



Maryland

Department of
the Environment

Larry Hogan
Governor

Boyd Rutherford
Lieutenant Governor

Ben Grumbles
Secretary

OCT 17 2016

Mr. Rudolph S. Chow, P.E.
Director
Baltimore City Department of Public Works
600 Abel Wolman Municipal Building
Baltimore, MD 21202

Dear Mr. Chow:

This letter acknowledges the Maryland Department of the Environment's (MDE) receipt of Baltimore City'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 City that included both reports as well as additional information on July 1, 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 (ISRP) requirements 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 Baltimore City's 2016 FAP MDE has determined that the City has demonstrated that it has sufficient funding in its FAP.

Below are more details regarding MDE's findings:

- In FY2018, the City projected that it will attain 3,175 impervious acres of credit from street sweeping, or 74% of its ISRP requirement. The City is also relying heavily upon stream restoration projects to meet its stormwater restoration goals.
- The implementation of annual best management practices (BMPs) (e.g., street sweeping, storm drain vacuuming) can fluctuate significantly from year to year, and stream restoration projects can take several years to go from planning to implementation. If the implementation of any of these projected BMPs falls short, additional BMPs will need to be implemented.
- In FY2019, the City projected numerous opportunities to restore impervious areas at little or no additional cost to the City, including redevelopment (150 acres) and volunteer activities (129 acres). These affordable BMP options should be maximized.

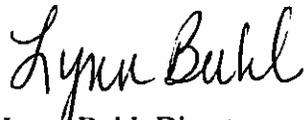
Mr. Rudolph S. Chow, P.E.

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MDE has provided additional review comments in an attachment for the City'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 December 27, 2017. The City's next FAP will be due in coordination with its December 27, 2018 Annual Report.

MDE recognizes the substantial effort required to create the FAP and WPRP Annual Report. Baltimore City 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.

Sincerely,



Lynn Buhl, Director
Water Management Administration

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

Attachment

**Maryland Department of the Environment
Baltimore City'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"> • Annotated Code of Maryland ENV §4-202.1(j) requires Phase I Municipal Separate Storm Sewer System (MS4) jurisdictions to submit Financial Assurance Plans (FAPs) to Maryland Department of the Environment (MDE) by July 1, 2106. Baltimore City submitted its FAP, officially dated June 28, 2016, electronically on July 1, 2016. • A public hearing on the City's FAP was held June 8, 2016. • The FAP demonstrates sufficient funding (\$79,444,314) for 81% of the projected Impervious Surface Restoration Plan (ISRP) costs for the FY2017-FY2018 period (\$97,655,049), exceeding the requirement for funding of 75% of the ISRP. The City's next FAP submittal must show 100% funding of the ISRP permit requirement.
<p>ISRP Baseline</p>	<ul style="list-style-type: none"> • Baltimore City's impervious area analysis indicated that there are 21,455 impervious acres in the City with little or no stormwater management. The City's current permit requires that 20% of that area, or 4,291 impervious acres, be restored during the course of its five-year permit term (i.e., 21,455 * 20% treatment requirement = 4,291 acres). The 4,291 impervious acre treatment requirement is also known as the ISRP baseline. MDE approved the City's impervious area analysis in July 2015.
<p>Actions to Meet Permit Requirements ("All Actions" worksheet)</p>	<ul style="list-style-type: none"> • The City provided a narrative that summarizes the activities and major achievements for requirements found in the City's MS4 permit. • The City's narrative did not include restoration estimates. • The City provided specific best management practice (BMP) types in the "All Actions" worksheet for meeting the ISRP baseline. • Capital projects reported in the "All Actions" worksheet were not sorted by projected implementation year (e.g., 2018), resulting in subtotals that did not reflect the actual values reported in the City's FAP. Moving forward, MDE has used revised values in this evaluation. • The City projects that it will attain 106% of the ISRP by the end of the permit term (FY2018). • In FY2015, the City reported actual credits of 3,175 acres for street sweeping (VSS) for restoration. If the City's projections for this fluctuating annual BMP practice fall short, additional BMPs will need to be implemented. • The City incorrectly transferred values for total acres restored by street sweeping from the "Spec Actions" worksheet to the "All Actions" worksheet. • All data discrepancies shall be clarified or corrected in future FAP submittals.

