

August 25, 2017

Lynn Buhl
Assistant Secretary
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230



**RE: Recommendations for new metrics approach for the Phase I
MS4 permit renewals**

Dear Assistant Secretary Buhl,

The undersigned members of the Choose Clean Water Coalition would like to thank you and the Water Management Administration for inviting this broad coalition of clean water advocates to help create and comment on the new Phase 1 MS4 permits in Maryland. The Choose Clean Water Coalition consists of over 200 diverse nonprofit organizations throughout the Chesapeake Bay watershed, with over 75 based here in Maryland. The Coalition serves as a strong and united advocate for restoring the thousands of streams and rivers flowing to the Chesapeake Bay by coordinating policy, messages, and accountability for clean water at the federal, state, and local levels. Several of our organizations are involved in the ongoing permit conversations with MDE.

Attached are our recommendations regarding the appropriate metrics to be included in the next iteration of Phase I MS4 permits. These recommendations emphasize developing a new restoration methodology for the next generation of Phase I MS4 permits. These recommended policies will strengthen the connections between the durable impervious surface area restoration requirements and stormwater volumetric focus of the current permits, with the pollutant reductions needed to meet the Chesapeake Bay TMDL and to address local water quality impairments. We seek to establish more relevant goals for the new permits and at the same time, ensure our local government and State Highway Administration (SHA) partners continue improving local waterways and the Chesapeake Bay.

We have been part of a series of meetings with you and your staff to discuss the future of these critically important permits. We thank you and Secretary Grumbles, Lee Currey, and Ray Bahr for your engagement during these discussions.

This submission offers an opportunity to find agreement on the core substance of the new permits. It also offers an important opportunity for MDE to respond to the deficiencies highlighted by the U.S. Environmental Protection Agency in their recent assessment of the performance of the Maryland stormwater sector in meeting expectations under the Bay TMDL.

We understand that recently resolved and continuing litigation over Maryland's current Phase I MS4 permits create uncertainty, including on some of the topics we have been asked to help address. This has, in some cases, caused us to reconsider previous positions or to replace specific recommendations with somewhat vague suggestions that serve as temporary "placeholders". We look forward to working with you and your staff to finalize the metrics and issues and to reach agreement on the monitoring and maximum extent practicable issues. For specific questions and concerns, please contact Caitlin Wall at wall@potomac.org.

Sincerely,

Anacostia Watershed Society
Audubon Naturalist Society
Audubon Society of Central Maryland
Baltimore Harbor Waterkeeper
Blue Heron Environmental Network, Inc.
Blue Water Baltimore
Chesapeake Bay Foundation
Choose Clean Water Coalition
Citizens for the Preservation of Middletown Valley
Clean Water Action
Conservation Montgomery
Envision Frederick
Frederick Zero Waste Alliance
Friends of Frederick County
Friends of Quincy Run
Friends of Sligo Creek
Friends of Ten Mile Creek and Little Seneca Reservoir
Friends of the Nanticoke River
Interfaith Partners for the Chesapeake
Little Falls Watershed Alliance
Lower Susquehanna Riverkeeper
Maryland Conservation Council
Maryland League of Conservation Voters
Maryland Sierra Club
Mattawoman Watershed Society
Neighbors of the Northwest Branch
Potomac Conservancy
Potomac Riverkeeper
Potomac Riverkeeper Network, Inc.
Rock Creek Conservancy
Savage River Watershed Association
Severn River Association
Sierra Club, Catoctin Group
Southern Maryland Audubon Society
South River Federation
St. Mary's River Watershed Association
WaterKeepers Chesapeake
Watts Branch Watershed Alliance
West Montgomery County Citizens Association
Wicomico Environmental Trust

CC: Benjamin H. Grumbles, D. Lee Currey, Raymond P. Bahr

Section 1: Principles for MDE's third round of MS4 permits

Overview: With the Stormwater Management Act of 2007, and as an early and innovative adopter of water quality protection charges (WQPCs), MS4 permits, and other key tools, Maryland has long been a leader in stormwater management, addressing legacy impervious surface area and new development.

