

MARYLAND DEPARTMENT OF THE ENVIRONMENT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGE PERMIT

PART I. IDENTIFICATION

A. **Permit Number:** 24-DP-3313 MD0068276

B. **Permit Area**

This permit covers all stormwater discharges into, through, or from the municipal separate storm sewer system (MS4) owned or operated by the Maryland Department of Transportation State Highway Administration (MDOT SHA) located in all Maryland Phase I and Phase II jurisdictions including, but not limited to, Anne Arundel, Baltimore, Calvert, Carroll, Cecil, Charles, Frederick, Harford, Howard, Montgomery, Prince George's, Queen Anne's, Saint Mary's, Washington, and Wicomico counties, as well as regulated State and federal entities.

C. **Effective Date:** To be determined (TBD)

D. **Expiration Date:** TBD

PART II. DEFINITIONS

Terms used in this permit are defined in relevant chapters of Title 40 of the Code of Federal Regulations (CFR) Parts 122-124 and the Code of Maryland Regulations (COMAR) 26.08.01, 26.17.01, and 26.17.02. Terms not defined in CFR or COMAR shall have the meanings attributed by common use.

PART III. WATER QUALITY

MDOT SHA must manage, implement, and enforce stormwater management programs in accordance with the Clean Water Act (CWA) and corresponding stormwater National Pollutant Discharge Elimination System (NPDES) regulations, 40 CFR Parts 122-124, to meet the following requirements:

1. Effectively prohibit pollutants in stormwater discharges or other unauthorized discharges into, through, or from the MS4 as necessary to comply with Maryland's receiving water quality standards;
2. Attain applicable stormwater wasteload allocations (WLAs) for each established or approved Total Maximum Daily Load (TMDL) for each receiving water body,

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consistent with Title 33 of the U.S. Code (USC) §1342(p)(3)(B)(iii); 40 CFR §122.44(k)(2) and (3); and

3. Comply with all other provisions and requirements contained in this permit, and in plans and schedules developed in fulfillment of this permit.

Compliance with all the conditions contained in PARTs IV through VII of this permit shall constitute compliance with §402(p)(3)(B)(iii) of the CWA and adequate progress toward compliance with Maryland's receiving water quality standards and U.S. Environmental Protection Agency (EPA) established or approved stormwater WLAs for this permit term.

PART IV. STANDARD PERMIT CONDITIONS

A. Permit Administration

MDOT SHA shall designate an individual to act as a liaison with the Maryland Department of the Environment (Department) for the implementation of this permit. MDOT SHA shall provide the coordinator's name, title, address, phone number, and email address. Additionally, MDOT SHA shall submit in its annual reports to the Department an organizational chart detailing personnel and groups responsible for major NPDES program tasks in this permit. The Department shall be notified in annual reports of any changes in personnel or organization relative to NPDES program tasks.

B. Legal Authority

MDOT SHA shall carry out all inspection, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with permit conditions according to 40 CFR 122.26, including the prohibition on illicit discharges to the MS4 owned or operated by MDOT SHA. In cases where violations are discovered from adjacent land uses, MDOT SHA shall contact the appropriate jurisdiction with legal authority over the adjacent land uses and report the violations. All inspections, violations, jurisdiction contacts, and resolution schedules shall be included in MDOT SHA's annual report.

C. Source Identification

Sources of pollutants in stormwater runoff within MDOT SHA's permit area shall be identified by MDOT SHA and linked to specific water quality impacts on a watershed basis. A georeferenced database shall be submitted annually in accordance with *Maryland Department of the Environment, National Pollutant Discharge Elimination System, Municipal Separate Storm Sewer System, Geodatabase Design and User's Guide (Version 1.2, September 2023, (hereafter MS4 Geodatabase) or as noted below that includes information on the following:*

1. Storm drain system: all infrastructure, major outfalls, inlets, and associated drainage areas delineated (to be submitted as a supplemental geodatabase);

2. Industrial and commercial sources: industrial and commercial land uses and sites that MDOT SHA has determined have the potential to contribute significant pollutants (to be submitted as a supplemental geodatabase);
3. Urban best management practices (BMPs): stormwater management facility data for new and redevelopment, including outfall locations and delineated drainage areas;
4. Impervious surfaces: all impervious land cover in MDOT SHA's permit area delineated, controlled and uncontrolled impervious areas based on, at a minimum, Maryland's hierarchical eight-digit sub-basins;
5. Monitoring locations: locations established by MDOT SHA for chemical, biological, and physical monitoring of watershed restoration efforts and the *2000 Maryland Stormwater Design Manual*, unless participating in the pooled monitoring program, as described in PART IV.G; and
6. Water quality improvement projects: restoration projects implemented in accordance with PART IV.E.3 including stormwater and thermal pollution reduction BMPs, programmatic initiatives, and alternative control practices in accordance with the *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated Guidance for National Pollutant Discharge Elimination System Stormwater Permits (2021)*, (hereafter 2021 Accounting Guidance), including projects proposed, under construction, and completed with associated drainage areas delineated.

D. Management Programs

The following management programs shall be implemented by MDOT SHA in its permit area. These management programs are designed to control stormwater discharges and reduce associated pollutant loadings to the maximum extent practicable (MEP) and shall be maintained for the term of this permit. Additionally, these programs shall be integrated with other permit requirements to promote a comprehensive adaptive approach toward solving stormwater discharge water quality problems. Annual reports for MDOT SHA's management programs shall be in accordance with PART V.A of this permit and the MS4 Geodatabase.

1. Stormwater Management

An acceptable stormwater management program shall be maintained by MDOT SHA in accordance with the Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland. Activities to be undertaken by MDOT SHA shall include, but not be limited to:

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- a. Implementing the stormwater management design policies, principles, methods, and practices found in the latest version of the *2000 Maryland Stormwater Design Manual*. This includes:
 - i. Complying with the Stormwater Management Act of 2007 (Act) by implementing environmental site design (ESD) to the MEP for all new and redevelopment projects;
 - ii. Implementing thermal pollution management strategies in coldwater and thermally impaired watersheds;
 - iii. Tracking the progress toward satisfying the requirements of the Act and identifying and reporting annually the problems and modifications necessary to implement ESD to the MEP; and
 - iv. Reporting annually the modifications that have been or need to be made to all plan review and approval processes to comply with the requirements of the Act.

- b. Maintaining programmatic and implementation information related to the stormwater management program including, but not limited to:
 - i. Number of Concept, Site Development, and Final plans received and number of those approved. Plans that are re-submitted as a result of a revision or in response to comments should not be considered as a separate project;
 - ii. Number of redevelopment projects received and number of those approved;
 - iii. Number of stormwater exemptions issued; and
 - iv. Number and type of waivers received and issued, including those for quantity control, quality control, or both. Multiple requests for waivers may be received for a single project and each should be counted separately, whether part of the same project or plan.

- c. Maintaining construction inspection information according to COMAR 26.17.02 for all ESD treatment practices, structural stormwater management facilities, and stable stormwater conveyance and capacity to receiving waters, including the number of inspections conducted and violation notices issued by MDOT SHA.

- d. Conducting preventative maintenance inspections, according to COMAR 26.17.02, of all ESD treatment systems, structural stormwater management facilities, and stable stormwater conveyance and capacity to receiving waters, at least on a triennial basis. Documentation identifying the ESD systems and structural stormwater management facilities inspected, the number of maintenance inspections, follow-up inspections, the enforcement actions used to ensure compliance, the maintenance inspection schedules, and any other relevant information shall be submitted in MDOT SHA's annual reports.

2. Erosion and Sediment Control

An acceptable erosion and sediment control program shall be maintained by MDOT SHA and implemented in accordance with the Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland. Activities to be undertaken by MDOT SHA shall include, but not be limited to:

- a. Implementing program improvements identified in any Department evaluation of MDOT SHA's erosion and sediment control enforcement authority;
- b. Ensuring that construction site operators have received training regarding erosion and sediment control compliance and hold a valid Responsible Personnel Certification as required by the Department; and
- c. Ensuring that all applicable construction projects obtain a notice of intent (NOI) for stormwater associated with construction activity.

3. Illicit Discharge Detection and Elimination

MDOT SHA shall implement an inspection and enforcement program to ensure that all discharges into, through, or from the MS4 that are not composed entirely of stormwater are either issued a permit by the Department or eliminated. Activities shall include, but not be limited to:

- a. Reviewing all MDOT SHA outfalls to prioritize field screening efforts in areas with the greatest potential for polluted discharges. MDOT SHA must submit the process developed to prioritize outfall screenings to the Department for approval with the first year annual report;
- b. Submitting a plan and schedule for field screening the prioritized outfalls for the Department's approval with the first year annual report. The plan and schedule shall include the annual screening of at least 150 outfalls. Each outfall having a dry weather discharge shall be sampled at the time of screening using a chemical test kit. An alternative program may be submitted by MDOT SHA for the Department's approval that methodically identifies, investigates, and eliminates illegal discharges into, through, or from MDOT SHA's MS4;
- c. Conducting annual visual surveys of commercial and industrial areas as identified in PART IV.C.2 above for discovering, documenting, and eliminating pollutant sources. Areas surveyed and the results of the surveys shall be reported annually;

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- d. Maintaining written standard operating procedures for outfall screenings, illicit discharge investigations, annual visual surveys of commercial and industrial areas, responding to illicit discharge complaints, and enforcement implementation;
- e. Maintaining a program to address and respond to illegal discharges, dumping, and spills; and
- f. Using appropriate procedures for investigating and eliminating illicit discharges, illegal dumping, and spills. When a suspected illicit discharge discovered within MDOT SHA's permit area is either originating from or discharging to an adjacent MS4, MDOT SHA must coordinate with that MS4 to resolve the investigation. Significant discharges shall be reported to the Department for enforcement and/or permitting.

4. Property Management and Maintenance

- a. Coverage under Maryland's NPDES General Permit for Discharges of Stormwater Associated with Industrial Activity (SW Industrial GP) is typically required at facilities where the following activities are performed: maintenance or storage of vehicles or equipment; storage of fertilizers, pesticides, landscaping materials, hazardous materials, or other materials that could pollute stormwater runoff. MDOT SHA shall:
 - i. Ensure that a Notice of Intent (NOI) has been submitted to the Department for each MDOT SHA-owned industrial facility requiring coverage under the SW Industrial GP; and
 - ii. Submit with the annual report a list of MDOT SHA properties currently covered under the industrial stormwater permit.
- b. MDOT SHA shall develop, implement, and maintain a good housekeeping plan (GHP) for MDOT SHA-owned properties not required to be covered under Maryland's SW Industrial GP where the activities listed in PART IV.D.4.a are performed. The GHP shall be submitted to the Department by MDOT SHA in its third year annual report and implemented thereafter. A standard GHP may be developed for all MDOT SHA-owned property or separate GHPs may be developed for properties with similar use (e.g., Park and Rides, maintenance yards, refueling stations). The GHP shall include, but not be limited to:
 - i. A description of property management activities;
 - ii. A map of the locations of properties covered by the GHP;
 - iii. A list of potential pollutants and their sources that result from facility activities;

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- iv. Written procedures designed to reduce the potential for stormwater pollution from property activities, including illicit discharges, dumping, and spills;
 - v. Written procedures for annually assessing MDOT SHA properties in order to prevent the discharge of pollutants, spills, and leaks into its municipal separate storm sewer system;
 - vi. Written procedures for performing stormwater conveyance system inspections for removing debris that may cause clogging, backups, and flooding; and
 - vii. Annual training for all appropriate MDOT SHA staff and contractors regarding best practices for preventing, reducing, and eliminating the discharge of pollutants during property activities.
- c. MDOT SHA shall continue to implement a program to reduce pollutants associated with the maintenance of MDOT SHA-owned properties including, but not limited to, State roads and Park and Rides. The maintenance program shall include the following activities where applicable:
- i. Street sweeping of 155 lane miles/year as identified in the first year of permit issuance or as annually updated thereafter in accordance with PART IV.E.11;
 - ii. Inlet and conveyance system inspection and cleaning in the amount of 299 tons of material removed/year as identified in the first year of permit issuance or as annually updated thereafter in accordance with PART IV.E.11; and
 - iii. Reducing the use of pesticides, herbicides, fertilizers, and other pollutants associated with vegetation management. This can include, but is not limited to:
 - Developing and implementing an Integrated Pest Management Plan according to EPA guidelines;
 - Custom fertilizer property management plans based on soil testing;
 - Targeted application or “spot application” of pesticides;
 - Alternative and organic fertilizers;
 - Manual weed removal, mowing, and trimming;
 - Annual training and applicator certification and licensing as required by Maryland Department of Agriculture to ensure accurate application of chemicals according to manufacturer's recommendations;
 - Subcontracting to a certified pest control applicator licensed business for some or all of properties;
 - Piloting biological pest control programs; and
 - Establishing “no mow” areas.

