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Annapolis, MD 21401

**Christopher J. Phipps, P.E.**  
**Director**

February 8, 2022

Mr. Stewart Comstock, P.E.  
Program Review Division Chief  
Stormwater, Dam Safety, and Flood Management Program  
Water and Science Administration  
Maryland Dept. of the Environment  
1800 Washington Blvd.  
Baltimore, MD 21230

Subject: Anne Arundel County NPDES MS4 Permit # MD0068306 (11-DP-3316)  
Fiscal Year 2021 (FY21) Annual Report

Dear Mr. Comstock:

With this correspondence we are submitting Anne Arundel County's Fiscal Year 2021 NPDES MS4 Annual Report (Report). This report provides compliance information pertinent to the subject NPDES MS4 Permit (Permit) and covers the time period of July 1, 2020 through June 30, 2021. The County continues to maintain legal authority for compliance with the Permit terms. The County's Department of Public Works, Bureau of Watershed Protection and Restoration continues to coordinate Permit administration in collaboration with sister County agencies.

Pursuant to your Department's request, all compliance report information and data are provided as an electronic submission; no hard copy documents are provided. In addition to the narrative Report, data and supporting information are submitted in the required MS4 Geodatabase format (Appendix A to the Report). We call your attention to the ReadMe document included in this submittal for additional interpretation and explanation relative to completion of the MS4 Geodatabase fields. Appendix A to the Report also includes stand-alone geodatabases specific to the County stormwater infrastructure and to identification of commercial and industrial outfalls, as well as a stand-alone database of revised *Chemical Monitoring* data from FY2013 through FY2020. Specific compliance narrative reports and other supporting data (e.g., Illicit Discharge Detection and Elimination – FY2021 Annual Report) are similarly provided in electronic format as Report appendices and are included in the *NarrativeFiles* table of the Geodatabase.

Demonstration of sufficient funding to comply with Permit conditions is documented in the required FY21 BWPR Annual Financial Report that is found in the *NarrativeFiles* table of the Geodatabase and in Appendix I of the Report. Additional financial information is reported in the *FiscalAnalyses* table of the Geodatabase.

As documented in the FY2020 MS4 Annual Report, we previously achieved the administratively-continued Permit's 20% equivalent impervious acre (EIA) restoration goal (4,996 acres). During FY21, we continued project implementation equivalent to 668.1 EIA restoration. The cumulative total EIA restored, including annual practices implemented in FY21, is 5,712.1. The County anticipates all EIA restoration credit that exceeds the administratively-continued permit goal of 4,996 acres will be applied to the newly issued NPDES MS4 Permit goal of 2,998 acres.

We continue to collect BMP data from newly completed grading permits, entering the data from as-built plans into a database structure and geospatial framework that is designed to manage the County's inventory. These data are reviewed in context with restoration BMPs to ensure any required adjustments to drainage areas and BMP POIs are addressed when more than one BMP provides stormwater management for a given area. The County continues to grapple with the challenge of data formatting for loading into the MS4 Geodatabase framework. For older BMPs, the mandatory data fields may never be populated because either the data are missing from the plan drawings or the BMP design pre-dated the type of information now required. We understand that certain mandatory data are necessary for crediting purposes. Moreover, we are required to account for all Urban BMPs and perform triennial inspections regardless of their contribution to TMDL Stormwater Wasteload Allocation (SW-WLA) achievement or managed EIA crediting. To account for any geodatabase data formatting issues, we continue our practice of incorporating error codes into the MS4 Geodatabase and, again, refer you to the ReadMe document (Associated with Appendix A to the Report) for explanations of null and/or blank values as well as error codes. Representative examples include the "99999" error code that represents a missing descriptive value, while dates coded as "1/1/1899" are used for missing or inapplicable values (e.g., the mandatory built date field for projects that are proposed or under construction).

Stormwater management construction inspection and preventative maintenance inspections continued in FY21. We are pleased to report that 5,313 triennial maintenance inspections were conducted and are included in the *BMPInspections* table of the MS4 Geodatabase. These are in addition to the reported inspections for alternative BMPs and restoration BMPs.

The County's Erosion and Sediment Control Program underwent an inspection and review in FY21 for purposes of continued delegation of enforcement authority. Said delegation of authority was granted through June 2023.

During the reporting period, the County's IDDE program successfully inspected 210 major and minor storm drain outfalls, and visually screened approximately 50 industrial sites and commercial areas as well as 31 County-owned and improved properties for the potential to discharge pollutants during storm events. Complete documentation of the IDDE activities and follow-up enforcement actions are found in Appendix E of the Report and in the *IDDE* table of the MS4 Geodatabase.

We also call your attention to the draft IDDE Outfall Screening Prioritization Process (FY22-FY26) that is found in Appendix I and the *NarrativeFiles* of the Geodatabase. This document is included for your review and comment or concurrence. We look forward to receiving your review

comments and/or concurrence such that we can make this a final SOP document ahead of the FY22 reporting cycle.