In the current second round of permits, jurisdictions were required to achieve an additional 20% impervious surface restoration using methodologies including Environmental Site Design (ESD), pond retrofits, and stream restoration. In addition, jurisdictions could implement various practices deemed “equivalent” to impervious surface restoration (as defined in the 2012 *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated: Guidance for National Pollutant Discharge Elimination System Stormwater Permits - “Accounting Guidance”*), such as septic system pumpouts and street sweeping.

Jurisdictions are continuously challenged by the increasing demand across the state for qualified contractors and the need for internal project management for this level of infrastructure investment. As a result, Montgomery County did not meet its 20% retrofit requirement and Prince George’s County is experimenting with a new tool, a large public-private partnership (P3) to meet its permit. These two counties, as well as several other jurisdictions (Anne Arundel County, Baltimore City, Baltimore County, Charles County, and Howard County), maintain robust WQPCs despite policy reversals in the General Assembly. Counties without any or insufficient dedicated local funding, such as Carroll County, Harford County, or Frederick County) are even further off track in meeting the 20% retrofit requirement.

Lessons learned from these past two rounds of permits led the Maryland stormwater community to prioritize the following principles. We recommend embedding these into the upcoming statewide template and into individual Phase I permits as developed over the next two years:

- **Prioritize durability**
 - Uncertainty, such as budget fluctuations and climate change impacts, requires durable solutions to manage stormwater impacts over time. ESD and other forms of green infrastructure, such as tree plantings, grade contouring, and sustainable wet-pond retrofits that mimic natural wetlands, provide long-lasting solutions. These solutions mimic nature and use their own natural growth processes to adapt to changing conditions over time. Hard, engineered surfaces and treatments (e.g., street sweeping) intended to reduce pollutant loads can never be self-sustaining or adaptive, as they will always require continued capital inputs and maintenance.
 - Projects must also be legally durable, with instruments such as easements used to ensure that new infrastructure will remain in place for as long as it is designed to do so.
- **Restore both local waterways and the Chesapeake Bay**
 - The challenge of meeting Chesapeake Bay Total Maximum Daily Load (TMDL) 2025 deadlines is immense, and continues to be a substantial driver of stormwater policy (rightfully so, as stormwater is the only growing pollution threat to the Chesapeake Bay). However, many jurisdictions lack local TMDLs for small streams, allowing jurisdictions to use equivalent-acre practices that benefit the Bay (i.e., septic system pumpouts) but don’t protect local waterways. Similarly, many jurisdictions do not use any local prioritizing or targeting in determining where to place their stormwater retrofits, providing benefit for the Bay but not strategically restoring local streams. Conversely, the impervious acreage standard is not quantitatively tied to the Wasteload Allocations (WLAs) required to actually meet the Bay TMDL. Treating impervious acreage alone is

an output, not an outcome, standard that does not provide substantial assurance of Bay restoration on a reasonable time frame.

- Our metrics proposal (Section 2 of this document) addresses the need to simultaneously focus on local waterways and the Bay.
- **Reduce stormwater volume**
 - The increased energy and velocity of stormwater over impervious surfaces may not be the *ultimate* cause of the pollutants that affect the Bay (primarily N, P, and TSS), but the volume of stormwater is certainly the vehicle for and the *proximate* cause of much of this pollution. Practices that promote stormwater on-site retention and infiltration, not just detention, best reduce volume impacts further downstream.
- **Use a treatment-train approach**
 - As stormwater moves downhill, it gathers energy. Treating it as high up in the watershed as possible first, means that there will be less pressure further down the system during storm events. This can also contribute to restoring natural groundwater regimes disrupted by development, by allowing water to naturally filter into the ground throughout the watershed. A successful treatment-train approach requires MS4 permits to incentivize projects on privately-owned land, and perhaps even *above* the pavement itself (i.e., granting credit for spongy turf and native landscaping practices). Similarly, this principle implies that stream restoration should be closely coupled with a watershed-wide strategy that seeks to restore baseflow to the stream (and modulate peak flows, which could be harmful to the desired stability of the restoration itself). Finally, addressing pollutants farther upstream in the watershed often increases pollution reduction credits at the final downstream location (e.g., the Bay).
- **Incentivize innovation**
 - Innovative jurisdictions, such as Montgomery and Prince George's Counties, attempting new engineering practices (such as committing to very high levels of green infrastructure) or new business models (such as P3) should be supported and incentivized to continue testing these ideas for the benefit of other jurisdictions. With risk comes the possibility of failure. The MS4 permit template should include an incentive rubric that enables jurisdictions to reap the benefits of innovation: for example, bonus credit given for achieving gains above and beyond the minimum.
- **Provide structure, versatility, and flexibility**
 - Every jurisdiction is different and has different needs. MDE should develop a permit template establishing a framework for desired outcomes that allows flexibility in how to achieve those outcomes; this flexibility should be incorporated into the permit text itself (not open to interpretation as part of the *Accounting Guidance*). For example, requiring each county to universally retrofit 20% of its impervious surface is inflexible and quite structured, but each county can choose from a very large menu of options on its own regarding how to achieve the 20%. This model results in MDE abdicating its role to enforce any of the other principles outlined above.

