Maryland Department of the Environment
Water Management Administration

Basis for Final Determination to Issue Maryland State Highway Administration's National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit

MD0068276 11-DP-3313

October 2015

Introduction

The Maryland Department of the Environment (MDE) made a Tentative Determination to issue the Maryland State Highway Administration (SHA) a National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) permit (Draft Permit) on December 26, 2014. The Draft Permit established specific conditions for regulating discharges from SHA's storm drain system. Public notices of MDE's Tentative Determination appeared in The Baltimore Sun on December 26, 2014, and January 2, 2015, as required by Maryland's Administrative Procedures Act (APA). Additionally, MDE maintains an interested party list for SHA's Draft Permit that includes federal, State, and local municipal officials, and numerous citizens of Maryland. Individuals on this list were notified of the Tentative Determination on December 30, 2014.

Subsequent to the notification of the Tentative Determination, MDE received two requests for a public hearing regarding SHA's Draft Permit. The requests came on December 30, 2014 and on January 5, 2015 by representatives from Friends of Quincy Run Watershed and the Maryland Stormwater Consortium, respectively. In response, MDE held a hearing on February 26, 2015 to accept testimony and comment regarding the Draft Permit. Two individuals representing various environmental groups testified at the hearing. The official transcript of the proceedings was furnished by For The Record, Inc., and is available on MDE's website.

After the hearing, the public record regarding SHA's Draft Permit remained open until March 13, 2015 to accept further comment in accordance with the APA. Numerous comments were received during this time from the Chesapeake Bay Foundation, Friends of Quincy Run Watershed, and the Maryland Stormwater Consortium. In aggregate, the comments offered various and often similar perspectives on the major tenets of SHA's Draft Permit. This Basis for Final Determination explains MDE's rationale for finalizing the requirements in the permit being issued today (Final Permit), and addresses the major concerns submitted to MDE during the public comment period.

Background

Maryland has been delegated the authority by the U.S. Environmental Protection Agency (EPA) to administer the federal NPDES permit program through a Memorandum of Agreement (MOA) signed in 1974 and recodified on May 18, 1989. Final stormwater regulations, adopted by EPA

in November 1990, and found in 40 Code of Federal Regulations (CFR) § 122.26, required certain owners of storm sewer systems to apply for Phase I NPDES MS4 permits. The SHA is considered a Phase I large municipality due to language in 40 CFR § 122.26 (b)(8) that defines a municipal separate storm sewer system as "...a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains)...(o)wned or operated by a state, city, town, borough, county, parish, district, association, or other public body..." This leads to the supposition that any public highway department operating within large or medium MS4 jurisdictions and responsible for water conveyances must participate in the NPDES municipal stormwater program. The SHA has an obligation to take part in Maryland's NPDES municipal stormwater efforts because it owns storm drain systems that are connected with those that are permitted currently. Therefore, MDE designated SHA as a Phase 1 large MS4 jurisdiction. As a result, SHA submitted a two-year, two-part application and was issued an initial MS4 permit in January 1999. The SHA's MS4 permit was reissued in October 2005. This permit action is to issue a new NPDES permit to SHA to regulate the discharge of stormwater runoff from its storm drain system.

This Final Permit represents another step forward for SHA's municipal stormwater program. In 1999, SHA's initial permit laid the foundation for a comprehensive approach to controlling runoff. This first permit required SHA to inventory and map storm drain system infrastructure; identify sources of pollution; monitor storm events to evaluate chemical, biological, and physical stream responses; and enhance existing and establish new management programs. This approach complied with the maximum extent practicable (MEP) standard established under the Clean Water Act, 33 U.S.C. § 1342(p)(3)(B)(iii). When reissued in 2005, the subsequent permit required SHA to evaluate urban runoff and water quality; prioritize watersheds in order to perform more detailed analyses and guide management implementation; and to begin restoring existing impervious area.

In preparing permits, MDE has used an adaptive permitting approach where the assessment of water quality on a watershed basis was used to establish additional retrofitting requirements, including the restoration of SHA's impervious area. An application for a new NPDES permit was submitted in October 2010 as part of SHA's fourth year annual report. This annual report and application served as the basis for developing the Final Permit that is being issued today.

Conditions of this Final Permit require SHA to possess the legal authority to control storm drain system pollutants, continue mapping its storm sewer system, monitor stormwater discharges, develop and implement comprehensive management programs, and provide education and outreach regarding stormwater pollution. New requirements under the Final Permit include increasing impervious area treatment, supporting litter reduction strategies, and implementing environmental site design (ESD) technologies for new and redevelopment projects to the MEP. The SHA will also be required to develop a comprehensive total maximum daily load (TMDL) implementation plan to address wasteload allocations (WLAs) approved by EPA. MDE has established this implementation plan as annual reporting requirements under this Final Permit (see Issue I).

The Final Permit for SHA is based on a "template" permit developed for Prince George's County with the input of EPA, MDE, several Maryland counties, and environmental groups. The permit

negotiation process for Prince George's County was discussed in EPA's letter to MDE on October 22, 2013 (see Attachments). In the letter, EPA concluded that the Prince George's County permit is "…an excellent template to advance the stormwater program…" and that it "…meets regulatory requirements, is enforceable, and achieves the water quality objectives of the Clean Water Act (CWA)."

More information on the MS4 permitting process in Maryland and MDE's iterative approach over the past several permit terms can be found in SHA's MS4 Permit Fact Sheet, which is available on MDE's website. All comments submitted to MDE during the Tentative Determination process are also available on the website. In addition, EPA letters describing Draft Permit development and the negotiation process for the Prince George's County template are provided in the Attachments to this document. These documents summarized a clear process that engaged stakeholders and EPA in order to develop a permit that will meet the water quality goals of the CWA by implementing measures to make further progress toward water quality standards (see Final Permit under Part III.).

The following is a discussion of the most substantive comments received and MDE's response to each. The issues receiving the most comments included WLA attainment dates, benchmarks for the implementation of restoration efforts, monitoring, public participation, erosion and sediment control, stormwater management, and ESD to the MEP. A summary of MDE's Basis for Final Determination to issue this Final Permit is then provided.

I. Wasteload Allocation Attainment Dates and Restoration Implementation Milestones.

There were many comments regarding the lack of enforceable details and deadlines for meeting the WLAs in SHA's Draft Permit. One environmental advocacy group requested that "[f]inal stormwater WLA attainment dates be set at the soonest possible date and shall be consistent with the deadlines associated with the Chesapeake Bay TMDL and the state and local Watershed Implementation Plans (WIPs)." Another commenter stated that "[a]s the TMDL plans do not require the SHA to set out how they will reach their 20% restoration goals it is therefore unclear what will be enforceable under the TMDL plans..."

MDE considers that SHA's NPDES MS4 Permit is not required to comply with WQS or any TMDL WLAs. The case that MS4 permits must comply with WQS was rejected by the U.S. Court of Appeals for the Ninth Circuit and several other state and federal courts[1]. In *Defenders of Wildlife v. Browner* [191 F.3d. 1159, 1164 (9th Cir. 1999)], the Ninth Circuit Court found that WQS are not applicable to municipal stormwater discharges. In its decision, the Court reasoned

[1] The Defenders decision has been followed in various state and federal courts. *e.g. Conservation Law Found., Inc. v. Boston Water & Sewer Comm'n*, 2010 U.S. Dist. LEXIS 134838, 73 ERC (BNA) 1282 (D. Mass. 2010); *Miss. River Revival, Inc. v. City of St. Paul*, 2002 U.S. Dist. LEXIS 25384, 56 ERC (BNA) 1114, 33 Envtl. L. Rep. 20131 (D. Minn. 2002); *City of Arcadia v. State Water Resources Control Bd*., 135 Cal. App. 4th 1392 (Cal. App. 4th Dist. 2006); *Building Industry Assn. of San Diego County v. State Water Resources Control Bd*., 124 Cal. App. 4th 866 (Cal. App. 4th Dist. 2004); *Matter of Natural Resources Defense Council, Inc. v. New York State Dept. of Envtl. Conservation*, 34 N.E. 782 (N.Y. 2015); *see also Tualatin Riverkeepers v. Or. Dep't of Envtl. Quality*, 230 P.3d 559, 563 n. 8 (2010) (discussing *Defenders* to explain why environmental groups only challenged an MS4 permit's failure to comply with water quality standards under state law and not the CWA). Indeed, no court has reported an opinion specifically rejecting the logic set forth in the *Defender*s decision.

that Congress expressly required industrial stormwater dischargers to comply with water quality standards, but specifically "…chose not to include a similar provision for municipal storm-sewer discharges." *Id*. at 1164-1165. The Court concluded that "…the text of 33 U.S.C. § 1342(p)(3)(B), the structure of the [CWA] as a whole, and this court's precedent all demonstrate that Congress did not require municipal storm-sewer discharges to comply strictly with 33 U.S.C. § 1311(b)(1)(C)." As a result, EPA's September 23, 2014 letter to MDE (see attachments) found the language and provisions found in the Draft Permit "…satisfactory for purposes of the CWA and applicable NPDES requirements."

