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 Carroll County Phase I Municipal Separate Storm Sewer (MS4) Permit, MD0068331

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 27, 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 Carroll County MS4 permit. EPA's comments include those in its letter dated September 20, 2012 regarding the earlier June 2012 draft of this permit (received on June 22, 2012), in which the Agency objected to the issuance of that draft permit. After discussions between EPA and MDE resolving those objections, and based on review of an MDE draft permit dated May 23, 2013 (2013 Draft Permit), EPA provided additional comments on June 27, 2014 and withdrew the Agency's specific objection by letter dated January 16, 2014. EPA has also provided related comments on a number of other Phase I MS4 permits over the past several years. We are pleased to note that the 2014 Draft Permit represents a significant improvement for Carroll 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. **<u>Water Quality Standards Language</u>**

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, Carroll 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 8-9 of the Fact Sheet. In addition to these provisions, the permit also requires chemical field screening of 100 (out of approximately 1,005) 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.

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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

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