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- d. MDOT SHA shall continue to reduce the use of winter weather deicing and anti-icing materials, without compromising public safety, by implementing the *Maryland Department of Transportation, State Highway Administration's Maryland Statewide Salt Management Plan*, developed and updated annually as required by the Maryland Code, Transportation §8-602.1. This includes but is not limited to:
- i. A plan for evaluation of new equipment and methods, and other strategies for continual program improvement;
 - ii. Training and outreach:
 - Providing a “Snow College” that annually provides MDOT SHA winter weather operator personnel and contractors with the latest training in deicer and anti-icer management; and
 - Developing and distributing best salt management practices outreach for educating the public.
 - iii. Tracking and reporting:
 - During storm events where deicing or anti-icing materials are applied to MDOT SHA roads, track and record, during storm events where deicing or anti-icing materials are applied, the amount of materials used, and snowfall in inches per event, if applicable; and
 - Report the deicing or anti-icing application by event or date, and the monthly and annual pounds used per lane mile per inch of snow.
- e. MDOT SHA shall evaluate current litter control problems associated with discharges into, through, or from portions of its MS4. Additionally, MDOT SHA shall continue to remove from or prevent from entering its storm drain system 600 tons of litter and debris as identified in the first year of permit issuance or as updated annually thereafter in accordance with PART IV.E.11.
- f. MDOT SHA shall submit in its year three MS4 annual report an evaluation for increasing the solar reflectance of impervious surfaces in coldwater and thermally impaired watersheds, consistent with Section 5.6.4 in the latest version of the *2000 Maryland Stormwater Design Manual*.
- g. MDOT SHA shall report annually on the changes in its Property Management and Maintenance programs and the overall pollutant reductions resulting from implementation of the components of the programs listed in this section.

5. Public Education

MDOT SHA shall continue to implement a public education and outreach program to reduce stormwater pollution and flooding. Education and outreach efforts may be integrated with other aspects of MDOT SHA's activities. These efforts are to be documented and summarized in each annual report, with details on resources (e.g., personnel and financial) expended and method of delivery for education and outreach. MDOT SHA shall implement a public outreach and education campaign that includes, but is not limited to:

- a. Maintaining a website with relevant stormwater management information and promoting its existence and use;
- b. Maintaining a compliance hotline or similar mechanism for public reporting of water quality complaints, including suspected illicit discharges, illegal dumping, spills, and flooding problems;
- c. Providing information to inform the general public about the benefits of:
 - i. Increasing water conservation;
 - ii. Reducing impervious surfaces;
 - iii. Proper erosion and sediment control practices;
 - iv. Removing debris from storm drain inlets to prevent flooding;
 - v. Improving landscape management (e.g., the proper use of herbicides, pesticides, and fertilizers, ice control and snow removal);
 - vi. Litter reduction;
 - vii. Reducing, reusing, and recycling solid waste; and
 - viii. Proper pet waste management.

MDOT SHA shall conduct a minimum of 115 outreach efforts per year. These efforts may include distributing printed materials such as brochures or newsletters; electronic materials such as website pages; mass media such as newspaper articles or public service announcements (radio or television); and conducting targeted workshops on stormwater management for the public.

E. Stormwater Restoration

In compliance with §402(p)(3)(B)(iii) of the CWA, MS4 permits must require stormwater controls to reduce the discharge of pollutants to the MEP and such other provisions as the Department determines appropriate for the control of such pollutants. Additionally, by regulation at 40 CFR §122.44, BMPs and programs implemented pursuant to this permit must be consistent with applicable stormwater WLAs developed under EPA established or approved TMDLs (see list of EPA established or approved TMDLs attached and incorporated as Appendix A). The impervious acre restoration requirements and associated pollutant reductions described below for MDOT SHA are consistent with

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Maryland's Phase III Watershed Implementation Plan (WIP) for the Chesapeake Bay TMDL and 2025 nutrient load targets, and for local TMDL implementation targets described by MDOT SHA in its TMDL Watershed Implementation Plans.

1. Annual alternative control practices used by MDOT SHA to meet its prior MS4 permit's impervious acre restoration requirement shall be:
 - a. Continued annually at the same level of implementation (e.g., street lane miles swept, catch basin cleaning) under this permit;
 - b. Replaced using stormwater management BMPs, programmatic initiatives, or alternative control practices in accordance with the 2021 Accounting Guidance; or
 - c. A combination of a and b above.
2. The impervious acre restoration requirements described below are in addition to the requirements listed in PART IV.E.1 of this permit.
3. By [Permit expiration date, to be determined], MDOT SHA shall complete the restoration of 3,046 impervious acres that have not been treated to the MEP by implementing stormwater BMPs, programmatic initiatives, or alternative control practices in accordance with the 2021 Accounting Guidance.
4. As part of the required impervious acre restoration in Part IV.E.3, MDOT SHA shall make progress toward impervious acre restoration using green stormwater infrastructure.
 - a. Green stormwater infrastructure includes all the practices listed in the 2021 Accounting Guidance that meet the requirements in "Table 19. Eligibility for Green Stormwater Infrastructure Credits", and "Table 20. Green Stormwater Infrastructure Enhanced Features", as well as the practices that meet the requirements of Section V.3. Land Cover Conversion BMPs;
 - b. MDOT SHA shall submit as part of the second-year annual report, an assessment of:
 - i. Completed impervious acre restoration using green stormwater infrastructure during prior permit terms;
 - ii. Future opportunities for implementing impervious acre restoration using green stormwater infrastructure during this permit term;
 - c. MDOT SHA shall submit as part of the fourth-year annual report:
 - i. An assessment of green stormwater infrastructure restoration to be completed by the fifth-year permit term anniversary date; and

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- ii. MDOT SHA’s proposal for green stormwater infrastructure as part of its plan for impervious acre restoration in the next permit term.
- 5. Underserved and overburdened communities are defined in the Environment Article, Title 1, Subtitle 7, Annotated Code of Maryland and are further described on the Department’s Environmental Justice (EJ) Screening Tool (https://mde.maryland.gov/Environmental_Justice/Pages/EJ-Screening-Tool.aspx). As part of the required impervious acre restoration in Part IV.E.4 of this permit, MDOT SHA shall make progress toward impervious acre restoration using green stormwater infrastructure in underserved or overburdened communities by:
 - a. Submitting as part of the second-year annual report, an assessment of:
 - i. Past impervious acre restoration completed using green stormwater infrastructure, including past permit terms, in underserved and overburdened communities;
 - ii. Future opportunities for impervious acre restoration using green stormwater infrastructure in underserved and overburdened communities;
 - b. Submitting as part of the fourth-year annual report:
 - i. An assessment of impervious acre restoration using green stormwater infrastructure to be commenced and completed by the fifth-year permit term anniversary date in underserved and overburdened communities; and
 - ii. MDOT SHA’s proposal for implementing green stormwater infrastructure in underserved and overburdened communities as part of its plan for impervious acre restoration in the next permit term.
- 6. Impervious acre restoration practices implemented in coldwater or thermally impaired watersheds should utilize the following practices from the 2021 Accounting Guidance: infiltration and filtering system BMPs (Table 2); and/or, land cover conversion BMPs (Tables 9-11) to cool and shade stormwater runoff.
- 7. By [end of first year of permit term, date to be determined], MDOT SHA shall complete stormwater BMPs, programmatic initiatives, or alternative control practices so that the total restoration at the end of year one meets the implementation benchmark schedule in Table 1.

“Benchmark” as used in this permit is a quantifiable goal or target to be used to assess progress toward the impervious acre restoration requirement or WLAs, such as a numeric goal for stormwater control measure implementation. If a benchmark is not met, MDOT SHA should take appropriate corrective action to improve progress toward meeting permit objectives. Benchmarks are intended as an adaptive management aid and generally are not considered to be enforceable.

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8. MDOT SHA may acquire Nutrient Credits for Total Nitrogen (TN), Total Phosphorus (TP), and Total Suspended Solids (TSS) in accordance with COMAR 26.08.11 to meet its impervious acre restoration requirement in PART IV.E.3 of this permit. For acquiring Nutrient Credits in place of impervious acre restoration, an equivalent impervious acre shall be based on reducing 18.08 pounds of TN, 2.23 pounds of TP, and 8,046 pounds of TSS. The maximum allowable credits obtained from trades with wastewater treatment plants shall not exceed 609 equivalent impervious acres restored.
9. Any Nutrient Credits acquired by MDOT SHA for meeting the restoration requirements of this permit shall be maintained and verified in accordance with COMAR 26.08.11 and reported to the Department in annual reports unless they are replaced at a one to one acre ratio by local stormwater management BMPs, programmatic initiatives, or alternative control practices in accordance with the 2021 Accounting Guidance.
10. MDOT SHA shall use the annual restoration benchmark schedule provided in Table 1 below to achieve its impervious acre restoration requirement by the end of the permit term.

Annual Restoration Benchmark Schedule, Table 1

| Metric | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|--|--------|--------|--------|--------|--------|
| Cumulative Percent Impervious Acre Restoration Completed | 30% | 45% | 60% | 80% | 100% |

11. In each year's annual report, MDOT SHA shall:
 - a. Submit to the Department a list of BMPs, programmatic initiatives, and alternative control practices to be completed in the following year to work toward meeting its impervious acre restoration benchmark:
 - i. The list of BMPs, programmatic initiatives, or alternative control practices shall be submitted in the BMP Portfolio format provided in Appendix B; and
 - ii. MDOT SHA may replace individual practices listed in its annual BMP Portfolio as long as the total implementation rate at the end of each year meets the annual restoration benchmark schedule in Table 1.
 - b. Evaluate progress toward meeting its annual restoration benchmark according to the schedule in Table 1 and adjust the benchmark appropriately based upon:

- i. Actual BMP implementation rates; and
- ii. Anticipated implementation rates and annual restoration benchmark schedule needed in the remaining years of this permit for meeting the final impervious acre restoration requirement by [permit expiration date].