The Final Permit issued today does establish the twenty percent restoration requirement (see PART IV.E.2.a.) as a numeric effluent limit to achieve the Chesapeake Bay and local TMDL WLAs. The SHA is required to "…commence and complete the implementation of restoration efforts for twenty percent of SHA's impervious surface area…that has not already been restored to the MEP" [see PART IV.E.2.a.]. In support of this, the Final Permit requires within one year of issuance that the SHA submit an impervious surface area assessment that serves as the baseline for restoration efforts. The permit also requires additional planning, reporting, and assessment components including the development of one coordinated TMDL implementation plan for addressing all watersheds that have EPA approved TMDLs.

In its September 23, 2014 letter, EPA stated that this numeric effluent limit (i.e., twenty percent restoration of impervious surface area) is "…consistent with the reductions called for in both Maryland's WIP [Watershed Implementation Plan] and CBP [Chesapeake Bay Program] 2017 interim goals…" and that "EPA is satisfied that this permit is consistent with the overall assumptions and requirements of the Chesapeake Bay TMDL WLA and the CBP goal of 2025." EPA also found "…this approach satisfactory with regard to other applicable TMDL WLAs identified in the permit…" EPA offered that the effluent limit "…is consistent with EPA's regulations and guidance" and "…is designed to reduce nutrient and sediment discharges in a way that is consistent with the [Maryland] Phase II WIP…" Finally, EPA's recent guidance [see Sawyers and Best-Wong, "Revisions to the November 22, 2002 Memorandum…" (11/26/2014)] identified the twenty percent restoration requirement as an example of "…a specific, quantifiable performance requirement that must be achieved within a set timeframe."

Therefore, the twenty percent restoration requirement described in PART IV.E.2. is an EPA approved effluent limit consistent with and satisfactory for addressing both the Chesapeake Bay and other applicable TMDL WLAs. The Final Permit also requires an initial impervious surface area assessment (see PART IV.E.2.a.) that serves as a quantification of the existing conditions that is used to assess progress toward meeting those WLAs. Finally, EPA has confirmed that not only is this effluent limit acceptable for making progress towards meeting TMDL WLAs, it is also consistent with regulations and guidance as set forth in EPA's 2002 Wayland, 2010 Hanlon, and 2014 Sawyers Memos. Consequently, the Final Permit does contain requirements that are consistent with the assumptions and requirements of any available TMDL WLAs.

In addition to the want for meeting WLAs, there was a collective concern from environmental advocates that the Draft Permit did not require enforceable plans with interim and final deadlines for meeting WLAs. For example, one organization stated that "[t]he Permit fails to require the benchmarks or interim standards or milestones in the implementation plan to be quantified as

defined in Maryland law and under the federal Clean Water Act regulations." Another commenter argued that the Draft Permit must require "[d]eadlines for attainment" and that these deadlines "be enforceable upon incorporation into the permit." This commenter added that "[n]umeric benchmarks [must] specify annual pollutant load reductions and be used to assess progress toward attainment of milestones and ultimate stormwater WLA attainment."

Federal regulations governing the use of compliance schedules in NPDES permits state that "[t]he permit may, when appropriate, specify a schedule of compliance leading to compliance with CWA and regulations." [40 CFR § 122.47]. By the terms of these regulations, a compliance schedule is used to address an ongoing violation of the CWA or federal regulation. According to the CWA and Maryland law, SHA's permit does not need to comply with WQS. Likewise, MDE did not make compliance with WQS a condition of the Draft Permit. For these reasons, there are no ongoing violations of WQS to address and compliance schedules are not applicable.

With respect to WLAs, MDE offers that TMDLs generally do not include deadlines for meeting respective WLAs. One exception to this rule is the Chesapeake Bay TMDL, which, according to the Chesapeake Bay Watershed Agreement, must be met by 2025. As discussed above, EPA has determined that the Draft Permit is consistent with the requirements of the Chesapeake Bay TMDL WLA. Similarly, EPA has also stated that the requirements for restoration described in PART IV.E.2.b. of the Draft Permit are acceptable for addressing other applicable TMDL WLAs. Therefore, the Draft Permit is not in violation and compliance schedules for meeting applicable WLAs are not required.

While they are not enforceable as effluent limitations, WQS are set forth in the Final Permit as are WLAs as goals that SHA must work toward meeting. To ensure that there is future progress toward meeting these goals, the Final Permit requires that the SHA submit a coordinated TMDL implementation plan "that addresses all EPA approved stormwater WLAs… and [the] requirements of Part VI.A., Chesapeake Bay Restoration by 2025 for SHA's storm sewer system." Provisions for this implementation plan can be found under PART IV.E. (Restoration Plans and Total Maximum Daily Loads). This section of the Final Permit requires SHA to conduct systematic assessments and develop a detailed TMDL implementation plan to address specific WLAs and aggregate WLAs that SHA is a contributor. For all EPA approved TMDLs, this implementation plan must include "...a detailed schedule for implementing all structural and nonstructural water quality improvement projects, enhanced stormwater management programs, and alternative stormwater control initiatives for meeting applicable WLAs…[that]…specify pollutant load reduction benchmarks and deadlines…[and]…include the final date for meeting applicable WLAs…" Also included in PART IV.E. are public notification and participation procedures, and requirements for SHA to address any material comments from the public regarding the implementation plan before submitting to MDE for review and approval. Once approved, this TMDL implementation plan, benchmarks and deadlines, and final date for meeting stormwater WLAs become enforceable under the permit to the extent that benchmarks or deadlines fall within this permit term.

As discussed above, the Draft Permit does not require strict compliance with WQS. MDE has recognized, however, that further pollutant reductions from stormwater discharges are necessary to improve water quality pursuant to comply with its Chesapeake Bay TMDL obligations.

Therefore, as authorized by 33 U.S.C. § 1342(p)(3)(B)(iii), MDE has established a restoration requirement that does not consider practicability. However, the goal is to show progress toward meeting TMDLs and this is expected to take several permit terms for all MS4 jurisdictions, including SHA. Due to the long term goal of achieving WLAs, SHA may set its plans, schedules, and budgets in a manner that considers practicability.

With respect to establishing a final date for meeting applicable WLAs, this language was developed during long term negotiations between EPA and MDE. In recognizing that the CWA allows EPA the right to review and deny the issuance of a permit under 33 U.S.C. § 1342(d)(2), EPA has a critical role in how NPDES MS4 permits are drafted. As part of the permit negotiations, MDE and EPA compromised on language that established a final date for meeting WLAs as goals.

The EPA September 23, 2014 letter outlined comments on early versions of the Howard County Draft Permit related to TMDL WLAs. The letter specified that: "EPA considers whether the permit contains objective and measurable elements (e.g., schedule for BMP installation or level of BMP performance)…EPA expects that such objective and measurable elements will be included in permits as an enforcement provision." In addition, the letter stated that "EPA had previously objected to the June 2012 draft permit because it: …did not includes [*sic*] a final date for meeting applicable WLAs benchmarks required in the annual report."

As a result of these discussions with EPA, the Final Permit requires SHA to propose an implementation plan with a final date for meeting WLAs. This will allow a long term planning strategy to incorporate the ultimate goal of achieving WQS. This meets the intent of the CWA and is deemed satisfactory by EPA. However, the Final Permit as written allows an iterative process that will incorporate any necessary changes in strategies and adjustment in BMP implementation over potentially numerous permit terms.

In summary, commenters requested that MDE provide greater detail on how WLAs will be met. MDE considers the twenty percent restoration requirement adequate for addressing both the Chesapeake Bay and other applicable TMDL WLAs. This twenty percent restoration requirement is supported by the EPA in their comments on the Howard and Prince George's County Draft Permits. The SHA will still have the flexibility in how it implements this requirement. Final Permit language regarding enforceability and implementation dates will remain unchanged.

