



Maryland
Department of
the Environment

Wes Moore, Governor
Aruna Miller, Lt. Governor

Serena McIlwain, Secretary
Suzanne E. Dorsey, Deputy Secretary

July 5, 2023

Ms. Karen Henry, Director
Department of Public Works
Anne Arundel County Government
2662 Riva Road
Annapolis, MD 21401

Dear Ms. Henry:

The Maryland Department of the Environment (Department) has reviewed Anne Arundel County's Fiscal Year 2022 Annual Report. This report was submitted on December 22, 2022 for its National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) permit 20-DP-3316 (MD0068306). This review is provided as Attachment 1.

Anne Arundel County's annual report documents several program accomplishments, including the transitioning of data to the MS4 Geodatabase schema consistent with the November 21 Draft Supplement User's Guide. Anne Arundel County also submitted an acceptable process for prioritizing outfall screenings for the illicit discharge detection and elimination program. The County has also exceeded the 20% and 40% benchmarks in Table 1 by restoring 1,535 acres.

The Department recognizes the effort required to implement a successful stormwater management program. This effort is essential in our mutual goal of restoring urban streams and the Chesapeake Bay, and the County is commended for its commitment and accomplishments toward this objective. If you have any questions regarding this review, please contact me at 410-537-3550 or stewart.comstock@maryland.gov.

Sincerely,

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

Attachments

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

Attachment 1
Maryland Department of the Environment's (Department)
Review of Anne Arundel County's
2022 National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Annual Report

PART V. Annual Progress Reporting

- The Annual Report was received on December 22, 2022 and covers July 1, 2021 to June 30, 2022 (fiscal year or “FY” 2022).
- This is the first report under the permit issued on November 5, 2021.

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.

C. Source Identification

- The County provided information in three databases: 1) an updated MS4 Geodatabase, 2) a supplemental storm drain geodatabase, and 3) a geodatabase delineating industrial and commercial land uses and sites.
- The County is working to align BMP data to the new MS4 Geodatabase structure and expects full implementation of the 2021 MS4 Geodatabase schema by FY2023.
- 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:
 - 39,599 storm drain inlets
 - 6,522 storm drain outfalls (2,484 major outfalls)
 - 2,487 culverts
 - 1,024.1 miles of storm drain pipe
- Industrial and Commercial Sources – the County submitted a supplemental geodatabase delineating industrial and commercial land uses and sites. The County reported 1,354 commercial and industrial outfalls including:
 - 1,311 previously mapped outfalls; and
 - 43 new outfalls
- Urban Best Management Practices (BMPs) – the *BMP* table, the *BMPPOI*, and *BMPDrainageArea* feature classes include:
 - 26,490 BMPs, with 195 shown as being removed;

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- 15,271 BMP Points of Investigation (POIs); with 142 representing restoration BMPs (i.e., no record in the BMP table); and
- 14,891 BMP drainage areas
- The County provided water quality improvement project data in the *RestBMP*, *AltBMPLine*, *AltBMPPoint*, and *AltBMPPoly* feature classes and the associated *AltBMPInspections* and *RestBMPInspections* tables.

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

D. Management Programs

1. Stormwater Management (SWM)

- Information on the County's SWM program was provided in the Annual Report and the *SWM* and *BMPInspections* tables.
- The County approved 105 concept plans, 121 site development plans, and 81 final development plans. There were no exemptions or waiver requests approved. Additionally, no redevelopment plans were approved from July 1, 2021 to February 22, 2022. The County reported problems with data collection after that date; this will be corrected in the next (i.e., FY2023) Annual Report.
- The County conducted 6,618 triennial maintenance inspections and issued 286 correction notices and 12 violation notices. These are all increases from FY2021.

2. Erosion & Sediment Control

- The County submitted quarterly grading permit information in the *QuarterlyGradingPermits* feature class and *QuarterlyGradingPmtInfo* table found in the MS4 Geodatabase.
- In FY2022, the County reported on 1,060 active grading permits, including 405 grading permits issued in FY2022. The active sites comprised a total disturbed area of 881 acres. The County also reported 165 stop work orders, 968 violations, 10 court cases, and collected \$6,500 in fines.
- On March 23, 2023, the Department renewed the County's delegated authority through June 30, 2025, based on a review that found that the majority of sites were in good condition and routine enforcement generally effective to achieve compliance.

3. Illicit Discharge Detection and Elimination (IDDE)

- The County submitted an acceptable process for prioritizing outfall screenings and schedule for field screening prioritized outfalls over the permit term.
- The County maintains an ordinance that prohibits illicit discharges into the storm drain system.
- The County maintains written standard operating procedures (SOPs) for implementing the IDDE program meeting PART IV.D.3.d of the permit. The County submitted the SOPs with the Annual Report. The Department recommends the County consider including example

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photographs and descriptions of poor housekeeping practices that would trigger corrective actions as part of the commercial and industrial surveys.

