Maryland Department of the Environment
Water Management Administration

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

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Introduction

The Maryland Department of the Environment (MDE) made a Tentative Determination to issue Harford County a National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) permit (Draft Permit) on June 18, 2014. The Draft Permit establishes specific conditions for regulating discharges from Harford County's storm drain system. Public notice of MDE's Tentative Determination appeared in The Aegis on June 18, 2014, and June 27, 2014, as required by Maryland's Administrative Procedures Act (APA). Additionally, MDE maintains an interested party list for the County's MS4 Draft Permit that includes federal, State, and local municipal officials, and numerous citizens of Harford County and Maryland. Individuals on this list were notified of the Tentative Determination on June 19, 2014.

Subsequent to the notification of the Tentative Determination, MDE received a request for a public hearing regarding Harford County's Draft Permit. The request was submitted on July 16, 2014 by Mr. Timothy Whittie, Director, Harford County Department of Public Works. In response, MDE held a hearing on September 5, 2014, to accept testimony and comment regarding the Draft Permit. Two individuals, including one representing Harford County, testified at the hearing. The official transcript of the proceedings has been furnished by Bel Air Reporting and is available on MDE's website.

After the hearing, the public record regarding Harford County's Draft Permit remained open until September 26, 2014 to accept further comment in accordance with the APA. Numerous comments were received during this time from Harford County, the United States Environmental Protection Agency (EPA), and environmental advocacy groups. In aggregate, the comments offered various and often contrary perspectives on the major tenets of Harford County'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 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 owners of storm sewer systems serving

populations greater than 100,000 to apply for Phase I NPDES MS4 permits. Based on 1990 U.S. Census data, Harford County was considered a Phase I municipality due to its population of over 100,000 at the time. Harford County is classified by CFR as a medium municipality because it owns and operates a storm sewer system and has a population of greater than 100,000 but less than 250,000. The County's initial permit was issued on May 17, 1994, and reissued on August 13, 1999, and November 1, 2004. This permit action is to issue a "fourth-generation" NPDES permit to Harford County to regulate the discharge of stormwater runoff from its storm drain system.

This Final Permit represents another step forward for Harford County's MS4 program. In 1994, the County's initial permit laid the foundation for a comprehensive approach to controlling runoff. This was done by inventorying and mapping storm drain system infrastructure; identifying sources of pollution; monitoring storm events to judge chemical, biological, and physical stream responses; and enhancing existing management programs while establishing new ones. This approach complied with the maximum extent practicable (MEP) standard established under the Clean Water Act (CWA), 33 U.S.C. § 1342(p)(3)(B)(iii). Its two subsequent permits required the County to evaluate water quality, prioritize watersheds in order to perform more detailed analyses and guide management implementation, and begin to restore existing impervious area.

In preparing permits, MDE has used an iterative permitting approach where the assessment of water quality on a watershed basis was used to establish additional retrofitting requirements, including restoration of the County's impervious area. In June 2010, Harford County submitted its fourth year annual report for the current third-generation permit. This annual report served as the County's application to re-issue this Final Permit.

Since the early drafting of this Final Permit, MDE has held numerous meetings with individual citizens, environmental advocates, EPA, and other county government officials that are similarly affected by MS4 permits. These meetings resulted in the addition of more significant conditions to Harford County's MS4 Draft Permit, in large part due to a growing regional focus on restoring Chesapeake Bay. Conditions of this Final Permit require the County 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 County will also be required to develop and implement plans to address wasteload allocations (WLAs) established under EPA approved total maximum daily load (TMDL) estimates. As discussed under Issue V. of this document, MDE has established these restoration plans as annual reporting requirements under this Final Permit.

The Final Permit for Harford County 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 is 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)."

In its letter to MDE dated September 23, 2014, EPA notes that MDE made several substantive changes to earlier versions of the draft of Harford County's Final Permit to address EPA and stakeholder concerns regarding water quality standards language, Chesapeake Bay TMDL compliance, backsliding, and water quality monitoring (see Attachments). Furthermore, EPA concluded that the Harford County permit "…is consistent with the [Prince George's County MS4 permit] 'template'…", which "…establishes clear enforceable requirements through the incorporation of implementation schedules for structural and nonstructural controls." EPA also stated that the Harford County permit "…is satisfactory for purposes of the CWA and NPDES permit regulations."

More information on the MS4 permitting process in Maryland and MDE's iterative approach over the past several permit terms can be found in Harford County's MS4 Permit Fact Sheet, which is available on MDE's website. In addition, an EPA letter dated November 29, 2012 provided relevant information about the Draft Permit development, the negotiation process for the Prince George's County's "template", and the public comments received (see Attachments). These documents summarize 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 water quality standards and TMDLs, restoration criteria, monitoring, stormwater program requirements, regulated permit area, annual reporting, and the 2014 MDE document titled *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated* (MS4 Guidance). MDE's response is broadly divided into the comments received by environmental advocacy groups (Issues I. through V.) and the comments from Phase I medium counties (Carroll, Charles, Frederick, Harford, and Howard) that are affected by NPDES MS4 permits (Issues VI. through XI.). A summary is then provided of MDE's Basis for Final Determination on this Final Permit.

I. Water Quality Standards and Total Maximum Daily Loads.

The goals of Harford County's MS4 permit are to control stormwater pollutant discharges, to improve water quality within the County's urban watersheds, and to work toward meeting water quality standards (WQS). In alignment with these goals, § 402(p)(3)(B)(iii) of the CWA requires the County to implement "…controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and systems, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." The Final Permit (see PART IV.) also requires the development of restoration plans to achieve stormwater WLAs where there are EPA approved TMDLs. In this manner, compliance with the permit will result in a reduction of pollutant discharges from the County's storm drain system and a framework for achieving WQS.

A. Water Quality Standards. A majority of the comments received on the Draft Permit referred to compliance with State and federal WQS. A common claim of environmental groups was that the Draft Permit authorizes discharges that do not meet existing WQS or that may contribute pollutants to impaired waters, and therefore cannot be legally issued by MDE. For example, one environmental advocacy group declared that "[t]he permit must contain a stated prohibition against discharges which cause or contribute to the violation of water quality standards for receiving waters." This advocacy group also noted that NPDES permits issued by the State must require that discharges authorized under these permits "…will be in compliance with all applicable requirements of: …surface and ground water quality standards…" [Code of Maryland Regulations (COMAR) § 26.08.04.02(A)(1)]. Another environmental advocacy group noted that federal regulations [40 CFR § 122.44(d)(1)(i)] require each NPDES permit to place limitations on all pollutants or pollutant parameters that "…are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard."

The argument that the issuance of an MS4 permit violates the CWA is based on a citation of federal regulations regarding Prohibitions Applicable to State NPDES Programs [40 CFR § 122.4(d) and (i) and § 123.25]. Section 40 CFR 122.4 prohibits the issuance of an NPDES permit "[w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States." Other commenters referenced 40 CFR § 122.4(i) to suggest that the Draft Permit must comply with WQS. The first sentence of 40 CFR § 122.4(i) reads "[n]o permit may be issued…[t]o a new source or a new discharger, if the discharge from its construction or operation will cause or contribute to the violation of water quality standards."

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 that Congress expressly required *industrial* storm-water 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)." However, EPA has the discretion to require this compliance if warranted.

[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*, 120 A.D.3d 1235, (N.Y. App. Div. 2d Dep't 2013) *cert. granted*, 23 N.Y.3d 901 (2014); *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.

To support their assertion that the Draft Permit must comply with WQS, an environmental advocacy group pointed to an administrative opinion, *In Re: Government of the District of Columbia, Municipal Separate Storm Sewer System,* 10 E.A.D. 323 (2002) where WQS were applied to the District of Columbia's MS4 permit. In this case, EPA used the discretion recognized in *Defenders of Wildlife,* 191 F.3d at 1166, to require that the District of Columbia's permit comply with WQS. In its decision, the Environmental Appeals Board clarified that the CWA does not mandate compliance with WQS. In this specific case, EPA exercised its discretion and intended that the District of Columbia permit would satisfy them.