II. Stormwater Monitoring.

Each commenter asserted that it is insufficient to require that one outfall and one in-stream location be monitored according to PART IV.F.1. (Assessment of Controls) of SHA's Draft Permit. One environmental group stated that "…the Draft Permit contemplates monitoring of just one small sub-watershed..." and that "[t]his one [sub-watershed] is not sufficient to provide meaningful information about the larger watershed in which it is located…" nor SHA's "…pollution trends across the state." Furthermore, the commenter recommended "…more extensive, representative monitoring across the state, in multiple watersheds, to obtain more

statistically significant monitoring data." Others have suggested a coordinated effort among MS4 jurisdictions to cover a larger area in an efficient manner.

MDE believes that the intent of the watershed monitoring found in PART IV.F.1. of the Draft Permit needs to be better explained, and that the extensive jurisdiction-wide chemical, physical, and biological monitoring that numerous environmental groups requested can be found in other sections of the Draft Permit. PART IV.D.3. of SHA's Draft Permit requires screening for illicit discharges to the municipal storm drain system. PART IV.E.1. describes watershed assessments on a jurisdiction-wide scale to assess current water quality conditions and prioritize improvement projects. PART IV.E.2. requires monitoring to evaluate and track the implementation of restoration plans. The SHA's Draft Permit contains Special Programmatic Conditions in PART VI. that include coordination with MDE's WIP to comply with the Chesapeake Bay TMDL. PART IV.F.2. requires surveying through physical monitoring the effectiveness of Maryland's new stormwater law requiring ESD to the MEP.

Focused monitoring in a small watershed as required in PART IV.F.1., however, serves a different purpose. This monitoring is extremely important for determining the effectiveness of individual restoration practices, gathering the necessary feedback for adaptive management, and calibrating models. The monitoring strategy is supported by the National Resource Council's (NRC) 2011 document, *Achieving Nutrient and Sediment Reduction Goals in the Chesapeake Bay: An Evaluation of Program Strategies and Implementation*. Specifically, NRC recommends that "[t]argeted monitoring programs in representative urban and agricultural watersheds and subwatersheds would provide valuable data to refine BMP efficiency estimates, particularly at the watershed scale, and thereby improve Watershed Model predictions."

The focused watershed approach was first described for Maryland MS4 jurisdictions in the report, *Maryland's National Pollutant Discharge Elimination System Municipal Stormwater Monitoring* (MDE, 1997). While CFR specifically defines chemical monitoring procedures for MS4 permit applications, the regulations are silent on biological and physical monitoring. Maryland's local governments emphasized that in many instances, biological and physical monitoring results are better indicators of small stream health. MDE agreed with this approach, but maintained that chemistry is also important, especially for assessing Chesapeake Bay restoration goals. Therefore, MDE proposed long term monitoring requirements that were aligned with the CWA's goal to "…restore and maintain the chemical, physical, and biological integrity of the nation's waters…", a concept articulated as the "three-legged stool" approach (MDE, 1997).

While initial application requirements in CFR stipulated the monitoring of three storms per year from five sites located throughout a jurisdiction, MDE requires SHA to monitor 12 storms per year at two monitoring sites. More intensive chemical, physical, and biological monitoring in one watershed is recommended in MDE's 1997 report, which states: "[u]sing the overall goal of assessing water health as guidance, MDE believes that the most logical way to modify the MS4 long term monitoring program is to require all jurisdictions to contribute to the entire approach by providing all three legs of the monitoring stool. That is, each jurisdiction shall conduct chemical testing, biological, and physical stream assessment. Additionally, site selection will need to be orchestrated at the State level. As jurisdictions pare chemical monitoring sites for

biological and physical assessments, it will be imperative to maintain an adequate number of residential, commercial, and industrial sites for State water chemistry needs."

In PART IV.F.1. of SHA's Final Permit, intensive monitoring will continue to be required at the Montgomery County Seneca Creek watershed that includes chemical, physical, and biological habitat sampling and analysis. In reporting year 2013, SHA conducted monitoring on more than 12 storms. In 2014, biological monitoring was conducted at five sites, located in Anne Arundel, Baltimore, Harford, Montgomery, and Prince George's Counties, which included macroinvertebrate sampling, physical habitat assessments, and in-stream water quality sampling. Physical stream monitoring protocols include an annual stream profile and survey of permanently monumented cross-sections with baseline conditions for assessing areas of aggradation and degradation. As part of this assessment, a hydrologic and/or hydraulic model is required within the permit term to analyze the effects on channel geometry of rainfall, discharge rates, stage, and, if necessary, continuous flow.

Maryland's MS4 jurisdictions implement restoration activities in the focused watersheds and have used the results from the monitoring data to develop BMP efficiencies. These have been extrapolated to other similar restoration projects across the jurisdictions. The CBP has used these data as well. For example, the CBP's Urban Stormwater Workgroup (USWG) relied heavily on Maryland's MS4 monitoring data to develop improved BMP efficiencies for street sweeping, stream restoration, stormwater treatment, and runoff reduction practices for inclusion in the CBP Bay Model. MDE asserts that focused watershed monitoring is important for characterizing urban runoff and understanding the effectiveness of stormwater BMPs. It is also a fiscally prudent approach when combined and shared among all Phase I jurisdictions.

Since the inception of the NPDES stormwater program, Maryland's MS4 jurisdictions have monitored more than 3,000 storm events along with an additional 1,800 plus sampling activities during baseflow conditions. These data allow a comprehensive characterization of the water chemistry of highway, commercial, industrial, and residential runoff. These data have been combined into a comprehensive statewide database and used for determining a parameter list of commonly found stormwater pollutants, calculating event mean concentrations (EMCs), supporting State objectives (MDE, 1997), and calibrating numerous TMDLs including the one for Chesapeake Bay. This information comprised a significant portion of the National Stormwater Quality Database (NSQD). As of 2014, the NSQD included 9,422 storms from across the nation to characterize urban runoff.

In PART IV.D.3. of the Final Permit, an inspection and enforcement program is required to be implemented to ensure that all discharges to and from the storm sewer system that are not composed entirely of stormwater are either eliminated or issued a permit by MDE. Permit requirements include the field screening of at least 150 outfalls annually. In its 2014 annual report, SHA documented field screening and outfall sampling at 208 and 80 outfalls, respectively. In addition, outside of the regular inspection program, two additional illicit discharges were reported by SHA field staff.

Additional monitoring requirements in PART IV.E.1. of SHA's permit specify that the SHA shall systematically assess the water quality in all watersheds in conjunction with any

surrounding MS4 jurisdictions and use the resulting analyses to develop a coordinated TMDL implementation plan for meeting all stormwater WLAs. Assessments must be performed at an appropriate watershed scale (e.g., Maryland's hierarchical eight- or twelve-digit sub-basins) and must be based on EPA's approved TMDL analysis or an equivalent and comparable jurisdiction water quality analysis. The assessments are to determine current water quality conditions; include the results of a visual watershed inspection; identify and rank water quality problems; prioritize all structural and nonstructural water quality improvement projects; and specify pollutant load reduction benchmarks and deadlines that demonstrate progress toward meeting all applicable stormwater WLAs.

SHA's Final Permit requires that all of the above data be submitted on an annual basis including: monitoring site locations; chemical monitoring results; TMDL pollutant load reductions; biological, habitat, and physical monitoring; illicit discharge detection and elimination sampling; and a narrative summary describing the results and coordinated analyses of the data. A reporting database that appears as "Attachment A" in SHA's MS4 Draft Permit was developed by MDE for the submittal of monitoring and program implementation data. The SHA's comprehensive monitoring plan comprised of all these programmatic elements has provided the framework for developing restoration strategies to improve water quality in streams and rivers where SHA's MS4 system is located. As a result of these monitoring and assessments efforts, SHA's 2014 annual report identified 13 restoration projects for planning, design, or construction in fiscal year 2015. The report also indicated that 95 projects were completed in 2014 to improve water quality conditions.

In summary, MDE considers the stormwater monitoring provisions contained in SHA's Final Permit sufficient for providing comprehensive water quality and TMDL assessments. The requirements include chemical, physical, and biological monitoring, and information to broadly assess the entire jurisdiction as well as contribute to the statewide aggregated data through focused, small scale watershed monitoring. Furthermore, the Final Permit's structure contributes the necessary feedback to allow permittees to make adaptive management decisions through an iterative process. As noted by EPA in its letter to MDE dated September 23, 2014, these requirements "…are consistent with Federal CWA and NPDES stormwater program requirements." Thus, MDE will not make the suggested changes in the Final Permit language.

