Public Comments Received Regarding the Tentative Determination to Re-Issue the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (General Discharge Permit No. 13-IM-5500, General NPDES No. MDR055500)

Commenters:

1. City of Aberdeen
2. Allegany County
3. Town of Boonsboro
4. Calvert County
5. Cecil County
6. Chesapeake Bay Foundation et al.
7. City of Frederick
8. City of Gaithersburg
9. City of Hagerstown
10. Maryland Municipal Stormwater Association (MAMSA) et al.
11. Maryland Department of Agriculture
12. Maryland League of Conservation Voters
13. Queen Anne's County
14. St. Mary's County
15. Washington County

Aberdeen
Home of Opportunity

March 27, 2017

Deborah Cappuccitti, Senior Regulatory Compliance Engineer
MD Department of Environment
Water Management Administration
1800 Washington Blvd.
Baltimore, MD 21230

Reference: **Proposed Reissuance of General Permit for Discharges from Small MS4s** (12-21-16)

Dear Ms. Cappuccitti;

The City of Aberdeen provides the following comments on the Maryland Department of the Environment's (MDE's or Department's) tentative Determination to reissue the National Pollutant Discharge Elimination System (NPDES) General Permit (GP) for discharges from Small Municipal Separate Storm Sewer System.

1. The City of Aberdeen, as a member of Maryland Municipal Stormwater Association (MAMSA), endorses the contents of the comments by this organization, contained under separate cover letter.

Part III

2. There are conflicting statements in Part III vs. what the Fact Sheet states: On page 3, Part III of the draft permit it states, "*Effectively prohibit pollutants in stormwater discharges or other unauthorized discharges into the MS4 as necessary to comply with Maryland's receiving water quality standards.*" In the Introduction, page 1 of the Fact Sheet it states, "*This permit will establish stormwater management programs to effectively control the discharge of storm drain system pollutants and improve water quality.*" The words prohibit and control have vastly different meanings. Please clarify.

3. In Part III, bullet 2 on page 3, the draft permit states the permittee must, "*Attain applicable wasteload allocations for each established or approved TMDL.....*" vs. show progress toward the TMDL or use Maximum Extent Practicable (MEP), the legal standard for MS4 discharges. The last paragraph in Part III then states that, "*Compliance with the condition contained in Parts IV and V of this permit shall constitute compliance with Section 402(p)(3)(B)(iii) of the CWA and adequate progress toward compliance with Maryland's receiving water quality standards and any EPA approved stormwater WLA for this permit term.*" This statement therefore indicates that by implementing the Minimum Control Measures in Part IV and the

Chesapeake Bay Restoration requirements in Part V that the permittee will be compliant with meeting WLAs. Please specify whether permittees must "attain" a WLA or that implementing the MCMs and Chesapeake Bay Restoration requirements will attain compliance.

Part IV

4. Part IV. A. Public Education and Outreach:

    a. Define and clarify "*hotline for the public to report water quality complaints*" Is this a separate phone line? What are the expectations for the municipality to respond to complaints? The use of a "Hotline" in a general sense is for emergency purposes; the ability to convey this number to the public as a hotline is misleading when most complaints for water quality are not emergencies, some are i.e. fish kill, sewage leaks into local waterways, fuel spills, etc. However, these types of emergencies often go through 911 or on-call emergency staff and not a "dedicated" hotline.

    b. "*Describe in reports to MDE how the education programs facilitate the permittee's efforts to reduce pollutants in stormwater runoff.*" Please clarify how these requirements will measure the City's effectiveness in providing these education programs. This requirement appears to be an unnecessary administrative burden when the previous items within this section already provide tangible goals and metrics to measure the effectiveness. Recommend to delete Part IV, Para A.5 this requirement from this permit.

5. Part IV. B. Public Involvement and Participation

    a. *Perform at least 5 public participation events during the permit term and report to MDE in accordance with reporting requirements.* Is there an expectation for completion of the 5 public events? For example, if MDE has an expectation of one event per year, and the City does not have one or the City waits until the last year to conduct all five (5); how does MDE measure the effectiveness or document non-compliance when the current method is to report as indicated on the reporting periods as specified in Part VI.C.3?

    b. "*Provide public access to the permittee's progress reports via website or other method and consider any substantive public comments received concerning the jurisdiction's MS4 program*" The City did not meet its deadline for submitting its FY2016 MS4 annual report and hired a consultant due to lack of staffing to assist. This MCM assumes an ability to manage web pages, provide status updates, and

respond to public comments. This may be practical for a Phase I permittee with larger staffs and funding abilities, but for a phase II permittee, this appears to be an onerous requirement. We request that this requirement be removed from the permit.

6. Part IV. C. Illicit Discharge Detection and Elimination

   a. It should be noted that the City may not be able to identify every illicit discharge. The first sentence in Part IV. C. must be reworded so the permittee is not required to "identify" all illicit storm drain system discharges.

   b. The City is not able to ensure that all "*.....spills, illegal dumping, and other suspected illicit discharges*" are eliminated. The IDDE program is designed to address third party entities, not the permittee. There are instances of "acute" dumping of non-stormwater (e.g. pet waste, oil, paint, etc.) that cannot be prohibited or eliminated entirely. That's the purpose of the Public Education and Public Involvement elements. There are also actions and processes in the IDDE SOP that address spills, illegal dumping, and other suspected illicit discharges such as source tracking, certified letter notification to business or home owners, educational door hangers, etc. to help prohibit future illicit discharges to the MEP. The first sentence in Part IV. C. must be reworded so the permittee is not required to "eliminate" all illicit storm drain system discharges.

   c. *"Establish a legal means for gaining access to private property to investigate and eliminate illicit storm drain system discharges (e.g. ordinances, easements, warrants."* We have concerns about the amount of administrative burden placed on a municipality to track all actions to meet compliance. This task requires a significant amount of action on the City's staff to document a case, investigate it, work with the owner whether cooperative or uncooperative, and follow up for compliance. The requirement for legal action involves Standard Operating Procedures and training of staff to ensure that all actions are taken to meet legal sufficiency to take the property owner to court for a ruling that may still not resolve the issues and eliminate the discharge.

Part IV

7. Part V.A.1-6. The Baseline Impervious Area Assessment, Work Plan, and long-term budget are due with the first annual report (September 1, 2018). This gives the permittee less than one (1) year to complete, assuming the permit is issued later in 2017 as indicated during the 2/13/17 MAMSA meeting. This is in addition to all the other requirements mandated to be

implemented in the six (6) minimum control measures. In contrast, the Delaware Phase II permit requires the impervious layer at Year 4. Municipalities will have to begin planning now for the upcoming fiscal year for a program that is not staffed, funded, or resourced and requires time to educate the elected officials so that the approvals can be obtained to implement. We request that this requirement be delayed until Year 4 to allow for other programmatic issues to be stood up within this permit.

Part VII

8. Part VII.R. Reporting Requirements: *"The permittee shall report any non-compliance which may endanger human health or the environment. Any information shall be provided orally within 24 hours from the time when the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances..."* Please provide instances or examples as to what MDE classifies as non-compliance that may endanger human health or the environment. MDE provides guidance on sanitary sewer overflows on when they are considered reportable and non-reportable and the appropriate thresholds. Please provide further clarification to what constitutes an immediate report as MDE views this requirement on the permittee.

General

9. MEP (Maximum Extent Practicable) is scattered throughout the permit, which is acceptable. However, MDE does not provide the MEP reference to complying with water quality standards in Part III. It states the following: *Attain applicable waterload allocations (WLAs) for each established or approved Total Maximum Daily Load (TMDL) for each receiving water body, consistent with Title 33 of the U.S. Code (USC) 1342(p)(3)(B)(iii); 40 CFR 122.44(k)(2) and (3);. ~~"Small municipalities covered under this general permit must manage, implement, and enforce management programs for controlling all stormwater discharges in accordance with the Clean Water Act (CWA) and corresponding stormwater NPDES regulations, 40 CFR Part 122.~~* Aqualaw's review of the DelDOT permit stated that the CWA does not mandate Stormwater discharges comply with WQS. Implementing the approved Plan (Parts IV and V) should show compliance with the WQS and TMDL (as stated in the last paragraph of Part III).

10. There is contradictory language between the fact sheet and the permit: The fact sheet says "Develop and implement an impervious area restoration plan within the first year of permit issuance....." The permit states only that the permittee has to develop the restoration plan. Please clarify.

11. Appendix D Requests the "*Cost of implementing this MCM during this permit term*" This could be a very onerous process to track labor hours, vehicle costs, materials and other data to meet this metric for every MCM. Will an estimate suffice or will detailed backup data be required to ensure compliance of the task? Please clarify.

If you have any further questions, please contact the undersigned at 410-272-1600 x 217 or ktorster@aberdeenmd.gov

Sincerely,

Kyle Torster

Kyle E. Torster, P.E,
Director of Public Works

ALLEGANY COUNTY, MARYLAND
Office of The Board of County Commissioners

701 Kelly Road
Cumberland, MD 21502
301-777-5912 FAX 301-724-6970
www.gov.allconet.org

BOARD OF COMMISSIONERS
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March 27, 2017

Benjamin H. Grumbles, Secretary
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, MD 21230

RE: Combined Sewer System (CSS) Exclusion Eligibility
NPDES General Permit for Small MS4's – General Discharge Permit No. 13-IM-5500

Dear Secretary Grumbles,

Allegany County was notified by MDE in November 2016 of our jurisdiction's proposed inclusion in the tentative determination to re-issue the NPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4) – Permit #MDR055500, 13-IM-5500.

Since then, we have diligently reviewed and evaluated the small MS4 regulations and gained understanding for the proposed inclusion based on the defined "urbanized area". This effort prompted collaboration between our sanitary sewer professionals and our stormwater professionals. Together, we have focused and regained perspective on the key objective of the Clean Water Act (CWA), which is to keep pollutants out of our nation's waters for protection of public health and the environment. To that end, a local government's responsibility is certainly to prioritize implementation of cost-effective projects that will address the most critical threats first.

The enclosed map depicts the areas by census block of Allegany County that are under Consent Orders from MDE to address combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs). Multiple jurisdictions are subject to these Consent Orders, as summarized in **Table 1**. All of these jurisdictions are working strategically and diligently in all districts to make progress in addressing the most critical public health threat to our streams - raw sewage overflows. It is important to note that while the Bedford Road and Jennings Run/Wills Creek Consent Order is classified as "SSO", those flows are contributing to Cumberland's CSS; therefore, lack of control in the upper reaches of this complex multi-jurisdictional CSS would result in higher volume CSOs downstream. The vast majority of our urbanized area is served by this complex CSS. This system collects and conveys combined flow beginning in and around Frostburg. The system collects additional sanitary flow as it conveys combined flow through County (Braddock Run district) and LaVale Sanitary jurisdictions eastward towards Cumberland. The system also collects sanitary flow north of Cumberland (Jennings/Wills and Bedford) and collects and conveys additional combined flow in Cumberland to the Riverside WWTP.

In order to meet the obligations of the Consent Orders, Allegany County completed Sanitary Sewer Evaluation Studies (SSES) for each district and submitted them to MDE. Each SSES provides a recommended course of action for prioritizing projects and the status of SSES completion dates are shown in **Table 1**. Allegany County has also dedicated a fully-trained Inflow & Infiltration (I&I) crew that performs home plumbing inspections including smoke testing, extensive videoing of sewer lines utilizing a County-owned closed circuit television (CCTV) system, flow metering and manhole inspections. These investigations support prioritization of improvements, which have included rehabilitation and replacement of sewer lines, pump station upgrades, and illicit connection disconnects. For detailed tracking of our efforts and progress, the latest version of our *Capacity, Management, Operations & Maintenance (CMOM)* report was submitted to MDE in April 2015. The

CMOM is currently undergoing a biennial update. A summary table of projects completed and associated costs is also enclosed.

Table 1: Summary of CSO and SSO Consent Orders

Consent Order Number	Effective Date	District	Responsible Jurisdiction	WWTP	CSS Complete
C-98-16009-S (SSO)	10/15/1998	Bowling Green	Allegany County DPW-Utilities	North Branch WWTP	2009
		Cresaptown			
		Georges Creek		Georges Creek WWTP	2002
01-C-00-18342L (CSO)	12/14/2001	Braddock Run	Allegany County DPW-Utilities	Riverside WWTP	2012
		Frostburg	City of Frostburg		--
		LaVale	LaVale Sanitary Commission		--
		Cumberland	City of Cumberland		--
CO-07-0395 (SSO feeding to CSS)	10/26/2006	Bedford Rd	Allegany County DPW-Utilities	Riverside WWTP	2010
		Jennings Run/Wills Creek			2010

In addition to the County's efforts, the City of Frostburg is approximately 65% separated and the City of Cumberland has an approved capture and treat design for which they are currently pursuing construction funding. To date, an estimated $78 million has been invested to address sewage overflows throughout the county, with an estimated $32 million having been invested into Allegany County's portion of the systems. The projected cost to meet the Consent Order obligations is estimated at $166 million with $70 million projected for Allegany County's portion.

The NPDES Small MS4 regulations state explicitly that "the definition of small MS4s does not include combined sewer systems…and combined sewer systems are not subject to [these] regulations". We commend EPA for having the forethought to exclude these systems from stormwater permitting, as this logically allows a jurisdiction to remain focused on the most critical threat to public health and the environment before beginning to direct limited resources to a second water quality priority.

MDE's determination to exclude the City of Cumberland and the City of Frostburg based on the exclusion language in the small MS4 regulations stated above is straight-forward in that the municipalities in their entirety are served by combined sewer systems. Allegany County's determination, however, is more complex and requires a thorough review of the systems depicted on the enclosed map. While Allegany County's storm sewer system is not combined in its entirety, the County's CSO and SSO Consent Orders have a direct correlation with the performance of the overall CSS that serves the vast majority of our urbanized area. In order to maintain EPA's priority to address the most critical threat first, Allegany County respectfully requests MDE and EPA to reconsider determination for our coverage under the small MS4 permit so that our resources can remain focused on the most critical threat: raw sewage overflows.

The population served by systems under CSO and SSO Consent Orders makes up 79.4% of our county's total population. As demonstrated by the costs summarized above, our community is deeply invested in addressing the public health and environmental threats associated with raw sewage overflows. To meet the requirements of a stormwater permit in addition to our existing efforts would only serve to redirect our limited resources from the priority of the most critical threat.

Despite Allegany County's 78% forest cover and "non-regulated" stormwater status, we have demonstrated a strong commitment to protecting surface water quality. All of our major wastewater treatment plants have been upgraded to ENR technology, a $46 million County investment. Our stormwater program for new and re-development is fully administered, including triennial maintenance inspections and enforcement and our sediment & erosion control program is fully administered by Allegany Soil Conservation District with MDE enforcement. These programs, together with our efforts to control CSOs and SSOs, result in substantial surface water quality benefits. This is realized in that the Potomac River as it flows from Allegany County does not have impairments for sediments or nutrients (see *Water Quality Analyses (WQA) of Sediment and Nutrients in the Potomac River Lower North Branch Watershed, Allegany County, MD* with EPA approval dated May 18, 2012).

Thank you for your thoughtful consideration of our exclusion eligibility. We would welcome the opportunity to meet with you to discuss the complexities of our sewer systems and factors for surface water quality prioritization. Please contact Paul Kahl, Director of Public Works, at 301.876-9566 or pkahl@alleganygov.org if you wish to schedule a meeting with our technical staff.

Sincerely,
Board of Allegany County Commissioners

Jacob C. Shade
President

Enclosures: Map – Consent Orders by Census Block
Table - Summary of CSO/SSO Projects Completed by Allegany County

CC: Raymond Bahr, MDE Water Management Administration - Sediment, Stormwater & Dam Safety Program
David Eberly, County Administrator
Paul Kahl, P.E., Director, Public Works
Mark Yoder, P.E., Utilities Division Chief
Angie Patterson, P.E., Land Use & Planning Engineer
Jim Webber, P.E., Utilities Engineer
Bill Rudd, County Attorney

Summary of CSO/SSO Projects Completed by Allegany County

Consent Order No.		Project	Cost
C-98-16009-S (SSO)			
	2002	Georges Creek/Bowling Green SSES	$1,500,000
	2005	Georges Creek Sewer Rehabilitation	$320,000
	2005	Cresaptown/Bowling Green Sewer Rehabiltation	$2,500,000
		Total	**$4,320,000**
01-C-00-18342L (CSO)			
	2009	Braddock Run Sewer	$1,500,000
	2012	Braddock Run Sewer Rehabiltation	$1,200,000
	2014	Braddock Run Phase II-Grahamtown/Consol	$1,286,000
	2015	Braddock Run Sanitary Rehabilitation Phase III	$1,338,000
	2015	Wrights Crossing Pump Station	$3,144,000
	2016	Braddock Run Sewer Rehabiltation Phase 5	$396,500
		Total	**$8,864,500**
CO-07-0395 (SSO feeding to CSS)			
	2010	Bedford Road SSES	$1,000,000
	2010	Jennings Run SSES	$1,000,000
	2011	Corriganville Pump Station	$962,750
	2011	Mount Savage Sewer Replacement	$250,000
	2011	Mount Savage Sewer Rehabilitation	$2,000,000
	2012	Ioka LPGS	$1,500,000
	2012	Bedford Road Phase III-Highland Estates	$1,000,000
	2013	Jennings Run Sanitary Sewer Rehabilitation Phase II	$1,356,000
	2013	Jennings Run Sewer Rehabilitation	$1,356,619
	2015	Bedford Road Phase IV-Mill Run	$936,442
		Total	**$11,361,811**
Designated County I&I Program			
	2009	Closed Circuit Television (CCTV) Truck	$230,000
	2009	Mobile CCTV Camera	$100,000
	2009	Large Sewer Cleaner Vac Truck	$450,000
	2009	Small Sewer Cleaner Vac Truck	$275,000
	2009	Push Camera	$15,000
	2009	Manhole Inspection Pole Camera	$25,000
	2009	Bypass pumps for CCTV work	$100,000
	2009	CCTV Software	$30,000
	2009-present	4-man Designated I&I Crew ($200K/year * 8 years)	$1,600,000
	2009	Training & certification of I&I Crew	$9,000
	2009-present	Repair work completed by County Utilities crew	$1,000,000
	2002-present	Management/engineering/inspection of all I&I contracts	$3,682,000
		Total	**$7,516,000**
		Grand Total	**$32,062,311**

Notes: Projects listed are funded by state or federal grants and loans
CCTV used for videotaping sewer lines

Consent Orders by Census Block
Allegany County, MD

- Waste Water Treatment Plants
- Overflow (open)
- Overflow (eliminated)
- County Sewer Lines
- Urbanized Area

Consent Orders Within Riverside Combined Sewer System

- Bedford Road, CO-07-0395
- Braddock Run, 01-C-00-18342-L, CSO
- Jennings Run/Wills Creek, CO-07-0395

Consent Orders Outside Riverside Combined Sewer System

- Bowling Green, C-98-16009-S
- Town of Westernport, 01-C-00-018487-L, CSO
- Cresaptown, C-98-16009-S
- Georges Creek Sewer, C-98-16009-S
- LaVale, C-98-16009-S

SOMERSET

BEDFORD

GARRETT

MINERAL

HAMPSHIRE

Ellerslie

Corriganville

Mount Savage

Frostburg

LaVale

Cumberland

Riverside WWTP

North Branch WWTP

Cresaptown

Midland

Lonaconing

Rawlings

Barton

Georges Creek WWTP

Westernport

Luke

Upper Potomac River Commission WWTP

47 36 220 68 40 55 53 936 657 51 135

Note:

- 90.7% of County Maintained Sewers are in Sewer Districts that are under Consent Order
- 79.4% of The County's Population resides in Sewer Districts that are under Consent Order

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Summary of CSO/SSO Projects Completed by Allegany County

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	2009	Push Camera	$15,000
	2009	Manhole Inspection Pole Camera	$25,000
	2009	Bypass pumps for CCTV work	$100,000
	2009	CCTV Software	$30,000
	2009-present	4-man Designated I&I Crew ($200K/year * 8 years)	$1,600,000
	2009	Training & certification of I&I Crew	$9,000
	2009-present	Repair work completed by County Utilities crew	$1,000,000
	2002-present	Management/engineering/inspection of all I&I contracts	$3,682,000
		Total	**$7,516,000**
		Grand Total	**$32,062,311**

Notes: Projects listed are funded by state or federal grants and loans
CCTV used for videotaping sewer lines

BOONSBORO MAYOR AND COUNCIL

21 NORTH MAIN STREET
BOONSBORO, MARYLAND 21713
301-432-5141 301-432-4050 (f)
www.town.boonsboro.md.us

HOWARD W. LONG
MAYOR

March 20, 2017

Mr. Raymond P. Bahr
Maryland Department of the Environment
Water Management Administration
1800 Washington Blvd., Ste. 440
Baltimore, Maryland 21230-1708

RE: Boonsboro Phase II MS4 Permit

Dear Mr. Bahr:

We have reviewed the draft National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4); specifically for administration and potential implementation in the Town of Boonsboro. After review, we offer the following comments for consideration:

- The Town of Boonsboro upgraded its wastewater treatment plant to a bio-enhanced nutrient system to comply with enhanced regulations. In order to comply with the additional regulations, the Town encumbered $8 million dollars of debt. As you may be aware, the population of the Boonsboro is little over 3300 people, with 25% of its residents over the age of 65. The Town of Boonsboro is currently experiencing a financial hardship due to the debt and with the addition of additional regulations to administer and encumber, the Town of Boonsboro will continue to experience this hardship.
- While the permit is based upon the US census's definition of an urbanized area, the actual makeup of the Town of Boonsboro is not consistent with this definition. The Town of Boonsboro Municipal Area encompasses approximately 1900 acres with 214 acres being impervious – 45 acres untreated, 127 acres with partial treatment, and 42 acres treated. The Impervious percentage is 11.4% and when taking out the treated impervious, the impervious percentage is 9.2%. This is less than 10% impervious and well below the normal criteria for an "Urbanized area". In addition, based on the criteria to request a waiver, the Town respectfully requests consideration of a waiver if assessments and modeling of the two unnamed tributaries draining most of the Boonsboro area show no Town related watershed stressors or substantial contribution to the TMDL loadings where they exit the area near Monroe rd.
- The Town has placed 10 plus acres in permanent easement around the tributaries draining the impervious area (~8000 lf drainage streams affected). The Town has done reforesting, removed livestock, done stream bank restoration, and allowed the riparian buffer surrounding the drainage streams to recover to a natural state. As these linear features do provide water quality

BOONSBORO MAYOR AND COUNCIL

21 NORTH MAIN STREET
BOONSBORO, MARYLAND 21713
301-432-5141 301-432-4050 (f)
www.town.boonsboro.md.us

HOWARD W. LONG
MAYOR

treatment by bio-remediation and assimilation, following sediment trapping, the Town requests this be credited toward the required 20% of impervious area required to be treated.

- The Town of Boonsboro strongly encourages a Nutrient Trading program, as briefly addressed in the draft permit, and requests consideration to be entered into the program immediately. The Maryland State Highway Administration (SHA) owns and operates 45 acres of right-of-way for MD-68, US alt-40, MD 66, and MD 67 within the municipal boundaries of Boonsboro and approximately 36 acres of this is untreated. Portions of the Boonsboro storm drain network and impervious area drain to the MD SHA storm drain system. The MD SHA storm drain networks primary discharge to the Town's Park lands and stream area. The Town of Boonsboro requests consideration to assign the MD SHA responsibility to treat this impervious acreage as well as credit the Town of Boonsboro for any treatment of this area and to have MD SHA responsible for the mapping, screening and record keeping of the drainage systems and outfalls owned and operated by MD SHA. The Town also requests MDE aid in facilitating mutually beneficial, cooperative SWM quality control projects between the MD SHA and the Town, where joint impervious areas contribute to the MD SHA drainage system, and where either of the parties have areas available to intercept and treat the water quality volume.

Thank you for your consideration of the above. Please contact Megan Clark, Town Manager at town.manager@myactv.net or 301-432-5141 to schedule an opportunity to meet to further discuss the above.

Sincerely,

H. Long, Mayor

Howard W. Long, Mayor
Town of Boonsboro

CALVERT COUNTY
BOARD OF COUNTY COMMISSIONERS
Courthouse, 175 Main Street
Prince Frederick, Maryland 20678
410-535-1600 • 301-855-1243
www.co.cal.md.us

Board of Commissioners
Mike Hart
Tom Hejl
Pat Nutter
Evan K. Slaughenhoupt Jr.
Steven R. Weems

March 28, 2017

Mr. Raymond P. Bahr, Chief
Program Review Division
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230

Dear Mr. Bahr:

The Calvert County Board of County Commissioners (BOCC) appreciates the opportunity to review and provide feedback regarding the Maryland Department of the Environment's (MDE's) tentative determination to issue the National Pollutant Discharge Elimination System (NPDES) General Permit (Permit) for discharges from small Municipal Separate Storm Sewer Systems (MS4s). The Calvert County Department of Public Works (DPW) is especially grateful for the time MDE staff spent discussing the Permit with local jurisdictions to help clarify the intent of the Permit as well as its requirements.

Calvert County agrees with the comments provided on March 30, 2017, by the Maryland Municipal Stormwater Association (MAMSA) to the MDE concerning the Permit and requests MDE to give careful consideration to the concerns expressed in MAMSA's document.

While we agree with the MAMSA document in its entirety, we must stress to the MDE that it is critical to follow 40 C.F.R. §122.32(a)(1), which states "If your small MS4 is not located entirely within an urbanized area, only the portion that is within the urbanized area is regulated," as well as 40 C.F.R. §122.26(b)(8), which states "the MS4 permittee is responsible only for those stormwater systems "owned or operated" by the jurisdiction." Under Federal law, it is our understanding that a permittee is only responsible for stormwater conveyances owned or operated by the local jurisdiction and only those within the designated urbanized area. Therefore, under the Permit, Calvert County is only responsible for systems within the urbanized area that are located on County-owned property or otherwise maintained by the conveyance of an easement.

We offer the following comments in addition to the comments provided by the MAMSA in response to the draft Permit document. At the MDE on March 6, 2017, several clarifications to the Permit conditions were made that we would like to verify. First, the baseline impervious area can be adjusted throughout the life of the Permit as new discoveries are made. Second, field verification is not necessary to obtain credit for rural areas' existing best management practices (BMPs) and a desktop analysis is acceptable. Third, BMPs can receive credit for the total amount of rainfall treated, rather than a maximum of one inch of rainfall as it is currently stated in the draft Permit. Finally, the Permit will include all BMPs approved by the MDE to date and the Permit will include more detailed descriptions of the equivalent BMPs, such as outfall stabilization.

Many references have been made by the MDE to the annual reporting process being the tool used to offer guidance throughout the life of the Permit to the permittee. We suggest that as programs and processes are established and reviewed annually via the report, that the MDE provide specific feedback so the permittee can adjust these items as quickly as possible.

Lastly, we support the MAMSA's request to issue a second draft Permit for review and discussion, given the extensive list of concerns. It is critical that the terms of the Permit are clearly stated and in accordance with Federal regulations in order to ensure compliance.

We sincerely appreciate your guidance during this process and look forward to further discussion with all interested stakeholders so that, collectively, we can ensure we meet the intent of the Permit, as well as remain in compliance throughout the Permit term.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
CALVERT COUNTY, MARYLAND

Tom Hejl, President

Evan K. Slaughenhoupt Jr., Vice President

Mike Hart

Pat Nutter

Steven R. Weems

Office of the County Executive

Alan J. McCarthy
County Executive

Alfred C. Wein, Jr.
Director of Administration

Office: 410.996.5202
Fax: 410.996.1014

Department of Public Works
Development Services Division

Kordell Wilen, P.E., Chief
410.996.5265
Fax: 410.996.8460

County Information
410.996.5200
410.658.4041

CECIL COUNTY, MARYLAND

Department of Public Works
Development Services Division
200 Chesapeake Boulevard, Suite 2450, Elkton, MD 21921

March 30, 2017

Attn: Mr. Raymond P. Bahr
Maryland Department of the Environment
Water Management Administration
Sediment, Stormwater, and Dam Safety Program
1800 Washington Blvd., Ste. 440
Baltimore, Maryland 21230-1708

RE: **Tentative Determination to Reissue the NPDES Phase II MS4 Permit**
MDR 055500, 13-IM-5500

Dear Mr. Bahr:

On behalf of Cecil County Maryland, we have attached a comment package pursuant to the Maryland Department of the Environment's Tentative Determination to reissue the NPDES Phase II MS4 Permit. Cecil County will be required to seek coverage under this permit and we have concerns about several of the requirements on the permit as currently written.

We request that MDE strongly considers these comments as you move forward with the reissuance process. Please feel free to contact me if you have any questions at 410-996-5265 or kwilen@ccgov.org.

Sincerely,

Kordell Wilen, Chief
Development Services Division
Department of Public Works

Attachments:
- Cecil County Comments
- Joint Small MS4 GP Comments
- Urbanized Area Map
- Cecil County MEP White Paper

CC (by electronic mail):
- Deborah Cappuccitti, MDE
- Al Wein, Cecil County
- Jason Allison, Cecil County
- W. Scott Flanigan, Cecil County
- Van Funk, Cecil County
- Lisa Ochsenhirt, AquaLaw PLC

Cecil County Comments
Proposed Reissuance of General Permit for Discharges from Small MS4s
March 30, 2017

I. INTRODUCTION

Cecil County (County) provides the following comments on the Maryland Department of the Environment's (MDE's or Department's) Tentative Determination to reissue the National Pollutant Discharge Elimination System (NPDES) General Permit (GP) for discharges from Small Municipal Separate Storm Sewer Systems (MS4s).

The County appreciates the opportunity to comment on the Draft GP and accompanying Draft Fact Sheet. The County has reviewed both documents in order to determine whether it can reasonably meet its goal of full compliance with its discharge permit. The County has been working for many years to establish a successful stormwater management program and to make thoughtful, cost-effective improvements that will improve quality of life for our citizens, businesses, and guests. We are proud of the work we have done over the past several years, and ask that MDE consider these efforts in setting expectations for the next permit cycle.

The County is a Maryland Municipal Stormwater Association (MAMSA or Association) Member. As such, we request that MDE carefully consider MAMSA's comments (jointly filed with the Maryland Association of Counties and the Maryland Municipal League), which we incorporate by reference, and which are attached to the County's comments as Attachment A. In certain instances, the County will not review a particular issue in detail, but will simply express agreement with MAMSA's position. In addition, the County supports MAMSA's redlined version of the Draft GP, attached as Attachment A to the joint comments.

II. COMMENTS

A. Permit Coverage Should Be Limited to MS4 Facilities in the Urbanized Area of the County

1. Only the Portion of the County's Small MS4 Located *within* an Urbanized Area Is Automatically Designated

The County agrees with MAMSA's argument that MDE's designation of small MS4s located *within* an urbanized area (UA) is legally acceptable. However, if the jurisdiction owns and operates a small MS4 that is both within and without the UA, then only the portion of the MS4 within the UA is regulated. This is unambiguously stated in the regulations: "If your small MS4 is not located entirely within an urbanized area, *only the portion that is within the urbanized area is regulated*." 40 C.F.R. § 122.32(a)(1).

The Draft GP appears to designate the entire County even though only a part of the jurisdiction is within an UA. This is manifestly improper. MDE should clarify in the final GP and Fact Sheet that, for any small MS4 owned or operated by a jurisdiction identified on Table A.1 as "within an urbanized area," the permit's requirements apply only to portions of the MS4 within the UA.

2. The Baseline for Restoration Should Be Calculated Using Only Untreated Impervious Area in the Urbanized Area Served by the MS4

The County agrees with MAMSA's careful reading of the Draft GP as requiring the calculation of the untreated impervious area within our regulated permit area, which is limited by federal law to the areas served by the County's MS4 within the urbanized area (UA) of the County. For reference, portions of the County are in two different UAs: (1) Aberdeen-Bel Air South-Bel Air North and (2) Philadelphia, PA-NY-DE, MD. A copy of the Maryland Department of Planning map showing UA is attached as Attachment B to these comments. Based on the instructions in Attachment B, the County will not be counting impervious areas (either treated or untreated) outside of the urbanized area in the baseline. Furthermore, the County will not be counting impervious areas within the urbanized area unless they are served by our MS4.

The County echoes MAMSA's request that MDE clarify throughout the GP and confirm in the Fact Sheet that MAMSA's reading is correct.

MDE must clarify this point because of the significant cost associated with the 20% restoration requirement. In addition, clarification is needed because other parts of the Draft GP incorrectly reference the need to comply with the term across the entire County. MAMSA has correctly identified specific sections (for example, the requirement in Minimum Control Measure (MCM) 6 for development good housekeeping measures "throughout the jurisdiction's properties") as creating confusion regarding the scope of the regulated area.

The County also agrees with MAMSA that any attempt by MDE to impose a "jurisdiction-wide" permit on the County is objectionable. Federal law is clear on this point, and state law gives MDE no authority to go beyond the federal requirements. MDE is only allowed to regulate parts of the small MS4 in the UA. *See* 40 C.F.R. §122.32(a)(1).

As Attachment B to these comments shows, large portions of the County are located outside of UAs. MDE has no authority to impose the MS4 GP on these parts of the County.

3. The Baseline for Restoration Should Not Include Marinas Covered by 16-MA

The County intends to exclude from its baseline marinas that are covered by 16-MA even if those marinas are located in the UA and discharge stormwater into the County's MS4.

MDE has made an initial determination that it will not require marinas covered by 16-MA to conduct restoration on the properties for a number of reasons (for example, their smaller size as compared to other types of regulated properties). MDE should not then require the County to address these additional acres in its impervious area assessment.

The County requests that MDE clarify in the Draft GP (in Attachment B) and Fact Sheet that MDE does not expect the County to pick up untreated acres associated with marinas.

B. The County Should Have the Flexibility to Conduct Restoration Anywhere in Its Basin

MDE has suggested that if the County wishes to limit its calculation of baseline to areas in the UA, the County must conduct restoration within the UA. MDE may be willing to negotiate additional flexibility in

the future—after the County submits its Work Plan—but MDE is not promising any particular outcome from those discussions.

The County agrees with MAMSA's view that permittees should be allowed to site restoration projects anywhere within a broad geographic area based on criteria developed by the permittee, such as cost-effectiveness, availability of land, willingness of private property owners to assist in projects, etc. Limiting projects to the UA is untenable, would be more costly, and would increase the risk of non-compliance.

The County particularly echoes MAMSA's concern that MDE has no legal authority to require permittees to perform restoration outside of the areas served by the permittees MS4 in the UA, and that any attempt by MDE to pressure the County into accepting a "jurisdiction-wide" approach to baseline by limiting restoration options is unfair and puts the County in a no-win situation.

C. The GP Cannot Regulate Nonpoint Sources and Third-Party Stormwater Discharges

As explained above, the County intends to calculate its baseline by focusing on areas served by the MS4 inside the UA. The County will remove any parcels that do not discharge into the County's MS4, including nonpoint sources (properties with sheet flow from the parcel into streams, creeks, etc.) and third-party direct dischargers (properties with their own discharge points into streams, creeks, etc.).

The County agrees with MAMSA's legal argument that the County is not responsible for addressing, through impervious area restoration, nonpoint sources or discharges by third parties.

D. MEP Is The Legal Compliance Standard for MS4s

In 1987, Congress recognized the challenges of regulating municipal stormwater, and amended the Clean Water Act to add a unique legal compliance standard for MS4s:

> Permits for discharges from municipal storm sewers…shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. 33 U.S.C. § 1342(p)(3)(B)(iii) (emphasis added).

Maximum extent practicable, or MEP, is the legal compliance standard for MS4 operators, including the County. Permit terms that require that the County do more than MEP are unlawful.

E. GP Requirements Are Not Practicable; Exceed MEP Level-of-Effort

The County has reviewed the Draft GP and determined that several requirements exceed an MEP level of effort for the County. As support for this conclusion, the County has provided Attachment C (Maximum Extent Practicable Analysis, or MEPA), which is an analysis of what the County can accomplish during this permit term. Here are the terms that the County has identified as beyond MEP:

1. Restoration Requirement: The County must "commence restoration efforts for twenty percent of existing developed lands that have little or no stormwater management," (Draft GP, p. 10) and develop an implementation schedule to show the twenty percent impervious area restoration requirement will be achieved by 2025. (Draft GP, p. 11, 13)

The County cannot develop an implementation scheduling promising the restoration of 20% of untreated impervious area by 2025. The County has calculated estimated costs to comply with this term based on two scenarios: (1) restoring impervious area as determined in the 2009 MAST run (County Phase II) and (2) restoring non-regulated impervious area as determined in the 2009 MAST run ("jurisdiction-wide" basis). Neither scenario is achievable based on a reasonable increase in stormwater costs for County residents.

The current budget for Cecil County's MS4 permit is approximately $300,000 annually. The restoration requirement is estimated to increase that requirement to between $6 and $8 million annually.

In addition to the financial impossibility, the restoration requirement is impossible from an operational perspective. Subtracting the initial one-year planning period, the County will have from 2018-2025, or 8 years, to install hundreds of BMPs. Based on previous experience, it will take approximately 18-36 months per project to design, permit, and construct new stormwater BMPs. There is simply not time in 8 years to take the total number of projects required through this process.

2. Mapping, MCM-3: The Draft GP requires that the County maintain a map of storm drain infrastructure that identifies "all pipes, outfalls, inlets, stormwater management best practices (BMPs), illicit discharge screening locations, and surface waters;" (Draft GP, p. 6)

   Mapping of all of these features cannot be completed in 1 year. The County has some features of the map already in place; however, others were not required by the last permit (which only required that the permittee develop a map "showing the extent of the storm drain system"). Mapping a system to this level of detail would be a substantial undertaking well beyond an MEP level of effort over the five-year permit term. It will take several years to add all of the specific details included above.

   In addition, the County objects to providing surface waters—they are not a part of "storm drain infrastructure" and only belong on the map if there is a discharge to the waterbody. The County also objects to the requirement to map "illicit discharge screening locations." If this means locations where the County tests for illicit discharges because of a citizen report, etc., it is unclear how we would know in advance where to map those locations. If this means mapping the outfalls we inspect to perform dry weather screening, they are the same as "outfall" as the GP is currently written.

3. SWPPPs, MCM-6: The Draft GP requires that the County develop, implement, and maintain a pollution prevention plan at "publicly owned or operated properties…" (Draft GP, p. 10)

   The County owns or operates 149 properties. Developing a pollution prevention plan for each property would take approximately 3,000 workhours, based on an estimated 20 hours per plan. It would take a full time employee approximately 3 years if they could devote half of their work day to this effort. This does not include numerous hours to educate employees at each site on the plan, reviewing plans on a regular basis, and revising plans as needed. This requirement is burdensome.

In addition, this requirement is unnecessary. The County owns or operates numerous properties that are very low-risk for discharging pollutants to the County's MS4. For example, several of the properties are vacant with no potential pollutants and others are only used for passive recreation. There is no need for a pollution prevention plan for these kind of low-risk properties. The County submits that this term is beyond MEP, is burdensome, and is the type of term that should be revised to achieve water quality related goals.

The County understands that MDE may intend that this language will only apply to certain types of facilities (for example, properties covered by 12-SW as industrial facilities). However, MDE's intent is not clear on the face of the permit. The County supports MAMSA's request that MDE consider alternative language to make expectations clear on the face of the permit.

4. Other Programs, MCM-6: The Draft GP appears to require that the County quantify and report pollution prevention efforts relating to street sweeping, pesticide applications, fertilizer applications, and de-icing applications. (Draft GP, p. 10) Although MDE has suggested that these are not mandatory programs, this is unclear from the Draft GP text.

   Federal regulations do not require that Phase II permittees have these programs. The requirement for MCM-6 is as follows:

   > (6) Pollution prevention/good housekeeping for municipal operations: (i) The permit must identify the minimum elements and require the development and implementation of an operation and maintenance program that includes a training component and has the ultimate goal of reducing pollutant runoff from municipal operations. Using training materials that are available from EPA, the State, Tribe, or other organizations, the program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. 40 C.F.R. § 122.34(b)(6).

   Although EPA has provided guidance to NPDES permitting authorities and regulated small MS4s on program components, there is no mention of pesticide and fertilizer controls at all, and only generic references to controls for streets, roads, and highways.

   Any attempt by MDE to impose these requirements as a mandatory permit term would be problematic. MDE has provided no basis for requiring Phase II MS4s, which are smaller than Phase I MS4s, to implement street sweeping, pesticide and fertilizer, and de-icing programs.

   Cecil County has mainly rural roads and does not currently perform any regular street sweeping. The pesticides and fertilizers are applied in accordance with existing State regulations and should not be included in the MS4 permit. The de-icing program is always a balance between public safety and amount of de-icing material applied. The calibration of the equipment by itself will not ensure that the operator is applying the proper amount of material. This requirement seems to be a burden that may not yield as much gain as education and the financial incentive to reduce the amount of de-icing material applied.

5. Outfall Screening SOP: The Draft GP requires that the County screen 20% of total outfalls each year, up to 100 outfalls per year. (Draft GP, p. 6, B-5).

   Federal regulations do not require that Phase II permittees have a dry weather outfall screening program. To comply with MCM-3, a permittee must "develop, implement and enforce" a program "to detect and eliminate illicit discharges" into the small MS4; develop a system map, with outfalls and waters of the U.S. that receive discharges from the outfalls; and educate employees, businesses, and the public of the "hazards associated" with illicit discharges.

   As with MCM-6, EPA provides guidance on MCM-3, and only suggests that the program include dry weather screening and field testing of "selected pollutants as part of the procedures for locating priority areas." 40 C.F.R. § 122.34(b)(3).

   There is no requirement for inspecting all outfalls over a permit cycle. In fact, it makes more sense to allow the County to target its inspections in areas that are more likely to have illicit discharges and connections (based on age of the development, a higher than average number of septic systems, etc.). Requiring inspections of all outfalls, no matter the size, across the entire system, is likely to yield a lot less useful information than carefully targeted inspections.

   As an aside, MDE is requiring small MS4s to inspect as many outfalls as Phase I MS4s. For example, Part IV.C of Howard County's MS4 permit (effective date January 1, 2014) requires that the County map "major outfalls" (defined by federal law as an outfall "that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent..." or for MS4s that receive stormwater from industrial areas "an outfall that discharges from a single pipe with an insider diameter of 12 inches or more from its equivalent…" 40 C.F.R. § 122.26(b)(5)) and then perform inspections of 100 outfalls annually. Part IV.D.3.a. Howard County's permit also allows it to submit, within 1 year of permit issuance "an alternative program…for MDE approval that methodically identifies, investigates, and eliminates illegal connections to the County's storm drain system…" This alternative program is not an option in the Draft GP.

As the list above suggests, MDE appears to have made no attempt to tailor the requirements of the Draft GP – and particularly the numeric requirements (e.g. restore 20% of impervious area) – to the MEP of particular MS4 dischargers (or even categories of dischargers like new vs. existing permittees, etc.).

The County requests that MDE review its MEPA, as well as the comments relating to practicability filed by other permittees, and then revise the GP so that it is achievable by all permittees.

F. Comments on Specific Permit Conditions that Should Be Revised or Clarified

The Draft GP includes a number of permit conditions that are incorrect, unreasonable, or unclear. These conditions are addressed, with suggested revisions, in the MAMSA redline of the Draft GP. Below, the County provides additional explanation of the suggested revisions for several of these problematic conditions.

1. MCM-4 and MCM-5 Are Overly Broad

The County supports MAMSA's comments and recommendations on changes to MCM-4 and MCM-5.

2. MDE Should Finalize a Functional Trading Program Before the GP is Issued

The County supports MAMSA's comments regarding the need for a functional trading program to assist the County with compliance before the GP is issued in final form.

As noted above, the County has estimated that the Draft GP 20% restoration requirement would cost approximately $49,000,000 even if limited to impervious acreage in the 2009 MAST regulated area (2000 UA). Allowing the County to voluntarily trade with its own wastewater treatment plant or to purchase nutrient credits from a trading platform would reduce these costs significantly, and would have no negative impacts on the Bay. It is vital that MDE acknowledge this reality before the County is forced to spend precious resources implementing restoration that could be more addressed in a much more cost-effective manner.

3. County Should Not Be Legally At-Risk for Third-Party Action

The County agrees with MAMSA's comments regarding the need for revisions that reflect the County's role as MDE's co-regulator with regard to the acts of third parties.

4. MDE Has Incorrectly Defined "Outfall;" Definition is Inconsistent with Federal Law

The County agrees with MAMSA's recommendation that MDE revise the definition of outfall in Attachment B of the Draft GP to make it consistent with federal law.

5. Certification Statement for NOI is Legally Incorrect

The County agrees with MAMSA's request that MDE revise the certification at Signature of Responsible Personnel (p. C-2) and Progress Report (p. D-2) so that they reflect the appropriate text from EPA's NPDES regulations (40 C.F.R. § 122.22).

6. The Draft GP Includes Unreasonably Broad Incorporation by Reference

The County agrees with MAMSA's view that the Draft GP statement that "permittee 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, Annotated Code of Maryland" (Draft GP, p. 16) is overbroad and may lead to confusion as to what is required of permittee. All permit conditions should be expressly stated in the GP.

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Joint Comments on
Proposed Reissuance of General Permit for Discharges from Small MS4s
March 30, 2017

I. INTRODUCTION

The Maryland Association of Counties (MACo), the Maryland Municipal League (MML), and the Maryland Municipal Stormwater Association (MAMSA) (together, the Associations) provide the following joint comments on the Maryland Department of the Environment's (MDE's or Department's) Tentative Determination to reissue the National Pollutant Discharge Elimination System (NPDES) General Permit (GP) for discharges from Small Municipal Separate Storm Sewer Systems (MS4s).

MACo is a non-profit and non-partisan organization that serves Maryland's counties by articulating the needs of local government to the Maryland General Assembly. The Association's membership consists of county elected officials and representatives from Maryland's 23 counties and Baltimore City. Currently, 10 of MACo's county members are subject to a Phase I MS4 permit and 2 are subject to a Phase II MS4 permit. Five additional counties may be subject to the proposed Phase II MS4 permit, making 17 of MACo's 24 members an MS4 jurisdiction. Like MAMSA, MACo has a strong interest in the reissuance of the Phase II permit.

MML is a voluntary, non-profit, nonpartisan association controlled and maintained by city and town governments. MML represents all 157 municipal governments and 2 special taxing districts. Of the 28 municipalities that may be subject to the proposed Phase II MS4 permit, 20 municipalities are currently operating under an existing Phase II permit and 8 municipalities will be operating under the proposed Phase II permit for the first time. MML has significant concerns relative to the impact of new stormwater requirements on many of these small, rural jurisdictions and supports the concerns articulated in these comments submitted by MAMSA.

MAMSA is an association of proactive local governments and leading stormwater consulting firms that work for clean water and safe infrastructure in Maryland based on sound science and good public policy.[1] MAMSA supports clean water, safe and vibrant communities, and a strong State economy by seeking to align clean water goals, smart stormwater management practices, and affordable programs, practices and infrastructure. Many of MAMSA's Members either have coverage under the current Small MS4 GP or have been identified by MDE as new permittees in the Draft GP. Therefore, MAMSA has a strong interest in the reissuance of this important permit.

The Associations appreciate the opportunity to share our concerns with MDE. We have carefully reviewed the Draft GP and accompanying Fact Sheet. As explained in greater detail below, it is imperative that MDE

[1] MAMSA Members include: Aberdeen, Berlin, Bel Air, Carroll County, Cecil County, Charles County, Frederick County, Harford County, Havre de Grace, Howard, La Plata, North East, Perryville, Queen Anne's County, Salisbury, St. Mary's County, Washington County, and Wicomico County. In addition to these Members, several other Phase II GP permittees (or potential permittees identified by MDE) have expressed general agreement and support with MAMSA's comments, including: the City of Frederick, Hagerstown, and Calvert County.

makes a number of critical changes to these documents before MDE issues the GP in final form. We are concerned that permittees will not be able to reasonably comply with the GP as it is currently written. Furthermore, a number of conditions do not provide clear direction as to what the permit requires. Unless changes are made, MDE will be setting these counties, cities, and towns up for failure. The Associations hope MDE shares the goal of full permit compliance by these smaller MS4 owners and operators.

Our comments follow. Many are related to legal points that are currently under review by various circuit courts across the State. MDE may wish to consider delaying the issuance of the GP until the Department and stakeholders receive some clarity from these courts on specific issues (for example, whether MDE can require that an MS4 permittee address third-party discharges through restoration requirements).

Delay would also allow the Department and interested stakeholders to review the expectations for the permit term before it is imposed on permittees (especially small and/or newly designated MS4s). Respectfully, although permittees value their good relationship with MDE, especially in their roles as co-regulators of the E&S and stormwater management programs, this cannot be a "trust me" permit. Because permittees bear the risk of an EPA audit or a citizen suit, the Associations urge MDE to make sure that all GP terms are clear and achievable before issuing the permit. We recommend that MDE hold two to three additional meetings to allow interested participants to step through the Draft GP in detail, to ask questions, and to recommend potential changes. An additional public comment period would be necessary for any substantive changes, although this will likely be needed even without additional meetings.

If MDE chooses not to delay reissuance of the GP, the Associations request that MDE carefully review and adopt the changes we propose in the attached red-lined version of the Draft GP (incorporated by reference to these comments as Attachment A). Edits should also be made to the Fact Sheet for consistency sake.

II. COMMENTS

A. Many of the Small MS4s Identified in the Draft GP Are Not Properly Designated

The Draft GP purports to designate a number of new small MS4s, as well as existing MS4s, based on criteria that do not comply with the requirements for such designations. MDE should review the list of designated small MS4s and remove those that do not meet the necessary requirements for designation.

1. The Designation Criteria in the Draft GP Are Improperly Stated and Applied, Resulting in Several Small MS4 Operators Being Incorrectly Identified as Permittees

Table A.1 includes a list of jurisdictions that MDE has designated for regulation under the GP, along with a justification for each designation. (Draft GP, p. A-4). Each permittee is designated for one of three reasons: (1) it is a small municipality "with a population greater than 1,000 that is located within a regulated Phase I jurisdiction;" (2) it is a small MS4 "located within the boundaries of an 'urbanized area' based on the latest decennial census;" or (3) it is a jurisdiction "with a population of at least 10,000 and a population density of at least 1,000 people per square mile…"

MDE's designation criteria are not wholly consistent with federal law. EPA's Phase II MS4 regulations provide for two circumstances under which the owner or operator of a small MS4 must obtain an NPDES permit for its stormwater discharges. The first applies to any "small MS4 . . . located in an urbanized area as determined by the latest Decennial Census by the Bureau of the Census." Thus, MDE's second designation criterion (i.e., small MS4s located within an urbanized area) is correct to the extent it is applied only to parts of a small MS4 within an urbanized area, as is explained further below.

The second circumstance under which a small MS4 owner or operator must obtain a permit is when the NPDES permitting authority—that is, MDE—has properly designated the small MS4 for permit coverage. The steps required to designate additional small MS4s are set forth in 40 C.F.R. § 123.35(b). First, the NPDES permitting authority must "[d]evelop criteria to evaluate whether a storm water discharge results in or has the potential to result in exceedances of water quality standards..." *Id*. § 123.35(b)(1). Second, those criteria are then applied to small MS4s outside urbanized areas that meet certain population and density requirements. *Id*. § 123.35(b)(2). Alternatively, the NPDES permitting authority may designate a "small MS4 that contributes substantially to the pollutant loadings of a *physically interconnected* municipal separate storm sewer that is regulated by the NPDES storm water program." *Id*. § 123.35(b)(4) (emphasis added).

MDE's first and third designation criteria do not comply with the procedural or substantive requirements provided in the federal regulations for the designation of additional small MS4s. MDE's first criterion purports to designate any municipality with population greater than 1,000 within a larger "Phase I jurisdiction." The second is a simple population trigger for localities with populations greater than 10,000 and 1,000 people per square mile. With both of these designation standards, MDE has failed to state *any* "criteria to evaluate whether a storm water discharge results in or has the potential to result in exceedances of water quality standards." *Id*. § 123.35(b)(1). This is a legal prerequisite to identifying a particular locality as a regulated small MS4. It follows that MDE failed to actually apply those (non-existent) water quality-based criteria to any of the purportedly designated permittees in an individualized fashion to determine if designation was necessary to address exceedances of water quality standards in those jurisdictions. The fundamental error in MDE's approach to designation is the agency's apparent assumption that population alone can be a trigger for the designation of small MS4 permittees. It cannot. The federal regulations clearly state that the water quality-based criteria developed by the permitting authority should be *applied to localities with larger populations*, not that the population, without more, is sufficient for designation. *Id*. § 123.35(b).

Similarly, the Associations are also unaware that MDE has made any determination that a particular small MS4 is physically interconnected to larger Phase I jurisdiction systems or that the MS4 "substantially contributes" to Phase I pollutant loadings. The inclusion of certain extremely small communities (for example, the Town of Emmitsburg, with a population of 3,504) suggests that this step was not taken. If MDE has done so, we believe it was done without any input from the regulated community, making it impossible for named municipalities or counties to determine whether their designation is appropriate.

In sum, MDE's designation based on the location of a municipality within a Phase I jurisdiction is not based on federal law. Neither is MDE's designation based purely on population and population density.

2. Only the Portion of a Small MS4 Located *within* an Urbanized Area Is Automatically Designated

As noted above, MDE's designation of small MS4s located *within* an urbanized area (UA) is legally acceptable. However, if the jurisdiction owns and operates a small MS4 that is both within and without the UA, then only the portion of the MS4 within the UA is regulated. This is unambiguously stated in the regulations: "If your small MS4 is not located entirely within an urbanized area, *only the portion that is within the urbanized area is regulated*." 40 C.F.R. § 122.32(a)(1).

The Draft GP appears to designate an entire jurisdiction if only a part of the jurisdiction is within an UA. This is manifestly improper. MDE should clarify in the final GP and Fact Sheet that, for any small MS4 owned or operated by a jurisdiction identified on Table A.1 as "within an urbanized area," the permit's requirements apply only to portions of the MS4 within the UA.

For these reasons, the Associations object to the designation of any jurisdiction on Table A.1 unless that jurisdiction owns or operates an MS4 within a UA. And among the potential designees based on the UA criterion, if a particular jurisdiction provides information that its MS4 is located outside of the UA, it should not be required to obtain permit coverage, and should be dropped from Table A.1 (unless the locality voluntarily elects to accept the designation).

B. The Impervious Area Restoration Requirement Must Be Right-Sized for Small MS4s

The impervious area restoration will be the single most burdensome requirement of the permit. It is incumbent on MDE to ensure that this requirement is reasonable and practicable.

1. The Baseline for Restoration Should Be Calculated Using Only Untreated Impervious Area in the Urbanized Area Served by the MS4

Under the terms of the Draft GP, a permittee is required to develop a baseline impervious area assessment (baseline) that will be used to calculate the 20% restoration requirement. (Draft GP, Part V.A, p. 11). The Draft GP directs permittees to Appendix B, Section III which explains how baseline should be calculated using five steps. (Draft GP, p. B-10 – B-12). Notably, Step 2 (Section III.A.2) states that the permittee shall evaluate the "total impervious surface within a jurisdiction's regulated permit area" to determine baseline. Step 5 (Section III.A.5) states that the permittee should subtract total impervious area that is "draining to water quality BMPs and nonstructural practices)…from the total impervious land area owned or operated by the jurisdiction as of 2002 (step 2 above)." The delta calculated by Step 5 is the baseline for calculating the 20% restoration requirement.

A careful reading of this discussion suggests that a permittee should calculate the untreated impervious area within the regulated permit area, which is limited by federal law to the areas served by the permittee's MS4 within the UA (see discussion above). Baseline should not include any impervious area for any property unless it is served by the permittee's MS4 (see discussion below regarding legal limitations on imposing responsibility for third-party and non-point source discharges using an MS4 permit).

The Associations ask that MDE clarify throughout the GP and confirm in the Fact Sheet that this careful reading is correct. Attachment A includes recommended textual changes.

MDE must clarify this point because of the significant cost associated with the 20% restoration requirement. In addition, clarification is needed because other parts of the Draft GP incorrectly reference the permittee's entire jurisdiction (versus strictly applying to properties or areas served by the MS4 within the UA). For example, Minimum Control Measure (MCM) 6 states that a permittee will satisfy the GP by developing, implementing, and maintaining procedures for good housekeeping "throughout the jurisdiction's properties." (Draft GP, p. 9). Using the phrase "throughout the jurisdiction's properties" creates confusion—not only does it reference the jurisdiction instead of the MS4, but it suggests that the permittee needs to comply with good housekeeping from border to border without consideration of the regulated permit area.

If the Associations have misinterpreted the Draft GP, and MDE does intend to impose a "jurisdiction-wide" permit on permittees, as it did (improperly) with Phase I MS4 permittees, we object. As explained above, federal law could not be clearer on this point: only portions of the small MS4 located within the UA are regulated by the NPDES stormwater program.

A "jurisdiction-wide" permit would also be at odds with the approach taken for small MS4s by every other Bay jurisdiction. USGS has developed a tool for reviewing the mapping of local land uses and permit types across the Bay Watershed.[2] A viewer can create an overlay of MS4 areas across the Bay. When this is done, it becomes clear that Maryland's MS4 overlay, which covers nearly the entire State, is very different than the MS4 overlay in Virginia, Pennsylvania, etc. Maryland's MS4 overlay covers almost the entire State, lending credence to the idea that Maryland has inappropriately identified entire jurisdictions as MS4s—rather than identifying MS4s. The map (as it was available on March 29, 2017) is provided as Attachment B.[3]

MDE cannot turn to state law as a basis for expanding its regulatory authority. EPA authorized Maryland to issue NPDES discharge permits as required by 33 U.S.C. §1342(b). The General Assembly instructed MDE in plain terms to implement the federal requirements. *See* Md. Code Envir. § 9-253 (granting only those "powers that are necessary to comply with and represent this State under the [Clean Water Act]"; COMAR 26.08.04.01.A (empowering MDE to "issue State discharge permits or NPDES permits (i.e., MS4 permits]…to satisfy the regulatory requirements of the [Clean Water Act]"). There is no state law authority to go beyond the federal requirements.

[2] Available at: https://chesapeake.usgs.gov/phase6/map/#map=7/-8717186.82/4719944.76/0.0/0,4,8.

[3] For comparison sake, we are also attaching an MDP map showing UA across the State with Attachment B. Taken together, it is clear that MDE, unlike other Bay jurisdictions, has unreasonably and unlawfully expanded its jurisdiction well beyond established urbanized areas.

2. Permittees Should Be Given the Flexibility to Conduct Restoration Anywhere in Their Geographic Area

MDE has suggested that if a permittee wishes to limit its baseline to areas in the UA, the permittee must conduct restoration within the UA. MDE may or may not allow the permittee to construct BMPs or develop programs in other unregulated parts of the jurisdiction.[4]

The Associations disagrees with hamstringing small MS4 GP permittees in this way. Permittees should be allowed to site restoration projects anywhere within a broad geographic area based on individual criteria such as cost-effectiveness, availability of land, willingness of private property owners to assist in projects, etc. Limiting projects to the UA will drive up costs (because it is almost always more expensive to install BMPs in an urbanized area as compared to a rural area) and will increase the risk that a permittee will be unable to identify sufficient available acreage to comply with the restoration requirement.

MDE's position appears to be based on its view that projects must occur in the UA to address local water quality issues. We have four responses to this idea.

First, there is no evidence that local water quality issues and impairments uniformly occur inside the UA, or that performing restoration outside of the UA necessarily fails to address local water quality within the UA. Each MS4 is different in this regard, and projects in a non-UA area may actually improve water quality downstream in the UA.

Second, MDE itself has determined that imposing the 20% restoration requirement from the Bay WIP is adequate to address local TMDLs. (Draft Fact Sheet, p. 9). The Bay TMDL and Phase I and II WIPs were based on a much broader geographic scale than local TMDLs. MDE is contradicting itself by suggesting that it is acceptable to address local TMDLs using a Bay surrogate, but refusing to allow permittees to work at the more expansive Bay scale.

Third, along the same line, MDE advocated a more flexible approach in the State's Trading Policy, which envisions cross-sector trading within three geographic areas, including the Potomac River Basin, the Patuxent River Basin, and the remaining Western Shore, Eastern Shore, and Susquehanna River Basin. *Water Quality Nutrient Trading Policy Statement* (Issued Oct. 2015).[5] Although local water quality is a factor to be considered as a part of trading, trading will still be allowed across a very broad geographic scope. MDE's narrow vision of how restoration should occur is inconsistent with its more reasonable approach to trading.

Fourth, as explained above, MDE has no legal authority to require permittees to perform restoration outside of the areas served by the permittees MS4 in the UA. MDE's attempt to press permittees into

[4] MDE has suggested that it may be willing to negotiate more flexibility after a permittee has submitted its Restoration Work Plan and Activity Schedule. Respectfully, permittees need to know now whether or not it is acceptable to install BMPs outside of the UA for full credit so that each permittee can decide whether to apply for GP coverage or request individual permit coverage. This information also will be relevant to the permittee for the purposes of estimating its costs and determining its "maximum extent practicable" level of effort for the Notice of Intent.

