



# Maryland

Department of  
the Environment

Larry Hogan  
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Lieutenant Governor

Ben Crumbles  
Secretary

OCT 17 2016

Mr. Christopher J. Phipps, P.E.  
Director, Department of Public Works  
Anne Arundel County  
2662 Riva Road  
Annapolis, MD 21401

Dear Mr. Phipps:

This letter acknowledges the Maryland Department of the Environment's (MDE) receipt of Anne Arundel County's 2016 Financial Assurance Plan (FAP) and 2016 Watershed Protection and Restoration Program (WPRP) Annual Report as required by the Annotated Code of Maryland. MDE received an e-mail from the County that included both reports as well as additional information on June 28, 2016.

Chapter 124 of the Acts of the General Assembly of 2015 requires MDE to make a determination regarding the sufficiency of funding in each FAP filed with the Department. For any FAP filed on or before July 1, 2016, funding in the FAP is sufficient if the FAP demonstrates that the County or municipality has dedicated revenues, funds, or sources of funds to meet, for the 2-year period immediately following the filing date of the FAP, 75% of the projected costs of compliance with the impervious surface restoration plan requirements (ISRP) of the County or municipality under its National Pollutant Discharge Elimination System (NPDES) Phase I Municipal Separate Storm Sewer System (MS4) permit over that 2-year period. After reviewing Anne Arundel County's 2016 FAP MDE has determined that the County has demonstrated that it has sufficient funding in its FAP.

Below are more details regarding MDE's findings:

- The County erroneously included an unapproved BMP, "Base", in the "All Actions" worksheet to achieve 1,200 acres of treatment, or 20% of the ISRP requirement. MDE has adjusted the County's FAP where appropriate to only include BMPs directly related to the implementation of the ISRP requirement during this permit term.
- The County proposes 2,044 acres of treatment, or 35% of its ISRP requirement, by improving the performance of its publicly owned treatment works (POTWs) in an amount equivalent to the impervious area pollutant reductions. As a matter of policy, MDE supports this option as a cost-effective means for achieving pollutant reductions and is committed to addressing how regulatory process requirements, including permit language and public participation, can be satisfied under this scenario. Until formal processes are in place, the County should continue to explore all currently approved BMPs for meeting the ISRP requirements.



- The County indicated using opportunities to restore impervious acres at little or no additional cost to the County, including septic pumping, shoreline stabilization, and septic connections to POTWs. These costs are covered by the Bay Restoration Fund (BRF) or are a homeowner's responsibility. The County should encourage more low-cost homeowner BMPs including rain barrels, rain gardens, and tree planting. These affordable BMP options provide great opportunities for citizen outreach and ISRP implementation.

MDE has provided additional review comments in an attachment for the County's information and use. Please provide a response to MDE's comments in subsequent FAPs and WPRP Annual Reports. MDE requests that WPRP Annual Reports be submitted in coordination with the NPDES MS4 Annual Reports, beginning on February 12, 2018. The County's next FAP will be due in coordination with its February 12, 2019 Annual Report.

MDE recognizes the substantial effort required to create the FAP and WPRP Annual Report. Anne Arundel County is commended for its effort in developing and implementing this very important environmental program for improving local water resources and restoring the Chesapeake Bay. If you have any questions regarding this review, please contact me at 410-537-3543 or Brian Clevenger at 410-537-3554, or [brian.clevenger@maryland.gov](mailto:brian.clevenger@maryland.gov).

Sincerely,



Lynn Buhl, Director  
Water Management Administration

cc: Brian Clevenger, Program Manager, Sediment, Stormwater, and Dam Safety Program