III. Public Participation.

MDE maintains that it is important to involve the public as much as possible during the development of a coordinated TMDL implementation plan and has incorporated language that will ensure this process in the Final Permit. Various comments from environmental advocacy groups also expressed this belief. One commenter urged that "…permit terms must be subject to the appropriate public review and comment provisions." Additionally, "The permit needs more detail and provision for public participation" and should "[d]efine a clear path."

MDE agrees that public participation is an important part of this process and asserts that public participation is adequately provided for in the Final Permit. For example, PART IV.E.3. requires SHA to provide copies of the coordinated TMDL implementation plan to the public, post notice of this implementation plan in local newspapers and SHA's website, allow for a 30 day comment

period before finalizing the implementation plan, and provide a summary of how SHA will address any material comment received from the public. Furthermore, included in PART V.A.1. is language that requires SHA to "submit annual reports on or before the anniversary date of this permit and post these reports on SHA's website."

With respect to public input on restoration plans, MDE offers that in the Final Permit, the restoration of twenty percent of impervious areas that have not already been restored to the MEP is the EPA approved effluent limit for addressing both the Chesapeake Bay and other applicable TMDL WLAs (see Issue I.). MDE does not dictate how a permittee meets this effluent limit. This is consistent with MDE's approach for other NPDES permits (e.g., wastewater treatment plants). Each permittee has the ability to tailor restoration activities to address unique local challenges and site specific water quality conditions by using the acceptable practices identified in the MS4 Guidance. SHA is given flexibility to determine how it implements restoration. However, SHA must also consider in its restoration plans how planned implementation addresses local TMDLs.

Neither the twenty percent restoration requirement nor the five-year permit term schedule is being modified through the submittal of SHA's restoration plans. MDE believes that the development and submittal of restoration plans are annual reporting requirements under CFR § 122.42(c) and do not constitute major permit modifications. NPDES annual reports require SHA to submit information on "…the status of implementing the components of the stormwater management program that are established as permit conditions." Numerous other conditions require the submittal of information into MDE so that MS4 stormwater program implementation can be tracked, assessed, and enforced. MDE does, however, have the discretion as Director of the NPDES program in Maryland to "…modify or revoke and reissue the permit accordingly…" should evidence supporting a modification be presented through annual reporting, new information or regulations, alterations, or other conditions found in CFR § 122.62(a) and (b).

IV. ESD to the MEP Is Required for All MS4 Restoration.

The restoration of twenty percent of SHA's impervious area that has little or no stormwater controls is a major requirement in the Draft Permit. Numerous comments from environmental advocacy groups demanded that ESD be used as the standard for acceptable impervious area restoration. One group implored that the twenty percent restoration should "…be implemented using environmental site design (ESD) as the default methodology unless SHA can show that its use is impractical and that other methodologies, in conjunction with ESD, can achieve the TMDL/stormwater WLA goals, milestones and benchmarks." Another group argued that "the most effective green [stormwater management] techniques" should be implemented. Therefore, it was suggested that the Draft Permit must be revised to require that ESD be used to meet the twenty percent restoration requirement.

MDE contends that there are incentives to utilize ESD practices for restoration in both the Draft Permit and MDE's 2014 *Accounting for Stormwater Wasteload Allocations and Impervious Area Treated: Guidance for NPDES Stormwater Permits* (MS4 Guidance). The Draft Permit states that restoration of impervious surfaces shall be based on the treatment of the water quality volume criteria and associated list of practices defined in the *2000 Maryland Stormwater Design*

Manual (Manual). While this allows structural treatment practices such as wet ponds, wetlands, infiltration, and filtration, the MS4 Guidance clearly shows that ESD practices will be given greater pollutant load reductions than other acceptable water quality treatment practices. In addition, impervious areas draining to practices like dry detention, dry extended detention, or hydrodynamic structures will not be considered treated and will be required to be restored to the MEP. By granting greater pollutant reduction credit for ESD, and allowing flexibility to use other acceptable water quality treatment facilities, MDE asserts that there is adequate regulatory impetus for using ESD practices as part of an overall restoration approach.

The most recent version of the Los Angeles County NPDES permit (NPDES NO. CAS004001, November 5, 2012), includes requirements for local low impact development (LID) ordinances for new development and redevelopment but not for restoration or retrofitting. It is important to note that the requirements and performance standards for these LID ordinances are similar to those required by Maryland. While EPA encourages its use, there is no federal mandate that ESD shall be used to meet MS4 permit requirements.

The Final Permit does not incorporate the Manual in its entirety for restoration projects, but selects a subset of criteria to follow from the Manual and the MS4 Guidance. For example, the stormwater management practices implemented must be either those found in the Manual or alternative BMPs as defined in the MS4 Guidance. For the BMPs that are found in the Manual, they must be sized to treat the water quality volume in order to receive impervious area credit. For alternative BMPs, pollutants must be treated so that the pounds reduced are equivalent to that of converting an acre of impervious surface to an acre of forest.
The list of practices from the Manual includes ESD to the MEP and more traditional stormwater management structures like stormwater ponds, wetlands, infiltration, filtering systems, and open channel systems. Acceptable alternative practices include impervious surface removal, street sweeping, catch basin cleaning, reforestation, stream restoration, outfall stabilization, shoreline management, and septic system enhancements. The Final Permit does not indicate a preference for the use of these practices but allows each jurisdiction the flexibility to choose its preferred mix of BMPs for implementation. Each jurisdiction has the ability to tailor restoration activities to address unique local challenges and site specific water quality conditions by using the acceptable practices identified in the MS4 Guidance.

In summary, SHA's Final Permit does provide incentive to use ESD for restoration. However, ESD may be used in conjunction with other proven water quality practices in order to achieve the clean water objectives of the Final Permit. This method allows a balanced approach where SHA can set priorities based on local water quality conditions, while offering flexibility to implement various strategies based on site specific opportunities to achieve watershed restoration objectives. Final Permit language regarding impervious area restoration criteria will remain unchanged.

V. Erosion and Sediment Control Needs More Attention.

One advocacy group expressed concern that the Draft Permit should give more attention to erosion and sediment control. MDE affirms that the Final Permit gives adequate attention to erosion and sediment control because it reflects the *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control* (Handbook) that was updated in 2012 to be more

stringent. One such update was establishing a maximum 20-acre grading unit for most construction sites. This limits larger earth disturbances that are more likely to cause sediment pollution. Also, more stringent temporary and permanent stabilization requirements were enacted to assist in reducing erosion and sediment generation, and help establish grass in non-work areas. Perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1) now require stabilization within 3 days instead of the former 7 days. The requirement for all other disturbed or graded areas was reduced from 14 days to 7 days.

The update to the Handbook has been supported by government entities, the regulatory community, trade groups, and members of the public for several years. Most of the new design specifications reflect proven practices that are already in use. Also, for improved efficiency, the Handbook includes a new section describing an erosion and sediment control plan approval process integrated more fully with the ESD to the MEP requirements of Maryland's Stormwater Management Program. Because more attention has already been given to erosion and sediment control through the update of the Handbook, MDE will retain PART IV.D.2. in the Final Permit.

Summary

Numerous environmental advocacy groups have not only commented at a public hearing held by MDE on the Draft Permit but have submitted suggested language changes for MDE's consideration. The changes being recommended for the Final Permit include WLA attainment dates, benchmarks for the implementation of restoration efforts, monitoring, public participation, erosion and sediment control, stormwater management, and ESD to the MEP. MDE appreciates the efforts of those involved in the Tentative Determination process. MDE has considered the many viewpoints and finds that the Final Permit offers a balanced approach while meeting the intent of the CWA. Thus, no permit language changes have been made.