F. MDOT SHA-Wide Stormwater TMDL Implementation Report

1. Where MDOT SHA has submitted an implementation plan for a TMDL identified in Appendix A and that plan has yet to be approved, MDOT SHA shall, within one year of the effective date of this permit, address all outstanding comments needed for the Department's approval of the plan.
2. Within one year of EPA's approval or establishment of a new TMDL having a stormwater WLA, MDOT SHA shall submit an implementation plan to the Department for approval. The TMDL implementation plan shall be based on the Department's TMDL analyses, or equivalent and comparable MDOT SHA water quality analyses, that includes:
 - a. A list of stormwater BMPs, programmatic initiatives, or alternative control practices that will be implemented to reduce pollutants for the TMDL;
 - b. A description of MDOT SHA's analyses and methods, and how they are comparable with the Department's TMDL analyses; and
 - c. Final implementation dates and benchmarks for meeting the TMDL's applicable stormwater WLA. Once approved by the Department, any new TMDL implementation plan shall be incorporated in MDOT SHA-Wide TMDL Stormwater Implementation Plan and subject to the annual progress report requirements under PART IV.F.3 of this permit.
3. For all TMDLs and WLAs listed in Appendix A, MDOT SHA shall annually document, in one MDOT SHA-Wide Stormwater TMDL Implementation Report, updated progress toward meeting these TMDL WLAs. This MDOT SHA-Wide Stormwater TMDL Implementation Report shall include:
 - a. A summary of all completed BMPs, programmatic initiatives, alternative control practices, or other actions implemented for each TMDL stormwater WLA;
 - b. An analysis and table summary of the net pollutant reductions achieved annually and cumulatively for each TMDL stormwater WLA;
 - c. An updated list of proposed BMPs, programmatic initiatives, and alternative control practices, as necessary, to demonstrate adequate

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progress toward meeting the Department's approved benchmarks and final stormwater WLA implementation dates; and

- d. Updates on MDOT SHA's efforts to reduce trash, floatables, and debris, and show progress toward achieving the annual trash reduction allocations required by the trash TMDLs for the Anacostia River Montgomery County Portion, Anacostia River Prince George's County Portion, Gwynns Falls, and Jones Falls. The updates shall describe the status of trash elimination efforts including resources (e.g., personnel and financial) expended and the effectiveness of all program components including:
 - i. Quantifying annual trash reductions using the Department's TMDL analysis or an equivalent and comparable MDOT SHA trash reduction model;
 - ii. The public education and outreach strategy to initiate or increase residential and commercial recycling rates, improve trash management, and reduce littering; and
 - iii. An annual evaluation of the MDOT SHA's trash reduction strategy including any modifications necessary to improve source reduction and proper disposal.
4. MDOT SHA shall provide continual outreach to the public and other stakeholders, including other jurisdictions or agencies holding stormwater WLAs in the same watersheds, regarding its TMDL stormwater implementation plans. MDOT SHA shall solicit input from the public, collaborate with stakeholders, and incorporate any relevant comments that can aid in achieving MDOT SHA stormwater WLAs. To allow for public participation, MDOT SHA shall:
 - a. Maintain a list of interested parties for notification of TMDL development actions;
 - b. Provide notice on MDOT SHA's webpage outlining how the public may obtain information on the development of TMDL stormwater implementation plans and opportunities for comment;
 - c. Provide copies of TMDL stormwater implementation plans to interested parties upon request;
 - d. Allow a minimum 30-day comment period before finalizing TMDL stormwater implementation plans; and
 - e. Document in final TMDL stormwater implementation plans how MDOT SHA provided public outreach and adequately addressed all relevant comments.

G. Assessment of Controls

MDOT SHA shall conduct BMP effectiveness and watershed assessment monitoring, and polychlorinated biphenyls (PCB) source tracking for assessing progress toward improving local water quality and restoring the Chesapeake Bay. The *2021 MS4 Monitoring Guidelines: BMP Effectiveness and Watershed Assessments* (hereafter 2021 Monitoring Guidelines) shall be referenced for addressing the technical guidelines and requirements outlined below.

1. BMP Effectiveness Monitoring

By [4 months after permit issuance, date to be determined, or by July 1 of each year], MDOT SHA shall notify the Department which option it chooses for BMP effectiveness monitoring. The two options are:

- a. MDOT SHA shall collaborate with the Department in a Pooled Monitoring Advisory Committee administered by the Chesapeake Bay Trust (CBT) for determining monitoring needs and selecting appropriate monitoring studies. To implement the required monitoring, MDOT SHA shall pay \$100,000, or an amount to be proposed by the MDOT SHA based on demonstrated past permit monitoring expenditures, annually into a pooled monitoring CBT fund. Enrollment in the program shall be demonstrated through a memorandum of understanding (MOU) between MDOT SHA and CBT by [date to be determined] of each year. The terms of the BMP effectiveness MOU are described in the 2021 Monitoring Guidelines. MDOT SHA shall remain in the program for the duration of this permit term; or
- b. MDOT SHA shall continue monitoring the Little Catocin Creek, or select and submit for the Department's approval a new BMP effectiveness study for monitoring by [4 months after permit issuance, date to be determined]. Monitoring activities shall occur where the cumulative effects of watershed restoration activities, performed in compliance with this permit, can be assessed. The minimum criteria for chemical, biological, and physical monitoring are as follows:

i. Chemical Monitoring:

- Twelve (12) storm events shall be monitored per year at each monitoring location with at least two occurring per quarter. Quarters shall be based on the calendar year. If exceptional weather patterns (e.g., dry weather periods) or other circumstances (e.g., equipment failures) occur during the reporting year, MDOT SHA shall provide documentation of such circumstance(s);

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- Discrete samples of stormwater flow shall be collected at the monitoring stations using automated or manual sampling methods;
- At least three (3) samples determined to be representative of each storm event shall be submitted to a laboratory for analysis according to methods listed under 40 CFR Part 136, and event mean concentrations (EMCs) shall be calculated;
- Baseflow sampling shall occur quarterly as near as the midpoint of each season (e.g., February for the first quarter, May for the second quarter, August for the third quarter, and November for the fourth quarter) as is practicable to allow for 72 hours of preceding dry time following baseflow sampling best practices;
- Stormwater flow and baseflow measurements shall be recorded at the outfall and in-stream stations for the following parameters:

| Stormwater and Baseflow Representative Samples (Parameters) |
|--|
| Total Suspended Solids (TSS) |
| Bacteria (<i>E.coli</i> or <i>Enterococcus</i> spp.) |
| Chloride |
| Discharge (flow) |
| Biochemical Oxygen Demand (BOD ₅) or Total Organic Carbon (TOC) |
| Orthophosphate |
| Total Nitrogen (TN) |
| Nitrate + Nitrite |
| Total Ammonia (sewer signal) |
| Total Phosphorus (TP) |

- Continuous measurements shall be recorded for the parameters listed below at the in-stream monitoring station or other practical location based on the approved study design:

| Continuous Measurements (Parameters) |
|--|
| Temperature |
| pH |
| Discharge (flow) |
| Turbidity (Optional per 2021 MS4 Monitoring Guidelines) |
| Conductivity |

- Data collected from stormwater, baseflow, and continuous monitoring shall be used to estimate annual and seasonal pollutant loads and reductions, and for the calibration of watershed assessment models; and
- If MDOT SHA elects to continue monitoring the Little Catoctin Creek watersheds, or selects a new BMP effectiveness study for monitoring, MDOT SHA shall submit a revised sampling plan for approval to address the new monitoring parameters provided above with the first annual report. An approved sampling plan under a prior MS4 permit for MDOT SHA shall continue until the Department approves a new sampling plan proposed under this permit.

ii. Biological Monitoring:

- Benthic macroinvertebrate samples shall be gathered each spring between the outfall and in-stream stations or other practical locations based on a Department approved study design; and
- MDOT SHA shall use the Maryland Biological Stream Survey (MBSS) sampling protocols for biological and stream habitat assessment.

iii. Physical Monitoring:

- A geomorphologic stream assessment shall be conducted between the outfall and in-stream monitoring locations or in a reasonable area based on the approved monitoring design. This assessment shall include annual comparison of permanently monumented stream channel cross-sections and the stream profile; and
- A hydrologic and/or hydraulic model shall be used (e.g., TR-20, HEC-2, HEC-RAS, HSPF, SWMM) in the fourth year of the permit to analyze the effects of rainfall; discharge rates; stage; and, if necessary, continuous flow on channel geometry.

iv. Annual Data Submittal: MDOT SHA shall describe in detail its monitoring activities for the previous year and include the following:

- EMCs submitted on the Department's long-term monitoring MS4 Geodatabase as specified in PART V below;
- Chemical, biological, and physical monitoring results and a combined analysis for the approved monitoring locations;

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- Any available analysis of surrogate relationships with the above monitoring parameters; and
- Any requests and accompanying justifications for proposed modifications to the monitoring program.

2. Watershed Assessment Monitoring

By [4 months after permit issuance, date to be determined, or by July 1] of each year, MDOT SHA shall notify the Department which option it chooses for watershed assessment monitoring. MDOT SHA must implement one of the two options as follows:

- a. MDOT SHA shall collaborate with the Department in a Pooled Monitoring Advisory Committee administered by CBT for determining appropriate watershed assessment monitoring. To implement the required monitoring, MDOT SHA shall pay \$180,660 annually into a pooled monitoring CBT fund. Enrollment in the program shall be demonstrated through an MOU between MDOT SHA and CBT to be signed by [date to be determined]. The terms of the Watershed Assessment Monitoring MOU are described in the 2021 Monitoring Guidelines. MDOT SHA shall remain in the program for the duration of this permit term; or
- b. MDOT SHA shall submit a comprehensive plan for watershed assessment and trend monitoring by [one year and 4 months after permit issuance, date to be determined] related to stream biology and habitat, bacteria, and chlorides and commence monitoring upon the Department's approval. The plan shall follow the 2021 Monitoring Guidelines and include:
 - i. Biological and habitat assessment monitoring at 25 stream sites using MBSS protocols;
 - ii. Bacteria (i.e., *E.coli*, *Enterococcus* spp., or fecal coliform monitoring); and
 - iii. Chloride assessments at two locations.

3. PCB Source Tracking

Within one year of permit issuance, MDOT SHA shall develop a PCB source tracking monitoring plan for all applicable TMDL WLAs where watershed reductions are required to meet water quality standards. MDOT SHA shall submit results and provide updates annually on the monitoring efforts.

H. Program Funding

1. Annually, a fiscal analysis of the capital, staffing, operation, and maintenance expenditures necessary to comply with all conditions of this permit shall be submitted by MDOT SHA as required in PART V below.

2. Adequate program funding to comply with all conditions of this permit shall be maintained. Lack of funding does not constitute a justification for noncompliance with the terms of this permit.