- For FY2022, County field crews inspected 150 major and minor outfalls, conducted chemical tests of dry weather discharges, and found four illicit discharges. While conducting routine visual inspections of 250 commercial and industrial areas, the County identified 12 upland pollutant sources. The County also responded to 28 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

- The County applied 11,061 tons of road salt and 193,000 gallons of brine during the winter season where the accumulated snowfall was 13.3 inches.
- The County provided salt management training to 135 staff and 95 contractors; 283 staff were trained in pollution prevention.
- The County swept 6,654 curb miles (256 miles) in FY2022, which is consistent with FY2021. The County is proposing to maintain this effort (256 miles) for FY2023. Moving forward, the County should report street sweeping in lane miles, which is the standard unit used by the Chesapeake Bay Program and the MS4 permit.
- The County removed 140 tons of material as part of ongoing inlet and catch basin cleaning efforts in FY2022 and maintained an average removal of 180 tons/year from FY2017 to FY2022. The County has indicated that it will continue to maintain this average in FY2023. This continues to meet the 174.5 tons/year needed to maintain restoration efforts and the County will continue this effort in FY2023. The County also removed 7,464 bags of litter and 1,900 tons of debris from County roads.
- The County continues to reduce the use of pesticides, herbicides, fertilizers and other pollutants associated with vegetation management.
- The County is developing Salt Management and Good Housekeeping plans due in the third-year Annual Report.
- The Department notes that the County currently implements most of the aspects of a Salt Management Plan including tracking deicing materials and snowfall, evaluating new technologies and techniques, and training winter weather operator staff and contractors. The County further reported that it was developing educational information for the public on its web page.

5. Public Education

- The County continues to conduct public outreach efforts and exceeded the number (75) required in the permit. Outreach efforts included operating a compliance hotline, implementing educational websites and social media sites targeting a variety of stormwater-related topics, and conducting the Watershed Stewards Academy.

Anne Arundel County has met the requirements of PART IV.D.

E. Stormwater Restoration

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- Anne Arundel County maintained the same level of street sweeping (256 miles) as FY2019, FY2020, and FY2021. While the amount of debris removed from inlets and catch basins was less than prior years, the County has maintained an average annual removal of 174.5 tons. There was a significant increase in septic pumping (191.3 equivalent acres in FY2022 versus 124.3 equivalent acres in prior years).
- Anne Arundel County completed twenty restoration projects treating a total of 792.8 acres in FY2022. Since the expiration of the last permit, the County has restored a total of 1,535 acres, or 51% of the 2,998 impervious acres required in the permit.
- The benchmarks established in the permit for Anne Arundel County's restoration efforts were 20% (600 acres) completed for Year 1 and 40% (1,200 acres) completed by Year 2. The County's completed restoration (1,535 acres) has exceeded both the Year 1 and 2 benchmarks.
- The County replaced the nutrient credits needed to meet the previous permit's restoration requirements in FY2020. Anne Arundel County did not participate in any nutrient credit trading in FY2022.

Anne Arundel County has met the requirements of PART IV.E.

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

- Anne Arundel County submitted 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.
- Anne Arundel County submitted the Countywide TMDL Stormwater Implementation Plan (the Plan) with the Annual Report (see Appendix E). The Plan includes the required elements listed in PART IV.F.3.
- The Department has reviewed the Plan and offers the following:
 - The County's total nitrogen (TN), total phosphorus (TP), and total suspended sediment (TSS) target load reductions for the Chesapeake Bay TMDL are 31.6%, 46.7%, and 67.3%, respectively. The cumulative Countywide reductions for TN, TP, and TSS were 7.2%, 19%, and 199.1%, respectively. The County provided summaries of these results at the County level and, for TN and TP, each segmentshed. Individual segmentshed targets have yet to be established for TSS.
 - A summary table (see Table 7, p. 16) was provided showing progress on the nine local TSS and nutrient TMDLs. This table and accompanying analysis show that the County is on track to meet these TMDLs by the completion years identified for each. The County has met the target reduction for TSS (28%) in the South River; the reported cumulative progress is 32%.
 - Anne Arundel County has developed a single plan to address the 19 bacteria TMDLs. In this plan, the County identifies the strategies used to address human sources (Tier A) and non-human sources (Tier B) of bacteria (see pp. 44-46 and Appendix F). The County also provided summaries of actions taken to address bacteria in the individual TMDL watersheds.

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- The County has two watersheds with PCB TMDLs (Baltimore Harbor and Patuxent River). The Plan provides updates on the actions taken to address these TMDLs, including updates on sampling and monitoring efforts.
- Anne Arundel County provided responses (see Appendix H) to the Department's comments on the FY2021 Countywide Plan from August 8, 2022. The Department considers these comments to be addressed with the following exception:
 - The Department's Watershed Protection, Restoration, and Planning Program (WPRPP) previously requested that index of biotic integrity, or biological sampling in general, be mentioned as a component of future planning efforts. The County has indicated that biological monitoring will be provided in future annual reports, but not as a component of the Plan. However, if these data can be used as measures of progress related to the Plan, then it is recommended that the County make the effort to link together programs when data and information have value to related projects.

Anne Arundel County has met the requirements of PART IV.F. The Department commends Anne Arundel County for its efforts in developing the Plan and for the continued progress in meeting Chesapeake Bay and local TMDLs.

G. Assessment of Controls

- Anne Arundel County fulfilled this requirement by participating in the Chesapeake Bay Trust's Pooled Monitoring Programs for BMP Effectiveness and Watershed Assessment Monitoring.
- As discussed above, the County has two watersheds (Baltimore Harbor and Curtis Creek, and Patuxent River) with PCB TMDLs. The County provided details and updates on its Phase I and Phase II monitoring plans in Appendix F of the County's FY2022 Annual Report.

Anne Arundel County has met the requirements of PART IV.G.

H. Program Funding

- Anne Arundel 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 \$39.1 million (M), and the operating and capital costs were \$23.7M and \$22.6M, respectively. These included \$23.9M collected through the County's Watershed Protection and Restoration Program (WPRP).
- The County provided a WPRP annual report for FY2022 as required (see Appendix G). The County also submitted the FY2022 Financial Assurance Plan (FAP). Comments on the County's FAP will be sent under separate correspondence.

Anne Arundel County has met the requirements of PART IV.H.