Section 2: Recommendations for a revised MS4 metric

- **Overview:**
 - This methodology combines new WLA reduction requirements with ESD implementation requirements (Part IV. E. 2. Restoration Plans).
- **Proposal:**
 - Develop a new restoration methodology for the next generation of Phase I MS4 permits to combine WLA reduction requirements with durable ESD restoration requirements to meet the Chesapeake Bay TMDL, local TMDLs, and stormwater volumetric reductions.
- **Methodology:**
 - 1) MDE conducts a gap analysis to identify pollution reduction requirements needed to meet WLAs (for the Chesapeake Bay TMDL and local TMDLs) for receiving waterbodies within the permittee's jurisdiction that have been assigned to a Phase I MS4 permittee. These numeric reduction requirements should be explicitly stated in the permits.
 - a) **Rationale:** MDE (rather than the permittees) developing specific numbers for each permit provides certainty for the permit holder, the regulator, and the public, while avoiding any delay or potential reason for delay by the jurisdiction associated with conducting their own calculations.
 - b) For the Bay TMDL allocation, new tools from the Chesapeake Bay Program are available to use the Phase III WIP methodology, Phase 6 Bay Model, and new CAST and other Bay Program tools. For different pollutants in other TMDLs, there are various other modelling protocols. Rather than allowing different modelling protocols for different permittees, MDE should determine the best methodology for each pollutant and use that to determine the "gap" for each permittee.
 - c) In addition, each permit holder was required to develop watershed assessments and restoration plans. These assessments and plans, and the data used to support them, should be used by MDE over the next 12 to 18 months to perform the gap analyses for meeting WLAs.
 - d) **Example:** Based on a county's existing plans and past performance, MDE may determine that 1 million additional pounds of pollution removal is required in order to meet the jurisdiction's WLA.
 - 2) Permittees must have 100% of the Bay TMDL (or local TMDLs for nutrients and sediment) practices and programs in place by the end of the permit term which includes the year 2025.
 - a) **Rationale:** 2025 is the end date by which Bay TMDL reductions via WLAs must be achieved at 100%. The MS4 permit must include language prompting jurisdictions to have all practices and programs in place for whichever permit term includes the year 2025.
 - b) For each numeric WLA assigned to each Phase I MS4 permit holder, MDE will use the (1) baseline year and load; (2) the current year load; and (3) the final target load. Then MDE will determine the reductions assigned to specific BMPs or projects that have been implemented to date (even if overall loads have increased across an MS4 county due to growth), as well as the gap between current loads (new baseline) and the final target.
 - 3) Permittees must identify priority local watersheds to focus efforts and meet stormwater WLAs for local TMDLs on a defined timeframe as recommended by MDE in the gap

analysis described in Step 1 above.¹ Under current permits, the permittees were required to complete watershed assessments that: “identify and rank water quality problems” in every local watershed; “specify pollutant load reductions benchmarks and deadlines” to meet the applicable stormwater WLAs; and, submit a restoration plan “for each stormwater WLA approved by EPA prior to the effective date of the permit.”² Creating and implementing local WLA plans should be fairly straight-forward, as most of the work was already completed under the current permit. These priority identifications, gap analyses, and plans should be utilized to create enforceable restoration plans and compliance schedules for all local impaired watersheds. These plans must include an identified end date for achievement of local stormwater WLAs, selected using one of these methods:

- (a) Establishing an end date:
 - ii) **Option 1:** require the permittees to hold local public hearings to establish an end date for each TMDL within a specified period of time.
 - iii) **Option 2:** MDE suggests an end date based on the gap analysis, using as benchmarks at least one progress over time scenario.
 - 1. **Example:** MDE could use the Bay TMDL 2025 scenario to establish a linear progress curve that plots annual progress until the end date is reached (e.g., a line starting at year 1 of the permit with a slope determined by various levels of annual progress). MDE could also develop several curves using alternative scenarios to present a range of options.
- 4) Permittees must meet a percentage of these reductions through durable ESD restoration techniques.
 - a) Counties can fulfill multiple goals by targeting projects that provide multiple benefits and build more durable means to reach the TMDL or other water quality goals for the county, by emphasizing the use of ESD, and limiting the reliance on projects that provide purely temporary treatment of symptoms without lasting capabilities to improve water quality, such as street sweeping.
 - b) Similarly, MDE should require a minimum percentage of ESD project types that yield durable benefits. For example, two permittees have established ESD goals (Prince George’s County at 100% and Montgomery County at 60%).
 - i) Recognizing the need for a tailored approach based on each jurisdiction’s demographics and geography, the remaining permits should include a goal of 40% ESD as a minimum, with the ability to increase this over time.
 - ii) Low-cost ESD projects, like planting trees and employing compost amendment to turf, should be encouraged and fully accredited in the *Accounting Guidance*. In addition, the *Accounting Guidance* should be revised in accordance with current best practice in this rapidly-changing field to ensure that its metrics and equivalencies are as up-to-date as possible and match the expectations included in the new CAST and other Bay models.
 - c) **Example:** if the gap analysis reveals that the reduction needed to meet the WLA is 1 million pounds of pollution and the permit requires 40% of the reduction to be achieved through durable restoration (using ESD), then the gap to be achieved

¹ We recognize that not all local impaired waterways have TMDLs. We caution MDE to remain aware of other waterways which are currently unregulated or without established TMDLs, and to continue to work with the EPA and local authorities to propose and designate local TMDLs accordingly.

² See Phase I MS4 Permit Part IV.E(1)(b)(iii)-(v) and Part IV.E(2)(b).

through ESD is 400,000 pounds of pollution.³ These percentages of the WLA might vary depending on a county's needs.

- **Discussion:**

- Inclusion of a requirement to meet WLAs with a minimum ESD requirement will support both water quality improvements and runoff reduction for local waterways and the Chesapeake Bay.
 - The WLA sets the ultimate reduction requirement and the ESD target becomes a technology-based means to achieving that target.
 - The challenge to introducing a water quality based numeric reduction standard in the new permit is that it is obviously only applicable where a WLA has been assigned to the MS4 permit. Ideally, every watershed would have a WLA for every pollutant for which the watershed is impaired. In reality, most watersheds have few TMDLs and even fewer numeric WLAs assigned to MS4 permits. (Incidentally, this is why additional promotion of ESD restoration is required – it reduces a variety of pollutants whether or not the watershed has a WLA or is considered impaired.)
 - Under this methodology, the ESD requirement in the next permit would not be a percentage of the county's impervious surfaces (e.g. 20%) expressed in acreage but rather a percentage of the WLA (e.g. 40%) expressed in pollutant pounds that must come from projects and practices that specifically target stormwater volume and runoff through ESD.⁴

³ On July 1, 2017, the Choose Clean Water Coalition sent a letter to Mr. Gary Setzer, representing MDE's Water Quality Trading Advisory Committee. The letter contained 11 recommendations for MDE to refine the Water Quality Nutrient and Sediment Trading and Offset Program Draft Regulations. We urge MDE to adopt these recommendations and ensure that any nutrient trading included in an MS4 permit adheres to those principles.

⁴ This requires potentially substantial changes in the *Accounting Guidance* to encourage ESD projects that meet both requirements. The *Accounting Guidance* must be updated to ensure it reflects new changes in technology and project type that meet the principles established in Section 1 of this document.