[5] *See also* the State's *Draft Trading and Offset Policy and Guidance Manual* (Sept. 2016) at p. 14 (establishing three trading regions).

accepting a "jurisdiction-wide" approach to baseline by limiting restoration options if they insist on a legally-correct approach is unfair and unreasonable.

In sum, MDE's proposed restriction on the area in which restoration may occur is an unnecessarily blunt instrument to achieve the stated goal. If the objective is to meet Bay restoration goals, then restoration efforts should be permitted anywhere within the same river basin consistent with the Trading Policy. However, if there is in fact a relevant impairment in a stream receiving discharges from the MS4, MDE could appropriately limit restoration activities *in those cases* on an appropriate watershed scale (e.g., the same or adjacent 8-digit HUC within the same watershed) to address the local impairment. In any case, limiting the geographic area in which restoration may occur to the UA is arbitrary and lacks any articulable scientific basis.

3. The GP Cannot Regulate Nonpoint Sources and Third-Party Stormwater Discharges

As explained above, the GP should focus on areas served by an MS4 inside the UA. A permittee is not responsible for nonpoint sources (properties with sheet flow from the parcel into streams, creeks, etc.) and third-party direct dischargers (properties with their own discharge points into streams, creeks, etc.) that do not enter into and are not discharged from the permittee's MS4.

Nonpoint sources are not subject to regulation under a Clean Water Act NPDES permit. The Clean Water Act only regulates stormwater that is discharged from a point source. *See* 55 Fed. Reg. at 47996 (stating that the MS4 permit requirement "only covers storm water discharges from point sources); *see also Decker v. Nw. Envtl. Def. Ctr.*, 133 S. Ct. 1326, 1331 (2013).

Rainwater that sheet flows off a parking lot or a field into a waterbody are examples of *nonpoint* sources that would not be within the jurisdiction of the Clean Water Act and the NPDES permitting program. *See Cordiano v. Metacon Gun Club, Inc.,* 575 F.3d 199, 221 (2d Cir. 2009) ("[S]urface water runoff which is neither collected nor channeled constitutes nonpoint source pollution and consequentially is not subject to the [Clean Water Act] permit requirement."); *see also Envtl. Def. Ctr., Inc. v. EPA*, 344 F.3d 832, 841 n. 8 (9th Cir. 2003). Furthermore, sheet flow off of impervious surfaces that does not flow to a surface water does not even meet the definition of nonpoint source; it is not a "source" at all. Nonpoint sources and surfaces that do not generate any flow to surface waters may not lawfully be included in the GP as the basis for a control requirement.

Permittees are also not responsible for third-party discharges. Many commercial and residential properties do not drain into a local MS4; they drain instead through privately owned ditches, swales, or pipes that lead to state waters. By state law, the entity who is "engaging…in activities requiring a discharge permit" must complete a permit application. *See* COMAR 26.08.04.01-1.A(1). In addition, under federal law, an MS4 owner or operator is only responsible for stormwater conveyances that are "owned or operated" by the locality. 40 C.F.R. § 122.26(b)(8) (emphasis added). MDE has no authority to impose responsibility for third-party discharges simply because they happen to occur within a permittee's political boundaries or even within the UA.

As additional evidence that private discharges are not covered by an MS4 permit, EPA Region III recently explained in an enforcement document that an MS4 operator covered by the current GP had incorrectly drawn its MS4 maps—it had not distinguished between public and private outfalls. EPA clarified that

private outfalls are not within the purview of the MS4 permit: "In addition, at the time of the 2015 MS4 inspection, EPA found that [the permittee's] map of all MS4 outfalls did not distinguish between [municipal] outfalls (which represented those outfalls included within the MS4) and privately owned outfalls, which would not be included as part of the [municipal's] MS4." EPA has acknowledged that third-party outfalls are not regulated under the MS4 GP. MDE should follow EPA's lead and make all necessary corrections to the Draft GP and Fact Sheet to reflect the fact that the GP does not cover direct discharges by third-parties.

Accordingly, MDE should clarify that permittees should remove untreated impervious acreage that does not drain to the MS4 owned or operated by the permittee, including acres that have sheet-flow to nearby waterbodies and acres that drain to privately owned or operated outfalls, from the baseline calculation.

C. The Draft GP's Requirements Will Require a Level that Exceeds the "Maximum Extent Practicable" for Many Permittees

1. MEP Is Legal Compliance Standard for MS4s

In 1987, Congress recognized the challenges of regulating municipal stormwater, and amended the Clean Water Act to add a unique legal compliance standard for MS4s:

> Permits for discharges from municipal storm sewers…shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

33 U.S.C. § 1342(p)(3)(B)(iii) (emphasis added).

The Maryland Court of Appeals reiterated this history in 2016 in support of the maximum extent practicable ("MEP") standard. *Md. Dept. of the Envt. v. Riverkeeper*, 447 Md. 88, 134 A.3d 892 (Md. 2016).

The MEP standard is important because it sets the level of effort for MS4s: a permittee must reduce discharges to the MEP. Permit terms that require that an MS4 do more than the maximum extent practicable are unlawful. Permit terms that likely violate the MEP standard for many (if not all) potential small MS4 permittees are identified below.

2. GP Requirements Are Not Practicable; Exceed An MEP Level-of-Effort

The Associations have identified several requirements that will exceed an MEP level of effort for many potential permittees. In addition to our comments, we ask that MDE carefully consider individual permittee comments on this point. Each permittee is in the best position to provide information on practicability, based on local factors (funding, operational staff, current programmatic strengths and weaknesses).

First, and foremost, the Associations state that the 20% restoration requirement is not achievable for many small MS4s permittees. We do not believe that many Phase II GP permittees are in the position to

develop and implement enough BMPs and other projects to comply with the restoration requirement, even if it is appropriately limited to a baseline established using MS4 service area within the UA, by the 2025 deadline.

Stormwater restoration projects are very expensive. One need only review the Financial Assurance Plans submitted by the Phase I communities, all of whom are larger and generally better funded than Phase II communities, to conclude that many small MS4 permittees will simply be unable to comply with the restoration term.

MDE's 2016 *Annual Report on Financial Assurance Plans and the Watershed Protection and Restoration Program* illustrates how much Phase I MS4 permittees have struggled with their individual permits. The Associations hold these programs in the highest regard. We know from our own Phase I MS4 Members that these communities are committed to Bay clean-up efforts. Nevertheless, we believe the Annual Report is proof that the WIP programs are proving very difficult to implement:

Specific Actions Completed Through FY2016 to Meet ISRP Permit Requirements

MS4	Acres Required to be Restored (Impervious Acre Baseline)	Impervious Acre Baseline Accepted by MDE (Y/P/N)[1]	Acres Restored	Cost[2]	Average Cost per Acre	Restoration Complete[3]
Anne Arundel County	5,862	Y	649	$6,596,505	**$10,159**	11.1%
Baltimore City	4,291	Y	2,372	10,561,649	**4,454**	55.3%
Baltimore County	6,036	Y	1,203	11,388,763	**9,467**	19.9%
Carroll County	1,344	P	1,123	12,576,575	**11,199**	83.6%
Charles County	1,410	P	223	6,592,038	**29,508**	15.8%
Frederick County	1,013	P	161	10,192,516	**63,491**	15.8%
Harford County	1,883	P	487	5,793,000	**11,887**	25.9%
Howard County	2,044	P	157	12,838,020	**81,771**	7.7%
Montgomery County	3,777	Y	1,780	75,031,122	**42,152**	47.1%
Prince George's County	6,105	Y	139	3,563,000	**25,633**	2.3%
Totals:	33,765		8,294	155,133,187	$18,704	26.4%

Just to choose an MS4 as an example, Anne Arundel County, with a population of over a half a million people, completed 11.1% of its restoration requirements through FY2016. If the County had 5,213 acres remaining to be treated at an average cost of $10,159 (which is likely low based on the reality that most MS4s choose the most cost-effective projects first, leaving more expensive BMPs until later), the total estimated cost would be an additional **$52 million**.

If larger, more well-funded counties cannot accomplish this task on the established schedule, we question why MDE would choose to impose the same approach on small cities, towns, and counties, while also denying permittees the ability to use trading as a compliance option (discussion below).

Financial impossibilities aside, we cannot imagine how a small MS4 permittee would actually construct enough BMPs over the 8-year period to meet the restoration term (especially if the acreage is not limited to the UA). It takes time to plan and design BMPs, to seek funding, to construct facilities, and to report on that work to MDE.[6]

The Associations are also concerned that if all of the State's Phase II MS4s are required to implement BMPs at the same time (by 2025), qualified contractors will be in demand, allowing them to charge a premium for their services, even further escalating implementation costs.

In addition to the restoration term, other parts of the Draft GP are well beyond MEP. For example, requiring permittees to map "all pipes, outfalls, inlets, stormwater management best practices (BMPs), illicit discharge screening locations, and surface waters" (Draft GP, p. 6) is more than is required by federal law and is impracticable for many permittees. In addition, some of the requested features are inappropriate (see Attachment A redline for specifics).

Another term that is beyond MEP is the requirement to develop, implement, and maintain a pollution prevention plan at "publicly owned or operated properties." (Draft GP, p. 10) Many Small MS4 GP permittees own dozens if not hundreds of properties. Requiring a pollution prevention plan for every property (even if properly limited to properties in the UA that discharge to the MS4) will eat up hundreds of hours of staff and/or consultant time, and serve little purpose—not all properties discharge into the MS4, and even those that do vary in the types of pollutants that may be present in their stormwater. The Associations understand that MDE may intend that this language will only apply to certain types of facilities (for example, properties covered by 12-SW as industrial facilities). However, MDE's intent is not clear on the face of the permit. We request that MDE consider alternative language, as proposed in Attachment A.

Lastly, the requirement to screen 20% of total outfalls each year, up to 100 outfalls per year is beyond MEP for many. (Draft GP, p. 6, B-5). Not only is this not required by federal law, but for some MS4s the number will be equal to the requirement for medium Phase I communities. MDE should scale back significantly on this requirement, and allow a permittee to prioritize a limited number of outfalls for inspection.

D. Comments on Specific Permit Conditions that Should Be Revised or Clarified

The Draft GP includes a number of permit conditions that are incorrect, unreasonable, or unclear. These conditions are addressed, with suggested revisions, in the attached redline of the Draft GP (Attachment A). Below, the Associations provide additional explanation of the suggested revisions for several of these problematic conditions.

[6] As an aside, we would prefer to see a clean 5-year permit that limits obligations to the permit term. For this permit term, it might be appropriate, for example, to allow permittees to build up their programs and begin planning restoration projects. Establishing a reasonable level of restoration for the next permit cycle should occur several years down the road when we have a better perspective in the State on the planning process.

1. MCM-4 and MCM-5 Are Overly Broad

The Draft GP states that compliance with state erosion and sediment control and stormwater management laws constitute compliance MCM-4 (Construction Site Stormwater Runoff Control) and MCM-5 (Post Construction Stormwater Management) (Draft GP, p. 7–8).

We have two concerns with these MCMs. First, the Draft GP duplicates and sometimes changes the requirements of State law, creating inconsistent sets of requirements. For example, MCM-4 mandates that a permittee "Develop a process for receiving, investigating, and resolving complaints from any interested party related to construction sites within the jurisdiction. Notify the complainant of the investigation and findings within seven days;" (Draft GP, p. 7). In contrast, the regulations require that an enforcement authority "accept and investigate complaints regarding erosion and sediment control concerns from any interested party and: (a) Conduct an initial investigation within 3 working days of receipt of the complaint; (b) Notify the complainant of the initial investigation and findings within 7 days of receipt of the complaint; and (c) Take appropriate action when violations are discovered during the course of the complaint investigation." COMAR 26.17.01.09(F). The Draft GP mandates "resolving" complaints; this is not required by State regulations (only required to take "appropriate action" if violations are discovered).

Second, the Draft GP does not carefully delineate responsibilities for permittees with different responsibilities for E&S control programs. Some GP permittees are neither approval nor enforcement authorities; some are approval authorities only and some are both. As a specific example, if a permittee is not reviewing and approving plans or performing inspections and enforcement, it is unclear when or how the permittee would "[e]nsure all necessary permits have been obtained." (Draft GP, p. 7).

The Associations recommend that MDE revise the GP to simply require that a permittee document its compliance with state erosion and sediment control and stormwater management laws to comply with MCM-4 and -5. This would address both of the above concerns, and would make the GP much more streamlined and readable. Moreover, because that appears to be the intent of these permit conditions, streamlining the permit in this fashion would in no way diminish the implementation of these MCMs.

2. MDE Should Finalize a Functional Trading Program Before the GP is Issued

The Draft GP "may" allow trading as a compliance option to address TMDL requirements "once a program has been established, regulations are adopted, public participation requirements are satisfied, and its use is approved by EPA." (Draft GP, p. 11)

MDE's decision to impose a 20% restoration requirement, while at the same time denying permittees the ability to use a cost-effect compliance option to meet that requirement, is unreasonable. MDE should finalize a trading program that allows MS4s to participate <u>before</u> it issues the GP. MDE has been working with an advisory committee since last year with a goal of issuing a manual this spring. Respectfully, MDE could finalize a trading manual before issuing the GP in final (and include appropriate language in the GP allowing permittees to use the trading program for compliance purposes).

MDE has publicly come out in support of trading: "Nutrient trading offers an attractive alternative to more traditional approaches for reducing water quality problems and can often achieve results faster and at a

lower cost." *Maryland Water Quality Nutrient Trading Policy Statement* (issued Oct. 2015). In addition, in 2012, the Chesapeake Bay Commission released a study estimating potential savings in Bay TMDL compliance costs of 82% if urban stormwater was allowed to participate in watershed-wide trading. *Nutrient Credit Trading for the Chesapeake Bay An Economic Study* (May 2012). In short, trading has widespread support and would be beneficial in making Bay goals more attainable.

If MDE will not revise the Draft GP, it should, at a minimum clarify that trading is expressly authorized *automatically upon the approval of a trading program*. Until such time as a program is finalized, trades should be allowed on a case-by-case basis subject to MDE review.

3. Permittees Should Not Be Legally At-Risk for Third-Party Action

The Associations agree with the goal of reducing acts or behaviors of third parties that negatively impact water quality. However, just as MDE works to improve water quality but cannot ensure standards are always met by third parties, or as a police department works to stop crime but cannot ensure that crimes are not committed, permittees can work to improve third party behavior but cannot guarantee or control the actions of those parties.

The Draft GP contains several provisions requiring permittees to "eliminate" and "ensure" actions or conditions beyond its reasonable control. MDE should make appropriate revisions that reflect the permittee's role as MDE's co-regulator with regard to the acts of third parties as reflected in the MEP Analysis and MEP Permit. We hope MDE appreciates the serious level of concern over provisions that might be read by third parties or by a court as making a permittee responsible for the acts or omissions of third parties.

Specific sections are identified in Attachment A. Here are a few examples of problematic text:

1. MCM-3: Mandates that the permittee will satisfy MCM-3 by "eliminating any illegal connection or illicit discharge to the storm drain system…" (Draft GP, p. 5) The IDDE requirement can and should include reasonable measures for the permittee to monitor, identify, and take action to eliminate known illicit discharges, but the permit should not make the permittee legally responsible for the criminal actions of third parties. Similarly, a permittee can write ordinances that give it various options for accessing private property to investigate IDDE. (Draft GP, p. 6) However, the options are limited by law and, more importantly, actual access may be limited for legal, practical, or even safety related issues. The expectation should not be that the permittee will be able to gain access on every occasion.

2. MCM-4: Permittee must "Ensure compliance with requirements" under 2011 E&S Standards and Specs; "Ensure all necessary permits have been obtained…;" (Draft GP, p. 7-8). A permittee that is delegated authority for E&S should be required to order that entities engaging in land disturbance comply with state law. However, a permittee should not be expected to "ensure" that certain behavior occur.

4. MDE Has Incorrectly Defined "Outfall" in a Manner Inconsistent with Federal Law

MDE has incorrectly defined "outfall" in the Draft GP. According to the Draft GP, although an outfall is "[t]ypically" at the end of a pipe where stormwater discharges to a stream, an outfall "is not limited to stream bank discharge points." Outfalls can also occur "on a property above the receiving stream channel." An outfall "can also be the discharge point of a stormwater management facility," although, in this case, "the inflow to the stormwater management facility should also be mapped." (Draft GP, p. B-4)

MDE's definition is inconsistent with the federal definition of an outfall, which is: "the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States." 40 CFR §122.26(b)(9).

We understand that MDE intended to provide a fuller explanation of what it views as outfall points, and did not intend to increase the number of outfalls that a permittee would need to inspect under the dry-weather screening program in MCM-3. While we appreciate the intention to clarify the definition, we request that the permit itself be written in a manner consistent with federal law.

5. Certification Statement for NOI is Legally Incorrect

EPA's NPDES regulations (40 C.F.R. § 122.22) require that permit applications and reports include the following certification statement:

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Several sections of the Draft GP are inconsistent with the federal language. Specifically, we request that MDE revise the certification at Signature of Responsible Personnel (p. C-2) and Progress Report (p. D-2) so that they reflect the appropriate text.

6. The Draft GP Includes Unreasonably Broad Incorporation by Reference

The Draft GP states that "permittee 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, Annotated Code of Maryland." (Draft GP, p. 16)

This requirement is overbroad and may lead to confusion as to what is required of permittee. All permit conditions should be expressly stated in the GP so that each permittee understands what is expected of their program and so that each permittee has a yardstick for measuring permit compliance.

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ATTACHMENT A

MARYLAND DEPARTMENT OF THE ENVIRONMENT

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

GENERAL PERMIT FOR DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS

GENERAL DISCHARGE PERMIT NO. 13-IM-5500
GENERAL NPDES NO. MDR055500

Effective Date: **TBD**
Expiration Date: **TBD**

PART I. COVERAGE UNDER THIS GENERAL PERMIT

A. Permit Area

This National Pollutant Discharge Elimination System (NPDES) general permit covers small municipal separate storm sewer systems (MS4s) in certain portions of the State of Maryland as defined under Title 40 of the Code of Federal Regulations (CFR) 122.26(b)(16) and 122.32(a)(1).

B. Designation

~~Municipalities~~Discharges designated for coverage by this general permit include those located within the geographical area of:

1. Municipalities defined as "large" or "medium" MS4s under 40 CFR 122.26(b) that are permitted currently under an individual NPDES municipal stormwater permit;

2. Urbanized areas as determined by the latest Decennial Census by the Bureau of the Census; or

3. Other ~~areas~~ discharges designated by the Maryland Department of the Environment (MDE) under 40 CFR 123.35(b)(2).

A list of ~~municipalities~~ small MS4s designated for coverage under this general permit is included in Appendix A.

C. Obtaining Coverage

Operators of ~~R~~regulated small MS4s~~municipalities~~ shall seek coverage under this permit by submitting a Notice of Intent (NOI) according to requirements in Part II below, using the form provided by MDE in Appendix C. A list of small MS4s requiring permit coverage is found in Appendix A. A small municipality may be a co-permittee or coordinate with a surrounding county covered under an MS4 NPDES stormwater permit.

D. Definitions

Terms used in this permit are defined in relevant chapters of 40 CFR Part 122 or 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.

Commented [A1]: Legal error: "Discharges" can be designated, not "Municipalities." 122.26(a)(1)

Commented [A2]: Not a lawful designation criterion under 40 CFR 122.26 or 123.35.

Commented [A3]: "Areas" cannot be designated under 122.26(a)(1). Only "discharges" can be designated.

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PART II. NOTICE OF INTENT REQUIREMENTS

A. Deadlines for Notification

Small MS4 ~~owners~~ operators identified in Appendix A shall seek coverage under this general permit and submit to MDE an NOI that contains the information outlined in Part II.B within 180 days of the effective date of this permit.

B. Contents

An NOI serves as notification that the ~~municipality~~ small MS4 operator intends to comply with this general permit. The NOI form is provided in Appendix C of this permit. The NOI shall contain the following:

1. The name, address, telephone number, and e-mail address of the responsible contact person for the required MS4 programs listed in Parts IV and V of this general permit;

2. A brief description of the ~~jurisdiction~~ MS4 and its drainage area for which coverage is being sought. This shall include the approximate size, land uses, and a description of the stormwater conveyance system~~, and list of other NPDES permits that have been issued by MDE~~;

3. A brief description of any agreements with another entity when responsibilities for permit compliance are shared between the permittee and entity. The relationship and specific duties of all parties shall be provided;

4. An estimate of the anticipated expenditures to implement the required programs specified in this general permit; and

5. An authorized signature according to Part VII.O of this general permit.

Commented [A5]: Coverage is not sought for "jurisdictions."

Commented [A6]: Premature. Not a realistic NOI requirement for permittees that have not yet conducted an impervious area assessment – and particularly for new MS4 permittees. Also not realistic for existing permittees who are facing a significant ramp up of current requirements (for example, it will likely be necessary to hire new employees to address various MCM terms). Determining staffing needs and financial impacts will take time and cannot reasonably be done in time to submit the NOI.

C. Where to Submit

~~Municipalities~~ MS4 operators seeking coverage under this permit shall submit NOIs

to the following: Maryland Department of the Environment
Water Management Administration
Sediment, Stormwater, and Dam Safety Program
1800 Washington Boulevard
Suite 440
Baltimore, Maryland 21230-1708

PART III. ~~COMPLIANCE WITH~~REASONABLE PROGRESS TOWARD ATTAINMENT OF WATER QUALITY STANDARDS

Operators of ~~S~~small ~~municipalities~~ MS4s covered under this general permit must manage, implement, and enforce management programs for controlling all stormwater ~~discharges~~discharged from its MS4 to the maximum extent practicable, in accordance with the Clean Water Act (CWA) and corresponding stormwater NPDES regulations, 40 CFR Part 122, to meet the following requirements:

1. Effectively ~~prohibit~~ reduce pollutants in stormwater discharges or other unauthorized discharges into the MS4 ~~as necessary to comply~~to make reasonable progress towards attainment of ~~with~~ Maryland's receiving water quality standards;

2. Make reasonable progress toward ~~A~~attaining applicable wasteload allocations (WLAs) for each established or approved Total Maximum Daily Load (TMDL) for each receiving water body, 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 general permit, and in plans and schedules developed in fulfillment of this permit.

Compliance with the conditions contained in Parts IV and V of this permit shall constitute compliance with Section 402(p)(3)(B)(iii) of the CWA and adequate progress toward compliance with Maryland's receiving water quality standards and any EPA approved stormwater WLA for this permit term.

PART IV. MINIMUM CONTROL MEASURES

Permittees shall ensure that the following minimum control measures (MCMs) are implemented in the jurisdiction served by the small MS4 covered under this permit. The six MCMs described below include Public Education and Outreach, Public Involvement and Participation, Illicit Discharge Detection and Elimination, Construction Site Stormwater Runoff Control, Post Construction Stormwater Management, and Pollution Prevention and Good Housekeeping. Specific requirements for compliance with this general permit are outlined for each MCM below. Permittees shall report on the status of implementation of these required programs in accordance with the MS4 Progress Report (Appendix D).

Any permittee renewing coverage under the general permit shall continue to maintain, update, and report progress as described below. All new permittees shall develop the programs described below within the first year of permit issuance and begin implementation thereafter. Annual reports will show progress toward program development and demonstrate full implementation of all permit requirements by the end of the five year permit term.

Permittees can choose to utilize partnerships or share responsibilities with other entities for compliance with any requirement of this general permit. This may entail establishing partnerships with the surrounding county or a municipality performing similar activities under the requirements of an NPDES MS4 permit. If responsibilities for permit compliance are shared

Commented [A7]: Compliance with WQS not legally required, and should not be implied. Court of Appeals clarified this in 2016 Anacostia Riverkeeper opinion.

Commented [A8]: This is confusing for existing permittees. Recommend existing permittees continue to implement programs required under previous permit until their programs are updated consistent with the new GP. Existing permittees should have 1 year to update programs. This should be clear under each MCM as well.

between the permittee and another entity, the relationship and specific duties of all participating

entities shall be described in the NOI and updated information provided in the MS4 Progress Report. However, the permittee shall remain responsible for compliance with all conditions of this general permit. For this reason, a legally binding contract, memorandum of understanding (MOU), or other similar means shall be executed between the permittee and all other entities to avoid conflicts resulting from noncompliance with this general permit.

A. Public Education and Outreach

Permittees are required to implement and maintain a public education and outreach program and distribute education materials to the community and employees to help reduce the discharge of pollutants caused by stormwater runoff. This entails developing brochures, booklets, and training programs to educate the public about the impacts of stormwater discharges on receiving waters, why controlling these discharges is important, and what the public can do to reduce pollutants in stormwater runoff. This program may be coordinated with other portions of the permittee's MS4 program or developed independent of other pollution control efforts.

Renewal permittees shall update and continue to maintain their public education and outreach program. New permittees shall develop this program within one year of permit issuance and begin implementation thereafter. All permittees shall provide program updates in accordance with the MS4 Progress Report specified for this MCM.

In order to comply with this MCM, all permittees shall:

1. Develop a hotline or designate an official contact for the public to report water quality complaints within one year of permit issuance;

2. Determine the target audience within the jurisdiction and develop materials to educate the audience on the impact of stormwater. These topics may include water conservation, chemical application on lawns and landscaping, proper car wash procedures, proper disposal of paint and other household hazardous waste, recycling and trash pick-up, and proper pet waste disposal;

3. Distribute stormwater educational materials through newsletters, website, or other appropriate methods. Submit examples of education material to MDE in accordance with reporting requirements;

4. Develop and implement an annual employee training program that addresses appropriate topics to prevent or reduce the discharge of pollutants into the storm drain system. Submit topics selected and attendee list to MDE in accordance with reporting requirements; and

5. Describe in reports to MDE how the education programs facilitate the permittee's efforts to reduce pollutants in stormwater runoff.

Commented [A9]: Increases flexibility for small entities.

Commented [A10]: Add text to allow permittee to use training materials developed by other permittees, third-parties, etc.

B. Public Involvement and Participation

Permittees are required to create and foster opportunities for public participation in the MS4 management program for controlling stormwater discharges. Recommended activities include adopt-a-stream programs, public surveys, storm drain stenciling, stream cleanups, tree plantings, and Earth Day events. This program may be coordinated with other portions of the permittee's MS4 program or developed independent of other pollution control efforts.

Renewal permittees shall update and continue to maintain their public involvement and participation program. New permittees shall develop this program within one year of permit issuance and begin implementation thereafter. All permittees shall provide program updates in accordance with the MS4 Progress Report specified for this MCM.

In order to comply with this MCM, all permittees shall:

1. Determine the target audience within the jurisdiction to promote public involvement and participation activities;

2. Specify activities appropriate for the target audience and promote participation;

3. Perform at least 5 public participation events during the permit term and report to MDE in accordance with reporting requirements;

4. Provide public access to the permittee's progress reports via website or other method and consider any substantive public comments received concerning the jurisdiction's MS4 program; and

5. Comply with all State and federal public notice requirements for any regulated activity on the property of the MS4.

C. Illicit Discharge Detection and Elimination (IDDE)

Permittees are required to develop, implement, and enforce a program to identify and eliminate illicit storm drain system discharges from the MS4 in accordance with 40 CFR §122.34(b)(3). A permittee will satisfy this MCM by field screening storm drain system outfalls, inspecting the storm drain system to identify any source of an illicit discharge, eliminating any illegal connection or illicit discharge to the storm drain system, and enforcing penalties where appropriate. The illicit discharge program shall also contain components to address illegal dumping and spills. Additional guidance is provided in Appendix B, Section II to assist permittees with the development of an acceptable IDDE program.

Renewal permittees shall update and continue to maintain their illicit discharge detection and elimination program. New permittees shall begin development of this program within one year of permit issuance and begin implementation thereafter. All permittees

shall provide program updates in accordance with the MS4 Progress Report specified for this MCM.

In order to comply with this MCM, all permittees shall:

1. Develop and periodically update ~~Maintain~~ a map of the ~~jurisdiction's storm drain infrastructure~~MS4 owned or operated by the permittee by [date for new permittees], which identifies ~~all pipes,~~ known outfalls, ~~inlets,~~ and known stormwater management best management practices (BMPs)~~, illicit discharge screening locations, and surface waters~~;

2. Adopt an ordinance, or other regulatory means, that prohibits illicit discharges into the ~~storm sewer system~~MS4;

3. ~~Establish~~ Document legal means for gaining access, to the maximum extent practicable, to private property to investigate and eliminate illicit storm drain system discharges (e.g., ordinance, easements~~, warrants~~);

4. Develop and implement written standard operating procedures (SOPs) that specify the following:

   a. Development of an inspection checklist describing how outfalls are screened for dry weather flows (see Figure B.2 of Appendix B for an example of an outfall screening checklist);
   b. Screening of a list of priority ~~20% of total~~ outfalls ~~per~~each year~~, up to 100 outfalls~~, with prioritization based on the permittee's review of parts of the regulated area that have aging infrastructure, areas with commercial and industrial development, etc.;
   c. Methods for identifying the source and eliminating spills, illegal dumping, and other suspected illicit discharges;
   d. Identification of priority areas for illicit discharge screening based on pollution potential;
   e. Enforcement and penalty procedures;
   f. Means by which to inform employees, businesses, and the general public of the issues relating to illegal discharges and improper waste disposal; and
   g. Coordination with adjacent/interconnected MS4 operator(s), as appropriate.

5. Submit SOPs to MDE for review and approval within two years of permit issuance. MDE will review for consistency with guidance in Appendix B, Section II;

6. Document results of illicit discharge screening efforts and include any necessary follow-up investigations, enforcement, and remediation measures implemented to address any suspected discharge. Submit to MDE in accordance with reporting requirements; and

7. Maintain complete records of IDDE program investigations and make available to

Commented [A11]: Clarify this applies only to MUNICIPAL storm sewer system.

Commented [A12]: New permittees will need time to develop system maps.

Formatted: Not Highlight

Commented [A13]: Clarify this applies only to MUNICIPAL storm sewer system.

Commented [A14]: May already exist for many permittees.

MDE during field reviews of the jurisdiction's MS4 program.

D. Construction Site Stormwater Runoff Control

~~Permittees are required to comply with Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland and State erosion and sediment control regulations under COMAR 26.17.01. The statute and COMAR specify the requirements for any construction activity that disturbs 5,000 square feet or 100 cubic yards or more of earth movement.~~ MDE considers compliance with Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland and State erosion and sediment control regulations under COMAR 26.17.01~~the State statute~~ to be compliance with this MCM of this general permit, and CFR. The permittee shall certify its compliance with this statute and regulations in its MS4 Progress Report.

All permittees shall provide program updates in accordance with the MS4 Progress Report specified for this MCM. In order to comply with State and federal laws and regulations pertaining to an acceptable erosion and sediment control program, all permittees shall:

1. Adopt an MDE approved ordinance that includes a process for plan review and approval of proposed construction drawings and erosion and sediment control plans, and inspection and enforcement procedures in accordance with COMAR 26.17.01. Subsequently, any proposed amendments to the ordinance shall be submitted to MDE for review and approval;

2. A municipality may accept the program that is being implemented by its respective county. Each permittee that relies on its respective county for the implementation of an erosion and sediment control program shall execute a binding agreement or resolution with said county. The agreement shall clarify respective roles of all parties related to plan review and approval, construction site inspections, and enforcement;

3. Ensure compliance with requirements under *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control* (MDE, 2011);

4. ~~Ensure~~ Require that all necessary permits have been obtained, including MDE's General Permit for Stormwater Associated with Construction Activity for projects disturbing one acre or more, and local sediment and erosion control plan approval;

5. Develop a process for receiving, investigating, and resolving complaints from any interested party related to construction activities within the jurisdiction. Notify the complainant of the investigation and findings within seven days;

6. Track all active construction sites within the jurisdiction and report to MDE the disturbed areas for all active permits in accordance with reporting requirements;

7. Take reasonable measures to e~~E~~nsure that construction site inspections and enforcement procedures are performed in accordance with COMAR. For jurisdictions that are not delegated, this will require ongoing communication

Commented [A15]: MCM 4 can and should be limited to these two sentences. So long as a permittee is in compliance with the E&S regulations, then it is complying with MCM 4. It is reasonable for a permittee to annually certify its compliance with the regulations. Everything else in this section is unnecessary.

There is a potential for conflicting requirements/interpretations between the permit and the regulations. There should be one source of authority on compliance with the E&S regulations.

Remainder of Part IV.D should be deleted.

Commented [A16]: Inconsistent with COMAR 26.17.01.11.B, which includes flexibility to vary from the 2011 Standards.

Commented [A17]: Shouldn't be a violation of this permit if a third-party unlawfully builds without CGP coverage.

Commented [A18]: Should not be a permit violation for permittee to not be aware of a fly-by-night construction job.

Not required by COMAR. Should be deleted.

and collaboration with the enforcement authority to ~~ensure~~ assure the permittee that any violations are properly addressed;

8. Use all procedures within existing municipal codes to help prevent and reduce erosion and sediment pollution into waters of the State from any construction activity. A municipality may suspend or deny the issuance of a building or grading permit when it determines that the applicant is not in compliance with an approved erosion and sediment control plan; and

9. Ensure staff is adequately trained on proper procedures and actions to address potential discharge of pollutants into the storm drain system as a result of any construction activity. The Responsible Personnel Certification on-line training course through MDE shall be made available to appropriate staff.

E. Post Construction Stormwater Management

Permittees are required to maintain an acceptable stormwater management program in accordance with Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland and State stormwater management regulations under COMAR 26.17.02. The statute and COMAR require that stormwater management shall be addressed for new development and redevelopment for any proposed project that disturbs 5,000 square feet or more. MDE considers compliance with the State statute to be compliance with this MCM of this general permit, and CFR. The permittee shall certify its compliance with this statute and regulations in its MS4 Progress Report.

All permittees shall provide program updates in accordance with the MS4 Progress Report specified for this MCM. In order to comply with State and federal laws, regulations, ordinances, and procedures pertaining to an acceptable stormwater management program, all permittees shall:

1. Adopt an MDE approved stormwater management ordinance that provides plan review and approval processes, and inspection and enforcement procedures that ensure proper construction and maintenance of BMPs in accordance with COMAR 26.17.02. Subsequently, any proposed amendments to the ordinance shall be submitted to MDE for review and approval;

2. A municipality may accept an MDE approved stormwater program that is being implemented by its respective county. Each permittee relying on the county for the implementation of a stormwater management program shall execute a binding agreement or resolution with said county. The agreement shall clarify respective roles of all parties related to stormwater plan review and approval, construction and post construction inspections, routine maintenance, enforcement, and BMP tracking;

3. ~~Implement the principles, methods, and practices found in the latest version of the *2000 Maryland Stormwater Design Manual, Volumes I & II* (Manual). This r~~Require~~s~~ that environmental site design (ESD) be implemented to the maximum extent practicable (MEP) for all new and redevelopment projects;

Commented [A19]: Too broad and subject to interpretation. Invitation to enforcement for bad actions of 3d parties.

Commented [A20]: Same as above. This MCM should (1) note that compliance with SW regulatiosn constitutes compliance with this MCM, and (2) that permittee must certify its compliance. Nothing more is needed. Delete remainder of section.

Commented [A21]: "Implement the principles, methods, and practices" is too vague to be an enforceable permit condition.

4. Maintain stormwater program implementation information and provide updates in accordance with the MS4 Progress Report that includes:

   a. An Urban BMP database in accordance with the database structure in Appendix B, Table B.1. This information shall be submitted to MDE with annual reports;
   b. Total number of triennial inspections performed and verification that inspections occur at least once every three years;
   c. Total number of violation notices issued and status of enforcement activities; and
   d. Summary of routine maintenance activities for all publicly owned BMPs. Maintenance plans shall address periodic mowing, plant composition and health, trash and debris accumulation, sedimentation and erosion, dewatering, and overall function of the facility in accordance with approved plans. Specify any actions taken to correct problems noted during routine maintenance activities.

5. Provide training for staff with relevant responsibilities related to implementing this MCM on proper BMP design, performance, inspection, and routine maintenance. Report to MDE the number of trainings offered, topics covered, and number of attendees in the MS4 Progress Report.

Commented [A22]: Need to clarify which staff need to receive training.

F. Pollution Prevention and Good Housekeeping

Permittees are required to develop and implement an operation and maintenance program that includes a training component to prevent and reduce pollutant runoff from municipal operations in accordance with 40 CFR ~~40~~§ 122.34(b)(6). A permittee will satisfy this MCM by developing, implementing, and maintaining procedures for pollution prevention and good housekeeping ~~throughout the jurisdiction's~~on properties owned by the permittee. Pollution prevention measures should address fleet yard operations, building maintenance activities, spill control, disposal of waste including hazardous waste, reducing or
eliminating discharge of pollutants from roads and parking lots, and storage and transport of chemicals.

Renewal permittees shall update and continue to maintain their pollution prevention and good housekeeping program. New permittees shall develop this program within one year of permit issuance and begin implementation thereafter. All permittees shall provide program updates in accordance with the MS4 Progress Report.

In order to comply with this MCM, all permittees shall:

1. Ensure that appropriate staff and contractors working on permittee-owned property in the permit area, as determined by the permittee, receive training at least annually on all sections of the permit relevant to this MCM. The training shall be designed to address the importance of water quality protection through pollution prevention and good housekeeping measures. Topics shall include spill prevention and response, controls for reducing or eliminating the discharge

of pollutants during facility operations, proper disposal of waste, and routine inspections to detect and

correct potential stormwater discharges at facilities owned and operated by the jurisdiction;

2. Develop, implement, and maintain a pollution prevention plan at any publicly owned or operated properties that do, or have the reasonable potential to, contribute pollutants to the permittees' MS4 (as determined by the permittee) that includes:

   a. A description of site activities;
   b. A site map identifying all buildings; stormwater conveyances including ditches, pipes, and swales; directions of stormwater flow (use arrows); water bodies receiving discharges; and locations of all existing structural control measures or BMPs;
   c. A list of potential pollutants and their sources and locations, including run-on from adjacent properties;
   d. Written good housekeeping procedures designed to reduce the potential for stormwater pollution from the facility;
   e. Procedures for routine site inspections to detect and correct stormwater discharges, releases, and any spills or leaks on site; and
   f. Documentation of any discharge, release, leak, or spill, including date, findings, and response actions.

3. Quantify and report pollution prevention efforts related to the following activities, if undertaken by the permittee:

   a. Number of miles swept and pounds of material collected from street sweeping and inlet cleaning programs;
   b. Describe good housekeeping methods for pesticide application such as integrated pest management plans or alternative techniques;
   c. Describe good housekeeping methods for fertilizer application such as chemical storage, landscaping with low maintenance/native species, and application procedures;
   d. Describe good housekeeping methods for deicing applications such as use of pretreatment, truck calibration and storage, salt dome storage and containment; and
   e. Describe other good housekeeping BMP procedures undertaken by permittee not listed above.

4. ~~Contact MDE to determine whether coverage is required for any jurisdiction-owned or operated facility under the General Permit for Stormwater Discharges Associated with Industrial Activity, Sector AD.a, which provides coverage to Department of Public Works and Highway Maintenance facilities~~. In its first MS4 Progress Report issued under this permit, provide MDE with a list of any facilities in Sector AD.a, including vehicle and equipment maintenance shops (vehicle and equipment rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations and salt storage for road deicing activities, that are owned or operated by the permittee. Indicate on the list whether any of the facilities are presently covered by the General Permit for

Commented [A23]: ALL publicly owned "properties" is too broad. Should be limited to properties with reasonable potential to discharge pollutants to MS4.

Also, to reduce compliance burden, suggest giving permittees the option of developing general plans covering multiple properties of similar type.

Commented [A24]: Vague requirement. Unclear what information permittee is to provide or when. Unclear how permittee is to "determine whether coverage is required." Suggest simplification and clarification.

Municipality owned/operated Sector AD.a facilities are exempt from the permitting requirement unless MDE notifies the municipality otherwise. Requirement should simply be for permittee to identify such facilities to MDE. MDE can follow up with additional information requests it deems appropriate.

Suggest rewording requirement to clearly state what information permittee must submit to MDE and when.

Stormwater Discharges Associated with Industrial Activity or the ~~02~~12-SW permit. Upon request by MDE, the permittee shall provide additional information about the identified facilities.

PART V. CHESAPEAKE BAY RESTORATION AND MEETING TOTAL MAXIMUM DAILY LOADS

Maryland's Watershed Implementation Plan (WIP) specifies the nutrient and sediment load reductions required to address the Chesapeake Bay TMDL by 2025. This general permit will make progress toward that strategy by requiring small MS4s to commence restoration efforts for twenty percent of existing developed lands within the regulated Permit Area that have little or no stormwater management. This

~~five~~ five-year permit term will require permittees to develop planning strategies and work toward implementing water quality improvement projects. Restoration planning strategies and implementation schedules required under this general permit are consistent with addressing the water quality goals of the Chesapeake Bay TMDL by 2025. The conditions established below require permittees to perform watershed assessments, identify water quality improvement opportunities, secure appropriate funding, and develop an implementation schedule to show the twenty percent impervious area restoration requirement will be achieved by 2025. This constitutes adequate progress toward compliance with Maryland's receiving water quality standards and any stormwater WLA established or approved by United States Environmental Protection Agency (EPA) for small MS4s regulated under this permit.

Restoration efforts may include the use of ESD practices, structural stormwater BMPs, retrofitting, stream restoration, or other alternative restoration practices. ~~Trading with other sectors may also be considered as another method to achieve pollutant reductions, once a program has been established, regulations are adopted, public participation requirements are satisfied, and its use is approved by EPA.~~ Acceptable design criteria for stormwater BMPs are outlined in the Manual and *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated* (MDE, 2014). Appendix B of this permit provides relevant guidance from MDE, 2014 for small MS4 permittees to comply with these requirements. A permittee will demonstrate compliance with restoration requirements by performing the following:

A. Develop a Baseline Impervious Area Assessment

Permittees shall determine the total impervious surface area within ~~their jurisdiction~~the regulated Permit Area and delineate the portions that are treated with acceptable water quality BMPs. This analysis will provide the baseline used to calculate the twenty percent restoration requirement.
This shall be done in accordance with the guidance outlined in Appendix B, Section III of this permit (which is consistent with MDE, 2014). The impervious area baseline assessment shall be submitted with the first year annual report for MDE review and approval. The following information shall be submitted with this assessment:

1. Total impervious acres for the ~~jurisdiction~~ regulated Permit Area covered under this general permit;
2. Total impervious acres treated by water quality BMPs;
3. Total impervious acres treated by BMPs providing partial water quality treatment;
4. Total impervious acres treated by nonstructural practices (i.e., rooftop disconnections, non-rooftop disconnections, or vegetated swales);
5. Verification that any impervious area draining to BMPs with missing inspection records are not considered treated; and
6. Total impervious acres untreated and twenty percent of this total area (restoration requirement).

B. Develop and Implement an Impervious Area Restoration Work Plan

Permittees shall submit a work plan with the first year annual report to describe the activities and milestones that will be performed over the permit term to show progress toward the twenty percent impervious area restoration requirement. This will form the

Commented [A25]: If and when a trading program is adopted, there should be no ambiguity as to whether permittees can take advantage of it. That should be automatic.

Suggested language has been added to a new Part V.E to clarify the use of trading.

Commented [A26]: Permit must not conflict with 40 CFR 122.26 and 122.32.

Commented [A27]: Question whether it will be possible for many smaller and new permittees to complete an IA Analysis by Sept. 2018. Consistent with Association comments, consider revising timeframes in GP to give permittees adequate planning time. Bear in mind that permittees will also be updated (or developing if a new permittee) significantly enhanced MCM programs during the first year.

basis of a long term plan; however, the plan may be adjusted and refined as part of the adaptive management process over the course of the permit term. A recommended work plan in the format of Table 1 below shall be submitted to MDE annually to describe progress and any modifications necessary to remain on track with restoration requirements. A suggested work plan is provided in Table 1. Permittees may use the work plan or develop a custom plan that addresses the unique circumstances of individual jurisdictions for MDE review and approval.

Table 1. Impervious Area Restoration Work Plan

Timeline	Management Strategies and Goals
Year 1	• Develop impervious area baseline assessment. • Develop restoration work plan for MDE review and approval. • Assess opportunities and timelines for implementing water quality BMPs. • Assess opportunities to develop partnerships with other NPDES permittees. • Determine funding needs and develop a long term budget.
Year 2	• Submit complete Urban BMP database. • Maintain inspection records for all BMPs. • Perform watershed assessments and identify water quality problems and opportunities for restoration. • Develop list of specific projects to be implemented for restoration and identify on the Restoration Activity Schedule (Table 2). • Incorporate future growth agency-wide/jurisdiction-wide master plans into restoration planning efforts. • Evaluate and refine budget needs for project implementation.
Year 3	• Update and submit Urban BMP database and documented maintenance and inspection status for all BMPs. • Develop adaptive management strategies for BMP implementation that identify opportunities for improved processes and procedures. • Continue to identify opportunities for water quality improvement projects and collaborative partnerships to meet restoration requirements.
Year 4	• Update and submit project implementation status in Table 2. • Update and submit Urban BMP database and documented maintenance and inspection status for all BMPs. • Submit narrative describing progress and updated adaptive management strategies toward implementing restoration projects.
Year 5	• Update and submit project implementation status in Table 2. • Provide complete list of specific projects needed to meet the twenty percent restoration requirement in Table 2 and include the projected implementation year (no later than 2025).

C. Develop a Restoration Activity Schedule

Permittees are required to develop a Restoration Activity Schedule (Table 2) and provide annual updates on the status of projects in the planning, construction, and final phase of implementation. A brief narrative shall accompany Table 2 and describe progress of

planned restoration activities. Table 2 below provides an example of how to submit the required information. The table outlines a schedule for various BMPs under different stages of implementation during the permit term. The impervious acre baseline is indicated as 100 acres and noted in year one. With the implementation of each BMP, the balance toward achieving the restoration requirement is recalculated in the Impervious Acre Restoration Target and Balance ("Imperv Acre Target and Balance") column. This plan should be continuously refined and updated over the duration of the permit term. By the end of the permit term, a complete list of projects required to meet the twenty percent restoration requirement shall be provided. The projected implementation year shall be no later than 2025, unless the permittee demonstrates that it is not practicable to implement the requirement by such date with a level of effort consistent with the maximum extent practicable standard set forth in 33 U.S.C. § 1342(p)(3)(B)(iii), in which case the permittee shall utilize the earliest date for which it is practicable for the restoration requirement to be fully implemented.

Commented [A28]: Permit must have a safety valve if 2025 deadline is not practicable to be consistent with 33 USC 1342(p)(3)(B)(iii).

Commented [A29]: Permit must have a safety valve if 2025 deadline is not practicable to be consistent with 33 USC 1342(p)(3)(B)(iii).

Permittees may take credit for retrofit and redevelopment that has been implemented between 2006 and the beginning of the permit term, including, but not limited to stream restoration efforts. When the impervious area baseline analysis considers the drainage areas to these practices as untreated, then these projects may be credited toward impervious area restoration requirements. Credits may be reported using the Restoration Activity Schedule (Table 2) discussed below.

Impervious acre credits are based on the level of water quality treatment provided. When water quality BMPs treat one inch of rainfall, the impervious acres draining to the BMP will be considered restored. When the rainfall treated is less than one inch, a proportional acreage will be calculated for impervious acres treated based on the percentage of one inch of rainfall treated. When alternative BMPs are implemented, acreage may be calculated based on an impervious acre equivalent identified in Appendix B, Table B.2. Additional information on BMP implementation and impervious acre credits may be found in *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated* (MDE, 2014).

Table 2. Restoration Activity Schedule (Example)

Type of Restoration Project	BMP[1] Code	Cost ($K)	Imperv Acres Treated	Imperv Acre Target and Balance	Project Status[2]	Year Complete or Projected Implementation Year (by 2025)	MD Grid Coordinates	
							Northing	Easting
				100				
Dry pond retrofit to wet	PWET	1,500	36	64	UC			
Bioretention	FBIO	260	6	58	P			
Bioswale	MSWB	100	2	56	P			
Dry pond retrofit to wet	PWET	800	10	46	P			
BMP retrofit	PWET	500	8	38	P			
Redevelopment	REDE	300	5	33	P			
Rain Gardens (4)	MRNG	20	2	31	P			
Disconn rooftop r/o	NDRR	200	10	21	P			
Stream restoration (1,000 linear feet)	STRE	500	10	11	P			
Outfall Stabilization	OUT	200	2	9	P			
Shallow marsh	WSHW	150	4	5	P			
Reforestation on Imperv	IMPF	100	3	2	P			
Green Roof, extensive	AGRE	100	0.5	1.5	P			
Perm pavement on existing pavement	APRP	150	2	-0.5	P			

[1] See Appendix B, Table B.1, Urban BMP database. BMP codes are identified under "MDE BMP Classification."

[2] Project Status: Enter P for planning and design, UC for under construction, and C for complete.

D. BMP Database Tracking

Permittees are required to develop a BMP inventory consistent with the required fields outlined in the BMP Database provided in Appendix B, Table B.1. ~~A brief narrative shall accompany the BMP database and provide verification that routine inspection and maintenance activities are up to date.~~ The database fields for inspection and maintenance need to be completed and show that BMPs are inspected every three years and properly maintained. If the required inspection and maintenance data are missing or incomplete then any credit previously applied should be corrected or removed.

Commented [A30]: Superfluous. The BMP Database must be submitted with the MS4 Progress Report (Part IV.E.4). Therefore it must be certified as true, accurate, and complete just like all other submissions under the permit.

Commented [A31]: If the missing information is simply a clerical error, then the permittee should have the opportunity to correct it.

E. Water Quality Trading

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Permittees are authorized to employ water quality trading with other sectors or other permittees to achieve the pollutant reductions required by this Part V upon the effective date of, and in accordance with terms and conditions of, any statute, regulation, guidance document, or policy statement permitting such trading.

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PART VI. EVALUATION AND ASSESSMENT, RECORDKEEPING, REPORTING, AND PROGRAM REVIEW

A. Evaluation and Assessment

The permittee must evaluate progress toward achieving compliance with all permit requirements, and the appropriateness of implemented BMPs. This shall be achieved through reporting to MDE as specified in Part VI.C below.

B. Recordkeeping

The permittee shall keep records for at least three years after the termination of this general permit. In addition to the information required in annual reports specified below, permittees shall submit any additional supporting documentation at the request of MDE. The permittee shall make its MS4 program information, including records, available to the public during regular business hours.

C. Reporting

1. The required information specified in the MS4 Progress Report in Appendix D shall be completed each year. The reporting period shall be based on State fiscal year. MS4 Progress Reports are due no later than September 1st of each year with the first annual report due September 1, 2018.

2. Annually, the permittee shall submit a report to MDE that evaluates progress toward meeting the twenty percent impervious area restoration requirement specified in Part V above. Restoration activity described in the MS4 Progress Report shall be completed and include:

    a. An impervious area baseline analysis in accordance with Part V.A and the guidance in Appendix B, Section III. This analysis shall be submitted with the first year annual report for MDE review and approval;
    b. The Impervious Area Restoration Work Plan (Table 1) shall be submitted with the first year annual report and in annual updates. The work plan shall include a narrative discussing progress made toward restoration efforts and a description of adaptive management strategies necessary to keep proposed implementation efforts on track;
    c. An updated Restoration Activity Schedule in accordance with Table 2 shall be submitted annually. By the end of the permit term, a complete list of projects required to meet the twenty percent restoration requirement shall be specified in Table 2. The projected implementation year shall be no later than 2025; and
    d. An updated Urban BMP database in accordance with Appendix B, Table B.1 in electronic format and a brief narrative discussing progress

made toward completing the database and performing routine maintenance and inspections.

3. Reporting for the six MCMs specified in Part IV must be submitted in years two and four of the permit term and include all information requested in the MS4 Progress Report in Appendix D.

~~**D. Program Review**~~

~~In order to assess the effectiveness of the permittee's NPDES program for eliminating non-stormwater discharges and reducing the discharge of stormwater pollutants to the MEP, MDE will review program implementation as described in MS4 Progress Reports. Procedures for the review of local erosion and sediment control and stormwater management programs exist in Maryland's sediment control and stormwater management laws. Additional reviews of MCM implementation and the twenty percent restoration requirement may be conducted at any time to determine compliance with permit conditions.~~

Commented [A32]: Outlines actions MDE may take. Seems more appropriate for a fact sheet than the permit.

PART VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The permittee must comply with all conditions of this general permit. Any permit noncompliance constitutes a violation of the CWA and is grounds for enforcement action, permit coverage termination, revocation, or modification. ~~The permittee 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, Annotated Code of Maryland.~~

Commented [A33]: Far too broad to merely incorporate by reference and make a condition of the permit. Many provisions wholly unrelated to stormwater. For example, why would a violation at a permittee's WWTP (Title 9, Subtitle 3) be a violation of this permit?

To the extent requirements in the referenced subtitles are directly applicable, they should be specifically incorporated into permit as conditions.

~~**B. Failure to Notify**~~

~~Agencies engaging in an activity under this general permit that fail to notify MDE of their intent to be covered under this general permit as described in Part II and who discharge to waters of the State without submitting an NOI application are in violation of the Environment Article, Annotated Code of Maryland and may be subject to penalties.~~

Commented [A34]: Cannot place a permit condition on entities that are not covered by the permit.

~~C.~~B. Limitations on Coverage

~~1.~~ 1. The following categories of non-stormwater discharges or flows shall be addressed only if ~~where~~ such discharges are identified by the ~~municipality~~ permittee as a significant contributor ~~sources~~ of pollutants to waters of the United States: landscape irrigation, diverted stream flows, rising groundwater, uncontaminated groundwater infiltration, uncontaminated pumped groundwater, foundation drains, air conditioning condensate, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering runoff, flows from riparian habitats and wetlands, residual street wash water, and discharges or flows from fire fighting activities~~.~~ If not so identified, the discharges listed above are authorized discharges under the permit.

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~~2.~~ 2. Non-stormwater sources, stormwater associated with industrial activity, or discharges associated with construction activities may be authorized to discharge via the municipal separate storm sewer system if such discharges are specifically authorized under an applicable NPDES discharge permit.

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~~3.~~ 3. Only stormwater discharges from municipal separate storm sewer systems are authorized to discharge under this general permit, except as provided in (1) and (2) above.

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~~D.~~C. Penalties Under the CWA - Civil and Criminal

Section 309(d) of the CWA, 33 USC 1319(d) provides that any person who violates any permit condition is subject to a civil penalty not to exceed $25,000 per day for each violation. Pursuant to the Civil Monetary Penalty Inflation Adjustment Rule, 40 CFR Part 19, any person who violates any NPDES permit condition or limitation after December 6, 2013, is liable for an administrative penalty not to exceed $37,500 per day for each such violation. Section 309(g)(2) of the CWA, 33 USC 1319(g)(2) provides that any person who violates any permit condition is subject to an administrative 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 after December 6, 2013, is liable for an administrative penalty not to exceed $16,000 per day for each such violation, up to a total penalty of $187,500. 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 one year, or both. If a person has been convicted of negligent violations of the CWA previously, the criminal penalties may be increased to $50,000 per day of violation, or imprisonment of not more than two years, 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 three years, or both. If a person has been convicted of knowing violations of the CWA previously, the criminal penalties may be increased to $100,000 per day of violation, or imprisonment of not more than six years, or both.

~~E.~~D. 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 the county 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 MDE, and with each day a violation continues being a separate violation. Section 9-342 further authorizes the MDE to impose upon any person who violates a permit condition, administrative civil penalties of up to $10,000 per violation, up to $100,000.

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 one 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 two years imprisonment.

The Environment Article, Section 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 two years per violation, or both.

The Environment Article, Section 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 two years per violation, or both.

~~F.~~E. Need to Halt or Reduce Activity not a Defense

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.

~~G.~~F. Continuation of an Expired General Permit

An expired general permit continues in force and effect for all permittees covered under this general permit until a new general permit is issued or the general permit is revoked or withdrawn. Coverage for new permittees may not be granted under an expired general permit.

~~H.~~G. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment and is in violation of this general permit, upon becoming aware of such discharge.

Commented [A35]: Should be clear that permittee is not in violation of permit for not minimizing/preventing discharge of which it had no knowledge.

~~I.~~H. Duty to Provide Information

The permittee shall furnish to MDE any information that may be requested to determine compliance with this general permit. The permittee shall also furnish to MDE, upon request, copies of records required to be maintained in compliance with the conditions of this general permit.

~~J.~~I. Other Information

When a permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in the NOI or in any other report to MDE, it shall promptly notify MDE of the facts or information.

~~K.~~J. Requiring an Individual Permit

1. MDE may require any jurisdiction to apply for and/or obtain an individual NPDES permit. When MDE requires a jurisdiction to apply for an individual NPDES permit, MDE will provide notification in writing that an application is required. This notification shall include a brief statement of the reasons for the decision, an application form, and a deadline for filing the application. Applications must be submitted to MDE. MDE may grant additional time to submit an application upon request of the applicant.

2. Any jurisdiction eligible for coverage under this general permit may request to be excluded from the coverage of this general permit by applying for an individual permit. In such cases, the jurisdiction must submit to MDE an individual application in accordance with the requirements of 40 CFR 122.26(c)(1)(ii), with reasons supporting the request.

3. When an individual NPDES permit is issued to a jurisdiction eligible for coverage under this general permit, the applicability of this general permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit. When an individual NPDES permit is denied to a jurisdiction otherwise subject to this general permit, then coverage under this general permit may be terminated by MDE.

~~L.~~K. Property Rights

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

~~M.~~L. Severability

The provisions of this general permit are severable. If any provision of this general 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 general permit to any circumstances is held invalid, its application to other circumstances shall not be affected.

~~N.~~M. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition. The Environment Article, Section 9-330, Annotated Code of Maryland, provides that MDE may revoke coverage under this permit if it finds that:

1. False or inaccurate information was contained in the application;

2. Conditions or requirements of the discharge permit have been or are about to be violated;

3. Substantial deviation from the requirements has occurred;

4. MDE has been refused entry to the premises for the purpose of inspecting to ensure compliance with the conditions of the discharge permit;

5. A change in conditions exists that requires temporary or permanent reduction or elimination of the permitted discharge;

6. Any State or federal water quality stream standard or effluent standard has been or is threatened to be violated; or

7. Any other good cause exists for revoking the discharge permit.

~~O.~~N. Signature of Authorized Administrator and Jurisdiction

All NOIs, annual reports, and information submitted to MDE shall be signed as required by COMAR 26.08.04.01-1 and 40 CFR 122.22. As in the case of municipal or other public facilities, signatories shall be a principal executive officer, ranking elected official, or other duly authorized employee.

~~P.~~O. Inspection and Entry

The permittee shall allow representatives of MDE and EPA to enter the permittee's premises at reasonable times to conduct an inspection of a regulated facility or activity, or to review records that must be kept as a condition of this permit.

~~Q.~~P. Proper Operations and Maintenance

The permittee shall properly operate and maintain all facilities and controls which are used to achieve compliance with the conditions of this permit.

~~R.~~Q. **Reporting Requirements**

The permittee shall report any non-compliance which may endanger human health or the environment. Any information shall be provided orally within 24 hours from the time when the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain 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.

~~PART VIII. REOPENER CLAUSE~~

~~If there is evidence indicating that the stormwater discharges authorized by this general permit cause, or have the reasonable potential to cause or contribute to, a violation of a water quality standard, the permittee may be required to obtain an individual permit or the general permit may be modified to include specific limitations and/or requirements. Permit modification or revocation will be conducted according to 40 CFR 122.62, 122.63, 122.64, and 124.5.~~

Commented [A36]: Duplicative of "Permit Actions" section in Party VII.

PART IX. AUTHORITY TO ISSUE GENERAL NPDES PERMITS

In compliance with the provisions of the CWA, as amended (33 USC 1251 et seq. the Act), agencies that are defined in Parts I.B.1 and I.B.2 of this general permit and that submit an NOI in accordance with Part II of this general permit are authorized to discharge in accordance with the conditions and requirements set forth herein.

D. Lee Currey
Acting Director
Water Management Administration

Date

APPENDIX A

Maryland Designation Criteria for
Small Municipal Separate Storm Sewer Systems

Appendix A

Maryland Designation Criteria for Small Municipal Separate Storm Sewer Systems

Phase I of the U.S. Environmental Protection Agency's (EPA) stormwater program was promulgated in 1990 under the Clean Water Act (CWA). This program relies on National Pollutant Discharge Elimination System (NPDES) permit coverage to address polluted discharges from stormwater runoff from medium and large municipal separate storm sewer systems (MS4s) that serve populations of 100,000 or more. The Phase II program expands Phase I by requiring operators of "small" MS4s in urbanized areas to implement programs to control stormwater runoff through the use of an NPDES permit. A small MS4 can be a municipally owned storm sewer system, but can also apply to State and federal agencies, and include transportation, universities, local sewer districts, hospitals, military bases, and prisons. This appendix describes the designation criteria for regulating small MS4 municipalities and State and federal properties.