Numerous meetings among local, State, federal, and environmental stakeholders leading up to the Tentative Determination were useful in developing an effective Draft Permit in compliance with State and federal laws. In its October 22, 2013 letter to MDE regarding the template permit, EPA stated that "...this permit and the MS4 program have been the subject of extensive discussions among EPA, MDE, County, and various stakeholder groups… As a result of these discussions, numerous changes have been made to this MS4 permit to ensure that: it meets regulatory requirements; is enforceable; and achieves the water quality objectives of the Clean Water Act (CWA)." Furthermore, in its September 23, 2014 letter, EPA confirmed "that the 2014 [Howard County] Draft Permit," which this SHA Draft Permit is based on, "is satisfactory for purposes of the CWA and NPDES permit regulations." One advocacy group affirmed that "[p]roviding some identifiable benchmarks and interim targets in these permits, improved public participation, and monitoring sufficient to determine whether the anticipated pollution reductions are being reached, are three critical parts of ensuring these MS4 permits provide the expected pollution reductions." MDE agrees and upholds that this Final Determination and Permit do just that.

In summary, this Final Permit is a major step forward toward meeting the water quality objectives of the CWA. Prior permits have required SHA to possess adequate legal authority, monitor stormwater discharges, and implement comprehensive management programs. New

requirements in this permit include restoring twenty percent of SHA's impervious area, reducing trash and litter, and developing an implementation plan to meet stormwater WLAs for impaired waters, including the Chesapeake Bay TMDL by 2025. MDE maintains that this Final Permit is both stringent enough to ensure water quality improvement and flexible enough for the development of practicable plans by SHA. Therefore, on October 9, 2015, MDE has reached a Final Determination to issue this MS4 Final Permit to SHA for the control of storm drain system discharges. The public has 30 days to request a judicial review.

Attachments

Supporting Documentation for MDE's Basis for Final Determination to Issue Maryland State Highway Administration's National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit

The attached letters from the U.S. Environmental Protection Agency (EPA) to the Maryland Department of the Environment (MDE) describe the permit negotiation process that engaged local jurisdictions and the environmental community, including the process of developing Prince George's and Howard Counties' permits. The documents summarize the changes MDE made to the two permits during these negotiations and show EPA's support for the issuance of the permits. This MS4 permit template that was used in the development of Prince George's and Howard Counties' permits is the same as the one used in the issuance of SHA's Final Permit. In addition, a list of individuals and organizations that participated in the Maryland State Highway Administration public comment period is provided.

1. U.S. Environmental Protection Agency letter from David B. McGuigan, Associate Director, Office of NPDES Permits and Enforcement, Water Protection Division, to Jay Sakai, Director, Water Management Administration, re: Supplemental Comments on Howard County Phase I Municipal Separate Storm Sewer (MS4) Permit (MD0068365) (September 23, 2014).

2. U.S. Environmental Protection Agency letter from David B. McGuigan, Associate Director, Office of NPDES Permits and Enforcement, Water Protection Division, to Jay Sakai, Director, Water Management Administration, re: Prince George's County Phase I Municipal Separate Storm Sewer (MS4) Permit (MD0068284) (October 22, 2013).

3. U.S. Environmental Protection Agency letter from Jon M. Capacasa, Director, Water Protection Division, to Jay Sakai, Director, Water Management Administration, re: Specific Objection to Prince George's County Phase I Municipal Separate Storm Sewer (MS4) Permit (MD0068284) (November 29, 2012).

4. List of organizations sending comments. Full comments are available on MDE's website.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SEP 23 2014

Mr. Jay Sakai, Director
Water Management Administration
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230

Re: Supplemental Comments on Howard County Phase I Municipal Separate Storm Sewer (MS4) Permit, MD0068322

Dear Mr. Sakai:

This letter provides comments supplementing those previously sent to you by the U.S. Environmental Protection Agency (EPA or the Agency) regarding the draft permit dated May 29, 2014 identified above (hereinafter, 2014 Draft Permit). EPA is providing these comments in context of the Agency's ongoing oversight of Maryland's National Pollutant Discharge Elimination System (NPDES) Permit Program pursuant to Section 402 of the Clean Water Act (CWA), 33 U.S.C. § 1342, and the Memorandum of Agreement between EPA and Maryland Department of the Environment (MDE) regarding the NPDES program. Through this letter, EPA is consolidating and clarifying several issues addressed in previous correspondence, and on which our respective agencies have come to resolution for purposes of issuance of Phase I municipal separate storm sewer system (MS4) permits.

EPA has previously provided comments to several earlier drafts of the Howard County MS4 permit. EPA's comments include those in its letter dated September 20, 2012 regarding the earlier June 2012 draft of this permit (received on June 22, 2012), in which the Agency objected to the issuance of that draft permit. After discussions between EPA and MDE resolving those objections, and based on review of an MDE draft permit dated May 23, 2013 (2013 Draft Permit), EPA provided additional comments on June 27, 2013 and then withdrew the Agency's specific objection by letter dated January 16, 2014. EPA has also provided related comments on a number of other Phase I MS4 permits over the past several years. We are pleased to note that the 2014 Draft Permit represents a significant improvement for Howard County's municipal stormwater program and its receiving waters. EPA confirms that the 2014 Draft Permit is satisfactory for purposes of the CWA and NPDES permit regulations.

1. **Water Quality Standards Language**

The CWA provides that stormwater permits for MS4 discharges shall contain controls to reduce the discharge of pollutants to the "maximum extent practicable" and such other provisions as the Administrator or an authorized State determines appropriate for the control of such pollutants. Section 402(p)(3)(B)(iii) of the CWA. Where the NPDES authority determines that MS4 discharges have the reasonable potential to cause or contribute to a water quality standard excursion, as MDE has done in this case, EPA recommends that the NPDES permitting

authority exercise its discretion to include appropriate narrative and/or numeric water quality-based effluent limitations (WQBELs) as necessary to meet water quality standards. Where WQBELs in permits for stormwater discharges from MS4s are expressed in the form of Best Management Practices (BMPs), EPA considers whether the permit contains objective and measureable elements (*e.g.*, schedule for BMP installation or level of BMP performance). *See* EPA Memorandum, "Revisions to the November 22, 2002 Memorandum 'Establishing TMDL Wasteload Allocations for Storm Water Sources and NPDES Permit Requirements Based on those WLAs'" (EPA, 11/12/2010) (hereinafter, EPA 2010 Hanlon Memo). EPA expects that such objective and measureable elements will be included in permits as enforceable provisions. *Id.* At the same time, it is EPA's position that the MS4 permit program is both an iterative and an adaptive management process for pollutant reduction and for achieving applicable water quality standard and/or total maximum daily load (TMDL) compliance. *See generally,* "National Pollutant Discharge Elimination System Permit Application Regulations for Stormwater Discharges," 55 Fed. Reg. 47990 (Nov. 16, 1990).

In its letter dated September 20, 2012, EPA objected to the June 22, 2102 draft permit because it did not contain adequate language prohibiting "discharges from the MS4 that would cause or contribute to any violation of water quality standards." In response to this concern, MDE submitted revised permit language in the 2013 Draft Permit repeated in the 2014 Draft Permit. EPA's letter today provides more detailed comments on the 2014 draft Permit. The 2014 Draft Permit (identical to the 2013 draft language) sets forth a narrative WQBEL that resolved EPA's 2012 objection because it contains enforceable objective and measurable elements:

> *The permittee must manage, implement, and enforce a stormwater management program (SWMP) in accordance with the Clean Water Act (CWA) and corresponding stormwater National Pollutant Discharge Elimination System (NPDES) regulations, 40 CFR Part 122, to meet the following requirements:*
>
> 1. *Effectively prohibit pollutants in stormwater discharges or other unauthorized discharges into the MS4 as necessary to comply with Maryland's receiving water quality standards;*
>
> 2. *Attain 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 permit, and in plans and schedules developed in fulfillment of this permit.*
>
> *Compliance with all the conditions contained in PARTs IV through VII of this permit shall constitute compliance with §402(p)(3)(B)(iii) of the CWA and adequate progress toward compliance with Maryland's receiving water quality standards and any EPA approved stormwater WLAs for this permit term.*

toward compliance with Maryland's receiving water quality standards and any EPA approved stormwater WLAs for this permit term.

Other parts of the 2014 Draft Permit further strengthen protections for the water quality of receiving streams: for example, the 2014 Draft requires implementation of Stormwater Management Programs which will be "integrated with other permit requirements to promote a comprehensive adaptive approach toward solving water quality problems." Permit at Part IV.D. Moreover, as the basis for the design of BMPs used to comply with the permit, MDE would also require the permittee to meet the criteria in MDE's previously-published *Maryland Stormwater Design Manual* (2000). *See e.g.,* Part D.1.a. of the 2014 Draft Permit. Additional permit provisions that strengthen the program, some of which are discussed below, include requirements for TMDL compliance, monitoring, public participation and annual reporting. The 2014 draft Permit would also require the permittee to "prohibit non-stormwater discharges through its MS4." Part VII.A. The permittee is "responsible for complying with all conditions of this permit...Regardless of any arrangement entered into however, the County remains responsible for permit compliance." Part VII.C.