PART V. PROGRAM REVIEW AND ANNUAL PROGRESS REPORTING

A. Annual Reporting

1. Annual progress reports, required under 40 CFR §122.42(c), will facilitate the long-term assessment of MDOT SHA's NPDES stormwater program. MDOT SHA shall submit annual reports on or before December 31st and post these reports on MDOT SHA's website. All information, data, and analyses shall be based on the State's fiscal year and include:
 - a. An executive summary on the status of implementing MDOT SHA's MS4 programs that are established as permit conditions including:
 - i. Permit Administration;
 - ii. Legal Authority;
 - iii. Source Identification;
 - iv. Stormwater Management;
 - v. Erosion and Sediment Control;
 - vi. Illicit Discharge Detection and Elimination;
 - vii. Property Management and Maintenance;
 - viii. Public Education;
 - ix. Stormwater Restoration;
 - x. MDOT SHA-wide Stormwater TMDL Implementation Plan;
 - xi. Assessment of Controls; and
 - xii. Program Funding.
 - b. A narrative summary describing the results and analyses of data, including monitoring data that is accumulated throughout the reporting year;
 - c. Expenditures for the reporting period and the proposed budget for the upcoming year;
 - d. A summary describing the number and nature of enforcement actions, inspections, and public education programs;
 - e. The identification of water quality improvements and documentation of attainment and/or progress toward attainment of schedules, benchmarks, deadlines, and applicable stormwater WLAs developed under EPA established or approved TMDLs; and

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- f. The identification of any proposed changes to MDOT SHA's program when stormwater WLAs are not being met.
2. All annual reporting specified in PARTs IV.C, D, E, F, and G, or required anywhere within this permit shall be made using the MS4 Geodatabase. A corresponding User's Guide provides guidance for data requirements and entry into the MS4 Geodatabase.
3. Because this permit uses an iterative approach to implementation, MDOT SHA must continuously evaluate the effectiveness of its programs and report any modifications in each annual report. Where programs are determined by MDOT SHA to be ineffective, modifications shall be made within 12 months that effectively show progress toward meeting stormwater WLAs developed under EPA approved TMDLs.

B. Program Review

In order to assess the effectiveness of MDOT SHA's NPDES stormwater program for reducing the discharge of pollutants to the MEP and working toward meeting water quality standards, the permittee will cooperate with the Department during the review of annual reports, field inspections, and periodic requests for additional data to determine permit compliance. Procedures for the review of local erosion and sediment control and stormwater management programs exist in Maryland State law and regulations. The Department may require additional evaluations and field inspections to be conducted for IDDE, property management and maintenance, assessment of controls, and impervious surface area and Chesapeake Bay restoration to determine compliance with permit conditions.

C. Reapplication for NPDES Stormwater Discharge Permit

This permit is effective for no more than five years from the effective date unless administratively continued by the Department. In order to qualify for an administrative continuation of this permit beyond five years, MDOT SHA must reapply for NPDES stormwater discharge permit coverage in its fourth year annual report. Failure to reapply for coverage constitutes a violation of this permit and can lead to a lapse of permit coverage and subject any discharges that occur without permit coverage to enforcement action and penalties. All requirements of this permit must be completed within the five-year permit term. An administrative continuance does not extend or modify any of the completion dates as set forth in the permit; the administrative continuance only provides

permit coverage to allow MDOT SHA discharges until a new NPDES permit is issued and effective. Once a new NPDES permit is effective the administrative continuance automatically expires.

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As part of this application process, MDOT SHA shall submit to the Department an executive summary of its NPDES stormwater management program that specifically describes how each MDOT SHA watershed has been thoroughly evaluated, and the status of implementing water quality improvement projects and all schedules, benchmarks, and deadlines toward meeting stormwater WLAs. This application shall be used to gauge the effectiveness of MDOT SHA's NPDES stormwater program and will provide guidance for developing future permit conditions. The application summary shall include:

1. MDOT SHA's NPDES stormwater program goals;
2. Program summaries for the permit term regarding:
 - a. Illicit discharge detection and elimination results;
 - b. Impervious Surface and Chesapeake Bay Restoration status including MDOT SHA totals for impervious acres, impervious acres controlled by stormwater management, the current status of water quality improvement projects and acres managed, and documentation of progress toward meeting stormwater WLAs developed under EPA approved TMDLs;
 - c. Pollutant load reductions as a result of this permit and an evaluation of whether TMDLs are being achieved; and
 - d. Other relevant data and information for describing MDOT SHA programs;
3. Program operation and capital improvement costs for the permit term; and
4. Descriptions of any proposed permit condition changes based on analyses of the successes and failures of MDOT SHA's efforts to comply with the conditions of this permit.

PART VI. SPECIAL PROGRAMMATIC CONDITIONS

Maryland's baseline programs, including the 1991 Forest Conservation Act, 1997 Priority Funding Areas Act, 2007 Stormwater Management Act, 2009 Smart, Green & Growing Planning Legislation, 2010 Sustainable Communities Act, 2011 Best Available Technology Regulation, and the 2012 Sustainable Growth & Agricultural Preservation Act effectively mitigate the majority of the impacts from new development. Any additional loads will be offset through Maryland's Aligning for Growth policies and procedures as articulated through Chesapeake Bay milestone achievement. MDOT SHA shall reflect these policies, programs, and implementation as part of its net WLA accounting as stipulated in PART IV.F.3.b of this permit.

PART VII. ENFORCEMENT AND PENALTIES

A. Discharge Prohibitions and Receiving Water Limitations

MDOT SHA shall prohibit non-stormwater discharges into, through, or from its MS4. NPDES permitted non-stormwater discharges are exempt from this prohibition. Discharges from the following will not be considered a source of pollutants when properly managed: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated ground water infiltration to separate storm sewers; uncontaminated pumped ground water; discharges from potable water sources; foundation drains; air conditioning condensation; irrigation waters; springs; footing drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; de-chlorinated swimming pool discharges (not including filter backwash); street wash water; and firefighting activities.

Consistent with §402(p)(3)(B)(iii) of the CWA, MDOT SHA shall take all reasonable steps in compliance with the terms of this permit to minimize or prevent the contamination or other alteration of the physical, chemical, or biological properties of any waters of the State, including a change in temperature, taste, color, turbidity, or odor of the waters or the discharge or deposit of any organic matter, harmful organism, or liquid, gaseous, solid, radioactive, or other substance into any waters of the State, that will render the waters harmful to:

1. Public health, safety, or welfare;
2. Domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial use;
3. Livestock, wild animals, domestic animals, or birds; and
4. Fish or other aquatic life.

B. Need to Halt or Reduce Activity not a Defense

As stated under 40 CFR §122.41(c), it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

C. Duty to Mitigate

MDOT SHA shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

D. Emergency Reporting Requirements

MDOT SHA shall report any non-compliance that may endanger human health or the environment to the Department's Compliance Program within 24 hours from the time when MDOT SHA becomes aware of the circumstances. The 24 hour reporting can be accomplished by telephone at 410-537-3510 or by email to mde.wsacompliance@maryland.gov with the subject line "24-hour non-compliance report notification, MDOT SHA MS4."

Within five days of the of the initial 24-hour report due, MDOT SHA shall provide a written submission containing a description of the non-compliance and its cause; the period of non-compliance, including exact dates and times; if the non-compliance has not been corrected, the anticipated time that it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance. A written summary of the incident and steps taken to prevent the recurrence of the emergency shall also be included in the subsequent annual report.

E. Duty to Comply

MDOT SHA shall be responsible for complying with all conditions of this permit. Other entities may be used to meet various permit obligations provided that both MDOT SHA and the other entity agree contractually, and that no stormwater restoration work for Chesapeake Bay or local TMDL stormwater implementation plans are double-counted. Regardless of any arrangement entered into however, MDOT SHA remains responsible for permit compliance. In no case may this responsibility or permit compliance liability be transferred to another entity.

Failure to comply with a permit provision constitutes a violation of the CWA and State law and is grounds for enforcement action; permit termination, revocation, or modification; or denial of a permit renewal application. MDOT SHA shall comply at all times with the provisions of the Environment Article, Title 4, Subtitles 1, 2, and 4; Title 7, Subtitle 2; and Title 9, Subtitle 3 of the Annotated Code of Maryland.

F. Proper Operation and Maintenance

MDOT SHA shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by MDOT SHA to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by MDOT SHA only when the operation is necessary to achieve compliance with the conditions of the permit.

G. Sanctions

1. Penalties Under the CWA - Civil and Criminal

Section 309(g)(2) of the CWA, 33 USC §1319(g)(2) provides that any person who violates any permit condition is subject to a civil penalty not to exceed \$10,000 per day for each violation, not to exceed \$125,000. Pursuant to the Civil Monetary Penalty Inflation Adjustment Rule, 40 CFR Part 19, any person who violates any NPDES permit condition or limitation is liable for an administrative penalty not to exceed \$16,000 per day for each such violation, up to a total penalty of \$177,500. Pursuant to Section 309(c) of the CWA, 33 USC §1319(c), any person who negligently violates any permit condition is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. Any person who knowingly violates any permit condition is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both.

2. Penalties Under the State's Environment Article – Civil and Criminal

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve MDOT SHA from civil or criminal responsibilities and/or penalties for a violation of Title 4, Title 7, and Title 9 of the Environment Article, Annotated Code of Maryland, or any federal, local, or other State law or regulation. Section 9-342 of the Environment Article provides that a person who violates any condition of this permit is liable to a civil penalty of up to \$10,000 per violation, to be collected in a civil action brought by the Department, and with each day a violation continues being a separate violation. Section 9-342 further authorizes the Department to impose upon any person who violates a permit condition, administrative civil penalties of up to \$5,000 per violation, up to \$50,000.

Section 9-343 of the Environment Article provides that any person who violates a permit condition is subject to a criminal penalty not exceeding \$25,000 or imprisonment not exceeding 1 year, or both for a first offense. For a second offense, Section 9-343 provides for a fine not exceeding \$50,000 and up to 2 years imprisonment.

The Environment Article, §9-343, Annotated Code of Maryland, provides that any person who tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$50,000 per violation, or by imprisonment for not more than 2 years per violation, or both.

The Environment Article, §9-343, Annotated Code of Maryland, provides that any person who knowingly makes any false statement, representation, or certification in any records or other document submitted or required to be

maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$50,000 per violation, or by imprisonment for not more than 2 years per violation, or both.

H. Permit Revocation and Modification

1. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by MDOT SHA for a permit modification or a notification of planned changes or anticipated noncompliance does not stay any permit condition. A permit may be modified by the Department upon written request by MDOT SHA and after notice and opportunity for a public hearing in accordance with and for the reasons set forth in COMAR 26.08.04.10 and 40 CFR §§122.62, 122.63, 122.64, and 124.5.

After notice and opportunity for a hearing and in accordance with COMAR 26.08.04.10, the Department may modify, suspend, or revoke and reissue this permit in whole or in part during its term for causes including, but not limited to the following:

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary reduction or elimination of the authorized discharge;
- d. A determination that the permitted discharge poses a threat to human health or welfare or to the environment and can only be regulated to acceptable levels by permit modification or termination;
- e. To incorporate additional controls that are necessary to ensure that the permit effluent limit requirements are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4; or
- f. As specified in 40 CFR §§122.62, 122.63, 122.64, and 124.5.

2. Duty to Provide Information

MDOT SHA shall furnish to the Department, within a reasonable time, any information that the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit; or to determine

compliance with this permit. MDOT SHA shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

I. Inspection and Entry

MDOT SHA shall allow an authorized representative of the State or EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter the permittee's premises where a regulatory activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and obtain copies at reasonable times of any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times, without prior notice, any construction site, facility, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

J. Monitoring and Recordkeeping

Unless otherwise specified by this permit, all monitoring and records of monitoring shall be in accordance with 40 CFR §122.41(j).

K. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, State or local law or regulations.

L. Severability

The provisions of this permit are severable. If any provision of this permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect. If the application of any provision of this permit to any circumstance is held invalid, its application to other circumstances shall not be affected.

M. Signature of Authorized Administrator

Each application, report, or other information required under this permit to be submitted to the Department shall be signed as required by COMAR 26.08.04.01-1. Signatories shall be a principal executive officer or other duly authorized employee.