Small Municipal Separate Storm Sewer Systems Permit Area

Parts 1.A and 1.B of the Small Municipal Separate Storm Sewer System General Discharge Permits for municipalities and for State and federal properties specify that small MS4s in the State of Maryland are regulated if located within the following geographical areas:

1. **Jurisdictions defined as "large" or "medium" MS4s under 40 CFR 122.26(b) that are permitted currently under an individual NPDES (Phase I) municipal stormwater permit.** Any small municipality with a population greater than 1,000 that is located within a regulated Phase I jurisdiction must seek permit coverage if it owns or operates an MS4. The following jurisdictions in Maryland are regulated under individual Phase I MS4 permits:

Anne Arundel County	Frederick County
Baltimore City	Harford County
Baltimore County	Howard County
Carroll County	Montgomery County
Charles County	Prince George's County
	State Highway Administration

2. **Urbanized areas as determined by the latest Decennial Census by the U.S. Census Bureau**. Coverage is also required for all ~~operators of~~ small MS4s located within the boundaries of an "urbanized area" based on the latest decennial census in accordance with 40 CFR 122.32(a)(1). A map of designated urbanized areas is located at the following website: https://www.epa.gov/npdes/urbanized-area-maps-npdes-ms4-phase-ii-stormwater-permits

3. **Other areas designated by MDE.** MDE has developed a set of designation criteria for small municipalities located outside of urbanized areas in accordance with 40 CFR 123.35(b)(2). Based on federal guidance, all jurisdictions with a population of at least

Commented [A37]: Not a valid designation criterion. No authority for this 40 CFR 122.26 or 123.25.

Commented [A38]: Must clarify that only portion of MS4 within urbanized area is designated per 40 CFR 122.32(a)(1).

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10,000 and a population density of at least 1,000 people per square mile must seek permit coverage.

Commented [A39]: Not a valid designation criterion.

Criteria must be based on water quality impacts, not population density. 40 CFR 123.35(b).

Municipal MS4 General Permit Waiver Criteria

The Code of Federal Regulations (CFR) specifies that certain municipalities may be waived from permit coverage under the following conditions:

1. An MS4 serves a population of less than 1,000 within the urbanized area and does not contribute substantially to the pollutant loadings of a physically interconnected regulated MS4 jurisdiction and stormwater controls are not needed based on wasteload allocations (WLAs) in an EPA approved or established total maximum daily load (TMDL); or

2. An MS4 serves a population of less than 10,000 and the permitting authority has evaluated receiving waters and determined that additional stormwater controls are not needed based on WLAs associated with an EPA approved TMDL or , if a TMDL has not been approved, an equivalent analysis that determines sources and allocations for the pollutants of concern; and has determined that future discharges from the MS4 do not have the potential to result in exceedances of water quality standards or other significant water quality impacts.

~~In addition to the above waiver criteria, municipalities that d~~Discharges of stormwater runoff combined with municipal sewage ~~are point sources that must obtain NPDES permits and, therefore,~~ are not subject to MS4 requirements (CFR 122.26(a)(7)).

Commented [A40]: MS4 permit is an NPDES permit. Confusing.

Table A.1 below provides a list of all Maryland counties and their municipalities that are required to be regulated under the MS4 program. The municipalities designated for Phase II MS4 general permit coverage are identified in the table based on the criteria herein. A municipality may request co-permittee status with its respective Phase I or Phase II county. Approximately 40 small municipalities are currently regulated through the MS4 NPDES program as co-permittees within Carroll, Montgomery, and Prince George's Counties.

Table A.1. Phase II MS4 General Permit Designation by County

Counties and Baltimore City	Jurisdictions Designated for Phase II MS4 Coverage	Justification
Allegany	Allegany County*	County is located within an urbanized area
Anne Arundel	Annapolis	City is located in a Phase I MS4
Baltimore	N/A	Phase I permit covers entire county
Baltimore City	N/A	Phase I permit covers entire city
Calvert	Calvert County*	County is located within an urbanized area
Caroline	N/A	Does not meet the urbanized area criteria
Carroll	N/A	Phase I permit covers all municipalities
Cecil	Cecil County, Elkton, North East*, Perryville*, and Rising Sun*	County and municipalities are located within an urbanized area
Charles	Indian Head* and La Plata*	Municipalities are located in a Phase I MS4
Dorchester	N/A	Does not meet the urbanized area criteria
Frederick	Brunswick, Emmitsburg, Frederick, Middletown, Mount Airy, Myersville, Thurmont, and Walkersville	Municipalities are located in a Phase I MS4
Garrett	N/A	Does not meet the urbanized area criteria
Harford	Aberdeen, Bel Air, Havre de Grace	Municipalities are located in a Phase I MS4
Howard	N/A	Phase I permit covers entire county
Kent	N/A	Does not meet the urbanized area criteria
Montgomery	Gaithersburg, Rockville, and Takoma Park	Municipalities are located in a Phase I MS4; Phase I permit covers all other municipalities
Prince George's	Bowie	Bowie is located in a Phase I MS4; Phase I permit covers all other municipalities
Queen Anne's	Queen Anne's County*	County is located within an urbanized area
St. Mary's	St. Mary's County*	County is located within an urbanized area
Somerset	N/A	Does not meet the urbanized area criteria
Talbot	Easton*	Easton population is greater than 10,000 and density greater than 1,000 people per sq. mi.
Washington	Washington County, Boonsboro*, Hagerstown, Smithsburg, and Williamsport*	County and municipalities are located within an urbanized area
Wicomico	Wicomico County* and Salisbury	County and city are located within an urbanized area
Worcester	N/A	Does not meet the urbanized area criteria

* Indicates a municipality newly designated for coverage as a Phase II small MS4

Eligible State and Federal Properties for MS4 Permit Coverage

Part 1.B. of the General Permit for Discharges from State and Federal Small Municipal Separate Storm Sewer Systems specifies eligibility criteria for government agencies. EPA gives states authority to determine which government properties require small MS4 general permit coverage. The definition of a small MS4 is noted under CFR 122.26(b)(16)(iii), and specifies: "…systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospitals or prison complexes, and highways or other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings." In determining eligibility criteria for State and federal permit coverage, MDE will rely on the CFR definition of a small MS4 which indicates that they are similar to municipal systems.

Other available documentation such as federal guidance defining urban areas and literature describing water resource impacts from developed lands are also an important consideration when determining eligibility criteria. For example, the U.S. Census Bureau defines "Nonresidential Urban Territory" in the Federal Register (volume 76, no. 164, August 24, 2011) as those areas that contain a "high degree of impervious surface," or twenty percent impervious area, and are within 0.25 miles of an urban area. Furthermore, documentation that evaluates the potential for properties to contribute pollutants to the storm drain system is also considered. For example, *Impacts of Impervious Cover on Aquatic Systems* (Center for Watershed Protection, 2003) indicates that in-stream water quality declines when watershed impervious cover exceeds ten percent.

Based on this information, MDE has determined that an impervious area threshold is appropriate for establishing eligibility criteria for government properties required to obtain MS4 general permit coverage. Eligible properties will be those that have greater than ten percent impervious area. This is a conservative threshold when compared to the U.S. Census Bureau's urban area definition for non-residential urban territory, and considers water quality and natural resource protection. This threshold will allow the focus of the small MS4 program to concentrate on the most developed properties, such as military bases, hospitals, prison complexes, and highways, and is consistent with the intent of federal regulations.

Based on the information described above, State and federal properties eligible for coverage:

1. Are owned, operated, or maintained by the State of Maryland or the United States of America (U.S.) and located within municipalities regulated under Phase I or Phase II permits; and

2. Serve developed land area greater than five acres and have at least ten percent impervious area property wide; or

3. Are those properties already covered under an NPDES small MS4 general permit.

State and Federal MS4 General Permit Waiver Criteria

As noted above, EPA allows some flexibility for how states determine which State and federal properties require small MS4 general permit coverage. CFR is clear that waivers may be granted to municipalities under certain conditions. Therefore, MDE will rely on the CFR definition of a small MS4 noted above (CFR 122.26(b)(16)(iii)) and language that applies to municipal waivers as the basis for the waiver provisions outlined below. CFR considers small State and federal MS4s to be similar to municipal systems; therefore, MDE may grant a waiver from permit coverage if an agency can demonstrate that a State or federal property:

1. Is located in very discrete areas, such as individual buildings. For example, a small facility containing few buildings that have associated parking and driveways with storm drains directly connected to a surrounding MS4 jurisdiction may be eligible for a waiver. On the other hand, facilities with numerous buildings, interior roads, and interior storm sewer infrastructure would not qualify for a waiver; and

2. Does not contribute substantially to the pollutant loadings of a physically interconnected regulated MS4 jurisdiction; and

3. Is not a military base, large hospital complex, prison complex, highway, or thoroughfare that meets MDE eligibility criteria.

MDE has developed a potential list of State and federal agencies (Tables A.2 and A.3) that will be affected by the eligibility criteria for permit coverage described above. Because numerous State and federal agencies are responsible for multiple properties, MDE recommends that permittees utilize options for filing joint applications and sharing responsibilities to most efficiently comply with permit requirements. State and federal agencies that own or operate any property that meets MDE's eligibility criteria shall obtain coverage under the NPDES program and comply with all terms and conditions of this MS4 permit, or apply for a waiver.

Summary

In accordance with the CWA, the criteria described above will require general permit coverage for the small municipalities and State and federal properties that have the greatest likelihood of causing discharge of polluted stormwater runoff. Regulating these small MS4s under the NPDES program will allow implementation of stormwater programs to protect water quality. MDE will consider additional information from municipal, State, or federal MS4 operators regarding eligibility of permit coverage, such as high population and growth areas, as well as whether a system discharges to sensitive waters, is contiguous to other regulated systems, or is a significant contributor of pollutant loadings to a physically interconnected MS4 that is regulated by the NPDES program.

Table A.2. Federal Agencies Potentially Eligible for Permit Coverage

Federal Agency	Property Name
Amtrak	Multiple Properties
Architect of the Capitol	Library of Congress at Fort Meade *
Army Reserves	1SG Adam S Brandt Memorial (Curtis Bay),* Jachman USARC*, Jecelin USARC #1*, Prince George's County Memorial USARC*
Dept of Agriculture	Beltsville Agricultural Research Center, * and National Plant Germplasm & Biotechnology Lab *
Dept of Defense, Air Force	Joint Base Andrews *
Dept of Defense, Army	Aberdeen Proving Grounds*, Fort Detrick*, Adelphi Lab*, Fort George G. Meade*, Washington Aqueduct* and multiple properties
Dept of Defense, Navy	Indian Head*, Bethesda*, Carderock*, Naval Academy* and multiple properties
Federal Bureau of Prisons	Multiple Properties
National Security Agency (NSA)	Ft Meade * and Friendship Annex
Dept of Homeland Security	FLETC Cheltenham Training Center* and multiple properties
National Park Service	Multiple Properties
Dept of Veterans Affairs (VA)	Multiple Properties (VA Hospitals)
General Services Administration	Multiple Properties
National Aeronautics and Space Administration (NASA)	Goddard Space Flight Center*
National Institutes of Health, NIH	Bethesda Campus * and multiple properties
National Institute of Standards & Technology (NIST)	Gaithersburg Campus *
U.S. Coast Guard	Multiple Properties
U.S. Postal Service	William F. Bolger Center * and multiple properties

* Indicates a federal facility or agency currently regulated under the Phase II small MS4 program

Table A.3. State Agencies Potentially Eligible for Permit Coverage

State Agency	Property Name
MD Air National Guard	Multiple Properties*
MD Army National Guard	Multiple Properties*
MD Aviation Authority	Martin State Airport* and other
MD Dept of General Services	Ellicott City District Court* and multiple properties
MD Dept of Health and Mental Hygiene	Multiple Properties
MD Dept of Juvenile Services	Multiple Properties
MD Dept of Public Safety & Correct Services	Multiple Properties
MD Dept of Transportation, Motor Vehicle Admin	Multiple Properties* including Glen Burnie*
MD Dept of Transportation, Port Admin	Multiple Properties*
MD Dept of Transportation, Transit Admin	Multiple Properties*
MD Dept of Transportation, Transportation Auth	Multiple Properties*
MD Food Center Authority	Multiple Properties
MD National Capital Parks & Planning (MNCPPC)	Montgomery* and Prince George's Parks
MD Stadium Authority	Camden Yards Complex*
MD State Police	Multiple Properties
Universities	Towson University,* College Park* and numerous additional campuses
Washington Metropolitan Area Transit (WMATA)	Multiple Metro Stations*
Washington Suburban Sanitary Commission (WSSC)	Multiple Properties*

* Indicates a State facility or agency currently regulated under the Phase II small MS4 program

APPENDIX B

Compliance with General Permit Requirements for Small Municipal Separate Storm Sewer Systems

Appendix B

Compliance with General Permit Requirements for Small Municipal Separate Storm Sewer Systems

The Maryland Department of the Environment (MDE) has issued two general discharge permits for Small Municipal Separate Storm Sewer Systems (MS4s): one for small municipalities and another for State and federal agencies. These two permits require that management programs be developed to effectively control the discharge of pollutants from stormwater runoff and improve water quality. These small MS4 general permits are issued in accordance with the Clean Water Act (CWA) and corresponding National Pollutant Discharge Elimination System (NPDES) regulations, 40 Code of Federal Regulations (CFR) 122.26. The permits establish the minimum requirements for municipal and State and federal agencies eligible for coverage under the NPDES program. This appendix provides guidance and additional information related to compliance with permit requirements. The guidance is organized into three sections as follows:

Section 1: *Describes management options for permit compliance;*

Section 2: *Provides guidance for developing an illicit discharge detection and elimination program; and*

Section 3: *Provides guidance for developing and implementing a restoration program to meet Chesapeake Bay water quality goals by 2025.*

Section I. Management Options for Permit Compliance

According to 40 CFR 122.30, the U.S. Environmental Protection Agency (EPA) strongly encourages partnerships and the watershed approach as the management framework for efficiently, effectively, and consistently protecting water quality and restoring aquatic ecosystems. This regulation offers flexibility to regulated operators for complying with permit requirements. Therefore, the following options may be considered by small MS4s during planning and implementation efforts. This will allow government entities and small municipalities to combine resources and collaborate with other NPDES programs to most effectively and efficiently achieve the water quality goals intended in the CWA.

A. Options for filing a Notice of Intent (NOI) Application.

MDE will allow multiple options for filing an NOI to receive permit coverage. An NOI application may represent an individual government facility or multiple properties owned or operated by a single entity. ~~If an NOI represents all storm sewers owned, operated, or maintained by a single entity, the application must specify each individual property to be covered under the permit.~~

Commented [A41]: Burdensome to list every individual property owned by a locality on the NOI.

B. Qualifying Local Programs (State or local).

An applicant may develop programs to comply with all minimum control measures independently, or rely on another responsible entity, or rely on a qualifying local program to comply with permit requirements. Maryland has existing State statutes and local ordinances in place that already require implementation of specific management measures that are more stringent than the conditions in 40 CFR Part 122. Therefore, the statewide regulatory requirements under the Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland for erosion and sediment control and Title 4, Subtitle 2 for stormwater management are considered to be "qualifying local programs." Compliance with these laws will meet the "Construction Site Stormwater Runoff Control" and "Post Construction Management" permit requirements. The permittee remains responsible for the implementation of these measures through compliance with Maryland's erosion and sediment control and stormwater management laws.

C. Sharing Responsibility.

A permittee may rely on another entity such as a State, federal, or municipal partner to satisfy one or more of the permit obligations. All permit obligations of each entity shall be noted in the NOI submitted to MDE according to PART II of this general permit and 40 CFR 122.35. Other responsible entities shall implement control measures that are at least as stringent as the corresponding requirements found in this NPDES general permit. Additionally, the other entity shall agree to implement the minimum control measures on the permittee's behalf. However, the permittee remains responsible for all regulatory obligations. Therefore, MDE encourages the permittee to enter into a legally binding agreement such as a memorandum of understanding with the other entity to minimize uncertainty about compliance with the permit. This information shall be specified in the NOI (Appendix C).

Section II. Illicit Discharge Detection and Elimination Program Guidance

Small municipalities and State and federal agencies covered under this NPDES MS4 permit are required to implement an illicit discharge detection and elimination (IDDE) program. The goal of an IDDE program is to find and eliminate pollutants entering the storm drain system. IDDE program activities include mapping the storm drain system, inspecting outfalls to discover polluted discharges, investigating the source of pollution, and taking steps to eliminate the discharge, which may include enforcement actions. Permittees are required to develop standard operating procedures (SOPs) that detail the steps to implement these activities. This section provides guidance that jurisdictions may use as a starting point to develop and implement their programs.

A discharge to a municipal separate storm sewer system is illicit if it is not composed entirely of stormwater [40 Code of Federal Regulations 122.26(b)(2)]. Illicit discharges can originate from a number of different types of sources, including incorrect plumbing, broken infrastructure, inappropriate business practices, and illegal dumping. For example, sanitary sewer lines or car wash drains may be connected to the storm sewer system instead of the sanitary sewer system. Drinking water lines or sanitary sewer pipes may be broken and leaking effluent into the storm sewer system. Businesses may be inappropriately washing vehicles, allowing wash water to drain into storm drain inlets. Illicit discharges may also result from purposeful dumping of pollutants into a storm drain.

A. Mapping

As part of their IDDE programs, permittees must develop a map which identifies all known outfalls and k n o w n storm drain conveyance systems owned or operated by the MS4 within the ~~jurisdiction~~regulated permit area. Outfalls are end points where collected and concentrated stormwater flows are discharged from pipes, concrete channels, and other structures that transport stormwater ~~within the jurisdictional property (see Figure B.1)~~to waters of the U.S. Typically, an outfall would be the end of pipe where stormwater discharges to a stream. ~~However, an outfall is not limited to stream bank discharge points. An end of pipe discharge may occur on a property above the receiving stream channel. These smaller pipes are good points to investigate in order to detect the source of an illicit discharge originating further up the system. An outfall can also be the discharge point of a stormwater management facility. In these instances; however, the inflow to the stormwater facility should also be mapped because an illicit discharge coming through the storm system is more likely to be detected at that location.~~

Figure B.1.*The above outfalls are examples of locations that should be identified on storm drain maps and included in the permittee's screening program if they discharge to waters of the U.S.. Areas with highly developed land uses (e.g., commercial business complexes, aging infrastructure) have a greater potential to pollute and should be prioritized. ~~Structural stability and erosion concerns should also be identified and corrected as part of an~~*

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Commented [A42]: Definition of outfall should be consistent with federal law. Points of discharge on property above a waterbody, discharges points from a BMP that do not discharge into waters, and inflow points are not outfalls.

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~~*effective IDDE program.*~~

Commented [A43]: Requiring outfall corrections is very expensive and time-consuming. Permittees should be focusing on developing a screening program and not how to address infrastructure.

B. Standard Operating Procedures

After outfalls are mapped, permittees should develop SOPs that outline methods to find and require the ~~eliminate~~ elimination of pollutants entering the ~~storm drain system~~MS4. The SOPs will identify the number of outfalls to be investigated per year, the frequency of dry weather outfall screenings, and methods for conducting outfall inspections. In addition, procedures to investigate and eliminate any suspected discharge are to be provided in the SOPs.

A Phase II MS4 municipality should screen ~~20% of total~~priority outfalls ~~per~~ each year~~, up to 100 outfalls~~. ~~This percentage would allow a jurisdiction to screen every outfall at least once per permit term, with the maximum amount being no greater than a medium Phase I MS4's requirement.~~ Screening efforts for State and federal facilities may be tiered based on property size. For small properties (i.e., less than 100 acres), all outfalls should be screened each year. Medium size properties (i.e., 100 - 2,000 acres) should screen 50% of total outfalls. Large properties (i.e., more than 2,000 acres) should screen 20% per year, up to 100 outfalls. A tiered approach takes into consideration the scale of each State or federal property. For example, a small facility with a total of five outfalls would be expected to screen all five outfalls per year. Likewise, larger facilities may screen a smaller percentage per year to account for the increased effort a greater number of outfalls would require.

The permittee's SOPs should also include an inspection checklist to be used in the field to document the outfall screening. A good resource for developing the IDDE program and field checklist is found in, *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, authored by the Center for Watershed Protection and Dr. Robert Pitt (2004). Figure B.2, the "Outfall Reconnaissance Inventory/Sample Collection Field Sheet", is one of several tools permittees may choose to use in their own programs. This checklist will assist a jurisdiction in identifying any potential illicit discharge, determining the need for a more in-depth investigation, and noting any other outfall maintenance needs (e.g., cracks, erosion, excessive vegetation).

C. Illicit Discharge Investigation

A dry weather screening is an outfall inspection conducted at a time when rain has not occurred recently, i.e., within the past 48 hours. During a period of dry weather, it is expected that any observed flow would be the result of some type of discharge other than precipitation. When a "dry weather flow" is observed, a jurisdiction must initiate an investigation to discover the source. If the source is determined to be illicit and the source can be identified after reasonable attempts to do so, the jurisdiction is required to take corrective measures to eliminate the discharge and initiate enforcement actions when necessary. Two examples of illicit discharge investigations are provided below to illustrate outfall identification, storm drain mapping, and discharge source tracking. These examples are taken from a Phase I MS4 annual report.

Example 1: Illicit Discharge Investigation for Discovered Wash Water

During a dry weather screening of Outfall 1, a flow was observed dripping into green sudsy water that had an oily odor. A chemical test indicated a high level of detergents. In the process of tracking the source, a high level of detergents was detected at Outfall 2, as well. The contributing storm drain was traced to a car wash that was believed to be discharging wash water into the storm drain system.

Example 2: Illicit Discharge Investigation for Detergents

A dry weather flow was discovered at the outfall of a stormwater management facility. A chemical test revealed the presence of chlorine and a high pH. A chemical test at the pond inflow indicated a high level of detergents. Upslope manholes were inspected to determine the path of the discharge through the storm drain system. Starting at the point of discharge and inspecting contributing segments of storm drain pipes (sometimes called a trunk investigation), a single point of flow that exceeded the acceptable level of detergents was isolated. The investigation revealed that the source of the discharge was located within the storm drain segment connected to inlets protected by berms on a private commercial business property yard.

D. Illicit Discharge Elimination and Enforcement

After identifying the source of an illicit discharge, a jurisdiction is required to provide notice to the property owner and ~~ensure~~ require that the responsible party takes appropriate action to eliminate the source of the illicit discharge. The jurisdiction may exercise its legal authority to access the property and utilize enforcement. These IDDE investigation procedures and enforcement actions will be specified in the permittee's SOPs.

Figure B.2. Outfall Reconnaissance Inventory/Sample Collection Field Sheet
(Center for Watershed Protection and Pitt, 2004)

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours:	Last 48 hours:	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
☐ Industrial		☐ Open Space	
☐ Ultra-Urban Residential		☐ Institutional	
☐ Suburban Residential		Other: _____	
☐ Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☐ Box ☐ Other: ____	☐ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☐ No *If No, Skip to Section 5*				
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
☐Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	☐ Yes	☐ No	
2. If yes, collected from:	☐ Flow	☐ Pool	
3. Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Section III. Guidance for Impervious Area Restoration Program Development

Small MS4 operators covered under this NPDES general permit are required to commence impervious area restoration for twenty percent of existing developed lands that have little or no stormwater management by the end of the permit term. This requirement supports the Maryland Watershed Implementation Plan (WIP) strategy for achieving nutrient and sediment load reductions on small MS4 properties to address Chesapeake Bay and local total maximum daily loads (TMDLs). Guidance for implementing restoration activities is available in the document, *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated* (MDE, 2014). While MDE, 2014 should be referenced by all stormwater permittees, the discussion below highlights the most relevant information from that document for small MS4 operators. This provides a clear outline for compliance with impervious area restoration for small MS4s.

A. Establishing Baselines: Impervious Surface Area Assessment

Permittees will need to determine the total impervious surface area ~~under their responsibility~~with the regulated MS4 Permit Area and delineate the portions that are treated with acceptable water quality BMPs to the maximum extent practicable (MEP). This analysis will provide the baseline used to calculate the twenty percent restoration requirement. The following information is needed for this assessment:

1. **Small MS4 Permit Area:** Determine the total impervious area within the regulated Permit Area ~~jurisdiction-wide~~. MDE recommends collaborating with large or medium MS4 jurisdictions to assist with this analysis and ensure that no area is accounted for twice.

2. **Land Use and Impervious Surface Area Analysis:** Evaluate the total impervious surface within a jurisdiction's regulated ~~permit~~ Permit ~~area~~ Area using the best available land use data that can be generated from the same source from year to year. The baseline year for the impervious area assessment may be 2002, which is the year that the 2000 Maryland Stormwater Design Manual (Manual) was fully implemented. BMPs designed in compliance with the water quality volume (WQ_v) treatment criteria found in the Manual are considered to provide water quality treatment to the MEP. Therefore, the impervious area draining to BMPs designed and approved in accordance with the Manual does not need to be counted toward impervious area restoration requirements.

3. **Urban BMPs:** All municipalities and State and federal agencies are required to develop and maintain an urban BMP database in accordance with Table B.1. The database identifies all existing stormwater facilities within each jurisdiction along with design, construction, and inspection information. This database and accompanying field inspections shall be used to verify the level of water quality treatment provided for an existing facility. The following guidelines can be used to determine the level of water quality treatment provided by existing stormwater facilities:

Commented [A44]: Inconsistent with the Accounting Guidance, which requires the permittee to first determine the regulated Permit Area based on delineation on MS4 it "owns or operates." The baseline is then based on the "total impervious surface within a jurisdiction's regulated permit area." P. 6.

- BMPs constructed according to the Manual for new development after the baseline year of 2002 provide acceptable water quality treatment. The impervious areas draining to these facilities do not need to be counted in the impervious area required to be restored.
- BMPs implemented for new development after 2002 may not be used for credit toward impervious area restoration.
- BMPs implemented prior to 2002 may provide some water quality treatment. These include wet ponds, wetlands, and infiltration facilities. In these cases, the original design parameters for each facility are needed to verify the level of treatment provided. The impervious area treated is based on the volume provided in relation to the WQ_v (i.e., runoff from 1 inch of rainfall). For example, if a BMP was designed to treat a half inch of rainfall, the amount of impervious area treated is 50% of the actual impervious area draining to the facility.
- Stormwater detention facilities designed for flood control do not provide water quality treatment. The impervious area draining to these BMPs must count toward the baseline.
- Where ~~plans, design specifications, and complete~~ recent (within the past 3 years) inspection and maintenance records are not available, BMPs are not considered to provide acceptable water quality treatment. Impervious areas draining to these structures must count toward the baseline.
- The impervious area treated by BMPs implemented for retrofitting or redevelopment between 2002 and 2006 may be subtracted from the baseline number.

Commented [A45]: A recent inspection showing that the BMP is working and in good condition should be adequate to show acceptable treatment. Unclear why it is necessary for an MS4 to provide plans or design specifications or inspection records from a decade ago in order to reduce baseline. These documents may be difficult to find, and requiring them may be punitive in certain cases.

A useful tool for an initial assessment is the Stormwater Management by Era approach documented by MDE in 2009. The approach considers four distinct regulatory eras where stormwater management requirements correlate with a certain level of BMP performance. These eras are as follows:

- Prior to 1985. Stormwater management regulations came into effect after this era. Any development constructed in this time period is most likely untreated (unless retrofits were constructed in later years).
- Between 1985 and 2002. BMPs implemented during this time addressed flood control; however, individual BMP design criteria shall be used to verify whether water quality is provided.
- Between 2002 and 2010. The Manual was fully implemented during this era.
- Post-2010. Environmental site design (ESD) to the MEP is required. Any development project that complied with State regulations in the third and fourth eras is considered to have acceptable water quality treatment.

This approach was used in the development of Maryland's WIP for meeting Chesapeake Bay TMDLs. It can be used for identifying BMPs that provide water quality so that the treated impervious areas may be deducted from the baseline assessment. The stormwater management by era approach can also be valuable for long term planning and for targeting potential areas suitable for retrofitting.

4. **Impervious Surfaces in Rural Areas:** Many rural roads and residential subdivisions have open vegetated drainage systems, impervious area disconnections, and sheetflow to conservation areas that filter and infiltrate stormwater runoff. Each jurisdiction should conduct a systematic review of existing rural areas to determine the extent of water quality treatment already provided. This review will also aid in identifying opportunities for retrofitting.

   Land use designation can help in selecting areas that are already adequately managed. For example, public roads and residential subdivisions in predominantly rural areas with low population densities (e.g., one or fewer dwelling unit per three acres) may have water quality design features equivalent to those defined in the Manual. Typically, areas that are less than fifteen percent impervious may meet ESD requirements according to the criteria for nonstructural practices in the Manual. These practices include rooftop disconnect, non-rooftop disconnect, and sheetflow to conservation areas. If a jurisdiction documents where conditions meet the Manual's criteria and adequate management is provided, then the impervious acres in these areas may be excluded from the baseline.

5. **Total Impervious Acres Not Treated to the MEP:** Subtract total impervious areas draining to water quality BMPs and nonstructural practices (determined in steps 3 and 4 above) from the total impervious ~~land area owned or operated by the jurisdiction as of 2002~~surface within the permittee's regulated Permit Area (step 2 above). Restoration requirements will apply to twenty percent of the remaining untreated land area.

B. Impervious Area Restoration Criteria

The water quality objective for impervious area restoration is based on treating the WQ_v (1 inch of rainfall) using BMPs defined in the Manual. Because of numerous constraints inherent in the urban environment, meeting the design standards specified in the Manual may not always be achievable. In these cases, retrofit opportunities that currently achieve less than the WQ_v should be pursued where they make sense. Applying impervious area treatment credit for these projects will be based on the proportion of the full WQ_v treated.

Where stormwater retrofits provide water quality treatment for existing unmanaged urban areas, impervious area restoration credit may be applied according to the following criteria:

- An acre for acre impervious credit will be given when a BMP is designed to provide treatment for the full WQ_v (1 inch of rainfall); or
- A proportional acreage of credit will be given when less than the WQ_v is provided: (percent of the WQ_v achieved) x (drainage area impervious acres).

C. Acceptable Restoration Strategies

The following are acceptable restoration strategies for receiving impervious area restoration credit. Permittees may submit alternative actions to comply with impervious area restoration requirements, subject to MDE approval.

1. **New Retrofit BMPs:** This includes new stormwater BMPs installed to provide water quality treatment for existing developed lands with no controls. Acceptable water quality BMPs and design criteria are provided in the Manual. When a BMP from this list is used and the full WQ_v is provided, the total impervious surface within the drainage area may be credited toward restoration.

2. **Existing BMP Retrofits:** These are existing BMPs that were not originally designed to provide water quality treatment (e.g., detention pond). As discussed previously, the impervious area draining to these BMPs may not be counted as treated. However, when retrofitted to an acceptable water quality BMP, such as converting a dry pond to a wetland, or providing additional WQ_v storage; the impervious acres draining to the BMP may be credited as restored.

3. **BMP Enhancement and Restoration:** Routine inspection and maintenance is essential to ensure optimal water quality treatment of any BMP. When BMP maintenance has not been performed, substantial structural problems will occur over time, undermining any water quality benefit intended from the practice. Therefore, when BMPs are not properly maintained they may not be considered to provide effective treatment for impervious surfaces. If credit was originally taken for water quality treatment, then future annual reports should remove that credit until the facility is restored.

   MDE has published guidance for inspection and maintenance in the *Maryland Stormwater Management Guidelines for State and Federal Projects* (MDE, 2015). These guidelines offer maintenance schedules for each BMP and specified time periods for inspection and corrective action. In addition, the Natural Resources Conservation Service of Maryland has published *Pond Code 378*, which includes an inspection checklist for ponds. Code 378 identifies areas that will cause significant problems if left unaddressed. When inspections and repairs are performed according to these guidelines (or others required by local review authorities), then the facility is considered properly maintained.

   When a BMP has failed and significant structural problems exist, the BMP must be restored to receive proper restoration credit. Restoring a failed BMP should include providing the full WQ_v, and may entail increasing storage capacity, providing forebays, increasing the flow path by installing berms or other design enhancements, re-planting with desirable wetland and native vegetation, or significant sediment clean outs. This is intended to ensure that BMPs are functioning as designed and that routine maintenance is addressed throughout the life of the BMP in order for the permittee to keep the credit.

4. **Alternative Stormwater BMPs**: MDE, 2014 recognizes that new and innovative approaches to stormwater management are being developed on a continuous basis. Therefore, several alternative BMPs are documented that may be used for the purpose of impervious area restoration. Some of these alternative BMPs include street sweeping, buffer planting, reforestation, stream restoration, shoreline stabilization, and others. A complete list of these alternative BMPs is provided in Table B.2, below. MDE, 2014 provides a method for translating pollutant load reductions from alternative BMPs into an impervious acre equivalent in order to credit these practices toward restoration requirements.

   Impervious acres treated shall be reported according to the "impervious acre equivalent" identified in Table B.2 for each alternative practice. As an example, where stream restoration is proposed, the impervious acre equivalent is equal to 0.01 acre per linear foot. This means that when 1,000 linear feet of stream is restored, then 10 acres of credit may be granted toward impervious area restoration.

5. **Trading**: MDE supports trading as a cost effective means for achieving pollutant load reductions. Adoption of new trading regulations in Maryland will include public participation ~~and approval by EPA~~. Therefore, trading with other source sectors ~~may be an~~will be authorized upon the adoption of such regulations or similar guidance or policy. ~~option after formal regulatory procedures are satisfied.~~

6. **Redevelopment:** Maryland's stormwater management regulations for redeveloped lands are intended to gain water quality treatment on existing developed lands while supporting initiatives to improve urban areas. Therefore, when water quality treatment practices are provided to address State redevelopment regulations, the existing impervious area treated may be credited toward restoration requirements. In most cases the credit will be equivalent to 50% of the existing impervious area for the project. When additional volume above the regulatory requirements is provided, additional credit will be accepted on a proportional basis as described in Section III.A above.

7. **Establishing Partnerships and Master Planning**: As discussed above, redevelopment activities may be credited toward restoration requirements. This presents an opportunity to develop future growth master plans to provide water quality treatment beyond regulatory requirements. This can be a cost effective solution for addressing Maryland's stormwater management regulations while incorporating impervious area restoration initiatives into long-range planning efforts.

   Small MS4 municipalities may work with private developers and offer incentives in order to gain additional water quality treatment for a project. MDE encourages localities to actively engage the development community through the stormwater plan review and approval process. There are numerous examples where larger MS4 jurisdictions have successfully partnered with private developers for this purpose.

In addition to partnerships with the private sector, small municipalities and government entities have the opportunity to collaborate with other watershed groups, and State, federal, or local entities to combine resources and facilitate implementation of restoration activities. As discussed in Section I of Appendix B, this could be a formal agreement with another entity and outlined in the NOI application, or this may be a partnership established for an individual project. Because the intent of the small MS4 general permit is to encourage partnerships to achieve the water quality goals of the CWA, MDE will remain flexible when any permittee pursues this option.

Table B.1. Urban Best Management Practice (BMP) Database and Codes

The BMP database below will tabulate a list of all BMPs within a jurisdiction. BMPs may be entered as a single structure or as a system of practices. For example, the ESD to the MEP mandate requires numerous ESD practices to be installed throughout a site in order to meet stormwater requirements; in these cases, local jurisdictions may enter the system of ESD practices by specifying the number and type of BMPs used to meet the target rainfall requirements (PE_REQ). These data may be entered in the NUM_BMPS and ESD_MEP fields shown below. Data for the Maryland grid coordinates for ESD systems should report the location of the most downstream practice.

Column Name	Data Type	Size	Description
YEAR	NUMBER	4	Annual report year
BMP_ID	TEXT	13	BMP ID code[1]
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
WATERSHED8DGT	NUMBER	8	Maryland 8-digit hydrologic unit code
WATERSHED12DGT	NUMBER	12	USGS 12-digit hydrologic unit code
BMP_NAME	TEXT	50	Name of BMP
BMP_CLASS	TEXT	1	BMP classification category (see list of BMPs: E, S, or A)
BMP_TYPE	TEXT	5	Type of BMP (see list of BMP classifications: enter code) [2]
NUM_BMPS	NUMBER	2	Number of all BMPs used to meet PE_REQ
ESD_MEP	TEXT	75	Type of all BMPs used to meet PE_REQ
LAND_USE	NUMBER	3	Predominant land use[3]
GEN_PERM_NUM	TEXT	10	General Discharge Permit Number
NPDES_PERM_NUM	TEXT	9	General NPDES No.
ADDRESS	TEXT	75	BMP address
CITY	TEXT	50	BMP City
STATE	TEXT	2	BMP State
ZIP	NUMBER	5	BMP zip code
ON_OFF_SITE	TEXT	10	On or offsite structure
CON_PURPOSE	TEXT	4	New development (NEWD), Redevelopment (REDE), or Restoration (REST)
CONVERTED_FROM	TEXT	5	If conversion of existing BMP then prior BMP type is required[8]
BMP_STATUS	TEXT	10	Status of BMP (active, removed) [8]
DRAIN_AREA	NUMBER	6	Structure drainage area (acres)[4, 8]
IMP_ACRES	NUMBER	8	Structure impervious drainage area (acres)[4, 8]
PE_REQ	NUMBER	8	P_E required[5, 8]
PE_ADR	NUMBER	8	P_E addressed[6, 8]
IMP_ACRES_REST	NUMBER	4	Equals IMP_ACRES when PE_ADR = 1 inch (for restoration only) [8]
RCN_PRE	NUMBER	2	Runoff curve number (weighted)[7, 8]
RCN_POST	NUMBER	2	Runoff curve number (weighted)[7, 8]
RCN_WOODS	NUMBER	2	Runoff curve number (weighted)[7, 8]
APPR_DATE	DATE/TIME	8	Permit approval date[8]
BUILT_DATE	DATE/TIME	8	As Built completion date (MM/DD/YYYY)
GEN_COMNT	TEXT	60	General comments

Column Name	Data Type	Size	Description
ADDITIONAL DATA REQUIREMENTS FOR ALL ALTERNATIVE BMPS			
PROJECT_NAME	TEXT	25	Name of project
PROJECT_DESCR	TEXT	75	Description of project
PROJECT_LENGTH	NUMBER	6	For stream restoration, shoreline stabilization, or outfall stab in feet
ACRES_SWEPT	NUMBER	6	Acres swept for street sweeping
TIMES_SWEPT	NUMBER	6	Number of times per year area is swept
ACRES_PLANTED	NUMBER	6	Acres of trees planted on urban impervious (IMPF)
ACRES_PLANTED	NUMBER	6	Acres of trees planted on pervious (FPU)
IMPERV_ACR_ELIM	NUMBER	6	Impervious acres removed to pervious land (IMPP)
EQ_IMP_ACRES	NUMBER	6	Equivalent impervious acres treated by alternative BMP (see Table B.2)
INSPECTION/MAINTENANCE DATA REQUIRED FOR ALL NEW, REDEVELOPMENT, RETROFIT, AND ALTERNATIVE BMPS			
BMP_STATUS	TEXT	4	Pass/Fail
LAST_INSP_DATE	DATE/TIME	8	Last inspection date
MAIN_DATE	DATE	8	Last date maintenance was performed (MM/DD/YYYY)
REINSP_STATUS	DATE/TIME	4	Pass/Fail
REINSP_DATE	DATE/TIME	8	Next planned inspection date (MM/DD/YYYY)
REPORTING YEAR	TEXT	4	State fiscal year (YYYY)
GEN_COMNT	TEXT	60	General comments

MDE Approved BMP Classifications

Category	Code	Code Description
ESD BMPs		
Alternative Surfaces (A)		
E	AGRE	Green Roof – Extensive
E	AGRI	Green Roof – Intensive
E	APRP	Permeable Pavements
E	ARTF	Reinforced Turf
Nonstructural Techniques (N)		
E	NDRR	Disconnection of Rooftop Runoff
E	NDNR	Disconnection of Non-Rooftop Runoff
E	NSCA	Sheetflow to Conservation Areas
Micro-Scale Practices (M)		
E	MRWH	Rainwater Harvesting
E	MSGW	Submerged Gravel Wetlands
E	MILS	Landscape Infiltration
E	MIBR	Infiltration Berms
E	MIDW	Dry Wells
E	MMBR	Micro-Bioretention
E	MRNG	Rain Gardens
E	MSWG	Grass Swale
E	MSWW	Wet Swale
E	MSWB	Bio-Swale
E	MENF	Enhanced Filters
Structural BMPs		
Ponds (P)		
S	PWED	Extended Detention Structure, Wet
S	PWET	Retention Pond (Wet Pond)
S	PMPS	Multiple Pond System

Category	Code	Code Description
S	PPKT	Pocket Pond
S	PMED	Micropool Extended Detention Pond
Wetlands (W)		
S	WSHW	Shallow Marsh
S	WEDW	ED – Wetland
S	WPWS	Wet Pond – Wetland
S	WPKT	Pocket Wetland
Infiltration (I)		
S	IBAS	Infiltration Basin
S	ITRN	Infiltration Trench
Filtering Systems (F)		
S	FBIO	Bioretention
S	FSND	Sand Filter
S	FUND	Underground Filter
S	FPER	Perimeter (Sand) Filter
S	FORG	Organic Filter (Peat Filter)
S	FBIO	Bioretention
Open Channels (O)		
S	ODSW	Dry Swale
S	OWSW	Wet Swale
Other Practices (X)		
S	XDPD	Detention Structure (Dry Pond)
S	XDED	Extended Detention Structure, Dry
S	XFLD	Flood Management Area
S	XOGS	Oil Grit Separator
S	XOTH	Other

MDE Approved Alternative BMP Classifications

Alt. BMPs (A)	Code	Code Description
A	MSS	Mechanical Street Sweeping
A	VSS	Regenerative/Vacuum Street Sweeping
A	IMPP	Impervious Surface Elimination (to pervious)
A	IMPF	Impervious Surface Elimination (to forest)
A	FPU	Planting Trees or Forestation on Pervious Urban
A	CBC	Catch Basin Cleaning
A	SDV	Storm Drain Vacuuming
A	STRE	Stream Restoration
A	OUT	Outfall Stabilization
A	SPSC	Regenerative Step Pool Storm Conveyance
A	SHST	Shoreline Management
A	SEPP	Septic Pumping
A	SEPD	Septic Denitrification
A	SEPC	Septic Connections to WWTP
A	NNET	Nutrient Net (Agriculture Trading)
A	POTW	Publicly Owned Treatment Works (WWTP Trading)

Notes:

1. Use unique BMP identification codes listed below
2. For ESD to MEP, enter the most predominant BMP type
3. Use Maryland Office of Planning (MDP) land use codes listed below
4. GIS shapefile optional
5. Rainfall target (from Table 5.3, Design Manual pp.5.21-22) used to determine ESD goals and size practices (for new development or redevelopment). If practice is for restoration, then PE_REQ is 1inch.
6. Rainfall addressed (using both ESD techniques and practices, and structural practices) by the BMPs within the drainage area
7. Optional – information should be submitted if available
8. Information not applicable for alternative BMPs

BMP Identification Codes: Each stormwater best management structure or water quality improvement project will need a unique identification code. For management of these data statewide it is necessary that these codes also indicate the jurisdiction where they are implemented, the year, and unique BMP number. County, City, or State abbreviations are listed below for NPDES Phase I jurisdictions to use as part of each BMP's identification code.

Jurisdiction	Code
Anne Arundel County	AA
Baltimore City	BC
Baltimore County	BA
Carroll County	CA
Cecil County	CC
Charles County	CH
Frederick County	FR
Harford County	HA
Howard County	HO
Prince George's County	PG
Montgomery County	MO
Maryland State Highway Administration	SHA
Washington County	WH

Small municipalities and State and federal agencies may develop their own jurisdiction code. An example BMP code for a federal agency using the required 13 characters is provided for a BMP located at National Institute of Health (NIH) implemented in 2012. In this case, the BMP ID code may be: NIH12BMP00001

MDP Land Use/Land Cover

10 Urban Built-up

- **11 Low Density Residential** – Detached single family/duplex dwelling units, yards, and associated areas. Areas of more than 90 percent single family/duplex dwelling units, with lot sizes less than five acres but at least one-half acres (0.2 dwelling units/acre to 2 dwelling units/acre).

- **12 Medium Density Residential** – Detached single family/duplex, attached single unit row housing, yards, and associated areas. Areas of more than 90 percent single family/duplex units and attached single unit row

housing, with lot sizes of less than one-half acre but at least one-eighth acre (2 dwelling units/acre to 8 dwelling units/acre).

- **13 High Density Residential** – Attached single unit row housing, garden apartments, high rise apartments/condominiums, mobile home and trailer parks. Areas of more than 90 percent high density residential units, with more than 8 dwelling units/acre.

- **14 Commercial** – Retail and wholesale services. Areas used primarily for the sale of products and services, including associated yards and parking areas.

- **15 Industrial** – Manufacturing and industrial parks, including associated warehouses, storage yards, research laboratories, and parking areas.

- **16 Institutional** – Elementary and secondary schools, middle schools, junior and senior high schools, public and private colleges and universities, military installations (built-up areas only, including buildings and storage, training, and similar areas) churches and health facilities, correctional facilities, and government offices and facilities that are clearly separable from the surrounding land cover.

- **17 Extractive** – Surface mining operations, including sand and gravel pits, quarries, coal surface mines, and deep coal mines. Status of activity (active vs. abandoned) is not distinguished.

- **18 Open Urban Land** – Urban areas whose use does not require structures, or urban areas where non-conforming uses characterized by open land have become isolated. Included are golf courses, parks, recreation areas (except associated with schools or other institutions), cemeteries, and entrapped agricultural and undeveloped land within urban areas.

- **191 Large Lot Subdivision (Agriculture)** – Residential subdivisions with lot sizes less than 20 acres but at least 5 acres, with a dominant land cover of open fields or pasture.

- **192 Large Lot Subdivision (Forest)** - Residential subdivisions with lot sizes less than 20 acres but at least 5 acres, with a dominant land cover of deciduous, evergreen or mixed forest.

20 Agriculture

- **21 Cropland** – Field and forage crops.

- **22 Pasture** – Land used for pasture, both permanent and rotated: grass.

- **23 Orchards/Vineyards/Horticulture** – Areas of intensively managed commercial bush and tree crops, including areas used for fruit production, vineyards, sod and seed farms, nurseries, and green houses.

- **24 Feeding Operations** – Cattle or hog feeding lots, poultry houses, and holding lots for animals, and commercial fishing areas (including oyster beds).

- **241 Feeding Operations** – Cattle or hog feeding lots, poultry houses, and holding lots for animals.

- **242 Agricultural Building** – Breeding and training facilities, storage facilities, built-up areas associated with a farmstead, small farm ponds, and commercial fishing areas.

- **25 Row and Garden Crops** – Intensively managed track and vegetable farms and associated areas.

40 Forest

- **41 Deciduous Forest** – Forested areas in which the trees characteristically lose their leaves at the end of the growing season. Included are such species as oak, hickory, aspen, sycamore, birch, yellow poplar, elm, maple, and cypress.

- **42 Evergreen Forest** - Forested areas in which the trees are characterized by persistent foliage throughout the year. Included are such species as white pine, pond pine, hemlock, southern white cedar, and red pine.

- **43 Mixed Forest** – Forested areas in which neither deciduous or evergreen species dominate, but in which there is a combination of both types.

- **44 Brush** – Areas that do not produce timber or other wood products but may have cut-over timber stands, abandoned agriculture fields, or pasture. These areas are characterized by vegetation types such as sumac, vines, rose, brambles, and tree seedlings.

50 Water – Rivers, waterways, reservoirs, ponds, bays, estuaries, and ocean.

60 Wetlands – Forested and non-forested wetlands, including tidal flats, tidal and non-tidal marshes, and upland swamps and wet areas.

70 Barren Land

- **71 Beaches** – Extensive shoreline areas of sand and gravel accumulation, with no vegetative cover or other land use.

- **72 Bare Exposed Rock** – Areas of bedrock exposure, scarps, and other natural accumulations of rock without vegetative cover.

- **73 Bare Ground** – Areas of exposed ground caused naturally, by construction, or other cultural processes.

Table B.2. Alternative Urban BMPs and Impervious Acre Credit

Alternative BMP	Calculating Impervious Acre Credit[1]	Impervious Acre Equivalent
Mechanical Street Sweeping	Acres swept multiplied by 0.07 = acres of credit	0.07
Regen/Vacuum Street Sweeping	Acres swept multiplied by 0.13 = acres of credit	0.13
Reforestation on Pervious Urban	Acres of reforested land multiplied by 0.38 = acres of credit	0.38
Impervious Urban to Pervious	Acres of reforested land multiplied by 0.75 = acres of credit	0.75
Impervious Urban to Forest	Acres of reforested land multiplied by 1.00 = acres of credit	1.00
Regenerative Step Pool Storm Conveyance (SPSC)[2]	Located in dry or ephemeral channels; credit is based on rainfall depth treated	Varies[2]
Catch Basin Cleaning	Tons of dry material collected multiplied by 0.40 = acres of credit	0.40
Storm Drain Vacuuming	Tons of dry material collected multiplied by 0.40 = acres of credit	0.40
Mechanical Street Sweeping	Tons of dry material collected multiplied by 0.40 = acres of credit	0.40
Regen/Vacuum Street Sweeping	Tons of dry material collected multiplied by 0.40 = acres of credit	0.40
Stream Restoration	Linear feet of stream restored multiplied by 0.01 = acres of credit	0.01
Outfall Stabilization	Linear feet of outfall stabilized multiplied by 0.01 = acres of credit; max credit is 2 acres per project	0.01
Shoreline Management	Linear feet of shoreline restored multiplied by 0.04 = acres of credit	0.04
Septic Pumping	Units pumped (annually) multiplied by 0.03 = acres of credit	0.03
Septic Denitrification	Units upgraded (w/denitrification) multiplied by 0.26= acres of credit	0.26
Septic Connections to WWTP	Units connected to a WWTP multiplied by 0.39 = acres of credit	0.39

1. For more information on calculating credits for alternative BMPs, see *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated* (MDE, 2014).
2. Full impervious area credit is granted when practice treats 1 inch of rainfall. If the full WQ_v is not provided, then the impervious area credit is based on the percentage of 1 inch that is treated. Described in Section III.B.

APPENDIX C

Municipal Small MS4 Notice of Intent

Municipal Small MS4 Notice of Intent

Maryland Department of the Environment (MDE)

National Pollutant Discharge Elimination System (NPDES) Small Municipal Separate Storm Sewer Systems (MS4) General Permit

This Notice of Intent (NOI) is intended for municipalities applying for coverage under the General Discharge Permit (No. 13-IM-5500) for Small MS4s. Submitting this application constitutes notice that the entity below agrees to comply with all terms and conditions of the general permit. The information required in this NOI shall be submitted to:

Maryland Department of the Environment, Water Management Administration
Sediment, Stormwater, and Dam Safety Program
1800 Washington Boulevard, Baltimore, MD 21230-1708
Phone: 410-537-3543 FAX: 410-537-3553
Web Site: www.mde.maryland.gov

Field Code Changed

Contact Information

Jurisdiction Name:

Responsible Personnel:

Mailing Address:

Phone Number(s):

Email address:

Additional Contact(s):

Mailing Address:

Phone Number(s):

Email address:

Signature of Responsible Personnel

~~I certify under penalty of law that I have personally examined and am familiar with the information submitted in this NOI and all attachments. I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.~~

Printed Name Signature Date

Commented [A46]: Substitute correct certification text from EPA's NPDES regulations. 40 C.F.R. § 122.22 requires that permit applications and reports include the following certification statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Municipal Small MS4 Notice of Intent

Due Date: **Date of Submission:**

Permittee Information

Renewal Permittee: ☐

New Permittee: ☐

Check if sharing responsibilities with another entity: ☐ Yes ☐ No

Required Information

1. A brief description of jurisdiction for which coverage is being sought:

2. The approximate size of jurisdiction (square miles):

3. Population:

4. Provide a list of all other NPDES permits that have been issued by MDE to the jurisdiction:

5. Describe any programs that the applicant will share responsibilities for compliance with another entity. Describe the role of all parties and include a copy of a memorandum of agreement when applicable:

~~6. Anticipated expenditures to implement the terms and conditions of the permit:~~

APPENDIX D

Municipal Small MS4 Progress Report

Municipal Small MS4 Progress Report

Maryland Department of the Environment (MDE)

National Pollutant Discharge Elimination System (NPDES) Small Municipal Separate Storm Sewer Systems (MS4) General Permit

This Progress Report is required for those jurisdictions covered under General Discharge Permit No. 13-IM-5500. Progress Reports shall be submitted to:

Maryland Department of the Environment, Water Management Administration
Sediment, Stormwater, and Dam Safety Program
1800 Washington Boulevard, Suite 440, Baltimore, MD 21230-1708
Phone: 410-537-3543 FAX: 410-537-3553
Web Site: www.mde.maryland.gov

Field Code Changed

Contact Information

Jurisdiction Name:

Responsible Personnel:

Mailing Address:

Phone Number(s):

Email address:

Additional Contact(s):

Mailing Address:

Phone Number(s):

Email address:

Signature of Responsible Personnel

~~I certify under penalty of law that I have personally examined and am familiar with the information submitted in this annual report. I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.~~

Printed Name Signature Date

Commented [A47]: Substitute correct certification statement from EPA NPDES regulations. EPA's NPDES regulations (40 C.F.R. § 122.22) require that permit applications and reports include the following certification statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Municipal Small MS4 Progress Report

Reporting Period (State Fiscal Year):

Due Date: **Date of Submission:**

Type of Report Submitted:

Impervious Area Restoration Progress Report (Annual): ☐

Six Minimum Control Measures Progress (Years 2 and 4): ☐

Both: ☐

Permittee Information:

Renewal Permittee: ☐

New Permittee: ☐

Compliance with Reporting Requirements

Part VI of the Small MS4 General Discharge Permit (No. 13-IM-5500) specifies the reporting information that needs to be submitted to MDE to demonstrate compliance with permit conditions. The specific information required in this MS4 Progress Report includes:

1. Annual progress toward compliance with impervious area restoration requirements in accordance with Part V of the general permit. All requested information and supporting documentation shall be submitted as specified on pages D-4 – D-6 of this report.
2. Periodic reports showing progress toward compliance with the six minimum control measures shall be submitted in years 2 and 4 of the permit term (unless otherwise specified by MDE). All requested information and supporting documentation shall be reported as specified on pages D-7 – D-19 of this report.

Instructions for Completing Appendix D Reporting Forms

The reporting forms provided in Appendix D allow the user to electronically fill in answers to questions. Users may enter quantifiable information, e.g., number of outfalls inspected, in text boxes. When a more descriptive explanation is requested, the reporting forms will expand as the user types to allow as much information needed to fully answer the question. The permittee should indicate in the forms when attachments are included to provide sufficient information required in the MS4 progress report.

Impervious Area Restoration Reporting

1. Was the impervious area baseline assessment submitted in year 1?
   ☐ Yes ☐ No

   If No, describe the status of completing the required information and provide a date at which all information required by MDE will be submitted:

   Total impervious acres of jurisdiction covered under this permit:

   Total impervious acres treated by stormwater water quality BMPs:

   Total impervious acres treated by BMPs providing partial water quality treatment (multiply acres treated by percent of water quality provided):

   Total impervious acres treated by nonstructural practices (i.e., rooftop disconnections, non-rooftop disconnections, or vegetated swales):

   Total impervious acres untreated in the jurisdiction:

   Twenty percent of this total area (this is the restoration requirement):

   Verify that all impervious area draining to BMPs with missing inspection records is not considered treated. Describe how this information was incorporated into the overall analysis:

2. Has an Impervious Area Restoration Work Plan been developed and submitted to MDE in accordance with Part V.B, Table 1 of the permit?
   ☐ Yes ☐ No

   Has MDE approved the work plan?
   ☐ Yes ☐ No

   If the answer to either question is No, describe the status of submitting (or resubmitting) the work plan to MDE and provide a date at which all outstanding information will be available:

Impervious Area Restoration Reporting

Describe progress made toward restoration planning, design, and construction efforts and describe adaptive management strategies necessary to meet restoration requirements by the end of the permit term:

3. Has a Restoration Schedule been completed and submitted to MDE in accordance with Part V.B, Table 2 of the permit?
   ☐Yes ☐No

   In year 5, has a complete restoration schedule been submitted including a complete list of projects and implementation dates for all BMPs needed to meet the twenty percent restoration requirement?
   ☐Yes ☐No

   Are the projected implementation years for completion of all BMPs no later than 2025?
   ☐ Yes ☐No

   Describe actions planned to provide a complete list of projects in order to achieve compliance by the end of the permit term:

   Describe the progress of restoration efforts (attach examples and photos of proposed or completed projects when available):

4. Has the BMP database been submitted to MDE in Microsoft Excel format in accordance with Appendix B, Table B.1?
   ☐Yes ☐No

   Is the database complete?
   ☐ Yes ☐No

   If either answer is No, describe efforts underway to complete all data fields, and a date that MDE will receive the required information:

5. Provide a summary of impervious area restoration activities planned for the next reporting cycle (attach additional information if necessary):

Impervious Area Restoration Reporting

6. Describe coordination efforts with other agencies regarding the implementation of impervious area restoration activities:
7. List total cost of developing and implementing impervious area restoration program during the permit term:

MCM #1: Public Education and Outreach

1. Does the jurisdiction maintain a public hotline for reporting water quality complaints?
   ☐ Yes ☐ No

   Number of complaints received: ☐

   Describe the actions taken to address the complaints:

2. Describe training to employees to reduce pollutants to the storm drain system:

3. Describe the target audience(s) within the jurisdiction:

4. Are examples of educational/training materials attached with this report?
   ☐ Yes ☐ No

   Provide the number and type of education materials developed:

   Describe how the public outreach program is appropriate for the target audience(s):

5. Describe how stormwater education materials were distributed to the public (e.g. newsletters, website):

6. Describe how educational programs facilitated efforts to reduce pollutants in stormwater runoff:

7. Provide a summary of the activities planned for the next reporting cycle:

8. List the total cost of implementing this MCM over the permit term:

MCM #2: Public Involvement and Participation

1. List all education and outreach events and the number of participants:

2. Describe how the public involvement and participation program is appropriate for the target audience:

3. Quantify and report public involvement and participation efforts shown below where applicable.

   Number of participants at Earth Day events:

   Quantity of trash and debris removed at clean up events:

   Number of employee volunteers participating in sponsored events:

   Number of trees planted:

   Length of stream cleaned (feet):

   Number of storm drains stenciled:

   Number of public notices published to facilitate public participation:

   Number of public meetings organized:

   Total number of attendees at all public meetings:

   Describe the agenda, items discussed, and collaboration efforts with interested parties for public meetings:

   Describe how public comments have been incorporated into the jurisdiction's MS4 program including water quality improvement projects to address impervious area restoration requirements:

MCM #2: Public Involvement and Participation

Describe other events and activities:
4. Provide a summary of activities planned for the next reporting cycle:
5. List the total cost of implementing this MCM for the permit term:

MCM #3: Illicit Discharge Detection and Elimination (IDDE)

1. Does the jurisdiction maintain a map showing the extent of its storm drain system, including all outfalls, inlets, stormwater management facilities, and illicit discharge screening locations?
   ☐ Yes ☐ No

   If Yes, attach the map to this report. If No, detail the current status of map development and provide an estimated date of submission to MDE:

2. Does the jurisdiction have an ordinance, or other regulatory means, that prohibits illicit discharges into the storm sewer system?
   ☐ Yes ☐ No

   If Yes, describe the means utilized by the jurisdiction. If No, describe the jurisdiction's plan, including approximate time frame, to establish a regulatory means to prevent illicit discharges into the storm sewer system:

3. Describe the authority and process the jurisdiction utilizes for gaining access to private property to investigate and eliminate illicit storm drain system discharges:

4. Did the jurisdiction submit to MDE standard operating procedures (SOPs) in accordance with PART IV.C of the permit?
   ☐ Yes ☐ No

   If No, provide a proposed date that SOPs will be submitted to MDE. MDE may require more frequent reports for delays in program development:

   Did MDE approve the submitted SOPs?
   ☐ Yes ☐ No

   If No, describe the status of requested SOP revisions and approximate date of resubmission for MDE approval:

MCM #3: Illicit Discharge Detection and Elimination (IDDE)

5. Describe how the jurisdiction considers priority areas of high pollutant potential when determining screening locations:

6. Answers to the following questions should reflect this reporting period.

   How many outfalls are identified on the storm drain map?

   Per the jurisdiction's SOP, how many outfalls were required to be screened for dry weather flows?

   How many outfalls were screened for dry weather flows?

   Per the jurisdiction's SOP, how often were outfalls required to be screened?

   How often were outfalls screened?

   How many dry weather flows were observed?

   If dry weather flows were observed, how many were determined to be illicit discharges?