Based on the foregoing, EPA has determined that the terms of the 2014 Draft Permit submitted by MDE constitute adequate progress and enforceable requirements towards achieving applicable water quality standards. Therefore, EPA considers this revised language and other provisions of the 2014 draft Permit satisfactory for purposes of the CWA and applicable NPDES requirements.

2. <u>Chesapeake Bay TMDL</u>

Pursuant to 40 CFR 122.44(d)(1)(vii)(B), where there is an applicable total maximum daily load (TMDL) approved or established by EPA, an NPDES permit must include effluent limitations that are consistent with the wasteload allocation (WLA) in the TMDL. This includes MS4 permits. See EPA 2010 Hanlon Memo at 3. If such effluent limitations are expressed as BMPs, EPA also evaluates whether the permit's administrative record provides an adequate demonstration that the BMPs required by the permit will be sufficient to implement applicable WLAs. Id. at 4.

The most significant TMDL for this permit is EPA's 2010 Chesapeake Bay TMDL (Bay TMDL). The Bay TMDL assigned aggregate WLAs for nutrients and sediment to NPDES-regulated sources of stormwater including Phase I MS4s (such as this permittee) and other sources (e.g., Phase II MS4s). The Chesapeake Bay Program partnership (CBP) collectively has adopted 2025 as the date by which 100% of the controls necessary to achieve the Bay TMDL allocations are expected to be in place. CBP has also adopted 2017 as an interim goal and the date by which practices should be in place to achieve 60% of the necessary reductions, as compared with the level of reduction achieved in 2009. Bay TMDL at 7-2.

EPA established the Chesapeake Bay TMDL WLAs in Maryland based largely on the actions and pollutant reductions committed to by Maryland's in its Phase I watershed implementation plan (WIP). After evaluating Maryland's Phase I WIP, EPA was satisfied

overall that the detail and level of effort set forth in the Phase I WIP would be sufficient to achieve the Bay TMDL (including the aggregate WLAs for stormwater). *EPA Evaluation of MDE Phase I WIP* (12/29/10). Maryland developed the Phase II WIP in 2012 to update the Phase I WIP and provide more information on strategies at the local level. EPA evaluated Maryland's Phase II WIP and found that it called for the same level of effort as the Phase I WIP, and provided even more detail on planned actions, although EPA noted concern that Maryland was falling behind the stormwater permit reissuance schedule. Overall, EPA was satisfied that as long as Maryland continued to advance implementation in all sectors, the Phase II WIP also provided reasonable assurance that the allocations called for in the Chesapeake Bay TMDL would be achieved in Maryland. *EPA Evaluation of MD Phase II WIP* (6/26/14).

The Phase I WIP proposed reductions from urban stormwater of 16.9% of TN, 35.7% of TP and 37.5 % of sediment from 2009 baseline levels. Chesapeake Bay TMDL at Table 8-3, page 8-14; see also MDE Phase II WIP at A-10. MDE's 2012 Phase II WIP explained that the controls necessary to achieve the stormwater WLAs would occur in two primary phases – the first through 2017 and then the next by 2025. MDE noted in its both its Phase I and Phase II WIPs that previous Phase I permits (including this one) included terms that required retrofitting of 10% of the impervious surface area not controlled to the maximum extent practicable. Phase II WIP at pp. 14, A-10. To meet the interim CBP goal for stormwater, MDE's 2012 WIP calls for requiring, in renewed federal NPDES Phase I MS4 permits, the retrofitting of an additional 20% of previously developed land that had little or no controls (for a total of 30% reduction), with BMPs designed to reduce nutrient and sediment discharges within the next five year permit term. MDE has announced that it is applying this strategy to both Phase I and Phase II MS4 permits. Id. To implement the practices necessary to meet the Bay TMDL WLAs for stormwater by the final CBP goal of 2025, MDE's 2012 WIP specifies that MDE would use BMPs in the next permit term(s) "at a level necessary to close the load reduction gap for each county." Phase II WIP at 23.

MDE designed this permit with several provisions to ensure that approximately 60% of the reductions needed to achieve the Bay TMDL WLAs will be attained in this permit term. As discussed in Maryland's Phase II WIP and in the 2014 Draft Permit at Section VI.A, additional reductions needed to achieve the WLAs will be implemented in the subsequent permit term(s) leading up to the CBP goal of putting all necessary controls in place by 2025. This schedule is consistent with the assumptions and requirements of the Bay TMDL and the CBP goal of 2025.

EPA had previously objected to the June 2012 draft permit because it: (1) failed to explicitly state what actions the permittee had to take to meet the Chesapeake Bay TMDL; and (2) did not includes a final date for meeting applicable WLAs benchmarks required in the annual report. EPA also requested that the initial sets of Restoration Plans developed under the permit be submitted to EPA for review and comment so that we can provide oversight to this important element of the permit. EPA also noted its expectation that MDE will incorporate significant milestones from these plans as measurable permit terms and conditions for the next renewal cycle. MDE addressed those objections in its 2013 Draft Permit, and EPA withdrew its objection dated January 16, 2014. EPA confirms in this letter that the 2014 Draft Permit is equally acceptable.

The 2014 Draft Permit contains an acceptable effluent limit for this permit term to achieve the Bay TMDL WLAs in accordance with the Maryland Phase II WIP discussed above. The 2014 Draft Permit sets forth an effluent limit that the permittee "shall commence and complete the implementation of restoration efforts for twenty percent of the County's impervious surface area consistent with the methodology described in [this Permit] that has not already been restored to the MEP." 2014 Draft Permit at Section IV.E.2.a. To support that requirement the 2014 draft Permit also requires the following:

> Within one year of permit issuance, Howard County shall 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, June 2011 or subsequent versions). Upon approval by MDE, this impervious surface area assessment shall serve as the baseline for the restoration efforts required in this permit.

MDE identifies applicable TMDLs to the permittee in Attachment B of the Permit. In support of the effluent limit of 20 percent reduction of impervious surface area, the 2014 draft Permit also requires additional planning, reporting and assessment components including requirements for the permittee to develop and submit a systematic watershed assessment, detailed restoration plan for all watersheds; and stormwater watershed implementation plans for each EPA approved WLA. See Parts IV.E.1 & 2. These restoration plans must include a detailed schedule and estimated costs for implementing stormwater water quality projects, enhanced stormwater management programs, and alternative stormwater management initiatives necessary for meeting other applicable stormwater WLAs. See Section IV.E.1 & 2. As described in the permit and in Maryland's Chesapeake Bay WIPs, the restoration plans will also involve significant public process in the development of an ongoing, iterative process for the implementation of projects and programs. Section IV.E.3. The permit requires detailed annual reports including an assessment of progress as well as the effectiveness of projects and programs. Section IV.E.4. Finally the permit describes how this permit is consistent with the Bay TMDL by referencing the effluent limit requiring "restoration of twenty percent of previously developed impervious land with little or no controls within this five year permit term as described in Maryland's Watershed Implementation Plan." Part VI.A of the 2014 Draft Permit. That discussion also identifies the reissuance of MS4 permits (including this one) as MDE's vehicle to be "used as the regulatory backbone for controlling urban pollutants toward meeting the Chesapeake Bay TMDL by 2025." Id.

EPA has reviewed this permit and considers the effluent limit (i.e., 20 percent reduction of impervious surface area) as supplemented by requirements discussed above consistent with the reductions called for in both Maryland's WIP and CBP 2017 interim goals. EPA is satisfied that this permit is consistent with the overall assumptions and requirements of Chesapeake Bay TMDL WLA and the CBP goal of 2025. EPA also finds this approach satisfactory with regard to the other applicable TMDL WLAs identified in the permit in addition to the Bay TMDL WLAs. Such an approach is consistent with EPA's regulations and guidance. See EPA 2010 Hanlon Memo at 5. Specifically, this effluent limit is designed to reduce nutrient and sediment

discharges within this permit term in a way that is consistent with the MDE Phase II WIP and interim CBP goal of having practices are in place to achieve 60% of the necessary reductions necessary to meet the Bay TMDL WLAs. The 2014 Draft Permit also discusses how that the requirement to reduce impervious surface area by 20 percent is a critical step towards achieving the remaining reductions necessary to meet the Bay TMDL in the next permit term(s).