D. Lee Currey
Director
Water and Science Administration

Date

Appendix A
EPA Approved Total Maximum Daily Loads (TMDLs)
MDOT SHA

This NPDES permit requires MDOT SHA to submit an annual TMDL assessment report evaluating effectiveness of MDOT SHA’s restoration plans and progress made in achieving compliance with EPA approved TMDLs. Similarly, by regulation at 40 CFR §122.44, EPA further requires that stormwater controls and programs implemented pursuant to this NPDES permit be consistent with applicable stormwater wasteload allocations (WLAs) developed under any approved TMDLs. The following is a list of TMDLs and WLAs applicable to MDOT SHA:

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|--------------------------|---|------------|-------|-----------|-----------|----------------------|------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| Anacostia River Sediment | Subsegment of 8 Digit WS 02140205 / Anacostia Watershed - LBC (Non-tidal) | TSS | 57.8 | tons/year | 85% | 2012 | Prince George's County |
| Anacostia River Sediment | Subsegment of 8 Digit WS 02140205 / Anacostia Watershed - NEB (Non-tidal) | TSS | 67.4 | tons/year | 85% | 2012 | Montgomery County |
| Anacostia River Sediment | Subsegment of 8 Digit WS 02140205 / Anacostia Watershed - NEB (Non-tidal) | TSS | 678.1 | tons/year | 85% | 2012 | Prince George's County |
| Anacostia River Sediment | Subsegment of 8 Digit WS 02140205 / Anacostia Watershed - NWB (Non-tidal) | TSS | 256.7 | tons/year | 85% | 2012 | Montgomery County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|---------------------------|--|------------|----------|---------------------|--------------|----------------------|------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| Anacostia River Sediment | Subsegment of 8 Digit WS 02140205 / Anacostia Watershed - NWB (Non-tidal) | TSS | 147.9 | tons/year | 85% | 2012 | Prince George's County |
| Anacostia River Sediment | Subsegment of 8 Digit WS 02140205 / Anacostia Watershed - Tidal Drainage | TSS | 9.0 | tons/year | 85% | 2012 | Prince George's County |
| Anacostia River Sediment | Subsegment of 8 Digit WS 02140205 / Anacostia Watershed - Watts Branch (Non-tidal) | TSS | 2.1 | tons/year | 85% | 2012 | Prince George's County |
| Anacostia River Trash | Subsegment of 8 Digit WS 02140205 / Anacostia Watershed - Montgomery County | Trash | 6,044.0 | pounds removed/year | 100% removal | 2010 | Montgomery County |
| Anacostia River Trash | Subsegment of 8 Digit WS 02140205 / Anacostia Watershed - Prince George's County | Trash | 14,134.0 | pounds removed/year | 100% removal | 2010 | Prince George's County |
| Antietam Creek Phosphorus | 8 Digit WS 02140502 / Antietam Creek | Phosphorus | 1,158.0 | lbs/year | 21% | 2013 | Washington County |
| Antietam Creek Sediment | 8 Digit WS 02140502 / Antietam Creek | TSS | 3,556.8 | tons/year | 58% | 2008 | Washington County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------------------|---|------------|-----------|-------------|-----------|----------------------|-------------------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| Back River PCBs | Segmentshed BACOH / Back River Oligohaline | PCBs | 127.6 | grams/year | 53% | 2012 | Baltimore County |
| Back River Sediment | 8-Digit WS 02130901 / Back River | TSS | 45.0 | tons/year | 75% | 2018 | Baltimore County |
| Baltimore Harbor Non-Tidal Sediment | 8-Digit WS 02130903 / Baltimore Harbor | TSS | 124.0 | tons/year | 56% | 2022 | Anne Arundel and Baltimore Counties |
| Baltimore Harbor PCBs | Bear Creek | PCBs | 27.6 | grams/year | 92% | 2012 | Baltimore County |
| Baltimore Harbor PCBs | Curtis Creek | PCBs | 23.1 | grams/year | 94% | 2012 | Anne Arundel County |
| Baltimore Harbor PCBs | Subsegment of 8 Digit WS 02130903 / Baltimore Harbor (incl. loads from Bear Creek and Curtis Creek) | PCBs | 67.0 | grams/year | 92% | 2012 | Anne Arundel County |
| Baltimore Harbor PCBs | Subsegment of 8 Digit WS 02130903 / Baltimore Harbor (incl. loads from Bear Creek and Curtis Creek) | PCBs | 28.9 | grams/year | 92% | 2012 | Baltimore County |
| Baltimore Harbor Tidal Nutrients | Multiple 8 Digit WS / Baltimore Harbor | Nitrogen | 159,318.0 | pounds/year | 15% | 2007 | Anne Arundel County |
| Baltimore Harbor Tidal Nutrients | Multiple 8 Digit WS / Baltimore Harbor | Phosphorus | 17,245.0 | pounds/year | 15% | 2007 | Anne Arundel County |
| Baltimore Harbor Tidal Nutrients | Multiple 8 Digit WS / Baltimore Harbor | Nitrogen | 362,890.0 | pounds/year | 15% | 2007 | Baltimore County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|----------------------------------|--|------------|----------|------------------|----------------|----------------------|-------------------|
| | | Impairment | WLA | Units | Reduction | | |
| Baltimore Harbor Tidal Nutrients | Multiple 8 Digit WS / Baltimore Harbor | Phosphorus | 39,279.0 | pounds/year | 15% | 2007 | Baltimore County |
| Baltimore Harbor Tidal Nutrients | Multiple 8 Digit WS / Baltimore Harbor | Nitrogen | 61,957.0 | pounds/year | 15% | 2007 | Carroll County |
| Baltimore Harbor Tidal Nutrients | Multiple 8 Digit WS / Baltimore Harbor | Phosphorus | 6,706.0 | pounds/year | 15% | 2007 | Carroll County |
| Baltimore Harbor Tidal Nutrients | Multiple 8 Digit WS / Baltimore Harbor | Nitrogen | 79,659.0 | pounds/year | 15% | 2007 | Howard County |
| Baltimore Harbor Tidal Nutrients | Multiple 8 Digit WS / Baltimore Harbor | Phosphorus | 8,622.0 | pounds/year | 15% | 2007 | Howard County |
| Baltimore Harbor Trash | 8 Digit WS 02130904 / Jones Falls | Trash | 1,418.7 | lbs/year removed | 100% reduction | 2015 | Baltimore County |
| Baltimore Harbor Trash | 8 Digit WS 02130905 / Gwynns Falls | Trash | 2,300.0 | lbs/year removed | 100% reduction | 2015 | Baltimore County |
| Bush River PCBs | Segmentshed BSHOH / Bush River | PCBs | 18.9 | grams/year | 62% | 2016 | Harford County |
| Bynum Run Sediment | 8 Digit WS 02130704 / Bynum Run | TSS | 187.0 | tons/year | 19% | 2011 | Harford County |
| Cabin John Creek Sediment | 8 Digit WS 02140207 / Cabin John Creek | TSS | 269.8 | tons/year | 23% | 2011 | Montgomery County |
| Catoctin Creek Nutrients | 8 Digit WS 02140305 / Catoctin Creek | Phosphorus | 1,876.0 | pounds/year | 9% | 2013 | Frederick County |
| Catoctin Creek Sediment | 8 Digit WS 02140305 / Catoctin Creek | TSS | 1,392.0 | tons/year | 49% | 2009 | Frederick County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|--|---|------------|---------|-------------|-----------|----------------------|--------------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| Conococheague Creek Sediment | 8 Digit WS 02140504 / Conococheague Creek | TSS | 2,008.1 | tons/year | 45% | 2008 | Washington County |
| Double Pipe Creek Nutrients | 8 Digit WS 02140304 / Double Pipe Creek | Phosphorus | 653.0 | pounds/year | 66% | 2013 | Carroll and Frederick Counties |
| Double Pipe Creek Sediment | 8 Digit WS 02140304 / Double Pipe Creek | TSS | 3,149.0 | tons/year | 34% | 2009 | Carroll County |
| Double Pipe Creek Sediment | 8 Digit WS 02140304 / Double Pipe Creek | TSS | 228.9 | tons/year | 47% | 2009 | Frederick County |
| Elk River and C&D Canal PCBs | Segmentshed C&DOH_MD / C&D Canal Oligohaline Maryland | PCBs | 1.0 | grams/year | 50% | 2014 | Cecil County |
| Elk River and C&D Canal PCBs | Segmentshed ELKOH / Elk River | PCBs | 10.5 | grams/year | 50% | 2014 | Cecil County |
| Gunpowder and Bird Rivers PCBs | 8-Digit WS 02130803 / Bird River | PCBs | 1.9 | grams/year | 70% | 2016 | Baltimore County |
| Gwynns Falls Sediment | 8 Digit WS 02130905 / Gwynns Falls | TSS | 412.5 | tons/year | 36% | 2010 | Baltimore County |
| Jones Falls Sediment | 8 Digit WS 02130904 / Jones Falls | TSS | 163.7 | tons/year | 22% | 2011 | Baltimore County |
| Lake Roland PCBs | Lake Roland | PCBs | 17.6 | grams/year | 29% | 2014 | Baltimore County |
| Liberty Reservoir Phosphorus and Sediments | 8 Digit WS 02130907 / Liberty Reservoir | Phosphorus | 677.0 | pounds/year | 45% | 2014 | Baltimore and Carroll Counties |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|--|--|-------------|----------|------------------------|-----------|----------------------|---|
| | | Impairment | WLA | Units | Reduction | | |
| Liberty Reservoir Phosphorus and Sediments | 8 Digit WS 02130907 / Liberty Reservoir | TSS | 275.0 | tons/year | 45% | 2014 | Baltimore and Carroll Counties |
| Little Patuxent River Sediment | 8 Digit WS 02131105 / Little Patuxent River | TSS | 875.8 | tons/year | 36% | 2011 | Anne Arundel and Howard Counties |
| Loch Raven Reservoir Bacteria | 8 Digit WS 02130805 / Loch Raven Reservoir | E.coli | 18,217.0 | billion MPN E. coli/yr | 95% | 2009 | Baltimore County |
| Loch Raven Reservoir Bacteria | 8 Digit WS 02130805 / Loch Raven Reservoir | E.coli | 21.0 | billion MPN E. coli/yr | 88% | 2009 | Carroll County |
| Lower Gunpowder Falls Sediment | 8 Digit WS 02130802 / Lower Gunpowder Falls | TSS | 53.0 | tons/year | 67% | 2017 | Baltimore County |
| Lower Monocacy Nutrients | 8 Digit WS 02140302 / Lower Monocacy River | Phosphorus | 4,222.0 | pounds/year | 25% | 2013 | Carroll, Frederick, and Montgomery Counties |
| Lower Monocacy River Sediment | Subsegment of 8 Digit WS 02140302 / Lower Monocacy River | TSS | 3,157.9 | tons/year | 61% | 2009 | Frederick County |
| Lower Monocacy River Sediment | Subsegment of 8 Digit WS 02140302 / Lower Monocacy River | TSS | 99.0 | tons/year | 61% | 2009 | Montgomery County |
| Marley and Furnace Creek Bacteria | Subsegment of WS 02130903 / Baltimore Harbor - Furnace Creek | Enterococci | 615.0 | billion counts/day | 78% | 2011 | Anne Arundel County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-----------------------------------|--|-------------|-------|--------------------|-----------|----------------------|------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| Marley and Furnace Creek Bacteria | Subsegment of WS 02130903 / Baltimore Harbor - Marley Creek | Enterococci | 908.0 | billion counts/day | 76% | 2011 | Anne Arundel County |
| Marsh Run Sediment | MD 8 Digit 02140503 / Marsh Run | TSS | 74.0 | tons/year | 59% | 2019 | Washington County |
| Non-Tidal Anacostia River PCBs | Subsegment of 8 Digit WS 02140205 / Anacostia River - Non-Tidal - Northeast Branch | PCBs | 1.5 | grams/year | 99% | 2011 | Montgomery County |
| Non-Tidal Anacostia River PCBs | Subsegment of 8 Digit WS 02140205 / Anacostia River - Non-Tidal - Northeast Branch | PCBs | 3.8 | grams/year | 99% | 2011 | Prince George's County |
| Non-Tidal Anacostia River PCBs | Subsegment of 8 Digit WS 02140205 / Anacostia River - Non-Tidal - Northwest Branch | PCBs | 2.6 | grams/year | 98% | 2011 | Montgomery County |
| Non-Tidal Anacostia River PCBs | Subsegment of 8 Digit WS 02140205 / Anacostia River - Non-Tidal - Northwest Branch | PCBs | 1.8 | grams/year | 98% | 2011 | Prince George's County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|--|---|------------|-----------|------------------|-----------|----------------------|---|
| | | Impairment | WLA | Units | Reduction | | |
| Other West Chesapeake Sediment | 8 Digit WS 02131005 / West Chesapeake Bay | TSS | 20.0 | tons/year | 33% | 2018 | Anne Arundel County |
| Patapsco River Lower North Branch Bacteria | 8 Digit WS 02130906 / Patapsco River Lower North Branch | E.coli | 47,814.0 | billion MPN/year | 21% | 2009 | Anne Arundel County |
| Patapsco River Lower North Branch Bacteria | 8 Digit WS 02130906 / Patapsco River Lower North Branch | E.coli | 192,971.0 | billion MPN/year | 13% | 2009 | Baltimore County |
| Patapsco River Lower North Branch Bacteria | 8 Digit WS 02130906 / Patapsco River Lower North Branch | E.coli | 143,218.0 | billion MPN/year | 13% | 2009 | Howard County |
| Patapsco River Lower North Branch Sediment | 8 Digit WS 02130906 / Patapsco River Lower North Branch | TSS | 1,278.6 | tons/year | 18% | 2011 | Anne Arundel, Baltimore, and Howard Counties |
| Patuxent River Lower Non-Tidal Sediment | 8 Digit WS 02131101 / Patuxent River Lower | TSS | 10.0 | tons/year | 58% | 2018 | Anne Arundel, Prince George's, and Charles Counties |
| Patuxent River Middle Non-tidal Sediment | 8 Digit WS 02131102 / Patuxent River Middle | TSS | 22.0 | ton/year | 56% | 2018 | Anne Arundel and Prince George's Counties |
| Patuxent River PCBs | Segmentshed PAXTF / Patuxent River Tidal Fresh | PCBs | 0.1 | grams/year | 100% | 2017 | Anne Arundel County |
| Patuxent River PCBs | Segmentshed PAXTF / Patuxent River Tidal Fresh | PCBs | 0.1 | grams/year | 100% | 2017 | Howard County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|--|--|------------|----------|------------------|-----------|----------------------|--|
| | | Impairment | WLA | Units | Reduction | | |
| Patuxent River PCBs | Segmentshed PAXTF / Patuxent River Tidal Fresh | PCBs | - | grams/year | 100% | 2017 | Montgomery County |
| Patuxent River PCBs | Segmentshed PAXTF / Patuxent River Tidal Fresh | PCBs | 0.1 | grams/year | 100% | 2017 | Prince George's County |
| Patuxent River Upper Bacteria | Subsegment of 8 Digit WS 02131104 / Patuxent River Upper | E.coli | 39,283.0 | billion MPN/year | 22% | 2011 | Anne Arundel County |
| Patuxent River Upper Bacteria | Subsegment of 8 Digit WS 02131104 / Patuxent River Upper | E.coli | 51,833.0 | billion MPN/year | 53% | 2011 | Prince George's County |
| Patuxent River Upper Sediment | 8 Digit WS 02131104 / Patuxent River Upper | TSS | 633.3 | tons/year | 11% | 2011 | Anne Arundel, Howard, and Prince George's Counties |
| Piscataway Creek and Mattawoman Creek PCBs | Segmentshed MATTF / Mattawoman Creek Tidal Fresh | PCBs | 11.3 | grams/year | 5% | 2019 | Charles County |
| Piscataway Creek and Mattawoman Creek PCBs | Segmentshed MATTF / Mattawoman Creek Tidal Fresh | PCBs | 3.0 | grams/year | 5% | 2019 | Prince George's County |
| Piscataway Creek and Mattawoman Creek PCBs | Segmentshed PISTF / Piscataway Creek Tidal Fresh | PCBs | 18.5 | grams/year | 5% | 2019 | Prince George's County |
| Piscataway Creek Non-Tidal Sediment | 8-Digit WS 02140203 / Piscataway Creek | TSS | 36.0 | ton/year | 51% | 2019 | Prince George's County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|--|---|------------|----------|-----------------------|-----------|----------------------|------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| Port Tobacco River Non-Tidal Sediment | 8-Digit WS 02140109 / Port Tobacco River | TSS | 20.0 | tons/year | 33% | 2019 | Charles County |
| Potomac River Montgomery County Sediment | 8 Digit WS 02140202 / Potomac River, Montgomery County | TSS | 251.7 | tons/year | 36% | 2012 | Montgomery County |
| Rock Creek Phosphorus | 8 Digit WS 02140206 / Rock Creek | Phosphorus | 773.0 | pounds/year | 32% | 2013 | Montgomery County |
| Rock Creek Sediment | 8 Digit WS 02140206 / Rock Creek | TSS | 540.0 | tons/year | 38% | 2011 | Montgomery County |
| Seneca Creek Sediment | 8 Digit WS 02140208 / Seneca Creek | TSS | 351.7 | tons/year | 45% | 2011 | Montgomery County |
| South River Sediment | 8 Digit WS 02131003 / South River | TSS | 64.0 | tons/year | 27% | 2017 | Anne Arundel County |
| Swan Creek Non-tidal Sediment | 8 Digit WS 02130706 / Swan Creek (non-tidal) | TSS | 26.0 | tons/year | 13% | 2016 | Harford County |
| The Chesapeake Bay TMDL | Segmentshed ANATF_DC / Anacostia River Tidal Fresh DC | Nitrogen | 3,807.3 | delivered pounds/year | 25% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed ANATF_DC / Anacostia River Tidal Fresh DC | Phosphorus | 376.8 | delivered pounds/year | 40% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed ANATF_MD / Anacostia River Tidal Fresh Maryland | Nitrogen | 10,901.2 | delivered pounds/year | 15% | 2010 | Montgomery County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|---|------------|----------|-----------------------|-----------|----------------------|------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed ANATF_MD / Anacostia River Tidal Fresh Maryland | Phosphorus | 795.0 | delivered pounds/year | 33% | 2010 | Montgomery County |
| The Chesapeake Bay TMDL | Segmentshed ANATF_MD / Anacostia River Tidal Fresh Maryland | Nitrogen | 11,755.6 | delivered pounds/year | 21% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed ANATF_MD / Anacostia River Tidal Fresh Maryland | Phosphorus | 981.3 | delivered pounds/year | 38% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed BACOH / Back River Oligohaline | Nitrogen | 6,112.3 | delivered pounds/year | 34% | 2010 | Baltimore County |
| The Chesapeake Bay TMDL | Segmentshed BACOH / Back River Oligohaline | Phosphorus | 562.3 | delivered pounds/year | 47% | 2010 | Baltimore County |
| The Chesapeake Bay TMDL | Segmentshed BOHOH / Bohemia River Oligohaline | Nitrogen | 1,243.5 | delivered pounds/year | 34% | 2010 | Cecil County |
| The Chesapeake Bay TMDL | Segmentshed BOHOH / Bohemia River Oligohaline | Phosphorus | 67.7 | delivered pounds/year | 45% | 2010 | Cecil County |
| The Chesapeake Bay TMDL | Segmentshed BSHOH / Bush River Oligohaline | Nitrogen | 14,149.3 | delivered pounds/year | 29% | 2010 | Harford County |
