU | A | 1 | 2.20 | 6/16/2015 | \$0 | 0.021% | Complete | DRP Project |
| HO310078 | MRNG | E | 1 | 0.15 | 6/18/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO310064 | MRNG | E | 1 | 0.15 | 6/23/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| HO343116 | FPU | A | 1 | 0.72 | 6/25/2015 | \$0 | 0.007% | Complete | DRP Project |
| HO343117 | FPU | A | 1 | 0.48 | 6/25/2015 | \$0 | 0.005% | Complete | DRP Project |
| HO343118 | FPU | A | 1 | 2.64 | 6/25/2015 | \$0 | 0.026% | Complete | DRP Project |
| HO343119 | FPU | A | 1 | 1.03 | 6/25/2015 | \$0 | 0.010% | Complete | DRP Project |
| HO310055 | MRNG | E | 1 | 0.15 | 6/25/2015 | \$0 | 0.001% | Complete | Volunteer - Smart Tool Sites |
| Rain Barrels | MRWH | E | 171 | 0.26 | 6/30/2015 | \$0 | 0.003% | Complete | Rain Barrels |
| Septic Upgrades | SEPD | A | 128 | 33.28 | 6/30/2015 | \$0 | 0.326% | Complete | Septic Upgrades |
| Subtotal Other Complete To Date | | | 439 | 81 | | \$0 | 0.8% | | |
| Total Complete to Date | | | 550 | 156.8 | | \$23,293,020 | 1.5% | | |

Check with MDE Geodatabase:

Rest BMP ID, type, class, number of BMPs, impervious acres, built date, implementation cost and implementation

Notes:

For street sweeping indicate the annual frequency that the streets are swept and for inlet cleaning indicate the number of inlets cleaned-out.

*IMPL COST is a summation and not an average.

General REST BMP IDs are included where the REST BMP ID per the MDE Geodatabase has yet to be assigned

Costs of \$0 are for restoration projects implemented in Howard County by other non-government groups

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