   Describe the investigation process to track and eliminate each suspected illicit discharge and report the status of resolution:

7. Describe maintenance or corrective actions undertaken during this reporting period to address erosion, debris buildup, sediment accumulation, or blockage problems:

8. Is the jurisdiction maintaining all IDDE inspection records and are they available to MDE during site inspections?
   ☐ Yes ☐ No

MCM #3: Illicit Discharge Detection and Elimination (IDDE)

9. If spills, illicit discharges, and illegal dumping occurred during this reporting period, describe the corrective actions taken, including enforcement activities, and indicate the status of resolution:
10. Attach to this report specific examples of educational materials distributed to the public related to illicit discharge reporting, illegal dumping, and spill prevention. If these are not available, describe plans to develop public education materials and submit examples with the next progress report:
11. Specify the number of employees trained in illicit discharge detection and spill prevention: 12. Provide examples of training materials. If not available, describe plans to develop employee training and submit examples with the next progress report:
13. List the cost of implementing this MCM during this permit term:

MCM #4: Construction Site Stormwater Runoff Control

Erosion & Sediment Control Program Procedures, Ordinances, and Legal Authority

1. Does the jurisdiction have an MDE approved ordinance?

   Has the jurisdiction submitted modifications to MDE?
   ☐ Yes ☐ No

   Has the adopted ordinance been submitted to MDE?
   ☐ Yes ☐ No

   If No, is the adopted ordinance attached?
   ☐ Yes ☐ No

2. Does the jurisdiction rely on the County or local Soil Conservation District to perform any or all requirements for an acceptable erosion and sediment control program?
   ☐ Yes ☐ No

   If Yes, check all that apply:
   ☐ Construction Inspections ☐ Plan Review and Approval
   ☐ Enforcement

3. Does the jurisdiction have a process to ensure that all necessary permits for a proposed development have been obtained prior to issuance of a grading or building permit?
   ☐ Yes ☐ No

   Explain how the jurisdiction ensures all permits are in place:

Erosion & Sediment Control Program Implementation Information

1. Does the jurisdiction have a process for receiving, investigating, and resolving complaints from interested parties related to construction activities and erosion and sediment control?
   ☐ Yes ☐ No

   Describe the process:

   Provide a list of all complaints and summary of actions taken to resolve them:

MCM #4: Construction Site Stormwater Runoff Control

2. Total number of active construction projects within the reporting period: ☐

   Provide a list of all construction projects and disturbed areas:

   Does the jurisdiction submit grading reports to MDE (only applies if the jurisdiction has an MDE approved ordinance)?
   ☐ Yes ☐ No ☐ N/A

3. Total number of violations notices issued related to this MCM within the jurisdiction (report total number whether the jurisdiction or another entity performs inspections):
   ☐

   Describe the status of enforcement activities:

   Describe how the jurisdiction communicates and collaborates with the enforcement authority for violations within the jurisdiction. Include measures taken by the jurisdiction such as suspending or denying a building or grading permit in order to prevent the discharge of pollutants into the storm drain system:

   Are erosion and sediment control inspection records retained and available to MDE during field review of local programs?
   ☐ Yes ☐ No

   If No, explain:

4. Number of staff trained in MDE's Responsible Personnel Certification:
   ☐

5. Describe the coordination efforts with other agencies regarding the implementation of this MCM:

6. List the total cost of implementing this MCM over the permit term:

MCM #5: Post Construction Stormwater Management

Stormwater Management Program Procedures, Ordinances, and Legal Authority

1. Does the jurisdiction have an MDE approved ordinance? ☐ Yes ☐ No

   Has the jurisdiction submitted modifications to MDE? ☐ Yes ☐ No

   Has the adopted ordinance been submitted to MDE? ☐ Yes ☐ No

   If No, is the adopted ordinance attached? ☐ Yes ☐ No

2. Does the jurisdiction have an MOU with the County to perform any or all requirements for an acceptable stormwater program?
   ☐ Yes ☐ No

   If Yes, check all that apply:
   - ☐ Plan Review and Approval
   - ☐ First Year Post Construction Inspections
   - ☐ As-Built Plan Approval
   - ☐ Post Construction Triennial Inspections
   - ☐ Enforcement
   - ☐ BMP Tracking and Reporting

Stormwater Management Program Implementation Information

1. Has an Urban BMP database been submitted in accordance with the database structure in Appendix B, Table B.1 as a Microsoft Excel file?
   ☐ Yes ☐ No

   Describe the status of the database and efforts to complete all data fields:

2. Total number of triennial inspections performed: ☐

   Total number of BMPs jurisdiction-wide: ☐

   Are inspections performed at least once every three years for all BMPs?
   ☐ Yes ☐ No

   If No, describe how the jurisdiction will catch up on past inspections and remain on track to perform BMP inspections once every three years:

MCM #5: Post Construction Stormwater Management

Are BMP inspection records retained and available to MDE during field review of local programs?
☐ Yes ☐ No

3. Total number of violations notices issued: ☐

   Describe efforts to bring BMPs into compliance and the status of enforcement activities within the jurisdiction:

4. Describe how the permittee coordinates and cooperates with the County to ensure stormwater BMPs are functioning according to approved standards. (Applicable for municipalities that rely on the County to perform stormwater triennial inspections):

5. Provide a summary of routine maintenance activities for all publicly owned BMPs:

   Number of publicly owned BMPs: ☐

   Describe how often BMPs are maintained. Specify whether maintenance activities are more frequent for certain BMP types:

   Are BMP maintenance checklists and procedures for publicly owned BMPs available to MDE during field review of local programs?
   ☐ Yes ☐ No

   Are BMP maintenance records retained and available to MDE during field review of local programs?
   ☐ Yes ☐ No

   If either answer is No, describe planned actions to implement maintenance checklists and procedures and provide formal documentation of these activities:

6. Number of staff trained in proper BMP design, performance, inspection, and routine maintenance: ☐

MCM #5: Post Construction Stormwater Management

7. Provide a summary of activities planned for the next reporting cycle:
8. List the total cost of implementing this MCM over the permit term:

MCM #6: Pollution Prevention and Good Housekeeping

1. Provide a list of topics covered during the last training session related to pollution prevention and good housekeeping, and attach to this report specific examples of training materials:

   List the last training date(s):

   Number of staff attended: ☐

2. Are the pollution prevention plan, site map, and inspection records at each facility retained and available to MDE during field review of the local program? ☐ Yes ☐ No
   If No, explain:

   Provide details of all discharges, releases, leaks, or spills that occurred in the past reporting period using the following format (attach additional sheets if necessary).

   Facility Name: Date:

   Describe observations:

   Describe permittee's response:

3. Quantify and report property management efforts as shown below, where applicable (attach additional sheets if necessary).

   Number of miles swept: ☐

   Amount of material collected (indicate units): ☐

   If roads and streets are swept, describe the strategy the permittee has implemented to maximize efficiency and target high priority areas:

   Number of inlets cleaned: ☐

   Amount of debris collected from inlet cleaning (indicate units): ☐

MCM #6: Pollution Prevention and Good Housekeeping

Describe how trash and hazardous waste materials are disposed of at permittee owned and operated facilities, including debris collected from street sweeping and inlet cleaning:

Does the permittee have a current State of Maryland public agency permit to apply pesticides?
☐ Yes ☐ No

If No, explain (e.g., contractor applies pesticides):

Does the permittee employ at least one individual certified in pesticide application?
☐ Yes ☐ No

If Yes, list name(s):

If the permittee applied pesticides during the reporting year, describe good housekeeping methods, e.g., integrated pest management, alternative materials/techniques:

If the permittee applied fertilizer during the reporting year, describe good housekeeping methods, e.g., application methods, chemical storage, low maintenance species, training:

If the permittee applied deicing materials during the reporting year, describe good housekeeping methods, e.g., pre-treatment, truck calibration and storage, salt domes:

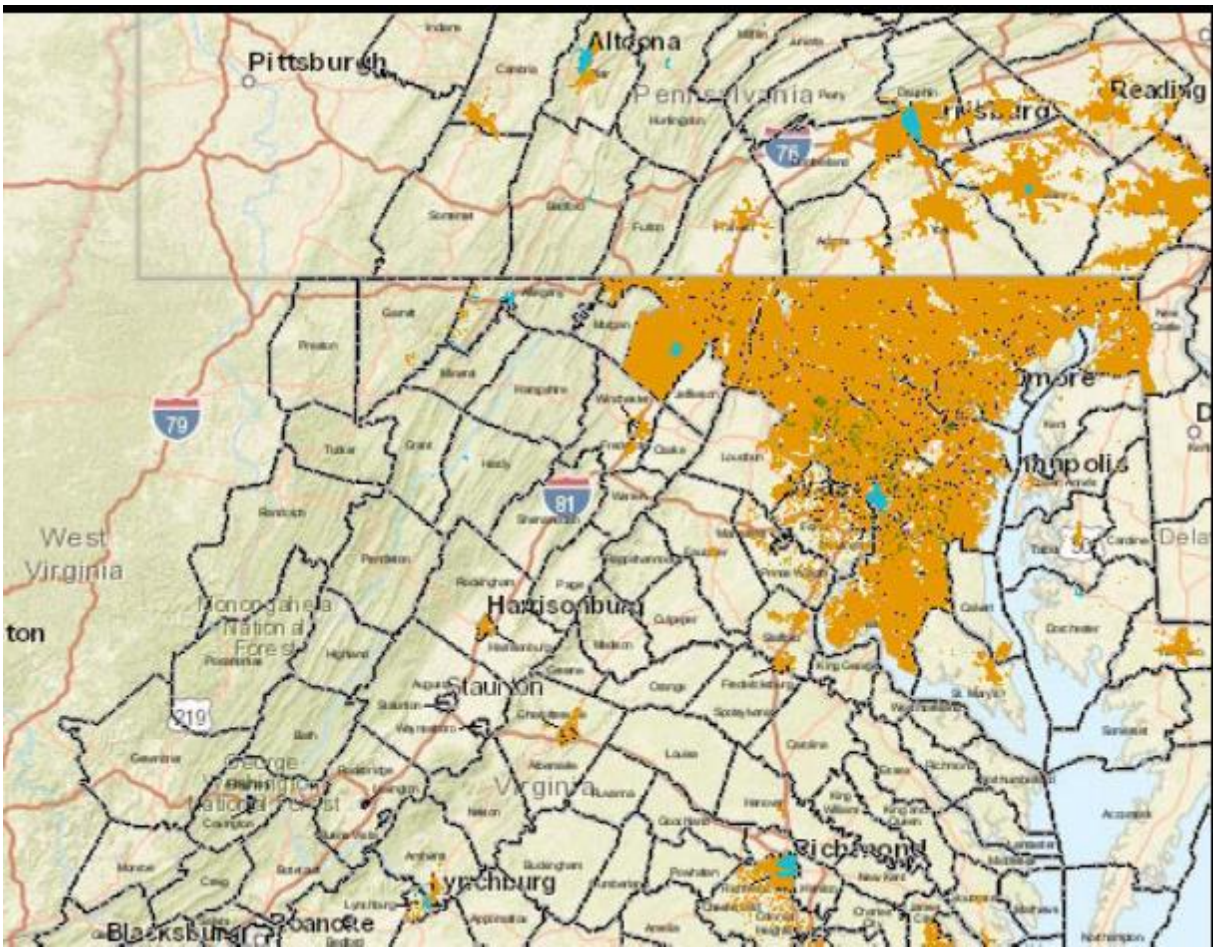
Describe good housekeeping BMP alternatives not listed above:

4. How many facilities require coverage under the Maryland General Permit for Stormwater Discharges Associated with Industrial Activity? ☐

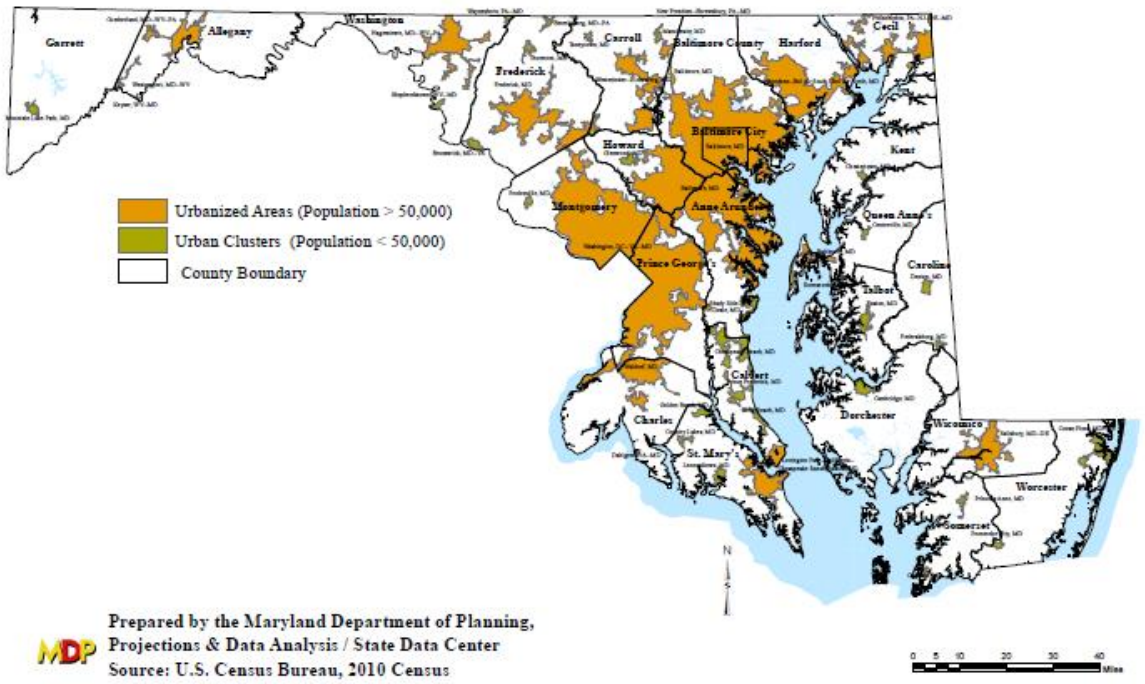
   If applicable, provide the status of obtaining coverage for all required facilities:

5. List the total cost of implementing this MCM over the permit term:

ATTACHMENT B

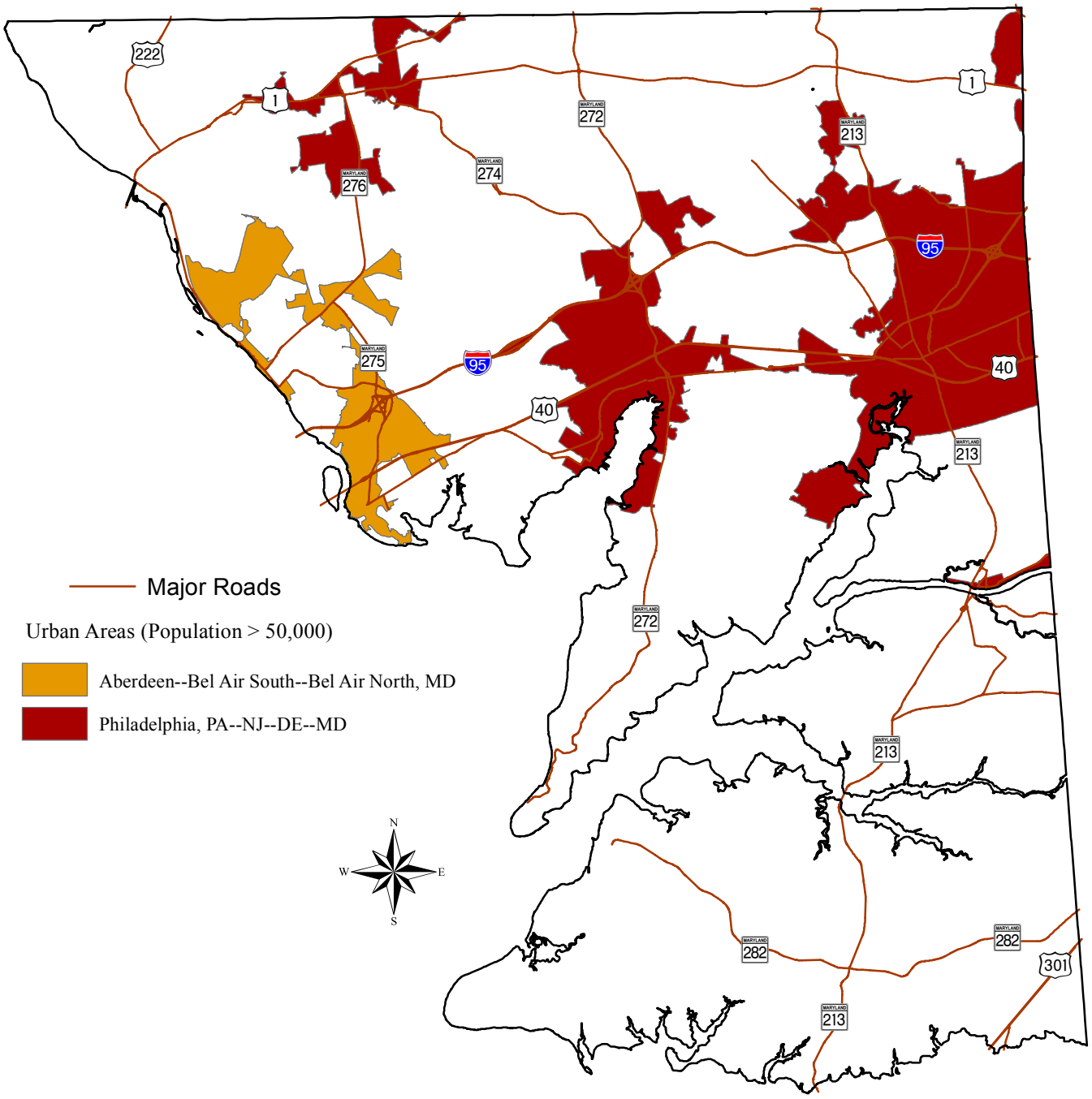

Pittsburgh
Altoona
Reading
79
81
West Virginia
Harrisonburg
Staunton
219
Virginia
Richmond
Lynchburg
Roanoke
Blacksburg

Urban Areas in Maryland, 2010



Prepared by the Maryland Department of Planning,
Projections & Data Analysis / State Data Center
Source: U.S. Census Bureau, 2010 Census

Cecil County, Maryland
2010 Urban Areas



Prepared by the Maryland Department of Planning,
Projections & Data Analysis / State Data Center
Source: U.S. Census Bureau, 2010 Census

Analysis of Maximum Extent Practicable for Draft Phase II MS4 Permit Requirements

Cecil County Government

3/30/17

EXECUTIVE SUMMARY

Cecil County is currently covered under the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II General Discharge Permit 03-IM-5500 (General Permit for discharges from Small MS4s). This permit requires the county to implement six minimum control measures to address water quality of Maryland's streams, rivers, and Chesapeake Bay through the continued implementation of stormwater management and erosion and sediment control programs, a requirement to prohibit illegal discharges, and public education.

The Maryland Department of the Environment (MDE) has issued a tentative determination for the next Phase II MS4 permit 13-IM-5500, which includes transitioning towards restoration of 20% of untreated impervious area as currently required by the Phase I jurisdictions. Since this requirement differs greatly from the current requirements, it raises concerns as to the County's ability to implement such changes. This Maximum Extent Practicable (MEP) analysis will address these concerns by examining implementation costs and schedules for compliance with the draft permit requirements. This analysis will address practicability of meeting the permit conditions within a five-year timeframe and what is financially feasible for the County.

We agree with MDE that neither of us benefits if the small municipalities seeking coverage under this permit are not successful. Therefore we respectfully ask that MDE carefully consider our comments, add clarity where necessary, and provide language that will make this permit attainable and practicable.

INTRODUCTION

Cecil County recognizes that stormwater discharge and runoff from various regulated and unregulated sources such as construction sites, residential neighborhoods, urban developments, roads, agricultural uses and industrial facilities can impact water quality in local streams.

Efforts to improve water quality under the National Pollutant Discharge Elimination System (NPDES) program traditionally focused on reducing pollutants in point source discharges from industrial facilities and municipal sewage treatment plants. However, in response to the growing understanding that stormwater discharges could also be impacting the nation's waters, Congress amended the Clean Water Act (CWA) in 1987, and required the EPA to establish NPDES requirements for stormwater discharges. The CWA was amended to add MEP as a unique legal compliance standard and the Maryland Court Appeals recently supported this MEP standard for Phase I MS4 permittees. The CWA also requires states to develop water quality standards for all surface waters, monitor these waters, and identify and list those waters that do not meet water quality standards. The purpose of water quality standards is to protect, maintain, and improve the quality of surface waters.

The goals of Maryland's NPDES MS4 permits are to make improvements through an adaptive management strategy. While this permit builds on the efforts of the previous Phase II MS4 permit, it establishes an unattainable requirement for the next permit. Cecil County will have completed watershed assessments by July 1, 2017. Using these assessments, with additional GIS analysis, Cecil County will develop a restoration work plan and a restoration activity schedule for this permit term. This MEP analysis will show what the County believes is possible and practicable within this permit and by 2025.

We note that this analysis was developed by County staff based on the draft permit. County staff is not in the position to commit the County's financial resources to any program—County leadership develops and approves local budgets. This analysis is also subject to change over time, as the MS4 program learns more about BMPs and uses adaptive management to make improvements to program implementation.

PREVIOUS APPROACHES

Cecil County has engaged in stormwater pollution prevention efforts in accordance with Maryland's general discharge permit 03-IM-5500 for stormwater discharges from small MS4s. In the general permit, MDE defines an MS4 as "*a conveyance or system of conveyances owned and operated by a State, city, town, or other public body having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes. These systems are used for collecting or conveying stormwater, are not combined sewers, and are not part of a Publicly Owned Treatment Works (POTW) as defined in 40 CFR 122.2*."

Phase II municipalities, also known as Small MS4s, are those covered under the NPDES MS4 Phase II General Permit. Each Phase II municipality is required to develop a Stormwater Management Program (SWMP) that implements the following six minimum measures (MCM): (1) Public Education and Outreach; (2) Public Participation and Involvement; (3) Illicit Discharge Detection and Elimination (IDDE); (4) Construction Site Runoff Control; (5) Post-Construction Runoff Control; and (6) Pollution Prevention/Good Housekeeping. Implementation of these MCM support efforts toward addressing the water quality of Maryland's streams, rivers, and Chesapeake Bay through improvement of stormwater management and erosion and sediment control programs; the removal of illicit discharges; and public education.

For each of the six MCM, the SWMP must address BMPs to be implemented, parties responsible, measurable goals, and BMP implementation schedule. Cecil County developed a SWMP designed to reduce the discharge of pollutants from their MS4 to the MEP. Measures taken to implement the SWMP serve to satisfy the general permit requirements and reduce the discharge of pollutants from the MS4 to the MEP.

Cecil County has initiated numerous programs to address receiving water quality by complying with the public education and outreach MCM of the general permit. The County uses pamphlets, website postings, presentations, roundtable discussions, educational programs, and public notices to reach a broad range of citizens in a cost effective manner. The selected public education and outreach BMPs are intended to target audiences that are likely to have significant impacts on stormwater quality, including County officials, contractors, developers, environmental education in the public schools, and residential interests. They are structured to gauge the effectiveness of each implementation strategy in reaching its target audience. Cecil County was the first jurisdiction to establish the Watershed Stewards Academy on the Eastern Shore. Supporting the WSA has allowed Cecil County to reach additional residents that had not become engaged in the previous outreach efforts. This has significantly increased the audience that the SWMP reaches and the public awareness of the stormwater pollutants and the impact on our local waterways.

The effect of sediment discharges on receiving waters is an overarching theme for all audiences. The SWMP also addresses impacts from sources such as yard waste, hazardous chemicals, and nutrients. In collaboration with University of Maryland

Extension Master Gardener's 'Bay-Wise' program the residential pollutant sources are identified where such impacts are commonly seen and may be most practicably avoided. The impacts of nutrient runoffs such as phosphorous and nitrogen are addressed in all audiences as well.

Educational materials have been made available through the Solid Waste Management Division. Hazardous chemical awareness is addressed in all audiences and proper disposal and/or recycling of such materials is encouraged with semi-annual hazardous waste days. A backyard conservation booklet was distributed to County residents and is now available in the County administration building. Agricultural stormwater management materials are provided to farmers and rural residents through the Cecil Soil Conservation District and University of Maryland Extension. Stormwater management and maintenance presentations are given to homeowners associations. The County's Stormwater and Sediment Branch page on the County's website contains relevant stormwater documents, tips for construction site runoff control, stormwater BMP examples, watershed information, and other NPDES compliance links and information. Links to stormwater and sediment and erosion control ordinances are also provided on the County website. The County holds quarterly roundtable meetings with developers, consultants, and contractors to disseminate stormwater management information.

To comply with the public involvement and participation MCM, the County actively involves the public with the continued implementation of the SWMP. Active implementation strategies to educate and engage the public include public meetings, public notices, volunteer events, public and private educational programs, partnerships with other local entities, and recycling events. The Watershed Stewards plan BMPs to facilitate awareness and to provide opportunities for participation in implementation activities for all interested citizens regardless of ethnic or economic background. Stream clean-ups, volunteer water quality monitoring, and an annual Wade-In facilitate a sense of ownership in working to improve receiving water quality within the County. Opportunities are provided to represent stormwater related interests at planning commission meetings and other public meetings.

The County took an incremental approach to developing an illicit discharge detection and elimination (IDDE) MCM program. Challenges in implementing this program included financial and staffing constraints, as well as necessary communication across jurisdictional boundaries. The foundation of the IDDE program is the storm sewer map depicting the MS4 system and associated outfalls. The County has completed an IDDE standard operation procedure manual and developed a plan within the urbanized areas of the County for IDDE field screening. The County's website provides information about IDDE. The County has had success in implementing a program to connect properties with failing home sewage treatment systems (HSTSs) to the sanitary sewer system. The County has various GIS layers as a base for the County's storm sewer mapping efforts.

In compliance with the construction site stormwater runoff control MCM requirement, the County has adopted an Erosion and Sediment Control Ordinance to establish minimum requirements for grading permits that require approved erosion and sediment control plans. Although the County does not have the jurisdictional authority for approval or enforcement of the state erosion and sediment control laws, the County has established procedures by which these requirements are administered. The County also conducts preconstruction meetings for all development projects for the developer and all the contractors involved in the project.

The Stormwater Management Ordinance is the primary component of the framework for compliance with the post-construction stormwater runoff control MCM. Plan reviews are performed for stormwater management BMPs for construction projects. The County requires inspection and maintenance agreements, and permanent easements along stormwater conveyance systems and all stormwater BMPs within a community development project area. The County has developed a GIS mapping process for the stormwater BMPs within the County. This process is now using the Urban BMP geodatabase structure developed by MDE.

In accordance with the pollution prevention and good housekeeping MCM, the County has developed various BMPs focused on education and awareness to reduce stormwater pollution resulting from municipal operations. County staff receives training that communicates the importance of stormwater pollution prevention and good housekeeping. The County has mapped County-owned properties with potential pollutants and developed stormwater pollution prevention plans (SWPPP) for the County's road maintenance yards and facilities requiring an industrial stormwater discharge permit.

MOVING FORWARD

This MEP Analysis will examine Cecil County's ability to meet the requirements based on the ability of the County to finance the permit requirements, and the ability of the County to implement the permit requirements over a five year permit term. Though there remain many details in the implementation of the draft permit, Cecil County has followed the activities of the Phase I jurisdictions and used them as a guide to determine our ability to maintain compliance.

There are several factors that the County identified that when applied to the County's individual circumstances define our unique MEP level-of-effort. Cecil County cannot do more than its MEP, nor does federal law require efforts beyond MEP. Cecil County has reviewed the Charles County MEP and will used the following terms in this analysis:

- Impossibility – This term is used to describe a permit condition that cannot be completed regardless of the budget or time allowed.
- Implementation Schedule – This term is used when the permit scheduling limitation are not practicable. These permit conditions may not allow for; chronological tasks, unforeseen delays, and unknown factors of a project.
- Capacity to Perform Permit Conditions – This term is used to describe the permit conditions that require impracticable resources due to the largely rural nature of Cecil County; we will identify when other options are available to achieve similar results.
- High Cost – The cost of implementing the permit conditions must be affordable for the County's residents, businesses, institutions, nonprofits, and others. To satisfy the conditions of this permit as drafted by MDE would require a significant increase in the County's MS4 budget.

MDE issued the tentative determination to reissue the small MS4 general permit. In this draft permit, the six MCMs are more explicitly defined and the 20% restoration requirement has been added. Cecil County has identified the following parts of the draft permit that exceed MEP (identified as "Exceeds MEP" below). In addition, the County has stated what it could likely accomplish during the permit term with additional resources and funding (identified as "Cecil County's MEP" below).

I. Part IV. A. Public Education and Outreach

4. *Develop and implement an annual employee training program that addresses appropriate topics to prevent or reduce the discharge of pollutants into the storm drain system*.

Exceeds MEP – Impossibility and High Cost, It is impossible and costly to train all employees annually.

Cecil County's MEP - Provide employee training through distribution of educational materials and offer biennial employee training for employees that are routinely involved in tasks that may involve potential stormwater pollutants.

Part IV. C Illicit Discharge Detection and Elimination (IDDE)

1. *Maintain a map of the jurisdiction's storm drain infrastructure, which identifies all pipes, outfalls, inlets, stormwater management best management practices (BMPs), illicit discharge screening locations, and surface waters*.

Exceeds MEP – Not practicable due to Cecil County's capacity to perform the permit conditions. It is not practicable to perform all the mapping of the existing storm drain infrastructure in accordance with the draft permit (1 year).

Cecil County's MEP - Cecil County has been working on identifying the storm drain infrastructure for several years and will continue to refine our maps each year but believes that this effort will be continual in the future permits. Cecil County agrees with MAMSA's comments on MCM-3.

II. Part IV. E Post Construction Stormwater Management

4. *Maintain stormwater program implementation and provide updates in accordance with the MS4 Progress Report that includes*:
   a. *An Urban BMP database in accordance with the database structure in Appendix B, Table B-1. This information shall be submitted to MDE with annual reports*.
   b. *Total number of triennial inspections performed and verification that inspections occur at least once every three years*.

Exceeds MEP – Not practicable due to Cecil County's capacity to perform the permit conditions. There are a large number of existing 'Urban BMPs' that must be mapped and entered into the database. It is not practicable to add the large number of smaller Environmental Site Design practices in the triennial inspections without some flexibility.

Cecil County's MEP -- Cecil County has been conducting triannual inspections for several years and will continue to inspect BMPs, but believes that this effort will continue in future permits.

III. Part IV. F Pollution Prevention and Good Housekeeping

1. *Ensure that appropriate staff and contractors receive training at least annually on all sections of the permit relevant to this MCM. The training shall be designed to address the importance of water quality protection through pollution prevention and good housekeeping measures*.
2. *Develop, implement, and maintain a pollution prevention plan at publicly owned or operated properties that includes*….

Exceeds MEP – Impossibility and High Cost, It is impossible and very costly to train all appropriate staff and contractors annually. It is impracticable to prepare a pollution prevention plan for properties that have very-low risk of pollutants entering into the County's MS4.

Cecil County's MEP - Provide employee training through distribution of educational materials and offer biennial employee training for appropriate staff that are routinely involved in tasks that may involve potential stormwater pollutants. Cecil County will provide contractor training through distribution of educational materials and pre-construction meetings.

IV. Part V Chesapeake Bay Restoration and Meeting Total Maximum Daily Loads

Exceeds MEP – Implementation schedule, Capacity to Perform Permit Conditions and High Cost. The Maryland Phase I MS4 jurisdictions have been struggling to complete this level of restoration over a five year permit. Requiring that implementation be completed by 2025, after this permit, only creates a scenario that is less practicable.

Cecil County's MEP - Cecil County will commence the mapping with the goal of completing mapping of the impervious areas untreated by stormwater management served by the permittee's MS4 within the 'Urbanized Area' within the permit term. The next generation of the Phase II MS4 should build from the level of effort completed.

V. Program Funding

Exceeds MEP – Implementation schedule, Capacity to Perform Permit Conditions and High Cost. This portion of the analysis will show the anticipated costs of the permit requirements as written.

Cecil County's MEP - Cecil County has provided approximately $300,000.00 per year towards compliance with the current MS4 permit. We have successfully leveraged these funds to request and receive approximately $2 million in grant funding in the last four years. We recommend that Cecil County be allowed to prepare a comprehensive financial capacity analysis within the first year to determine the funding available for the MS4 program.

I. Public Education and Outreach

Cecil County has an engrained Public Education and Outreach program that has been in most, if not all, the public schools. In 2014 Cecil County was invited to present this program at the CWEA conference '*Success Stories: Proven Effective Stormwater Compliance Strategies'*. Cecil County has partnered with University of Maryland to start the first Watershed Stewards Academy on the Eastern Shore. We have been involved in supporting the two existing watershed associations and helping two additional watershed associations get started. We will be hosting the 8th annual wade-in, have attended many public events, support multiple stream cleanup efforts and the list continues to grow.

Yet, in order to comply with this MCM, all permittees shall:

4. *Develop and implement an annual employee training program that addresses appropriate topics to prevent or reduce the discharge of pollutants into the storm drain system*.

As public employees, we attend many mandatory trainings, and courses on defensive driving, hazardous material handling, employee safety/fire training, etc. Even though they are mandatory, the County is still unable to reach all County employees. We agree that County employees need to be a target audience for education on MS4-related issues, but annual stormwater training for all County employees would consume many workhours and is beyond MEP because of the practicability and lost workhours.

We request more flexibility in the wording of this requirement to allow the County to provide education and outreach that is effective rather than provide a training video once a year to check a box.

II. Illicit Discharge Detection and Elimination (IDDE)

Under the draft permit, the County is required to develop, implement, and enforce a program to identify and eliminate illicit storm drain system discharges in accordance with 40 CFR §122.34(b)(3).

As stated in our previous comments and shown on the attached redlined version of the draft permit, we believe with slight changes to the language this MCM would be practicable. For example, the County's MEP would be developing and periodically updating a map of the known MS4 owned or operated by Cecil County, which identifies the known outfalls and stormwater management BMPs. The current permit would require the permittee to maintain a map of all pipes, outfalls, inlets, stormwater management BMPs, illicit discharge screening locations, and surface waters. Not only is this unclear but implementation of this mapping would not yield a reduction in the illegal discharges. It would be more beneficial to make progress implementing some of the recommendations from the Chesapeake Bay Program for the 'Advanced MS4 Nutrient Discovery Program Credit'.

Cecil County currently has a well-developed IDDE program and in the fall of 2015 presented the GIS mapping at the *EPA Region 3 and MDE Phase II MS4 Forum*. However, the level of effort to comply with the draft permit would exceed Cecil County's MEP and is not consistent with federal law.

III. Post-Construction Stormwater Management

The County is proud of the efforts we have made on MCM-5 since 2011. The current Phase II MS4 GP requires that the County implement a stormwater management program to reduce the discharge of pollutants to the maximum extent practicable (MEP). We have systematically worked to the MEP to map the stormwater management ponds and ESD practices in the County, have assessed their condition, and prioritized work based on the assessment.

During a recent EPA audit they found Cecil County's plan review and approval process, using Hansen software, was in compliance. As of April 2015 Cecil County had identified 395 stormwater facilities, of which only 193 are within the County's urbanized area. Nine of the facilities are still in their sediment phase (i.e., they have not been converted to stormwater management phase and are still the responsibility of MDE to inspect for compliance).

Cecil County has been developing a data base of the approved ESD practices with the goal of using a GIS layer to track and monitor these facilities. We are aware that MDE is working with the Chesapeake Bay Program to develop a geodatabase that

all jurisdictions can use. We have also heard that it may be possible to establish a self-inspection program for the small ESD practice. This would be consistent with state law, which does not specifically mandate that a locality inspect ESDs. Rather, per COMAR 26.17.02.11, the locality must ensure maintenance through an inspection program. Having a self-inspection program would allow the County to perform random inspections on a smaller number of practices.

To further demonstrate what Cecil County's MEP is, we have completed the inspections for over 120 SWM facilities and over 20 ESD practices within five (5) months. A majority of these facilities will require maintenance or repairs; all are at some stage of Cecil County's maintenance enforcement process. Through this effort we have determined this level of effort cannot be sustained continuously. We will continue to concentrate our effort on the remaining facilities within the regulated area and will be preparing an inspection implementation schedule for all the existing BMPs.

In addition, our inspectors are knowledgeable and use the Fulcrum application on mobile devices to complete the inspections. During the inspection, EPA complimented County inspectors on the amount of time they spend inspecting each facility (thoroughness). In the Report, EPA did not identify any gaps in our inspections of the selected ponds.

Cecil County has begun the effort necessary to establish the Urban BMP database. We are requiring any development projects submitted after January 1, 2017 to submit the information in the database structure described by Appendix B, Table B.1. We also developed a process to migrate the information into the County's GIS system which will streamline the maintenance inspections.

Cecil County acknowledges our obligation to inspect stormwater management facilities. However the County's believes MEP for this MCM would be; (1) provide an inspection implementation schedule for existing structural stormwater facilities within the first year, (2) develop a self-inspection program for ESD practices and provide an inspection implementation schedule for the ESD practices within the second year, and (3) make progress toward creating the Urban BMP database for the existing stormwater management facilities while collecting the database information for new facilities.

IV. Pollution Prevention and Good Housekeeping

As part of Phase II MS4 Permit compliance the County must ensure that a Notice of Intent (NOI) is submitted to MDE for each County-owned municipal facility requiring NPDES Industrial Stormwater General Discharge Permit (12-SW) coverage. A pollution prevention plan must also be developed for each of these facilities. The County will also need to continue implementing a program to reduce pollutants associated with maintenance activities at County-owned facilities including parks, roadways, and parking lots.

MDE must clarify the phrase “throughout the jurisdiction’s properties” because of the significant cost associated with the preparing SWPPPs for all the County properties. In addition, using the phrase “throughout the jurisdiction’s properties” creates confusion—not only does it reference the jurisdiction instead of the MS4, but it suggests that the permittee needs to comply with good housekeeping from border to border without consideration of the regulated permit area.

Developing a pollution prevention plan for each County property (149) would take approximately 3,000 workhours, based on an estimated 20 hours per plan. It would take a full time employee approximately 3 years if they could devote half of their work day to this effort. This does not include numerous hours to educate employees at each site on the plan, reviewing plans on a regular basis, and revising plans as needed. This requirement is burdensome.

The County acknowledges that MDE may have intended that this provision only apply to those facilities that involve a potential for stormwater pollutants. As with the Public Education and Outreach MCM, we agree that the County employees need to be a target audience for education on MS4-related issues. However, we again request more flexibility in the wording of this requirement to allow employee training through distribution of educational materials and offer biennial employee training for appropriate staff that are routinely involved in tasks that may involve potential stormwater pollutants. MEP would limit preparing a SWPPP for County properties that have a potential risk of pollutant discharge.

V. Chesapeake Bay Restoration and Meeting Total Maximum Daily Loads

The County has completed watershed assessments for the most of the County and will complete the remaining watersheds in fiscal year 2017. This was done at a geographic scale that extended beyond the regulated area required by the MS4 permit because the assessments will be used to provide a roadmap not only for meeting NPDES Phase II permit requirements, but also for Chesapeake Bay TMDL implementation efforts. These assessments were performed at an appropriate watershed scale (e.g., Maryland's hierarchical eight sub-basins) and were based on EPA’s nine minimum elements.

The BMPs suggested in the Northeast River Watershed were designed to meet Environmental Site Design (ESD) and conventional method requirements for runoff rate, volume, and surface area. Approximately 61.3 acres of impervious surface area within the Northeast River Watershed were determined to be available for treatment with the implementation of the BMPs mentioned in the assessment. An estimated total cost for implementation of all BMPs listed in the assessment is approximately $3,345,700. This is an average of $54,600 per acre treated.

The approximate cost of the watershed assessments was $350,000.00 over five years. With these assessments Cecil County has identified approximately 302.5 acres

of impervious area available for treatment. The estimated cost to complete the design, obtain property permission (if needed) and construct the projects is $18.7 million dollars. The average cost per impervious acre treated is estimated to be $61,900.00. Cecil County acknowledges that there are additional opportunities in the watershed, however these estimates represent the locations with the best opportunity for restoration based on our current understanding.

Cecil County has completed several projects and collaborated with local non-government organizations to complete approximately 140 acres of restoration. Even with an unlimited budget available, which there is not, this experience has shown that 20% restoration cannot be completed by 2025. Considerable time is necessary for identifying the additional impervious area that is available for treatment, property acquisition or easement rights, design, permitting and construction. After a site has been selected each project can easily take 18-36 months for completion. A recent project funded by the Department of Natural Resources for approximately 8,100 linear feet has taken approximately 18 months for land permissions, design and permitting. It is anticipated that construction will be completed by the fall of 2017 approximately 24 months. This is considered a fast project and the construction has not started yet. These projects are very dependent on the weather, therefore the completion date is still tentative.

a. Baseline Impervious Area Assessment

Within one year of permit issuance, the County must submit an impervious surface area assessment consistent with the methods described in the MDE document "*Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits* (MDE 2014)." Upon approval by MDE, this assessment will serve as the baseline for the County's impervious surface area that has little or no stormwater management and establish the restoration effort required.

Cecil County has started an impervious area assessment and has found that it can be very time consuming and expensive to determine the impervious area for the 2002 baseline year. The County does not have planimetrics for that time frame and it would be costly, and potentially inaccurate, to have a consultant digitize the available aerial photographs. Therefore the County has begun a GIS analysis to approximate the existing impervious area within the regulated area that does not have adequate stormwater management.

Cecil County supports MAMSA's position that permit coverage is limited to the regulated MS4 and the contributing drainage areas to these systems. It is the County's position that it may be possible to complete the impervious area assessment within these regulated areas within the first year. However we reserve the right to adjust the baseline as additional analysis of the impervious area is completed throughout the permit term.

The County has a large number of the stormwater BMPs that were designed to treat water quality, however we have not established a compilation of the impervious area treated by the BMPs. This data is frequently shown on the approved plans and/or as-builts, but would take a significant effort to research and compile. This information will be collected as the BMP geodatabase is developed, however it is impracticable to complete this within the first year of the permit. Therefore baseline impervious area reported may be unnecessarily increased due the inability to perform an exhaustive research of the existing files. The County would recommend that the “total impervious area treated by water quality BMPs” be required only in the final annual report.

To determine whether existing BMPs provide adequate water quality based on design or construction will also take significant amount of research and validating with calculations. The County recommends that the “total impervious area treated by BMPs providing partial water quality treatment” be required only in the final report.

Cecil County has increased the effort for completing inspections of the existing BMPs within the regulated area. This includes over 100 structural facilities and an undetermined number of ESD practices within the Urbanized Area. It is unreasonable to complete the required inspections for BMPs jurisdiction-wide within the first year. The County would recommend that any impervious area draining to BMPs without the required inspection records be added to the baseline at the end of the permit term.

Therefore it is Cecil County’s position that the ‘Development of a Baseline Impervious Area Assessment’ as currently written in the draft permit exceeds the MEP due to the implementation schedule and the financial burden on the County.

This baseline impervious area assessment focuses on proving what impervious area has adequate stormwater management. When completing the watershed assessments Cecil County was entirely focused on identifying the impervious acreage that does not currently have adequate stormwater management. With this approach we identified potential projects which are estimated to exceed $18 million dollars which is well beyond the County’s MEP. The deliverable of this effort has led directly to funding and implementation of several projects.

b. Impervious Area Restoration Work Plan

With the first annual report the County must also submit a 'Work Plan' that will show progress toward the twenty percent impervious area restoration requirement. Cecil County is unwilling to submit a 'Work Plan' that exceeds MEP. The draft work plan in the permit suggests assessing opportunities and timelines for implementation, determine funding needs and determining a long term budget within the first year.

The adaptive management process suggests using 'improved processes and procedures' but is unclear how these will be approved by MDE. Additional alternative practices have been approved by the Chesapeake Bay Program Urban Workgroup (CBP) since the MDE 2014 document was published. We hope and would expect additional practices will receive approval from the CBP prior to 2025.

The draft permit (appendix B. Section III.C.5) suggests that trading may be available which could a have significant impact on Cecil County's work plan. Adoption of the trading regulations will require public participation and EPA approval which may extend beyond the first year of the permit.

These and many other variables in implementation of the restoration requirements make a work plan very unreliable beyond two or three years. Cecil County recommends that each jurisdiction have the option to prepare a 'Maximum Extent Practicable' analysis in the work plan, in-lieu of developing the baseline impervious area assessment. The work plan should only provide the list of specific projects that can be completed within the permit term and must align with the MEP analysis.

c. Develop a Restoration Activity Schedule

By the end of the permit term, the County must provide a complete list of projects in the 'Restoration Activity Schedule' with a ***projected implementation year no later than 2025***. The restoration activities must be consistent with the methodology described in the MDE 2014 document "Accounting for Stormwater …." mentioned above. These plans must provide detailed cost estimates for individual projects, programs, controls, and plan implementation. The County must develop a geodatabase to track and monitor the implementation of restoration plans document the progress toward meeting the twenty percent restoration of impervious surface area permit.

MDE believes the above effort constitutes adequate progress toward Maryland's receiving water quality standards and any wasteload allocation established or approved by EPA for small MS4s regulated under the draft permit. However, the draft permit is silent on the legal standard of "Maximum Extent Practicable" for MS4 discharges.

In 2011, Dennis King and Patrick Hagan gathered data from jurisdictions that have completed a significant number and variety of watershed restoration projects into a statewide report called *The Costs of Stormwater Management Practices in Maryland Counties.* This report provides cost estimates for twenty four different stormwater

management practices, including, pre-construction costs, land costs, construction costs, and post-construction costs. This report and its cost estimates were designed to assist counties in developing planning level cost estimates for watershed restoration. Total design and construction costs per impervious square acre range from $6,049 for street sweeping to $335,412 for new permeable pavement. The median cost per impervious acre is $55,000.

Selection of watershed restoration practices must be based on criteria which include availability of land within existing development, ease of land acquisition, permitting requirements, and technical feasibility.

For the purpose of assessing the cost of watershed restoration on a planning level, other jurisdictions, including Harford County, have used the median cost of $55,000 per impervious acre. Multiplying $55,000 by the impervious surface area identified as the baseline for restoration efforts (20% of total impervious surface area) in the baseline assessment outlined above will give the total estimated cost to meet permit requirements.

FIGURE 1

Planning Level Unit Cost Development for Stormwater Best Management Practices (BMPs)

Initial Costs Per Impervious Acre Treated

Stormwater BMP	Initial Project Costs				
	Pre- Construction Costs	Construction Costs	Land Costs	Total Initial Costs	Annualized Initial Costs
Impervious Urban Surface Reduction	$ 8,750	$ 87,500	$ 50,000	$ 146,250	$ 9,830
Urban Forest Buffers	$ 3,000	$ 30,000	$-	$ 33,000	$ 2,218
Urban Grass Buffers	$ 2,150	$ 21,500	$-	$ 23,650	$ 1,590
Urban Tree Planting	$ 3,000	$ 30,000	$ 150,000	$ 183,000	$ 12,300
Wet Ponds and Wetlands (New)	$ 5,565	$ 18,550	$ 2,000	$ 26,115	$ 1,755
Wet Ponds and Wetlands (Retrofit)	$ 21,333	$ 42,665	$ 2,000	$ 65,998	$ 4,436
Dry Detention Ponds (New)	$ 9,000	$ 30,000	$ 5,000	$ 44,000	$ 2,957
Hydrodynamic Structures (New)	$ 7,000	$ 35,000	$-	$ 42,000	$ 2,823
Dry Extended Detention Ponds (New)	$ 9,000	$ 30,000	$ 5,000	$ 44,000	$ 2,957
Dry Extended Detention Ponds (Retrofit)	$ 22,500	$ 45,000	$ 5,000	$ 72,500	$ 4,873
Infiltration Practices w/o Sand, Veg. (New)	$ 16,700	$ 41,750	$ 5,000	$ 63,450	$ 4,265
Infiltration Practices w/ Sand, Veg. (New)	$ 17,500	$ 43,750	$ 5,000	$ 66,250	$ 4,453
Filtering Practices (Sand, above ground)	$ 14,000	$ 35,000	$ 5,000	$ 54,000	$ 3,630
Filtering Practices (Sand, below ground)	$ 16,000	$ 40,000	$-	$ 56,000	$ 3,764
Erosion and Sediment Control	$ 6,000	$ 20,000	$-	$ 26,000	$ 1,748
Urban Nutrient Management	$-	$ 61,000	$-	$ 61,000	$ 4,100
Street Sweeping	$-	$ 6,049	$-	$ 6,049	$ 407
Urban Stream Restoration	$ 21,500	$ 43,000	$-	$ 64,500	$ 4,335
Bioretention (New - Suburban)	$ 9,375	$ 37,500	$ 3,000	$ 49,875	$ 3,352
Bioretention (Retrofit - Highly Urban)	$ 52,500	$ 131,250	$ 3,000	$ 186,750	$ 12,553
Vegetated Open Channels	$ 4,000	$ 20,000	$ 2,000	$ 26,000	$ 1,748
Bioswale (New)	$ 12,000	$ 30,000	$ 2,000	$ 44,000	$ 2,957
Permeable Pavement w/o Sand, Veg. (New)	$ 21,780	$ 217,800	$-	$ 239,580	$ 16,104
Permeable Pavement w/ Sand, Veg. (New)	$ 30,492	$ 304,920	$-	$ 335,412	$ 22,545

d. BMP Database Tracking

This requirement is similar to the MEP comments provided with Part IV.E Post Construction Stormwater Management and the inspection requirements for the restoration BMPs will only increase with time. Cecil County would suggest that flexibility be added to the inspection requirements. For example with stream restoration projects, if the MDE or Army Corps of Engineers permit requires inspection and maintenance for 5 years, the County should be allowed to start the triannual inspections after the permit inspections are completed. If stream riparian buffers have grown with an acceptable survival rate and are becoming an established forest, the inspection and maintenance requirement should be discontinued.

VI. PROGRAM FUNDING

According to permit conditions, a fiscal analysis of the restoration requirements of the permit must be submitted to MDE with the first year report. Adequate program funding and a long term budget to comply with all conditions of the permit must be provided. With variability of the implementation of the restoration requirement it is difficult to determine the long term budget. The long term budget should be determined by a MEP analysis that considers the economic conditions of Cecil County.

Cecil County Government serves an estimated population of 102,383 over a land area of 352 square miles. The County is empowered to levy a property tax on real property and personal property used in connection with a business, an income tax on residents and non-residents working in the County, and to levy or collect various other taxes and charges for services. Through actions and the budget, the County Executive has emphasized policies that will promote the current and future welfare of the County's citizens. These policies include the expansion of infrastructure for job creation, support for education, and building safer communities.

Cecil County was able to maintain services to its citizens throughout the recent economic recession because it obtained and maintained a strong fund balance in its General Fund. Cecil County balances its budgets and practices prudent financial planning in order to provide and maintain the quality of life that our residents expect for their tax dollars.

Cecil County has used the best available land use data from Maryland Watershed Implementation Plan 2009 MAST urban scenario. The County Phase II regulated impervious area was determined to be 4,461.7 acres and the non-regulated impervious developed area was 1157.7 acres. Using the King and Hagan median cost of $55,000.00 per impervious acre figure 2 below shows the estimated funding required for the restoration.

FIGURE 2

Planning Level Impervious Area Restoration Estimates*

Land Use	Impervious Area		Estimated Expense	
	Total	20% Restoration	Total Cost	Annual Costs (8 years)
County Phase II	4,461.7	892.3	$ 49,000,000	$ 6,125,000
Non-regulated	1,157.7	231.5	$ 12,700,000	$ 1,587,000
Jurisdiction-wide	5,619.4	1,123.8	$ 61,700,000	$7,712,000
* The total impervious area may include impervious area constructed with adequate SWM between 2002 and 2009				

Cecil County believes compliance with the proposed 20% restoration requirement jurisdiction-wide would be financially infeasible. To be achievable and affordable, the impervious area restoration requirement must consider only the impervious area served by our MS4 located within the urbanized area, allow nutrient trading, and not exceed the County's MEP.

CONCLUSION

Cecil County is currently covered under the NPDES MS4 Phase II General Permit 03-IM-5500. Since this permit was issued in 2003 Cecil County has implemented a strong Stormwater Management Plan that includes the following six MCM: public education and outreach; public participation and involvement; illicit discharge detection and elimination; construction site runoff control; post-construction runoff control; and pollution prevention/good housekeeping.

The County has demonstrated its dedication to water quality through the continued improvement of its SWMP and the six MCMs. It is anticipated that MDE will issue Cecil County coverage under the Phase II Permit when this five-year permit cycle ends. The next permit will require compliance with the six MCMs and impervious area restoration to build on the County's accomplishments during this permit term.

Cecil County plans to explore the feasibility of financing options and innovative restoration efforts which will contribute to the improvement of Maryland's water quality while avoiding undue, and potentially impossible, strain on the county, its resources, and its residents. The County requests that MDE consider this MEP analysis and adjust permit terms to reflect the information we have provided regarding the achievability of particular requirements.

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Mr. Raymond Bahr
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230
Sent via electronic mail

March 30, 2017

Re: Tentative Determination to Re-Issue MS4 General Permit to Municipalities (13-IM-5500/MDR055500)

Dear Mr. Bahr:

Thank you for the opportunity to comment on the Maryland Department of Environment (MDE) tentative determination to re-issue the Municipal Separate Storm Sewer System (MS4) General Permit MDR055500 to Phase II MS4 jurisdictions (Draft Phase II Permit). The below signatories have a vital interest in the protection and restoration of local rivers, streams and the Chesapeake Bay to achieve fishable, swimmable waters across the Chesapeake Bay watershed. Stormwater pollution, or polluted runoff, is the only major source of nitrogen that is still increasing.[1] Maryland's Watershed Implementation Plan (WIP) relies heavily on regulated jurisdictions to reduce the state's polluted runoff load, making the terms and implementation of MS4 permits critical to the state's success under the Chesapeake Bay Total Daily Maximum Load (TMDL).[2]

Considering the importance of these permits to achieving stormwater reduction goals under the TDML, the signatories are concerned that the tentative Draft Permit does not meet or advance necessary pollution reductions. While more detailed comments are found below, our concerns can be summarized as follows:

- The 20% impervious surface restoration requirement included in the draft permit has not proven to be effective in obtaining sufficient pollution reduction goals for Phase I MS4 permittees, although in any case, it is likely that most Phase I entities will not achieve that percent restoration by the end of the permit term;
- The Permit should include a quantitative evaluation of the current loading of nitrogen, phosphorus and sediment to establish a baseline and require numerical pollution reduction in accordance with applicable wasteload allocations for each established TMDL for each receiving water body, including the Chesapeake Bay;

[1] U.S. Environmental Protection Agency, Office of the Inspector General, *Development Growth Outpacing Progress in Watershed Efforts to Restore the Chesapeake Bay*, Evaluation Report No.2007-P-00031, September 10, 2007, Summary Recommendations; Chesapeake Bay Program, *Bay Barometer*, CBP/TRS 293-09, EPA-903-R-09-001 (March 2009), 8.

[2] *See* University of Maryland/Maryland Department of Planning/Maryland Department of Agriculture/Maryland Department of Environment/Maryland Department of Natural Resources. (2012). *Maryland's Phase II Watershed Implementation Plan for the Chesapeake Bay TMDL*. Document Version: October 26, 2012. [Herein "Phase II WIP"] P. 14. ("The stormwater sector is projected to reduce about 838,000 pounds/year of nitrogen as a result of implementing the Interim Target Strategy. **About 78% of that reduction is anticipated to occur from sources regulated under federal NPDES stormwater permits**")(emphasis added).

- The Draft Phase II Permit does not require any pollution reduction projects to be implemented in the term of the permit itself, which conflicts with the Phase II WIP and is also inappropriate as a permit condition;
- The permit's reliance on construction site stormwater runoff controls found in statute and regulations is insufficient insofar as the statute and regulations need strengthening to meet current weather patterns, although they were recently weakened through regulatory action; further, recent studies have demonstrated that even large Phase I MS4 jurisdictions have not adequately enforced state standards;
- Restoration plans should not include trading until the anticipated trading regulations and public participation process have been completed.

Detailed Commentary

1. The 20% impervious surface restoration requirement is not cost-effective and has not resulted in meaningful progress towards pollution reduction goals for Phase I MS4 permittees. Additionally, it is proving largely non-implementable among those permittees due to budget and limited throughput capabilities.

The undersigned are concerned that this Draft Phase II Permit proposes to use the same ineffective and generalized standard of twenty percent restoration of untreated impervious surfaces that was used unsuccessfully in the Phase I MS4 permits.[3] As demonstrated by the Phase I MS4 restoration plans and the statutorily required Financial Assurance Plans (FAP), permittees can spend a large amount of money without making significant progress towards reducing pollution or achieving mandated wasteload allocations (WLAs). For example, Frederick County's restoration plan revealed that, even if the County faithfully complied with the 20% impervious surface restoration as required by the permit, based on the BMPs selected by the County, the County would still only be approximately 5% of the way towards compliance with nitrogen WLAs. This progress of only 5% towards final nitrogen goals comes at a cost of over $33 million. Similarly, Anne Arundel County plans to spent $450 million on stream restoration by 2025, which will achieve a significant level of the "impervious surface restoration" acreage while barely driving any nitrogen reductions. Maryland Department of Environment has identified urban stream restoration and street sweeping as the two least cost-effective urban stormwater best management practices (BMPs), with the practices being anywhere from $2,500 to over $6,000 per POUND of nitrogen reduction,[4] yet each one of the Phase I MS4 permittee's restoration plans contain a significant number of these practices because they obtain "impervious acreage" reduction. The focus on achieving "impervious acreage reduction" as opposed to

[3] *See, e.g.,* Maryland Department of Environment National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Discharge Permit for Anne Arundel County, Maryland. Permit Number 11-DP-3316/MD0068306. ("Anne Arundel County shall commence and complete the implementation of restoration efforts for twenty percent of the County's impervious surface area…") Identical language is found in each Phase I MS4 permit with the exception of Montgomery County, Maryland.

[4] Maryland Department of the Environment, *Cost Efficiency and Other Factors in Urban Stormwater BMP Selection*, WIP Local Technical Meeting Series. November 2013. Available at: http://www.mde.state.md.us/programs/Water/TMDL/TMDLImplementation/Documents/Regional_Meetings/Fall2013/presentations/Cost_Efficiency_WIP_Fall_Workshops_10312013.pdf

achieving actual pollution reduction means these permittees will spend a lot of money while still not meeting legally mandated TMDLs and WLAs. The undersigned are concerned that the 20% surrogate, and the costs expended to meet it, will not result in timely (2025) compliance with the stormwater sector's portion of the Chesapeake Bay TMDL, as articulated in the state WIPs, and that more will have to be asked of these permittees in the near future.

Finally, it does not appear that many, if any, of the state's Phase I MS4 jurisdictions will meet their 20% restoration permit term obligations. It is not logical to expect smaller jurisdictions with even more limited resources to be able to do so.

2. The Permit should include a quantitative evaluation of the current loading of pollutants including nitrogen, phosphorus and sediment to establish a baseline, and require numerical pollution reduction in accordance with applicable wasteload allocations for each established TMDL for each receiving water body, and that for the Chesapeake Bay.

To avoid the scenario in which permittees spend millions of dollars and still fall short of TMDL compliance, we the permit must require an evaluation of how much nutrient and sediment pollution the jurisdiction currently contributes and determine numerical reductions necessary to meet WLAs. Under the terms of this Draft Phase II Permit, the permittees must attain applicable WLAs for each TMDL for each receiving water body. [5] However, there is no provision requiring an evaluation of how much pollution occurs and therefore no way to determine whether the practices considered or implemented are reducing pollutant loads down to the WLAs. Because this new permit round seeks to tie the MS4 implementation to meeting the WIP goals (as it should), these sources should apply Chesapeake Bay Model values or monitored Event Mean Concentrations to quantify, at very least, the current loading of nitrogen, phosphorus and sediment from the existing developed areas and stormwater infrastructure. This quantification is necessary to establish a baseline for meeting either the Baywide or any local TMDLs.

Further, as the TMDLs and WLAs are scientifically developed to meet specific water quality goals and are expressed as numerical pollutant loads, it makes sense that the MS4 permits should reflect those numerical limits and contain numerical objectives for meeting them. The pollution reduction provisions of the permit, or submitted by the permittees, must be expressed as pounds of pollution reduction designed to obtain local and Bay TMDLs and WLAs. There is no correlation whatsoever between the 20% impervious surface reduction permit term and the numerical pollution limits that these jurisdictions are required to meet. As indicated above, without this correlation, it is very likely that the permittees could comply with the permits and still be very far away from reaching legally mandated pollution reduction loads. Therefore, we recommend that pollution reduction loads and goals in this permit be expressed as numerical objectives. Numerical pollution reduction requirements would also be far more readily translatable for any future trading scheme.

3. The Draft Phase II Permit does not require any pollution reduction projects to be implemented in the term of the permit itself, which conflicts with the Phase II WIP and is also inappropriate as a permit condition.

[5] Draft Phase II Permit Part III.2.

The Draft Phase II Permit fails to require the implementation of any pollution reduction practices during the term of the permit, instead requesting a "complete list of specific projects" by the end of the five-year permit term. [6] The Draft Phase II Permit also states that the "projected implementation year shall be no later than 2025," [7] which is outside the term of the permit itself. This violates the MS4 requirements under the Clean Water Act, and is also in conflict with the stormwater strategies in Maryland's Phase II WIP.

Maryland regulations allow MDE to include a compliance schedule as a condition of a permit for "existing discharges which do not comply with permit conditions, effluent limits, or water quality standards." [8] The regulations also *require* a compliance schedule longer than 9 months to include interim dates. [9] Compliance schedules should at the least and in their outermost margins be consistent with the deadlines associated with the Chesapeake Bay TMDL and the Watershed Implementation Plan, but because some of these deadlines and milestones are multi-year in nature, enforceable interim benchmarks are also required under the state law cited above.

The Clean Water Act provisions governing MS4 permits state: "[a]ny such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit." 33 U.S.C.S. §1342(p)(4)(A). To put the date of compliance with the requirement to restore 20% of untreated impervious surface "no later than 2025" is approximately 7 years after the date of issuance of the permit, assuming the Draft Phase II Permit is issued in 2018. This is clearly in violation of the plain directive of the Clean Water Act.