Because of the number of Phase I MS4 permits, MDE and EPA agreed to develop a single permit, which, when approved, would serve as a template for the remaining Phase I jurisdictions, including Harford County. In its letter dated November 29, 2012, EPA objected to the June 2012 version of that template, because the language prohibiting discharges that would cause or contribute to a violation of WQS was inadequate. In response to this concern, MDE submitted revised language in subsequent draft permits (see PART III.). Despite EPA's initial suggestions, this language does not require strict compliance with WQS, but establishes WQS and WLAs in approved TMDLs as goals. In its September 23, 2014 letter providing supplemental comments on the Draft Permit, EPA noted that this language resolved the 2012 objection because "…it contains enforceable objective and measurable elements." EPA also noted the other parts of the Draft Permit (e.g., PARTs IV.D., and VII.A. and C.) "…further strengthen protections for the water quality of receiving streams…" As a result, EPA considers the language and provisions found in the Draft Permit "…satisfactory for purposes of the CWA and applicable NPDES requirements."

With respect to State law, under Section 9-324(a)(1) of the Environment Article, MDE may only issue a permit if it complies with "[a]ll applicable State and federal water quality standards and effluent limitations." MDE has interpreted the use of "applicable" to be consistent with the CWA and the *Defenders of Wildlife* case, which specifically exempt discharges from MS4 systems from compliance with WQS. Therefore, WQS are not applicable to MS4 permits unless MDE requires them. Here, MDE has not required strict compliance with WQS.

That State and federal law do not require the Draft Permit to meet WQS was affirmed recently in the decision of Judge Stringer in *Blue Water Baltimore v. MDE* [Case No. 03-C-14-000761]. That case dealt with the MS4 permit issued to Baltimore County on December 23, 2013, which is based on the same template. In a ruling from the bench, Judge Stringer concluded that "…the Clean Water Act does not require compliance with the water quality standards." Judge Stringer further stated that Maryland law does not require the MS4 permit to meet WQS "…because there is no applicable Federal or State law requiring it." Therefore, the Court ruled that "…the permit complies with 33 U.S.C. § 1342(p)(3)(B) of the Clean Water Act."

In summary, several environmental advocacy groups have argued that State and federal law and regulations require that the Draft Permit comply with WQS. However, this interpretation of the CWA has been rejected by U.S. Court of Appeals for the Ninth Circuit in the *Defenders of Wildlife* case; MS4 stormwater discharges are specifically exempted from compliance with WQS. Similarly, Maryland law and regulations do not make WQS applicable to stormwater discharges. Rather, MS4 permits are required to comply with legal standards that another source

(e.g., federal law) makes applicable to them. Because there is no applicable federal or State legal standard, the Final Permit does not need to comply with WQS. Any argument that is founded on the premise that the Final Permit must comply with WQS is incorrect.

B. TMDLs and WLAs. There were also many comments regarding the lack of specific WLAs in Harford County's Draft Permit. For example, one environmental advocacy group stated that the Draft Permit must contain requirements "…consistent with the assumptions and requirements of any available wasteload allocation." [40 CFR § 122.44(d)(1)(vii)(B)]. This group also commented that "[d]espite the clear legal requirement for the Draft Permit to ensure compliance with WQS and TMDL WLAs, it does not do so." Another environmental advocacy group similarly stated that "[u]nder the terms of this Draft Permit, the County must attain applicable WLAs for each TMDL for each receiving water body." This group added that "[t]he Permit must include a quantification of the current loading of nitrogen, phosphorus and sediment from all identified sources…to assess progress towards applicable WLAs…" Another common argument from the environmental community has been that EPA's own guidance [see Wayland and Hanlon, "Establishing TMDL WLAs for Storm Water Sources…" (11/22/2002), and Hanlon and Keehner, "Revisions to the November 22, 2002 Memorandum…" (11/12/2010)] recommends that "…where the NPDES authority determines that MS4 discharges and/or small construction stormwater discharges have the reasonable potential to cause or contribute to water quality standards excursions, permits for MS4s and/or small construction stormwater discharges should contain numeric effluent limitations where feasible to do so."

As discussed above, the Draft Permit is not required to comply with WQS or any TMDL WLAs. However, the permit does establish the twenty percent restoration requirement (see PART IV.E.2.) as a numeric effluent limit to achieve the Chesapeake Bay and local TMDL WLAs. The County is required to "…commence and complete the implementation of restoration efforts for twenty percent of the County'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 County 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 assessments and detailed restoration plans for all watersheds, and stormwater implementation plans for each EPA approved TMDL.

In its September 23, 2014 letter, EPA states 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 the other applicable TMDL WLAs identified in the permit…" EPA offers 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 MDE Phase II WIP…" Finally, EPA's recent guidance [see Sawyers and Best-Wong, "Revisions to the November 22, 2002 Memorandum…" (11/26/20140] uses 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 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.

C. Enforceable Plans and Deadlines. In addition to the want for meeting WQS and 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 numeric 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." This organization added that the CWA "… requires that compliance with MS4 permits be 'expeditiously as practicable'…" Another commenter argued that the Draft Permit must require the County to "…prepare plans as enforceable permit requirements to implement approved TMDL and WLA with compliance schedules containing the final date for meeting applicable WLAs…" Additionally, another environmental advocacy group commented that compliance schedules and pollution reduction milestones "…are necessary for the County to attain [WLAs]…" and that "…only these types of requirements can ensure compliance with [WQS], in accordance with the [CWA] and Maryland law."

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, the County's permit does not need to comply with WQS. Likewise, MDE has not made 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 plans 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, the Final Permit does set forth WQS and WLAs as goals that the County must work toward meeting. To ensure that there is progress toward meeting these goals, the Final Permit requires that the County submit restoration plans

for each stormwater WLA approved by EPA. Provisions for these restoration plans can be found under PART IV.E. (Restoration Plans and Total Maximum Daily Loads). This section of the Final Permit requires Harford County to conduct systematic assessments and develop detailed restoration plans for all watersheds within the County. For all EPA approved TMDLs, these restoration plans 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 the County to address any material comments from the public regarding the restoration plans before submitting to MDE for review and approval. Once approved, these plans, schedules, benchmarks and deadlines, and final date for meeting stormwater WLAs become enforceable under the permit

D. Restoration Criteria. The restoration of twenty percent of the County'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. The central argument was that federal MEP standards mandate the use of ESD in MS4 permits. Additionally, it was argued that State law mandates the use of ESD to the MEP when implementing stormwater management. Therefore, the Draft Permit must be revised to require that ESD be used to meet the twenty percent restoration requirement.

One environmental advocacy group commented that the CWA requires MS4 permittees to "…develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants…to the *maximum extent practicable.*" [40 CFR § 122.34(a)] (emphasis in original). This group also offered that "... Maryland law states that ESD should be used in stormwater management programs whenever possible…" Another group commented that "…this permit must institute or impose *all* the controls and the *highest* levels of management and treatment that are capable of *being put into practice* – most decidedly not standard practices" [*NC Wildlife Federation v. NC Division of Water Quality*, 5 E.H.R. 2055, 6 E.H.R. 0164] (emphasis in original).

MDE's review of the federal regulations and the *NC Wildlife* decision found that these refer to post-construction stormwater controls for new development and are not applicable to restoration activities. Also, the *NC Wildlife* decision did not require ESD; rather, it specified conditions for the use of *structural stormwater controls* for new development activities (emphasis added). Regarding Maryland law, with the passage of the original Stormwater Management Act (Act) in 1982 and its subsequent revisions in 2007 and 2012, the General Assembly intended to "…reduce as nearly as possible the adverse effects of stormwater runoff…" [§ 4-201, Annotated Code of Maryland]. However, the Act addresses the installation of stormwater management to serve future development and specifies that "…a person may not develop any land for residential, commercial, industrial, or institutional use without submitting a stormwater management plan…" [§ 4-204, Annotated Code of Maryland]. The standard for new development stormwater management is to reduce runoff to reflect forested conditions. Therefore, new development should not contribute to increased stormwater flows.

During the Baltimore City tentative determination process, the City noted in its comments in September 2012 that the legislative history of the Act does not mention MS4 permit requirements and that "…no one who commented on the legislation…suggested that the [Act] would result in a requirement that…permittees be required to implement [ESD] as part of MS4 compliance." Clearly, Maryland's law and regulations have historically imposed stormwater management for new development and there is nothing in either that suggests otherwise.

