



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

**MAR 12 2014**

Mr. Jeffrey Odefey  
Director of Stormwater Programs  
American Rivers  
P.O. Box 114  
Tarrytown, New York 10591

Dear Mr. Odefey:

Thank you for your letter of July 10, 2013, transmitting a petition (Petition) to determine whether stormwater discharges from commercial, industrial and institutional sites require National Pollutant Discharge Elimination System (NPDES) permits. The Petition was submitted to the U.S. Environmental Protection Agency, Region III (EPA or Agency) by your organization along with the Conservation Law Foundation, the Natural Resources Defense Council (NRDC) and a coalition of local Waterkeepers and watershed groups (collectively, "the Petitioners").

The Petition raises the concern that certain non de minimus stormwater discharges from the commercial, industrial, and institutional sectors that are currently unregulated under the NPDES program are contributing to exceedances of water quality standards. The Petition further requests that EPA use its Residual Designation Authority under 40 CFR 122.26(a)(9)(i)(D) to require NPDES permit coverage for those discharges pursuant to Section 402(p) of the Clean Water Act.

After a very careful review of the issues raised in the Petition, EPA has decided to deny the Petition for the reasons specified in more detail in the Enclosure. EPA believes that there exists a number of tools and programs in place that address stormwater pollution, such as robust Municipal Separate Storm Sewer System (MS4) permits, local and Chesapeake Bay Total Maximum Daily Load (TMDL) implementation, and strong state stormwater regulations. Furthermore, EPA finds that the data presented with the Petition is not sufficient for the Agency to proceed with the categorical designations and subsequent permitting of additional sources at this time as requested in the Petition.

EPA appreciates the Petitioners continuing stewardship concerning our natural resources. However, for the reasons explained in the Enclosure, EPA has decided not to take the action requested in the Petition at this time. If you have any questions, please contact Mr. Jon Capacasa, Director, Water Protection Division, at (215) 814-5422.

Sincerely,

A handwritten signature in black ink, appearing to read "Shawn M. Garvin". The signature is fluid and cursive, with the first name "Shawn" being the most prominent.

Shawn M. Garvin  
Regional Administrator

Enclosure

cc: Mr. Gary Belan, Acting Senior Director, American Rivers (w/enclosure)

## Enclosure

### EPA Region III's Evaluation of the Petition Submitted by American Rivers, the Conservation Law Foundation and NRDC dated July 10, 2013

## **I. OVERVIEW**

On July 10, 2013, American Rivers, Conservation Law Foundation, and Natural Resources Defense Council, together with a group of local Riverkeepers and Watershed Groups (hereinafter, collectively the Petitioners) petitioned the Regional Administrator of EPA Region III to make "a determination, pursuant to 40 C.F.R. § 122.26(a)(9)(i)(D), that non *de-minimis*, currently non-NPDES permitted stormwater discharges from commercial, industrial, and institutional (CII) sites are contributing to violations of water quality standards in unspecified impaired waters throughout Region III, and therefore require National Pollutant Discharge Elimination System (NPDES) permits pursuant to section 402(p) of the Clean Water Act (CWA)."<sup>1</sup> The Petition cites lead, copper, zinc, sediment, oxygen demand, and nutrients as the specific pollutants contributing to the multitude of impaired water bodies within the Region. Additionally, the Petition asserts that stormwater discharges from impervious surfaces on commercial, industrial, and institutional sites consistently contain elevated levels of these pollutants.

The Petition defines "commercial" sites as any site where the primary land use is commercial activity such as the sale of food and services as opposed to residential or industrial use. Mixed use development with any commercial activity would be considered commercial. "Industrial" sites are defined as any site where the primary land use is light or heavy industry, including buildings, equipment, and parking areas. "Institutional" sites are described as any site where an institution is located, including schools, colleges, hospitals, museums, prisons, town halls or court houses, police and fire stations, including parking lots, dormitories, and university housing.