| The Chesapeake Bay TMDL | Segmentshed BSHOH / Bush River Oligohaline | Phosphorus | 676.2 | delivered pounds/year | 46% | 2010 | Harford County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|---|------------|----------|-----------------------|-----------|----------------------|------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed C&DOH_MD / C&D Canal Oligohaline Maryland | Nitrogen | 1,234.7 | delivered pounds/year | 34% | 2010 | Cecil County |
| The Chesapeake Bay TMDL | Segmentshed C&DOH_MD / C&D Canal Oligohaline Maryland | Phosphorus | 66.8 | delivered pounds/year | 45% | 2010 | Cecil County |
| The Chesapeake Bay TMDL | Segmentshed CB1TF / Northern Chesapeake Bay Tidal Fresh | Nitrogen | 1,031.6 | delivered pounds/year | 29% | 2010 | Baltimore County |
| The Chesapeake Bay TMDL | Segmentshed CB1TF / Northern Chesapeake Bay Tidal Fresh | Phosphorus | 59.4 | delivered pounds/year | 46% | 2010 | Baltimore County |
| The Chesapeake Bay TMDL | Segmentshed CB1TF / Northern Chesapeake Bay Tidal Fresh | Nitrogen | 1,011.6 | delivered pounds/year | 15% | 2010 | Carroll County |
| The Chesapeake Bay TMDL | Segmentshed CB1TF / Northern Chesapeake Bay Tidal Fresh | Phosphorus | 17.8 | delivered pounds/year | 24% | 2010 | Carroll County |
| The Chesapeake Bay TMDL | Segmentshed CB1TF / Northern Chesapeake Bay Tidal Fresh | Nitrogen | 18,119.6 | delivered pounds/year | 33% | 2010 | Harford County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|---|------------|---------|-----------------------|-----------|----------------------|---------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed CB1TF / Northern Chesapeake Bay Tidal Fresh | Phosphorus | 630.2 | delivered pounds/year | 46% | 2010 | Harford County |
| The Chesapeake Bay TMDL | Segmentshed CB1TF / Northern Chesapeake Bay Tidal Fresh | Nitrogen | 8,389.9 | delivered pounds/year | 30% | 2010 | Cecil County |
| The Chesapeake Bay TMDL | Segmentshed CB1TF / Northern Chesapeake Bay Tidal Fresh | Phosphorus | 354.2 | delivered pounds/year | 44% | 2010 | Cecil County |
| The Chesapeake Bay TMDL | Segmentshed CB2OH / Northern Chesapeake Bay Oligohaline | Nitrogen | 144.4 | delivered pounds/year | 36% | 2010 | Harford County |
| The Chesapeake Bay TMDL | Segmentshed CB2OH / Northern Chesapeake Bay Oligohaline | Phosphorus | 10.8 | delivered pounds/year | 48% | 2010 | Harford County |
| The Chesapeake Bay TMDL | Segmentshed CB3MH / Upper Chesapeake Bay Mesohaline | Nitrogen | 238.5 | delivered pounds/year | 34% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed CB3MH / Upper Chesapeake Bay Mesohaline | Phosphorus | 20.6 | delivered pounds/year | 46% | 2010 | Anne Arundel County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|--|------------|----------|-----------------------|-----------|----------------------|---------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed CB4MH / Middle Chesapeake Bay Mesohaline | Nitrogen | 2,853.5 | delivered pounds/year | 34% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed CB4MH / Middle Chesapeake Bay Mesohaline | Phosphorus | 234.2 | delivered pounds/year | 48% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed ELKOH / Elk River | Nitrogen | 6,752.6 | delivered pounds/year | 34% | 2010 | Cecil County |
| The Chesapeake Bay TMDL | Segmentshed ELKOH / Elk River | Phosphorus | 280.5 | delivered pounds/year | 45% | 2010 | Cecil County |
| The Chesapeake Bay TMDL | Segmentshed GUNOH / Gunpowder River Oligohaline | Nitrogen | 13,796.2 | delivered pounds/year | 23% | 2010 | Baltimore County |
| The Chesapeake Bay TMDL | Segmentshed GUNOH / Gunpowder River Oligohaline | Phosphorus | 816.2 | delivered pounds/year | 39.10% | 2010 | Baltimore County |
| The Chesapeake Bay TMDL | Segmentshed GUNOH / Gunpowder River Oligohaline | Nitrogen | 168.6 | delivered pounds/year | 8.80% | 2010 | Carroll County |
| The Chesapeake Bay TMDL | Segmentshed GUNOH / Gunpowder River Oligohaline | Phosphorus | 14.5 | delivered pounds/year | 14.40% | 2010 | Carroll County |
| The Chesapeake Bay TMDL | Segmentshed GUNOH / Gunpowder River Oligohaline | Nitrogen | 3,020.7 | delivered pounds/year | 25.30% | 2010 | Harford County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|--|------------|---------|-----------------------|-----------|----------------------|------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed GUNOH / Gunpowder River Oligohaline | Phosphorus | 153.7 | delivered pounds/year | 44.30% | 2010 | Harford County |
| The Chesapeake Bay TMDL | Segmentshed MAGMH / Magothy River Mesohaline | Nitrogen | 3,245.2 | delivered pounds/year | 34.30% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed MAGMH / Magothy River Mesohaline | Phosphorus | 268.7 | delivered pounds/year | 47.40% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed MATTF / Mattawoman Creek Tidal Fresh | Nitrogen | 2,099.6 | delivered pounds/year | 18.30% | 2010 | Charles County |
| The Chesapeake Bay TMDL | Segmentshed MATTF / Mattawoman Creek Tidal Fresh | Phosphorus | 234.6 | delivered pounds/year | 35.40% | 2010 | Charles County |
| The Chesapeake Bay TMDL | Segmentshed MATTF / Mattawoman Creek Tidal Fresh | Nitrogen | 640.6 | delivered pounds/year | 9.20% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed MATTF / Mattawoman Creek Tidal Fresh | Phosphorus | 105.9 | delivered pounds/year | 29.70% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed MIDOH / Middle River Oligohaline | Nitrogen | 514.0 | delivered pounds/year | 36.00% | 2010 | Baltimore County |
| The Chesapeake Bay TMDL | Segmentshed MIDOH / Middle River Oligohaline | Phosphorus | 46.5 | delivered pounds/year | 46.80% | 2010 | Baltimore County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|--|------------|----------|-----------------------|-----------|----------------------|---------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed NORTF / North East River Tidal Fresh | Nitrogen | 6,431.0 | delivered pounds/year | 28.90% | 2010 | Cecil County |
| The Chesapeake Bay TMDL | Segmentshed NORTF / North East River Tidal Fresh | Phosphorus | 239.4 | delivered pounds/year | 43.80% | 2010 | Cecil County |
| The Chesapeake Bay TMDL | Segmentshed PATMH / Patapsco River Mesohaline | Nitrogen | 13,850.2 | delivered pounds/year | 32.20% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed PATMH / Patapsco River Mesohaline | Phosphorus | 1,046.6 | delivered pounds/year | 45.30% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed PATMH / Patapsco River Mesohaline | Nitrogen | 15,659.9 | delivered pounds/year | 27.30% | 2010 | Baltimore County |
| The Chesapeake Bay TMDL | Segmentshed PATMH / Patapsco River Mesohaline | Phosphorus | 806.8 | delivered pounds/year | 43.10% | 2010 | Baltimore County |
| The Chesapeake Bay TMDL | Segmentshed PATMH / Patapsco River Mesohaline | Nitrogen | 690.6 | delivered pounds/year | 12.50% | 2010 | Carroll County |
| The Chesapeake Bay TMDL | Segmentshed PATMH / Patapsco River Mesohaline | Phosphorus | 76.1 | delivered pounds/year | 31.10% | 2010 | Carroll County |
| The Chesapeake Bay TMDL | Segmentshed PATMH / Patapsco River Mesohaline | Nitrogen | 4,195.3 | delivered pounds/year | 24.60% | 2010 | Howard County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|---|------------|-------|-----------------------|-----------|----------------------|------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed PATMH / Patapsco River Mesohaline | Phosphorus | 174.9 | delivered pounds/year | 31.30% | 2010 | Howard County |
| The Chesapeake Bay TMDL | Segmentshed PAXMH / Lower Patuxent River Mesohaline | Nitrogen | 838.1 | delivered pounds/year | 23.60% | 2010 | Charles County |
| The Chesapeake Bay TMDL | Segmentshed PAXMH / Lower Patuxent River Mesohaline | Phosphorus | 76.5 | delivered pounds/year | 38.70% | 2010 | Charles County |
| The Chesapeake Bay TMDL | Segmentshed PAXMH / Lower Patuxent River Mesohaline | Nitrogen | 201.3 | delivered pounds/year | 24.30% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed PAXMH / Lower Patuxent River Mesohaline | Phosphorus | 20.0 | delivered pounds/year | 38.60% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed PAXOH / Middle Patuxent River Oligohaline | Nitrogen | 546.3 | delivered pounds/year | 24.70% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed PAXOH / Middle Patuxent River Oligohaline | Phosphorus | 45.7 | delivered pounds/year | 39.90% | 2010 | Anne Arundel County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|---|------------|----------|-----------------------|-----------|----------------------|------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed PAXOH / Middle Patuxent River Oligohaline | Nitrogen | 436.5 | delivered pounds/year | 24.80% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed PAXOH / Middle Patuxent River Oligohaline | Phosphorus | 41.7 | delivered pounds/year | 39.20% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed PAXTF / Upper Patuxent River Tidal Fresh | Nitrogen | 9,888.8 | delivered pounds/year | 16.10% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed PAXTF / Upper Patuxent River Tidal Fresh | Phosphorus | 697.5 | delivered pounds/year | 30.30% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed PAXTF / Upper Patuxent River Tidal Fresh | Nitrogen | 22,932.4 | delivered pounds/year | 8.80% | 2010 | Howard County |
| The Chesapeake Bay TMDL | Segmentshed PAXTF / Upper Patuxent River Tidal Fresh | Phosphorus | 1,465.3 | delivered pounds/year | 17% | 2010 | Howard County |
| The Chesapeake Bay TMDL | Segmentshed PAXTF / Upper Patuxent River Tidal Fresh | Nitrogen | 73.9 | delivered pounds/year | 10% | 2010 | Montgomery County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|--|------------|---------|-----------------------|-----------|----------------------|------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed PAXTF / Upper Patuxent River Tidal Fresh | Phosphorus | 44.0 | delivered pounds/year | 12% | 2010 | Montgomery County |
| The Chesapeake Bay TMDL | Segmentshed PAXTF / Upper Patuxent River Tidal Fresh | Nitrogen | 6,356.1 | delivered pounds/year | 18% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed PAXTF / Upper Patuxent River Tidal Fresh | Phosphorus | 625.0 | delivered pounds/year | 30% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed PISTF / Piscataway Creek Tidal Fresh | Nitrogen | 3,011.4 | delivered pounds/year | 22% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed PISTF / Piscataway Creek Tidal Fresh | Phosphorus | 300.1 | delivered pounds/year | 39% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed POTMH_MD / Lower Potomac River Mesohaline Maryland | Nitrogen | 3,578.6 | delivered pounds/year | 19% | 2010 | Charles County |
| The Chesapeake Bay TMDL | Segmentshed POTMH_MD / Lower Potomac River Mesohaline Maryland | Phosphorus | 346.3 | delivered pounds/year | 37% | 2010 | Charles County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|--|------------|---------|-----------------------|-----------|----------------------|------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed POTMH_MD / Lower Potomac River Mesohaline Maryland | Nitrogen | 124.0 | delivered pounds/year | 15% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed POTMH_MD / Lower Potomac River Mesohaline Maryland | Phosphorus | 13.1 | delivered pounds/year | 33% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed POTOH1_MD / Lower Potomac River Oligohaline Maryland | Nitrogen | 102.8 | delivered pounds/year | 23% | 2010 | Charles County |
| The Chesapeake Bay TMDL | Segmentshed POTOH1_MD / Lower Potomac River Oligohaline Maryland | Phosphorus | 12.0 | delivered pounds/year | 37% | 2010 | Charles County |
| The Chesapeake Bay TMDL | Segmentshed POTOH2_MD / Port Tobacco River Oligohaline Maryland | Nitrogen | 1,833.5 | delivered pounds/year | 24% | 2010 | Charles County |
| The Chesapeake Bay TMDL | Segmentshed POTOH2_MD / Port Tobacco River Oligohaline Maryland | Phosphorus | 161.5 | delivered pounds/year | 40% | 2010 | Charles County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|---|------------|---------|-----------------------|-----------|----------------------|------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed POTOH3_MD / Nanjemoy Creek Oligohaline Maryland | Nitrogen | 913.9 | delivered pounds/year | 22% | 2010 | Charles County |
| The Chesapeake Bay TMDL | Segmentshed POTOH3_MD / Nanjemoy Creek Oligohaline Maryland | Phosphorus | 96.8 | delivered pounds/year | 37% | 2010 | Charles County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_DC / Upper Potomac River Tidal Fresh DC | Nitrogen | 5,982.9 | delivered pounds/year | 11% | 2010 | Montgomery County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_DC / Upper Potomac River Tidal Fresh DC | Phosphorus | 404.5 | delivered pounds/year | 29% | 2010 | Montgomery County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_DC / Upper Potomac River Tidal Fresh DC | Nitrogen | 1,298.2 | delivered pounds/year | 25% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_DC / Upper Potomac River Tidal Fresh DC | Phosphorus | 125.9 | delivered pounds/year | 40% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_MD / Upper Potomac River Tidal Fresh Maryland | Nitrogen | 7,897.8 | delivered pounds/year | 8% | 2010 | Carroll County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|---|------------|----------|-----------------------|-----------|----------------------|-------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed POTTF_MD / Upper Potomac River Tidal Fresh Maryland | Phosphorus | 764.5 | delivered pounds/year | 20% | 2010 | Carroll County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_MD / Upper Potomac River Tidal Fresh Maryland | Nitrogen | 377.5 | delivered pounds/year | 25% | 2010 | Charles County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_MD / Upper Potomac River Tidal Fresh Maryland | Phosphorus | 33.9 | delivered pounds/year | 40% | 2010 | Charles County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_MD / Upper Potomac River Tidal Fresh Maryland | Nitrogen | 76,039.6 | delivered pounds/year | 10% | 2010 | Frederick County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_MD / Upper Potomac River Tidal Fresh Maryland | Phosphorus | 4,036.8 | delivered pounds/year | 18% | 2010 | Frederick County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_MD / Upper Potomac River Tidal Fresh Maryland | Nitrogen | 45,582.1 | delivered pounds/year | 16% | 2010 | Montgomery County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|---|------------|----------|-----------------------|-----------|----------------------|------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed POTTF_MD / Upper Potomac River Tidal Fresh Maryland | Phosphorus | 2,253.0 | delivered pounds/year | 20% | 2010 | Montgomery County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_MD / Upper Potomac River Tidal Fresh Maryland | Nitrogen | 4,967.8 | delivered pounds/year | 25% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_MD / Upper Potomac River Tidal Fresh Maryland | Phosphorus | 467.2 | delivered pounds/year | 40% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_MD / Upper Potomac River Tidal Fresh Maryland | Nitrogen | 67,615.1 | delivered pounds/year | 15% | 2010 | Washington County |
| The Chesapeake Bay TMDL | Segmentshed POTTF_MD / Upper Potomac River Tidal Fresh Maryland | Phosphorus | 2,397.1 | delivered pounds/year | 23% | 2010 | Washington County |
| The Chesapeake Bay TMDL | Segmentshed RHDMMH / Rhode River Mesohaline | Nitrogen | 662.6 | delivered pounds/year | 34% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed RHDMMH / Rhode River Mesohaline | Phosphorus | 54.5 | delivered pounds/year | 47% | 2010 | Anne Arundel County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|-------------------------|---|------------|---------|-----------------------|-----------|----------------------|------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed SASOH / Sassafras River Oligohaline | Nitrogen | 1,088.9 | delivered pounds/year | 34% | 2010 | Cecil County |
| The Chesapeake Bay TMDL | Segmentshed SASOH / Sassafras River Oligohaline | Phosphorus | 58.7 | delivered pounds/year | 45% | 2010 | Cecil County |
| The Chesapeake Bay TMDL | Segmentshed SEVMH / Severn River Mesohaline | Nitrogen | 5,572.3 | delivered pounds/year | 34% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed SEVMH / Severn River Mesohaline | Phosphorus | 463.5 | delivered pounds/year | 47% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed SOUMH / South River Mesohaline | Nitrogen | 4,235.9 | delivered pounds/year | 34% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed SOUMH / South River Mesohaline | Phosphorus | 363.6 | delivered pounds/year | 47% | 2010 | Anne Arundel County |
| The Chesapeake Bay TMDL | Segmentshed WBRTF / Western Branch Patuxent River Tidal Fresh | Nitrogen | 8,815.5 | delivered pounds/year | 19% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed WBRTF / Western Branch Patuxent River Tidal Fresh | Phosphorus | 823.2 | delivered pounds/year | 33% | 2010 | Prince George's County |
| The Chesapeake Bay TMDL | Segmentshed WSTMH / West River Mesohaline | Nitrogen | 326.5 | delivered pounds/year | 34% | 2010 | Anne Arundel County |

