



Maryland

Department of the Environment

Wes Moore, Governor
Aruna Miller, Lt. Governor

Serena McIlwain, Secretary
Suzanne E. Dorsey, Deputy Secretary

June 20, 2024

Karen Henry, Director
Department of Public Works
Anne Arundel County
2662 Riva Road
Annapolis, MD 21403

Dear Ms. Henry:

The Maryland Department of the Environment, Water and Science Administration (the Department) has reviewed Anne Arundel County's fiscal year (FY) 2023 Annual Report submitted on December 22, 2023, for its National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) permit (20-DP-3316, MD0068306). Results of the review are provided in the Attachment. The Department would like to bring the following items to the County's attention:

- Anne Arundel County has successfully restored a total of 1,796 acres, or 59.9% of the 2,998 impervious acres required in the permit. The Department commends the County for surpassing the Years 2 and 3 benchmarks as outlined in the permit.
- Anne Arundel County issued four guidance documents, known as Blue Notes, on erosion and sediment control practices, project cost estimates, non-tidal floodplain delineation, and digital plan filing processes. Please be aware that The County must submit any local guidance that affects stormwater management requirements to the Department for approval.
- The Department is currently reviewing the County's TMDL Implementation Plan and Bacteria TMDL Restoration Plan at the time of this letter. Comments will be sent under forthcoming correspondence.

The Department congratulates you and your staff for the successful endeavors completed under the NPDES stormwater program. This effort is essential to meeting our mutual goal of restoring urban streams and the Chesapeake Bay, and the County is commended for its commitment to and accomplishments of this program. If you have any questions regarding this review, please contact me at 410-537-3550 or Stewart.Comstock@Maryland.gov.

Sincerely,

Stewart Comstock, P.E. Chief
Program Review Division
Stormwater, Dam Safety, and Flood Management Program

cc: Erik Michelsen, Anne Arundel County
Ginger Ellis, Anne Arundel
Janis Markusic, Anne Arundel County

Attachment

**Maryland Department of the Environment's (Department)
Review of Anne Arundel County's (County)
2023 National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Annual Report**

Annual Progress Reporting

- The Annual Report was received on December 22, 2023, and covers July 1, 2022, to June 30, 2023 (fiscal year or "FY" 2023).
- This is the second annual report under the Permit (MDE 20-DP-3316, MD0068306) issued on November 5, 2021.

Summary

Anne Arundel County's annual report documents several program accomplishments.

- With this report, the county has transitioned its BMP data to fully align with the September 2023 version of the MS4 Geodatabase.
- The County must submit any local guidance that affects stormwater management requirements to the Department for approval.
- The County continues supporting a robust and comprehensive environmental and stormwater outreach and education program through both online and social media platforms, as well as participation in restoration project-specific public meetings.
- Once again, the County boasts high levels of implementation for stormwater restoration alternative control practices, exceeding compliance with its permit goals for all its annual programmatic credits for FY2023.
- The County completed 1,796 acres of equivalent impervious restoration out of the 2,998 acres required by this Permit. This far exceeds the impervious acre restoration requirements for Year 2, nearly meeting the Year 3 restoration benchmark of 60%.
- The County documented tangible steps towards completing various plans due in the next (third) Annual Report, including the Salt Management Plan, Good Housekeeping Plan, and Financial Assurance Plan.

The Department commends Anne Arundel County for its efforts in implementing a successful stormwater management program.

PART IV. Standard Permit Conditions

A & B. Permit Administration and Legal Authority

- Anne Arundel County submitted an updated organizational chart outlining the various County departments and their individual permit responsibilities.
- Anne Arundel County maintained adequate legal authority for compliance with all permit conditions. There were no changes to the County Code that affected legal authority.

The County has met the requirements of PARTs IV.A & B.

