Maryland Department of the Environment
Water and Science Administration

Basis for Final Determination to Modify Charles County's National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit

DISCHARGE PERMIT NO. 11-DP-3322
NPDES NO. MD0068365

Effective Date:	December 26, 2014
Modified Date:	November 8, 2019
Expiration Date:	December 25, 2019

Introduction

The Maryland Department of the Environment (the Department) made a tentative determination on July 5, 2019, to modify the National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system permit ("stormwater permit" or "MS4 permit") issued to Charles County (the County). The stormwater permit that was originally issued on December 6, 2014, established specific conditions for regulating discharges from Charles County's storm drain system. Public notice of the Department's tentative determination to modify the permit appeared in the Maryland Register on July 5 and 19, 2019, and in The Maryland Independent newspaper on July 5 and 12, 2019, as required by Maryland's Administrative Procedures Act (APA). Additionally, the Department maintains an interested parties list that includes federal, State, and local municipal officials as well as numerous residents of the State of Maryland that were notified of the tentative determination.

In addition to the notification of tentative determination, the Department conducted a public hearing regarding the proposed modifications to the County's permit. The hearing to accept testimony and comment regarding the modifications was held on July 31, 2019. Three individuals representing the County and various environmental groups testified at the hearing and an official audio transcript of the proceedings furnished by For The Record, Inc. is available on the Department's website.

After the hearing, the public record regarding the modifications to the County's stormwater permit remained open until October 3, 2019, to accept further comment in accordance with the APA. In aggregate, the comments received during the public hearing offered various perspectives on the major tenets of water quality trading and with respect to the County's stormwater permit. The issues receiving the most comments included procedures for water quality trading, how trading affects the existing impervious surface restoration requirement, and how trading will affect future permit requirements. Each of these issues will be addressed below as part of the Department's Basis for Final Determination.

Background

When the Chesapeake Bay Total Maximum Daily Load (TMDL) was published in December 2010, each state in the Chesapeake Bay watershed was required to develop a Watershed Implementation Plan (WIP) for how they would achieve the pollution load reductions required by the TMDL. Maryland's WIP established a State framework for meeting the water quality goals for the Chesapeake Bay by 2025. Much of the urban stormwater goals were to be implemented through NDPES MS4 permits. Specifically, the Department's NPDES MS4 permits address stormwater concerns related to local and Chesapeake Bay TMDLs via a 20 percent restoration requirement for impervious surfaces that have no treatment.

Charles County's NPDES MS4 Phase I permit that requires the 20 percent impervious surface restoration was issued on December 6, 2014. The County's Fiscal Year 2018 Annual Report documented that the County anticipates the restoration of 895 impervious acres by the end its permit term on December 25, 2019. This is equal to 57% of the County's restoration requirement of 1,577 impervious acres.

Restoration control practices implemented by Charles County include traditional methods, e.g., ponds, filters, and wetlands, and alternative methods, e.g., street sweeping, tree planting, and stream restoration based on the Department's "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits (MDE, August 2014)" (MS4 Accounting Guidance).

1. Water Quality Trading Program Regulations

Numerous comments received by the Department were directly related to the Water Quality Trading Program regulations, Code of Maryland Regulations (COMAR) 26.08.11, which became effective on July 16, 2018. These regulations were originally published in the Maryland Register, 44:25 Md. R. 1189-1195, on December 7, 2017, and republished with nonsubstantive changes, 45:14 Md. R. 698-702, on July 6, 2018. Comments regarding Maryland's Water Quality Trading Program that have been addressed through prior regulation adoption and citizen participation opportunities found in State Government Article (SG) Annotated Code of Maryland, Title 10, Subtitle 1, and 7-213 include:

A. Local Water Quality Provisions

Comment(s): It must be made clear that credits must only be applied in close proximity to where they're generated; otherwise the trades will endanger local water quality. As one commenter stated, the "co-benefits" of installing stormwater management locally, including public safety, property, infrastructure, and cost, "haven't been taken into account at the County level."

Department Response: Water quality trading regulations in COMAR 26.08.11.08 stipulate how local water quality is addressed and limitations on where the credits can be generated.