Information on the application of de-icing materials in FY21, and on our Salt Management Plan, are found in Part IV.D.5.b of the Report and in the *ChemicalApplication* table of the MS4 Geodatabase. The winter of 2020-2021 saw the return of snow accumulations greater than 8 inches, the third most snow recorded in the past five reporting periods, and coincided with the application of 7,800 total tons of salt (road salt and liquid salt brine) to County roadways. While this was an increase in quantity of salt used, the application of the County's Salt Management Plan and Sensible Salting Practices continue to result in efficient use of de-icing materials to ensure County roadway safety.

Although in-person gatherings were limited, if not completely cancelled in FY21, we continued to maintain a robust and comprehensive public education and outreach program through online and social media platforms. The County public education programs focus on multiple aspects of stormwater pollution reduction and prevention. Additionally, we continue to maintain the Environmental Hotline for 24/7 reporting of environmental complaints. The Hotline, staffed by the Department of Inspections & Permits, is but one of three primary means of reporting environmental concerns to the County; the other two include the mobile app SeeClickFix and dialing 311 to reach a County constituent services representative. Public education accomplishments are found in Part IV.D.6 of the Report.

Work toward achieving the SW-WLA associated with both the Chesapeake Bay TMDL and the individual TMDLs applicable to County lands and waterways continues. In addition to documentation of restoration project effect on SW-WLA achievement, the County continued monitoring programs related to both Bacteria and PCB TMDLs. Our annual TMDL implementation progress is briefly summarized in the Report (Part IV.E.2.b and E.5), documented in the *CountywideStormwaterWatershedAssessment* and *LocalStormwaterWatershedAssessment* tables of the MS4 Geodatabase, and is more fully described in the Countywide TMDL Stormwater Implementation Plan (Countywide Plan) found in Appendix H of the Report.

During FY21, the County initiated development of the Countywide Plan as required in the newly issued NPDES MS4 Permit. The information provided in the Countywide Plan includes annual implementation progress evaluation as well as submission of the draft West River Non-Tidal Sediment TMDL Restoration Plan that now includes TIPP sediment modeling for MDE review and approval. We also note that the Patuxent River PCB Restoration Plan (draft) was previously submitted to MDE for review (FY20) and subsequent comment/responses occurred during FY21. The County continues working with MDE to finalize this plan and, per MDE guidance, will await publication of the MDE PCB Monitoring Guidance document prior to completing and submitting this restoration plan for MDE approval. In the interim, we anticipate receiving your review comments on the Countywide Plan such that any corrections and additions can be made prior to the FY22 reporting cycle.

During the reporting period, we also continued the required Assessment of Controls monitoring program until exercising our option to join the Pooled Monitoring Program (PMP) coordinated through the Chesapeake Bay Trust. The County's participation in the PMP became effective January 1, 2021. The PMP Memoranda of Understanding between the County and the Trust, and

associated supporting documentation, were previously provided to MDE. Copies are found in Appendix B of this Report.

A summary of the FY21 monitoring activities and results is included in the Report (Part IV.F). Chemical water quality monitoring in the Church Creek subwatershed continued from July 1, 2020 through March 18, 2021, providing an overlap between joining the PMP and cessation of storm and baseflow event monitoring. Physical stream stability data were collected in the Church Creek and Picture Spring Branch subwatersheds in October 2020. Spring benthic macroinvertebrate sampling and habitat metrics were not collected in FY21 because the County opted into the PMP prior to the spring index period. Water quality monitoring results are found in the MS4 Geodatabase *ChemicalMonitoring* table, while the monitoring site locations and drainage area data are found in their respective geodatabase feature classes. Physical stability data are found in the full annual monitoring reports located in Appendices C and D of the Report.

During FY21, the rating curve for the 96" culvert at the Church Creek monitoring station was revised to more accurately reflect the water budget for this subwatershed. The revised rating curve was developed from directly measured discharges within the pipe at various times and stages during the Permit term. The revised rating curve was subsequently applied to the continuous stage data collected from FY13 until the conclusion of water quality monitoring in March 2021, a time period associated with the administratively continued Permit term. Pollutant loading and EMC data previously reported from FY13 through FY20 were recalculated using the revised rating. A stand-alone database with corrected loads and EMC data for FY13 through FY20 is found in Appendix A (AACountyChemicalMonitoring\_CorrectedData\_FY13thruFY20.mdb).

The full annual monitoring reports for both the Church Creek/Parole Plaza Watershed Restoration Assessment and the Picture Spring Branch Stormwater Management Assessment are found in Appendices C and D, respectively, of the Report.

We thank you for your consideration of this FY2021 NPDES MS4 Annual Report. Should you have any questions regarding the submittal content please contact Janis Markusic at 410.222.0551 or via email at [pwmark02@aacounty.org](mailto:pwmark02@aacounty.org).

Sincerely,



Erik Michelsen,  
Deputy Director  
Bureau of Watershed Protection and Restoration

Mr. Stewart Comstock  
February 8, 2022  
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EM:JM

cc: Christopher J. Phipps, Director, DPW  
Ginger Ellis, Planning Administrator, BWPR  
Brenda Morgan, Engineer Administrator, BWPR  
Janis Markusic, Program Manager, BWPR  
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