Maryland Department of the Environment's (Department) Review of Anne Arundel County's 2023 Annual Report for the NPDES MS4 Phase I Permit

C. Source Identification

- The County provided information in 3 databases: 1) an updated MS4 Geodatabase, 2) a supplemental storm drain geodatabase, and 3) a geodatabase delineating industrial and commercial land uses and sites.
- Storm Drain System – the County submitted a supplemental geodatabase delineating the entire storm drain system that includes storm drain inlets and outfalls, culverts, and storm drain pipes. The County reported:
 - 40,257 storm drain inlets;
 - 6,702 storm drain outfalls (2,607 major outfalls);
 - 2,550 culverts; and
 - 1,039 miles of storm drain pipes
- Industrial and Commercial Sources – the County submitted a supplemental geodatabase delineating industrial and commercial land uses and sites that have the potential to contribute significant pollutants to stormwater. The County reported 1,437 commercial and industrial outfalls including:
 - 1,347 previously mapped outfalls; and
 - 90 new outfalls
- Urban Best Management Practices (BMPs) – This year the County transitioned its BMP data to fully align with MDE's 2021 MS4 Geodatabase schema. Data associated with the *BMPPOI* feature class, *BMP* table, and *RestBMP* feature class have been condensed into a single *BMP* feature class. The County reported:
 - 15,335 BMPs, with 264 solely representing restoration BMPs;
 - Of the 264 restoration BMPs, 26 are canceled or inactive, 211 are complete, 3 are under construction, and 24 are in the planning stage; and
 - 16,815 BMP drainage areas
- Impervious Surfaces – The County will revise and update its impervious surface dataset and multi-year analysis when the State's 2023 imagery capture becomes available in FY2024. For this reason, impervious surface information was not included with the geodatabase. In the interim, the County has reported:
 - 35,259 acres of privately or County-owned impervious surfaces; and
 - 24,625 acres of these are uncontrolled (e.g., no stormwater management)
- The County provided water quality improvement project data in the *BMP*, *AltBMPLine*, *AltBMPPoint*, and *AltBMPPoly* feature classes and the associated *BMPInspections* and *AltBMPInspections* tables.
- While the County reported information using the 2023 format, some of the new geodatabase fields were not completed. For example, the *PE_PRE_CONV* and *PRE_CONV_IMP_ACR_CREDIT* fields were blank for new conversion BMPs, and the Permit Info table was also incomplete.

The County has met the requirements of PARTs IV.C 1 – 6.

Maryland Department of the Environment's (Department) Review of Anne Arundel County's 2023 Annual Report for the NPDES MS4 Phase I Permit

D. Management Programs

1. Stormwater Management (SWM)

- Information on the County's SWM program was provided in the Annual Report and in the *SWM* and *BMP Inspections* tables.
- The County must submit to the Department any modification or changes to plan review policies, details, standard plans, ordinances, or design requirements for the Department's review and concurrence.
- The County approved 102 concept plans, 125 site development plans, and 16 final development plans. There were no exemptions or waiver requests approved. Additionally, there were 11 redevelopment plans approved. The County conducted 6,061 triennial or first-year maintenance inspections. Of these inspections, 121 were noted as failing. The County issued 757 correction notices and 16 violation notices. The number of triennial maintenance inspections that were conducted is less than that of FY2022, reflecting the time spent learning to use new inspection applications and training time required for two new DIP inspectors.
- The County issued four guidance documents, also known as "Blue Notes" on:
 - Updated practices on the design and review of erosion and sediment control plans, construction, inspection, and enforcement;
 - Updated unit pricing for project cost estimates, security amounts and inspection fees;
 - Non-Tidal Floodplain Delineation - Development Projects; and
 - Digital filing and signing processes

Please note that local variations of stormwater management requirements may not be valid unless approved by the Department. The County must submit any local guidance that affects stormwater management requirements to the Department for approval.

2. Erosion & Sediment Control

- The County submitted quarterly grading permit information in the *Quarterly Grading Permits* feature class found in the MS4 geodatabase.
- In FY2023, the County approved 81 quarterly grading permits. The permit sites comprised a total disturbed area of 444.1 acres.
- Anne Arundel County was delegated sediment control enforcement authority in April 2023, effective through June 2025.