B. Performance Standards and Associated Pollutant Reductions

Comment(s): One commenter noted that "Maryland's water quality trading regulations do not allow credits to be produced from unused capacity at wastewater treatment plants… The significant violations documented at Mattawoman WWTP must result in that facility's ineligibility to generate credits, which creates uncertainty about the County's ability to obtain the necessary credits for compliance."

Department Response: Wastewater treatment plant performance criteria are stipulated in COMAR 26.08.11.06 for total nitrogen and total phosphorus and ensure that additional pollutant reduction credits are generated. The regulations allow credits to be generated by a wastewater point source "based on that wastewater point source's performance". Additionally, performance criteria are stipulated in COMAR 26.08.11.03 to ensure that additional pollutant reduction credits are generated.

C. Availability of Credits

Comment(s): Where will credits come from or be found by the permittee? Concern was expressed about the apparent number of available credits.

Answer: Permittees are responsible for acquiring credits in the public marketplace. It is not the policy of the Department to mandate where permittees must locate credits, provided the credits are generated and certified according to the State's regulations.

2. Timing/Necessity of the Proposed Modifications

Numerous comments received by the Department questioned the timing of the proposed modifications. There were also questions asking why trading is necessary or should be allowed. Specific comments regarding the timing and practicality of the proposed modification include:

A. Uncertainty of County MS4 Programs and Continued Restoration Implementation

Comment(s): What impact will trading have on Charles County's ability to meet its restoration and pollution reduction goals and maintain its progress toward compliance deadlines? Language should be added to formalize the schedule for replacing credits during future permit cycles with stormwater best management practices and requiring that credits be maintained by the County until they are replaced.

Department Response: The Permit Modification Fact Sheet notes that nutrient load reductions achieved through the trading program shall be replaced by stormwater practices during the next permit term. Permittees shall continue to pursue current restoration efforts and track progress in annual reports as specified in the permit modification. The Fact Sheet provides information on how trading under the current permit will affect requirements in future permits. More specifically, nutrient trading to meet the MS4 permit's 20 percent impervious surface restoration (ISR) requirement shall be continued annually until a new permit is issued to Charles County. The trading regulations (see COMAR 26.08.11.08) specify that if there is a default in a trade contract, expiration of a credit, or suspension or revocation of a credit, the buyer (e.g., Charles County) using the credit remains responsible for complying with the permit. In any of these events, the permit modification requires Charles County to inform the Department annually of how it is maintaining compliance with the restoration requirement of the permit. As credits are replaced by restoration practices, additional water quality benefits are realized beyond the specific pollutants that were traded.

3. Future Permits, Modifications, and Legal Action Related To Permit Compliance

A. Transparency and Nutrient Credit Calculations

Comment(s): To address the need for transparency, the permit modification should identify "the number of nitrogen, phosphorus, and sediment credits needed for each acre of impervious surface restoration".

Department Response: These calculations, and other technical standards, are addressed in the Accounting Guidance and any subsequent updates. Placing these details within the permit itself inhibits the Department's ability to update or revise them as needed to ensure compliance with the permit.

Comment(s): To address the need for transparency, the permit modification should include language "clarifying which baseline impervious load should be used for the urban loading rate, and also specifying that this applies to nitrogen, phosphorus, and sediment."

Department Response: PART IV.E.3 of the permit (Nutrient Trading) specifies that "[T]he basis for an equivalent impervious acre restored through trading is the difference in pollutant loads between urban and forest stormwater runoff according to [the Accounting Guidance]." Appendix D of the Accounting Guidance explains the nutrient conversion process and provides example calculations to determine impervious acres treated based on given pollutant load reductions. Specifically, Tables D.1 and D.6 provide the level of nutrient load reductions per acre of nutrient trading credit. Therefore, this information is already available and is incorporated by reference into the modified portion of the permit.

B. Use of the impervious surface restoration metric for achieving nutrient reductions

Comment(s): It was questioned "whether the ISR metric is still useful for achieving TMDL nutrient reduction goals." One commenter expressed "great concern about how any permittee can achieve the ultimate goal of nutrient and sediment pollution reduction for Chesapeake Bay and local waters if the current permit impervious surface restoration goals are being missed." Additionally, Charles County stated that it is awaiting a legal decision that could impact the County's restoration obligations and "shape… MS4 permits in the future."