The Petition seeks designation and permitting of all unpermitted CII sites that discharge stormwater to receiving waters impaired by lead, copper, zinc, sediment, COD/BOD, phosphorus, and/or nitrogen, as described in each state's Integrated Report submitted under sections 305(b) and 303(d) of the CWA. As described in the petition, the Petitioners recognize that stormwater discharges associated with industrial activity, as defined by 40 C.F.R. § 122.26(b)(14), are already regulated. For these categories of industrial facilities, the Petitioners request permitting of those portions of a facility not already permitted (e.g., employee parking lots and office buildings). Petitioners have requested regulation of all described discharges,

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<sup>1</sup> CLF, NRDC, American Rivers, and local environmental groups also petitioned the Regional Administrators of Regions 1 and 9 to designate the same types of sources discharging into certain impaired waters in those Regions.

regardless of whether or not those CII sites discharge to municipal separate storm sewer systems (MS4s) with existing NPDES permits.

NPDES regulations at 40 CFR § 122.26(f)(5) require that EPA make a final determination on the Petition within 90 days of receipt. Given the broad scope of the current Petition, the Region was unable to complete review of the Petition within 90 days. On October 31, 2013, Region III provided an interim response to the Petitioners indicating additional review time would be necessary and that a final determination on the Petition was anticipated within three to four additional months.

### ***The EPA Region III NPDES Program***

EPA Region III consists of five States (Delaware, Maryland, Pennsylvania, Virginia, and West Virginia) as well as the District of Columbia (DC). EPA's Regional Office is the permitting authority, and provides oversight for, the NPDES stormwater permitting program in DC and for federal facilities in Delaware. The remaining areas are under the jurisdiction of the individual state agencies with ongoing EPA oversight. Of added significance, the Region's area of responsibility encompasses a number of valuable hydrologic resources including: the Chesapeake Bay watershed, the Potomac and Anacostia watersheds, the Susquehanna watershed, the Ohio River basin, and the Schuylkill and Delaware River watersheds.

## **II. STATUTORY AND REGULATORY BACKGROUND**

In 1987, Congress amended Section 402 of the Clean Water Act (CWA) and established a phased approach to regulating discharges "composed entirely of stormwater," requiring some, but not all, point source discharges of stormwater to be regulated. Water Quality Act § 405, codified as CWA § 402(p). In the first phase, Congress required NPDES permits for discharges from municipal separate storm sewer systems (MS4s) serving a population greater than 100,000, and stormwater discharges associated with industrial activity, including construction sites greater than 5 acres. CWA § 402(p)(1), (2), 33 U.S.C. § 1342(p)(1), (2). Additionally, the Act provides for NPDES permits for any stormwater discharge determined by EPA or an authorized state to contribute to a violation of water quality standards (WQS) or to be a significant contributor of pollutants to waters of the United States. CWA § 402(p)(2)(E), 33 U.S.C. § 1342(p)(2)(E).<sup>2</sup> In 1990, EPA promulgated permit application regulations for these discharges pursuant to § 402(p)(4), 33 U.S.C. § 1342(p)(4). 55 Fed. Reg. 47990 (Nov. 16, 1990) ("Phase I rule"). The Phase I rule included a provision allowing any person to petition EPA to require an NPDES permit for a stormwater discharge that contributes to a water quality standard violation or is a significant contributor of pollutants to waters of the United States. 40 C.F.R. § 122.26(f)(2).

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<sup>2</sup> This case-by-case authority to designate stormwater discharges for NPDES permits was codified at 40 C.F.R. § 122.26(a)(1)(v) in 1989. 54 Fed. Reg. 255 (Jan. 4, 1989). See also 55 Fed. Reg. 47990, 47993 (Nov. 16, 1990).