3. Illicit Discharge Detection and Elimination (IDDE)

- The County prioritizes and schedules outfall screenings according to the IDDE Outfall Screening Prioritization Process approved in the previous (FY2022) Annual Report.
- The County maintains:
 - An ordinance that prohibits illicit discharges into the storm drain system; and
 - Written standard operating procedures (SOPs) for implementing the IDDE program meeting PART IV.D.3.d of the permit. For FY2023, the SOP was revised to address MDE comments regarding examples of potential upland pollutant sources. The County submitted the revised SOPs with the annual report (see Appendix C).

Maryland Department of the Environment's (Department) Review of Anne Arundel County's 2023 Annual Report for the NPDES MS4 Phase I Permit

- For FY2023, County field crews inspected 163 major and minor outfalls, conducted chemical tests of dry weather discharges, and found 3 illicit discharges. While conducting routine visual inspections of 355 commercial and industrial areas, the County identified 47 upland pollutant sources. The County also responded to 27 illicit discharge complaints. The County submitted documentation demonstrating appropriate corrective actions through verbal warnings, notices of violation, and civil citations.

4. Property Management and Maintenance

- A list of the 18 County-owned properties currently covered under the industrial stormwater permit was provided in the Annual Report.
- The County swept 6,658.3 lane miles (256 miles/2 weeks) in FY2023, which is consistent with efforts since FY2019. The street sweeping program collected 443.4 tons of material from County-maintained streets in FY2023. The County is proposing to maintain this effort (256 miles/2 weeks) for FY2024.
- The County continues to reduce the use of pesticides, herbicides, fertilizers, and other pollutants associated with vegetation management.
- The County applied 1,008 tons of road salt and 9,541 gallons of brine during the winter season where the accumulated snowfall was 0.2 inches. While the amount of deicing materials decreased in FY2023, the accumulated snowfall was also much less than preceding years. While the use of deicing and anti-icing materials is variable and reflects local weather conditions, the amount used in FY2023 is higher when considering the amount of snowfall.
- The County provided salt management training to 134 staff and 93 contractors. Additionally, 189 staff were trained in pollution prevention.
- The County removed 334.3 tons of material as part of ongoing inlet and catch basin cleaning efforts in FY2023 and maintained an average removal of 193.5 tons/year from FY2020 to FY2023. This continues to exceed the 174.5 tons/year needed to maintain restoration efforts and the County will continue this effort in FY2024. The County also removed 10,101 bags of litter and 1,081 tons of debris from County roads.
- The County is continuing to develop a Salt Management plan, which is due in the third-year annual report.
- On April 18, 2024, the Department approved a template Good Housekeeping Plan (GHP) developed by several of the MS4 permittees, including the County, and the Metropolitan Washington Council of Governments (MWCOCG). The County shall submit the template in its final form as well as example GHPs, in the third-year annual report.

5. Public Education

- The County continues to conduct public outreach efforts, including operating a compliance hotline, implementing educational websites and social media sites targeting a variety of stormwater-related topics, and conducting the Watershed Stewards Academy.
- The County also hosted several in-person and virtual outreach events. In FY2023, the Bureau of Watershed Protection and Restoration (BWPR) and the Bureau of Utility Operations (BUO) hosted 84 and 35 public outreach events, respectively.