A common theme in many of the environmental advocacy groups' comments is that the Draft Permit allows the use of stormwater management practices that are less effective to be used for restoration activities. For example, one group offered "…recognizing that ESD is not appropriate for all projects, areas, and circumstances, the preference for ESD should simply require that such measures are evaluated before less efficient, structural measures are implemented." Another stated that the Draft Permit's restoration requirements "…fall short of MEP because they do not require or prioritize the use of [ESD] techniques."

MDE believes that there are incentives to utilize ESD practices for restoration in both the Draft Permit and the MS4 Guidance. The Draft Permit states that restoration of impervious surfaces shall be based on the treatment of the water quality volume (WQ_v) 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, restoration efforts in Harford County will be consistent with EPA incentives and other national programs. In its November 29, 2012 letter, EPA removed prior objections to the Draft Permit and supported MDE's MS4 Guidance. Therefore, this letter clearly shows that the permit conforms to EPA recommendations.

In February 2010, MDE issued an NPDES Permit to Montgomery County (MD0068349) that does not require the use of ESD to satisfy restoration requirements. Similarly, 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 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 NPDES permit requirements.

In summary, Harford County'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. MDE believes that this allows a balanced approach where the County 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.

II. MDE MS4 Guidance.

As discussed above, a major provision in Harford County's Draft Permit is the restoration of twenty percent of the County's impervious surfaces that have little or no stormwater management. MDE has provided for how this requirement can be met in the MS4 Guidance. During the public comment period for Harford County's Draft permit, MDE received many varied and often conflicting comments regarding the MS4 Guidance document. MDE's reasoning and answers to the specific concerns from environmental groups are provided below.

Many environmental groups believed that the MS4 Guidance document does not meet the MEP standard for restoration practice implementation because it allows the use of less effective best management practices (BMPs). One environmental advocacy group states that BMPs such as extended detention practices "…are significantly less effective than ESD at controlling stormwater pollution because they fail to address the core problem: overall runoff volume. While reduction of pollutant loadings is important, it is secondary to the enormous runoff volumes that destroy aquatic life and mobilize sediments and nutrients by eroding stream banks." This group's primary support against the use of extended detention facilities comes from the 2008 draft of the National Research Council's (NRC) report, *Urban Stormwater Management in the United States* (National Academies Press, 2009 and cited herein as the "NRC report") on stormwater that "…provides strong evidence – and a scientific consensus – that detention ponds fail to meet the full range of urban stream and watershed restoration objectives."

The NRC report described this historical stormwater perspective on page 341: "Some way was needed to control the quantity of water reaching the end of pipes during a runoff event, and on-site detention…became the standard for accomplishing this. Ordinances started appearing in the early 1970s, requiring developers to reduce the peaks of different size storms, such as the 10-year, 24-hour storm. The ordinances were usually intended to prevent future problems with peak flows by requiring the installation of flow control structures, such as detention basins, in new developments." The NRC report succinctly pointed out on pages 421 and 422 that "[t]he problem with the traditional approach is that (1) the majority of storms throughout the year are small and therefore pass through the detention facilities uncontrolled, (2) the criterion of reducing storm flow does not address the need for reducing total storm volume, and (3) the facilities are not designed to work as a system on a watershed scale. In many cases, the site-by-site approach has exacerbated downstream flooding and channel erosion problems as a watershed is gradually built out."

The NRC report suggests that a fundamental shift is needed in how stormwater management is implemented in order to achieve better water quality results. On page 535, the NRC report states that "[f]or MS4 operators, the concept of designing MS4s for both flood control conveyance (capital flood design) and for water quality protection (water quality design) involves a fundamental shift. Whereas flood control engineers design conveyance systems with return frequencies of two years (streets), ten years (detention basins), 50 years, and 100 years (channels), the water quality design storm event is for a return frequency of six months to a year. The water quality design implicitly focuses on treating the first flush of runoff, which contains the highest load and concentration of pollutants and which occurs in the first half to one inch of runoff. In contrast, flood control designs are built to convey tens of inches of runoff."

MDE strongly concurs with the NRC report and used the same hydrologic analysis to push through new regulations in Maryland in 2000 that specifically address stream channel erosion and degradation. The State's historical perspective described in the Manual, page 1.10, states that "[t]raditionally, Maryland has attempted to provide some measure of channel protection by imposing the two-year storm peak discharge control requirement, which requires that the discharge from the two-year post development peak rates be reduced to pre development levels. However, recent research and experience indicate that the two-year peak discharge criterion is not capable of protecting downstream channels from erosion. In some cases, controlling the two-year storm may actually accelerate streambank erosion because it exposes the channel to a longer duration of erosive flows than it would have otherwise received."

The Manual was an effort to incorporate the significant experiences gained by the State's stormwater community and accommodate much needed improvements for managing urban runoff. Accordingly, MDE's regulations and the accompanying Manual were updated to require "…a unified approach for sizing stormwater BMPs in the State of Maryland to meet pollutant removal goals, maintain groundwater recharge, reduce channel erosion, prevent overbank flooding, and pass extreme floods." The ensuing criteria and treatment volumes correlate directly to the NRC's recommendations for the management of the smaller, more frequent storm events. Design features include the use of pre-treatment vegetation, wetland pockets and pools, flow reduction techniques, native plants, meadows, trees, permeable soils, and the creation of sinuous flow paths. These green techniques mimic the natural hydrologic process, soak up and store runoff, and improve water quality. Structural BMPs (e.g., dry ponds, detention ponds) that do not meet minimum water quality treatment standards described in Maryland's Manual cannot be used to meet permit restoration requirements.

Many of the comments from environmental groups used the terms "detention facility" and "extended detention facility" interchangeably. Technically speaking, there are significant differences between a detention facility and an extended detention facility. These differences are noted in the NRC report (see pages 568 and 569), which defines detention as "[t]he temporary storage of stormwater runoff in a [BMP] with the goals of controlling peak discharge rates..." Conversely, the report confirms the utility of extended detention wet ponds as part of a systems approach to restoring urban watersheds. Page 395 of the NRC report states that: "[b]y holding a volume of stormwater runoff for an extended period of time, extended detention [BMPs] can achieve both water quality improvement and reduced peak flows. Generally the goal is to hold the flows for 24 hours at a minimum to maximize the opportunity of settling, adsorption, and transformation of pollutants. For smaller storm events (one- to two-year storms), this added holding time also greatly reduces the outflows from the [BMP] to a level that the stream channel can handle."

According to the NRC report, page 400, wet extended detention facilities that "…are designed with an aquatic bench around the edges to promote contact with plants…aids in reduction of flow velocities, provides growth surfaces for microbes, takes up pollutants, and provides filtering." Finally, when discussing unique opportunities for retrofitting in urban areas on page 459, the NRC report concludes that "[p]ublicly owned, consolidated [BMPs] should be strongly considered as there may be insufficient land to have small, on-site systems. The types of [BMPs]

that are used in consolidated facilities - particularly detention basins, wet/dry ponds, and stormwater wetlands - perform multiple functions, such as prevention of streambank erosion, flood control, and large-scale habitat provision."

Maryland's Manual requires all extended detention facilities to have wet pool storage and management of the one-year 24-hour storm as recommended in the NRC report. Thus, extended detention wet ponds are acceptable for stormwater restoration. Furthermore, MDE encourages the retrofit of detention facilities or dry ponds to extended detention wet pond facilities as a strategy for reducing pollutants to Chesapeake Bay and meeting MS4 permit obligations. Where these opportunities present themselves, they should be explored fully. Maryland's Manual for stormwater BMP design and MDE's approach to retrofitting under the municipal permit program are completely aligned with the NRC report.

III. Maryland Stormwater Program Requirements.

Harford County's Draft Permit requires that the County maintain an acceptable stormwater management program in accordance with the Environmental Article, Title 4, Subtitle 2, Annotated Code of Maryland. This includes compliance with the minimum requirements specified under COMAR § 26.17.02. Some environmental groups provided recommendations related to stormwater program requirements in PART IV.D.1. of the Draft Permit. These recommendations included specific language related to inspection and maintenance, documentation of stormwater management waivers and exemptions, and ESD code review and modifications. MDE believes that the suggested language changes are already addressed under Maryland's stormwater program requirements and reinforced in the Draft Permit. Because State stormwater management law and regulations are incorporated by reference, these provisions are required and enforced under the Final Permit.