Department Response: The Department has determined that compliance with the 20% impervious area restoration requirement in the permit constitutes adequate progress toward compliance with Maryland's receiving water quality standards and United States Environmental Protection Agency (EPA) approved stormwater wasteload allocations (WLAs) for the Chesapeake Bay and local TMDLs. Furthermore, the Maryland State Court of Appeals in *MDE et al. v. Anacostia et al.* affirmed the 20% restoration requirement as a "well developed and vetted strategy." This metric will continue to be used during the current permit cycle as a metric for Charles County's efforts to achieve its pollutant reduction goals.

Conclusion

Charles County's permit represents a major step forward in meeting the water quality objectives of the Clean Water Act (CWA). Requirements in the permit include restoring 20% of the County's impervious area (i.e., the ISR requirement), and developing restoration plans to meet stormwater WLAs to address Chesapeake Bay and local water quality impacts. With respect to the ISR requirement, Charles County has documented that while the capital and operational funds necessary to meet the 20 percent impervious surface restoration requirement are available, the physical capacity for implementing structural best management practices (BMPs) within the permit timeframe is a limiting factor.

In July 2018, Maryland adopted a program that allows MS4 permittees to use nutrient credit trading. Because this option was not available at the time of issuance, the existing permit must be modified to allow nutrient credit trading as an option for meeting ISR goals within the framework of the permit. Therefore, the Department has reached a final determination to modify Charles County's MS4 permit to use Maryland's newly authorized nutrient trading program as an option to meet its 20 percent ISR requirement.

Comments Submitted by:	Comment(s) or Question(s)	Relevant Response
Audubon Naturalist Society (oral & written comments)	"There is great concern about how any permittee can achieve the ultimate goal of nutrient and sediment pollution reduction for Chesapeake Bay and local waters if the current permit impervious surface restoration goals are being missed."[1]	§3, p. 4
	"We understand and appreciate the statement on page 5 of the [Permit Modification] Fact Sheet, last bullet, that is that "It is generally understood" that the use of nutrient trading in the last year of a permit term must be "replaced by stormwater management practice and alternatives during the next permit term." The trouble is that this statement cannot be taken alone, given that it appears in the Fact Sheet but is not anchored in the permit itself. To assure that this statement is legally binding and enforceable, we strongly urge that there be precise language in the new permit for all permittees which have used nutrient trading to achieve ISR credit which states that each such credit is replaced by actual in-ground impervious surface restoration."[1]	§2, p. 3
	"With respect to Charles County's success at reducing pollutants, the table at p. 126 of its annual report… gives rise to the question of whether the reductions for 2025 will be met even if the total IRS [*sic*] acres are achieved. If MDE permits Charles County to invoke nutrient trading to meet the ISR acres for the current permit, it will be even further behind in pollutant reduction for the 2025 finish line and even beyond."[2]	§3, p. 4
	"The larger issue raised by the Charles County permit implementation experience and raised as well by all the Maryland Phase I permittees is whether the ISR metric is still useful for achieving TMDL nutrient reduction goals."[2]	§3, p. 4
	[1]Comments provided at public hearing, 7/31/2019 [2]Written comments received 10/02/2019	
Charles County (oral comments)	"The County continues to work towards full compliance with the restoration requirement but having the flexibility to trade for a portion of the requirement is important to the County as we come closer to the end of the permit term."	§2, p. 3
	"The County is awaiting the decision on the Frederick and Carroll Counties MS4 permits appeals case, which was heard by the Maryland Court of Special Appeals in September 2018 and could impact the County's obligations under the current MS4 permit, including the extent of the restoration requirement and shape how the Maryland Department of Environment writes MS4 permits in the future."	§3, p. 4