3. Monitoring and Assessment

Where WQBELs are expressed as BMPs, the permit must require adequate monitoring to determine if the BMPs are performing as necessary. EPA expects that when developing monitoring requirements, the NPDES authority will consider the variable nature of stormwater as well as the availability of reliable and applicable field data describing the treatment efficiencies of the BMPs required and supporting modeling analysis. EPA 2010 Hanlon Memo at p. 4.

The 2014 draft Permit contains several provisions requiring monitoring and assessment of watershed restoration as well as the effectiveness of controls – including both BMPs and environmental site design projects (ESDs). Section IV.F. These requirements include intensive monitoring and assessment of a sub-watershed as well as MS4 discharges to such a water body. The water monitoring requirements include chemical (grab and continuous in-stream monitor), biological and physical assessment of the receiving water. The permit also requires assessment and modeling of the permittee's stormwater program for determining the effectiveness of stormwater management practices on stream channel protection. MDE explains that this information is integrated into the larger CBP monitoring and assessment database to better characterize and account for the effects of stormwater and the efficacy of stormwater controls. See Section IV.F. of the Permit and pages 9-10 of the Fact Sheet. In addition to these provisions, the permit also requires chemical field screening of 100 (out of approximately 368) major MS4 outfalls annually for illicit discharges. Finally, the permittee is required to submit an annual report that includes the monitoring and assessment data already collected, and requires further an analysis of the overall effectiveness and improvements in the stormwater programs and projects. See Part V. of the permit.

Previously, EPA and MDE had agreed that the "template" language in the Prince George's County MS4 permit could be used as a template for the remaining expired Phase I MS4 permits (including this one) to be reissued by MDE. By this letter EPA confirms that this permit is consistent with the "template." EPA also confirms that those provisions as well as the County-specific provisions are consistent with Federal CWA and NPDES permitting regulations.

EPA expects that MDE will proceed to Final Determination for issuance of the final permit. If there are any significant changes to the permit as a result of comments received during the public comment period, MDE must submit a revised permit to EPA for review.

If you have any questions, please contact me, or Brian Trulear, Chief, NPDES Permits Branch, at (215) 814-5723.

Sincerely,

David B. McGuigan,
Associate Director
Office of NPDES Permits & Enforcement
Water Protection Division

cc: Brian Clevenger, MDE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

OCT 2 2 2013

Mr. Jay Sakai, Director
Water Management Administration
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230

Re: Prince George's County Phase I Municipal Separate Storm Sewer (MS4) Permit (MD0068284)

Dear Mr. Sakai:

This letter is a follow-up to our discussions of September 30, 2013, among representatives from the U.S. Environmental Protection Agency (EPA or the Agency), the Maryland Department of the Environment (MDE), and Prince George's County (PGC) regarding the PGC Phase I MS4 permit referenced above. As you know, this permit and the MS4 program have been the subject of extensive discussions among EPA, MDE, PGC, and various stakeholder groups over the last two years. As a result of these discussions, numerous changes have been made to this MS4 permit to ensure that: it meets regulatory requirements; is enforceable; and achieves the water quality objectives of the Clean Water Act (CWA).

On May 18, 2012, EPA received the draft which would serve as a basis for the above-referenced NPDES permit. This permit was reviewed pursuant to 40 C.F.R. § 123.44 and the Memorandum of Agreement (MOA) between MDE and EPA Region III (May 22, 1989). Extensive discussions on this draft occurred between EPA and MDE, and on June 14, 2012, EPA sent written comments and a marked-up version of the Prince George's County permit to MDE requesting that changes be made to the draft permit. On June 15, 2012, to provide additional time to bring the discussions to a conclusion, EPA issued a general objection/time extension request to provide the full 90 days for review.

Discussions between MDE and EPA continued during the time extension and, at the expiration of our 90-day review period on August 16, 2012, EPA issued a specific objection to the issuance of the PGC permit pursuant to 40 C.F.R. §§ 123.44(b)(1) and (c)(1) and Section III.A of the MOA. In the specific objection, EPA found that several substantive requirements for MS4 permits, as required by the federal Clean Water Act, 33 U.S.C. §§ 1251 *et seq.* (CWA), and its implementing regulations, had not been incorporated into the PGC permit. Specifically, EPA found that requirements in the permit were deficient in the following areas: Water Quality Standards Language; Anacostia Trash Total Maximum Daily Load (TMDL) Requirements; Chesapeake Bay TMDL Compliance; Backsliding; and Industrial/Commercial Monitoring.

Subsequently, EPA, MDE, and other stakeholders held numerous calls and meetings to address the issues identified as deficient by EPA. Based upon these communications, MDE agreed to make several significant and substantive changes to the draft permit to address EPA and stakeholder concerns. MDE submitted a final revised draft permit and fact sheet to EPA on November 11, 2012. On November 29, 2012, EPA withdrew its objection since the revised permit adequately addressed the deficiencies identified by EPA and that the draft permit was consistent with EPA regulatory requirements, including enforceability considerations.

The PGC permit that was public noticed on April 19, 2013 by MDE is a significant advance regionally in MS4 permit development based upon the concept of watershed restoration. The permit establishes a clear path forward for both local and Chesapeake Bay water quality restoration through the development and implementation of Watershed Restoration and TMDL Implementation plans. Most importantly, the permit establishes clear enforceable requirements through the incorporation of implementation schedules for structural and non-structural controls. Additionally, the enforceability of these plans is supported by guidance regarding the quantification of restoration efforts and comprehensive annual reporting requirements. EPA also noted, with interest, PGC's willingness to fully engage stakeholders in the development of Watershed Restoration and TMDL plans. Stakeholder participation is critical to the success of water quality restoration and effective stormwater management. EPA fully supports PGC efforts in this area.

With respect to concerns that the county raised about past enforcement discretion exercised by the state, EPA has made it clear during its reviews of state NPDES programs, including recent audits of several local MS4 permits, that compliance of MS4 permits is, and will continue to be, an enforcement priority. Accordingly, we expect each State to ensure full compliance with all permit provisions and, where necessary, to undertake appropriate enforcement actions.

Currently, there is a significant MS4 permit backlog in Maryland and there is a need to move from permit drafting to implementation to achieve our shared water quality goals. The PGC permit is an excellent template to advance the stormwater program. EPA and MDE should monitor the effectiveness of this generation of MS4 permits and, if areas of enhancement are noted, they should be addressed during the next cycle of permit reissuance. As we have discussed, EPA will continue to support MDE's efforts to implement an effective MS4 permitting and enforcement program.

If you have any questions, please contact me at (215) 814-2158.

Sincerely,

David B. McGuigan, Ph.D.
Associate Director
Office of NPDES Permits and Enforcement
Water Protection Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

NOV 2 9 2012

Mr. Jay Sakai, Director
Water Management Administration
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230

Re: Specific Objection to Prince George's County Phase I Municipal Separate Storm Sewer (MS4) Permit (MD0068284)

Dear Mr. Sakai:

This letter supplements my letter to you dated August 8, 2012, in which the U.S. Environmental Protection Agency (EPA or the Agency) objected to the Maryland Department of the Environment's (MDE) above-referenced draft permit. Since the time of EPA's objection, our agencies have had several clarifying discussions to address remaining concerns, both by phone and in person on September 5 and October 4, 2012 respectively, in addition to numerous email exchanges, in order to come to resolution on the objection issues. As you know, our respective agencies have now reached agreement on the issues identified in our August 8, 2012 letter, and we believe that the revised permit and fact sheet package MDE submitted to us on November 11, 2012 reflects those agreements and resolves the objection issues. By this letter, EPA is removing its objection to the draft Prince George's County MS4 permit with the understanding that the commitments below will be met in the final permit and its implementation.

Water Quality Standards Attainment Language

EPA had objected to the draft permit because it did not contain language prohibiting water quality exceedances. Rather, the permit conditioned the contamination or alteration of waters of the state with the maximum extent practicable (MEP) standard. In support of the objection, EPA cited specific permit provisions contained in Part VI.A of the draft permit.