The suggested language changes regarding stormwater maintenance included provisions that the County develop a maintenance plan for all County owned and operated stormwater management practices within 18 months of the effective date of the permit. This language is actually less stringent than State regulation. COMAR § 26.17.02.09.E.(5)(n) (Contents and Submission of Stormwater Management Plans) requires an inspection and maintenance schedule prior to final stormwater management plan approval. Because County owned and operated facilities need to meet State regulation, a maintenance plan is already required to be developed during the plan review process. Therefore, the suggested language is less stringent than COMAR and unacceptable.

Additional permit language recommendations specified that the County "…shall provide for the inspection of all practices at least once every three years…" and "…submit documentation in its annual reports identifying the practices inspected, the number of maintenance inspections performed, the County's inspection schedules, the actions used to ensure compliance, and any other relevant information." This provision is already required in both the Draft Permit and in COMAR § 26.17.02. For example, PART IV.D.1. of the Draft Permit requires the County to maintain construction inspection information, and "[d]ocumentation identifying the ESD systems and structural stormwater management facilities inspected, the number of maintenance inspections, follow-up inspections, the enforcement actions used to ensure compliance, the

maintenance inspection schedules, and other relevant information shall be submitted in the County's annual reports." In addition, the content of inspection reports, documentation of activities, and the minimum inspection frequency of at least once every three years are also provided in COMAR § 26.17.02. Therefore, the requirements specified in both the permit and State regulations meet the intent of the suggested language changes.

Another recommendation under maintenance of stormwater management practices specifies that the County "…shall develop accountability mechanisms to ensure maintenance of stormwater control measures on non-County property." The Draft Permit does specify that preventative maintenance inspections shall be performed and enforcement actions be used to ensure compliance according to COMAR. In addition, COMAR § 26.17.02.03.(c)(2) specifies that an acceptable stormwater management program shall have "…inspection and enforcement procedures that ensure the proper construction and maintenance of approved stormwater management measures." COMAR § 26.17.02.10.D. specifies that "[t]he county or municipality responsible for inspection and enforcement of approved stormwater management plans may, for enforcement purposes, use any one or a combination of the following actions…" These actions may include a notice of violation, a stop work order, a civil action, or criminal prosecution. Therefore, the County already has the enforcement authority and accountability mechanisms necessary to pursue appropriate action to ensure the proper maintenance of stormwater practices.

Another comment related to Maryland's stormwater management program recommended that the Draft Permit require full documentation and evaluation of all stormwater management exemptions and waivers to ensure that there are no adverse effects to stream quality. This documentation is required in the Draft Permit under PART IV.D.1.b.iii. and iv. These requirements specify the documentation of the "[n]umber of stormwater exemptions issued" and the "[n]umber and type of waivers received and issued, including those for quantity control, quality control, or both…" In addition, COMAR § 26.17.02.05.C. specifies that waiver policies for individual developments "…reasonably ensure that a development will not adversely impact stream quality;" and "…that the cumulative effects of the waiver policy are evaluated." Therefore, the suggested language related to waivers and exemptions are required under COMAR and reinforced in the Draft Permit.

Additional language recommendations were related to the modification of County codes and ordinances to eliminate any impediments to implementing ESD to the MEP. As a State regulatory requirement, all local jurisdictions were required to adopt local ordinances that comply with the Act by implementing ESD to the MEP for all new and redevelopment. Under PART IV.D.1.a.ii., the Draft Permit requires "[t]racking the progress toward satisfying the requirements of the Act [Stormwater Management Act of 2007] and identifying and reporting annually the problems and modifications necessary to implement ESD to the MEP;" and that the permittee "[r]eport annually the modifications that have been made or need to be made to all ordinances, regulations, and new development plan review and approval processes to comply with the requirements of the Act." In addition, COMAR § 26.17.02.08.B.(3) states that "[t]he use of ESD planning techniques and treatment practices specified in this section may not conflict with existing State law or local ordinances, regulations, or policies. Counties and municipalities shall modify planning and zoning ordinances and public works codes to eliminate any impediments to implementing ESD to the MEP according to the Design Manual." Therefore, the

suggested language changes are already incorporated into the permit and COMAR. The specific language in the Final Permit directing the County to make necessary modifications for the successful implementation of ESD to the MEP meets the intent of the recommended language changes.

IV. Stormwater Monitoring.

Many environmental groups commented that the requirement that one outfall and one in-stream location be monitored, according to PART IV.F.1. (Assessment of Controls) of the County's Draft Permit, is insufficient. One environmental group stated that "…the permit contemplates monitoring of just *one* small *sub*-watershed..." and that "[t]his sub-watershed is not sufficient to provide meaningful information about the larger watershed in which it is located, much less provide information about the County as a whole."

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 County-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 the County's Draft Permit requires screening for illicit discharges to the municipal storm drain system. PART IV.E.1. describes watershed assessments on a County-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. Harford County's Draft Permit contains Special Programmatic Conditions in PART VI. that include coordination with MDE's Watershed Implementation Plan (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.

MDE has previously noted during the Phase II WIP process that water quality monitoring cannot be tied directly to implementation. Rather the State has established parallel processes for tracking implementation and water quality monitoring. Although monitoring is required within the MS4 permits, it is specific monitoring designed as part of a larger State strategy. [Maryland Phase II WIP Comment Response Document at page 70.].

Focused monitoring in a small watershed as required in PART IV.F.1. is extremely important for determining the effectiveness of individual restoration practices, gathering the necessary feedback for adaptive management, and for calibrating models. This monitoring strategy is supported by the NRC's 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).

Local governments also emphasized that infrequent chemical monitoring of numerous sites throughout a jurisdiction would not be as informative as intensive chemical monitoring of a few subwatersheds. While initial application requirements in CFR stipulated the monitoring of three storms per year from five sites located throughout a jurisdiction, MDE requires Harford County to monitor eight 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 Harford County's Final Permit, intensive monitoring will continue to be required in the Wheel Creek watershed that includes physical, chemical, and biological sampling and analysis. In PART IV.F.2. of the Final permit, the County is required to continue physical stream monitoring in the Church Creek watershed to assess the implementation of the latest version of the Manual, especially regarding stream channel erosion. 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.

Since the inception of the NPDES stormwater program, Maryland's MS4 jurisdictions have monitored more than 2,900 storm events along with an additional 1,698 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 comprises a significant portion of the National Stormwater Quality Database. As of 2014, the database included 9,422 storms from across the nation to characterize urban runoff.

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 jurisdiction. 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 believes 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.

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 100 outfalls annually. In its 2012 annual report, the County documented field screening of 108 outfalls from December 2012 to March 2013. Twenty-seven outfalls had dry weather flow and ten outfalls were identified as needing maintenance. Chemical testing was conducted on the 27 dry weather discharges and follow-up screenings were conducted as needed. The ten outfalls needing maintenance were referred to the responsible parties for correction. In addition, the County conducted 52 surveys of commercial and industrial sites to identify and eliminate pollution sources in areas that could be significant sources of pollutants, and took corrective action at three sites exhibiting problems. The County has a water resources hotline to receive complaints associated with illegal dumping, spills, stormwater pollutants, and other concerns. Harford County Hazmat responded to 150 incidents in the 2012 calendar year and found that 93 incidents had a potential water quality impact.

Additional monitoring requirements in PART IV.E.2. of Harford County's permit specify that the County shall systematically assess the water quality in all watersheds and use the resulting analyses to develop detailed restoration plans for meeting 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 County 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.

Harford County's 2012 annual report documented that 60 sites were monitored, including 28 chemical, five physical, 17 biological, nine flow, and two rain fall sites across Winters Run, Bynum Run, Deer Creek, James Run, Swan Creek, and Bush River. Small watershed assessments have been completed for Wheel Creek, Plumtree Run, Sam's Branch, and Foster Branch (totaling 3,628 acres), and the Declaration Run and Riverside watershed assessments were under development (totaling 1,250 acres). Small watershed assessments will be completed for watersheds with the greatest percentage of impervious surface and potential for restoration, including Mariner Run & Rumsey Island, Heavenly Waters, Spenceola Run, Shamrock Run & Wright Creek, and Lower Winters Run (totaling 10,281 acres). Furthermore, the County created a capital project monitoring program to assess water quality, habitat quality, and/or bank stability

pre- and post-construction of restoration projects. Monitoring includes visual inspections, fish surveys, water chemistry, total and dissolved nitrogen and phosphorus, and geomorphic analyses.