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FAP Condition	MDE Assessment and Recommendations
<p>Annual and Projected Costs</p> <p>("All Actions" and "ISRP Costs" worksheet)</p>	<ul style="list-style-type: none"> • In the FAP, the City estimated that the required restoration will cost \$28,916,682 through FY2018 and \$132,781,812 through FY2020. • The restoration cost per acre for completed projects is \$4,454. Restoration cost per acre for the next two years (i.e., FY2017-FY2018) is \$7,694 per acre. The cost for restoration completed and projected through FY2020 is \$28,243 per acre. • The City indicated using opportunities to restore acres at no cost to the City, including redevelopment and volunteer activities. These affordable BMP options should be maximized. • In the "All Actions" worksheet, the City did not include costs for the two capital projects that are shown as under construction. When possible, the City should provide the projected costs for all restoration activities. • All BMPs submitted in the City's FAP are approved in MDE's MS4 geodatabase. • Based on past progress, the City will need to increase the pace of implementation to fulfill the 20% restoration requirement. <ul style="list-style-type: none"> ○ The City plans to implement multiple capital project BMPs for 1,145 acres of credit in FY2018 and FY2019. This includes one stream restoration project for 771 acres of credit in FY2019. In previous fiscal years, the City reported a stream restoration project for 31 acres of credit. For FY2017, the City lists three BMPs under construction or in planning for an additional 94 acres of credit, including one stream restoration project for 80 acres of credit. ○ The City should consider the practicality of relying heavily on stream restorations 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. • The City will need to provide additional information in its next FAP submittal on the scheduling of these projects and specifically how they will be completed before the end of its permit term. Additionally, all discrepancies noted above shall be more fully explained or corrected.

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FAP Condition	MDE Assessment and Recommendations
Annual and Projected Revenues ("ISRP Revenue" worksheet)	<ul style="list-style-type: none"> • 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. • Values and formulae have been entered correctly. The City reported revenues for each category as required. • For FY2017-2018, the annual revenue appropriated for the ISRP exceeds the annual costs toward the ISRP by \$18,210,735, ensuring that there is adequate funding.
Funding Sources ("Fund Sources" worksheet)	<ul style="list-style-type: none"> • The required fields in the "Fund Sources" worksheet are complete. • Cell formulas have been entered and calculated correctly. • Sources of funds for the next two years include: <ul style="list-style-type: none"> ○ Stormwater Remediation Fee = \$52M ○ Bonds/State Revolving Loan Fund = \$32M ○ General Fund = \$5M ○ Grants = \$3.5M ○ Total Funding Sources = \$93M • The City has reported that the sum of the funding sources for the current and projected fiscal years exceed the costs for ISRP implementation.
Specific Actions and Expenditures from Previous Fiscal Years ("Spec Actions" worksheet)	<ul style="list-style-type: none"> • The "Spec Actions" worksheet reflects completed restoration activities. The reported BMPs are site specific as required by the law. • The formulae in the worksheet are correct. • The City used BMP codes that were approved in MDE's MS4 geodatabase. • On the "Spec Actions" worksheet, the City only reported street sweeping, which is an annual BMP, and a stream restoration project (estimated 0.72% restoration credit).
Future WPRP and FAP Reporting	<ul style="list-style-type: none"> • Baltimore City's next Watershed Protection and Restoration Program (WPRP) Annual Report will be due in coordination with the County's December 27, 2017 MS4 Annual Report. • The City's next FAP will be due in coordination with its December 27, 2018 Annual Report.