Finally, the Draft Phase II Permit is inconsistent with Maryland's Phase II WIP, which includes the strategy to have Phase II MS4 jurisdictions implement the 20% treatment of untreated impervious surface by 2017. The delays thus far have already put Maryland far behind schedule, and to further that delay by not requiring pollution reductions projects to be implemented until 2025 is inappropriate and puts Maryland out of compliance with its approved WIP.

Over the course of decades of MS4 permits, we have seen jurisdictions struggle to stay on track. Without any interim benchmarks or deadlines, it is very likely we will see the same thing under these Draft Phase II permits. The current proposed draft would allow for good actors to implement projects earlier than 2025, but would not provide any requirement for jurisdictions to do so. Therefore, we urge the inclusion of a schedule of implementation for pollution reduction projects during the lifetime of the permit.

4. The permit's reliance on construction site stormwater runoff controls found in statute and regulations is insufficient insofar as the statute and regulations need strengthening to meet current weather patterns, and were also recently weakened through regulatory action; further, studies have shown that even large MS4 Phase I jurisdictions are failing to adequately enforce such requirements

[6] Draft Phase II Permit, Part V.C. Page 13.
[7] *Id.*
[8] Md. Code Regs. 26.08.04.02.
[9] Md. Code Regs. 26.08.04.02.

The Draft Phase II permit incorporates existing state law and regulations regarding construction site stormwater runoff control. However, due to the recent weakening of these standards, this term does not provide adequate protection to ensure water quality. In addition, these regulations are badly in need of updating to reflect current climate and meteorological conditions. The water quality volumes currently reflected in law and regulation are not preventing excessive sediment and nutrient pollution overflows, nor are a substantial number of local jurisdictions adequately enforcing state norms.

Recently, the Maryland Department of Environment repealed several important provisions of the construction site stormwater regulations, including inspection requirements, length of plan approvals, and size of grading units. Each one of these provisions served an important role in preventing sediment and nutrient runoff from construction sites. Weakening inspection requirements weakens the incentive to follow erosion control procedures and put in important erosion control mechanisms. Even when the proper practices were put in place originally, storms and other changes in conditions on site can cause significant pollution if adjustments to sediment and erosion control systems aren't made as needed. Preventing this pollution by frequent inspections to correct any failing, undersized, or otherwise ineffective sediment pollution control measures is far more effective and less expensive than attempting to clean up the waterway after the fact. Removing the inspection requirement was also directly adverse to one of the most important and effective erosion prevention requirements: stabilizing any exposed soil within seven calendar days of active grading being completed (COMAR 26.17.01.07). Proper soil stabilization with grass seed or mulch can reduce the erosion potential by 90-99%. Conversely, an unprotected, unstabilized construction site in Maryland can erode at a rate of 100 tons of sediment per acre each year. Since the two-week inspection requirement has been removed, then sites that have failed to comply with the stabilization requirement are contributing to sediment pollution indefinitely. The Draft Phase II Permit must provide for timely inspection requirements that are no farther apart than every two weeks for active construction sites.

Similarly, the recent repeal of grading unit size will adversely affect pollution control efforts under this Draft Phase II Permit. The Draft Phase II Permit must include a smaller grading unit size (e.g. ten acres) to prevent large areas of exposed soil that result in sediment and nutrient pollution to local waterways.

Finally, water volume capacity of most sediment control measures is commonly exceeded by the increasingly strong storms in the state. In the past few years, Maryland has seen weather events that have overwhelmed construction sites even when the sites are in compliance with the minimal practices required by regulation. Standards must be increased in state regulations or within these permits to reflect modern storm event and rainfall totals.

5. Restoration plans should not include trading until the anticipated trading regulations and public participation process have been completed.

The undersigned are pleased to see that the Draft Phase II Permit recognizes that trading must be done through a formal regulatory process with public participation. However, we encourage the Department to instruct permittees not to rely on the speculative and uncertain trading program in their assessments and restoration plans until the details of such a trading program are in place. As

was seen with the Phase I MS4 jurisdictions, it is inappropriate to allow a permittee to budget for and rely upon practices that later prove to be unworkable or simply unavailable.

We look forward to working with the Department to ensure strong effective permits to reduce polluted runoff and achieve our shared clean water goals.

Sincerely,

Alison Prost
Chesapeake Bay Foundation

Dru Schmidt-Perkins
1,000 Friends of Maryland

Caroline Taylor
Montgomery Coutryside Alliance

Kate Fritz
South River Federation

Paulette Hammond
Maryland Conservation Council

Katlyn Clark
Waterkeepers Chesapeake

Jeff Horstman
Midshore Riverkeeper

Jeff Holland
West & Rhode Riverkeeper

Rupert Rossetti
Cecil Land Use Association

Katherine Jones
Blue Water Baltimore

Vince Meldrum
Earth Force

Bob Hocutt
Wicomico Environmental Trust

Michelle Kokolis
Rock Creek Conservancy

Jim Foster
Anacostia Watershed Society

Dan Smith
Friends of Lower Beaverdam Creek

Bernie McGurl
Lackawanna River Conservation Association

Randy McClement
Mayor

Aldermen

Kelly M. Russell
President Pro Tem

Michael C. O'Connor
Philip Dacey
Joshua Bokee
Donna Kuzemchak

March 30, 2017

Via Email

Mr. Raymond Bahr
Ms. Deborah Cappuccitti
Maryland Department of the Environment
Water Management Administration
Sediment, Stormwater, and Dam Safety Program
1800 Washington Boulevard, Suite 440
Baltimore, Maryland 21230

RE: MDE Tentative Determination to issue Two NPDES Phase II MS4 General Permits

Dear Mr. Bahr and Ms. Cappuccitti,

The City of Frederick (the City) appreciates the opportunity to review and provide comment on the Maryland Department of the Environment's (MDE's) Tentative Determination to reissue the National Pollutant Discharge Elimination System (NPDES) General Permit (GP) for discharges from Small Municipal Separate Storm Sewer Systems (MS4s).

The City shares MDE's goal for full permit compliance in order to address the water quality goals of the Chesapeake Bay TMDL and general stewardship of the environment. However, after careful review of the Draft GP and accompanying Fact Sheet the City of Frederick will not be able to reasonably comply with the GP as it is currently written.

In addition to the comments and clarification requests noted below, the City of Frederick fully supports comments and recommendations for revision of the Draft GP provided by the Maryland Municipal Stormwater Association (MAMSA) in a letter dated March 30, 2017 developed to voice the many concerns of existing and future MS4 Permit Holders.

Please consider the following comments from the City:

1. Achieving the twenty percent impervious area restoration requirement by 2025 as outlined in Section V of the Draft GP is not achievable for the City of Frederick.

   Part V. of the draft GP states *"Restoration planning strategies and implementation schedules required under this general permit are consistent with addressing the water quality goals of the Chesapeake Bay TMDL by 2025. The conditions established below require permittees to perform watershed assessments, identify water quality improvement opportunities, secure appropriate funding, and develop an implementation schedule to show the twenty percent impervious area restoration requirement will be achieved by 2025."*

The City of Frederick developed a Watershed Management Plan in 2016 to provide a road map for meeting NPDES Phase II, Chesapeake Bay TMDL, and local TMDL requirements. The plan, as developed, includes the following: assessments of existing watershed and stream conditions; analysis of pollutant loads for existing and future conditions; and the identification, prioritization, and cost estimates for potential restoration projects.

While the City has addressed the initial requirements in the GP, the most challenging, and frankly impracticable, requirements will be developing an implementation schedule and securing appropriate funding for implementation of the recommended projects.

The plan identifies forty-one (41) projects to provide treatment to almost 17% of untreated impervious areas in the City, falling short of the required 20% reduction of untreated impervious area or treatment of those areas. The cost of those forty-one (41) projects is estimated to be more than $52 million. When divided over the next seven years, the Draft GP states that the impervious area restoration requirement will be achieved by 2025, the yearly cost for implementation is $7.5 million per year.

In order to understand the impact of that figure to the City, consider the following: Between 2014 and 2017, the average yearly cost of the City's adopted Capital Improvements Program (CIP) is $23 million. The estimated cost to achieve the twenty percent impervious area restoration requirement by 2025 is approximately $7.5 million per year between 2018 and 2025, requiring the City to dedicate nearly a third of the City's total CIP to restoration of untreated impervious areas.

Generally four percent (4%), or $1 million, is dedicated to major stormwater management improvement projects in the CIP. Increasing the share of the CIP dedicated to stormwater improvements to meet the restoration requirements only takes funding away from other City infrastructure requirements including road rehabilitation projects, water distribution system improvements and sanitary sewer system improvement projects to name only a few.

This simple analysis demonstrates that achieving the twenty percent impervious area restoration requirement by 2025 is not achievable for The City of Frederick.

2. The City is also concerned with meeting requirement number 4 of the Notice of Intent. According to the Draft GP the following is to be submitted with NOI within 180 days of permit issuance:

> *4. An estimate of the anticipated expenditures to implement the required programs specified in this general permit; and*

In order to develop an estimate of expenditures necessary to implement the required programs specified, the City will need to review, assess and determine gaps in the existing program to manage the new permit requirements. The City will likely need to hire additional staff who will be dedicated solely to managing the permit requirements.

3. Aside from the challenge of meeting the requirements outlined in Part II and Part V. of the Draft GP, there are a number of conditions noted in the draft that do not provide clear direction as to what the permit requires. The City requests clarification of the following:

PART II. NOTICE OF INTENT REQUIREMENTS

> *3. A brief description of any agreements with another entity when responsibilities for permit compliance are shared between the permittee and entity. The relationship and specific duties of all parties shall be provided;*

Question: Are formal agreements required if the jurisdiction has not been delegated the authority to perform the tasks in the MCM? (*i.e. managing the Erosion and Sediment Control program to control construction site stormwater runoff*)

PART IV. MINIMUM CONTROL MEASURES

MCM A. Public Education and Outreach

> *1. Develop a hotline for the public to report water quality complaints within one year of permit issuance;*

Question: Is an established, manned 24-hour telephone line sufficient or is a dedicated line required?

> *4. Develop and implement an annual employee training program that addresses appropriate topics to prevent or reduce the discharge of pollutants into the storm drain system. Submit topics selected and attendee list to MDE in accordance with reporting requirements;*

Question: Are training topics required to be approved by MDE?

MCM C. Illicit Discharge Detection and Elimination (IDDE)

In the draft permit, outfalls are defined as "end points where collected and concentrated stormwater flows are discharged from pipes, concrete channels, and other structures that transport stormwater within the jurisdictional property."

The definition in the draft permit requires a jurisdiction to screen significantly more "outfalls" for dry weather flow. Outfalls that may discharge into SWM BMPs designed to treat stormwater runoff before reaching waters of the US.

This definition is significantly different from the Federal definition which is

> *"...a point source...at the point where the municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States." 40 CFR §122.26(b)(9)*

Question: Why is the permit requirement so much more stringent than the federal requirement?

Question: Is lab testing required as part of the Phase II IDDE program?

MCM F. Pollution Prevention and Good Housekeeping

The Draft GP requires all staff and contractors receive training.

Question: Are contractors hired by the City to execute CIP projects or large scale Operations and Maintenance projects required to be trained by the City or does the Responsible Personnel Certification Course meet this requirement?

Question: Are pollution prevention plans required for all publicly owned properties such as administrative office buildings, parking garages, parks, etc.?

Again, The City of Frederick appreciates the opportunity to review and provide comment on the Draft NPDES General Permit for discharges from Phase II MS4s. The City looks forward to receiving achievable compliance goals in order to continue to improve water quality conditions within our watersheds.

Please provide responses to me at tcoleman@cityoffrederick.com. Thank you for your consideration.

Sincerely,

Tracy Ann Coleman, P.E.
Deputy Director of Public Works – Engineering

TAC/jcd

cc: Randy McClement, Mayor
Zack Kershner, P.E., Director of Public Works

Gaithersburg
A CHARACTER COUNTS! CITY

March 30, 2017 Email and FedEx Delivery

Mr. Raymond Bahr
Maryland Department of the Environment
Water Management Administration
Sediment, Stormwater, and Dam Safety Program
1800 Washington Blvd., Suite 440
Baltimore, Maryland 21230-1708

Dear Mr. Bahr:

The City of Gaithersburg is committed with the State of Maryland to improving local water quality and the health of the Chesapeake Bay. Gaithersburg has carefully reviewed the draft General Permit and the accompanying Fact Sheet, which were issued on December 22, 2016. Acknowledging the importance of addressing impacts related to stormwater runoff and achieving full compliance with water quality regulations, the City has prepared comments on the Maryland Department of the Environment's Tentative Determination to reissue the National Pollutant Discharge Elimination System (NPDES) General Permit for discharges from Small Municipal Separate Storm Sewer Systems (MS4s). Comments follow on the attached pages.

While Gaithersburg is eager to move forward with the next phase in our MS4 permit cycle, we urge MDE to ensure that all general permit terms are clear and achievable before issuing final determination on the permit.

We appreciate the opportunity to share our comments and concerns about the draft general permit and look forward to continuing to work with the State on this endeavor. Should you have any questions, please contact me at 240-805-1275 or meredith.strider@gaithersburgmd.gov.

Sincerely,

Meredith Strider

Meredith Strider
Stormwater Program Manager

Cc: Deborah Cappuccitti, Senior Regulatory Compliance Engineer, Maryland Department of the Environment
Dennis Enslinger, Deputy City Manager, City of Gaithersburg
Michael Johnson, Director of Public Works, City of Gaithersburg

City of Gaithersburg Comments
Proposed Reissuance of General Permit for Discharges from Small MS4s
March 30, 2017

I. MS4 Permit Jurisdictional Boundaries

The Maryland Department of the Environment (MDE) has suggested that permitted MS4 jurisdictions should remove any parcels owned by another permitted agency from its MS4 jurisdiction; those individual parcels would then be included in the other jurisdiction's MS4 permit. (For example, Montgomery County owns parcels within Gaithersburg—Gaithersburg could potentially exclude the County parcels from its MS4 permit boundary, and the County would take them on under its own permit). This would leave restoration requirements and all other permit requirements up to the second jurisdiction.

Gaithersburg is wary of this fragmented approach to the MS4 permit boundary for several reasons. Singling out individual parcels within an existing MS4 permit area would lead to difficulty in achieving compliance with three of the six minimum control measures established under the NPDES permit:

- **Illicit discharge detection and elimination** – Given the fact the parcels are outside of a municipality's permit boundary, that municipality cannot claim authority to investigate or require modifications to prevent further issues without jurisdiction over the parcel. This could lead to non-compliance with permit requirements.
- **Construction site storm water runoff control** – Removing individual parcels from the small MS4's jurisdiction raises the issue of whether or not a municipality has the ability to regulate construction site stormwater runoff control within its corporate boundaries as required under our ordinance provisions. If a parcel is removed from the MS4 jurisdictional boundaries, the municipality will be unable to enforce the applicable ordinance requirements which are approved by MDE.
- **Post construction storm water management in new development and redevelopment** – MS4 permittees are required to enforce post construction requirements under their MDE-approved ordinance for all properties covered under the ordinance provision (corporate City boundaries). MDE requires municipalities to adopt standard ordinance provisions and we cannot exclude individual parcels from our enforcement activities.

According to the EPA, the intent of the NPDES program is to regulate all municipal, industrial, and commercial facilities that discharge wastewater directly from a point source (a discrete conveyance such as a pipe, ditch, or channel) into a receiving waterbody (lake, river, or ocean); such discharges are regulated through the issuance of NPDES permits. The City of Gaithersburg asserts that that the practice of excluding individual parcels which don't discharge directly from point sources into a receiving waterbody, but that actually discharge to another jurisdiction's storm drain system is not in line with the original intent of the NPDES program.

The City of Gaithersburg is not opposed to the idea of sharing responsibilities under the NPDES MS4 program. The EPA does allow for government operators of facilities to share responsibilities for meeting the Phase II program requirements. Those entities choosing to do so may submit jointly with other municipalities or governmental entities. However, this decision should be made jointly between the municipalities or government entities—this is not typically a unilateral decision by EPA or the authorized implementation agency (MDE). To move forward with this approach, we believe that the entities need to submit their permits jointly and

have them approved concurrently—this means that all entities must agree to joint submission of their permits. At this time, Gaithersburg reserves the right to retain such parcels within its MS4 jurisdictional boundaries.

II. Comments on Specific Permit Terms in Need of Clarification

PART IV – Minimum Control Measures

The City of Gaithersburg is concerned about the lack of general compliance specificity for the six minimum control measures (MCMs) proposed in the draft general permit. In many cases, clarification is needed so that permitted jurisdictions are clear on whether implementation activities will meet compliance thresholds. MDE will need to issue specific guidance on each of the MCMs, and provide clear and consistent feedback that the measures implemented by a jurisdiction are in compliance with the permit terms. Gaithersburg recommends including in the permit a defined schedule within which MDE will review reporting documents, provide feedback, and clearly state whether the subject jurisdiction is in compliance with the permit.

The following questions and comments request clarification about the six minimum control measures proposed in the draft general permit:

a. Public Education and Outreach

- A.1 – Guidance is needed about the requirements for the water quality hotline—does it need to be a dedicated phone line, a general telephone number, or will online service requests be sufficient to achieve compliance?
- A.2 – Is the MS4 jurisdiction to determine the target audience for public education and outreach activities? How many audience segments must be targeted? Must a small MS4 develop educational materials or may a small MS4 make available material developed by the County, MDE, or other sources? Clarification is needed.
- A.3 – Reference the reporting requirements here, and clarify what is being requested—does MDE want copies of all education materials used?
- A.4 – Employee training requirements must be clarified to specify which relevant employees require training, and what training topics and materials will satisfy permit requirements. Will all employees need to undergo training, or just those engaged in certain activities? If the latter, what activities will require employee training? What topics will be acceptable to MDE? Again, refer to the specific reporting requirements in this section.
- A.5 – Please clarify this requirement, specifically what level of reporting will achieve permit compliance. Is MDE looking for specific performance metrics to gauge the success of the education programs?

b. Public Involvement and Participation

- B.3 – MDE must specify what types of activities qualify as public participation events (e.g. public meetings, surveys, requests for comment, etc.), or clarify that this decision will be left to the jurisdiction to determine.

c. Illicit Discharge Detection and Elimination (IDDE)

- C.1 – Clarify whether the "map of the jurisdiction's storm drain infrastructure" is a physical map or must be in digital format (geographic information system).
- C.4.b – Clarify whether a permitted municipality with greater than 500 outfalls will need to inspect all outfalls within the five-year permit term. This section references "20% of total outfalls per year, up to 100 outfalls," while Appendix B, Section II.B mentions screening "every outfall at least once per permit term."
- C.4.d – Will MDE provide guidance for the identification of priority areas for IDDE? Further guidance is needed about how the priority areas will be treated by the MS4 jurisdiction once identified.
- C.7 – Clarify what constitutes a complete IDDE record for the purposes of permit compliance.

d. Construction Site Runoff Control

The construction site runoff control minimum control measure should not include specific language above and beyond what is required by Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland and State erosion and sediment control regulations under COMAR 26.17.01. If a jurisdiction is in compliance with state law, as determined through the delegation review process, the MS4 permit holder would therefore be in compliance with the permit. The additional terms listed in the draft general permit would create inconsistent regulatory requirements.

- D.3 – EPA and MDE need to come to an understanding on the differences between the State and Federal regulations concerning erosion and sediment control on construction sites. MDE and the EPA must be in agreement about their requirements and the threshold for achieving permit compliance—it cannot be left to the jurisdictions to defend the State program to the EPA.
- D.6 – Update this language to clarify that permitted jurisdictions must "track all active construction sites" within the jurisdiction's purview. The word purview is critical, as a jurisdiction isn't required to track state and federal projects within its jurisdiction, and MOUs may be in place to cover County projects.

e. Post-Construction Stormwater Management

As stated in our comments about section IV.D—Construction Site Runoff Control, Gaithersburg believes that the language related to this minimum control measure should be minimal, and require only compliance with the existing regulations.

- E.5 -- Insert the word "appropriate" before the word "staff." Clarification is needed here to specify which staff members are required to receive training as part of this minimum control measure.

f. Good Housekeeping

- F.1 – Clarification is needed about which appropriate staff and contractors will require annual training.
- F.2 – Clarification is needed about which City-owned facilities are required to meet this requirement. The City of Gaithersburg owns or operates nearly 200 separate

properties, including over 25 facilities with buildings, most of which do not have significant pollution potential—these include parks, recreation facilities, office uses, and other minimally-polluting uses. The requirement that small MS4 jurisdictions "develop, implement, and maintain a pollution prevention plan at all publicly-owned or operated properties" is burdensome and unnecessary in most cases. Gaithersburg's Public Works maintenance facility has the greatest pollution potential of all City facilities, is already covered by the 12-SW industrial permit, and has a comprehensive pollution prevention plan in place.

III. PART V – Chesapeake Bay Restoration and Meeting Total Maximum Daily Loads

The City requests that this section of the permit include all specific trigger dates for baseline impervious assessment and retrofit and redevelopment credits. In addition, for retrofit and redevelopment project credits, the permit should specify whether project that are *built* or *designed* after the trigger date are eligible for credit towards the twenty percent restoration requirement.

a. Develop a Baseline Impervious Area Assessment

Gaithersburg would like for MDE to provide permitted jurisdictions the opportunity to update the impervious coverage and treatment acre baselines as new impervious cover, BMP data, or inspection records become available.

- A.1 – Include the trigger date for total impervious acres assessment.
- A.6 – Clarify to say "total impervious acres classified as untreated," as this could include partially treated acres, BMPs that haven't been inspected, BMPs that are missing plan data, etc.
- A.6 – Allow the assessment to be revised during the permit term if new information shows that more areas are considered treated (e.g. as-builts are obtained or inspection and maintenance activities are brought up to date). New information could potentially impact both the baseline number of untreated acres, as well as achievement of the 20% restoration requirement.

b. Develop and Implement an Impervious Area Restoration Work Plan (Work Plan)

Gaithersburg appreciates the opportunity to develop a custom work plan that addresses our unique position within the MS4 permit framework. For all items in the permit requiring MDE review and approval, including the Impervious Area Restoration Work Plan, the permit should clearly delineate a timeframe within which MDE will review and approve or provide comments to the jurisdictions. A clearly defined and finite review and approval timeline is critical to every jurisdiction's ability to maintain compliance with the permit requirements. The following comments are offered in regard to Table 1, the Impervious Area Restoration Work Plan.

- Specify the level of detail required for the Work Plan—will MDE accept a level of detail similar to what is shown in the example table?
- Please confirm that watershed plans that were completed prior to the permit term are acceptable for use during the permit term.

- The baseline assessment described in Part V.A cannot be completed without the BMP database being completed; why then is the BMP database required to be submitted in year 2?
- Clarify what "adaptive management strategies for BMP implementation" means.
- Clarify whether the items included in the draft Work Plan are optional, and which are required under the permit.
- Guidance and increased specificity is needed for those municipalities that will develop a custom work plan.

IV. PART VI – Evaluation and Assessment, Recordkeeping, Reporting, and Program Review

a. Reporting

- C.1 – Rewrite the first sentence to for clarity. For example, "The MS4 Progress Report in Appendix D shall be submitted each year, containing the information described in Parts VI.C.2 and VI.C.3."

b. Program Review

- MDE must not only review the reports, but also accept or reject them so that permitted jurisdictions are definitively in or out of compliance with the permit. It must be clear whether jurisdictions are in compliance with each report that is accepted by MDE.

V. PART VII – Standard Permit Conditions

a. Need to Halt or Reduce Activity Not a Defense

- Clarification is needed so that permittees understand this subsection's applicability.

b. Expiration of an Expired General Permit

- The program proposed by this permit includes a five-year plan, as established in Table 1 under Part V.B. An amended or reissued permit will be necessary at the end of the five year term for the program to be successful. Continuation of the expired general permit will mean that no further restoration will be carried out by permitted jurisdictions.

c. Duty to Mitigate

- Permittees cannot be held in violation of the permit for not minimizing or preventing any discharge of which they have no knowledge.

d. Duty to Provide Information

- Permittees should only be required to furnish to MDE any <u>relevant</u> information to determine compliance with the general permit.

e. Requiring an Individual Permit

- K.1 – MDE must provide more than a brief statement of the reasons for deciding to issue a jurisdiction an individual permit. All reasons for the decision should be provided to the subject jurisdiction.

f. Permit Actions

- N.4 – Define the word premises in this context. Jurisdictions cannot control whether a private entity refuses access to MDE for the purposes of compliance inspection.

g. Reporting Requirements

- Specify whether the written submission must be provided within five business days or calendar days.

VI. Appendix B

a. Section III – Guidance for Impervious Area Restoration Program Development

- A.3 – The requirement to provide plans or design specifications for some facilities may not be possible in some cases. MDE should reconsider the documentation threshold for allowing BMPs to count toward the restoration goal.
- C.4 – Provide additional information about the process for designating new alternative stormwater BMPs.

VII. Appendix D – Municipal Small MS4 Progress Report

a. MCM #2 – Public Involvement and Participation (page D-8)

- 3 – Why are Earth Day events specifically referenced? Why not Arbor Day, Gaithersburg Green Week or other related events?

VIII. Additional General Comments

- The draft permit refers to, in various places, the "MS4 Progress Report" and "Annual Report"—be consistent in the use of these terms to minimize confusion at reporting deadlines.

CITY OF HAGERSTOWN, MARYLAND

Valerie A. Means
City Administrator
One East Franklin Street • Hagerstown, MD 21740
E-mail: vmeans@hagerstownmd.org
Telephone: 301.766.4168 • TDD: 301.797.6617

March 29, 2017

Mr. Raymond Bahr, Division Chief
Maryland Department of the Environment
Water Management Administration
Sediment, Stormwater, and Dam Safety Program
1800 Washington Boulevard, Suite 440
Baltimore, MD 21230-1708

RE: TENTATIVE DETERMINATION TO REISSUE MS4 GENERAL PERMIT TO MUNICIPALITIES

Dear Mr. Bahr:

The City of Hagerstown (the "City") welcomes this opportunity to provide comments on the Tentative Determination to Re-issue the MS4 General Permit to Municipalities (the "Permit"). We have reviewed a draft version of the comments to be submitted by the Maryland Municipal Stormwater Association (MAMSA) regarding the Permit; while the City is not a member of MAMSA, we formally agree with and support all of the concerns and recommendations presented in their comments. In addition, we wish to express the following specific concerns over the practicability of the Permit's terms and goals:

1. **THE 2025 DEADLINE FOR COMPLIANCE IS NOT PRACTICAL**
Based upon preliminary analysis of the impervious surface coverage in the City, approximately 400 to 500 acres of currently "unmanaged" impervious area must be treated. Assuming that the Permit becomes effective on January 1, 2018, the City would have to complete projects that treated an average of 60 acres of impervious surface (an area roughly equivalent to a regional shopping center) each year until the deadline. Given the need to identify suitable sites for facilities, the acquisition of easements or rights-of-way from private property owners, engineering design of the facilities, permitting, bidding/procurement, and construction, it is not feasible for the City to complete this many projects in such a short time frame. **The City will work to comply with the deadline imposed by the Permit, but it is not reasonable to assume that all of the required work will be completed by 2025.**

2. **THE FINANCIAL BURDEN IMPOSED ON THE CITY BY THE PERMIT IS NOT MANAGEABLE**

The "Maximum Extent Practicable" standard in the Permit must not only apply to the level of environmental restoration and pollutant reduction attained by these efforts; it must also consider what is feasible and "practical" for a permittee to accomplish. The City, like many older municipalities throughout Maryland, is struggling to maintain its tax base and preserve the essential services that it provides to its residents. Based upon the 2017 Constant Yield notice, City property values have decreased by 3% forcing us to consider property tax increases, decreasing needed Capital Improvement expenditures, using General Fund reserves, and cutting services. The additional cost to fund the projects required for Permit compliance will exacerbate the budget situation, forcing increasingly difficult and painful decisions that will decrease the quality of life in the City.

The City has used State and Federal grant funds to accomplish previous stormwater management retrofit projects. However, with the expansion of the General Permit to cover many new municipalities throughout Maryland, the available grant funds will be divided amongst a much larger pool of applicants, decreasing the amount that can be awarded to the City. President Trump's proposed plan to cut the Environmental Protection Agency's (EPA) Chesapeake Bay Program annual budget from $73 million to $5 million will significantly decrease available funding assistance, as approximately 75% of that reduction is projected to come from funds that EPA disperses to the Bay states. In short, it appears that the amount of outside financial assistance that the City can hope for to comply with the Permit will be severely limited.

Two stormwater retrofit facilities, treating approximately 21 acres of impervious surfaces, were constructed by the City in 2016. These facilities were constructed on City-owned land, so no easement or right-of-way acquisition was required. The final construction cost of this project was $580,000, or $27,600 per acre. Using this average rate (which is undoubtedly low due to the favorable site conditions at these two locations), the cost to construct additional facilities to treat the 400 – 500 acres of impervious area required by the Permit would be in excess of $12 million; the City expects the actual costs to exceed $20 million. This cost far exceeds the funds available in the City's Capital Improvement Budget for stormwater projects.

The City will likely be forced to consider the implementation of a Stormwater Utility Fee to raise revenue to complete the required retrofit projects. While this may help to pay part of the program costs, it will place a further financial burden on City residents, and will put the City at a competitive economic disadvantage with municipalities that are less than ten miles away in neighboring Pennsylvania and West Virginia. As the City becomes a less desirable place to live due to tax/fee increases and service reductions, property values (the basis of the majority of the City's revenues) will continue to decline. This cycle will further weaken the City's ability to meet the Permit requirements.

If compliance with the Permit is MDE's primary goal, then additional State/Federal funds must be allocated to municipalities in order to accomplish the required pollutant reductions.

3. <u>DEVELOPMENT DENSITY AND GEOLOGIC CONDITIONS LIMIT RETROFIT OPPORTUNITIES</u>

The downtown core area (approximately 2,500 acres of land area) was densely developed by the early 1900's, and although an extensive storm drainage collection/conveyance system was constructed, no provisions for treatment or pollutant reduction were included in its design. As a result, there are a very limited number of locations where there is enough available land area to construct new retrofit facilities. Also, because the storm drainage system collects runoff from large sub-watersheds and concentrates discharges at a limited number of major outfalls, it is difficult to provide water quality treatment without having facilities becoming overwhelmed by the volume of stormwater in the system.

The City and portions of Washington County are underlain with limestone geology (i.e. Karst topography). Stormwater management facilities that detain runoff, or that attempt to recharge the underlying aquifers, often create sinkholes that provide direct connections between pollutant-laden surface runoff and the groundwater below; sinkholes can also be hazards to property, residents, pets, etc. This condition limits the number of stormwater BMPs that can be employed, and increases the costs of these practices due to the need for impervious liners that prevent sinkhole formation.

The City requests that MDE consider these constraints, and grant the City flexibility in the implementation of projects to meet the Permit requirements.

In conclusion, the City recognizes the importance of the effort to reduce nutrient and pollutant loads in our waterways, and supports programs and initiatives that will help to restore the health of the Chesapeake Bay. However, given the reasons listed above, the City does not believe that full compliance with the terms of the Permit and the 2025 pollutant reduction goals is at all realistic. The City will work toward these goals, but can only do so at a rate that is financially sustainable.

Sincerely,

CITY OF HAGERSTOWN

Valerie A. Means

Valerie A. Means
City Administrator

c: Hagerstown Mayor & Council
Rodney Tissue, City Engineer
Jim Bender, Assistant City Engineer

Joint Comments on
Proposed Reissuance of General Permit for Discharges from Small MS4s
March 30, 2017

I. INTRODUCTION

The Maryland Association of Counties (MACo), the Maryland Municipal League (MML), and the Maryland Municipal Stormwater Association (MAMSA) (together, the Associations) provide the following joint comments on the Maryland Department of the Environment's (MDE's or Department's) Tentative Determination to reissue the National Pollutant Discharge Elimination System (NPDES) General Permit (GP) for discharges from Small Municipal Separate Storm Sewer Systems (MS4s).

MACo is a non-profit and non-partisan organization that serves Maryland's counties by articulating the needs of local government to the Maryland General Assembly. The Association's membership consists of county elected officials and representatives from Maryland's 23 counties and Baltimore City. Currently, 10 of MACo's county members are subject to a Phase I MS4 permit and 2 are subject to a Phase II MS4 permit. Five additional counties may be subject to the proposed Phase II MS4 permit, making 17 of MACo's 24 members an MS4 jurisdiction. Like MAMSA, MACo has a strong interest in the reissuance of the Phase II permit.

MML is a voluntary, non-profit, nonpartisan association controlled and maintained by city and town governments. MML represents all 157 municipal governments and 2 special taxing districts. Of the 28 municipalities that may be subject to the proposed Phase II MS4 permit, 20 municipalities are currently operating under an existing Phase II permit and 8 municipalities will be operating under the proposed Phase II permit for the first time. MML has significant concerns relative to the impact of new stormwater requirements on many of these small, rural jurisdictions and supports the concerns articulated in these comments submitted by MAMSA.

MAMSA is an association of proactive local governments and leading stormwater consulting firms that work for clean water and safe infrastructure in Maryland based on sound science and good public policy.[1] MAMSA supports clean water, safe and vibrant communities, and a strong State economy by seeking to align clean water goals, smart stormwater management practices, and affordable programs, practices and infrastructure. Many of MAMSA's Members either have coverage under the current Small MS4 GP or have been identified by MDE as new permittees in the Draft GP. Therefore, MAMSA has a strong interest in the reissuance of this important permit.

The Associations appreciate the opportunity to share our concerns with MDE. We have carefully reviewed the Draft GP and accompanying Fact Sheet. As explained in greater detail below, it is imperative that MDE

[1] MAMSA Members include: Aberdeen, Berlin, Bel Air, Carroll County, Cecil County, Charles County, Frederick County, Harford County, Havre de Grace, Howard, La Plata, North East, Perryville, Queen Anne's County, Salisbury, St. Mary's County, Washington County, and Wicomico County. In addition to these Members, several other Phase II GP permittees (or potential permittees identified by MDE) have expressed general agreement and support with MAMSA's comments, including: the City of Frederick, Hagerstown, and Calvert County.

makes a number of critical changes to these documents before MDE issues the GP in final form. We are concerned that permittees will not be able to reasonably comply with the GP as it is currently written. Furthermore, a number of conditions do not provide clear direction as to what the permit requires. Unless changes are made, MDE will be setting these counties, cities, and towns up for failure. The Associations hope MDE shares the goal of full permit compliance by these smaller MS4 owners and operators.

Our comments follow. Many are related to legal points that are currently under review by various circuit courts across the State. MDE may wish to consider delaying the issuance of the GP until the Department and stakeholders receive some clarity from these courts on specific issues (for example, whether MDE can require that an MS4 permittee address third-party discharges through restoration requirements).

Delay would also allow the Department and interested stakeholders to review the expectations for the permit term before it is imposed on permittees (especially small and/or newly designated MS4s). Respectfully, although permittees value their good relationship with MDE, especially in their roles as co-regulators of the E&S and stormwater management programs, this cannot be a "trust me" permit. Because permittees bear the risk of an EPA audit or a citizen suit, the Associations urge MDE to make sure that all GP terms are clear and achievable before issuing the permit. We recommend that MDE hold two to three additional meetings to allow interested participants to step through the Draft GP in detail, to ask questions, and to recommend potential changes. An additional public comment period would be necessary for any substantive changes, although this will likely be needed even without additional meetings.

If MDE chooses not to delay reissuance of the GP, the Associations request that MDE carefully review and adopt the changes we propose in the attached red-lined version of the Draft GP (incorporated by reference to these comments as Attachment A). Edits should also be made to the Fact Sheet for consistency sake.

II. COMMENTS

A. Many of the Small MS4s Identified in the Draft GP Are Not Properly Designated

The Draft GP purports to designate a number of new small MS4s, as well as existing MS4s, based on criteria that do not comply with the requirements for such designations. MDE should review the list of designated small MS4s and remove those that do not meet the necessary requirements for designation.

1. The Designation Criteria in the Draft GP Are Improperly Stated and Applied, Resulting in Several Small MS4 Operators Being Incorrectly Identified as Permittees

Table A.1 includes a list of jurisdictions that MDE has designated for regulation under the GP, along with a justification for each designation. (Draft GP, p. A-4). Each permittee is designated for one of three reasons: (1) it is a small municipality "with a population greater than 1,000 that is located within a regulated Phase I jurisdiction;" (2) it is a small MS4 "located within the boundaries of an 'urbanized area' based on the latest decennial census;" or (3) it is a jurisdiction "with a population of at least 10,000 and a population density of at least 1,000 people per square mile…"

MDE's designation criteria are not wholly consistent with federal law. EPA's Phase II MS4 regulations provide for two circumstances under which the owner or operator of a small MS4 must obtain an NPDES permit for its stormwater discharges. The first applies to any "small MS4 . . . located in an urbanized area as determined by the latest Decennial Census by the Bureau of the Census." Thus, MDE's second designation criterion (i.e., small MS4s located within an urbanized area) is correct to the extent it is applied only to parts of a small MS4 within an urbanized area, as is explained further below.

The second circumstance under which a small MS4 owner or operator must obtain a permit is when the NPDES permitting authority—that is, MDE—has properly designated the small MS4 for permit coverage. The steps required to designate additional small MS4s are set forth in 40 C.F.R. § 123.35(b). First, the NPDES permitting authority must "[d]evelop criteria to evaluate whether a storm water discharge results in or has the potential to result in exceedances of water quality standards..." *Id*. § 123.35(b)(1). Second, those criteria are then applied to small MS4s outside urbanized areas that meet certain population and density requirements. *Id*. § 123.35(b)(2). Alternatively, the NPDES permitting authority may designate a "small MS4 that contributes substantially to the pollutant loadings of a *physically interconnected* municipal separate storm sewer that is regulated by the NPDES storm water program." *Id*. § 123.35(b)(4) (emphasis added).

MDE's first and third designation criteria do not comply with the procedural or substantive requirements provided in the federal regulations for the designation of additional small MS4s. MDE's first criterion purports to designate any municipality with population greater than 1,000 within a larger "Phase I jurisdiction." The second is a simple population trigger for localities with populations greater than 10,000 and 1,000 people per square mile. With both of these designation standards, MDE has failed to state *any* "criteria to evaluate whether a storm water discharge results in or has the potential to result in exceedances of water quality standards." *Id*. § 123.35(b)(1). This is a legal prerequisite to identifying a particular locality as a regulated small MS4. It follows that MDE failed to actually apply those (non-existent) water quality-based criteria to any of the purportedly designated permittees in an individualized fashion to determine if designation was necessary to address exceedances of water quality standards in those jurisdictions. The fundamental error in MDE's approach to designation is the agency's apparent assumption that population alone can be a trigger for the designation of small MS4 permittees. It cannot. The federal regulations clearly state that the water quality-based criteria developed by the permitting authority should be *applied to localities with larger populations*, not that the population, without more, is sufficient for designation. *Id*. § 123.35(b).

Similarly, the Associations are also unaware that MDE has made any determination that a particular small MS4 is physically interconnected to larger Phase I jurisdiction systems or that the MS4 "substantially contributes" to Phase I pollutant loadings. The inclusion of certain extremely small communities (for example, the Town of Emmitsburg, with a population of 3,504) suggests that this step was not taken. If MDE has done so, we believe it was done without any input from the regulated community, making it impossible for named municipalities or counties to determine whether their designation is appropriate.

In sum, MDE's designation based on the location of a municipality within a Phase I jurisdiction is not based on federal law. Neither is MDE's designation based purely on population and population density.

2. Only the Portion of a Small MS4 Located *within* an Urbanized Area Is Automatically Designated

As noted above, MDE's designation of small MS4s located *within* an urbanized area (UA) is legally acceptable. However, if the jurisdiction owns and operates a small MS4 that is both within and without the UA, then only the portion of the MS4 within the UA is regulated. This is unambiguously stated in the regulations: "If your small MS4 is not located entirely within an urbanized area, *only the portion that is within the urbanized area is regulated*." 40 C.F.R. § 122.32(a)(1).

The Draft GP appears to designate an entire jurisdiction if only a part of the jurisdiction is within an UA. This is manifestly improper. MDE should clarify in the final GP and Fact Sheet that, for any small MS4 owned or operated by a jurisdiction identified on Table A.1 as "within an urbanized area," the permit's requirements apply only to portions of the MS4 within the UA.

For these reasons, the Associations object to the designation of any jurisdiction on Table A.1 unless that jurisdiction owns or operates an MS4 within a UA. And among the potential designees based on the UA criterion, if a particular jurisdiction provides information that its MS4 is located outside of the UA, it should not be required to obtain permit coverage, and should be dropped from Table A.1 (unless the locality voluntarily elects to accept the designation).

B. The Impervious Area Restoration Requirement Must Be Right-Sized for Small MS4s

The impervious area restoration will be the single most burdensome requirement of the permit. It is incumbent on MDE to ensure that this requirement is reasonable and practicable.

1. The Baseline for Restoration Should Be Calculated Using Only Untreated Impervious Area in the Urbanized Area Served by the MS4

Under the terms of the Draft GP, a permittee is required to develop a baseline impervious area assessment (baseline) that will be used to calculate the 20% restoration requirement. (Draft GP, Part V.A, p. 11). The Draft GP directs permittees to Appendix B, Section III which explains how baseline should be calculated using five steps. (Draft GP, p. B-10 – B-12). Notably, Step 2 (Section III.A.2) states that the permittee shall evaluate the "total impervious surface within a jurisdiction's regulated permit area" to determine baseline. Step 5 (Section III.A.5) states that the permittee should subtract total impervious area that is "draining to water quality BMPs and nonstructural practices)…from the total impervious land area owned or operated by the jurisdiction as of 2002 (step 2 above)." The delta calculated by Step 5 is the baseline for calculating the 20% restoration requirement.

A careful reading of this discussion suggests that a permittee should calculate the untreated impervious area within the regulated permit area, which is limited by federal law to the areas served by the permittee's MS4 within the UA (see discussion above). Baseline should not include any impervious area for any property unless it is served by the permittee's MS4 (see discussion below regarding legal limitations on imposing responsibility for third-party and non-point source discharges using an MS4 permit).

The Associations ask that MDE clarify throughout the GP and confirm in the Fact Sheet that this careful reading is correct. Attachment A includes recommended textual changes.

MDE must clarify this point because of the significant cost associated with the 20% restoration requirement. In addition, clarification is needed because other parts of the Draft GP incorrectly reference the permittee's entire jurisdiction (versus strictly applying to properties or areas served by the MS4 within the UA). For example, Minimum Control Measure (MCM) 6 states that a permittee will satisfy the GP by developing, implementing, and maintaining procedures for good housekeeping "throughout the jurisdiction's properties." (Draft GP, p. 9). Using the phrase "throughout the jurisdiction's properties" creates confusion—not only does it reference the jurisdiction instead of the MS4, but it suggests that the permittee needs to comply with good housekeeping from border to border without consideration of the regulated permit area.

If the Associations have misinterpreted the Draft GP, and MDE does intend to impose a "jurisdiction-wide" permit on permittees, as it did (improperly) with Phase I MS4 permittees, we object. As explained above, federal law could not be clearer on this point: only portions of the small MS4 located within the UA are regulated by the NPDES stormwater program.

A "jurisdiction-wide" permit would also be at odds with the approach taken for small MS4s by every other Bay jurisdiction. USGS has developed a tool for reviewing the mapping of local land uses and permit types across the Bay Watershed.[2] A viewer can create an overlay of MS4 areas across the Bay. When this is done, it becomes clear that Maryland's MS4 overlay, which covers nearly the entire State, is very different than the MS4 overlay in Virginia, Pennsylvania, etc. Maryland's MS4 overlay covers almost the entire State, lending credence to the idea that Maryland has inappropriately identified entire jurisdictions as MS4s—rather than identifying MS4s. The map (as it was available on March 29, 2017) is provided as Attachment B.[3]

MDE cannot turn to state law as a basis for expanding its regulatory authority. EPA authorized Maryland to issue NPDES discharge permits as required by 33 U.S.C. §1342(b). The General Assembly instructed MDE in plain terms to implement the federal requirements. *See* Md. Code Envir. § 9-253 (granting only those "powers that are necessary to comply with and represent this State under the [Clean Water Act]"; COMAR 26.08.04.01.A (empowering MDE to "issue State discharge permits or NPDES permits (i.e., MS4 permits]…to satisfy the regulatory requirements of the [Clean Water Act]"). There is no state law authority to go beyond the federal requirements.

[2] Available at: https://chesapeake.usgs.gov/phase6/map/#map=7/-8717186.82/4719944.76/0.0/0,4,8.

[3] For comparison sake, we are also attaching an MDP map showing UA across the State with Attachment B. Taken together, it is clear that MDE, unlike other Bay jurisdictions, has unreasonably and unlawfully expanded its jurisdiction well beyond established urbanized areas.

2. Permittees Should Be Given the Flexibility to Conduct Restoration Anywhere in Their Geographic Area

MDE has suggested that if a permittee wishes to limit its baseline to areas in the UA, the permittee must conduct restoration within the UA. MDE may or may not allow the permittee to construct BMPs or develop programs in other unregulated parts of the jurisdiction.[4]

The Associations disagrees with hamstringing small MS4 GP permittees in this way. Permittees should be allowed to site restoration projects anywhere within a broad geographic area based on individual criteria such as cost-effectiveness, availability of land, willingness of private property owners to assist in projects, etc. Limiting projects to the UA will drive up costs (because it is almost always more expensive to install BMPs in an urbanized area as compared to a rural area) and will increase the risk that a permittee will be unable to identify sufficient available acreage to comply with the restoration requirement.

MDE's position appears to be based on its view that projects must occur in the UA to address local water quality issues. We have four responses to this idea.

First, there is no evidence that local water quality issues and impairments uniformly occur inside the UA, or that performing restoration outside of the UA necessarily fails to address local water quality within the UA. Each MS4 is different in this regard, and projects in a non-UA area may actually improve water quality downstream in the UA.

Second, MDE itself has determined that imposing the 20% restoration requirement from the Bay WIP is adequate to address local TMDLs. (Draft Fact Sheet, p. 9). The Bay TMDL and Phase I and II WIPs were based on a much broader geographic scale than local TMDLs. MDE is contradicting itself by suggesting that it is acceptable to address local TMDLs using a Bay surrogate, but refusing to allow permittees to work at the more expansive Bay scale.

Third, along the same line, MDE advocated a more flexible approach in the State's Trading Policy, which envisions cross-sector trading within three geographic areas, including the Potomac River Basin, the Patuxent River Basin, and the remaining Western Shore, Eastern Shore, and Susquehanna River Basin. *Water Quality Nutrient Trading Policy Statement* (Issued Oct. 2015).[5] Although local water quality is a factor to be considered as a part of trading, trading will still be allowed across a very broad geographic scope. MDE's narrow vision of how restoration should occur is inconsistent with its more reasonable approach to trading.

Fourth, as explained above, MDE has no legal authority to require permittees to perform restoration outside of the areas served by the permittees MS4 in the UA. MDE's attempt to press permittees into

[4] MDE has suggested that it may be willing to negotiate more flexibility after a permittee has submitted its Restoration Work Plan and Activity Schedule. Respectfully, permittees need to know now whether or not it is acceptable to install BMPs outside of the UA for full credit so that each permittee can decide whether to apply for GP coverage or request individual permit coverage. This information also will be relevant to the permittee for the purposes of estimating its costs and determining its "maximum extent practicable" level of effort for the Notice of Intent.

[5] *See also* the State's *Draft Trading and Offset Policy and Guidance Manual* (Sept. 2016) at p. 14 (establishing three trading regions).

accepting a "jurisdiction-wide" approach to baseline by limiting restoration options if they insist on a legally-correct approach is unfair and unreasonable.

In sum, MDE's proposed restriction on the area in which restoration may occur is an unnecessarily blunt instrument to achieve the stated goal. If the objective is to meet Bay restoration goals, then restoration efforts should be permitted anywhere within the same river basin consistent with the Trading Policy. However, if there is in fact a relevant impairment in a stream receiving discharges from the MS4, MDE could appropriately limit restoration activities *in those cases* on an appropriate watershed scale (e.g., the same or adjacent 8-digit HUC within the same watershed) to address the local impairment. In any case, limiting the geographic area in which restoration may occur to the UA is arbitrary and lacks any articulable scientific basis.

3. The GP Cannot Regulate Nonpoint Sources and Third-Party Stormwater Discharges

As explained above, the GP should focus on areas served by an MS4 inside the UA. A permittee is not responsible for nonpoint sources (properties with sheet flow from the parcel into streams, creeks, etc.) and third-party direct dischargers (properties with their own discharge points into streams, creeks, etc.) that do not enter into and are not discharged from the permittee's MS4.

Nonpoint sources are not subject to regulation under a Clean Water Act NPDES permit. The Clean Water Act only regulates stormwater that is discharged from a point source. *See* 55 Fed. Reg. at 47996 (stating that the MS4 permit requirement "only covers storm water discharges from point sources); *see also Decker v. Nw. Envtl. Def. Ctr.*, 133 S. Ct. 1326, 1331 (2013).

Rainwater that sheet flows off a parking lot or a field into a waterbody are examples of *nonpoint* sources that would not be within the jurisdiction of the Clean Water Act and the NPDES permitting program. *See Cordiano v. Metacon Gun Club, Inc.,* 575 F.3d 199, 221 (2d Cir. 2009) ("[S]urface water runoff which is neither collected nor channeled constitutes nonpoint source pollution and consequentially is not subject to the [Clean Water Act] permit requirement."); *see also Envtl. Def. Ctr., Inc. v. EPA*, 344 F.3d 832, 841 n. 8 (9th Cir. 2003). Furthermore, sheet flow off of impervious surfaces that does not flow to a surface water does not even meet the definition of nonpoint source; it is not a "source" at all. Nonpoint sources and surfaces that do not generate any flow to surface waters may not lawfully be included in the GP as the basis for a control requirement.

Permittees are also not responsible for third-party discharges. Many commercial and residential properties do not drain into a local MS4; they drain instead through privately owned ditches, swales, or pipes that lead to state waters. By state law, the entity who is "engaging…in activities requiring a discharge permit" must complete a permit application. *See* COMAR 26.08.04.01-1.A(1). In addition, under federal law, an MS4 owner or operator is only responsible for stormwater conveyances that are "owned or operated" by the locality. 40 C.F.R. § 122.26(b)(8) (emphasis added). MDE has no authority to impose responsibility for third-party discharges simply because they happen to occur within a permittee's political boundaries or even within the UA.

As additional evidence that private discharges are not covered by an MS4 permit, EPA Region III recently explained in an enforcement document that an MS4 operator covered by the current GP had incorrectly drawn its MS4 maps—it had not distinguished between public and private outfalls. EPA clarified that

private outfalls are not within the purview of the MS4 permit: "In addition, at the time of the 2015 MS4 inspection, EPA found that [the permittee's] map of all MS4 outfalls did not distinguish between [municipal] outfalls (which represented those outfalls included within the MS4) and privately owned outfalls, which would not be included as part of the [municipal's] MS4." EPA has acknowledged that third-party outfalls are not regulated under the MS4 GP. MDE should follow EPA's lead and make all necessary corrections to the Draft GP and Fact Sheet to reflect the fact that the GP does not cover direct discharges by third-parties.

Accordingly, MDE should clarify that permittees should remove untreated impervious acreage that does not drain to the MS4 owned or operated by the permittee, including acres that have sheet-flow to nearby waterbodies and acres that drain to privately owned or operated outfalls, from the baseline calculation.

C. The Draft GP's Requirements Will Require a Level that Exceeds the "Maximum Extent Practicable" for Many Permittees

1. MEP Is Legal Compliance Standard for MS4s

In 1987, Congress recognized the challenges of regulating municipal stormwater, and amended the Clean Water Act to add a unique legal compliance standard for MS4s:

> Permits for discharges from municipal storm sewers…shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

33 U.S.C. § 1342(p)(3)(B)(iii) (emphasis added).

The Maryland Court of Appeals reiterated this history in 2016 in support of the maximum extent practicable ("MEP") standard. *Md. Dept. of the Envt. v. Riverkeeper*, 447 Md. 88, 134 A.3d 892 (Md. 2016).

The MEP standard is important because it sets the level of effort for MS4s: a permittee must reduce discharges to the MEP. Permit terms that require that an MS4 do more than the maximum extent practicable are unlawful. Permit terms that likely violate the MEP standard for many (if not all) potential small MS4 permittees are identified below.

2. GP Requirements Are Not Practicable; Exceed An MEP Level-of-Effort

The Associations have identified several requirements that will exceed an MEP level of effort for many potential permittees. In addition to our comments, we ask that MDE carefully consider individual permittee comments on this point. Each permittee is in the best position to provide information on practicability, based on local factors (funding, operational staff, current programmatic strengths and weaknesses).

First, and foremost, the Associations state that the 20% restoration requirement is not achievable for many small MS4s permittees. We do not believe that many Phase II GP permittees are in the position to

develop and implement enough BMPs and other projects to comply with the restoration requirement, even if it is appropriately limited to a baseline established using MS4 service area within the UA, by the 2025 deadline.

Stormwater restoration projects are very expensive. One need only review the Financial Assurance Plans submitted by the Phase I communities, all of whom are larger and generally better funded than Phase II communities, to conclude that many small MS4 permittees will simply be unable to comply with the restoration term.

MDE's 2016 *Annual Report on Financial Assurance Plans and the Watershed Protection and Restoration Program* illustrates how much Phase I MS4 permittees have struggled with their individual permits. The Associations hold these programs in the highest regard. We know from our own Phase I MS4 Members that these communities are committed to Bay clean-up efforts. Nevertheless, we believe the Annual Report is proof that the WIP programs are proving very difficult to implement:

Specific Actions Completed Through FY2016 to Meet ISRP Permit Requirements

MS4	Acres Required to be Restored (Impervious Acre Baseline)	Impervious Acre Baseline Accepted by MDE (Y/P/N)[1]	Acres Restored	Cost[2]	Average Cost per Acre	Restoration Complete[3]
Anne Arundel County	5,862	Y	649	$6,596,505	**$10,159**	11.1%
Baltimore City	4,291	Y	2,372	10,561,649	**4,454**	55.3%
Baltimore County	6,036	Y	1,203	11,388,763	**9,467**	19.9%
Carroll County	1,344	P	1,123	12,576,575	**11,199**	83.6%
Charles County	1,410	P	223	6,592,038	**29,508**	15.8%
Frederick County	1,013	P	161	10,192,516	**63,491**	15.8%
Harford County	1,883	P	487	5,793,000	**11,887**	25.9%
Howard County	2,044	P	157	12,838,020	**81,771**	7.7%
Montgomery County	3,777	Y	1,780	75,031,122	**42,152**	47.1%
Prince George's County	6,105	Y	139	3,563,000	**25,633**	2.3%
Totals:	33,765		8,294	155,133,187	$18,704	26.4%

Just to choose an MS4 as an example, Anne Arundel County, with a population of over a half a million people, completed 11.1% of its restoration requirements through FY2016. If the County had 5,213 acres remaining to be treated at an average cost of $10,159 (which is likely low based on the reality that most MS4s choose the most cost-effective projects first, leaving more expensive BMPs until later), the total estimated cost would be an additional **$52 million**.

If larger, more well-funded counties cannot accomplish this task on the established schedule, we question why MDE would choose to impose the same approach on small cities, towns, and counties, while also denying permittees the ability to use trading as a compliance option (discussion below).

Financial impossibilities aside, we cannot imagine how a small MS4 permittee would actually construct enough BMPs over the 8-year period to meet the restoration term (especially if the acreage is not limited to the UA). It takes time to plan and design BMPs, to seek funding, to construct facilities, and to report on that work to MDE.[6]

The Associations are also concerned that if all of the State's Phase II MS4s are required to implement BMPs at the same time (by 2025), qualified contractors will be in demand, allowing them to charge a premium for their services, even further escalating implementation costs.

In addition to the restoration term, other parts of the Draft GP are well beyond MEP. For example, requiring permittees to map "all pipes, outfalls, inlets, stormwater management best practices (BMPs), illicit discharge screening locations, and surface waters" (Draft GP, p. 6) is more than is required by federal law and is impracticable for many permittees. In addition, some of the requested features are inappropriate (see Attachment A redline for specifics).

Another term that is beyond MEP is the requirement to develop, implement, and maintain a pollution prevention plan at "publicly owned or operated properties." (Draft GP, p. 10) Many Small MS4 GP permittees own dozens if not hundreds of properties. Requiring a pollution prevention plan for every property (even if properly limited to properties in the UA that discharge to the MS4) will eat up hundreds of hours of staff and/or consultant time, and serve little purpose—not all properties discharge into the MS4, and even those that do vary in the types of pollutants that may be present in their stormwater. The Associations understand that MDE may intend that this language will only apply to certain types of facilities (for example, properties covered by 12-SW as industrial facilities). However, MDE's intent is not clear on the face of the permit. We request that MDE consider alternative language, as proposed in Attachment A.

Lastly, the requirement to screen 20% of total outfalls each year, up to 100 outfalls per year is beyond MEP for many. (Draft GP, p. 6, B-5). Not only is this not required by federal law, but for some MS4s the number will be equal to the requirement for medium Phase I communities. MDE should scale back significantly on this requirement, and allow a permittee to prioritize a limited number of outfalls for inspection.

D. Comments on Specific Permit Conditions that Should Be Revised or Clarified

The Draft GP includes a number of permit conditions that are incorrect, unreasonable, or unclear. These conditions are addressed, with suggested revisions, in the attached redline of the Draft GP (Attachment A). Below, the Associations provide additional explanation of the suggested revisions for several of these problematic conditions.

[6] As an aside, we would prefer to see a clean 5-year permit that limits obligations to the permit term. For this permit term, it might be appropriate, for example, to allow permittees to build up their programs and begin planning restoration projects. Establishing a reasonable level of restoration for the next permit cycle should occur several years down the road when we have a better perspective in the State on the planning process.

1. MCM-4 and MCM-5 Are Overly Broad

The Draft GP states that compliance with state erosion and sediment control and stormwater management laws constitute compliance MCM-4 (Construction Site Stormwater Runoff Control) and MCM-5 (Post Construction Stormwater Management) (Draft GP, p. 7–8).

We have two concerns with these MCMs. First, the Draft GP duplicates and sometimes changes the requirements of State law, creating inconsistent sets of requirements. For example, MCM-4 mandates that a permittee "Develop a process for receiving, investigating, and resolving complaints from any interested party related to construction sites within the jurisdiction. Notify the complainant of the investigation and findings within seven days;" (Draft GP, p. 7). In contrast, the regulations require that an enforcement authority "accept and investigate complaints regarding erosion and sediment control concerns from any interested party and: (a) Conduct an initial investigation within 3 working days of receipt of the complaint; (b) Notify the complainant of the initial investigation and findings within 7 days of receipt of the complaint; and (c) Take appropriate action when violations are discovered during the course of the complaint investigation." COMAR 26.17.01.09(F). The Draft GP mandates "resolving" complaints; this is not required by State regulations (only required to take "appropriate action" if violations are discovered).

Second, the Draft GP does not carefully delineate responsibilities for permittees with different responsibilities for E&S control programs. Some GP permittees are neither approval nor enforcement authorities; some are approval authorities only and some are both. As a specific example, if a permittee is not reviewing and approving plans or performing inspections and enforcement, it is unclear when or how the permittee would "[e]nsure all necessary permits have been obtained." (Draft GP, p. 7).

The Associations recommend that MDE revise the GP to simply require that a permittee document its compliance with state erosion and sediment control and stormwater management laws to comply with MCM-4 and -5. This would address both of the above concerns, and would make the GP much more streamlined and readable. Moreover, because that appears to be the intent of these permit conditions, streamlining the permit in this fashion would in no way diminish the implementation of these MCMs.

2. MDE Should Finalize a Functional Trading Program Before the GP is Issued

The Draft GP "may" allow trading as a compliance option to address TMDL requirements "once a program has been established, regulations are adopted, public participation requirements are satisfied, and its use is approved by EPA." (Draft GP, p. 11)

MDE's decision to impose a 20% restoration requirement, while at the same time denying permittees the ability to use a cost-effect compliance option to meet that requirement, is unreasonable. MDE should finalize a trading program that allows MS4s to participate <u>before</u> it issues the GP. MDE has been working with an advisory committee since last year with a goal of issuing a manual this spring. Respectfully, MDE could finalize a trading manual before issuing the GP in final (and include appropriate language in the GP allowing permittees to use the trading program for compliance purposes).

MDE has publicly come out in support of trading: "Nutrient trading offers an attractive alternative to more traditional approaches for reducing water quality problems and can often achieve results faster and at a

lower cost." *Maryland Water Quality Nutrient Trading Policy Statement* (issued Oct. 2015). In addition, in 2012, the Chesapeake Bay Commission released a study estimating potential savings in Bay TMDL compliance costs of 82% if urban stormwater was allowed to participate in watershed-wide trading. *Nutrient Credit Trading for the Chesapeake Bay An Economic Study* (May 2012). In short, trading has widespread support and would be beneficial in making Bay goals more attainable.