In the second phase, Congress required EPA, after conducting studies and reporting on the results to Congress, to issue regulations designating additional stormwater discharges to be regulated “to protect water quality.” CWA § 402(p)(5), (6), 33 U.S.C. § 1342(p)(5), (6). Stormwater discharges designated for regulation under § 402(p)(6) were not necessarily required to be regulated through NPDES permits. Rather, Congress required that EPA “establish a comprehensive program to regulate such designated sources.” *Id.* In 1995, EPA completed studies and submitted a report to Congress describing additional stormwater discharges under consideration for regulation. Based on this report, EPA promulgated regulations in 1999 (“Phase II rule”) designating two additional categories of stormwater discharges for regulation: certain small MS4s<sup>3</sup> and small construction sites (1-5 acres); and required NPDES permit coverage for these discharges. 64 Fed. Reg. 68722 (Dec. 8, 1999).

The Phase II rule also added a process to the regulations for designating additional stormwater discharges for NPDES permit coverage (“residual designation authority” or “RDA”) to allow designation of a category of discharges within a geographic area if determined to contribute to a violation of a water quality standard or to significantly contribute pollutants to waters of the United States. 64 Fed. Reg. at 68781; 40 C.F.R. § 122.26(a)(9)(i)(D).<sup>4</sup> These residual designation provisions are based on the authority of both §§ 402(p)(2)(E) and 402(p)(6), recognizing the permitting authority’s potential need to regulate individual unregulated stormwater discharges on a case-by-case basis, as well as the potential need to regulate stormwater discharges on a categorical basis locally or regionally to address local concerns or to make progress in complying with water quality standards. *See* 64 Fed. Reg. at 68781. Any discharge or category of discharges designated under the RDA regulation is subject to NPDES permitting. 40 C.F.R. § 122.26(a)(9)(ii),(iii).

### III. SUMMARY OF PETITION AND REGION III DETERMINATION

In the Petition, the Petitioners assert the following: (1) hundreds of waterbodies in Region III are impaired by lead, copper, zinc, sediment, COD/BOD, phosphorus and/or nitrogen; (2) stormwater discharges from impervious areas at CII sites contain the pollutants of concern; and (3) stormwater discharges from CII sites are contributing to these water quality impairments. In support, the Petitioners cite guidance and reports in which data has shown that stormwater discharges are significant sources of pollutants. Petitioners also cite to the National Stormwater Quality Database (NSQD) and various other studies pointing to a connection between increases

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<sup>3</sup> Regulated small MS4s are primarily separate storm sewer systems serving municipal populations within “urbanized areas” as defined by the Census Bureau based on the latest census. 40 C.F.R. §122.32(a). This term also includes other publicly owned separate storm sewer systems similar to MS4s (e.g., military bases, large hospital or prison complexes, highways) and small MS4s outside urbanized areas based on criteria developed by the State; at minimum, municipal entities outside urbanized areas with a population greater than 10,000 must be considered for permitting. 40 C.F.R. §§ 122.26(b)(16); 40 C.F.R. § 123.35(b).

<sup>4</sup> The Phase II rule also allows for designating stormwater discharges for NPDES permit coverage if stormwater controls are needed for such discharges based on wasteload allocations in a TMDL. 40 C.F.R. § 122.26(a)(9)(i)(C). This basis for designating stormwater discharges was not raised in the petition.

in the amount of imperviousness and decreases in water quality. Finally, the Petitioners provide 303(d) lists of impaired waters within Region III. The references submitted with the Petition, although insightful and important to understanding the causes and effects of stormwater pollution, do not establish a correlation between facilities of the industrial, commercial and institutional land use categories and the impaired waters in Region III.

After reviewing the information provided by Petitioners as well as other sources of information, Region III has concluded that there is at present insufficient data on which to base a categorical designation of currently unregulated stormwater discharges from commercial, industrial and institutional sites in the Region. The Petition provides no information directly connecting the stormwater from a particular CII source, or category of CII sources, to any specific water body impairments, and the Region does not have that level of information reasonably available. In addition, our analysis in response to this Petition indicates that water quality protection programs that cover the majority of CII stormwater discharges in the Region are in place to address these discharges. This response demonstrates how Region III has made addressing urban stormwater a high priority in recent years and describes how the Region is using an array of existing and constantly evolving, tools and programs to reduce water quality standards exceedances and more effectively control stormwater pollution moving forward.