| TMDL Report | Location | TMDLS | | | | Year Approved by EPA | County |
|--|---|------------|---------|-----------------------|-----------|----------------------|--------------------------------|
| | | Impairment | WLA | Units | Reduction | | |
| The Chesapeake Bay TMDL | Segmentshed WSTMH / West River Mesohaline | Phosphorus | 26.7 | delivered pounds/year | 48% | 2010 | Anne Arundel County |
| Tidal Potomac and Anacostia River PCBs | 8 Digit WS 02140201 / Potomac River, Upper | PCBs | 16.2 | grams/year | 92% | 2007 | Prince George's County |
| Tidal Potomac and Anacostia River PCBs | 8 Digit WS 02140204 / Oxon Creek | PCBs | 0.7 | grams/year | 99% | 2007 | Prince George's County |
| Tidal Potomac and Anacostia River PCBs | Subsegment of 8 Digit WS 02140205 / Anacostia - Tidal Portion | PCBs | 1.1 | grams/year | 100% | 2007 | Prince George's County |
| Upper Monocacy Nutrients | 8 Digit WS 02140303 / Upper Monocacy River | Phosphorus | 2,404.0 | pounds/year | 3% | 2013 | Carroll and Frederick Counties |
| Upper Monocacy River Sediment | 8 Digit WS 02140303 / Upper Monocacy River | TSS | 371.5 | tons/year | 44% | 2009 | Carroll County |
| Upper Monocacy River Sediment | 8 Digit WS 02140303 / Upper Monocacy River | TSS | 1,770.0 | tons/year | 49% | 2009 | Frederick County |
| West River Non-Tidal Sediment | 8-Digit WS 02131004 / West and Rhode Rivers | TSS | 19.0 | tons/year | 24% | 2019 | Anne Arundel County |