If MDE will not revise the Draft GP, it should, at a minimum clarify that trading is expressly authorized *automatically upon the approval of a trading program*. Until such time as a program is finalized, trades should be allowed on a case-by-case basis subject to MDE review.

3. Permittees Should Not Be Legally At-Risk for Third-Party Action

The Associations agree with the goal of reducing acts or behaviors of third parties that negatively impact water quality. However, just as MDE works to improve water quality but cannot ensure standards are always met by third parties, or as a police department works to stop crime but cannot ensure that crimes are not committed, permittees can work to improve third party behavior but cannot guarantee or control the actions of those parties.

The Draft GP contains several provisions requiring permittees to "eliminate" and "ensure" actions or conditions beyond its reasonable control. MDE should make appropriate revisions that reflect the permittee's role as MDE's co-regulator with regard to the acts of third parties as reflected in the MEP Analysis and MEP Permit. We hope MDE appreciates the serious level of concern over provisions that might be read by third parties or by a court as making a permittee responsible for the acts or omissions of third parties.

Specific sections are identified in Attachment A. Here are a few examples of problematic text:

1. MCM-3: Mandates that the permittee will satisfy MCM-3 by "eliminating any illegal connection or illicit discharge to the storm drain system…" (Draft GP, p. 5) The IDDE requirement can and should include reasonable measures for the permittee to monitor, identify, and take action to eliminate known illicit discharges, but the permit should not make the permittee legally responsible for the criminal actions of third parties. Similarly, a permittee can write ordinances that give it various options for accessing private property to investigate IDDE. (Draft GP, p. 6) However, the options are limited by law and, more importantly, actual access may be limited for legal, practical, or even safety related issues. The expectation should not be that the permittee will be able to gain access on every occasion.

2. MCM-4: Permittee must "Ensure compliance with requirements" under 2011 E&S Standards and Specs; "Ensure all necessary permits have been obtained…;" (Draft GP, p. 7-8). A permittee that is delegated authority for E&S should be required to order that entities engaging in land disturbance comply with state law. However, a permittee should not be expected to "ensure" that certain behavior occur.

4. MDE Has Incorrectly Defined "Outfall" in a Manner Inconsistent with Federal Law

MDE has incorrectly defined "outfall" in the Draft GP. According to the Draft GP, although an outfall is "[t]ypically" at the end of a pipe where stormwater discharges to a stream, an outfall "is not limited to stream bank discharge points." Outfalls can also occur "on a property above the receiving stream channel." An outfall "can also be the discharge point of a stormwater management facility," although, in this case, "the inflow to the stormwater management facility should also be mapped." (Draft GP, p. B-4)

MDE's definition is inconsistent with the federal definition of an outfall, which is: "the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States." 40 CFR §122.26(b)(9).

We understand that MDE intended to provide a fuller explanation of what it views as outfall points, and did not intend to increase the number of outfalls that a permittee would need to inspect under the dry-weather screening program in MCM-3. While we appreciate the intention to clarify the definition, we request that the permit itself be written in a manner consistent with federal law.

5. Certification Statement for NOI is Legally Incorrect

EPA's NPDES regulations (40 C.F.R. § 122.22) require that permit applications and reports include the following certification statement:

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Several sections of the Draft GP are inconsistent with the federal language. Specifically, we request that MDE revise the certification at Signature of Responsible Personnel (p. C-2) and Progress Report (p. D-2) so that they reflect the appropriate text.

6. The Draft GP Includes Unreasonably Broad Incorporation by Reference

The Draft GP states that "permittee 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, Annotated Code of Maryland." (Draft GP, p. 16)

This requirement is overbroad and may lead to confusion as to what is required of permittee. All permit conditions should be expressly stated in the GP so that each permittee understands what is expected of their program and so that each permittee has a yardstick for measuring permit compliance.

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ATTACHMENT A

MARYLAND DEPARTMENT OF THE ENVIRONMENT

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

GENERAL PERMIT FOR DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS

GENERAL DISCHARGE PERMIT NO. 13-IM-5500
GENERAL NPDES NO. MDR055500

Effective Date: **TBD**
Expiration Date: **TBD**

PART I. COVERAGE UNDER THIS GENERAL PERMIT

A. Permit Area

This National Pollutant Discharge Elimination System (NPDES) general permit covers small municipal separate storm sewer systems (MS4s) in certain portions of the State of Maryland as defined under Title 40 of the Code of Federal Regulations (CFR) 122.26(b)(16) and 122.32(a)(1).

B. Designation

~~Municipalities~~Discharges designated for coverage by this general permit include those located within the geographical area of:

1. Municipalities defined as "large" or "medium" MS4s under 40 CFR 122.26(b) that are permitted currently under an individual NPDES municipal stormwater permit;

2. Urbanized areas as determined by the latest Decennial Census by the Bureau of the Census; or

3. Other ~~areas~~ discharges designated by the Maryland Department of the Environment (MDE) under 40 CFR 123.35(b)(2).

A list of ~~municipalities~~ small MS4s designated for coverage under this general permit is included in Appendix A.

C. Obtaining Coverage

Operators of ~~R~~regulated small MS4s~~municipalities~~ shall seek coverage under this permit by submitting a Notice of Intent (NOI) according to requirements in Part II below, using the form provided by MDE in Appendix C. A list of small MS4s requiring permit coverage is found in Appendix A. A small municipality may be a co-permittee or coordinate with a surrounding county covered under an MS4 NPDES stormwater permit.

D. Definitions

Terms used in this permit are defined in relevant chapters of 40 CFR Part 122 or 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.

Commented [A1]: Legal error: "Discharges" can be designated, not "Municipalities." 122.26(a)(1)

Commented [A2]: Not a lawful designation criterion under 40 CFR 122.26 or 123.35.

Commented [A3]: "Areas" cannot be designated under 122.26(a)(1). Only "discharges" can be designated.

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PART II. NOTICE OF INTENT REQUIREMENTS

A. Deadlines for Notification

Small MS4 ~~owners~~ operators identified in Appendix A shall seek coverage under this general permit and submit to MDE an NOI that contains the information outlined in Part II.B within 180 days of the effective date of this permit.

B. Contents

An NOI serves as notification that the ~~municipality~~ small MS4 operator intends to comply with this general permit. The NOI form is provided in Appendix C of this permit. The NOI shall contain the following:

1. The name, address, telephone number, and e-mail address of the responsible contact person for the required MS4 programs listed in Parts IV and V of this general permit;

2. A brief description of the ~~jurisdiction~~ MS4 and its drainage area for which coverage is being sought. This shall include the approximate size, land uses, and a description of the stormwater conveyance system~~, and list of other NPDES permits that have been issued by MDE~~;

3. A brief description of any agreements with another entity when responsibilities for permit compliance are shared between the permittee and entity. The relationship and specific duties of all parties shall be provided;

4. An estimate of the anticipated expenditures to implement the required programs specified in this general permit; and

5. An authorized signature according to Part VII.O of this general permit.

Commented [A5]: Coverage is not sought for "jurisdictions."

Commented [A6]: Premature. Not a realistic NOI requirement for permittees that have not yet conducted an impervious area assessment – and particularly for new MS4 permittees. Also not realistic for existing permittees who are facing a significant ramp up of current requirements (for example, it will likely be necessary to hire new employees to address various MCM terms). Determining staffing needs and financial impacts will take time and cannot reasonably be done in time to submit the NOI.

C. Where to Submit

~~Municipalities~~ MS4 operators seeking coverage under this permit shall submit NOIs

to the following: Maryland Department of the Environment
Water Management Administration
Sediment, Stormwater, and Dam Safety Program
1800 Washington Boulevard
Suite 440
Baltimore, Maryland 21230-1708

PART III. ~~COMPLIANCE WITH~~REASONABLE PROGRESS TOWARD ATTAINMENT OF WATER QUALITY STANDARDS

Operators of ~~S~~small ~~municipalities~~ MS4s covered under this general permit must manage, implement, and enforce management programs for controlling all stormwater ~~discharges~~discharged from its MS4 to the maximum extent practicable, in accordance with the Clean Water Act (CWA) and corresponding stormwater NPDES regulations, 40 CFR Part 122, to meet the following requirements:

1. Effectively ~~prohibit~~ reduce pollutants in stormwater discharges or other unauthorized discharges into the MS4 ~~as necessary to comply~~to make reasonable progress towards attainment of ~~with~~ Maryland's receiving water quality standards;

2. Make reasonable progress toward ~~A~~attaining applicable wasteload allocations (WLAs) for each established or approved Total Maximum Daily Load (TMDL) for each receiving water body, 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 general permit, and in plans and schedules developed in fulfillment of this permit.

Compliance with the conditions contained in Parts IV and V of this permit shall constitute compliance with Section 402(p)(3)(B)(iii) of the CWA and adequate progress toward compliance with Maryland's receiving water quality standards and any EPA approved stormwater WLA for this permit term.

PART IV. MINIMUM CONTROL MEASURES

Permittees shall ensure that the following minimum control measures (MCMs) are implemented in the jurisdiction served by the small MS4 covered under this permit. The six MCMs described below include Public Education and Outreach, Public Involvement and Participation, Illicit Discharge Detection and Elimination, Construction Site Stormwater Runoff Control, Post Construction Stormwater Management, and Pollution Prevention and Good Housekeeping. Specific requirements for compliance with this general permit are outlined for each MCM below. Permittees shall report on the status of implementation of these required programs in accordance with the MS4 Progress Report (Appendix D).

Any permittee renewing coverage under the general permit shall continue to maintain, update, and report progress as described below. All new permittees shall develop the programs described below within the first year of permit issuance and begin implementation thereafter. Annual reports will show progress toward program development and demonstrate full implementation of all permit requirements by the end of the five year permit term.

Permittees can choose to utilize partnerships or share responsibilities with other entities for compliance with any requirement of this general permit. This may entail establishing partnerships with the surrounding county or a municipality performing similar activities under the requirements of an NPDES MS4 permit. If responsibilities for permit compliance are shared

Commented [A7]: Compliance with WQS not legally required, and should not be implied. Court of Appeals clarified this in 2016 Anacostia Riverkeeper opinion.

Commented [A8]: This is confusing for existing permittees. Recommend existing permittees continue to implement programs required under previous permit until their programs are updated consistent with the new GP. Existing permittees should have 1 year to update programs. This should be clear under each MCM as well.

between the permittee and another entity, the relationship and specific duties of all participating

entities shall be described in the NOI and updated information provided in the MS4 Progress Report. However, the permittee shall remain responsible for compliance with all conditions of this general permit. For this reason, a legally binding contract, memorandum of understanding (MOU), or other similar means shall be executed between the permittee and all other entities to avoid conflicts resulting from noncompliance with this general permit.

A. Public Education and Outreach

Permittees are required to implement and maintain a public education and outreach program and distribute education materials to the community and employees to help reduce the discharge of pollutants caused by stormwater runoff. This entails developing brochures, booklets, and training programs to educate the public about the impacts of stormwater discharges on receiving waters, why controlling these discharges is important, and what the public can do to reduce pollutants in stormwater runoff. This program may be coordinated with other portions of the permittee's MS4 program or developed independent of other pollution control efforts.

Renewal permittees shall update and continue to maintain their public education and outreach program. New permittees shall develop this program within one year of permit issuance and begin implementation thereafter. All permittees shall provide program updates in accordance with the MS4 Progress Report specified for this MCM.

In order to comply with this MCM, all permittees shall:

1. Develop a hotline or designate an official contact for the public to report water quality complaints within one year of permit issuance;

2. Determine the target audience within the jurisdiction and develop materials to educate the audience on the impact of stormwater. These topics may include water conservation, chemical application on lawns and landscaping, proper car wash procedures, proper disposal of paint and other household hazardous waste, recycling and trash pick-up, and proper pet waste disposal;

3. Distribute stormwater educational materials through newsletters, website, or other appropriate methods. Submit examples of education material to MDE in accordance with reporting requirements;

4. Develop and implement an annual employee training program that addresses appropriate topics to prevent or reduce the discharge of pollutants into the storm drain system. Submit topics selected and attendee list to MDE in accordance with reporting requirements; and

5. Describe in reports to MDE how the education programs facilitate the permittee's efforts to reduce pollutants in stormwater runoff.

Commented [A9]: Increases flexibility for small entities.

Commented [A10]: Add text to allow permittee to use training materials developed by other permittees, third-parties, etc.

B. Public Involvement and Participation

Permittees are required to create and foster opportunities for public participation in the MS4 management program for controlling stormwater discharges. Recommended activities include adopt-a-stream programs, public surveys, storm drain stenciling, stream cleanups, tree plantings, and Earth Day events. This program may be coordinated with other portions of the permittee's MS4 program or developed independent of other pollution control efforts.

Renewal permittees shall update and continue to maintain their public involvement and participation program. New permittees shall develop this program within one year of permit issuance and begin implementation thereafter. All permittees shall provide program updates in accordance with the MS4 Progress Report specified for this MCM.

In order to comply with this MCM, all permittees shall:

1. Determine the target audience within the jurisdiction to promote public involvement and participation activities;

2. Specify activities appropriate for the target audience and promote participation;

3. Perform at least 5 public participation events during the permit term and report to MDE in accordance with reporting requirements;

4. Provide public access to the permittee's progress reports via website or other method and consider any substantive public comments received concerning the jurisdiction's MS4 program; and

5. Comply with all State and federal public notice requirements for any regulated activity on the property of the MS4.

C. Illicit Discharge Detection and Elimination (IDDE)

Permittees are required to develop, implement, and enforce a program to identify and eliminate illicit storm drain system discharges from the MS4 in accordance with 40 CFR §122.34(b)(3). A permittee will satisfy this MCM by field screening storm drain system outfalls, inspecting the storm drain system to identify any source of an illicit discharge, eliminating any illegal connection or illicit discharge to the storm drain system, and enforcing penalties where appropriate. The illicit discharge program shall also contain components to address illegal dumping and spills. Additional guidance is provided in Appendix B, Section II to assist permittees with the development of an acceptable IDDE program.

Renewal permittees shall update and continue to maintain their illicit discharge detection and elimination program. New permittees shall begin development of this program within one year of permit issuance and begin implementation thereafter. All permittees

shall provide program updates in accordance with the MS4 Progress Report specified for this MCM.

In order to comply with this MCM, all permittees shall:

1. Develop and periodically update ~~Maintain~~ a map of the ~~jurisdiction's storm drain infrastructure~~MS4 owned or operated by the permittee by [date for new permittees], which identifies ~~all pipes,~~ known outfalls, ~~inlets,~~ and known stormwater management best management practices (BMPs)~~, illicit discharge screening locations, and surface waters~~;

2. Adopt an ordinance, or other regulatory means, that prohibits illicit discharges into the ~~storm sewer system~~MS4;

3. ~~Establish~~ Document legal means for gaining access, to the maximum extent practicable, to private property to investigate and eliminate illicit storm drain system discharges (e.g., ordinance, easements~~, warrants~~);

4. Develop and implement written standard operating procedures (SOPs) that specify the following:

   a. Development of an inspection checklist describing how outfalls are screened for dry weather flows (see Figure B.2 of Appendix B for an example of an outfall screening checklist);
   b. Screening of a list of priority ~~20% of total~~ outfalls ~~per~~each year~~, up to 100 outfalls~~, with prioritization based on the permittee's review of parts of the regulated area that have aging infrastructure, areas with commercial and industrial development, etc.;
   c. Methods for identifying the source and eliminating spills, illegal dumping, and other suspected illicit discharges;
   d. Identification of priority areas for illicit discharge screening based on pollution potential;
   e. Enforcement and penalty procedures;
   f. Means by which to inform employees, businesses, and the general public of the issues relating to illegal discharges and improper waste disposal; and
   g. Coordination with adjacent/interconnected MS4 operator(s), as appropriate.

5. Submit SOPs to MDE for review and approval within two years of permit issuance. MDE will review for consistency with guidance in Appendix B, Section II;

6. Document results of illicit discharge screening efforts and include any necessary follow-up investigations, enforcement, and remediation measures implemented to address any suspected discharge. Submit to MDE in accordance with reporting requirements; and

7. Maintain complete records of IDDE program investigations and make available to

Commented [A11]: Clarify this applies only to MUNICIPAL storm sewer system.

Commented [A12]: New permittees will need time to develop system maps.

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Commented [A13]: Clarify this applies only to MUNICIPAL storm sewer system.

Commented [A14]: May already exist for many permittees.

MDE during field reviews of the jurisdiction's MS4 program.

D. Construction Site Stormwater Runoff Control

~~Permittees are required to comply with Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland and State erosion and sediment control regulations under COMAR 26.17.01. The statute and COMAR specify the requirements for any construction activity that disturbs 5,000 square feet or 100 cubic yards or more of earth movement.~~ MDE considers compliance with Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland and State erosion and sediment control regulations under COMAR 26.17.01~~the State statute~~ to be compliance with this MCM of this general permit, and CFR. The permittee shall certify its compliance with this statute and regulations in its MS4 Progress Report.

All permittees shall provide program updates in accordance with the MS4 Progress Report specified for this MCM. In order to comply with State and federal laws and regulations pertaining to an acceptable erosion and sediment control program, all permittees shall:

1. Adopt an MDE approved ordinance that includes a process for plan review and approval of proposed construction drawings and erosion and sediment control plans, and inspection and enforcement procedures in accordance with COMAR 26.17.01. Subsequently, any proposed amendments to the ordinance shall be submitted to MDE for review and approval;

2. A municipality may accept the program that is being implemented by its respective county. Each permittee that relies on its respective county for the implementation of an erosion and sediment control program shall execute a binding agreement or resolution with said county. The agreement shall clarify respective roles of all parties related to plan review and approval, construction site inspections, and enforcement;

3. Ensure compliance with requirements under *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control* (MDE, 2011);

4. ~~Ensure~~ Require that all necessary permits have been obtained, including MDE's General Permit for Stormwater Associated with Construction Activity for projects disturbing one acre or more, and local sediment and erosion control plan approval;

5. Develop a process for receiving, investigating, and resolving complaints from any interested party related to construction activities within the jurisdiction. Notify the complainant of the investigation and findings within seven days;

6. Track all active construction sites within the jurisdiction and report to MDE the disturbed areas for all active permits in accordance with reporting requirements;

7. Take reasonable measures to e~~E~~nsure that construction site inspections and enforcement procedures are performed in accordance with COMAR. For jurisdictions that are not delegated, this will require ongoing communication

Commented [A15]: MCM 4 can and should be limited to these two sentences. So long as a permittee is in compliance with the E&S regulations, then it is complying with MCM 4. It is reasonable for a permittee to annually certify its compliance with the regulations. Everything else in this section is unnecessary.

There is a potential for conflicting requirements/interpretations between the permit and the regulations. There should be one source of authority on compliance with the E&S regulations.

Remainder of Part IV.D should be deleted.

Commented [A16]: Inconsistent with COMAR 26.17.01.11.B, which includes flexibility to vary from the 2011 Standards.

Commented [A17]: Shouldn't be a violation of this permit if a third-party unlawfully builds without CGP coverage.

Commented [A18]: Should not be a permit violation for permittee to not be aware of a fly-by-night construction job.

Not required by COMAR. Should be deleted.

and collaboration with the enforcement authority to ~~ensure~~ assure the permittee that any violations are properly addressed;

8. Use all procedures within existing municipal codes to help prevent and reduce erosion and sediment pollution into waters of the State from any construction activity. A municipality may suspend or deny the issuance of a building or grading permit when it determines that the applicant is not in compliance with an approved erosion and sediment control plan; and

9. Ensure staff is adequately trained on proper procedures and actions to address potential discharge of pollutants into the storm drain system as a result of any construction activity. The Responsible Personnel Certification on-line training course through MDE shall be made available to appropriate staff.

E. Post Construction Stormwater Management

Permittees are required to maintain an acceptable stormwater management program in accordance with Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland and State stormwater management regulations under COMAR 26.17.02. The statute and COMAR require that stormwater management shall be addressed for new development and redevelopment for any proposed project that disturbs 5,000 square feet or more. MDE considers compliance with the State statute to be compliance with this MCM of this general permit, and CFR. The permittee shall certify its compliance with this statute and regulations in its MS4 Progress Report.

All permittees shall provide program updates in accordance with the MS4 Progress Report specified for this MCM. In order to comply with State and federal laws, regulations, ordinances, and procedures pertaining to an acceptable stormwater management program, all permittees shall:

1. Adopt an MDE approved stormwater management ordinance that provides plan review and approval processes, and inspection and enforcement procedures that ensure proper construction and maintenance of BMPs in accordance with COMAR 26.17.02. Subsequently, any proposed amendments to the ordinance shall be submitted to MDE for review and approval;

2. A municipality may accept an MDE approved stormwater program that is being implemented by its respective county. Each permittee relying on the county for the implementation of a stormwater management program shall execute a binding agreement or resolution with said county. The agreement shall clarify respective roles of all parties related to stormwater plan review and approval, construction and post construction inspections, routine maintenance, enforcement, and BMP tracking;

3. ~~Implement the principles, methods, and practices found in the latest version of the *2000 Maryland Stormwater Design Manual, Volumes I & II* (Manual). This r~~Require~~s~~ that environmental site design (ESD) be implemented to the maximum extent practicable (MEP) for all new and redevelopment projects;

Commented [A19]: Too broad and subject to interpretation. Invitation to enforcement for bad actions of 3d parties.

Commented [A20]: Same as above. This MCM should (1) note that compliance with SW regulatiosn constitutes compliance with this MCM, and (2) that permittee must certify its compliance. Nothing more is needed. Delete remainder of section.

Commented [A21]: "Implement the principles, methods, and practices" is too vague to be an enforceable permit condition.

4. Maintain stormwater program implementation information and provide updates in accordance with the MS4 Progress Report that includes:

   a. An Urban BMP database in accordance with the database structure in Appendix B, Table B.1. This information shall be submitted to MDE with annual reports;
   b. Total number of triennial inspections performed and verification that inspections occur at least once every three years;
   c. Total number of violation notices issued and status of enforcement activities; and
   d. Summary of routine maintenance activities for all publicly owned BMPs. Maintenance plans shall address periodic mowing, plant composition and health, trash and debris accumulation, sedimentation and erosion, dewatering, and overall function of the facility in accordance with approved plans. Specify any actions taken to correct problems noted during routine maintenance activities.

5. Provide training for staff with relevant responsibilities related to implementing this MCM on proper BMP design, performance, inspection, and routine maintenance. Report to MDE the number of trainings offered, topics covered, and number of attendees in the MS4 Progress Report.

Commented [A22]: Need to clarify which staff need to receive training.

F. Pollution Prevention and Good Housekeeping

Permittees are required to develop and implement an operation and maintenance program that includes a training component to prevent and reduce pollutant runoff from municipal operations in accordance with 40 CFR ~~40~~§ 122.34(b)(6). A permittee will satisfy this MCM by developing, implementing, and maintaining procedures for pollution prevention and good housekeeping ~~throughout the jurisdiction's~~on properties owned by the permittee. Pollution prevention measures should address fleet yard operations, building maintenance activities, spill control, disposal of waste including hazardous waste, reducing or
eliminating discharge of pollutants from roads and parking lots, and storage and transport of chemicals.

Renewal permittees shall update and continue to maintain their pollution prevention and good housekeeping program. New permittees shall develop this program within one year of permit issuance and begin implementation thereafter. All permittees shall provide program updates in accordance with the MS4 Progress Report.

In order to comply with this MCM, all permittees shall:

1. Ensure that appropriate staff and contractors working on permittee-owned property in the permit area, as determined by the permittee, receive training at least annually on all sections of the permit relevant to this MCM. The training shall be designed to address the importance of water quality protection through pollution prevention and good housekeeping measures. Topics shall include spill prevention and response, controls for reducing or eliminating the discharge

of pollutants during facility operations, proper disposal of waste, and routine inspections to detect and

correct potential stormwater discharges at facilities owned and operated by the jurisdiction;

2. Develop, implement, and maintain a pollution prevention plan at any publicly owned or operated properties that do, or have the reasonable potential to, contribute pollutants to the permittees' MS4 (as determined by the permittee) that includes:

   a. A description of site activities;
   b. A site map identifying all buildings; stormwater conveyances including ditches, pipes, and swales; directions of stormwater flow (use arrows); water bodies receiving discharges; and locations of all existing structural control measures or BMPs;
   c. A list of potential pollutants and their sources and locations, including run-on from adjacent properties;
   d. Written good housekeeping procedures designed to reduce the potential for stormwater pollution from the facility;
   e. Procedures for routine site inspections to detect and correct stormwater discharges, releases, and any spills or leaks on site; and
   f. Documentation of any discharge, release, leak, or spill, including date, findings, and response actions.

3. Quantify and report pollution prevention efforts related to the following activities, if undertaken by the permittee:

   a. Number of miles swept and pounds of material collected from street sweeping and inlet cleaning programs;
   b. Describe good housekeeping methods for pesticide application such as integrated pest management plans or alternative techniques;
   c. Describe good housekeeping methods for fertilizer application such as chemical storage, landscaping with low maintenance/native species, and application procedures;
   d. Describe good housekeeping methods for deicing applications such as use of pretreatment, truck calibration and storage, salt dome storage and containment; and
   e. Describe other good housekeeping BMP procedures undertaken by permittee not listed above.

4. ~~Contact MDE to determine whether coverage is required for any jurisdiction-owned or operated facility under the General Permit for Stormwater Discharges Associated with Industrial Activity, Sector AD.a, which provides coverage to Department of Public Works and Highway Maintenance facilities~~. In its first MS4 Progress Report issued under this permit, provide MDE with a list of any facilities in Sector AD.a, including vehicle and equipment maintenance shops (vehicle and equipment rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations and salt storage for road deicing activities, that are owned or operated by the permittee. Indicate on the list whether any of the facilities are presently covered by the General Permit for

Commented [A23]: ALL publicly owned "properties" is too broad. Should be limited to properties with reasonable potential to discharge pollutants to MS4.

Also, to reduce compliance burden, suggest giving permittees the option of developing general plans covering multiple properties of similar type.

Commented [A24]: Vague requirement. Unclear what information permittee is to provide or when. Unclear how permittee is to "determine whether coverage is required." Suggest simplification and clarification.

Municipality owned/operated Sector AD.a facilities are exempt from the permitting requirement unless MDE notifies the municipality otherwise. Requirement should simply be for permittee to identify such facilities to MDE. MDE can follow up with additional information requests it deems appropriate.

Suggest rewording requirement to clearly state what information permittee must submit to MDE and when.

Stormwater Discharges Associated with Industrial Activity or the ~~02~~12-SW permit. Upon request by MDE, the permittee shall provide additional information about the identified facilities.

PART V. CHESAPEAKE BAY RESTORATION AND MEETING TOTAL MAXIMUM DAILY LOADS

Maryland's Watershed Implementation Plan (WIP) specifies the nutrient and sediment load reductions required to address the Chesapeake Bay TMDL by 2025. This general permit will make progress toward that strategy by requiring small MS4s to commence restoration efforts for twenty percent of existing developed lands within the regulated Permit Area that have little or no stormwater management. This

~~five~~ five-year permit term will require permittees to develop planning strategies and work toward implementing water quality improvement projects. Restoration planning strategies and implementation schedules required under this general permit are consistent with addressing the water quality goals of the Chesapeake Bay TMDL by 2025. The conditions established below require permittees to perform watershed assessments, identify water quality improvement opportunities, secure appropriate funding, and develop an implementation schedule to show the twenty percent impervious area restoration requirement will be achieved by 2025. This constitutes adequate progress toward compliance with Maryland's receiving water quality standards and any stormwater WLA established or approved by United States Environmental Protection Agency (EPA) for small MS4s regulated under this permit.

Restoration efforts may include the use of ESD practices, structural stormwater BMPs, retrofitting, stream restoration, or other alternative restoration practices. ~~Trading with other sectors may also be considered as another method to achieve pollutant reductions, once a program has been established, regulations are adopted, public participation requirements are satisfied, and its use is approved by EPA.~~ Acceptable design criteria for stormwater BMPs are outlined in the Manual and *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated* (MDE, 2014). Appendix B of this permit provides relevant guidance from MDE, 2014 for small MS4 permittees to comply with these requirements. A permittee will demonstrate compliance with restoration requirements by performing the following:

A. Develop a Baseline Impervious Area Assessment

Permittees shall determine the total impervious surface area within ~~their jurisdiction~~the regulated Permit Area and delineate the portions that are treated with acceptable water quality BMPs. This analysis will provide the baseline used to calculate the twenty percent restoration requirement.
This shall be done in accordance with the guidance outlined in Appendix B, Section III of this permit (which is consistent with MDE, 2014). The impervious area baseline assessment shall be submitted with the first year annual report for MDE review and approval. The following information shall be submitted with this assessment:

1. Total impervious acres for the ~~jurisdiction~~ regulated Permit Area covered under this general permit;
2. Total impervious acres treated by water quality BMPs;
3. Total impervious acres treated by BMPs providing partial water quality treatment;
4. Total impervious acres treated by nonstructural practices (i.e., rooftop disconnections, non-rooftop disconnections, or vegetated swales);
5. Verification that any impervious area draining to BMPs with missing inspection records are not considered treated; and
6. Total impervious acres untreated and twenty percent of this total area (restoration requirement).

B. Develop and Implement an Impervious Area Restoration Work Plan

Permittees shall submit a work plan with the first year annual report to describe the activities and milestones that will be performed over the permit term to show progress toward the twenty percent impervious area restoration requirement. This will form the

Commented [A25]: If and when a trading program is adopted, there should be no ambiguity as to whether permittees can take advantage of it. That should be automatic.

Suggested language has been added to a new Part V.E to clarify the use of trading.

Commented [A26]: Permit must not conflict with 40 CFR 122.26 and 122.32.

Commented [A27]: Question whether it will be possible for many smaller and new permittees to complete an IA Analysis by Sept. 2018. Consistent with Association comments, consider revising timeframes in GP to give permittees adequate planning time. Bear in mind that permittees will also be updated (or developing if a new permittee) significantly enhanced MCM programs during the first year.

basis of a long term plan; however, the plan may be adjusted and refined as part of the adaptive management process over the course of the permit term. A recommended work plan in the format of Table 1 below shall be submitted to MDE annually to describe progress and any modifications necessary to remain on track with restoration requirements. A suggested work plan is provided in Table 1. Permittees may use the work plan or develop a custom plan that addresses the unique circumstances of individual jurisdictions for MDE review and approval.

Table 1. Impervious Area Restoration Work Plan

Timeline	Management Strategies and Goals
Year 1	• Develop impervious area baseline assessment. • Develop restoration work plan for MDE review and approval. • Assess opportunities and timelines for implementing water quality BMPs. • Assess opportunities to develop partnerships with other NPDES permittees. • Determine funding needs and develop a long term budget.
Year 2	• Submit complete Urban BMP database. • Maintain inspection records for all BMPs. • Perform watershed assessments and identify water quality problems and opportunities for restoration. • Develop list of specific projects to be implemented for restoration and identify on the Restoration Activity Schedule (Table 2). • Incorporate future growth agency-wide/jurisdiction-wide master plans into restoration planning efforts. • Evaluate and refine budget needs for project implementation.
Year 3	• Update and submit Urban BMP database and documented maintenance and inspection status for all BMPs. • Develop adaptive management strategies for BMP implementation that identify opportunities for improved processes and procedures. • Continue to identify opportunities for water quality improvement projects and collaborative partnerships to meet restoration requirements.
Year 4	• Update and submit project implementation status in Table 2. • Update and submit Urban BMP database and documented maintenance and inspection status for all BMPs. • Submit narrative describing progress and updated adaptive management strategies toward implementing restoration projects.
Year 5	• Update and submit project implementation status in Table 2. • Provide complete list of specific projects needed to meet the twenty percent restoration requirement in Table 2 and include the projected implementation year (no later than 2025).

C. Develop a Restoration Activity Schedule

Permittees are required to develop a Restoration Activity Schedule (Table 2) and provide annual updates on the status of projects in the planning, construction, and final phase of implementation. A brief narrative shall accompany Table 2 and describe progress of

planned restoration activities. Table 2 below provides an example of how to submit the required information. The table outlines a schedule for various BMPs under different stages of implementation during the permit term. The impervious acre baseline is indicated as 100 acres and noted in year one. With the implementation of each BMP, the balance toward achieving the restoration requirement is recalculated in the Impervious Acre Restoration Target and Balance ("Imperv Acre Target and Balance") column. This plan should be continuously refined and updated over the duration of the permit term. By the end of the permit term, a complete list of projects required to meet the twenty percent restoration requirement shall be provided. The projected implementation year shall be no later than 2025, unless the permittee demonstrates that it is not practicable to implement the requirement by such date with a level of effort consistent with the maximum extent practicable standard set forth in 33 U.S.C. § 1342(p)(3)(B)(iii), in which case the permittee shall utilize the earliest date for which it is practicable for the restoration requirement to be fully implemented.

Commented [A28]: Permit must have a safety valve if 2025 deadline is not practicable to be consistent with 33 USC 1342(p)(3)(B)(iii).

Commented [A29]: Permit must have a safety valve if 2025 deadline is not practicable to be consistent with 33 USC 1342(p)(3)(B)(iii).

Permittees may take credit for retrofit and redevelopment that has been implemented between 2006 and the beginning of the permit term, including, but not limited to stream restoration efforts. When the impervious area baseline analysis considers the drainage areas to these practices as untreated, then these projects may be credited toward impervious area restoration requirements. Credits may be reported using the Restoration Activity Schedule (Table 2) discussed below.

Impervious acre credits are based on the level of water quality treatment provided. When water quality BMPs treat one inch of rainfall, the impervious acres draining to the BMP will be considered restored. When the rainfall treated is less than one inch, a proportional acreage will be calculated for impervious acres treated based on the percentage of one inch of rainfall treated. When alternative BMPs are implemented, acreage may be calculated based on an impervious acre equivalent identified in Appendix B, Table B.2. Additional information on BMP implementation and impervious acre credits may be found in *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated* (MDE, 2014).

Table 2. Restoration Activity Schedule (Example)

Type of Restoration Project	BMP[1] Code	Cost ($K)	Imperv Acres Treated	Imperv Acre Target and Balance	Project Status[2]	Year Complete or Projected Implementation Year (by 2025)	MD Grid Coordinates	
							Northing	Easting
				100				
Dry pond retrofit to wet	PWET	1,500	36	64	UC			
Bioretention	FBIO	260	6	58	P			
Bioswale	MSWB	100	2	56	P			
Dry pond retrofit to wet	PWET	800	10	46	P			
BMP retrofit	PWET	500	8	38	P			
Redevelopment	REDE	300	5	33	P			
Rain Gardens (4)	MRNG	20	2	31	P			
Disconn rooftop r/o	NDRR	200	10	21	P			
Stream restoration (1,000 linear feet)	STRE	500	10	11	P			
Outfall Stabilization	OUT	200	2	9	P			
Shallow marsh	WSHW	150	4	5	P			
Reforestation on Imperv	IMPF	100	3	2	P			
Green Roof, extensive	AGRE	100	0.5	1.5	P			
Perm pavement on existing pavement	APRP	150	2	-0.5	P			

[1] See Appendix B, Table B.1, Urban BMP database. BMP codes are identified under "MDE BMP Classification."

[2] Project Status: Enter P for planning and design, UC for under construction, and C for complete.

D. BMP Database Tracking

Permittees are required to develop a BMP inventory consistent with the required fields outlined in the BMP Database provided in Appendix B, Table B.1. ~~A brief narrative shall accompany the BMP database and provide verification that routine inspection and maintenance activities are up to date.~~ The database fields for inspection and maintenance need to be completed and show that BMPs are inspected every three years and properly maintained. If the required inspection and maintenance data are missing or incomplete then any credit previously applied should be corrected or removed.

Commented [A30]: Superfluous. The BMP Database must be submitted with the MS4 Progress Report (Part IV.E.4). Therefore it must be certified as true, accurate, and complete just like all other submissions under the permit.

Commented [A31]: If the missing information is simply a clerical error, then the permittee should have the opportunity to correct it.

E. Water Quality Trading

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Permittees are authorized to employ water quality trading with other sectors or other permittees to achieve the pollutant reductions required by this Part V upon the effective date of, and in accordance with terms and conditions of, any statute, regulation, guidance document, or policy statement permitting such trading.

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PART VI. EVALUATION AND ASSESSMENT, RECORDKEEPING, REPORTING, AND PROGRAM REVIEW

A. Evaluation and Assessment

The permittee must evaluate progress toward achieving compliance with all permit requirements, and the appropriateness of implemented BMPs. This shall be achieved through reporting to MDE as specified in Part VI.C below.

B. Recordkeeping

The permittee shall keep records for at least three years after the termination of this general permit. In addition to the information required in annual reports specified below, permittees shall submit any additional supporting documentation at the request of MDE. The permittee shall make its MS4 program information, including records, available to the public during regular business hours.

C. Reporting

1. The required information specified in the MS4 Progress Report in Appendix D shall be completed each year. The reporting period shall be based on State fiscal year. MS4 Progress Reports are due no later than September 1st of each year with the first annual report due September 1, 2018.

2. Annually, the permittee shall submit a report to MDE that evaluates progress toward meeting the twenty percent impervious area restoration requirement specified in Part V above. Restoration activity described in the MS4 Progress Report shall be completed and include:

    a. An impervious area baseline analysis in accordance with Part V.A and the guidance in Appendix B, Section III. This analysis shall be submitted with the first year annual report for MDE review and approval;
    b. The Impervious Area Restoration Work Plan (Table 1) shall be submitted with the first year annual report and in annual updates. The work plan shall include a narrative discussing progress made toward restoration efforts and a description of adaptive management strategies necessary to keep proposed implementation efforts on track;
    c. An updated Restoration Activity Schedule in accordance with Table 2 shall be submitted annually. By the end of the permit term, a complete list of projects required to meet the twenty percent restoration requirement shall be specified in Table 2. The projected implementation year shall be no later than 2025; and
    d. An updated Urban BMP database in accordance with Appendix B, Table B.1 in electronic format and a brief narrative discussing progress

made toward completing the database and performing routine maintenance and inspections.

3. Reporting for the six MCMs specified in Part IV must be submitted in years two and four of the permit term and include all information requested in the MS4 Progress Report in Appendix D.

~~**D. Program Review**~~

~~In order to assess the effectiveness of the permittee's NPDES program for eliminating non-stormwater discharges and reducing the discharge of stormwater pollutants to the MEP, MDE will review program implementation as described in MS4 Progress Reports. Procedures for the review of local erosion and sediment control and stormwater management programs exist in Maryland's sediment control and stormwater management laws. Additional reviews of MCM implementation and the twenty percent restoration requirement may be conducted at any time to determine compliance with permit conditions.~~

Commented [A32]: Outlines actions MDE may take. Seems more appropriate for a fact sheet than the permit.

PART VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The permittee must comply with all conditions of this general permit. Any permit noncompliance constitutes a violation of the CWA and is grounds for enforcement action, permit coverage termination, revocation, or modification. ~~The permittee 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, Annotated Code of Maryland.~~

Commented [A33]: Far too broad to merely incorporate by reference and make a condition of the permit. Many provisions wholly unrelated to stormwater. For example, why would a violation at a permittee's WWTP (Title 9, Subtitle 3) be a violation of this permit?

To the extent requirements in the referenced subtitles are directly applicable, they should be specifically incorporated into permit as conditions.

~~**B. Failure to Notify**~~

~~Agencies engaging in an activity under this general permit that fail to notify MDE of their intent to be covered under this general permit as described in Part II and who discharge to waters of the State without submitting an NOI application are in violation of the Environment Article, Annotated Code of Maryland and may be subject to penalties.~~

Commented [A34]: Cannot place a permit condition on entities that are not covered by the permit.

~~C.~~B. Limitations on Coverage

~~1.~~ 1. The following categories of non-stormwater discharges or flows shall be addressed only if ~~where~~ such discharges are identified by the ~~municipality~~ permittee as a significant contributor ~~sources~~ of pollutants to waters of the United States: landscape irrigation, diverted stream flows, rising groundwater, uncontaminated groundwater infiltration, uncontaminated pumped groundwater, foundation drains, air conditioning condensate, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering runoff, flows from riparian habitats and wetlands, residual street wash water, and discharges or flows from fire fighting activities~~.~~ If not so identified, the discharges listed above are authorized discharges under the permit.

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~~2.~~ 2. Non-stormwater sources, stormwater associated with industrial activity, or discharges associated with construction activities may be authorized to discharge via the municipal separate storm sewer system if such discharges are specifically authorized under an applicable NPDES discharge permit.

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~~3.~~ 3. Only stormwater discharges from municipal separate storm sewer systems are authorized to discharge under this general permit, except as provided in (1) and (2) above.

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~~D.~~C. Penalties Under the CWA - Civil and Criminal

Section 309(d) of the CWA, 33 USC 1319(d) provides that any person who violates any permit condition is subject to a civil penalty not to exceed $25,000 per day for each violation. Pursuant to the Civil Monetary Penalty Inflation Adjustment Rule, 40 CFR Part 19, any person who violates any NPDES permit condition or limitation after December 6, 2013, is liable for an administrative penalty not to exceed $37,500 per day for each such violation. Section 309(g)(2) of the CWA, 33 USC 1319(g)(2) provides that any person who violates any permit condition is subject to an administrative 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 after December 6, 2013, is liable for an administrative penalty not to exceed $16,000 per day for each such violation, up to a total penalty of $187,500. 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 one year, or both. If a person has been convicted of negligent violations of the CWA previously, the criminal penalties may be increased to $50,000 per day of violation, or imprisonment of not more than two years, 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 three years, or both. If a person has been convicted of knowing violations of the CWA previously, the criminal penalties may be increased to $100,000 per day of violation, or imprisonment of not more than six years, or both.

~~E.~~D. 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 the county 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 MDE, and with each day a violation continues being a separate violation. Section 9-342 further authorizes the MDE to impose upon any person who violates a permit condition, administrative civil penalties of up to $10,000 per violation, up to $100,000.

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 one 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 two years imprisonment.

The Environment Article, Section 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 two years per violation, or both.

The Environment Article, Section 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 two years per violation, or both.

~~F.~~E. Need to Halt or Reduce Activity not a Defense

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.

~~G.~~F. Continuation of an Expired General Permit

An expired general permit continues in force and effect for all permittees covered under this general permit until a new general permit is issued or the general permit is revoked or withdrawn. Coverage for new permittees may not be granted under an expired general permit.

~~H.~~G. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment and is in violation of this general permit, upon becoming aware of such discharge.

Commented [A35]: Should be clear that permittee is not in violation of permit for not minimizing/preventing discharge of which it had no knowledge.

~~I.~~H. Duty to Provide Information

The permittee shall furnish to MDE any information that may be requested to determine compliance with this general permit. The permittee shall also furnish to MDE, upon request, copies of records required to be maintained in compliance with the conditions of this general permit.

~~J.~~I. Other Information

When a permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in the NOI or in any other report to MDE, it shall promptly notify MDE of the facts or information.

~~K.~~J. Requiring an Individual Permit

1. MDE may require any jurisdiction to apply for and/or obtain an individual NPDES permit. When MDE requires a jurisdiction to apply for an individual NPDES permit, MDE will provide notification in writing that an application is required. This notification shall include a brief statement of the reasons for the decision, an application form, and a deadline for filing the application. Applications must be submitted to MDE. MDE may grant additional time to submit an application upon request of the applicant.

2. Any jurisdiction eligible for coverage under this general permit may request to be excluded from the coverage of this general permit by applying for an individual permit. In such cases, the jurisdiction must submit to MDE an individual application in accordance with the requirements of 40 CFR 122.26(c)(1)(ii), with reasons supporting the request.

3. When an individual NPDES permit is issued to a jurisdiction eligible for coverage under this general permit, the applicability of this general permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit. When an individual NPDES permit is denied to a jurisdiction otherwise subject to this general permit, then coverage under this general permit may be terminated by MDE.

~~L.~~K. Property Rights

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

~~M.~~L. Severability

The provisions of this general permit are severable. If any provision of this general 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 general permit to any circumstances is held invalid, its application to other circumstances shall not be affected.

~~N.~~M. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition. The Environment Article, Section 9-330, Annotated Code of Maryland, provides that MDE may revoke coverage under this permit if it finds that:

1. False or inaccurate information was contained in the application;

2. Conditions or requirements of the discharge permit have been or are about to be violated;

3. Substantial deviation from the requirements has occurred;

4. MDE has been refused entry to the premises for the purpose of inspecting to ensure compliance with the conditions of the discharge permit;

5. A change in conditions exists that requires temporary or permanent reduction or elimination of the permitted discharge;

6. Any State or federal water quality stream standard or effluent standard has been or is threatened to be violated; or

7. Any other good cause exists for revoking the discharge permit.

~~O.~~N. Signature of Authorized Administrator and Jurisdiction

All NOIs, annual reports, and information submitted to MDE shall be signed as required by COMAR 26.08.04.01-1 and 40 CFR 122.22. As in the case of municipal or other public facilities, signatories shall be a principal executive officer, ranking elected official, or other duly authorized employee.

~~P.~~O. Inspection and Entry

The permittee shall allow representatives of MDE and EPA to enter the permittee's premises at reasonable times to conduct an inspection of a regulated facility or activity, or to review records that must be kept as a condition of this permit.

~~Q.~~P. Proper Operations and Maintenance

The permittee shall properly operate and maintain all facilities and controls which are used to achieve compliance with the conditions of this permit.

~~R.~~Q. **Reporting Requirements**

The permittee shall report any non-compliance which may endanger human health or the environment. Any information shall be provided orally within 24 hours from the time when the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain 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.

~~PART VIII. REOPENER CLAUSE~~

~~If there is evidence indicating that the stormwater discharges authorized by this general permit cause, or have the reasonable potential to cause or contribute to, a violation of a water quality standard, the permittee may be required to obtain an individual permit or the general permit may be modified to include specific limitations and/or requirements. Permit modification or revocation will be conducted according to 40 CFR 122.62, 122.63, 122.64, and 124.5.~~

Commented [A36]: Duplicative of "Permit Actions" section in Party VII.

PART IX. AUTHORITY TO ISSUE GENERAL NPDES PERMITS

In compliance with the provisions of the CWA, as amended (33 USC 1251 et seq. the Act), agencies that are defined in Parts I.B.1 and I.B.2 of this general permit and that submit an NOI in accordance with Part II of this general permit are authorized to discharge in accordance with the conditions and requirements set forth herein.

D. Lee Currey
Acting Director
Water Management Administration

Date

APPENDIX A

Maryland Designation Criteria for
Small Municipal Separate Storm Sewer Systems

Appendix A

Maryland Designation Criteria for Small Municipal Separate Storm Sewer Systems

Phase I of the U.S. Environmental Protection Agency's (EPA) stormwater program was promulgated in 1990 under the Clean Water Act (CWA). This program relies on National Pollutant Discharge Elimination System (NPDES) permit coverage to address polluted discharges from stormwater runoff from medium and large municipal separate storm sewer systems (MS4s) that serve populations of 100,000 or more. The Phase II program expands Phase I by requiring operators of "small" MS4s in urbanized areas to implement programs to control stormwater runoff through the use of an NPDES permit. A small MS4 can be a municipally owned storm sewer system, but can also apply to State and federal agencies, and include transportation, universities, local sewer districts, hospitals, military bases, and prisons. This appendix describes the designation criteria for regulating small MS4 municipalities and State and federal properties.

Small Municipal Separate Storm Sewer Systems Permit Area

Parts 1.A and 1.B of the Small Municipal Separate Storm Sewer System General Discharge Permits for municipalities and for State and federal properties specify that small MS4s in the State of Maryland are regulated if located within the following geographical areas:

1. **Jurisdictions defined as "large" or "medium" MS4s under 40 CFR 122.26(b) that are permitted currently under an individual NPDES (Phase I) municipal stormwater permit.** Any small municipality with a population greater than 1,000 that is located within a regulated Phase I jurisdiction must seek permit coverage if it owns or operates an MS4. The following jurisdictions in Maryland are regulated under individual Phase I MS4 permits:

Anne Arundel County	Frederick County
Baltimore City	Harford County
Baltimore County	Howard County
Carroll County	Montgomery County
Charles County	Prince George's County
	State Highway Administration

2. **Urbanized areas as determined by the latest Decennial Census by the U.S. Census Bureau**. Coverage is also required for all ~~operators of~~ small MS4s located within the boundaries of an "urbanized area" based on the latest decennial census in accordance with 40 CFR 122.32(a)(1). A map of designated urbanized areas is located at the following website: https://www.epa.gov/npdes/urbanized-area-maps-npdes-ms4-phase-ii-stormwater-permits

3. **Other areas designated by MDE.** MDE has developed a set of designation criteria for small municipalities located outside of urbanized areas in accordance with 40 CFR 123.35(b)(2). Based on federal guidance, all jurisdictions with a population of at least

Commented [A37]: Not a valid designation criterion. No authority for this 40 CFR 122.26 or 123.25.

Commented [A38]: Must clarify that only portion of MS4 within urbanized area is designated per 40 CFR 122.32(a)(1).

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10,000 and a population density of at least 1,000 people per square mile must seek permit coverage.

Commented [A39]: Not a valid designation criterion.

Criteria must be based on water quality impacts, not population density. 40 CFR 123.35(b).

Municipal MS4 General Permit Waiver Criteria

The Code of Federal Regulations (CFR) specifies that certain municipalities may be waived from permit coverage under the following conditions:

1. An MS4 serves a population of less than 1,000 within the urbanized area and does not contribute substantially to the pollutant loadings of a physically interconnected regulated MS4 jurisdiction and stormwater controls are not needed based on wasteload allocations (WLAs) in an EPA approved or established total maximum daily load (TMDL); or

2. An MS4 serves a population of less than 10,000 and the permitting authority has evaluated receiving waters and determined that additional stormwater controls are not needed based on WLAs associated with an EPA approved TMDL or , if a TMDL has not been approved, an equivalent analysis that determines sources and allocations for the pollutants of concern; and has determined that future discharges from the MS4 do not have the potential to result in exceedances of water quality standards or other significant water quality impacts.

~~In addition to the above waiver criteria, municipalities that d~~Discharges of stormwater runoff combined with municipal sewage ~~are point sources that must obtain NPDES permits and, therefore,~~ are not subject to MS4 requirements (CFR 122.26(a)(7)).

Commented [A40]: MS4 permit is an NPDES permit. Confusing.

Table A.1 below provides a list of all Maryland counties and their municipalities that are required to be regulated under the MS4 program. The municipalities designated for Phase II MS4 general permit coverage are identified in the table based on the criteria herein. A municipality may request co-permittee status with its respective Phase I or Phase II county. Approximately 40 small municipalities are currently regulated through the MS4 NPDES program as co-permittees within Carroll, Montgomery, and Prince George's Counties.

Table A.1. Phase II MS4 General Permit Designation by County

Counties and Baltimore City	Jurisdictions Designated for Phase II MS4 Coverage	Justification
Allegany	Allegany County*	County is located within an urbanized area
Anne Arundel	Annapolis	City is located in a Phase I MS4
Baltimore	N/A	Phase I permit covers entire county
Baltimore City	N/A	Phase I permit covers entire city
Calvert	Calvert County*	County is located within an urbanized area
Caroline	N/A	Does not meet the urbanized area criteria
Carroll	N/A	Phase I permit covers all municipalities
Cecil	Cecil County, Elkton, North East*, Perryville*, and Rising Sun*	County and municipalities are located within an urbanized area
Charles	Indian Head* and La Plata*	Municipalities are located in a Phase I MS4
Dorchester	N/A	Does not meet the urbanized area criteria
Frederick	Brunswick, Emmitsburg, Frederick, Middletown, Mount Airy, Myersville, Thurmont, and Walkersville	Municipalities are located in a Phase I MS4
Garrett	N/A	Does not meet the urbanized area criteria
Harford	Aberdeen, Bel Air, Havre de Grace	Municipalities are located in a Phase I MS4
Howard	N/A	Phase I permit covers entire county
Kent	N/A	Does not meet the urbanized area criteria
Montgomery	Gaithersburg, Rockville, and Takoma Park	Municipalities are located in a Phase I MS4; Phase I permit covers all other municipalities
Prince George's	Bowie	Bowie is located in a Phase I MS4; Phase I permit covers all other municipalities
Queen Anne's	Queen Anne's County*	County is located within an urbanized area
St. Mary's	St. Mary's County*	County is located within an urbanized area
Somerset	N/A	Does not meet the urbanized area criteria
Talbot	Easton*	Easton population is greater than 10,000 and density greater than 1,000 people per sq. mi.
Washington	Washington County, Boonsboro*, Hagerstown, Smithsburg, and Williamsport*	County and municipalities are located within an urbanized area
Wicomico	Wicomico County* and Salisbury	County and city are located within an urbanized area
Worcester	N/A	Does not meet the urbanized area criteria

* Indicates a municipality newly designated for coverage as a Phase II small MS4

Eligible State and Federal Properties for MS4 Permit Coverage

Part 1.B. of the General Permit for Discharges from State and Federal Small Municipal Separate Storm Sewer Systems specifies eligibility criteria for government agencies. EPA gives states authority to determine which government properties require small MS4 general permit coverage. The definition of a small MS4 is noted under CFR 122.26(b)(16)(iii), and specifies: "…systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospitals or prison complexes, and highways or other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings." In determining eligibility criteria for State and federal permit coverage, MDE will rely on the CFR definition of a small MS4 which indicates that they are similar to municipal systems.

Other available documentation such as federal guidance defining urban areas and literature describing water resource impacts from developed lands are also an important consideration when determining eligibility criteria. For example, the U.S. Census Bureau defines "Nonresidential Urban Territory" in the Federal Register (volume 76, no. 164, August 24, 2011) as those areas that contain a "high degree of impervious surface," or twenty percent impervious area, and are within 0.25 miles of an urban area. Furthermore, documentation that evaluates the potential for properties to contribute pollutants to the storm drain system is also considered. For example, *Impacts of Impervious Cover on Aquatic Systems* (Center for Watershed Protection, 2003) indicates that in-stream water quality declines when watershed impervious cover exceeds ten percent.

Based on this information, MDE has determined that an impervious area threshold is appropriate for establishing eligibility criteria for government properties required to obtain MS4 general permit coverage. Eligible properties will be those that have greater than ten percent impervious area. This is a conservative threshold when compared to the U.S. Census Bureau's urban area definition for non-residential urban territory, and considers water quality and natural resource protection. This threshold will allow the focus of the small MS4 program to concentrate on the most developed properties, such as military bases, hospitals, prison complexes, and highways, and is consistent with the intent of federal regulations.

Based on the information described above, State and federal properties eligible for coverage:

1. Are owned, operated, or maintained by the State of Maryland or the United States of America (U.S.) and located within municipalities regulated under Phase I or Phase II permits; and

2. Serve developed land area greater than five acres and have at least ten percent impervious area property wide; or

3. Are those properties already covered under an NPDES small MS4 general permit.

State and Federal MS4 General Permit Waiver Criteria

As noted above, EPA allows some flexibility for how states determine which State and federal properties require small MS4 general permit coverage. CFR is clear that waivers may be granted to municipalities under certain conditions. Therefore, MDE will rely on the CFR definition of a small MS4 noted above (CFR 122.26(b)(16)(iii)) and language that applies to municipal waivers as the basis for the waiver provisions outlined below. CFR considers small State and federal MS4s to be similar to municipal systems; therefore, MDE may grant a waiver from permit coverage if an agency can demonstrate that a State or federal property:

1. Is located in very discrete areas, such as individual buildings. For example, a small facility containing few buildings that have associated parking and driveways with storm drains directly connected to a surrounding MS4 jurisdiction may be eligible for a waiver. On the other hand, facilities with numerous buildings, interior roads, and interior storm sewer infrastructure would not qualify for a waiver; and

2. Does not contribute substantially to the pollutant loadings of a physically interconnected regulated MS4 jurisdiction; and

3. Is not a military base, large hospital complex, prison complex, highway, or thoroughfare that meets MDE eligibility criteria.

MDE has developed a potential list of State and federal agencies (Tables A.2 and A.3) that will be affected by the eligibility criteria for permit coverage described above. Because numerous State and federal agencies are responsible for multiple properties, MDE recommends that permittees utilize options for filing joint applications and sharing responsibilities to most efficiently comply with permit requirements. State and federal agencies that own or operate any property that meets MDE's eligibility criteria shall obtain coverage under the NPDES program and comply with all terms and conditions of this MS4 permit, or apply for a waiver.

Summary

In accordance with the CWA, the criteria described above will require general permit coverage for the small municipalities and State and federal properties that have the greatest likelihood of causing discharge of polluted stormwater runoff. Regulating these small MS4s under the NPDES program will allow implementation of stormwater programs to protect water quality. MDE will consider additional information from municipal, State, or federal MS4 operators regarding eligibility of permit coverage, such as high population and growth areas, as well as whether a system discharges to sensitive waters, is contiguous to other regulated systems, or is a significant contributor of pollutant loadings to a physically interconnected MS4 that is regulated by the NPDES program.

Table A.2. Federal Agencies Potentially Eligible for Permit Coverage

Federal Agency	Property Name
Amtrak	Multiple Properties
Architect of the Capitol	Library of Congress at Fort Meade *
Army Reserves	1SG Adam S Brandt Memorial (Curtis Bay),* Jachman USARC*, Jecelin USARC #1*, Prince George's County Memorial USARC*
Dept of Agriculture	Beltsville Agricultural Research Center, * and National Plant Germplasm & Biotechnology Lab *
Dept of Defense, Air Force	Joint Base Andrews *
Dept of Defense, Army	Aberdeen Proving Grounds*, Fort Detrick*, Adelphi Lab*, Fort George G. Meade*, Washington Aqueduct* and multiple properties
Dept of Defense, Navy	Indian Head*, Bethesda*, Carderock*, Naval Academy* and multiple properties
Federal Bureau of Prisons	Multiple Properties
National Security Agency (NSA)	Ft Meade * and Friendship Annex
Dept of Homeland Security	FLETC Cheltenham Training Center* and multiple properties
National Park Service	Multiple Properties
Dept of Veterans Affairs (VA)	Multiple Properties (VA Hospitals)
General Services Administration	Multiple Properties
National Aeronautics and Space Administration (NASA)	Goddard Space Flight Center*
National Institutes of Health, NIH	Bethesda Campus * and multiple properties
National Institute of Standards & Technology (NIST)	Gaithersburg Campus *
U.S. Coast Guard	Multiple Properties
U.S. Postal Service	William F. Bolger Center * and multiple properties

* Indicates a federal facility or agency currently regulated under the Phase II small MS4 program

Table A.3. State Agencies Potentially Eligible for Permit Coverage

State Agency	Property Name
MD Air National Guard	Multiple Properties*
MD Army National Guard	Multiple Properties*
MD Aviation Authority	Martin State Airport* and other
MD Dept of General Services	Ellicott City District Court* and multiple properties
MD Dept of Health and Mental Hygiene	Multiple Properties
MD Dept of Juvenile Services	Multiple Properties
MD Dept of Public Safety & Correct Services	Multiple Properties
MD Dept of Transportation, Motor Vehicle Admin	Multiple Properties* including Glen Burnie*
MD Dept of Transportation, Port Admin	Multiple Properties*
MD Dept of Transportation, Transit Admin	Multiple Properties*
MD Dept of Transportation, Transportation Auth	Multiple Properties*
MD Food Center Authority	Multiple Properties
MD National Capital Parks & Planning (MNCPPC)	Montgomery* and Prince George's Parks
MD Stadium Authority	Camden Yards Complex*
MD State Police	Multiple Properties
Universities	Towson University,* College Park* and numerous additional campuses
Washington Metropolitan Area Transit (WMATA)	Multiple Metro Stations*
Washington Suburban Sanitary Commission (WSSC)	Multiple Properties*

* Indicates a State facility or agency currently regulated under the Phase II small MS4 program

APPENDIX B

Compliance with General Permit Requirements for Small Municipal Separate Storm Sewer Systems

Appendix B

Compliance with General Permit Requirements for Small Municipal Separate Storm Sewer Systems

The Maryland Department of the Environment (MDE) has issued two general discharge permits for Small Municipal Separate Storm Sewer Systems (MS4s): one for small municipalities and another for State and federal agencies. These two permits require that management programs be developed to effectively control the discharge of pollutants from stormwater runoff and improve water quality. These small MS4 general permits are issued in accordance with the Clean Water Act (CWA) and corresponding National Pollutant Discharge Elimination System (NPDES) regulations, 40 Code of Federal Regulations (CFR) 122.26. The permits establish the minimum requirements for municipal and State and federal agencies eligible for coverage under the NPDES program. This appendix provides guidance and additional information related to compliance with permit requirements. The guidance is organized into three sections as follows:

Section 1: *Describes management options for permit compliance;*

Section 2: *Provides guidance for developing an illicit discharge detection and elimination program; and*

Section 3: *Provides guidance for developing and implementing a restoration program to meet Chesapeake Bay water quality goals by 2025.*

Section I. Management Options for Permit Compliance

According to 40 CFR 122.30, the U.S. Environmental Protection Agency (EPA) strongly encourages partnerships and the watershed approach as the management framework for efficiently, effectively, and consistently protecting water quality and restoring aquatic ecosystems. This regulation offers flexibility to regulated operators for complying with permit requirements. Therefore, the following options may be considered by small MS4s during planning and implementation efforts. This will allow government entities and small municipalities to combine resources and collaborate with other NPDES programs to most effectively and efficiently achieve the water quality goals intended in the CWA.