Harford County'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 Harford County's MS4 Draft Permit was developed by MDE for the submittal of monitoring and program implementation data. The County's comprehensive monitoring plan comprised of all these programmatic elements has provided the framework for developing restoration strategies to improve water quality in the County's streams and rivers. As a continuation of these efforts, planning for candidate watershed restoration designs are underway at several sites and several restoration projects are already under construction.

Several organizations have also commented that the Draft Permit's monitoring requirements do not sufficiently assess the County's compliance with WQS. As discussed under Issue I., the Draft Permit does not mandate compliance with WQS, but does require the County to implement programs that will make progress toward achieving WLAs and WQS goals. Therefore, monitoring requirements within Harford County's Final Permit do not need to demonstrate that WQS are met. Instead, the required monitoring serves as a tool to evaluate best management practices designed to reduce the discharge of stormwater and pollution.

In summary, MDE believes that the stormwater monitoring provisions contained in Harford County's Final Permit are sufficient for providing comprehensive water quality and TMDL assessments. The requirements include chemical, physical, and biological monitoring, and provide 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 to the Draft Permit language.

V. Annual Reports and Public Participation.

Restoration plans must be submitted within the first year of the permit term for MDE approval. Numerous environmental advocates believe that these plans are major permit modifications that are subject to public participation requirements under the CWA. Typical comments received stated that "[p]lans and schedules that are required under the permit meet the legal definition of 'effluent limitations,' even when developed in the first instance by the County and submitted to MDE for approval. Therefore, they must be incorporated as enforceable permit terms through a major permit modification process."

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 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. The County is given flexibility to determine how it implements restoration. However, the County 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 local 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 the County 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).

MDE believes that it is important to involve the public as much as possible during the development of local restoration plans and has incorporated language that will ensure this process in the Final Permit. For example, PART IV.E.3. requires Harford County to provide copies of watershed assessments and restoration plans to the public, post notice of these assessments and restoration plans in local newspapers and the County's website, allow for a 30 day comment period before finalizing assessment and restoration plans, and provide a summary of how the County will address any material comment received from the public. One environmental advocate acknowledged this process stating that "…the current tentative draft permit provides for public participation during the development of watershed assessments and restoration plans, including the TMDL process…" Other commenters urged that "…MDE require the County to make its annual reports available online in order to better enable public participation…" MDE agrees and included language to PART V.A.1. that requires the County to "submit annual reports on or before the anniversary date of this permit and post these reports on the County's website."

VI. MEP Compliance Standard and TMDLs.

The comments from environmental groups suggested the Draft Permit needs to comply with State and federal WQS and TMDLs (see Issue I.). In contrast, several MS4 jurisdictions (including Harford, Frederick, Charles, and Carroll Counties) have concerns regarding references to WQS and TMDL WLAs in the Draft Permit. In general, the counties suggested that there is no legal mandate to require strict compliance with WQS or TMDLs and that the MEP standard should be applied to all MS4 permits. Additionally, Charles, Frederick, and Harford Counties provided detailed cost and feasibility estimates for implementing the requirements of the Draft Permit.

Some of the counties also cited Congress' 1987 decision to adopt MEP as the compliance standard for MS4 permits. MDE agrees that Congress' 1987 decision only required local governments to reduce discharges to a technologically practicable standard. Likewise, the Final Permit as written does not mandate compliance with WQS and/or TMDL WLAs. However, MDE does not agree with statements suggesting that there is no legal requirement to include references to WQS and/or TMDL WLAs. Therefore, MDE is granted broad authority under 33 U.S.C. § 1342(p)(3)(B)(iii), and the discretion to establish "…such other provisions as… the State determines appropriate for the control of pollutants." See also *Defenders of Wildlife*, 191 F.3d at 1166 (noting that 33 U.S.C. § 1342(p)(3)(B)(iii) gives a permitting authority discretion to determine if additional "pollution controls are appropriate").

While MDE has not exercised its broad authority to require County stormwater discharges to strictly comply with WQS and/or TMDL WLAs, the Final Permit does address long term water quality goals. The importance of addressing CWA goals is underscored in EPA documentation. This is summarized in the EPA September 23, 2014 letter to MDE that outlines the history of MS4 permit negotiations in Maryland. In addition, EPA regulations, specifically 40 CFR § 122.44, require that BMPs and programs implemented to comply with this permit must be consistent with the assumption of applicable WLAs developed under approved TMDLs.

Water quality goals are addressed in the Final Permit under PART III. Water Quality. This permit condition requires the County to establish management programs that will prohibit pollutants so that the County is capable of complying with WQS and will eventually attain WLAs. Furthermore, the language references the section of the CWA that sets forth the MEP standard. Thus, the County is not required to meet WQS, TMDLs, or WLAs, but must establish programs to make progress toward meeting those goals in a manner that is practicable over the permit term and in future permit terms.

The Final Permit further requires the County to submit watershed restoration plans that describe how it will implement control measures to eventually attain the WLAs set forth in TMDLs. While the Permit requires that these plans include deadlines for attainment, the County is also required to establish adaptive management strategies to continuously reassess the effectiveness of its programs. This adaptive approach is anticipated to take several permit terms for all MS4 jurisdictions, including Harford County. Thus, MDE believes that these permit terms meet the intent of the CWA, because water quality goals will be achieved through implementation of long term plans and programs. This comports with an MEP standard of compliance.

In summary, MDE issues NPDES permits that carry both State and federal authority. MDE has legal authority for requiring consistency with WQS and TMDL WLAs in MS4 permits. However, the framework of the Final Permit requires programs and restoration plans that are designed to meet long term water quality goals without strictly requiring compliance with WQS. MDE will keep references to WQS, TMDLs, and WLAs in the permit.

A. Watershed Assessment and TMDL Restoration Requirements. Charles, Harford, and Frederick counties have objected to PART IV.E.1.a. and PART IV.E.2.b. of the Draft Permit. These sections require the County to complete "detailed watershed assessments for the entire

County" by the end of the permit term, and to submit restoration plans within one year for each stormwater WLA that was approved by EPA prior to permit issuance. The counties' reasoning for the objection and MDE's response follow:

1. MS4s Are Not Required to Address TMDL WLAs or Provide a Final Date for Meeting WLAs. Concerns by the counties stated that "…requiring that the County include in its TMDL plan a final date for meeting applicable TMDLs is legally inconsistent with the MEP standard. There is no legal requirement that MS4 permits include terms to address applicable TMDLs." In addition, "…it is very difficult to establish a final date…unknown factors could affect the implementation schedule, making any detailed schedule of questionable use." Furthermore, the "…provision also assumes that meeting the WLAs is technically feasible, financially affordable and generally practicable."

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 33 U.S.C. § 1342(p)(3)(B)(iii). Therefore, there is a legal basis to include permit requirements to address TMDLs. However, the goal is to show progress toward meeting TMDLs and this is expected to take several permit terms for all MS4 jurisdictions, including Harford County. Due to the long term goal of achieving WLAs, the County 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 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 "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 the County to propose restoration plans 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.

2. Watershed Assessments Should Be Limited to the Bush River Watershed. Harford County commented that limiting watershed assessments is practical and prioritizes work in the most urban area of the County with the "…highest potential for effective restoration."

Furthermore the County suggested that "[r]equiring County-wide assessments is overly broad…MDE has no legal authority to order action outside of County's service area", defining the service area as "…areas served by County-owned stormwater conveyances…" and excluding areas such as "…separate storm sewers in very discrete areas…" and "…areas with direct discharges to local waterways…"

As discussed in the section regarding "Permit Area" (see Issue IX.), MDE may require an NPDES MS4 permit for any discharge that is determined to "…contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States" [40 CFR § 122.26(a)(1)(v)]. This regulation further provides that MDE may "designate discharges from municipal separate storm sewer systems on a system-wide or jurisdiction-wide basis." Therefore, MDE has legal authority to order action on a jurisdiction-wide basis.