Attachment



**Maryland Department of the Environment  
Anne Arundel County's 2016 Financial Assurance Plan  
September 2016**

FAP Condition	MDE Assessment and Recommendations
<p>Demonstration of Public Participation and Sufficient Funding</p>	<ul style="list-style-type: none"> <li>• Anne Arundel County submitted its Financial Assurance Plan (FAP) electronically on June 28, 2016, officially dated July 1, 2016. The County forwarded the final FAP (County Resolution No. 40-16) that was certified (signed) by the County Executive on July 11, 2016. The County's signed resolution indicated that a public hearing was held.</li> <li>• The FAP demonstrates sufficient funding (\$121,129,951) for 105% of the projected Impervious Surface Restoration Plan (ISRP) costs for the FY2017-FY2018 period (\$114,986,205), exceeding the requirement for funding of 75% of the ISRP.</li> </ul>
<p>ISRP Baseline</p>	<ul style="list-style-type: none"> <li>• Anne Arundel County's impervious area analysis indicated that there are 29,311 impervious acres in the City with little or no stormwater runoff treatment. The County's current permit requires that 20% of that area, or 5,862 impervious acres, be restored during the course of its five-year permit term (i.e., 29,311 * 20% treatment requirement = 5,862 acres). The 5,862 impervious acre treatment requirement is also known as the ISRP baseline. MDE approved the County's impervious area analysis in July 2015.</li> </ul>
<p>Actions to Meet Permit Requirements  ("All Actions" worksheet)</p>	<ul style="list-style-type: none"> <li>• The County provided a narrative summarizing the implementation of its Municipal Separate Storm Sewer System (MS4) permit program, including impervious area information and capital budget projections.</li> <li>• The restoration acres in the narrative are consistent with the values found in the associated Excel worksheets. However, the County incorrectly duplicated values for the total restored impervious acres from the "Spec Actions" worksheet in the "All Actions" worksheet. Moving forward the County should provide completed and projected actions in separate worksheets.</li> <li>• The County erroneously included an unapproved best management practice (BMP), "Base", in the "All Actions" worksheet to achieve 1,200 acres of treatment, or 20% of the ISRP requirement. MDE has adjusted the County's FAP where appropriate to only include BMPs directly related to the implementation of the ISRP requirement during this permit term.</li> <li>• Excluding the above discrepancies, the County provided specific BMP types in the "All Actions" worksheet for meeting the MS4 permit's ISRP baseline.</li> <li>• Some BMPs are under design or construction, or have been completed. The County projects that it will attain 80% of the ISRP requirement (i.e., 4,682 vs. 5,862 impervious acres) by the end of the permit term (FY2018).</li> <li>• The County proposes 2,044 acres of treatment, or 35% of its ISRP requirement, by improving the performance of publicly owned treatment works (POTWs) in an amount equivalent to the impervious area pollutant reductions. The County stated that the re-allocation of pollutant loads would be temporary to allow completion of restoration projects beyond the permit term. The County has projected to meet the full ISRP requirement without the aid of POTW nutrient reductions by the end of FY2020. In order to</li> </ul>

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<b>FAP Condition</b>	<b>MDE Assessment and Recommendations</b>
<p>Actions to Meet Permit Requirements</p> <p>("All Actions" worksheet)</p>	<p>make a determination on the acceptability of this strategy, the County should provide more detailed information, including the name(s) of the involved POTW(s) and a calculation of the pollutant load available for re-allocation.</p> <ul style="list-style-type: none"> <li>• MDE is considering how the overachievement in nutrient reduction in the wastewater sector can be utilized by MS4 permittees in characterizing progress toward meeting total maximum daily load (TMDL) goals. As a matter of policy, MDE supports this option as a cost-effective means for achieving pollutant reductions and is committed to addressing how regulatory process requirements, including permit language and public participation, can be satisfied under this scenario. Until formal processes are in place, MS4s should explore all currently approved BMP options for meeting the ISRP requirements.</li> <li>• The County also included average credits of 550 acres for street sweeping (VSS) and 100 acres for septic pumping (SEPP). In FY2015, the County reported actual credits of 246 acres and 23 acres for VSS and SEPP, respectively. If the County's projections for these fluctuating annual BMP practices fall short, additional BMPs will need to be implemented.</li> <li>• The County should encourage more low-cost homeowner BMPs including rain barrels, rain gardens, and tree planting. These affordable BMP options provide great opportunities for citizen outreach and ISRP implementation.</li> </ul>
<p>Annual and Projected Costs</p> <p>("All Actions" and "ISRP Costs" worksheet)</p>	<ul style="list-style-type: none"> <li>• In the FAP narrative, the County estimated that the required restoration will cost \$94 million through FY2018 and \$239 million through FY2020.</li> <li>• The restoration cost per acre for completed projects is \$10,159. Restoration cost per acre for the next two years (i.e., FY2017-FY2018) is \$18,403 per acre. The cost for restoration completed and projected through FY2020 is \$50,064 per acre. The County should re-examine cost projections and determine why they are increasing so dramatically per acre of treatment.</li> <li>• In the "All Actions" worksheet, there is no cost assigned to POTW credits because the County is not allocating additional stormwater funds to pay for these pollutant reductions.</li> <li>• The County indicated using opportunities to restore impervious acres at little or no additional cost to the County, including septic pumping and septic connections to POTWs. These costs are covered by the Bay Restoration Fund (BRF) or are a homeowner's responsibility. There are also three shoreline stabilization projects (SHST) that are volunteer activities and have no associated cost. The County should provide outreach and promote these volunteer efforts and BMPs for additional restoration credit and cost savings.</li> <li>• Based on past progress, the County will need to increase the pace of implementation to fulfill the 20% restoration requirement. <ul style="list-style-type: none"> <li>○ The County plans to implement step pool storm conveyance systems (SPSC) for 960 acres of credit over the next five years. In previous fiscal years, the County reported 24 acres of credit through the use of SPSC. For FY2016-FY2018, the County has SPSCs either under</li> </ul> </li> </ul>