Region III declines to begin a process for the categorical designation of stormwater discharges from CII sites to impaired waters as requested by Petitioners, since after evaluation of the data accompanying the Petition Region III has determined that the data supplied by the Petitioners to support the exercise of RDA is insufficient. The Region has determined that the tools and programs in place adequately address the Petitioners' concerns and that the use of RDA, while a valuable tool that we will continue to consider for the future, is not a sound or strategic action to take at this time in Region III.

#### **IV. PETITION REVIEW CRITERIA**

EPA has identified a number of factors to consider in exercising its case-by-case and categorical designation authority. For a case-by-case determination under section 402(p)(2)(E), EPA described as relevant factors the available water quality and sampling data as well as "the location of the discharge with respect to waters of the United States; the size of the discharge, the quantity and nature of the pollutants reaching waters of the United States; and any other relevant factors." 55 Fed. Reg. at 47993. As noted in early guidance with respect to designations under CWA § 402(p)(3)(E), State reports generated under CWA section 305(b) are critical sources of information for making designation determinations.<sup>5</sup>

In the development of the Phase II rule, EPA considered designation of additional categories of stormwater sources for regulation under the NPDES permit program, based on

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<sup>5</sup> *Designation of Stormwater Discharges for Immediate Permitting*, August 8, 1990, available at <http://www.epa.gov/npdes/pubs/owm0220.pdf> at 12.

three factors. 64 Fed. Reg. 68722, 68780 (December 8, 1999). EPA considered 1) the likelihood for exposure of pollutants to precipitation at sources included in that category, 2) whether sufficient data are available on which to make a determination of potential adverse water quality impacts for the category of sources, and 3) whether such sources were adequately addressed by other environmental programs. *Id.* The likelihood of exposure of pollutants to precipitation at industrial sources was also a factor in defining the scope of “stormwater discharges associated with industrial activity” in the Phase I rule. *See* 55 Fed. Reg. at 48008.<sup>6</sup> These basic factors are also relevant in evaluating the Petition.<sup>7</sup>

In a letter from the EPA Assistant Administrator for Water to the Vermont Agency of Natural Resources,<sup>8</sup> EPA elaborated on these factors. EPA noted that “[n]either the CWA nor implementing regulations impose a non-discretionary duty to designate sources” and that a decision to “exercise its discretion to designate (or not) sources should be based on available information and relevant considerations.” (Mehan letter at 1). Noting that sufficient information to determine causes of impairment or to identify stormwater sources of the impairment may not be available in some circumstances, EPA further stated that while it has not defined a threshold level of pollutant contribution that would trigger a finding that a source is contributing to a violation of a water quality standard (WQS) or is a significant contributor of pollutants to waters of the U.S., “it would be reasonable to require permits for discharges that contribute more than *de minimis* amounts of pollutants identified as the cause of impairment to a water body.” (Mehan letter at 2). However, EPA also noted that “other water quality protections that are already in place” are relevant to consider with respect to whether to designate a source or when to make such designation or permit application requirement effective. “Vigorously implemented controls that otherwise might be ‘voluntary’ may provide a reasonable basis to defer designation of a particular source.” (Mehan letter at 3).

Region III has evaluated the Petition in light of the factors discussed above. The Region has also taken into consideration administrative and policy factors. Further, the Region consulted authorized states in the region and took their views into account, since in the vast majority of the region, states and not EPA would be responsible for issuing and overseeing permits for any designated stormwater discharges. The states concerns included factors such as resources, workload, and their preferred means of addressing stormwater-related pollution.

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<sup>6</sup> The Phase I rule, which excluded from the definition, certain industrial stormwater discharges based on the assumption that there is little or no exposure of materials or activities to precipitation was remanded. *NRDC v. EPA*, 966 F.2d 1292, 1305 (9th Cir. 1992). However, the underlying rationale that exposure of industrial pollutants to precipitation is a relevant factor was not questioned. Rather, EPA’s exclusion was remanded for lack of record support for this assumption. To cure this defect, in the Phase II rule EPA promulgated a conditional exclusion for owners/operators of industrial activities to certify that the facility meets the “no exposure” requirements of the rule. 64 Fed. Reg. at 68782-87; 40 C.F.R. § 122.26(g).