With respect to concentrating efforts in a particular area, the County has the ability to do this by establishing restoration plans that prioritize implementation schedules in certain watersheds. According to its 2012 annual report, Harford County has already begun this effort and for several watersheds has completed or is working on stormwater retrofit and stream restoration assessments, including at Plumtree Run, Foster Branch, Declaration Run, and Riverside. Issue IV. Stream Monitoring details much of the monitoring performed in past years. However, water quality concerns in other watersheds in the County dictate the need to develop long term restoration plans that also consider the water quality condition of all watersheds County-wide.

3. The Assessment and Planning Sections Are Duplicative and Confusing. Harford County and other MS4 counties suggested that these sections need greater clarity so that detailed scheduling comes after prioritizing projects.

While MDE expects that the initial assessments will set priorities for water quality improvement projects, the Final Permit is also structured so that an adaptive management process will dictate final scheduling and address site specific design challenges. It is expected that the restoration plans developed after one year will identify priority projects along with a schedule for implementation. However, MDE believes the Final Permit allows any fine tuning of schedules to address site specific concerns through the iterative process. Thus, the assessment and planning sections of the Draft Permit will remain as written.

4. The County Should Be Given a Reasonable Amount of Time to Complete Plans. The counties suggested that it is "…not possible to complete the type of restoration plan called for by the Draft Permit in the time given. In particular, the Draft Permit requires that the County include detailed cost estimates for individual projects, programs, controls, and plan implementation with the restoration plan for each stormwater WLA. One year is not enough time to assess each individual watershed, much less to use that information to develop plans with specific BMPs and associated cost estimates. Also, conceptually, mandating a complete, enforceable plan within one year is contrary to adaptive management."

The restoration plans serve as a planning framework that establishes schedules for the County to eventually attain WLAs set forth in approved TMDLs. This planning framework is part of an ongoing process that was established since the County's original permit in 1994. The 1994

permit required the County to prioritize watersheds, assess retrofit potential, and submit an implementation schedule for constructing retrofits. In addition, the County's second and third-generation permits required more detailed assessments, cost estimates, and implementation schedules. Therefore, this section of the Final Permit requires that Harford County continue the process already initiated through prior permit requirements that began 20 years ago.

Examples of current progress toward these efforts are noted in Harford County's 2012 annual report, and include watershed specific as well as County-wide programs. Through this work, the County has recognized the importance of initiating efforts to develop County-wide watershed and impervious area assessments. In addition, the Final Permit requirement to submit restoration plans within one year is intended to move forward and facilitate the planning efforts that have been initiated since the County's first permit in 1994. MDE believes that the permit history shows that adequate time is given for the development of these plans.

The counties also noted concerns that restoration plans are considered enforceable permit conditions. MDE expects that the iterative process will allow long term adaptive management to address site specific challenges and needed modifications to schedules. MDE will consider all factors involved with successful implementation prior to taking enforcement action.

B. The Chesapeake Bay TMDL and Twenty Percent Restoration Requirement. Maryland's NPDES MS4 permits require coordination with its WIP and will be used as the regulatory backbone for controlling urban pollutants toward meeting the Chesapeake Bay TDML by 2025. The Draft Permit requires compliance with the Chesapeake Bay TMDL through the use of a strategy that calls for the restoration of twenty percent of previously developed impervious land that has little or no controls. However, Charles, Frederick, and Harford counties have opposed the requirement in the permit to "…commence and complete the implementation of restoration efforts for twenty percent of the County's impervious surface area…" The counties believe this provision exceeds an MEP level of effort and that compliance would be financially and operationally infeasible. In addition, the counties believe that "MDE has no factual basis for concluding that the County is capable of implementing the kinds of substantial clean-up measures in the Phase I and Phase II WIPs by 2025."

MDE maintains that compliance with the twenty percent restoration requirement is necessary in order for the permit to be consistent with the Chesapeake Bay TMDL and Maryland's WIP. The importance of using the twenty percent restoration requirement to meet the Chesapeake Bay TMDL was underscored in the EPA September 23, 2014 letter, which stated: "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…" In addition, "EPA has reviewed this permit and considers the effluent limit (i.e., 20 percent reduction of impervious surface area)…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 the Chesapeake Bay TMDL WLA and the CBP goal of 2025."

As a result, MDE has used its discretion pursuant to 33 U.S.C. § 1342(p)(3)(B)(iii) to set more specific pollutant reduction goals for urban stormwater discharges as part of the Chesapeake Bay TMDL that do not consider practicability. Although MDE has not established WQS or WLAs as

effluent limitations, it has established the twenty percent restoration requirement as a water quality based effluent limitation that is beyond MEP standard. Therefore, the EPA September 2014 letter articulated the need for consistency with the Chesapeake Bay TMDL, and this is satisfied through the twenty percent restoration strategy. Furthermore, this strategy will meet the necessary reductions for interim and long term Bay restoration milestones and is consistent with EPA and statewide initiatives to restore Chesapeake Bay.

VII. MDE's Stormwater Accounting Guidance Is Flawed.

Harford County and several other MS4 counties in Maryland commented that MDE's MS4 Guidance is flawed and should not be referenced in the Draft Permit. The counties list several reasons for why the MS4 Guidance is flawed, including claiming that the Chesapeake Bay WIP, MS4 permits, and the MS4 Guidance are inconsistent; BMP efficiencies continue to change; ESD to the MEP should not be required for all restoration; and MS4 trading policies are not allowed. For these reasons, the counties contend "…that the Stormwater Accounting Guidance should remain guidance and not be incorporated as a term in the MS4 permit."

A. Maryland's Chesapeake Bay WIP, MS4 Permits, and the Guidance Are Inconsistent.

Harford County and several other counties commented that Maryland's Chesapeake Bay WIP, MS4 permits, and the MS4 Guidance are not consistent with each other. Specifically, one county stated that "…the Permit is inconsistent with and more onerous than the WIP. The WIP applies the 20% restoration equivalency percentage to the pre-1985 impervious cover. In contrast, the Permit includes a far larger area – all of the untreated impervious area consistent with the methodology in MDE's Stormwater Accounting Guidance, which applies the restoration requirement to all pre-2002 development."

Maryland's WIP analysis estimated stormwater loads and reductions based upon Maryland Department of Planning land cover information and the date when stormwater management was first required statewide. Maryland first enacted a stormwater management law in 1982 and municipalities and counties were implementing the program by 1985. Consequently, Maryland's WIP analysis used 1985 as the baseline year for determining if land development occurred with or without stormwater management.

Through the years, Maryland's stormwater management program has undergone several updates. Initially, the State's stormwater management program focused on quantity management to control flooding. In 2000, Maryland's stormwater management regulations were updated to require that water quality be addressed. These regulations were implemented across the State by 2002. Accordingly, BMPs implemented between 1985 and 2002 provided very little if any water quality treatment. For this reason, there are numerous opportunities to improve stormwater management on land areas that were developed between the years of 1985 and 2002. For example, BMPs that were constructed primarily for flood control (e.g., dry ponds) may be retrofitted to provide water quality.

MDE has the discretion to develop permit conditions that it considers appropriate for meeting stormwater WLAs, even if they are more stringent than prior TMDL or WIP documents (see Issue VI. MEP Compliance Standard and TMDLs). Maryland's MS4 permits were written to

incorporate when water quality treatment was required by the State's stormwater management regulations. Specifically, MDE established 2002 as the year for determining baseline impervious area criteria for restoration. As noted by the counties, changing the baseline date from 1985 to 2002 increases the impervious area that needs to be restored in comparison to the WIP analysis. MDE believes, however, that the increased impervious area and restoration requirements are part of the iterative plan process necessary for meeting stormwater WLAs established in the Chesapeake Bay TMDL by 2025. Therefore, MDE will maintain the existing language in the Final Permit.

B. BMP Efficiencies Continue to Change. Harford County and other counties believe that numerous BMPs and efficiencies for meeting the Chesapeake Bay TMDL continue to change. The counties' concern is that "…MDE will reflect those changes in future versions of the *Stormwater Accounting Guidance*." Furthermore, one county opined, "[i]f BMP efficiency updates result in 'downgrading' of certain BMPs, these changes should not be held against the County, as we will have invested years and millions of dollars in their installation." MDE is sympathetic to this concern. However, because stormwater TMDL WLAs are goals, the counties will not be held accountable for fluctuations in BMP efficiencies. The counties will be held accountable to a much more stable criterion in the Final Permit, namely, the twenty percent restoration requirement.