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FAP Condition	MDE Assessment and Recommendations
<p>Annual and Projected Costs</p> <p>("All Actions" and "ISRP Costs" worksheet)</p>	<p>construction or in planning for an additional 245 acres of credit.</p> <ul style="list-style-type: none"> <li>○ The County should consider the practicality of relying heavily on step pool conveyance systems and stream restoration projects within a short time period. These projects require pre-restoration monitoring for proper design. In addition, monitoring is required to estimate an erosion rate to calculate nutrient and sediment removal credits in accordance with the stream restoration expert panel protocols. Additional factors that may impact the construction process include weather and mandatory stream closure periods for fish spawning and migration. These variables indicate that any project with an anticipated credit for FY2017 should already be in the construction phase.</li> <li>● The County also reported that stormwater facility retrofits were completed for 61 acres of restoration. The County plans to restore an additional 637 acres over the permit term, a more than 10-fold increase over current implementation rates.</li> </ul>
<p>Annual and Projected Revenues</p> <p>("ISRP Revenue" worksheet)</p>	<ul style="list-style-type: none"> <li>● Revenues for the ISRP have been reported for FY2015-FY2020 as required by Annotated Code of Maryland, Environment Article § 4-202.1(j)(1)(i)3.</li> <li>● Entries and formulas have been entered correctly. The County reported revenues for each category as required.</li> <li>● The annual revenue appropriated for the ISRP exceeds the annual costs toward the ISRP by \$6,143,746, ensuring that there is adequate funding.</li> </ul>
<p>Funding Sources</p> <p>("Fund Sources" worksheet)</p>	<ul style="list-style-type: none"> <li>● The required fields in the sources of funds worksheet are complete. The County will, however, need to indicate the percentage of funds directed toward the ISRP as directed in the FAP Guidance.</li> <li>● Cell formulas have been entered and calculated correctly.</li> <li>● Sources of funds for the next two years include: <ul style="list-style-type: none"> <li>○ Bonds = \$75M</li> <li>○ Stormwater Remediation Fee = \$42M</li> <li>○ General Fund/other = \$3.5M</li> <li>○ State Funded Grants = \$0.3M</li> <li>○ Total Funding Sources = \$121M</li> </ul> </li> <li>● The County has reported that the sum of the funding sources for the current and projected fiscal years exceed the costs for ISRP implementation.</li> </ul>
<p>Specific Actions and Expenditures from Previous Fiscal Years</p> <p>("Spec Actions" worksheet)</p>	<ul style="list-style-type: none"> <li>● The "Spec Actions" worksheet reflects completed restoration activities. The reported BMPs are site specific as required by the FAP law.</li> <li>● The formulae in the worksheet are correct.</li> <li>● The County used BMP codes that were approved in MDE's MS4 geodatabase.</li> <li>● According to the worksheet, there is no associated cost to the County for septic disconnection and shoreline stabilization. Moving forward, where there is no associated cost, the County should provide additional clarification on why this is the case (e.g., was it a volunteer project, etc.).</li> </ul>

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<b>FAP Condition</b>	<b>MDE Assessment and Recommendations</b>
Future WPRP and FAP Reporting	<ul style="list-style-type: none"><li>• Anne Arundel County's next Watershed Protection and Restoration Program (WPRP) Annual Report will be due in coordination with the County's February 12, 2018 MS4 Annual Report.</li><li>• The County's next FAP will be due in coordination with its February 12, 2019 Annual Report.</li></ul>