<sup>7</sup> EPA’s use of these factors in deciding not to designate additional stormwater sources in the Phase II rule was upheld. *See Environmental Defense Center v. EPA*, 344 F.3d 832, 861 (9th Cir., 2003).

<sup>8</sup> Letter from G. Tracy Mehan, III to Elizabeth McLain, with attachment “Answers to Questions Raised,” dated Sept. 16, 2003. (“Mehan letter”)

In sum, the factors considered by the Region in evaluating the petition are:

- A. Likelihood of exposure of pollutants to precipitation at sites in the categories identified in the petition.
- B. Sufficiency of available data to evaluate the contribution of stormwater discharges to water quality impairment from the targeted categories of sites.
  - a. Data to determine potential locations of unregulated CII sites
  - b. Data with respect to correlating CII sites to causes of impairment in receiving water quality
  - c. Data available from establishment of Total Maximum Daily Loads
- C. Whether other federal, state, or local programs adequately address the known stormwater discharge contribution to a water quality standard violation.

## V. ANALYSIS

### A. Likelihood of Exposure of Pollutant Sources at CII Sites

Petitioners rely heavily on the National Stormwater Quality Database (NSQD) in support of their argument that CII areas are significant sources of pollutants, leading to WQS exceedances. The NSQD is a data compilation created through a 2001 EPA grant to the University of Alabama and the Center for Watershed Protection. The purpose of the project was to collect and evaluate stormwater data from NPDES Phase I MS4 permit holders in order to “describe the characteristics of national stormwater quality, provide guidance for future sampling needs, and to enhance local stormwater management activities in areas having limited data.” Robert Pitt et.al, *The National Stormwater Quality Database NSQD, version 1.1*), February 16, 2004 at 2. NSQD version 3 contains data from 8600 sampling events, representing 104 Phase I communities (there are approximately 750 Phase I communities throughout the U.S.).<sup>9</sup>

EPA considered the extent of exposure of pollutant sources when evaluating additional categories of stormwater discharges for potential permitting under the Phase II stormwater program-including the use of the NSQD. As described by Petitioners and in various studies, areas of highly impervious cover can be a source of pollution. In the preamble of the Phase I rule, EPA noted that “large parking facilities, due to their impervious nature may generate large amount of runoff which may contain significant amounts of oil and grease and heavy metals which may have adverse impacts on receiving waters” and stated that while it was not requiring

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<sup>9</sup> The initial data compilation was completed in 2004. The database was updated in 2008 to include data from EPA’s 1983 Nationwide Urban Runoff Program (NURP) study and USGS’ 1987 National Urban-Storm-Runoff Database, as well as information from the International BMP Database. Cite to EPA data showing how many Phase I MS4s.

regulation at this time, such sources could be designated if they were contributing to a WQS violation. 55 FR 47990, 48010 (November 16, 1990). For purposes of this Petition, EPA accepts that many CII sites have significant amounts of impervious surface, which are exposed to a variety of pollutants that can discharge. However, this Petition does not provide enough evidence that all CII sources in Region III require NPDES regulation.

**B. Data is Insufficient to Make a Categorical Determination that CII Sites Contribute to Water Quality Standards Exceedances**

EPA agrees that it is reasonable to expect that the pollutants identified in the Petition may be exposed to precipitation at CII sites due to their impervious cover. Moreover, EPA has recognized that "the level of imperviousness in an area strongly correlates with the quality of the nearby receiving water." 64 FR 68722, 68725 (December 8, 1999). However, this is insufficient for making a determination that categorically CII sites are contributing to water quality standard violations in Region III.