A. Options for filing a Notice of Intent (NOI) Application.

MDE will allow multiple options for filing an NOI to receive permit coverage. An NOI application may represent an individual government facility or multiple properties owned or operated by a single entity. ~~If an NOI represents all storm sewers owned, operated, or maintained by a single entity, the application must specify each individual property to be covered under the permit.~~

Commented [A41]: Burdensome to list every individual property owned by a locality on the NOI.

B. Qualifying Local Programs (State or local).

An applicant may develop programs to comply with all minimum control measures independently, or rely on another responsible entity, or rely on a qualifying local program to comply with permit requirements. Maryland has existing State statutes and local ordinances in place that already require implementation of specific management measures that are more stringent than the conditions in 40 CFR Part 122. Therefore, the statewide regulatory requirements under the Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland for erosion and sediment control and Title 4, Subtitle 2 for stormwater management are considered to be "qualifying local programs." Compliance with these laws will meet the "Construction Site Stormwater Runoff Control" and "Post Construction Management" permit requirements. The permittee remains responsible for the implementation of these measures through compliance with Maryland's erosion and sediment control and stormwater management laws.

C. Sharing Responsibility.

A permittee may rely on another entity such as a State, federal, or municipal partner to satisfy one or more of the permit obligations. All permit obligations of each entity shall be noted in the NOI submitted to MDE according to PART II of this general permit and 40 CFR 122.35. Other responsible entities shall implement control measures that are at least as stringent as the corresponding requirements found in this NPDES general permit. Additionally, the other entity shall agree to implement the minimum control measures on the permittee's behalf. However, the permittee remains responsible for all regulatory obligations. Therefore, MDE encourages the permittee to enter into a legally binding agreement such as a memorandum of understanding with the other entity to minimize uncertainty about compliance with the permit. This information shall be specified in the NOI (Appendix C).

Section II. Illicit Discharge Detection and Elimination Program Guidance

Small municipalities and State and federal agencies covered under this NPDES MS4 permit are required to implement an illicit discharge detection and elimination (IDDE) program. The goal of an IDDE program is to find and eliminate pollutants entering the storm drain system. IDDE program activities include mapping the storm drain system, inspecting outfalls to discover polluted discharges, investigating the source of pollution, and taking steps to eliminate the discharge, which may include enforcement actions. Permittees are required to develop standard operating procedures (SOPs) that detail the steps to implement these activities. This section provides guidance that jurisdictions may use as a starting point to develop and implement their programs.

A discharge to a municipal separate storm sewer system is illicit if it is not composed entirely of stormwater [40 Code of Federal Regulations 122.26(b)(2)]. Illicit discharges can originate from a number of different types of sources, including incorrect plumbing, broken infrastructure, inappropriate business practices, and illegal dumping. For example, sanitary sewer lines or car wash drains may be connected to the storm sewer system instead of the sanitary sewer system. Drinking water lines or sanitary sewer pipes may be broken and leaking effluent into the storm sewer system. Businesses may be inappropriately washing vehicles, allowing wash water to drain into storm drain inlets. Illicit discharges may also result from purposeful dumping of pollutants into a storm drain.

A. Mapping

As part of their IDDE programs, permittees must develop a map which identifies all known outfalls and k n o w n storm drain conveyance systems owned or operated by the MS4 within the ~~jurisdiction~~regulated permit area. Outfalls are end points where collected and concentrated stormwater flows are discharged from pipes, concrete channels, and other structures that transport stormwater ~~within the jurisdictional property (see Figure B.1)~~to waters of the U.S. Typically, an outfall would be the end of pipe where stormwater discharges to a stream. ~~However, an outfall is not limited to stream bank discharge points. An end of pipe discharge may occur on a property above the receiving stream channel. These smaller pipes are good points to investigate in order to detect the source of an illicit discharge originating further up the system. An outfall can also be the discharge point of a stormwater management facility. In these instances; however, the inflow to the stormwater facility should also be mapped because an illicit discharge coming through the storm system is more likely to be detected at that location.~~

Figure B.1.*The above outfalls are examples of locations that should be identified on storm drain maps and included in the permittee's screening program if they discharge to waters of the U.S.. Areas with highly developed land uses (e.g., commercial business complexes, aging infrastructure) have a greater potential to pollute and should be prioritized. ~~Structural stability and erosion concerns should also be identified and corrected as part of an~~*

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Commented [A42]: Definition of outfall should be consistent with federal law. Points of discharge on property above a waterbody, discharges points from a BMP that do not discharge into waters, and inflow points are not outfalls.

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~~*effective IDDE program.*~~

Commented [A43]: Requiring outfall corrections is very expensive and time-consuming. Permittees should be focusing on developing a screening program and not how to address infrastructure.

B. Standard Operating Procedures

After outfalls are mapped, permittees should develop SOPs that outline methods to find and require the ~~eliminate~~ elimination of pollutants entering the ~~storm drain system~~MS4. The SOPs will identify the number of outfalls to be investigated per year, the frequency of dry weather outfall screenings, and methods for conducting outfall inspections. In addition, procedures to investigate and eliminate any suspected discharge are to be provided in the SOPs.

A Phase II MS4 municipality should screen ~~20% of total~~priority outfalls ~~per~~ each year~~, up to 100 outfalls~~. ~~This percentage would allow a jurisdiction to screen every outfall at least once per permit term, with the maximum amount being no greater than a medium Phase I MS4's requirement.~~ Screening efforts for State and federal facilities may be tiered based on property size. For small properties (i.e., less than 100 acres), all outfalls should be screened each year. Medium size properties (i.e., 100 - 2,000 acres) should screen 50% of total outfalls. Large properties (i.e., more than 2,000 acres) should screen 20% per year, up to 100 outfalls. A tiered approach takes into consideration the scale of each State or federal property. For example, a small facility with a total of five outfalls would be expected to screen all five outfalls per year. Likewise, larger facilities may screen a smaller percentage per year to account for the increased effort a greater number of outfalls would require.

The permittee's SOPs should also include an inspection checklist to be used in the field to document the outfall screening. A good resource for developing the IDDE program and field checklist is found in, *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, authored by the Center for Watershed Protection and Dr. Robert Pitt (2004). Figure B.2, the "Outfall Reconnaissance Inventory/Sample Collection Field Sheet", is one of several tools permittees may choose to use in their own programs. This checklist will assist a jurisdiction in identifying any potential illicit discharge, determining the need for a more in-depth investigation, and noting any other outfall maintenance needs (e.g., cracks, erosion, excessive vegetation).

C. Illicit Discharge Investigation

A dry weather screening is an outfall inspection conducted at a time when rain has not occurred recently, i.e., within the past 48 hours. During a period of dry weather, it is expected that any observed flow would be the result of some type of discharge other than precipitation. When a "dry weather flow" is observed, a jurisdiction must initiate an investigation to discover the source. If the source is determined to be illicit and the source can be identified after reasonable attempts to do so, the jurisdiction is required to take corrective measures to eliminate the discharge and initiate enforcement actions when necessary. Two examples of illicit discharge investigations are provided below to illustrate outfall identification, storm drain mapping, and discharge source tracking. These examples are taken from a Phase I MS4 annual report.

Example 1: Illicit Discharge Investigation for Discovered Wash Water

During a dry weather screening of Outfall 1, a flow was observed dripping into green sudsy water that had an oily odor. A chemical test indicated a high level of detergents. In the process of tracking the source, a high level of detergents was detected at Outfall 2, as well. The contributing storm drain was traced to a car wash that was believed to be discharging wash water into the storm drain system.

Example 2: Illicit Discharge Investigation for Detergents

A dry weather flow was discovered at the outfall of a stormwater management facility. A chemical test revealed the presence of chlorine and a high pH. A chemical test at the pond inflow indicated a high level of detergents. Upslope manholes were inspected to determine the path of the discharge through the storm drain system. Starting at the point of discharge and inspecting contributing segments of storm drain pipes (sometimes called a trunk investigation), a single point of flow that exceeded the acceptable level of detergents was isolated. The investigation revealed that the source of the discharge was located within the storm drain segment connected to inlets protected by berms on a private commercial business property yard.

D. Illicit Discharge Elimination and Enforcement

After identifying the source of an illicit discharge, a jurisdiction is required to provide notice to the property owner and ~~ensure~~ require that the responsible party takes appropriate action to eliminate the source of the illicit discharge. The jurisdiction may exercise its legal authority to access the property and utilize enforcement. These IDDE investigation procedures and enforcement actions will be specified in the permittee's SOPs.

Figure B.2. Outfall Reconnaissance Inventory/Sample Collection Field Sheet
(Center for Watershed Protection and Pitt, 2004)

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours:	Last 48 hours:	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
☐ Industrial		☐ Open Space	
☐ Ultra-Urban Residential		☐ Institutional	
☐ Suburban Residential		Other: _____	
☐ Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☐ Box ☐ Other: ____	☐ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☐ No *If No, Skip to Section 5*				
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
☐Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	☐ Yes	☐ No	
2. If yes, collected from:	☐ Flow	☐ Pool	
3. Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Section III. Guidance for Impervious Area Restoration Program Development

Small MS4 operators covered under this NPDES general permit are required to commence impervious area restoration for twenty percent of existing developed lands that have little or no stormwater management by the end of the permit term. This requirement supports the Maryland Watershed Implementation Plan (WIP) strategy for achieving nutrient and sediment load reductions on small MS4 properties to address Chesapeake Bay and local total maximum daily loads (TMDLs). Guidance for implementing restoration activities is available in the document, *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated* (MDE, 2014). While MDE, 2014 should be referenced by all stormwater permittees, the discussion below highlights the most relevant information from that document for small MS4 operators. This provides a clear outline for compliance with impervious area restoration for small MS4s.

A. Establishing Baselines: Impervious Surface Area Assessment

Permittees will need to determine the total impervious surface area ~~under their responsibility~~with the regulated MS4 Permit Area and delineate the portions that are treated with acceptable water quality BMPs to the maximum extent practicable (MEP). This analysis will provide the baseline used to calculate the twenty percent restoration requirement. The following information is needed for this assessment:

1. **Small MS4 Permit Area:** Determine the total impervious area within the regulated Permit Area ~~jurisdiction-wide~~. MDE recommends collaborating with large or medium MS4 jurisdictions to assist with this analysis and ensure that no area is accounted for twice.

2. **Land Use and Impervious Surface Area Analysis:** Evaluate the total impervious surface within a jurisdiction's regulated ~~permit~~ Permit ~~area~~ Area using the best available land use data that can be generated from the same source from year to year. The baseline year for the impervious area assessment may be 2002, which is the year that the 2000 Maryland Stormwater Design Manual (Manual) was fully implemented. BMPs designed in compliance with the water quality volume (WQ_v) treatment criteria found in the Manual are considered to provide water quality treatment to the MEP. Therefore, the impervious area draining to BMPs designed and approved in accordance with the Manual does not need to be counted toward impervious area restoration requirements.

3. **Urban BMPs:** All municipalities and State and federal agencies are required to develop and maintain an urban BMP database in accordance with Table B.1. The database identifies all existing stormwater facilities within each jurisdiction along with design, construction, and inspection information. This database and accompanying field inspections shall be used to verify the level of water quality treatment provided for an existing facility. The following guidelines can be used to determine the level of water quality treatment provided by existing stormwater facilities:

Commented [A44]: Inconsistent with the Accounting Guidance, which requires the permittee to first determine the regulated Permit Area based on delineation on MS4 it "owns or operates." The baseline is then based on the "total impervious surface within a jurisdiction's regulated permit area." P. 6.

- BMPs constructed according to the Manual for new development after the baseline year of 2002 provide acceptable water quality treatment. The impervious areas draining to these facilities do not need to be counted in the impervious area required to be restored.
- BMPs implemented for new development after 2002 may not be used for credit toward impervious area restoration.
- BMPs implemented prior to 2002 may provide some water quality treatment. These include wet ponds, wetlands, and infiltration facilities. In these cases, the original design parameters for each facility are needed to verify the level of treatment provided. The impervious area treated is based on the volume provided in relation to the WQ_v (i.e., runoff from 1 inch of rainfall). For example, if a BMP was designed to treat a half inch of rainfall, the amount of impervious area treated is 50% of the actual impervious area draining to the facility.
- Stormwater detention facilities designed for flood control do not provide water quality treatment. The impervious area draining to these BMPs must count toward the baseline.
- Where ~~plans, design specifications, and complete~~ recent (within the past 3 years) inspection and maintenance records are not available, BMPs are not considered to provide acceptable water quality treatment. Impervious areas draining to these structures must count toward the baseline.
- The impervious area treated by BMPs implemented for retrofitting or redevelopment between 2002 and 2006 may be subtracted from the baseline number.

Commented [A45]: A recent inspection showing that the BMP is working and in good condition should be adequate to show acceptable treatment. Unclear why it is necessary for an MS4 to provide plans or design specifications or inspection records from a decade ago in order to reduce baseline. These documents may be difficult to find, and requiring them may be punitive in certain cases.

A useful tool for an initial assessment is the Stormwater Management by Era approach documented by MDE in 2009. The approach considers four distinct regulatory eras where stormwater management requirements correlate with a certain level of BMP performance. These eras are as follows:

- Prior to 1985. Stormwater management regulations came into effect after this era. Any development constructed in this time period is most likely untreated (unless retrofits were constructed in later years).
- Between 1985 and 2002. BMPs implemented during this time addressed flood control; however, individual BMP design criteria shall be used to verify whether water quality is provided.
- Between 2002 and 2010. The Manual was fully implemented during this era.
- Post-2010. Environmental site design (ESD) to the MEP is required. Any development project that complied with State regulations in the third and fourth eras is considered to have acceptable water quality treatment.

This approach was used in the development of Maryland's WIP for meeting Chesapeake Bay TMDLs. It can be used for identifying BMPs that provide water quality so that the treated impervious areas may be deducted from the baseline assessment. The stormwater management by era approach can also be valuable for long term planning and for targeting potential areas suitable for retrofitting.

4. **Impervious Surfaces in Rural Areas:** Many rural roads and residential subdivisions have open vegetated drainage systems, impervious area disconnections, and sheetflow to conservation areas that filter and infiltrate stormwater runoff. Each jurisdiction should conduct a systematic review of existing rural areas to determine the extent of water quality treatment already provided. This review will also aid in identifying opportunities for retrofitting.

   Land use designation can help in selecting areas that are already adequately managed. For example, public roads and residential subdivisions in predominantly rural areas with low population densities (e.g., one or fewer dwelling unit per three acres) may have water quality design features equivalent to those defined in the Manual. Typically, areas that are less than fifteen percent impervious may meet ESD requirements according to the criteria for nonstructural practices in the Manual. These practices include rooftop disconnect, non-rooftop disconnect, and sheetflow to conservation areas. If a jurisdiction documents where conditions meet the Manual's criteria and adequate management is provided, then the impervious acres in these areas may be excluded from the baseline.

5. **Total Impervious Acres Not Treated to the MEP:** Subtract total impervious areas draining to water quality BMPs and nonstructural practices (determined in steps 3 and 4 above) from the total impervious ~~land area owned or operated by the jurisdiction as of 2002~~surface within the permittee's regulated Permit Area (step 2 above). Restoration requirements will apply to twenty percent of the remaining untreated land area.

B. Impervious Area Restoration Criteria

The water quality objective for impervious area restoration is based on treating the WQ_v (1 inch of rainfall) using BMPs defined in the Manual. Because of numerous constraints inherent in the urban environment, meeting the design standards specified in the Manual may not always be achievable. In these cases, retrofit opportunities that currently achieve less than the WQ_v should be pursued where they make sense. Applying impervious area treatment credit for these projects will be based on the proportion of the full WQ_v treated.

Where stormwater retrofits provide water quality treatment for existing unmanaged urban areas, impervious area restoration credit may be applied according to the following criteria:

- An acre for acre impervious credit will be given when a BMP is designed to provide treatment for the full WQ_v (1 inch of rainfall); or
- A proportional acreage of credit will be given when less than the WQ_v is provided: (percent of the WQ_v achieved) x (drainage area impervious acres).

C. Acceptable Restoration Strategies

The following are acceptable restoration strategies for receiving impervious area restoration credit. Permittees may submit alternative actions to comply with impervious area restoration requirements, subject to MDE approval.

1. **New Retrofit BMPs:** This includes new stormwater BMPs installed to provide water quality treatment for existing developed lands with no controls. Acceptable water quality BMPs and design criteria are provided in the Manual. When a BMP from this list is used and the full WQ_v is provided, the total impervious surface within the drainage area may be credited toward restoration.

2. **Existing BMP Retrofits:** These are existing BMPs that were not originally designed to provide water quality treatment (e.g., detention pond). As discussed previously, the impervious area draining to these BMPs may not be counted as treated. However, when retrofitted to an acceptable water quality BMP, such as converting a dry pond to a wetland, or providing additional WQ_v storage; the impervious acres draining to the BMP may be credited as restored.

3. **BMP Enhancement and Restoration:** Routine inspection and maintenance is essential to ensure optimal water quality treatment of any BMP. When BMP maintenance has not been performed, substantial structural problems will occur over time, undermining any water quality benefit intended from the practice. Therefore, when BMPs are not properly maintained they may not be considered to provide effective treatment for impervious surfaces. If credit was originally taken for water quality treatment, then future annual reports should remove that credit until the facility is restored.

   MDE has published guidance for inspection and maintenance in the *Maryland Stormwater Management Guidelines for State and Federal Projects* (MDE, 2015). These guidelines offer maintenance schedules for each BMP and specified time periods for inspection and corrective action. In addition, the Natural Resources Conservation Service of Maryland has published *Pond Code 378*, which includes an inspection checklist for ponds. Code 378 identifies areas that will cause significant problems if left unaddressed. When inspections and repairs are performed according to these guidelines (or others required by local review authorities), then the facility is considered properly maintained.

   When a BMP has failed and significant structural problems exist, the BMP must be restored to receive proper restoration credit. Restoring a failed BMP should include providing the full WQ_v, and may entail increasing storage capacity, providing forebays, increasing the flow path by installing berms or other design enhancements, re-planting with desirable wetland and native vegetation, or significant sediment clean outs. This is intended to ensure that BMPs are functioning as designed and that routine maintenance is addressed throughout the life of the BMP in order for the permittee to keep the credit.

4. **Alternative Stormwater BMPs**: MDE, 2014 recognizes that new and innovative approaches to stormwater management are being developed on a continuous basis. Therefore, several alternative BMPs are documented that may be used for the purpose of impervious area restoration. Some of these alternative BMPs include street sweeping, buffer planting, reforestation, stream restoration, shoreline stabilization, and others. A complete list of these alternative BMPs is provided in Table B.2, below. MDE, 2014 provides a method for translating pollutant load reductions from alternative BMPs into an impervious acre equivalent in order to credit these practices toward restoration requirements.

   Impervious acres treated shall be reported according to the "impervious acre equivalent" identified in Table B.2 for each alternative practice. As an example, where stream restoration is proposed, the impervious acre equivalent is equal to 0.01 acre per linear foot. This means that when 1,000 linear feet of stream is restored, then 10 acres of credit may be granted toward impervious area restoration.

5. **Trading**: MDE supports trading as a cost effective means for achieving pollutant load reductions. Adoption of new trading regulations in Maryland will include public participation ~~and approval by EPA~~. Therefore, trading with other source sectors ~~may be an~~will be authorized upon the adoption of such regulations or similar guidance or policy. ~~option after formal regulatory procedures are satisfied.~~

6. **Redevelopment:** Maryland's stormwater management regulations for redeveloped lands are intended to gain water quality treatment on existing developed lands while supporting initiatives to improve urban areas. Therefore, when water quality treatment practices are provided to address State redevelopment regulations, the existing impervious area treated may be credited toward restoration requirements. In most cases the credit will be equivalent to 50% of the existing impervious area for the project. When additional volume above the regulatory requirements is provided, additional credit will be accepted on a proportional basis as described in Section III.A above.

7. **Establishing Partnerships and Master Planning**: As discussed above, redevelopment activities may be credited toward restoration requirements. This presents an opportunity to develop future growth master plans to provide water quality treatment beyond regulatory requirements. This can be a cost effective solution for addressing Maryland's stormwater management regulations while incorporating impervious area restoration initiatives into long-range planning efforts.

   Small MS4 municipalities may work with private developers and offer incentives in order to gain additional water quality treatment for a project. MDE encourages localities to actively engage the development community through the stormwater plan review and approval process. There are numerous examples where larger MS4 jurisdictions have successfully partnered with private developers for this purpose.

In addition to partnerships with the private sector, small municipalities and government entities have the opportunity to collaborate with other watershed groups, and State, federal, or local entities to combine resources and facilitate implementation of restoration activities. As discussed in Section I of Appendix B, this could be a formal agreement with another entity and outlined in the NOI application, or this may be a partnership established for an individual project. Because the intent of the small MS4 general permit is to encourage partnerships to achieve the water quality goals of the CWA, MDE will remain flexible when any permittee pursues this option.

Table B.1. Urban Best Management Practice (BMP) Database and Codes

The BMP database below will tabulate a list of all BMPs within a jurisdiction. BMPs may be entered as a single structure or as a system of practices. For example, the ESD to the MEP mandate requires numerous ESD practices to be installed throughout a site in order to meet stormwater requirements; in these cases, local jurisdictions may enter the system of ESD practices by specifying the number and type of BMPs used to meet the target rainfall requirements (PE_REQ). These data may be entered in the NUM_BMPS and ESD_MEP fields shown below. Data for the Maryland grid coordinates for ESD systems should report the location of the most downstream practice.

Column Name	Data Type	Size	Description
YEAR	NUMBER	4	Annual report year
BMP_ID	TEXT	13	BMP ID code[1]
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
WATERSHED8DGT	NUMBER	8	Maryland 8-digit hydrologic unit code
WATERSHED12DGT	NUMBER	12	USGS 12-digit hydrologic unit code
BMP_NAME	TEXT	50	Name of BMP
BMP_CLASS	TEXT	1	BMP classification category (see list of BMPs: E, S, or A)
BMP_TYPE	TEXT	5	Type of BMP (see list of BMP classifications: enter code) [2]
NUM_BMPS	NUMBER	2	Number of all BMPs used to meet PE_REQ
ESD_MEP	TEXT	75	Type of all BMPs used to meet PE_REQ
LAND_USE	NUMBER	3	Predominant land use[3]
GEN_PERM_NUM	TEXT	10	General Discharge Permit Number
NPDES_PERM_NUM	TEXT	9	General NPDES No.
ADDRESS	TEXT	75	BMP address
CITY	TEXT	50	BMP City
STATE	TEXT	2	BMP State
ZIP	NUMBER	5	BMP zip code
ON_OFF_SITE	TEXT	10	On or offsite structure
CON_PURPOSE	TEXT	4	New development (NEWD), Redevelopment (REDE), or Restoration (REST)
CONVERTED_FROM	TEXT	5	If conversion of existing BMP then prior BMP type is required[8]
BMP_STATUS	TEXT	10	Status of BMP (active, removed) [8]
DRAIN_AREA	NUMBER	6	Structure drainage area (acres)[4, 8]
IMP_ACRES	NUMBER	8	Structure impervious drainage area (acres)[4, 8]
PE_REQ	NUMBER	8	P_E required[5, 8]
PE_ADR	NUMBER	8	P_E addressed[6, 8]
IMP_ACRES_REST	NUMBER	4	Equals IMP_ACRES when PE_ADR = 1 inch (for restoration only) [8]
RCN_PRE	NUMBER	2	Runoff curve number (weighted)[7, 8]
RCN_POST	NUMBER	2	Runoff curve number (weighted)[7, 8]
RCN_WOODS	NUMBER	2	Runoff curve number (weighted)[7, 8]
APPR_DATE	DATE/TIME	8	Permit approval date[8]
BUILT_DATE	DATE/TIME	8	As Built completion date (MM/DD/YYYY)
GEN_COMNT	TEXT	60	General comments

Column Name	Data Type	Size	Description
ADDITIONAL DATA REQUIREMENTS FOR ALL ALTERNATIVE BMPS			
PROJECT_NAME	TEXT	25	Name of project
PROJECT_DESCR	TEXT	75	Description of project
PROJECT_LENGTH	NUMBER	6	For stream restoration, shoreline stabilization, or outfall stab in feet
ACRES_SWEPT	NUMBER	6	Acres swept for street sweeping
TIMES_SWEPT	NUMBER	6	Number of times per year area is swept
ACRES_PLANTED	NUMBER	6	Acres of trees planted on urban impervious (IMPF)
ACRES_PLANTED	NUMBER	6	Acres of trees planted on pervious (FPU)
IMPERV_ACR_ELIM	NUMBER	6	Impervious acres removed to pervious land (IMPP)
EQ_IMP_ACRES	NUMBER	6	Equivalent impervious acres treated by alternative BMP (see Table B.2)
INSPECTION/MAINTENANCE DATA REQUIRED FOR ALL NEW, REDEVELOPMENT, RETROFIT, AND ALTERNATIVE BMPS			
BMP_STATUS	TEXT	4	Pass/Fail
LAST_INSP_DATE	DATE/TIME	8	Last inspection date
MAIN_DATE	DATE	8	Last date maintenance was performed (MM/DD/YYYY)
REINSP_STATUS	DATE/TIME	4	Pass/Fail
REINSP_DATE	DATE/TIME	8	Next planned inspection date (MM/DD/YYYY)
REPORTING YEAR	TEXT	4	State fiscal year (YYYY)
GEN_COMNT	TEXT	60	General comments

MDE Approved BMP Classifications

Category	Code	Code Description
ESD BMPs		
Alternative Surfaces (A)		
E	AGRE	Green Roof – Extensive
E	AGRI	Green Roof – Intensive
E	APRP	Permeable Pavements
E	ARTF	Reinforced Turf
Nonstructural Techniques (N)		
E	NDRR	Disconnection of Rooftop Runoff
E	NDNR	Disconnection of Non-Rooftop Runoff
E	NSCA	Sheetflow to Conservation Areas
Micro-Scale Practices (M)		
E	MRWH	Rainwater Harvesting
E	MSGW	Submerged Gravel Wetlands
E	MILS	Landscape Infiltration
E	MIBR	Infiltration Berms
E	MIDW	Dry Wells
E	MMBR	Micro-Bioretention
E	MRNG	Rain Gardens
E	MSWG	Grass Swale
E	MSWW	Wet Swale
E	MSWB	Bio-Swale
E	MENF	Enhanced Filters
Structural BMPs		
Ponds (P)		
S	PWED	Extended Detention Structure, Wet
S	PWET	Retention Pond (Wet Pond)
S	PMPS	Multiple Pond System

Category	Code	Code Description
S	PPKT	Pocket Pond
S	PMED	Micropool Extended Detention Pond
Wetlands (W)		
S	WSHW	Shallow Marsh
S	WEDW	ED – Wetland
S	WPWS	Wet Pond – Wetland
S	WPKT	Pocket Wetland
Infiltration (I)		
S	IBAS	Infiltration Basin
S	ITRN	Infiltration Trench
Filtering Systems (F)		
S	FBIO	Bioretention
S	FSND	Sand Filter
S	FUND	Underground Filter
S	FPER	Perimeter (Sand) Filter
S	FORG	Organic Filter (Peat Filter)
S	FBIO	Bioretention
Open Channels (O)		
S	ODSW	Dry Swale
S	OWSW	Wet Swale
Other Practices (X)		
S	XDPD	Detention Structure (Dry Pond)
S	XDED	Extended Detention Structure, Dry
S	XFLD	Flood Management Area
S	XOGS	Oil Grit Separator
S	XOTH	Other

MDE Approved Alternative BMP Classifications

Alt. BMPs (A)	Code	Code Description
A	MSS	Mechanical Street Sweeping
A	VSS	Regenerative/Vacuum Street Sweeping
A	IMPP	Impervious Surface Elimination (to pervious)
A	IMPF	Impervious Surface Elimination (to forest)
A	FPU	Planting Trees or Forestation on Pervious Urban
A	CBC	Catch Basin Cleaning
A	SDV	Storm Drain Vacuuming
A	STRE	Stream Restoration
A	OUT	Outfall Stabilization
A	SPSC	Regenerative Step Pool Storm Conveyance
A	SHST	Shoreline Management
A	SEPP	Septic Pumping
A	SEPD	Septic Denitrification
A	SEPC	Septic Connections to WWTP
A	NNET	Nutrient Net (Agriculture Trading)
A	POTW	Publicly Owned Treatment Works (WWTP Trading)

Notes:

1. Use unique BMP identification codes listed below
2. For ESD to MEP, enter the most predominant BMP type
3. Use Maryland Office of Planning (MDP) land use codes listed below
4. GIS shapefile optional
5. Rainfall target (from Table 5.3, Design Manual pp.5.21-22) used to determine ESD goals and size practices (for new development or redevelopment). If practice is for restoration, then PE_REQ is 1inch.
6. Rainfall addressed (using both ESD techniques and practices, and structural practices) by the BMPs within the drainage area
7. Optional – information should be submitted if available
8. Information not applicable for alternative BMPs

BMP Identification Codes: Each stormwater best management structure or water quality improvement project will need a unique identification code. For management of these data statewide it is necessary that these codes also indicate the jurisdiction where they are implemented, the year, and unique BMP number. County, City, or State abbreviations are listed below for NPDES Phase I jurisdictions to use as part of each BMP's identification code.

Jurisdiction	Code
Anne Arundel County	AA
Baltimore City	BC
Baltimore County	BA
Carroll County	CA
Cecil County	CC
Charles County	CH
Frederick County	FR
Harford County	HA
Howard County	HO
Prince George's County	PG
Montgomery County	MO
Maryland State Highway Administration	SHA
Washington County	WH

Small municipalities and State and federal agencies may develop their own jurisdiction code. An example BMP code for a federal agency using the required 13 characters is provided for a BMP located at National Institute of Health (NIH) implemented in 2012. In this case, the BMP ID code may be: NIH12BMP00001

MDP Land Use/Land Cover

10 Urban Built-up

- **11 Low Density Residential** – Detached single family/duplex dwelling units, yards, and associated areas. Areas of more than 90 percent single family/duplex dwelling units, with lot sizes less than five acres but at least one-half acres (0.2 dwelling units/acre to 2 dwelling units/acre).

- **12 Medium Density Residential** – Detached single family/duplex, attached single unit row housing, yards, and associated areas. Areas of more than 90 percent single family/duplex units and attached single unit row

housing, with lot sizes of less than one-half acre but at least one-eighth acre (2 dwelling units/acre to 8 dwelling units/acre).

- **13 High Density Residential** – Attached single unit row housing, garden apartments, high rise apartments/condominiums, mobile home and trailer parks. Areas of more than 90 percent high density residential units, with more than 8 dwelling units/acre.

- **14 Commercial** – Retail and wholesale services. Areas used primarily for the sale of products and services, including associated yards and parking areas.

- **15 Industrial** – Manufacturing and industrial parks, including associated warehouses, storage yards, research laboratories, and parking areas.

- **16 Institutional** – Elementary and secondary schools, middle schools, junior and senior high schools, public and private colleges and universities, military installations (built-up areas only, including buildings and storage, training, and similar areas) churches and health facilities, correctional facilities, and government offices and facilities that are clearly separable from the surrounding land cover.

- **17 Extractive** – Surface mining operations, including sand and gravel pits, quarries, coal surface mines, and deep coal mines. Status of activity (active vs. abandoned) is not distinguished.

- **18 Open Urban Land** – Urban areas whose use does not require structures, or urban areas where non-conforming uses characterized by open land have become isolated. Included are golf courses, parks, recreation areas (except associated with schools or other institutions), cemeteries, and entrapped agricultural and undeveloped land within urban areas.

- **191 Large Lot Subdivision (Agriculture)** – Residential subdivisions with lot sizes less than 20 acres but at least 5 acres, with a dominant land cover of open fields or pasture.

- **192 Large Lot Subdivision (Forest)** - Residential subdivisions with lot sizes less than 20 acres but at least 5 acres, with a dominant land cover of deciduous, evergreen or mixed forest.

20 Agriculture

- **21 Cropland** – Field and forage crops.

- **22 Pasture** – Land used for pasture, both permanent and rotated: grass.

- **23 Orchards/Vineyards/Horticulture** – Areas of intensively managed commercial bush and tree crops, including areas used for fruit production, vineyards, sod and seed farms, nurseries, and green houses.

- **24 Feeding Operations** – Cattle or hog feeding lots, poultry houses, and holding lots for animals, and commercial fishing areas (including oyster beds).

- **241 Feeding Operations** – Cattle or hog feeding lots, poultry houses, and holding lots for animals.

- **242 Agricultural Building** – Breeding and training facilities, storage facilities, built-up areas associated with a farmstead, small farm ponds, and commercial fishing areas.

- **25 Row and Garden Crops** – Intensively managed track and vegetable farms and associated areas.

40 Forest

- **41 Deciduous Forest** – Forested areas in which the trees characteristically lose their leaves at the end of the growing season. Included are such species as oak, hickory, aspen, sycamore, birch, yellow poplar, elm, maple, and cypress.

- **42 Evergreen Forest** - Forested areas in which the trees are characterized by persistent foliage throughout the year. Included are such species as white pine, pond pine, hemlock, southern white cedar, and red pine.

- **43 Mixed Forest** – Forested areas in which neither deciduous or evergreen species dominate, but in which there is a combination of both types.

- **44 Brush** – Areas that do not produce timber or other wood products but may have cut-over timber stands, abandoned agriculture fields, or pasture. These areas are characterized by vegetation types such as sumac, vines, rose, brambles, and tree seedlings.

50 Water – Rivers, waterways, reservoirs, ponds, bays, estuaries, and ocean.

60 Wetlands – Forested and non-forested wetlands, including tidal flats, tidal and non-tidal marshes, and upland swamps and wet areas.

70 Barren Land

- **71 Beaches** – Extensive shoreline areas of sand and gravel accumulation, with no vegetative cover or other land use.

- **72 Bare Exposed Rock** – Areas of bedrock exposure, scarps, and other natural accumulations of rock without vegetative cover.

- **73 Bare Ground** – Areas of exposed ground caused naturally, by construction, or other cultural processes.

Table B.2. Alternative Urban BMPs and Impervious Acre Credit

Alternative BMP	Calculating Impervious Acre Credit[1]	Impervious Acre Equivalent
Mechanical Street Sweeping	Acres swept multiplied by 0.07 = acres of credit	0.07
Regen/Vacuum Street Sweeping	Acres swept multiplied by 0.13 = acres of credit	0.13
Reforestation on Pervious Urban	Acres of reforested land multiplied by 0.38 = acres of credit	0.38
Impervious Urban to Pervious	Acres of reforested land multiplied by 0.75 = acres of credit	0.75
Impervious Urban to Forest	Acres of reforested land multiplied by 1.00 = acres of credit	1.00
Regenerative Step Pool Storm Conveyance (SPSC)[2]	Located in dry or ephemeral channels; credit is based on rainfall depth treated	Varies[2]
Catch Basin Cleaning	Tons of dry material collected multiplied by 0.40 = acres of credit	0.40
Storm Drain Vacuuming	Tons of dry material collected multiplied by 0.40 = acres of credit	0.40
Mechanical Street Sweeping	Tons of dry material collected multiplied by 0.40 = acres of credit	0.40
Regen/Vacuum Street Sweeping	Tons of dry material collected multiplied by 0.40 = acres of credit	0.40
Stream Restoration	Linear feet of stream restored multiplied by 0.01 = acres of credit	0.01
Outfall Stabilization	Linear feet of outfall stabilized multiplied by 0.01 = acres of credit; max credit is 2 acres per project	0.01
Shoreline Management	Linear feet of shoreline restored multiplied by 0.04 = acres of credit	0.04
Septic Pumping	Units pumped (annually) multiplied by 0.03 = acres of credit	0.03
Septic Denitrification	Units upgraded (w/denitrification) multiplied by 0.26= acres of credit	0.26
Septic Connections to WWTP	Units connected to a WWTP multiplied by 0.39 = acres of credit	0.39

1. For more information on calculating credits for alternative BMPs, see *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated* (MDE, 2014).
2. Full impervious area credit is granted when practice treats 1 inch of rainfall. If the full WQ_v is not provided, then the impervious area credit is based on the percentage of 1 inch that is treated. Described in Section III.B.

APPENDIX C

Municipal Small MS4 Notice of Intent

Municipal Small MS4 Notice of Intent

Maryland Department of the Environment (MDE)

National Pollutant Discharge Elimination System (NPDES) Small Municipal Separate Storm Sewer Systems (MS4) General Permit

This Notice of Intent (NOI) is intended for municipalities applying for coverage under the General Discharge Permit (No. 13-IM-5500) for Small MS4s. Submitting this application constitutes notice that the entity below agrees to comply with all terms and conditions of the general permit. The information required in this NOI shall be submitted to:

Maryland Department of the Environment, Water Management Administration
Sediment, Stormwater, and Dam Safety Program
1800 Washington Boulevard, Baltimore, MD 21230-1708
Phone: 410-537-3543 FAX: 410-537-3553
Web Site: www.mde.maryland.gov

Field Code Changed

Contact Information

Jurisdiction Name:

Responsible Personnel:

Mailing Address:

Phone Number(s):

Email address:

Additional Contact(s):

Mailing Address:

Phone Number(s):

Email address:

Signature of Responsible Personnel

~~I certify under penalty of law that I have personally examined and am familiar with the information submitted in this NOI and all attachments. I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.~~

Printed Name Signature Date

Commented [A46]: Substitute correct certification text from EPA's NPDES regulations. 40 C.F.R. § 122.22 requires that permit applications and reports include the following certification statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Municipal Small MS4 Notice of Intent

Due Date: **Date of Submission:**

Permittee Information

Renewal Permittee: ☐

New Permittee: ☐

Check if sharing responsibilities with another entity: ☐ Yes ☐ No

Required Information

1. A brief description of jurisdiction for which coverage is being sought:

2. The approximate size of jurisdiction (square miles):

3. Population:

4. Provide a list of all other NPDES permits that have been issued by MDE to the jurisdiction:

5. Describe any programs that the applicant will share responsibilities for compliance with another entity. Describe the role of all parties and include a copy of a memorandum of agreement when applicable:

~~6. Anticipated expenditures to implement the terms and conditions of the permit:~~

APPENDIX D

Municipal Small MS4 Progress Report

Municipal Small MS4 Progress Report

Maryland Department of the Environment (MDE)

National Pollutant Discharge Elimination System (NPDES) Small Municipal Separate Storm Sewer Systems (MS4) General Permit

This Progress Report is required for those jurisdictions covered under General Discharge Permit No. 13-IM-5500. Progress Reports shall be submitted to:

Maryland Department of the Environment, Water Management Administration
Sediment, Stormwater, and Dam Safety Program
1800 Washington Boulevard, Suite 440, Baltimore, MD 21230-1708
Phone: 410-537-3543 FAX: 410-537-3553
Web Site: www.mde.maryland.gov

Field Code Changed

Contact Information

Jurisdiction Name:

Responsible Personnel:

Mailing Address:

Phone Number(s):

Email address:

Additional Contact(s):

Mailing Address:

Phone Number(s):

Email address:

Signature of Responsible Personnel

~~I certify under penalty of law that I have personally examined and am familiar with the information submitted in this annual report. I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.~~

Printed Name Signature Date

Commented [A47]: Substitute correct certification statement from EPA NPDES regulations. EPA's NPDES regulations (40 C.F.R. § 122.22) require that permit applications and reports include the following certification statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Municipal Small MS4 Progress Report

Reporting Period (State Fiscal Year):

Due Date: **Date of Submission:**

Type of Report Submitted:

Impervious Area Restoration Progress Report (Annual): ☐

Six Minimum Control Measures Progress (Years 2 and 4): ☐

Both: ☐

Permittee Information:

Renewal Permittee: ☐

New Permittee: ☐

Compliance with Reporting Requirements

Part VI of the Small MS4 General Discharge Permit (No. 13-IM-5500) specifies the reporting information that needs to be submitted to MDE to demonstrate compliance with permit conditions. The specific information required in this MS4 Progress Report includes:

1. Annual progress toward compliance with impervious area restoration requirements in accordance with Part V of the general permit. All requested information and supporting documentation shall be submitted as specified on pages D-4 – D-6 of this report.
2. Periodic reports showing progress toward compliance with the six minimum control measures shall be submitted in years 2 and 4 of the permit term (unless otherwise specified by MDE). All requested information and supporting documentation shall be reported as specified on pages D-7 – D-19 of this report.

Instructions for Completing Appendix D Reporting Forms

The reporting forms provided in Appendix D allow the user to electronically fill in answers to questions. Users may enter quantifiable information, e.g., number of outfalls inspected, in text boxes. When a more descriptive explanation is requested, the reporting forms will expand as the user types to allow as much information needed to fully answer the question. The permittee should indicate in the forms when attachments are included to provide sufficient information required in the MS4 progress report.

Impervious Area Restoration Reporting

1. Was the impervious area baseline assessment submitted in year 1?
   ☐ Yes ☐ No

   If No, describe the status of completing the required information and provide a date at which all information required by MDE will be submitted:

   Total impervious acres of jurisdiction covered under this permit:

   Total impervious acres treated by stormwater water quality BMPs:

   Total impervious acres treated by BMPs providing partial water quality treatment (multiply acres treated by percent of water quality provided):

   Total impervious acres treated by nonstructural practices (i.e., rooftop disconnections, non-rooftop disconnections, or vegetated swales):

   Total impervious acres untreated in the jurisdiction:

   Twenty percent of this total area (this is the restoration requirement):

   Verify that all impervious area draining to BMPs with missing inspection records is not considered treated. Describe how this information was incorporated into the overall analysis:

2. Has an Impervious Area Restoration Work Plan been developed and submitted to MDE in accordance with Part V.B, Table 1 of the permit?
   ☐ Yes ☐ No

   Has MDE approved the work plan?
   ☐ Yes ☐ No

   If the answer to either question is No, describe the status of submitting (or resubmitting) the work plan to MDE and provide a date at which all outstanding information will be available:

Impervious Area Restoration Reporting

Describe progress made toward restoration planning, design, and construction efforts and describe adaptive management strategies necessary to meet restoration requirements by the end of the permit term:

3. Has a Restoration Schedule been completed and submitted to MDE in accordance with Part V.B, Table 2 of the permit?
   ☐Yes ☐No

   In year 5, has a complete restoration schedule been submitted including a complete list of projects and implementation dates for all BMPs needed to meet the twenty percent restoration requirement?
   ☐Yes ☐No

   Are the projected implementation years for completion of all BMPs no later than 2025?
   ☐ Yes ☐No

   Describe actions planned to provide a complete list of projects in order to achieve compliance by the end of the permit term:

   Describe the progress of restoration efforts (attach examples and photos of proposed or completed projects when available):

4. Has the BMP database been submitted to MDE in Microsoft Excel format in accordance with Appendix B, Table B.1?
   ☐Yes ☐No

   Is the database complete?
   ☐ Yes ☐No

   If either answer is No, describe efforts underway to complete all data fields, and a date that MDE will receive the required information:

5. Provide a summary of impervious area restoration activities planned for the next reporting cycle (attach additional information if necessary):

Impervious Area Restoration Reporting

6. Describe coordination efforts with other agencies regarding the implementation of impervious area restoration activities:
7. List total cost of developing and implementing impervious area restoration program during the permit term:

MCM #1: Public Education and Outreach

1. Does the jurisdiction maintain a public hotline for reporting water quality complaints?
   ☐ Yes ☐ No

   Number of complaints received: ☐

   Describe the actions taken to address the complaints:

2. Describe training to employees to reduce pollutants to the storm drain system:

3. Describe the target audience(s) within the jurisdiction:

4. Are examples of educational/training materials attached with this report?
   ☐ Yes ☐ No

   Provide the number and type of education materials developed:

   Describe how the public outreach program is appropriate for the target audience(s):

5. Describe how stormwater education materials were distributed to the public (e.g. newsletters, website):

6. Describe how educational programs facilitated efforts to reduce pollutants in stormwater runoff:

7. Provide a summary of the activities planned for the next reporting cycle:

8. List the total cost of implementing this MCM over the permit term:

MCM #2: Public Involvement and Participation

1. List all education and outreach events and the number of participants:

2. Describe how the public involvement and participation program is appropriate for the target audience:

3. Quantify and report public involvement and participation efforts shown below where applicable.

   Number of participants at Earth Day events:

   Quantity of trash and debris removed at clean up events:

   Number of employee volunteers participating in sponsored events:

   Number of trees planted:

   Length of stream cleaned (feet):

   Number of storm drains stenciled:

   Number of public notices published to facilitate public participation:

   Number of public meetings organized:

   Total number of attendees at all public meetings:

   Describe the agenda, items discussed, and collaboration efforts with interested parties for public meetings:

   Describe how public comments have been incorporated into the jurisdiction's MS4 program including water quality improvement projects to address impervious area restoration requirements:

MCM #2: Public Involvement and Participation

Describe other events and activities:
4. Provide a summary of activities planned for the next reporting cycle:
5. List the total cost of implementing this MCM for the permit term:

MCM #3: Illicit Discharge Detection and Elimination (IDDE)

1. Does the jurisdiction maintain a map showing the extent of its storm drain system, including all outfalls, inlets, stormwater management facilities, and illicit discharge screening locations?
   ☐ Yes ☐ No

   If Yes, attach the map to this report. If No, detail the current status of map development and provide an estimated date of submission to MDE:

2. Does the jurisdiction have an ordinance, or other regulatory means, that prohibits illicit discharges into the storm sewer system?
   ☐ Yes ☐ No

   If Yes, describe the means utilized by the jurisdiction. If No, describe the jurisdiction's plan, including approximate time frame, to establish a regulatory means to prevent illicit discharges into the storm sewer system:

3. Describe the authority and process the jurisdiction utilizes for gaining access to private property to investigate and eliminate illicit storm drain system discharges:

4. Did the jurisdiction submit to MDE standard operating procedures (SOPs) in accordance with PART IV.C of the permit?
   ☐ Yes ☐ No

   If No, provide a proposed date that SOPs will be submitted to MDE. MDE may require more frequent reports for delays in program development:

   Did MDE approve the submitted SOPs?
   ☐ Yes ☐ No

   If No, describe the status of requested SOP revisions and approximate date of resubmission for MDE approval:

MCM #3: Illicit Discharge Detection and Elimination (IDDE)

5. Describe how the jurisdiction considers priority areas of high pollutant potential when determining screening locations:

6. Answers to the following questions should reflect this reporting period.

   How many outfalls are identified on the storm drain map?

   Per the jurisdiction's SOP, how many outfalls were required to be screened for dry weather flows?

   How many outfalls were screened for dry weather flows?

   Per the jurisdiction's SOP, how often were outfalls required to be screened?

   How often were outfalls screened?

   How many dry weather flows were observed?

   If dry weather flows were observed, how many were determined to be illicit discharges?

   Describe the investigation process to track and eliminate each suspected illicit discharge and report the status of resolution:

7. Describe maintenance or corrective actions undertaken during this reporting period to address erosion, debris buildup, sediment accumulation, or blockage problems:

8. Is the jurisdiction maintaining all IDDE inspection records and are they available to MDE during site inspections?
   ☐ Yes ☐ No

MCM #3: Illicit Discharge Detection and Elimination (IDDE)

9. If spills, illicit discharges, and illegal dumping occurred during this reporting period, describe the corrective actions taken, including enforcement activities, and indicate the status of resolution:
10. Attach to this report specific examples of educational materials distributed to the public related to illicit discharge reporting, illegal dumping, and spill prevention. If these are not available, describe plans to develop public education materials and submit examples with the next progress report:
11. Specify the number of employees trained in illicit discharge detection and spill prevention: 12. Provide examples of training materials. If not available, describe plans to develop employee training and submit examples with the next progress report:
13. List the cost of implementing this MCM during this permit term:

MCM #4: Construction Site Stormwater Runoff Control

Erosion & Sediment Control Program Procedures, Ordinances, and Legal Authority

1. Does the jurisdiction have an MDE approved ordinance?

   Has the jurisdiction submitted modifications to MDE?
   ☐ Yes ☐ No

   Has the adopted ordinance been submitted to MDE?
   ☐ Yes ☐ No

   If No, is the adopted ordinance attached?
   ☐ Yes ☐ No

2. Does the jurisdiction rely on the County or local Soil Conservation District to perform any or all requirements for an acceptable erosion and sediment control program?
   ☐ Yes ☐ No

   If Yes, check all that apply:
   ☐ Construction Inspections ☐ Plan Review and Approval
   ☐ Enforcement

3. Does the jurisdiction have a process to ensure that all necessary permits for a proposed development have been obtained prior to issuance of a grading or building permit?
   ☐ Yes ☐ No

   Explain how the jurisdiction ensures all permits are in place:

Erosion & Sediment Control Program Implementation Information

1. Does the jurisdiction have a process for receiving, investigating, and resolving complaints from interested parties related to construction activities and erosion and sediment control?
   ☐ Yes ☐ No

   Describe the process:

   Provide a list of all complaints and summary of actions taken to resolve them:

MCM #4: Construction Site Stormwater Runoff Control

2. Total number of active construction projects within the reporting period: ☐

   Provide a list of all construction projects and disturbed areas:

   Does the jurisdiction submit grading reports to MDE (only applies if the jurisdiction has an MDE approved ordinance)?
   ☐ Yes ☐ No ☐ N/A

3. Total number of violations notices issued related to this MCM within the jurisdiction (report total number whether the jurisdiction or another entity performs inspections):
   ☐

   Describe the status of enforcement activities:

   Describe how the jurisdiction communicates and collaborates with the enforcement authority for violations within the jurisdiction. Include measures taken by the jurisdiction such as suspending or denying a building or grading permit in order to prevent the discharge of pollutants into the storm drain system:

   Are erosion and sediment control inspection records retained and available to MDE during field review of local programs?
   ☐ Yes ☐ No

   If No, explain:

4. Number of staff trained in MDE's Responsible Personnel Certification:
   ☐

5. Describe the coordination efforts with other agencies regarding the implementation of this MCM:

6. List the total cost of implementing this MCM over the permit term:

MCM #5: Post Construction Stormwater Management

Stormwater Management Program Procedures, Ordinances, and Legal Authority

1. Does the jurisdiction have an MDE approved ordinance? ☐ Yes ☐ No

   Has the jurisdiction submitted modifications to MDE? ☐ Yes ☐ No

   Has the adopted ordinance been submitted to MDE? ☐ Yes ☐ No

   If No, is the adopted ordinance attached? ☐ Yes ☐ No

2. Does the jurisdiction have an MOU with the County to perform any or all requirements for an acceptable stormwater program?
   ☐ Yes ☐ No

   If Yes, check all that apply:
   - ☐ Plan Review and Approval
   - ☐ First Year Post Construction Inspections
   - ☐ As-Built Plan Approval
   - ☐ Post Construction Triennial Inspections
   - ☐ Enforcement
   - ☐ BMP Tracking and Reporting

Stormwater Management Program Implementation Information

1. Has an Urban BMP database been submitted in accordance with the database structure in Appendix B, Table B.1 as a Microsoft Excel file?
   ☐ Yes ☐ No

   Describe the status of the database and efforts to complete all data fields:

2. Total number of triennial inspections performed: ☐

   Total number of BMPs jurisdiction-wide: ☐

   Are inspections performed at least once every three years for all BMPs?
   ☐ Yes ☐ No

   If No, describe how the jurisdiction will catch up on past inspections and remain on track to perform BMP inspections once every three years:

MCM #5: Post Construction Stormwater Management

Are BMP inspection records retained and available to MDE during field review of local programs?
☐ Yes ☐ No

3. Total number of violations notices issued: ☐

   Describe efforts to bring BMPs into compliance and the status of enforcement activities within the jurisdiction:

4. Describe how the permittee coordinates and cooperates with the County to ensure stormwater BMPs are functioning according to approved standards. (Applicable for municipalities that rely on the County to perform stormwater triennial inspections):

5. Provide a summary of routine maintenance activities for all publicly owned BMPs:

   Number of publicly owned BMPs: ☐

   Describe how often BMPs are maintained. Specify whether maintenance activities are more frequent for certain BMP types:

   Are BMP maintenance checklists and procedures for publicly owned BMPs available to MDE during field review of local programs?
   ☐ Yes ☐ No

   Are BMP maintenance records retained and available to MDE during field review of local programs?
   ☐ Yes ☐ No

   If either answer is No, describe planned actions to implement maintenance checklists and procedures and provide formal documentation of these activities:

6. Number of staff trained in proper BMP design, performance, inspection, and routine maintenance: ☐

MCM #5: Post Construction Stormwater Management

7. Provide a summary of activities planned for the next reporting cycle:
8. List the total cost of implementing this MCM over the permit term:

MCM #6: Pollution Prevention and Good Housekeeping

1. Provide a list of topics covered during the last training session related to pollution prevention and good housekeeping, and attach to this report specific examples of training materials:

   List the last training date(s):

   Number of staff attended: ☐

2. Are the pollution prevention plan, site map, and inspection records at each facility retained and available to MDE during field review of the local program? ☐ Yes ☐ No
   If No, explain:

   Provide details of all discharges, releases, leaks, or spills that occurred in the past reporting period using the following format (attach additional sheets if necessary).

   Facility Name: Date:

   Describe observations:

   Describe permittee's response:

3. Quantify and report property management efforts as shown below, where applicable (attach additional sheets if necessary).

   Number of miles swept: ☐

   Amount of material collected (indicate units): ☐

   If roads and streets are swept, describe the strategy the permittee has implemented to maximize efficiency and target high priority areas:

   Number of inlets cleaned: ☐

   Amount of debris collected from inlet cleaning (indicate units): ☐

MCM #6: Pollution Prevention and Good Housekeeping

Describe how trash and hazardous waste materials are disposed of at permittee owned and operated facilities, including debris collected from street sweeping and inlet cleaning:

Does the permittee have a current State of Maryland public agency permit to apply pesticides?
☐ Yes ☐ No

If No, explain (e.g., contractor applies pesticides):

Does the permittee employ at least one individual certified in pesticide application?
☐ Yes ☐ No

If Yes, list name(s):

If the permittee applied pesticides during the reporting year, describe good housekeeping methods, e.g., integrated pest management, alternative materials/techniques:

If the permittee applied fertilizer during the reporting year, describe good housekeeping methods, e.g., application methods, chemical storage, low maintenance species, training:

If the permittee applied deicing materials during the reporting year, describe good housekeeping methods, e.g., pre-treatment, truck calibration and storage, salt domes:

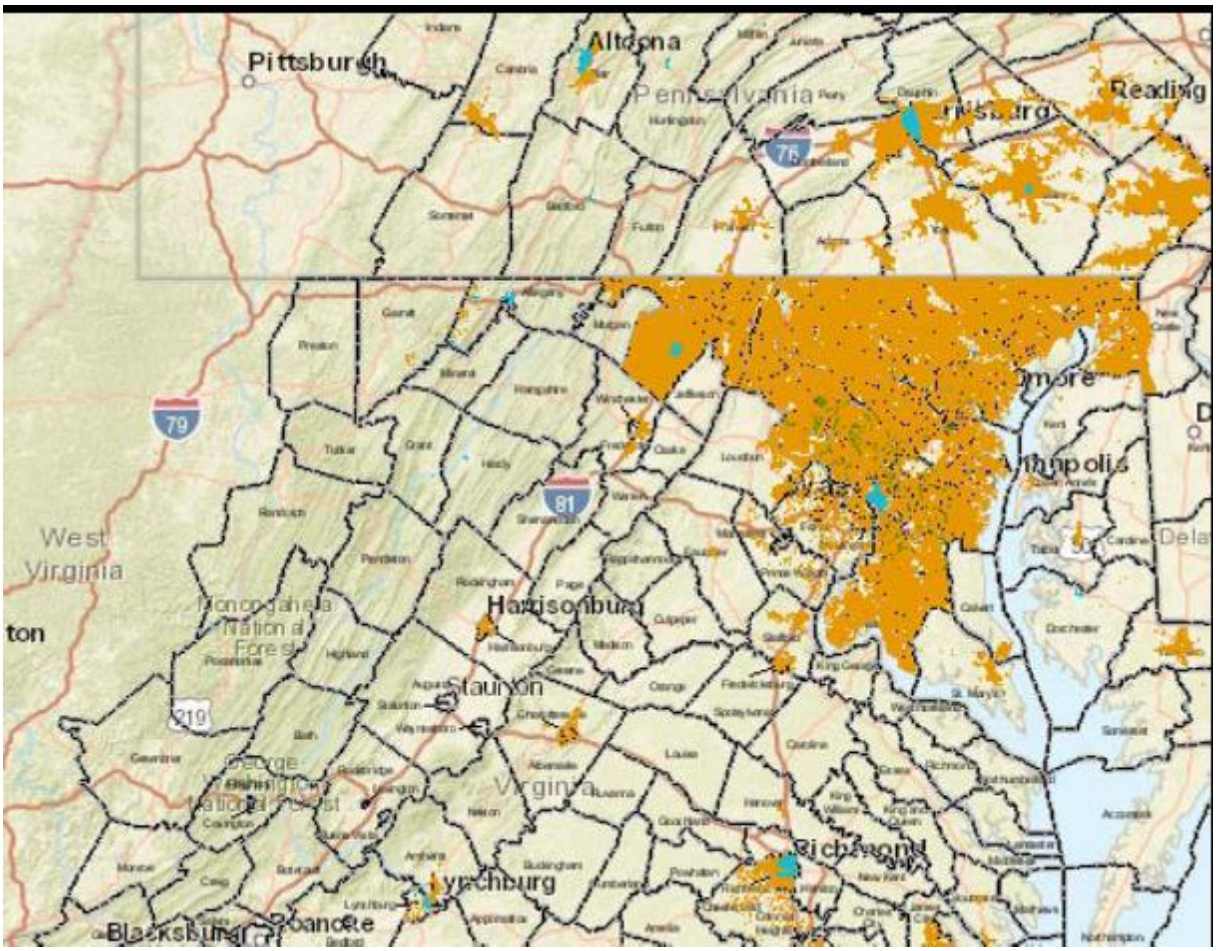
Describe good housekeeping BMP alternatives not listed above:

4. How many facilities require coverage under the Maryland General Permit for Stormwater Discharges Associated with Industrial Activity? ☐

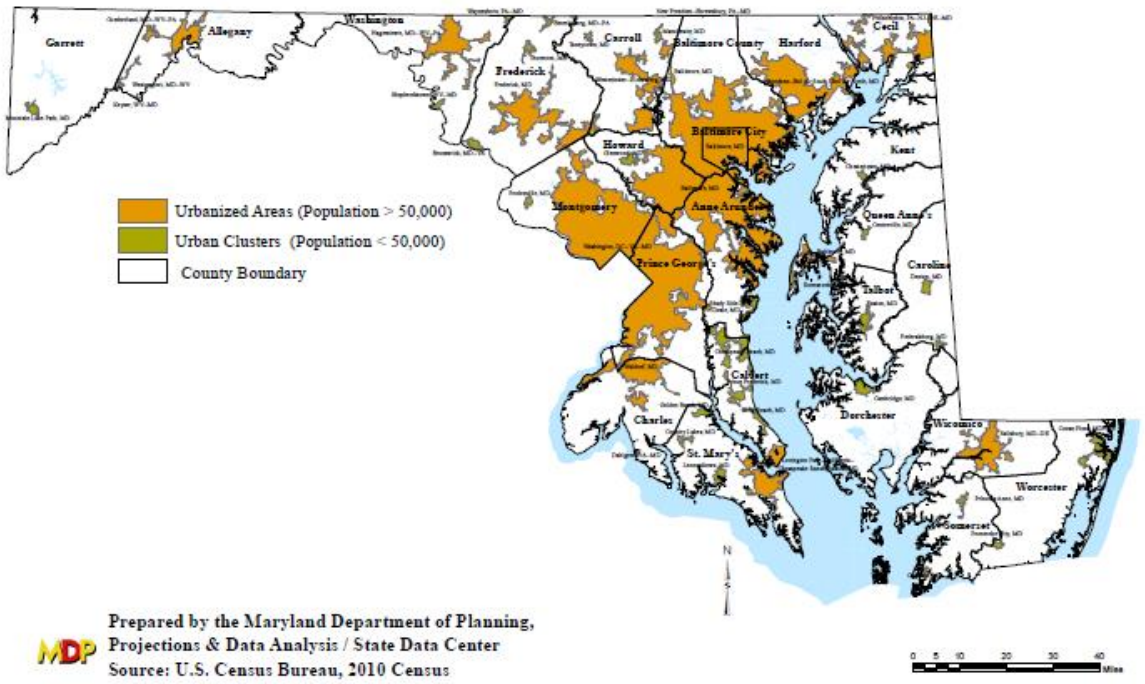
   If applicable, provide the status of obtaining coverage for all required facilities:

5. List the total cost of implementing this MCM over the permit term:

ATTACHMENT B


Pittsburgh
Altoona
Reading
79
81
West Virginia
Harrisonburg
Staunton
219
Virginia
Richmond
Lynchburg
Roanoke
Blacksburg

Urban Areas in Maryland, 2010



Prepared by the Maryland Department of Planning,
Projections & Data Analysis / State Data Center
Source: U.S. Census Bureau, 2010 Census

Maryland
Department of Agriculture

Office of Resource Conservation

Agriculture | Maryland's Leading Industry

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Joseph Bartenfelder, Secretary
James P. Eichhorst, Deputy Secretary

The Wayne A. Cawley, Jr. Building
50 Harry S. Truman Parkway
Annapolis, Maryland 21401
www.mda.maryland.gov

410.841.5863 Baltimore/Washington
410.841.5734 Fax
800.492.5590 Toll Free

March 30, 2017

Mr. Raymond Bahr
Maryland Department of the Environment
Water Management Administration
Sediment, Stormwater, and Dam Safety Program
1800 Washington Boulevard, Suite 440
Baltimore, Maryland 21230-1708

Re: NPDES General Permit for Small MS4s – General Discharge Permit No. 13-1M-5500
NPDES General Permit for State and Federal Small MS4s – General Discharge Permit No. 13-SF-5501

Dear Mr. Bahr:

As you may be aware, the Maryland Department of Agriculture has proposed language for inclusion in the above referenced permits. The Department continues to be concerned about the loss of productive farmland due to installation of restoration projects to meet Impervious Acre Credits under the NPDES General Permit. The Department would like to ensure that agricultural operations participating in such projects are in compliance with all applicable laws and regulations prior to project approval. Consequently, we suggest the following wording be adopted in all future MS4 permits:

Land which has an Agricultural Use Assessment as determined by the Department of Assessments and Taxation may be eligible to participate in stormwater management projects using equivalent impervious acres only if the Maryland Department of Agriculture has determined that such land has met all applicable local, State, and federal laws and regulations, including but not limited to Nutrient Management Plan implementation consistent with the requirements of COMAR 15.20.07 and 15.20.08. In addition, the participant must have an approved Soil Conservation and Water Quality Plan, and if appropriate a Waste Storage Plan, which addresses existing resource concerns on the land.