Appendix B
BMP Portfolio – New and Replacement BMPs

| BMP NAME | BMP TYPE ¹ | NUMBER OF BMPs | IMPERVIOUS ACRES TREATED ^{2,3} | LENGTH RESTORED (feet)/ LANE MILES (miles)/ TONS REMOVED (tons) ³ |
|---|--|------------------|---|--|
| Obligations from Previous Permit That Must Be Continued | | | | |
| Annual BMPs | | | | |
| Street Sweeping | VSS | N/A ³ | 0.0 ⁴ | 155.7 |
| Catch Basin Cleaning | CBC | N/A ³ | 0.0 ⁴ | 598,500 |
| Capital Projects – Replacing Annual BMPs | | | | |
| | | | | |
| Proposed Restoration for Year [insert year of permit (e.g., 2)] of the Reissued Permit | | | | |
| Annual BMPs | | | | |
| | | | | |
| Capital Projects – New Restoration | | | | |
| N/A ⁵ | Restoration beyond the 20% Requirement from the 2015 permit, implemented up to 10/8/2020, and being used for restoration under the next permit | N/A ⁵ | 1,505.5 | N/A ⁵ |
| N/A ⁵ | Restoration completed during the administrative continuation and being used for restoration under the next permit | N/A ⁵ | 661.4 | N/A ⁵ |
| 130048 | PWET | 1 | 4.1 | N/A ³ |
| 020363 | PWET | 1 | 7.8 | N/A ³ |

Notes:

1. BMP types are from the MS4 Geodatabase.
2. Final equivalent impervious acres treated from stream restorations must be based on

individual site-specific values and not the planning rate.

3. N/A = not applicable (BMPs with no associated number of BMPs, length, lane miles, or mass loading metric).
4. MDOT SHA street sweeping and inlet cleaning operations since the end of the previous MS4 Permit term have not met the requirements of the 2021 Accounting Guidance. MDOT SHA implementation of these BMP types after October 8, 2020 has not been claimed for impervious acre restoration, but MDOT SHA is continuing these practices.
5. The impervious acre restoration in addition to the 20% requirement of the previous MS4 Permit, completed prior to October 8, 2020 and during the administrative continuation, included multiple BMPs which are summarized as two records of total impervious acre credit. As a result, BMP NAME, NUMBER OF BMPs, and LENGTH RESTORED (feet)/ LANE MILES (miles)/ MASS LOADING (lbs) are not presented.

Column Descriptions

- BMP NAME: Unique ID or name of project.
- BMP TYPE: Type of restoration BMP. BMP types and classes from the MS4 Geodatabase (see table below). Additional BMP types (e.g., DGI) from the 2021 Accounting Guidance may also be used.
- NUMBER OF BMPs: The number of restoration BMPs present. If a project has multiple types of a single BMP, the amount is identified in the Number of BMPs column. If using septic pumping or denitrification, the number of affected septic systems is reported in this column.
- IMPERVIOUS ACRES TREATED: Impervious acres treated, using the 2021 Accounting Guidance.
- LENGTH RESTORED (feet)/ LANE MILES (miles)/ TONS REMOVED (tons): Length of stream restoration, outfall stabilized, or shoreline stabilized/ lane miles swept/ pounds of material removed as a part of inlet cleaning.

Appendix C

BMP TYPE Definitions

| BMP TYPE CODE | BMP TYPE |
|------------------------------|-------------------------------------|
| Alternative Surfaces (A) | |
| AGRE | Green Roof – Extensive |
| AGRI | Green Roof – Intensive |
| APRP | Permeable Pavements |
| ARTF | Reinforced Turf |
| Nonstructural Techniques (N) | |
| NDRR | Disconnection of Rooftop Runoff |
| NDNR | Disconnection of Non-Rooftop Runoff |
| NSCA | Sheetflow to Conservation Areas |
| Micro-Scale Practices (M) | |
| MRWH | Rainwater Harvesting |
| MSGW | Submerged Gravel Wetlands |
| MILS | Landscape Infiltration |
| MIBR | Infiltration Berms |
| MIDW | Dry Wells |
| MMBR | Micro-Bioretenion |
| MRNG | Rain Gardens |
| MSWG | Grass Swale |
| MSWW | Wet Swale |
| MSWB | Bio-Swale |
| MENF | Enhanced Filters |
| Ponds (P) | |
| PWED | Extended Detention Structure, Wet |
| PWET | Retention Pond (Wet Pond) |
| PMPS | Multiple Pond System |
| PPKT | Pocket Pond |
| PMED | Micropool Extended Detention Pond |
| Wetlands (W) | |
| WSHW | Shallow Marsh |
| WEDW | ED – Wetland |
| WPWS | Wet Pond – Wetland |
| WPKT | Pocket Wetland |
| Infiltration (I) | |

| | |
|-----------------------|--|
| IBAS | Infiltration Basin |
| ITRN | Infiltration Trench |
| Filtering Systems (F) | |
| FBIO | Bioretention |
| FSND | Sand Filter |
| FUND | Underground Filter |
| FPER | Perimeter (Sand) Filter |
| FORG | Organic Filter (Peat Filter) |
| Open Channels (O) | |
| ODSW | Dry Swale |
| OWSW | Wet Swale |
| Other Practices (X) | |
| XDPD | Detention Structure (Dry Pond) |
| XDED | Extended Detention Structure, Dry |
| XFLD | Flood Management Area |
| XOGS | Oil Grit Separator |
| XOTH | Other |
| Alternative BMPs | |
| MSS | Mechanical Street Sweeping |
| VSS | Regenerative/Vacuum Street Sweeping (i.e., Advanced Street Sweeping) |
| IMPP | Impervious Surface Reduction (i.e., impervious to pervious) |
| IMPF | Impervious Surface to Forest (i.e., IMPP + FPU) |
| FPU | Forestation on Pervious Urban (i.e., Forest Planting) |
| CBC | Catch Basin Cleaning |
| SDV | Storm Drain Vacuuming |
| STRE | Stream Restoration |
| OUT | Outfall Stabilization |
| SHST | Shoreline Management |
| SPSD | Dry Channel Regenerative Step Pool Stormwater Conveyance System |
| SEPP | Septic Pumping |
| SEPD | Septic Denitrification |
| SEPC | Septic Connections to WWTP |
| FTW | Floating Treatment Wetland |
| FCO | Forest Conservation |
| CLTM | Conservation Landscaping |
| RCL | Riparian Conservation Landscaping |
| RFP | Riparian Forest Planting |

| | |
|------|--|
| STCI | Street Tree |
| USRP | Urban Soil Restoration (Compacted Pervious Surfaces) |
| USRI | Urban Soil Restoration (Removed Impervious Surfaces) |
| UTC | Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf) |
| DGI | Elimination of Discovered Nutrient Discharges from Grey Infrastructure |
| OTH | Other |