In response to this concern, MDE has submitted revised permit language which was recommended by EPA. The new language states that, "the permittee must manage, implement and enforce a stormwater management program (SWMP) in accordance with the Clean Water Act (CWA) and corresponding stormwater National Pollutant Discharge Elimination System (NPDES) regulations, 40 C.F.R Part 122, to meet the following requirements: (1) Effectively prohibit pollutants in stormwater discharges or other unauthorized discharges into the MS4 as necessary to comply with Maryland's receiving water quality standards; (2) Attain applicable wasteload allocations (WLAs) for each established or approved Total Maximum Daily Load (TMDL) for each receiving water body…; and (3) Comply with all other provisions and requirements contained in this permit, and in plans and schedules developed in fulfillment of this

permit.

EPA considers this revised language satisfactory to resolve this portion of the objection.

Anacostia Trash TMDL

EPA had also objected to the draft permit because it failed to include specific requirements related to the Anacostia Trash TMDL, which includes a WLA for Prince George's County. EPA suggested language to MDE for use in the permit to resolve this concern. The revised permit now includes language requiring the permittee to: (1) inventory and evaluate current trash and recycling programs; (2) develop and implement a public education and outreach strategy with specific performance goals and deadlines; (3) develop a work plan that is consistent with the TMDL, as required by 40 C.F.R. § 122.44(d)(1)(vii)(B) - including a detailed schedule for implementing the controls necessary to attain the annual trash removal allocation of 170,628 pounds and trash reduction benchmarks; (4) develop accounting methods to quantify annual trash reduction; and (5) report annually on the progress toward implementing the trash reduction strategy.

EPA considers this revised language satisfactory to resolve this portion of the objection.

Chesapeake Bay TMDL

EPA had further objected to the draft permit because it failed to explicitly state what actions the permittee had to take to comply with the Chesapeake Bay TMDL. In Part VI.A, the revised permit states that it "is requiring compliance with the Chesapeake Bay TMDL through the use of a strategy that calls for the restoration of 20% of previously developed impervious land with little or no controls within this five year permit term..." The permit expands on this requirement by specifying that in Part IV.E.2.a, "Equivalent acres restored of impervious surfaces, through new retrofits or the retrofit of pre-2002 structural Best Management Practices (BMPs), shall be based upon the treatment of the Water Quality Volume (WQ_v) criteria and associated list of practices defined in the *2000 Maryland Stormwater Design Manual.* For alternate BMPs, the basis for calculation of equivalent impervious acres restored is based upon the pollutant loads from forested cover." EPA believes that more clarity is needed in the permit regarding the relationship between the WQ_v criteria and the design manual in the restoration language in Part IV.E.2.a. Therefore, we recommend the following change to the language:

> "Equivalent acres restored of impervious surfaces, through new retrofits or the retrofit of pre-2002 structural BMPs, shall be based upon the treatment of the WQ_v criteria and performance criteria of the associated list of practices contained in Chapters 3 and 5 of ~~defined in~~ the *2000 Maryland Stormwater Design Manual* and amendments thereto."

In addition, Part IV.E.2, entitled "Restoration Plans", details the process which the permittee must adhere to in order to achieve the 20% reduction through its restoration planning, which includes a final date for meeting applicable WLAs. In Part IV.E.2.b.i, EPA recommends

the language modification below to ensure that the permit condition correlates with the benchmarks required in the annual report (See Part V.A.1.e).

> "Include the final date for meeting applicable WLAs with associated annual pollutant reduction benchmarks and a detailed schedule for implementing all Chesapeake Bay TMDL requirements, including but not limited to: stormwater structural and nonstructural water quality improvement projects, enhanced stormwater management programs, and alternative stormwater control initiatives necessary for meeting applicable WLAs;"

We further request that the initial sets of Restoration Plans developed under the permit be submitted to EPA for review and comment so that we can provide oversight to this important element of the permit. As we have discussed, we also expect that MDE will incorporate significant milestones from these Plans as measurable permit terms and conditions for the next renewal cycle.

EPA strongly supports expanded use of green infrastructure to protect and restore waters while creating more environmentally and economically sustainable communities. EPA expects that the restoration requirement in Maryland MS4 permits will be achieved through the use of a variety of green infrastructure retrofitting solutions, such as infiltration practices, green roofs, rain gardens, rainwater harvesting, grass swales/filters, etc. Given the undisputed multiple benefits associated with green infrastructure, as well as general long-term financial benefits, EPA encourages the use of green approaches to stormwater management. Green practices have been proven through multiple studies to reduce stormwater runoff volume and help lessen the amount of pollutants entering surface waters untreated. We urge that MDE provide sufficient incentives in the permit and its administration (such as the green landscaping incentive in the DC MS4 permit) for the preferential use of such practices in meeting the permit terms and to solicit public comment on additional means to accomplish that end.

If the foregoing language modifications are completed, EPA will consider the revised language satisfactory to resolve this portion of the objection.

Backsliding

EPA objected to the draft permit because it contained provisions which were required to be completed during the last permit term – effectively providing the permittee with additional time to complete items that were overdue. The term "backsliding" includes permit conditions which are less stringent than the comparable terms of the previous permit. Backsliding is prohibited in NPDES permits unless specific conditions are satisfied. *See* Section 402(o) of the CWA, 33 U.S.C. § 1342(o). Such conditions did not apply to this permit. EPA provided a marked version of the permit to identify portions of the draft permit where backsliding was occurring. The revised permit addressed all of EPA's requested changes; therefore we consider this portion of the objection to be resolved.

Industrial/Commercial Monitoring

EPA objected to the draft permit on the basis that it failed to require the permittee to maintain an inventory of industrial and commercial sites which had the potential to contribute pollutants to the storm sewer system. EPA provided proposed language in a marked-up version of the permit which recommended how this condition could be incorporated into the permit. The Source Identification section (Part IV.C) of the revised permit now requires that the permittee identify industrial and commercial land use sites that it determines have the potential to contribute significant pollutants. In addition, Part IV.D.3.b requires that annual visual surveys of those commercial and industrial areas be conducted.

EPA considers this revised language satisfactory to resolve this portion of the objection.

Recommendations

In addition to the concerns raised above, EPA included two recommendations in its objection letter – the need for inclusion of employee training language and the request for removal of the phrase "maximum extent practicable" (MEP) from portions of the permit. Part IV.D.5.b.v of the revised permit contains the condition that the maintenance program that is developed by the County ensures that all County staff receive adequate training in pollution prevention and good housekeeping practices. Furthermore, where EPA requested, most references to the phrase MEP were removed. EPA was pleased that MDE also considered both of these recommendations and included appropriate language in the revised permit.

Next Steps

During our recent meeting, we discussed how MDE expected to rely on the Prince George's County permit as a template for the remaining expired Phase I MS4 permits to be reissued by MDE. In addition, EPA understands that the Baltimore City MS4 permit, which was previously published for public notice/comment, will be revised to also include the changes to which our agencies have agreed in this Prince George's County permit template. We look forward to reviewing those draft permits.

EPA expects that MDE will proceed to tentative determination and public notice of the permit as the next step in the renewal process. If there are any significant changes to the permit as a result of comments received during the public comment period, a revised permit must be submitted to EPA for review.

If you have any questions, please contact me, or Evelyn MacKnight, Chief, NPDES Permits Branch, at (215) 814-5717.

Sincerely,

Jon M. Capacasa, Director
Water Protection Division

cc: Brian Clevenger, MDE
Samuel Wynkoop, Prince George's County

SHA MS4 permit comments submitted to MDE

ORGANIZATION SENDING COMMENTS	SIGNATURE, CO-SIGNATURES, AND/OR AFFILIATED ORGANIZATIONS	DATE RECEIVED	DOCUMENTS RECEIVED
Chesapeake Bay Foundation	Alison Prost, Executive Director	3/13/2015	Letter (3 pgs)
Friends of Quincy Run Watershed	Marian Dombroski	7/23/2014	Comments (2 pgs)
Maryland Stormwater Consortium	Bruce A. Gilmore, Maryland Stormwater Consortium; Jim Foster, Annacostia Watershed Society; Elaine Lutz, Chesapeake Bay Foundation; Marian Dombroski, Friends of Quincy Run Watershed; and Claudia Friedetzky, Maryland Sierra Club	3/13/2015	Letter (5 pgs)
U.S. Environmental Protection Agency	David B. McGuigan	9/23/14	Letter of support (7 pgs)
U.S. Environmental Protection Agency	David B. McGuigan	10/22/13	Letter of support (2 pgs)
U.S. Environmental Protection Agency	Jon M. Capacasa	11/29/12	Letter of support (5 pgs)