It is likely that BMP efficiencies and pollutant loadings will continue to change as the Chesapeake Bay Model (Model) is recalibrated with better data. While these updates help to improve the accuracy of the Model, they do present some uncertainty for the counties as they work to show progress toward meeting TMDLs. This would be unfair if the stormwater TMDL WLAs were strict compliance standards in the MS4 permits, but they are not (see Issue I. Water Quality Standards and Total Maximum Daily Loads). The counties merely need to incorporate these new efficiencies into their accounting methods for showing progress toward meeting TMDLs and supporting adaptive management strategies.

MDE has established a much more precise measurement for complying with the MS4 permits. Specifically, MDE has established the twenty percent impervious area restoration requirement as an effluent limit for stormwater TMDL WLAs. The methods for calculating impervious area restoration are relatively clear and straight-forward, and purposely, are not as susceptible to change over time. In fact, when Model Version 5.3.0 was recently updated to Version 5.3.2 and the pollutant loads changed, MDE did "not believe that this change [was] significant enough to recalculate impervious acre equivalencies" (MS4 Guidance, 2014). Furthermore, MDE stated that "[a]nother important benefit of maintaining consistent equivalent impervious acre credits is…a higher level of predictability to local governments in the assessment and implementation of practices for meeting MS4 permit requirements." Therefore, MDE will keep the reference to the MS4 Guidance in the Final Permit.

C. ESD to the MEP Is Required for All MS4 Restoration. Harford County and several other MS4 counties commented that the Draft Permit requires that ESD be implemented to the MEP for all MS4 restoration. Specifically, they point to permit condition PART IV.E.2.a., which states, "[e]quivalent acres restored of impervious surfaces, through new retrofits or the retrofits of pre-2002 structural BMPs, shall be based upon the treatment of the 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 forest cover."

The counties contended that the Draft Permit language compels them to implement all of the requirements and criteria found in the Manual. These include the requirement that ESD to the MEP must be used before any structural controls may be implemented and that ESD to the MEP must be used for at least the WQ_v, or the volume from one inch of rainfall across a BMP's drainage area. The counties believe that requiring ESD to the MEP for restoration would "result in the skyrocketing of costs" because these practices are the most expensive to implement.

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 WQ_v 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. Because the Draft Permit does not explicitly require Harford County to use ESD to the MEP for all MS4 restoration projects, MDE will retain PART IV.E.2.a. of the Draft Permit as written.

D. MS4 Trading Policies. Harford County and other MS4 counties believe that the Draft Permit should be modified to authorize trading. One county commented that "MS4s would benefit greatly from an open and transparent [S]tate trading program. According to a study performed by the Chesapeake Bay Commission, allowing significant point sources and urban stormwater sources to trade could potentially reduce compliance costs…" MDE agrees with the counties; however, because these trading policies have not been finalized, it would be premature to include them in the Final Permit.

According to the State's WIP, MDE is charged with developing an Accounting for Growth (AFG) policy "…to help offset new or increased discharges, and provide alternatives for achieving greater environment protection than through existing regulatory programs." However, extensive outreach and public comment regarding the AFG policy revealed that there was a lack of consensus on many of the fundamental issues. A work group was established in 2013 that was comprised of various stakeholders to find common ground, clarify areas of disagreement, and make recommendations for a draft AFG policy. MDE is amenable to considering trading as an option for meeting stormwater WLAs once an official trading policy is established, however, no changes will be made to the permit at this time.

VIII. Management Programs and Federalization of State Laws.

Various comments were received from the MS4 Phase I counties, including Harford County, regarding the language contained in many of the management programs described in PART IV.D. of the Draft Permit. Comments expressed concern that the Draft Permit was mandating that Harford County be held responsible for the behavior of third-party individuals or companies. Additionally, Harford County objected to conditions in the Draft Permit that require compliance with State laws and regulations as this federalizes State programs and opens counties up to enforcement actions by the EPA and possibly other entities for activities overseen by the State.

A. Federalization of State Laws. Harford County believes that PARTS IV.D.1. and IV.D.2. of the Draft Permit inappropriately incorporate State law requirements, and thereby, federalize them. Harford County believes that each of these programs is a major undertaking with many associated activities and details, and what MDE and the County may view as improvement opportunities, EPA or other third parties may view and enforce as deficiencies and violations. This is of concern because federalization triggers federal enforceability and penalties, typically different and far beyond what was contemplated when the State requirements were established. This includes enhanced legal standing, which provides a greater opportunity for third-person citizen law suits.

MDE has had long standing programs for both stormwater management (established in 1982) and erosion and sediment control (established in 1972) that meet or exceed federal regulations that were established in 1990. Provision for establishing a state program in lieu of a federal program is set forth in 40 CFR § 122.1(b). Because CFR allows qualifying local programs to be used in place of those required in federal regulations, MDE chose to incorporate both programs into NPDES permits.

MDE made the decision to incorporate State program requirements into the permit for three reasons. First, MDE believes this approach is the most programmatically reasonable. Incorporating the State's erosion and sediment control and stormwater management programs into the permit eliminates the redundancy of having two separate State and federal programs. For example, there is bound to be overlap of activities if two similar programs, one State and one federal, are implemented. Second, this approach reduces financial costs associated with having two separate programs. Third, in its letter dated November 29, 2012, EPA commented on the issue of backsliding. Because these programs have been a fundamental construct of the County's MS4 Permit since the 1990's, MDE believes that EPA would object to the removal of these fundamental stormwater program elements from the MS4 Draft Permit. Thus, except as described in Issue VIII.D. below, MDE's decision is to keep the existing language in PARTS IV.D.1. and IV.D.2. of the permit.

B. Permit Makes County Accountable for Third-Party Behavior. Harford County expressed concern that the MS4 Draft Permit imposes potential liability on the County for third-party behavior. The County commented, "…just as MDE works to improve water quality but cannot ensure standards are always met by third parties, or as a police department works to stop crime but cannot ensure that all criminal acts are prevented, the County can work toward improving the behavior of third parties but cannot guarantee what those parties will do at all times."

It is evident from the five permit conditions that follow this introductory sentence that MDE acknowledges illicit discharges and other non-permitted activities may occur. Therefore, MDE requires an illicit discharge detection and elimination program that includes field screening of outfalls to locate illicit discharges, procedures for spill response, and appropriate enforcement procedures for investigating and eliminating illicit discharges. The Final Permit requires the County to manage programs designed to limit pollutant discharges to the MEP. Therefore, the expectation of MDE is not that illicit discharges will never occur but that an adequate program is in place to actively search for and eliminate illicit discharges. The Final Permit is consistent with this logic.

A similar comment was made by some counties with regard to PART IV.D.4. Litter and Floatables. One county questioned how it could document all litter control problems as well as demonstrate that an acceptable level of effort was undertaken to reduce litter. This section of the permit requires two main actions on the part of the County. First, the County must include in its watershed assessments an evaluation of litter problems in each particular watershed as well as document current litter control programs and opportunities for improvements. Thus, the question of what is expected will be answered on an individual watershed basis as described in the County's own watershed assessments and not through specific permit conditions.

Second, the permit requires the County, within one year of permit issuance, to develop, implement, and annually assess the effectiveness of an education and outreach program that educates the public on the importance of reducing, reusing, and recycling. The conditions described in this section are similar to the public education program required by PART IV.D.6. and should be easily incorporated into the required outreach efforts performed by the County. Thus, MDE has made no changes to these sections of the permit.

C. Good Housekeeping Requirements Are too Broad. Several of the counties had concerns regarding the requirement to ensure "…all County staff receive adequate training in pollution prevention and good housekeeping practices." The counties are concerned that "all" employees must receive this training. They have requested that MDE change the language to "appropriate" employees.

MDE agrees the training should be specific to professionals whose job directly relates to MS4 requirements. The Final Permit specifies that staff should receive "adequate" training. The intent is to allow the County to use discretion when directing training efforts to necessary personnel. MDE believes that the Final Permit addresses the counties' concern and no changes have been made.