The County has met the requirements of PART IV.D.1-5

E. Stormwater Restoration

- Anne Arundel County completed 31 restoration projects treating a total of 260.1 acres in FY2023, including:
 - Five upland structural practices totaling 87.2 acres;
 - Ten alternative practices (e.g., stream restoration, outfall stabilization) totaling 102.4 acres; and
 - Multiple septic system upgrades (denitrification) or connection to a wastewater treatment plant totaling 70.5 acres
- The County maintained the same level of street sweeping (256 miles/2 weeks) as FY2022. The amount of debris removed from inlets and catch basins was significantly more than in prior years, with 334.3 tons collected as compared to the permit-term (FY2020-FY2023) annual average of 193.5 tons. There was an increase in septic pumping with 593 equivalent acres compared to the permit-term annual average of 566 equivalent acres. These restoration credits reflect the continued maintenance of annual practices associated with the previous permit.
- Since the expiration of the last permit, the County has restored a total of 1,796 acres, or approximately 60% of the 2,998 impervious acres required in the permit.
- The benchmarks established in the permit for the County's restoration efforts were 40% (1,200 acres) completed for Year 2 and 60% (1,800 acres) completed by Year 3. The County's completed restoration (1,796 acres) has exceeded the Year 2 benchmark and nearly met the Year 3 benchmark.
- The Chesapeake Bay Program (CBP) expert panels recommend that an extensive project file be maintained for each stream restoration project. Specifically:
 - This should include as-built drawings, credit calculations, photos, post-construction monitoring, inspection records, maintenance agreement, and relevant data for all protocol calculations. This information is necessary for local jurisdictions to verify credit calculations and is noted in Appendix C of the Department's 2023 Draft Supplement to Geodatabase Design and User's Guide.
 - For the first year a new stream restoration project is reported in the MS4 Geodatabase, the Department requests the County include more specific information describing pre- and post-site conditions, project design, and all credit calculations.
- Anne Arundel County did not participate in any nutrient credit trading in FY2023.

The County has met the requirements of PART IV.E.

F. Countywide Total Maximum Daily Load (TMDL) Stormwater Implementation Plan

- There are no new draft TMDL implementation plans for review and approval, as the County was not issued any new TMDLs in FY2023.
- The County resubmitted the "Non-Tidal Baltimore Harbor Watershed Sediment TMDL Implementation Plan" for the Department's review. Comments on this plan will be sent under separate correspondence.

Maryland Department of the Environment's (Department) Review of Anne Arundel County's 2023 Annual Report for the NPDES MS4 Phase I Permit

- The County submitted an updated “Bacteria TMDL Restoration Plan” for this permit term for the Department’s review. Comments on this plan will be sent under separate correspondence.
- The County submitted the Countywide TMDL Implementation Plan (the Plan) with the FY2023 Annual Report (see Appendix E). The Plan includes the required elements listed in PART IV.F.3.
- The Department is still reviewing the plan and will forward comments when they are available.

The County has met the requirements of PART IV.F.

G. Assessment of Controls

- Beginning in FY2023, the County participates in the Chesapeake Bay Trust’s Pooled Monitoring Programs for BMP Effectiveness and Watershed Assessment Monitoring only for the Bacteria and Chloride Watershed Assessment Monitoring requirements. This is a change from FY2022, where the County was a full participant in all the programs.
- The County will now undertake the required Biological and Habitat Assessment Monitoring via the previously established Countywide Biological Monitoring Program.
- An updated version of the County’s Comprehensive Plan for Watershed Assessment Monitoring: Biological and Habitat Monitoring was submitted as Appendix F of the FY2023 Annual Report.
- The County has two watersheds (Baltimore Harbor and Curtis Creek/Bay, and the Patuxent River) with PCB TMDLs. The County provided details and updates on its Phase I and Phase II monitoring plans with the FY2023 Annual Report (see Appendix E).

The County has met the requirements of PART IV.G.

H. Program Funding

- The County provided detailed information on the expenditures and budget related to the implementation of the permit in the *FiscalAnalyses* table of the Geodatabase. The total annual cost for implementing the County’s NPDES MS4 program was \$38.7 million (M), and the operating and capital costs were \$26.2 M and \$23.3 M, respectively. These included \$24.2 M collected through the County’s Watershed Protection and Restoration Program (WPRP).
- The County provided a WPRP annual report for FY2023 as required (see Appendix G).

The County has met the requirements of PART IV.H.