Chesapeake Bay Foundation (written comments)	"There appear to be no available credits listed for the Potomac or Patuxent River basins, to which Charles County is confined for trading options.. The County has stated that they intend to acquire "credits from the unused load capacity at the County's Mattawoman wastewater treatment plant." Maryland's water quality trading regulations do not allow credits to be produced from unused capacity at wastewater treatment plants… The significant violations documented at Mattawoman WWTP must result in that facility's ineligibility to generate credits, which creates uncertainty about the County's ability to obtain the necessary credits for compliance."	§1, pp. 2-3
	"CBF recommends that the permit modification process should include an analysis of reasonable assurance that incorporating trading in these permits can, in fact, help permittees meet compliance deadlines. This could include identification of anticipated, available credit purchases. If sufficient credits are not available, then the permittee should also update restoration plans to identify and include supplemental stormwater practices that can be implemented in a shorter timeframe, such as tree planting or more extensive, additional green infrastructure installation, that would allow the permittee to come into compliance by the end of the permit term."	§1, pp. 2-3
	"The proposed modification language incorporates MDE's "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits" (Guidance Manual) as the basis for required credit purchases. … CBF strongly recommends clarifying which baseline impervious load should be used for the urban loading rate, and also specifying that this applies to nitrogen, phosphorus, and sediment. … For the sake of public transparency and ease of tracking pounds of credits needed against pounds of credits purchased from the trading registry, CBF strongly recommends that the permit modification specifically identify the number of nitrogen, phosphorus, and sediment credits needed for each acre of impervious surface restoration. Since the purpose of the impervious surface restoration requirement is to address runoff from impervious areas, the appropriate loading rate would be from an urban impervious acre to forest. Under Model version 5.3.0, which was in effect when the current permits were issued, the delta between urban impervious and forest is 7.68 pounds per acre per year for nitrogen, 1.91 pounds per acre per year for phosphorus, and 0.43 tons per acre per year for sediment. These values should be listed directly in the permit modification with a clear directive that permittees much purchase these values for each acre of impervious surface restoration that is being replaced with credit purchases."	§3, pp. 3-4
	"[I]t should be made clear in the permit modification language itself what the strategy is for the "trading in time" approach. … CBF recommends the inclusion of language in the	§2, p. 3

	permit modification itself that formalizes the expectation that credits must be maintained until converted into stormwater practices, and that the conversion must happen in the next permit term. …The permit modification language should also make it clear that those purchased credits will be required to be maintained annually until the conversion is done."	
	"CBF is concerned about the proposed permit modification's lack of compliance with COMAR 26.08.11.08(E), which requires credits used within any impaired water to be generated within the impaired watershed... CBF is concerned that applying the water quality trading regulations to MS4 permits without further specifying how the credits must be purchased in regard to impaired local waters will worsen local water quality hotspots… CBF recommends including specific geographic locations that align with local water quality impairments in which credits must be generated in order to be purchased for MS4 compliance."	§1, p. 2
	"Allowing unlimited credit purchasing instead of local restoration will endanger local water quality and delay progress towards attainment of local TMDLs. Furthermore, setting the expectation that all unmet permit obligations may be met through trading will exacerbate the delay and disruptions in program implementation. Therefore, CBF recommends setting a clear limit on the ability to purchase credits in lieu of restoration obligations, and also setting clear expectations that the ability to trade will also be limited in the future."	§2, p. 3
Mattawoman Watershed Society (oral comments)	"These stormwater impervious surface reclamations or treatments serve other purposes than just protecting the [Chesapeake] Bay. They serve public safety. We have been having enormous flooding here in Charles County. These things on the ground… help to control that flooding. So it's good that we're trying to control the pollution and restore the Bay, but it has other effects, and if you leave them off then you're risking the lives and the property of the citizens of the County. So I think we should not change the rules in the middle even if it's permitted because of the co-benefits of actually figuring out ways to soak up the stormwater… It also helps to protect our infrastructure, our road infrastructure, our bridge infrastructure from washing away, and we've had terrible problems with that as well, which is quite expensive to the taxpayers. So taking our stormwater and slowing it down so that it isn't grinding at the infrastructure will save us money in the end. I fear that those benefits haven't been taken into account at the County level… Over in Phase III [of the Maryland Watershed Implementation Plan] we're supposed to be paying attention to the issues that are brought up by these increased precipitation events within the Phase III WIP, right? So why would we shoot ourselves in the foot now when these kinds of treatments can help in those issues, as well."	§1, p. 2