D. Remove Requirement for RPC Classes. Harford County requested that PART IV.D.2.b. of the Draft Permit be removed. This section states "[a]t least two times per year, conducting Responsible Personnel Certification classes to educate construction site operators regarding erosion and sediment control compliance;…" MDE agrees that this section can be modified because an online web-based training course is now available through MDE for the required certification. Thus, PART IV.D.2.b. of the Final Permit now reads "[e]nsure that construction

site operators have received training regarding erosion and sediment control compliance and hold a valid Responsible Personnel Certification as required by MDE."

IX. Regulated Permit Area.

Harford County and three other jurisdictions that are subject to Phase I permits questioned the boundaries of the regulated permit area. Specifically, Harford County "…objects to expanding the permit beyond areas regulated by federal law. There is no legal basis for doing so under federal law…" The County further commented, "Federal regulations are focused on stormwater ***conveyances*** owned by a municipal entity." The counties are concerned because "…other Phase I MS4s in the State have urban areas and rural areas, the latter of which may have no stormwater facilities or systems that feed into the municipally-owned MS4." Accordingly, these jurisdictions suggest that land outside of this defined conveyance system cannot be included in the MS4 permit.

Language set forth in Harford County's permit states that "[t]his permit covers all stormwater discharges from the municipal separate storm sewer system owned or operated by Harford County, Maryland." EPA in 40 CFR § 122.26(b)(8) 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): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body…having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes…; (ii) Designed or used for collecting or conveying storm water…" This definition along with other State and federal regulations gives MDE the authority to issue this Draft Permit jurisdiction-wide.

Since the inception of the NPDES stormwater program, MDE has considered permit coverage to be jurisdiction-wide. This approach is based on specific permit provisions, such as erosion and sediment control and stormwater management programs, which are included in State statute, administered locally, and implemented jurisdiction-wide. All private development within the borders of Harford County requires erosion and sediment control and stormwater management approval, and is subsequently inspected, maintained, and enforced under the County's authority. MDE believes that it is also logical that federal stormwater management regulations be implemented jurisdiction-wide.

Additionally, in the November 16, 1990, preamble to the NPDES stormwater regulations, EPA suggested that permit coverage may include areas where jurisdictions have control over land use decisions. MDE agrees and believes that the amount and quality of stormwater entering an MS4 are affected by planning and zoning decisions made by a jurisdiction. Accordingly, it is reasonable to base the scope of the permit on the entire jurisdiction.

The argument to limit regulated permit area takes a myopic view of the MS4 system and ignores the language set forth in 40 CFR § 122.26(a)(1)(v). This section states that MDE may require an NPDES stormwater permit for discharges that "contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States." Section 40 CFR § 122.26(a)(1)(v) further provides that MDE may "designate discharges from municipal

separate storm sewer systems on a system-wide or jurisdiction-wide basis." Therefore, MDE will continue to define the regulated permit area as jurisdiction-wide and considers all provisions of this permit to apply to the geographic area of Harford County.

X. Distinction Between Phase I Large and Medium Jurisdictions.

Comments were received by Harford County objecting to treating all Phase I jurisdictions as if they have the same capacity to manage MS4 permit obligations. Specifically, Footnote 2 of its comments states "[t]he County has submitted comments in every Phase I MS4 permit reissuance since 2012. In addition to a number of substantive concerns, we have repeatedly opposed MDE's issuance of Phase I permits based upon a permit 'template' that fails to consider individual community goals and capabilities." Most jurisdictions believe that there should be a distinction between an individual and a group permit and that MDE has effectively created a general permit with its template approach.

The content of the various MS4 permits being issued is based on a common template. The final version of this template is the result of months of negotiations between MDE, EPA, local jurisdictions and various environmental groups. Because there is no requirement to issue distinctly different permits to each jurisdiction, MDE has opted to use a template based process to expedite the development of this generation of NPDES permits. This same process was used successfully to develop the previous permits.

MDE believes that while similar language exists in all the MS4 permits, each draft permit is tailored to address the needs of the jurisdiction being issued the permit. For example, while large MS4s must screen for at least 150 outfalls, the medium jurisdictions must only screen for only 100. Medium jurisdictions are required to monitor eight storms while large jurisdictions are required to monitor twelve storms. Litter and trash programs are tailored to address each MS4's needs, and TMDLs in each permit pertain to that jurisdiction only. Additionally, the twenty percent restoration of impervious surface area permit condition is based on each MS4's baseline impervious area. Consequently, larger, more densely developed jurisdictions will have more impervious area and medium jursdictions will have less impervious area that will require restoration. MDE believes that this is an appropriate scaling of the restoration requirements. Moreover, the twenty percent restoration requirement is based on MDE's Chesapeake Bay TMDL strategy. Therefore, it is a water quality based effluent limitation and does not consider practicability. The Final Permit will remain as written prior.

XI. Summary

Harford County and numerous environmental advocacy groups have not only commented on the Draft Permit but have submitted suggested language changes for MDE's consideration. The changes being recommended for the Final Permit repeat many of the arguments submitted during the commenting period regarding water quality standards and TMDLs, restoration criteria, monitoring, management program requirements, regulated permit area, annual reporting and public participation, and the MS4 Guidance document. MDE appreciates the efforts of those involved in the Tentative Determination process. MDE has considered the many viewpoints and believes the Final Permit offers a balanced approach while meeting the intent of the CWA.

Except for the changes described in Issue VIII.D. regarding Responsible Personnel Certification classes, no other Permit language changes have been made.

MDE believes that 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 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)." Furthermore, in its September 23, 2014 letter, EPA stated that "[w]e are pleased to note that the 2014 Draft Permit represents a significant improvement for Harford 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."

In summary, this Final Permit is a major step forward toward meeting the water quality objectives of the CWA. Prior permits have required Harford County to possess adequate legal authority, monitor stormwater discharges, and implement comprehensive management programs. New requirements in this permit include restoring twenty percent of the County's impervious area, reducing trash and litter, and developing restoration plans to meet stormwater WLAs for impaired waters, including the Chesapeake Bay TMDL by 2025. MDE believes that this permit is both stringent enough to ensure water quality improvement and flexible enough for the development of practicable plans by the County. Therefore, on December 30, 2014, MDE has reached a Final Determination to issue this NPDES Final Permit to Harford County 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 Harford County'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 Harford County and the environmental community, including the process of developing the Prince George's County template permit. The documents summarize the changes MDE made to the two permits during these negotiations and show the EPA's support for the issuance of the permits. In addition, a list of individuals, organizations, and local governments that participated in the Harford County 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 Harford County Phase I Municipal Separate Storm Sewer (MS4) Permit (MD0068357) (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 Harford County Phase I Municipal Separate Storm Sewer (MS4) Permit, MD0068268

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 June 28, 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 Harford 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 June 28, 2013 (2013 Draft Permit), EPA provided additional comments and withdrew the Agency's specific objection by letter dated August 29, 2013. 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 Harford 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.*

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 August 29, 2013. 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, Harford 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 8-10 of the Fact Sheet. In addition to these provisions, the permit also requires chemical field screening of 100 (out of approximately 110) 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

Harford County MS4 permit comments submitted to MDE

ORGANIZATION SENDING COMMENTS	SIGNATURE, CO-SIGNATURES, AND/OR AFFILIATED ORGANIZATIONS	DATE RECEIVED	DOCUMENTS RECEIVED
Natural Resources Defense Council (NRDC)	Rebecca Hammer (NRDC), together with American Rivers, Gunpowder Riverkeeper, Earth Forum of Howard County, and Patuxent Riverkeeper	7/1/14	Letter (3 pgs) Reference to 6/27/13 letter (34 pgs)
Maryland Stormwater Consortium	Bruce Gimore	8/28/14	Letter (11 pgs)
EPA	David B. McGuigan	9/23/14	Letter of support (7 pgs)
Chesapeake Bay Foundation	Alison Prost, Executive Director	9/26/14	Letter (13 pgs) Attachment 1 (5 pgs)
Potomac Conservancy	Amanda John	9/29/14	Letter (4 pgs)
Frederick County Government	Timothy F. Whittie	9/25/14	Comments (24 pgs) Appendices (A- I)
Harford County Public Hearing Transcript	Bel Air Reporting	9/17/14	Official transcript of public hearing held on September 5, 2014