We would be glad to discuss the Department's proposal at your convenience and look forward to hearing from you.

Sincerely,

Hans Schmidt
Assistant Secretary

MARYLAND
LEAGUE OF
CONSERVATION
VOTERS

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Karla Raettig
Executive Director

30C West Street.
Annapolis, MD 21401
www.mdlcv.org

Mr. Raymond Bahr
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230
March 30, 2017
Re: Tentative Determination to Re-Issue MS4 General Permit to Municipalities (13-IM-5500/MDR055500)

Dear Mr. Bahr,

Thank you for the opportunity to comment on the Maryland Department of Environment (MDE) tentative determination to re-issue the municipal separate storm sewer system (MS4) general permit MDR055500 to municipalities (Draft Phase II Permit). Maryland League of Conservation Voters (Maryland LCV) has a vital interest in the protection and restoration of local rivers, streams and the Chesapeake Bay to achieve fishable, swimmable waters across the Chesapeake Bay watershed. Stormwater pollution, or polluted runoff, is the only major source of nitrogen that is still increasing.[1] Maryland's Watershed Implementation Plan (WIP) relies heavily on regulated jurisdictions to reduce the state's polluted runoff load, making the terms and implementation of MS4 permits critical to the state's success under the Chesapeake Bay Total Daily Maximum Load (TMDL).[2] Maryland League of Conservation Voters has three major concerns:

The Phase II permit must require pollution reduction within the life of its permit.

Maryland LCV's primary concern is that the Draft Phase II Permit does not require any pollution reduction projects to be implemented in the term of the permit itself, which conflicts with the Phase II WIP and is also inappropriate as a permit condition. Instead it requests a "complete list of specific projects" by the end of the five-year permit term.[3] The Draft Phase II Permit also states that the "projected implementation year shall be no later than 2025," which is outside the term of the permit itself. This violates the MS4 requirements under the Clean Water Act, and is also in conflict with the stormwater strategies in Maryland's Phase II WIP. MDE needs to require actual projects and implementation of pollution reductions that are directly in line with the goals of reducing nitrogen and other waste loads and volumes.

---

[1] U.S. Environmental Protection Agency, Office of the Inspector General, *Development Growth Outpacing Progress in Watershed Efforts to Restore the Chesapeake Bay*, Evaluation Report No.2007-P-00031, September 10, 2007, Summary Recommendations; Chesapeake Bay Program, *Bay Barometer*, CBP/TRS 293-09, EPA-903-R-09-001 (March 2009), 8.

[2] *See* University of Maryland/Maryland Department of Planning/Maryland Department of Agriculture/Maryland Department of Environment/Maryland Department of Natural Resources. (2012). *Maryland's Phase II Watershed Implementation Plan for the Chesapeake Bay TMDL*. Document Version: October 26, 2012. [Herein "Phase II WIP"] P. 14. ("The stormwater sector is projected to reduce about 838,000 pounds/year of nitrogen as a result of implementing the Interim Target Strategy. **About 78% of that reduction is anticipated to occur from sources regulated under federal NPDES stormwater permits**")(emphasis added).

[3] Draft Phase II Permit, Part V.C. Page 13.

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Patrice Stanley

Karla Raettig
Executive Director

30C West Street.
Annapolis, MD 21401
www.mdlcv.org

Pushing implementation off until a future permit term also means that each phase II jurisdiction would have to rush to install projects in a few short years to meet the goals of the TMDL. MDE would then have to ensure an unrealistically high number of projects in a short timeframe. MDE must require significant pollution reduction within the life of its permit in order to reach local TMDLs, the Bay TMDL, be consistent with the WIPs, and also help reach the 2025 goals.

MDE needs to use a better metric to reach TMDL goals and sufficient pollution reduction

Maryland learned valuable lessons in using a 20% impervious surface requirement for the Phase I MS4 permits. Even if every phase I Jurisdiction reached the 20% requirement, these localities would miss the TMDL reduction goals by a sizable margin. For the Phase II permit, MDE needs to set requirements that sufficiently close this mission gap. Using metrics directly linked to waste load allocation in the phase II permit is an important step towards doing so. Using a 20% impervious surface requirement is insufficient and unwise. MDE must write permit levels that sets each Phase II jurisdiction on the correct path to 2025. The trend line of this path must set jurisdictions up to reach or exceed their TMDL goals and the 2025 goal of the Bay TMDL.

Restoration plans should not include trading until the anticipated trading regulations and public participation process have been completed.

Maryland LCV urges the Department to instruct permittees not to rely on the speculative and uncertain trading program in their assessments and restoration plans until the details of such a trading program are in place. As was seen with the Phase I MS4 jurisdictions, it is inappropriate to allow a permittee to budget for and rely upon practices that later prove to be unworkable or simply unavailable.

Thank you again for the opportunity to submit these comments. We would be pleased to discuss any aspect of them and answer any questions. Please direct all comments to Ben Alexandro, Water Policy Advocate at the Maryland League of Conservation Voters at balexandro@mdlcv.org

Sincerely,

Ben Alexandro

Benjamin Alexandro
Water Policy Advocate
Maryland League of Conservation Voters

Queen Anne's County

County Commissioners:
James J. Moran, At Large
Jack N. Wilson, Jr., District 1
Stephen Wilson, District 2
Robert Charles Buckey, District 3
Mark A. Anderson, District 4

THE COUNTY COMMISSIONERS OF QUEEN ANNE'S COUNTY
The Liberty Building
107 North Liberty Street
Centreville, MD 21617

Telephone: (410) 758-4098
Fax: (410) 758-1170
e-mail: QACCommissioners&Administrator@qac.org

County Administrator: Gregg A. Todd
Executive Assistant to County Commissioners: Margie A. Houck
County Attorney: Patrick Thompson, Esquire

March 30, 2017

Benjamin H. Grumbles, Secretary of the Environment
Office of Secretary
Department of the Environment
Montgomery Park Business Center,
1800 Washington Blvd.,
Baltimore, MD 21230

RE: National Pollutant Discharge Elimination System (NPDES)
Draft General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4)
General Discharge Permit NO. 13-IM-550
General NPDES NO. MDR 055500

Dear Secretary Grumbles:

Queen Anne's County is committed to ongoing implementation of projects and policies that improve water quality to support a clean and healthy Chesapeake Bay. As supporters of Maryland Municipal Stormwater Association (MAMSA), Clean Chesapeake Coalition, Healthy Waters Roundtable, Chesapeake Bay Foundation and our Local River keepers Associations we are working with other jurisdiction and nonprofits across the State to promote sound and efficient policies to clean the Chesapeake Bay while responsibly managing public funds.

We are writing to support the comments submitted to MDE by MAMSA. MAMSA outlines many aspects of the proposed permit that have generated questions that need additional review and clarification prior to the permit being issued. These points include:

- the criteria used by MDE to include a jurisdiction in the permit
- the need to clarify that the permit only applies to the Urbanized Area
- the need to permit restoration to be implemented Countywide
- the need to clarify the permit does not regulate nonpoint source and third party discharges
- state in the permit that "Maximum Extent Practicable" is the legal compliance standard
- trading will be established and permitted to meet the goals of the permit

In addition we have attached comments generated specific to the concerns of Queen Anne's County, as a small rural county, being included in this permit. There are many outstanding questions relating to the regulations and implementation of the permit on a rural county. More time and answers are needed prior to this permit being issued so we can fully understand the impacts.

Once questions raised during the comment period are answered we ask that the local jurisdictions be afforded a fair opportunity and time period to review the information and meet with MDE prior to any final decision on the permit.

We look forward to continuing our discussions with MDE on this important issue.

Respectfully submitted for the public record,

Queen Anne's County,

Todd R. Mohn, PE
Director of Public Works

CC: Queen Anne's County Commissioners
Greg Todd, County Administrator
Patrick Thompson, Esq. County Attorney
Lisa M. Ochsenhirt, Esq. AquaLaw PLC
Bruce Bereano, Esq.

Queen Anne's County

County Commissioners:
James J. Moran, At Large
Jack N. Wilson, Jr., District 1
Stephen Wilson, District 2
Robert Charles Buckey, District 3
Mark A. Anderson, District 4

THE COUNTY COMMISSIONERS OF QUEEN ANNE'S COUNTY
The Liberty Building
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e-mail: QACCommissioners&Administrator@qac.org

County Administrator: Gregg A. Todd
Executive Assistant to County Commissioners: Margie A. Houck
County Attorney: Patrick Thompson, Esquire

March 30, 2017

MS4 Comments from Queen Anne's County

National Pollutant Discharge Elimination System (NPDES)
Draft General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4)
General Discharge Permit NO. 13-IM-550
General NPDES NO. MDR 055500

On December 22, 2016, Queen Anne's County was notified that our rural County was proposed to be included under the referenced NPDES Phase II General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). The County was obviously surprised concerning our tentative eligibility to this second generation NPDES stormwater general permit for Phase II entities.

Our inclusion was based on EPA's tentative determination (using 2010 census data) that a small urbanized area (UA) in the Kent Island-Grasonville region with a population of 12,315 citizens meets the designation criteria under federal regulations requiring coverage under the NPDES Phase II Small Municipal Separate Storm Sewer System (MS4) permit. The portion of Queen Anne's County that was designated as UA is only 3.2% of the County land area. The County is generally a rural agricultural County with 88% of the land zoned for agriculture and over 30% of the County in preservation. The County does not believe that a rural county of less than 50,000 residents made up significantly of farmland and rural low density residential development with a population density of 128.5 per sq. mile was intended to fall under the regulatory authority of a MS4 permit (see attached exhibit A & B from MDP). As a rural County, we do not really have an integrated stormwater system that fits the regulatory scope of an MS4 as you would find in a municipality or city.

The County has a variety of concerns with the proposed permit including the process to issue the permit, the scope of the regulated area, the cost to comply, the designation as a UA and the lack of nutrient trading which will be an essential part of being successful.

Permit Process

A number of unanswered questions revolve around the proposed permit that need to be answered and clarified in the permit document. With answers not currently available MDE has encouraged local jurisdictions to submit questions and comments during the open comment period ending on March 30, 2017. It is anticipated that a significant number of comments will be submitted to MDE requiring an extensive response. The response to questions and comments will likely result with changes to the proposed permit and interpretations related to implementation to the permit. Local jurisdictions need time to review the responses from MDE and any proposed changes to the Permit. Therefore, Queen Anne's County requests that the pending permit not be approved or issued until the responses by MDE are made available to local jurisdictions and adequate time is provided for public review. Likewise, that adequate time be provided to review any changes to the Permit as a result of the public comment period.

It is only fair that the local jurisdictions be afforded the opportunity to fully understand the requirements of the permit prior to it being issued. This is specifically true of this MS4 permit since the current proposed process is to issue the permit then have local jurisdictions work with MDE to create a plan to implement the permit. During the process to create a plan many interpretations will need to be made as to permitted practices and acceptable time frames for implementation. Local jurisdiction will not fully understand the regulatory scope, financial and staff commitments necessary to comply with this permit until the plan is drafted. In fact, this process seems a bit backwards from the perspective of a local jurisdiction which would choose to work on creating the plan to fully understand the rules, commitments, and impacts of the undertaking prior to the issuance of this permit. Can the permit approval be deferred until local jurisdictions have had time to work with MDE on draft plans?

Scope of the Permit

The proposed permit must be made clear that the requirements only apply to the portions of the County designated as an UA. The permit should also be clear that calculations to comply with the 20% restoration requirements are based only on the impervious coverage in the UA that is served by the MS4.

Mitigation and restoration practices throughout the County will result in improved water quality in the Bay and tributaries. The County asks that the permit clarify that all mitigation and restoration efforts in and around the UA, as well as throughout the County that will reduce pollutant loads into the bay and improve water quality, be considered towards meeting the goals of the permit.

Cost to Comply

The proposed permit has significant ramifications on our local budget currently and in the future. Based on our current understanding of the permit, we anticipate substantial additional cost to both the operating and capital budgets to implement.

Phase I jurisdictions have had to increase budgets to established full divisions of professional employees to comply with permit obligations. We also anticipate the need, over time, to add new employees dedicated to the implementation. Full implementation of the program will require a number of full time employees which include engineers, inspectors and clerical staff. Increases in the operating budget over time could reach $400,000 – $500,000 annually.

The County Capital budget will need to be significantly increased to implement restoration projects to comply. Projects to comply with stormwater restoration are very expensive and currently range from $35,000 - $50,000 per acre. Based on treating 20% of the untreated impervious area in the UA, which is estimated at approximately 190 acres, the overall new capital expense is estimated to be $6.65M – $9.5M to be invested for project completion by 2025.

These are costs that simply cannot be absorbed by a County and tax base of our size.

Nutrient Trading

Once the permit is issued a jurisdiction must formulate a plan to comply with the permit. Nutrient trading plays an important part in a small rural jurisdictions ability to meet the requirements of the permit. The County is working to implement a variety of WIP projects as well as connecting 1,500 septic systems to an ENR sewer treatment plant which could create credits to meet the goals. However, trading is not currently permitted and the rules for trading are not established. This unknown leaves a void in a counties ability to prepare a plan to comply with and meet the goals of the permit. The ability to trade or not trade and the associated regulations that govern trading could significantly impact the anticipated staffing needs and capital budget associated with meeting the restoration requirements.

Since the ability to trade or not trade will influence each jurisdictions ability to create a plan and to comply, we ask that MDE not issue the permit until the ability to trade has been established and vetted.

Urbanized Area

In 2010, the County was not aware that the UA would be used as a regulatory designation relating to establishing an MS4 designation in Queen Anne's County. Had that been known the County may have scrutinized the designation of an UA more closely. We now have reviewed information relating to the designation to better understand the odd shape and configuration of the UA. Upon review, the County believes that the area designated actually meets the definition of and should be classified as an Urban Cluster. Therefore would not meet the criteria for inclusion in the MS4 permit as a "County located in an urbanized area".

The determination includes QAC as a part of the Baltimore Metropolitan area. Our urbanized area does not include any incorporated municipalities and has very minimal amounts of Storm Drain systems outside of SHA right-of-way (Pier 1 new ESD and Postal Road). It is also notable that within the UA portion of QAC 38 % of all roads and associated roadside drainage are within SHA jurisdiction.

Queen Anne's County is a small rural County and questions being considered as a jurisdiction designated for Phase II MS4 coverage as a "County located in an urbanized area" in light of the following:

- According to the "*Geographic Areas Reference Manual; Census Urban & Rural Classifications*" an Urbanized Area (UA) is a continuously built up area with a population of 50,000 or more and must have a population density of 1,000 people per square mile. The Census population of Queen Anne's County in 2010 was 47,798 and the population density of Queen Anne's County in 2010 was 128.5 people per square mile. The County does not meet the criteria to be an UA.

- QAC is not a continuation of the Baltimore Region Urbanized Area. A portion of QAC was designated due to the proximity to the UA in Anne Arundel County. The two UA's are over 4 miles apart jumping across the Chesapeake Bay with no population in the intervening area. This designation is inconsistent with the "jump" criteria for designating an UA.

  > "*A jump occurs where a low-density area is used to connect an outlying densely populated area to the main body of the UA. Two conditions must be satisfied: (1) the road distance through the low-density area must be 1 ½ miles or less, and (2) the combined population density of the outlying area and the intervening area must be at least 500 people per square mile.*"

- The UA in Queen Anne's County is not characterized as a continuously built up area. As example, in one location the UA is considered continuous because it meets at a single point and in another area portions are connected by a narrow strip of land. See attached exhibit C.

Ongoing Commitment to a Clean and Healthy Chesapeake Bay

Queen Anne's County is committed to a cleaner Chesapeake Bay. The County is a member of the Clean Chesapeake Coalition an Association of Maryland County governments whose elected officials have coalesced to raise awareness and pursue improvement to the water quality of the Chesapeake Bay. We strive to achieve our goals in the most cost-effective and fiscally responsible manner, through research, coordination and advocacy. Consistent with this mission, we are focusing our attention and resources on the most cost-effective projects, programs and activities that are proven to yield measurable and lasting improvements to water quality.

To illustrate the above point, Queen Anne's County broke ground on a multi-phased public sewer extension project that will ultimately remove and retire 1,526 failing septic systems on Kent Island. Approximately 80-percent of these septic systems have been discharging effluent directly into waters of the State for many decades. When completed, our new public sewer system will remove over 17,000 pounds of nitrogen discharges from the environment. This 10-year, $50 million project has been modeled as the premier example state-wide by MDE for other jurisdictions to follow. It is an obvious testament of our commitment towards effective use of resources and partnerships that result with permanent improvements to water quality in the Chesapeake Bay.

The County appreciates the opportunity to comment on this permit application and look forward to MDE's written response to our comments. We look forward to working in cooperation with MDE to negotiate a permit, if necessary, that is reasonable in terms of taxpayer cost, economic impact and pollution reduction effectiveness.

Respectfully submitted for the public record,

Queen Anne's County

Todd R. Mohn, PE
Director of Public Works

EXHIBIT A

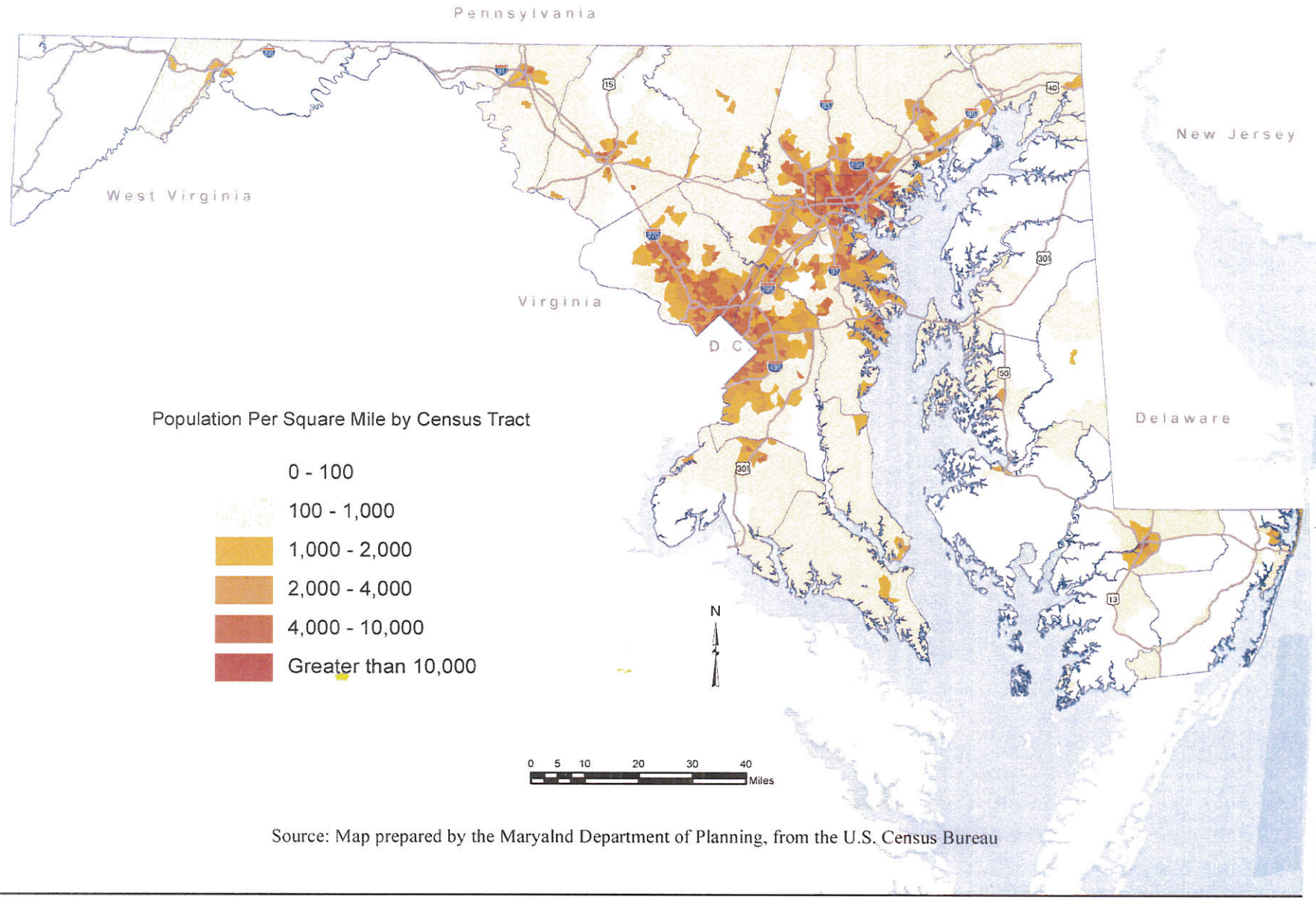
Population Density by County from 2010 Census
Prepared By Maryland Department of Planning
Queen Anne's County Ranks 18th out of the 24 Jurisdictions

Population Density by Jurisdiction, 2010 & 2000

Area	Land Area sq mi.	Population, 2010	Population per sq. mi. 2010	Population, 2000	Population per sq. mi. 2000	Population Change 2000-2010	Change in density 2000-2010
Maryland	**9,707.24**	**5,773,552**	**594.8**	**5,296,486**	**541.9**	**477,066**	**52.9**
Allegany County	424.16	75,087	177.0	74,930	176.1	157	0.9
Anne Arundel County	414.90	537,656	1,295.9	489,656	1,177.2	48,000	118.6
Baltimore County	598.30	805,029	1,345.5	754,292	1,260.1	50,737	85.4
Calvert County	213.15	88,737	416.3	74,563	346.5	14,174	69.8
Caroline County	319.42	33,066	103.5	29,772	93.0	3,294	10.5
Carroll County	447.59	167,134	373.4	150,897	336.0	16,237	37.4
Cecil County	346.27	101,108	292.0	85,951	246.9	15,157	45.1
Charles County	457.75	146,551	320.2	120,546	261.5	26,005	58.7
Dorchester County	540.77	32,618	60.3	30,674	55.0	1,944	5.3
Frederick County	660.22	233,385	353.5	195,277	294.6	38,108	58.9
Garrett County	647.10	30,097	46.5	29,846	46.1	251	0.4
Harford County	437.09	244,826	560.1	218,590	496.4	26,236	63.7
Howard County	250.74	287,085	1,144.9	247,842	983.4	39,243	161.6
Kent County	277.03	20,197	72.9	19,197	68.7	1,000	4.2
Montgomery County	491.25	971,777	1,978.2	873,341	1,762.5	98,436	215.7
Prince George's County	482.69	863,420	1,788.8	801,515	1,651.1	61,905	137.6
Queen Anne's County	371.91	47,798	128.5	40,563	109.0	7,235	19.5
St. Mary's County	357.18	105,151	294.4	86,211	238.6	18,940	55.7
Somerset County	319.72	26,470	82.8	24,747	75.6	1,723	7.2
Talbot County	268.54	37,782	140.7	33,812	125.6	3,970	15.1
Washington County	457.78	147,430	322.1	131,923	288.0	15,507	34.1
Wicomico County	374.44	98,733	263.7	84,644	224.4	14,089	39.3
Worcester County	468.28	51,454	109.9	46,543	98.4	4,911	11.5
Baltimore city	80.94	620,961	7,671.5	651,154	8,058.4	-30,193	-386.9

Prepared by the Maryland Department of Planning Projections & Data Analysis/State Data Center

Maryland Population Density by Census Tract, 2010



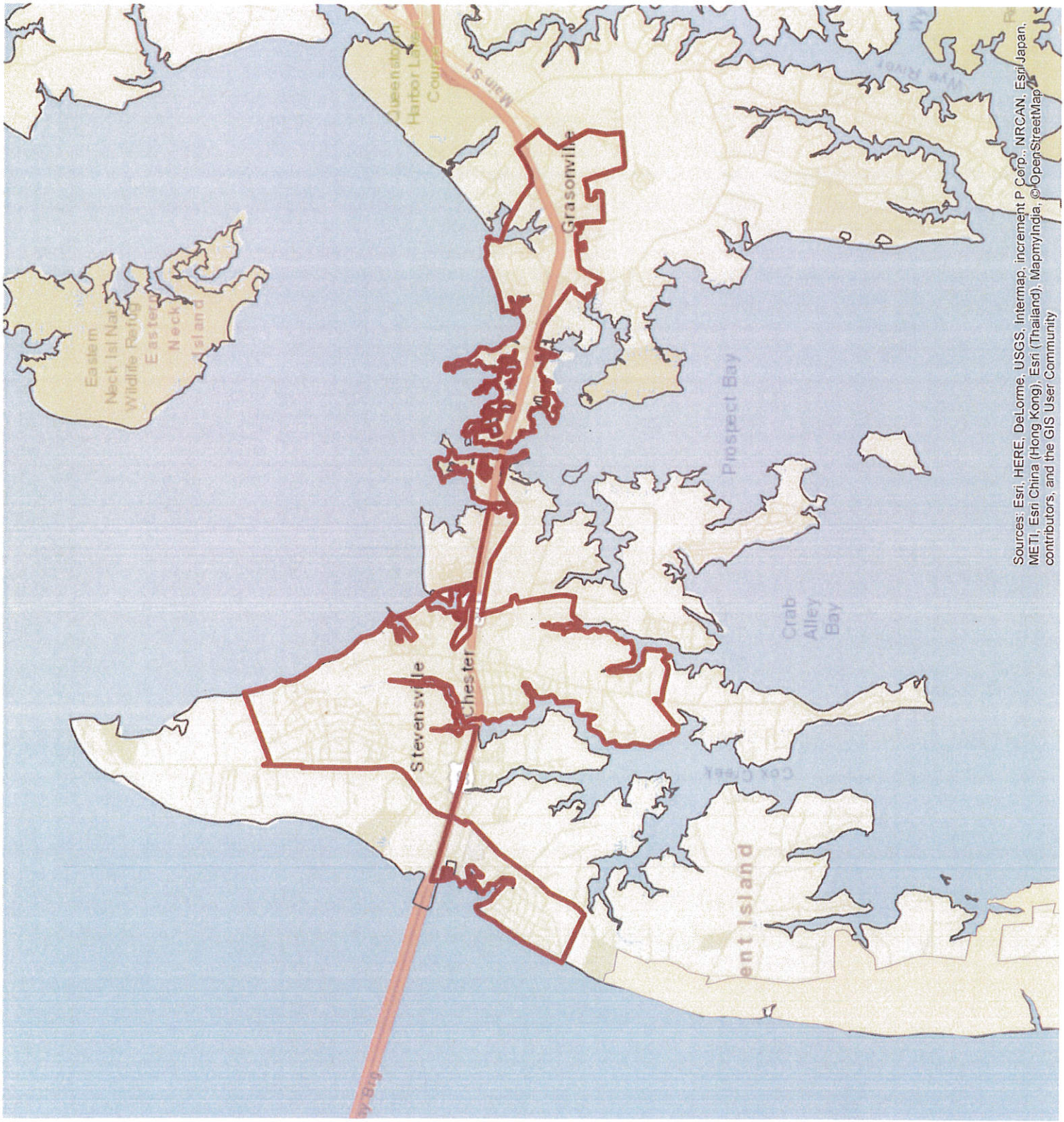
Source: Map prepared by the Maryalnd Department of Planning, from the U.S. Census Bureau

EXHIBIT B

Population Density by Census Tract from 2010 Census
Prepared By Maryland Department of Planning

EXHIBIT C

Urbanized Area Based on the 2010 Census



ST. MARY'S COUNTY GOVERNMENT
COMMISSIONERS OF ST. MARY'S COUNTY

James R. Guy, President
Michael L. Hewitt, Commissioner
Tom Jarboe, Commissioner
Todd B. Morgan, Commissioner

March 28, 2017

Mr. Ben Grumbles, Secretary
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, MD 21230

RE: MS4 General Discharge Permit
Permit #MDR 055500, 13-IM-5500

Dear Mr. Grumbles:

Thank you for the opportunity to comment on the Maryland Department of the Environment's (MDE) Tentative Determination to reissue the National Pollution Elimination System (NPDES) General Permit (GP) for Discharges from Small Municipal Separate Storm Sewer Systems (MS4) Permit. This permit will for the first time regulate St. Mary's County's stormwater discharge. We are very concerned regarding the impact of this proposed permit on the County's operations, budget, and most of all St. Mary's County residents.

The County has reviewed both the Draft GP and the accompanying Draft Fact Sheet in order to determine whether it can reasonably comply with the permit. As a newly identified permittee, the County is very concerned that the Draft GP represents an enormous amount of work over a short five-year period, which does not allow the County an adequate amount of time for planning and program development.

Although the entire GP will be extremely challenging for the County, the 20% restoration requirement is particularly problematic. As discussed below, imposing this term across the entire County would cost $50-$74M according to the King & Hagan Study estimates. MDE cannot expect the County to spend between $50 Million and $74 Million by 2025 for stormwater restoration projects. MDE must right-size this permit to acknowledge the County's status as a new permittee and its ability to comply with the terms before MDE issues the final GP.

The County is a Member of the Maryland Municipal Stormwater Association (MAMSA or Association). As a MAMSA Member, we generally concur with the MAMSA comments. We request that MDE carefully consider MAMSA's comments, which we incorporate by reference and attach as Attachment A, in addition to the County specific comments below. For certain issues, the County will not review the issue in detail, but will simply express agreement with MAMSA's position. In addition, the County generally supports MAMSA's redlined version of the Draft GP, attached as Attachment A to the Association's comments. We request that MDE review and incorporate the proposed changes into the Final GP, and make accompanying changes, as appropriate, to the Fact Sheet.

Our comments are as follows:

A. Permit Coverage Should Be Limited to MS4 Facilities in the Urbanized Area of the County

1. Only the Portion of the County's Small MS4 Located *within* an Urbanized Area Is Automatically Designated

The County agrees with MAMSA's argument that MDE's designation of small MS4s located *within* an urbanized area (UA) is correct. However, if a jurisdiction owns and operates a small MS4 that is both within and outside the UA, then only the portion of the MS4 within the UA is regulated. This is unambiguously stated in the regulations: "If your small MS4 is not located entirely within an urbanized area, *only the portion that is within the urbanized area is regulated.*" 40 C.F.R. § 122.32(a)(1).

The Draft GP appears to designate the entire County even though only a part of the County's MS4 is within an UA. This is manifestly improper. MDE should clarify in the final GP and Fact Sheet that, for any small MS4 owned or operated by a jurisdiction identified on Table A.1 as "within an urbanized area," the permit's requirements apply only to portions of the MS4 within the UA.

2. The Baseline for Restoration Should Be Calculated Using Only Untreated Impervious Area in the Urbanized Area Served by the MS4

The County agrees with MAMSA's careful reading of the Draft GP as requiring calculation of the untreated impervious area within our regulated permit area, which is limited by federal law to the areas served by the County's MS4 within the UA of the County.

For reference, a portion of the County is in the Lexington Park--California—Chesapeake Ranch Estates UA. A copy of the Maryland Department of Planning map showing this UA is attached as Attachment B to these comments.

Based on the instructions in Appendix B to the Draft GP, the County will not be counting impervious areas (either treated or untreated) outside of the UA in its baseline. Furthermore, the County will not be counting impervious areas within the UA unless they are served by our MS4.

The County echoes MAMSA's request that MDE clarify throughout the GP and confirm in the Fact Sheet that MAMSA's reading is correct.

MDE must clarify this point because of the significant cost associated with the 20% restoration requirement. In addition, clarification is needed because other parts of the Draft GP incorrectly reference the need to comply with the term across the entire County. MAMSA has correctly identified specific sections (for example, the requirement in Minimum Control Measure (MCM) 6 for development of good housekeeping measures "throughout the jurisdiction's properties") as creating confusion regarding the scope of the regulated area.

MAMSA is also correct that any attempt by MDE to impose a "jurisdiction-wide" permit on the County is objectionable. Federal law is clear on this point, and state law gives MDE no authority to go beyond the federal requirements. MDE is only allowed to regulate parts of the small MS4 in the UA. *See* 40 C.F.R. §122.32(a)(1).

As Attachment B to these comments shows, large portions of the County are located outside of UAs. MDE has no authority to impose the MS4 GP on these parts of the County.

B. The County Should Have the Flexibility to Conduct Restoration Anywhere in Its Basin

MDE has suggested that if the County wishes to limit its calculation of baseline to areas in the UA, the County must limit restoration projects to the UA. MDE may be willing to negotiate additional flexibility in the future—after the County submits its Work Plan—but MDE is not promising any particular outcome from those discussions.

The County should be allowed to site restoration projects anywhere within a broad geographic area based on criteria it believes to be appropriate, such as cost-effectiveness, availability of land, willingness of private property owners to assist in projects, etc. Limiting projects to the UA is untenable, would be more costly, and would increase the risk of non-compliance.

MAMSA has correctly noted that MDE has no legal authority to require permittees to do anything outside of the UA because areas outside of the UA are unregulated by law. Any attempt by MDE to pressure the County into accepting an unlawful "jurisdiction-wide" permit by limiting the County's flexibility in implementing restoration projects is unfair and puts the County in a no-win situation.

C. The GP Cannot Regulate Nonpoint Sources and Third-Party Stormwater Discharges

As explained above, the County intends to calculate its baseline by including impervious acreage in areas served by the MS4 inside the UA. The County will remove any parcels that do not discharge into the County's MS4, including nonpoint sources (properties with sheet flow from the parcel into streams, creeks, etc.) and third-party direct dischargers (properties with their own discharge points into streams, creeks, etc.).

The County agrees with MAMSA's legal argument that MS4 permittees, including the County, are not responsible for addressing, through impervious area restoration, nonpoint sources or discharges by third parties. This is a fundamental jurisdictional issue; MDE has no authority to impose responsibility for these types of discharges in the County's MS4 permit.

D. MEP Is Legal Compliance Standard for MS4s

In 1987, Congress recognized the challenges of regulating municipal stormwater, and amended the Clean Water Act to add a unique legal compliance standard for MS4s:

> Permits for discharges from municipal storm sewers…shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. 33 U.S.C. § 1342(p)(3)(B)(iii) (emphasis added).

Maximum extent practicable, or MEP, is the legal compliance standard for MS4 operators, including the County. Permit terms that require that the County do more than MEP are unlawful.

E. GP Requirements Are Not Practicable; Exceed MEP Level-of-Effort

The County has reviewed the Draft GP and determined that several requirements exceed an MEP level of effort for the County. Here is an overview of the terms that the County has identified as beyond MEP:

1. Restoration Requirement: The County must "commence restoration efforts for twenty percent of existing developed lands that have little or no stormwater management," (Draft GP, p. 10) and develop an implementation schedule to show the twenty percent impervious area restoration requirement will be achieved by 2025. (Draft GP, p. 11, 13)

The County cannot develop a schedule to restore 20% of untreated impervious area by 2025 using an MEP level-of-effort.

Based on the County's initial review, this is a minimum $50 Million permit item. If the GP applies "jurisdiction-wide," the County estimates it will have to treat approximately 1,000 acres that are currently considered untreated. The County estimates a cost of approximately $50,000 per acre, which is lower than the average costs included in the King & Hagan study the State attached to its Chesapeake Bay Phase II Watershed Implementation Plan (WIP).[1] This cost assumes all restoration can be achieved by retrofitting existing stormwater management ponds, which may not be feasible; in which case the costs will be substantially more. For reference, King & Hagan estimated $65,998 per impervious acre treated for retrofitting wet ponds. This is the initial cost, which includes pre-construction, construction and land costs; total costs over 20 years rise to $81,251 per impervious acre treated. Assuming an average cost of $73,624 per impervious acre, restoration costs could rise in excess of $74M.

The County could potentially achieve a more reasonable amount of restoration. For example, if the restoration requirement were 200 acres, which appears to be more in line with the estimates from other Phase II permittees, the County might be able to comply. Limiting the restoration baseline to UA areas served by the County's MS4 would reduce the 20% requirement, and could bring the figure in line with a more achievable approach.

The County also questions whether it is necessary for the State's most rural counties and smallest towns to comply with such an aggressive Bay-related permit term. Bay water quality has been improving over the past several years. Moreover, the Chesapeake Bay Program Office is in the middle of what it calls the Mid-Point Assessment to determine how much progress all of the Bay jurisdictions have made on clean-up. The State may change its approach to the stormwater sector in its Phase III WIP. The County suggests that it would be prudent to wait on issuance of the Phase II GP until we have more answers on all of these issues.

In addition to the financial impossibility, the restoration requirement is impossible from an operational perspective. Subtracting the initial one-year planning period, the County will have 2018-2025, or 8 years, to install hundreds of BMPs. Based on previous experience, it will take approximately 20 years construct restoration projects for 1,000 acres of restoration. There is simply not time in 8 years to take the total number of projects required through this process.

2. SWPPPs, MCM-6: The Draft GP requires that the County develop, implement, and maintain a pollution prevention plan at "publicly owned or operated properties…" (Draft GP, p. 10)

The County owns or operates about 213 properties. Developing a pollution prevention plan for each property would take approximately 1,700 workhours, based on an estimated 8 hours per plan. It would take a full time employee a full work year. This does not include numerous hours to educate employees at each site on the plan, reviewing plans on a regular basis, and revising plans as needed. This requirement is burdensome.

In addition, this requirement is unnecessary. The County owns or operates numerous properties that are very low-risk for discharging pollutants to the County's MS4. Many of those properties are undeveloped, or are minimally developed. Even fully developed sites with buildings, parking

[1] A copy of pages estimating costs for pond retrofits is attached as Attachment C to these comments.

lots, and lawn areas pose no more risk than any residential or commercial site. There is no need for a pollution prevention plan for these kind of low-risk properties. The County notes that it already has SWPPPs (required under 12-SW for municipally-owned facilities that are regulated as industrial facilities) for two (2) facilities. If SWPPPs are already in place for 12-SW facilities, why is it necessary to require that we write new plans for lower-risk properties?

The County submits that this term is beyond MEP, is burdensome, and is the type of term that should be revised to achieve water quality related goals.

The County understands that MDE may intend that this language will only apply to County-owned properties covered by 12-SW. However, MDE's intent is not clear on the face of the permit. The County supports MAMSA's request that MDE consider alternative language to make expectations clear on the face of the permit.

3. Outfall Screening SOP: The Draft GP requires that the County screen 20% of total outfalls each year, up to 100 outfalls per year. (Draft GP, p. 6, B-5).

   Federal regulations do not require that Phase II permittees have a dry weather outfall screening program. To comply with MCM-3, a permittee must "develop, implement and enforce" a program "to detect and eliminate illicit discharges" into the small MS4; develop a system map, with outfalls and waters of the U.S. that receive discharges from the outfalls; and educate employees, businesses, and the public of the "hazards associated" with illicit discharges.

   As with MCM-6, EPA provides guidance on MCM-3, and only suggests that the program include dry weather screening and field testing of "selected pollutants as part of the procedures for locating priority areas." 40 C.F.R. § 122.34(b)(3).

   There is no requirement for inspecting all outfalls over a permit cycle. In fact, it makes more sense to allow the County to target its inspections in areas that are more likely to have illicit discharges and connections (based on age of the development, a higher than average number of septic systems, etc.). Requiring inspections of all outfalls, no matter the size, across the entire system, is likely to yield a lot less useful information than carefully targeted inspections. The County recommends that MDE revise the Draft GP to only require inspections of major, known outfalls based on a prioritization scheme developed by the County.

   As an aside, MDE is requiring small MS4s to inspect as many outfalls as Phase I MS4s. For example, Part IV.C of Howard County's MS4 permit (effective date January 1, 2014) requires that the County map "major outfalls" (defined by federal law as an outfall "that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent..." or for MS4s that receive stormwater from industrial areas "an outfall that discharges from a single pipe with an insider diameter of 12 inches or more from its equivalent..." 40 C.F.R. § 122.26(b)(5)) and then perform inspections of 100 outfalls annually. Part IV.D.3.a. Howard County's permit also allows it to submit, within 1 year of permit issuance "an alternative program...for MDE approval that methodically identifies, investigates, and eliminates illegal connections to the County's storm drain system..." This alternative program is not an option in the Draft GP. Requiring the County to inspect as many outfalls as Howard County is unreasonable and beyond MEP.

As the list above suggests, MDE appears to have made no attempt to tailor the requirements of the Draft GP – and particularly the numeric requirements (e.g. restore 20% of impervious area) – to the MEP of particular MS4 dischargers (or even categories of dischargers like new vs. existing permittees, etc.).

The County requests that MDE consider the comments above, as well as the comments relating to practicability filed by other permittees, and then revise the GP so that it is achievable by all permittees, or, at a minimum, by a majority of permittees.

F. The GP Does Not Give the County Sufficient Time to Develop Programs or Provide Information

Many of the jurisdictions identified on Table A.1, including the County, will be covered for the first time under the Small MS4 GP. Unlike many of the State's Phase I MS4s, which have been working to develop their stormwater programs for decades, the County will need time to stand-up the kinds of programs required to achieve compliance with the GP.

Several parts of the Draft GP require that the County provide information or complete projects under a schedule that is simply impossible to meet.

As a concrete example, the Draft GP requires that the NOI, due 180 days after the permit effective date, include an estimate of anticipated expenditures to implement the GP programs (Draft GP, p. 2). Not only is this an insufficient amount of time for the County to estimate the cost of future programs, but it is inconsistent with the amount of time provided to address some of the MCMs. For example, the County will have 1 year to develop its program to comply with MCM-2. It is not possible to provide an estimate of cost for this program until after this work has been done.

G. Comments on Specific Permit Conditions that Should Be Revised or Clarified

The Draft GP includes a number of permit conditions that are incorrect, unreasonable, or unclear. These conditions are addressed, with suggested revisions, in the MAMSA redline of the Draft GP. Below, the County provides additional explanation of the suggested revisions for several of these problematic conditions.

1. MCM-4 and MCM-5 Are Overly Broad

The County supports MAMSA's comments and recommendations on changes to MCM-4 and MCM-5.

The County notes that it is not an E&S Approving Authority (plan review is performed by the St. Mary's Soil Conservation District) or an Enforcement Authority (the State inspects E&S controls). Including specific terms as GP requirements that do not apply to the County because of its status as a non-AA or EA delegated program could put the County at risk in the future if there are questions regarding the County's compliance with the GP.

2. MDE Should Finalize a Functional Trading Program Before the GP is Issued

The County supports MAMSA's comments regarding the need for a functional trading program to assist the County with compliance before the GP is issued in final form.

Due to the large cost of restoration, allowing the County to voluntarily trade with a wastewater treatment plant or to purchase nutrient credits from a trading platform would reduce these costs significantly, and would have no negative impacts on the Bay. It is vital that MDE acknowledge this reality before the County is forced to spend precious resources implementing restoration that could be more addressed in a much more cost-effective manner.

3. County Should Not Be Legally At-Risk for Third-Party Action

The County agrees with MAMSA's comments regarding the need for revisions that reflect the County's role as MDE's co-regulator with regard to the acts of third parties.

4. MDE Has Incorrectly Defined "Outfall;" Definition is Inconsistent with Federal Law

The County agrees with MAMSA's recommendation that MDE revise the definition of outfall in Appendix B of the Draft GP to make it consistent with federal law.

5. Certification Statement for NOI is Legally Incorrect

The County agrees with MAMSA's request that MDE revise the certification at Signature of Responsible Personnel (p. C-2) and Progress Report (p. D-2) so that they reflect the appropriate text from EPA's NPDES regulations (40 C.F.R. § 122.22).

6. The Draft GP Includes Unreasonably Broad Incorporation by Reference

The County agrees with MAMSA's view that the Draft GP statement that "permittee 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, Annotated Code of Maryland" (Draft GP, p. 16) is overbroad and may lead to confusion as to what is required of permittee. All permit conditions should be expressly stated in the GP.

Again, thank you for the opportunity to comment on this proposed permit. We trust that you will address these comments to our satisfaction prior to issuance of the permit.

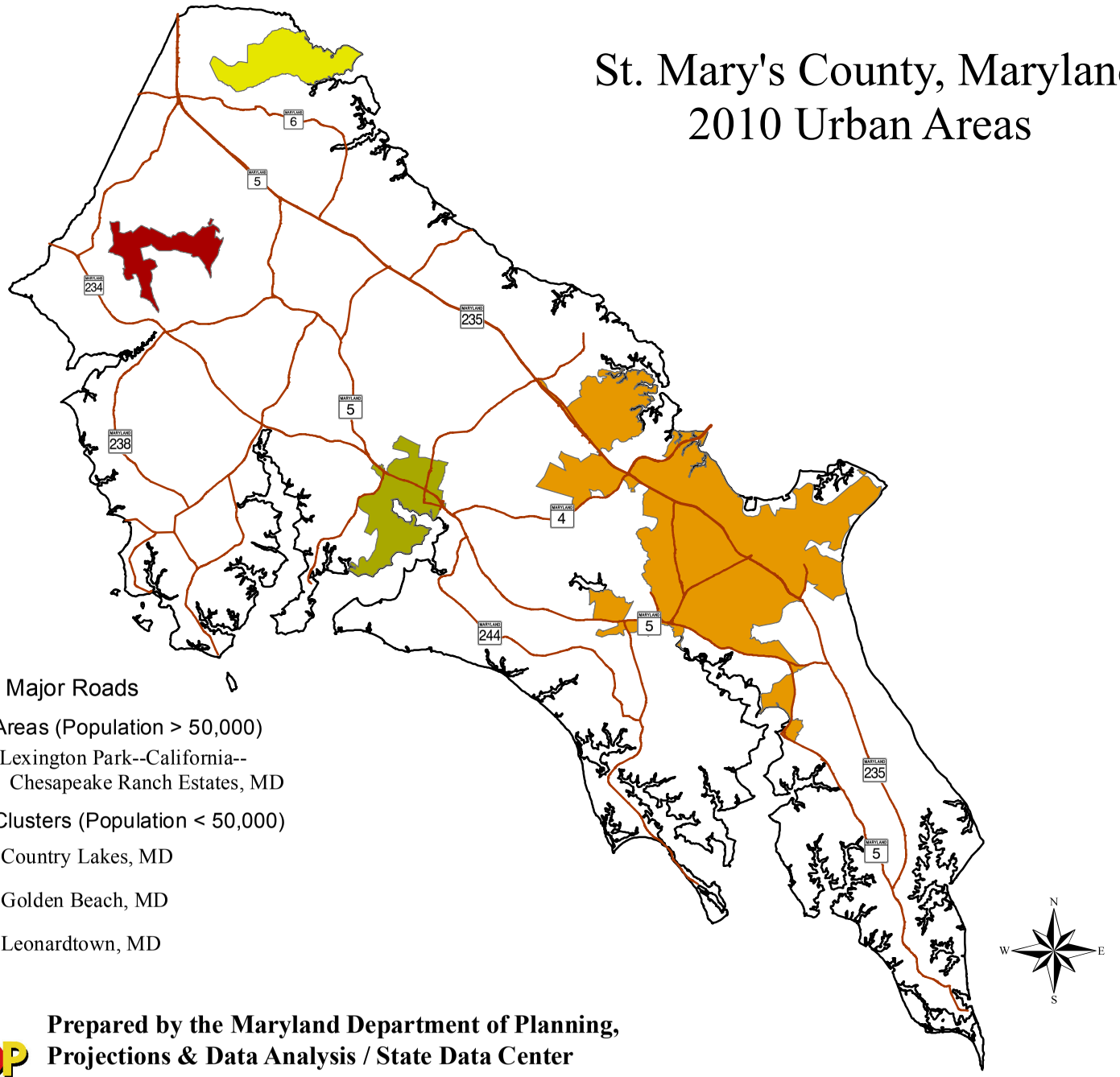
Sincerely,
COMMISSIONERS OF
ST. MARY'S COUNTY

James R. Guy, President

CSMC/jg/cf
T:consent2017/85

cc: Senator Stephen Waugh
Delegate Deborah Rey
Delegate Gerald Clark
Delegate Matthew Morgan
Commissioner Michael L. Hewitt
Commissioner Tom Jarboe
Commissioner Todd B. Morgan
Commissioner John E. O'Connor
Dr. Rebecca Bridgett, County Administrator
George Sparling, County Attorney
John J. Groeger, P.E. Interim Director, Department of Public Works & Transportation

St. Mary's County, Maryland
2010 Urban Areas



Prepared by the Maryland Department of Planning,
Projections & Data Analysis / State Data Center
Source: U.S. Census Bureau, 2010 Census

Ref. No. [UMCES] CBL 11-043

Costs of Stormwater Management Practices In Maryland Counties

Prepared for

Maryland Department of the Environment
Science Services Administration (MDESSA)

By

Dennis King*and Patrick Hagan
University of Maryland
Center for Environmental Science (UMCES)

October 10, 2011

*** For questions or comments contact Dennis King at dking@umces.edu**

UNIVERSITY OF MARYLAND
CENTER FOR ENVIRONMENTAL SCIENCE
CHESAPEAKE BIOLOGICAL LABORATORY
P.O . BOX 38, SOLOMONS, MD 20688

Technical Report Series No. TS-626-11 of the University of Maryland Center for Environmental Science

1. Executive Summary

This report develops and presents planning level unit cost estimates for implementing stormwater best management practices (SWBMPs) in Maryland counties. These unit costs are expressed as costs per acre of impervious area treated and are estimated here for SWBMPs specified in MDE's recently released Maryland Assessment and Scenario Tool (MAST). The SWBMP unit costs presented here can be used with county MAST output to compare combinations of SWBMPs based on their costs as well as their potential contribution to meeting county TMDL targets. They are "planning level" in the sense that they are intended to be generally accurate when averaged across the state of Maryland and across Maryland counties. Actual SWBMP costs, however, depend in critical ways on site and landscape conditions, project design characteristics, project scale, land costs, level of urbanization, and other factors that differ significantly from one Maryland county to another. Therefore, the tables of planning level pre-construction, construction, and post-construction cost estimates that are presented in the report are followed by tables of county-specific cost adjustment factors. Individual counties may choose to use these adjustment factors so that unit cost estimates better represent their county conditions.

The report also provides links to an MDE website where Excel spreadsheet programs that contain the same tables of cost estimates that are provided in this report are in a format which allows users with more reliable county-level or site-specific SWBMP cost data to adjust (override) component cost estimates and to generate their own county-level unit cost estimates for one or more SWBMPs. This report includes an appendix that provides guidance regarding which county-specific factors influence SWBMP costs, presents quantitative and qualitative indicators of how important they are, and illustrates how some of them differ from one region of the state of Maryland to another.

Table ES-1 (the next page) presents planning level estimates of pre-construction, construction, and post-construction costs, and life cycle and annualized life cycle costs per impervious area treated for each SWBMP. Maryland counties with no better cost estimates can use these default cost estimates as they appear, or adjust them based on the data and guidance provided. Counties with better cost data should use them to override some or all of the input costs used in the cost estimating spreadsheets that generated the planning level costs presented in Table ES-1, and generate their own county-specific unit cost estimates.

To be useful for planning purposes, counties need estimates of overall county costs associated with combinations of SWBMPs that are under consideration. For this purpose the unit cost estimate for each SWBMP in Table ES-1 needs to be multiplied by the number of acres a county is considering treating with that SWBMP (e.g., from MAST), and the results need to be summed for all SWBMPs being considered. It is important to note, however, that the cost of county projects within each SWBMP category may range higher and lower than the (average) planning level unit costs presented in this paper. This means that while the costs provided here are suitable for general planning purposes, they should not be used to judge the costs of all project options within any SWBMP category. Developing a cost-effective or "optimal" mix of county SWBMPs, and a budget strategy to pay for them, will require costing out specific project options within each SWBMP category. The spreadsheet programs that accompany this report should be useful as a standard framework for that more detailed cost analysis.

Table: Executive Summary-1 (ES-1)

Table ES-1. Summary Unit Planning Level Stormwater Cost Estimates Per Impervious Acre Treated

Stormwater Management Practice	Pre-Construction Costs[1]	Construction Costs[2]	Land Costs[3]	Total Initial Costs	Total Post-Construction Costs[4]	Total Costs over 20 Years	Average Annual Costs over 20 Years
Impervious Urban Surface Reduction	$ 8,750	$ 87,500	$ 50,000	$ 146,250	$ 885	$ 163,957	$ 8,198
Urban Forest Buffers	$ 3,000	$ 30,000	$ -	$ 33,000	$ 1,210	$ 57,207	$ 2,860
Urban Grass Buffers	$ 2,150	$ 21,500	$ -	$ 23,650	$ 870	$ 41,057	$ 2,053
Urban Tree Planting	$ 3,000	$ 30,000	$ 150,000	$ 183,000	$ 1,210	$ 207,207	$ 10,360
Wet Ponds and Wetlands (New)	$ 5,565	$ 18,550	$ 2,000	$ 26,115	$ 763	$ 41,368	$ 2,068
Wet Ponds and Wetlands (Retrofit)	$ 21,333	$ 42,665	$ 2,000	$ 65,998	$ 763	$ 81,251	$ 4,063
Dry Detention Ponds (New)	$ 9,000	$ 30,000	$ 5,000	$ 44,000	$ 1,231	$ 68,620	$ 3,431
Hydrodynamic Structures (New)	$ 7,000	$ 35,000	$ -	$ 42,000	$ 3,531	$ 112,620	$ 5,631
Dry Extended Detention Ponds (New)	$ 9,000	$ 30,000	$ 5,000	$ 44,000	$ 1,231	$ 68,620	$ 3,431
Dry Extended Detention Ponds (Retrofit)	$ 22,500	$ 45,000	$ 5,000	$ 72,500	$ 1,231	$ 97,120	$ 4,856
Infiltration Practices w/o Sand, Veg. (New)	$ 16,700	$ 41,750	$ 5,000	$ 63,450	$ 866	$ 80,770	$ 4,039
Infiltration Practices w/ Sand, Veg. (New)	$ 17,500	$ 43,750	$ 5,000	$ 66,250	$ 906	$ 84,370	$ 4,219
Filtering Practices (Sand, above ground)	$ 14,000	$ 35,000	$ 5,000	$ 54,000	$ 1,431	$ 82,620	$ 4,131
Filtering Practices (Sand, below ground)	$ 16,000	$ 40,000	$ -	$ 56,000	$ 1,631	$ 88,620	$ 4,431
Erosion and Sediment Control	$ 6,000	$ 20,000	$ -	$ 26,000	$ 10	$ 26,207	$ 1,310
Urban Nutrient Management[5]	$ -	$ 61,000	$ -	$ 61,000	$ 31	$ 61,620	$ 3,081
Street Sweeping[6]	$ -	$ 6,049	$ -	$ 6,049	$ 451	$ 15,079	$ 754
Urban Stream Restoration	$ 21,500	$ 43,000	$ -	$ 64,500	$ 891	$ 82,320	$ 4,116
Bioretention (New - Suburban)	$ 9,375	$ 37,500	$ 3,000	$ 49,875	$ 1,531	$ 80,495	$ 4,025
Bioretention (Retrofit - Highly Urban)	$ 52,500	$ 131,250	$ 3,000	$ 186,750	$ 1,531	$ 217,370	$ 10,869
Vegetated Open Channels	$ 4,000	$ 20,000	$ 2,000	$ 26,000	$ 610	$ 38,207	$ 1,910
Bioswale (New)	$ 12,000	$ 30,000	$ 2,000	$ 44,000	$ 931	$ 62,620	$ 3,131
Permeable Pavement w/o Sand, Veg. (New)	$ 21,780	$ 217,800	$ -	$ 239,580	$ 2,188	$ 283,347	$ 14,167
Permeable Pavement w/ Sand, Veg. (New)	$ 30,492	$ 304,920	$ -	$ 335,412	$ 3,060	$ 396,603	$ 19,830

[1] Includes cost of site discovery, surveying, design, planning, permitting, etc. which, for various BMPs tend to range from 10% to 40% of BMP construction costs.

[2] Includes capital, labor, material and overhead costs, but not land costs, associated implementation; for street sweeping includes only capital cost of mechanical sweeper. Nutrient management construction costs refer to the cost of an outreach campaign, not to any construction costs.

[3] For all stormwater BMPs that require land it is assumed that: 1) the opportunity cost of developable land is $100,000 per acre and 2) 50% of projects that require land take place on developable land with the rest taking place on land that is not developable. This brings the opportunity cost of land for stormwater BMPs that require land to $50,000 per acre. Actual county-specific land cost and percent developable land values can be filled in.
NOTE: The area of some BMPs may be significantly less than the impervious area treated.

[4] Combined annual operating, implementation, and maintenance costs.

[5] Best available data indicate that "retail" (i.e., direct mail) public outreach campaigns cost about $15 per household contacted. For an illustrative county, we assumed that each household has 5,941 sq ft of turf and 2,406 sq ft of impervious cover (medium density development). This means that 7.33 households need to adopt this BMP to potentially result in an acre of turf being treated, at a cost $109.98 per turf acre. Based on a review of direct mail response rates, we assumed that 2% of households contacted will respond positively to this outreach effort, bringing the cost per turf acre treated to $5,497.50/acre. The equivalent on a per-impervious-acre was based on the MDE June 2011 stormwater guidance document, which provides an equivalent for this practice of .09 acres impervious area per one acre of this practice. This estimate does not include any additional costs for soil tests by the homeowner to determine the appropriate amount of fertilizer required.

[6] Capital acquisition cost per impervious acre treated.

Washington County
MARYLAND
DIVISION OF
ENVIRONMENTAL MANAGEMENT
WATER QUALITY | SOLID WASTE | ENGINEERING SERVICES

March 30, 2017

Maryland Department of the Environment
Water Management Administration
Sediment, Stormwater and Dam Safety Program
1800 Washington Boulevard, STE 440
Baltimore, MD 21224

Attention: Mr. Raymond Bahr

RE: Tentative Determination to Re-issue the General Permit for discharges from Small Municipal Separate Storm Sewer Systems
General Permit No. 13-IM-5500
General NPDES No. MDR055500

Dear Mr. Bahr;

The Washington County Division of Environmental Management has received and reviewed the Tentative Determination to Re-issue the General Permit for discharges from Small Municipal Separate Storm Sewer Systems. In response to this draft permit, the County is in agreement with and attaches and incorporates as a part of this County comment letter the Joint Comments on Proposed Reissuance of General Permit for Discharges from Small MS4s of the Maryland Associations of Counties, Maryland Municipal League and Maryland Municipal Stormwater Association dated March 30, 2017. In addition to these comments, the County would like to add the following:

- The financial impact of this draft permit and the time constraints designated are not practical for a local government to achieve. Washington County is working through the calculations on treated and untreated impervious acres in order to assess the feasibility of the 20% restoration requirement. Early analysis by County staff indicates that the County could be seeing a cost of $25 million or more to achieve compliance with this permit. With a timeframe limitation assumption of 8 years to comply this would be an annual impact of over $3 million. While the County strives to comply with the environmental regulations

and permits issued to it by the State, this proposed permit is an unreasonable request.

- It should be noted and considered in this permit that the State of Maryland Phase I and Phase II Watershed Implementation Plans defined the work which needed to be accomplished by each source sector discharging to the Bay. Therefore, the MS4 permittees covered by the General Permit should not be responsible for other sectors in this permit.
- On page 5 of the permit; Paragraph B. Public Involvement and Participation; number 3 refers to a public participation event. What is the definition of a public event?
- Appendix B – Table B.1 – Urban Best Management Proactive Database and Codes: the list field names to be included in the database contain duplicate column names with different descriptions of data they are to contain. Duplications can create issues with the database and we would suggest that these duplications be corrected.

The County expresses its gratitude in advance for your consideration of the above comments in the preparation of the final permit. While the County places value in the condition of our environment, the parameters being proposed under this permit are not reasonable and realistic. If you have any questions or would like to discuss any of these items further, please do not hesitate to contact me at 240-313-2621.

Sincerely,

Julie A. Pippel

Julie A. Pippel
Director

Attachments: Joint Comments on Proposed Reissuance of General Permit for Discharges from Small MS4s of the Maryland Associations of Counties, Maryland Municipal League and Maryland Municipal Stormwater Association dated March 30, 2017.