Because of the wide range of potential sources of the pollutants listed in the Petition, it is generally not possible to identify which source or sources contribute to water quality standards violations without a watershed-level analysis. The most relevant available data to assess whether CII sites are contributing to particular WQS exceedances are Total Maximum Daily Loads (TMDL) analyses. CWA section 303(d) requires that states identify waters not complying with WQS, even with technology-based effluent limits in place. States must develop TMDLs for all such waters in accordance with a prioritized schedule developed by the state. In developing a TMDL, a quantitative assessment is made of the relative pollutant contributions from point sources, nonpoint sources, natural background, and the degree to which reductions in pollutant discharges are needed to attain compliance with WQS. TMDLs are the sum of wasteload allocations for point sources, load allocations for non-point sources and natural background along with a margin of safety sufficient to ensure compliance with WQS. Once a TMDL is approved or established by EPA, any NPDES permit covering sources discharging to the waterbody must include requirements consistent with the TMDL. 40 C.F.R. § 122.44(d)(1)(vii)(B).

EPA Region III has approved or established approximately 15,000 TMDLs to impaired waters that address 46,383 miles of impaired rivers and streams, 120,379 acres of impaired lakes, reservoirs and ponds, and 4,447 square miles of impaired bays and estuaries. When compared to EPA's national numbers, that number accounts for approximately 27.5% of all TMDLs developed - a significant statistic when assessing this issue. Of those TMDLs within Region III, 1,334 address nutrient impairments, 1,169 address sediment impairments, and 6,766 address metals impairments. That accounts for 65% of all of the Region's TMDLs.

As noted above, 65% of the Region's TMDLs address nutrients, sediment and metals in some form. EPA would have to review 9,750 TMDL documents to determine if unregulated CII

discharges have been identified as contributing to the impairment in the particular watershed. Beyond that analysis, TMDL documents would require further scrutiny to determine whether CII discharges were significant sources of impairment or simply one of many land uses that was taken into consideration during the TMDL process. Since it was not possible to complete such a task in the timeframe of this petition response and the resources to do so would be considerable, the Region sought to determine which parameters could be used to identify which impaired waters could be potentially impaired by CII sites, including review of certain TMDLs, and then looked specifically at data about those impaired waters.

**a. GIS Analysis to Determine the Location of Unregulated Highly Impervious Surface Areas Representing CII Sites**

In order to assess the potential contribution of CII discharges to the water quality impairments listed in the petition, it is important to assess the location of the CII sites relative to impaired waters. Such information was not provided in the petition. Therefore, Region III, in order to provide a comprehensive response to the Petition, developed a series of GIS renderings of our region, state by state, to analyze impervious surface representing potential CII sites and their location relative to impaired waters. The Region analyzed information from research studies that supported the determination that CII sites often have 70% or greater area of imperviousness associated with them.<sup>10</sup> Using data from the National Land Cover Database, GIS maps were created to show areas throughout the Region where impervious surface was greater than 70%. The percentage is an indicator that land use categories related to commercial, industrial and institutional properties would have an average of 70% imperviousness or greater.<sup>11</sup>

A GIS layer for Phase I MS4 regulated areas as well as Phase II MS4 areas defined by the 2010 U.S. Census urbanized areas was overlaid with the 70% impervious surface layer to show where the areas of high imperviousness are included as part of a regulated NPDES MS4 program. In addition, the Chesapeake Bay watershed boundary was depicted to indicate where the Chesapeake Bay TMDL and its associated accountability framework are currently implemented. The results showed that a very small portion of the total area of highly impervious surface within the Region is currently unregulated; rather most highly impervious areas are within the boundaries of an NPDES MS4 permit area or covered by the Chesapeake Bay watershed TMDL.

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<sup>10</sup> See Ottinger, Elizabeth, Memo to File - Rationale for 70% Impervious Surface Indicator used in the RDA Petition Response

<sup>11</sup> It is important to note that academic research often utilizes the percent of impervious cover (IC) as a measurement of anticipated water quality impairment. For example, water bodies which have 10% IC are expected to have noticeable water quality impairments. It is important to distinguish between the use of the percent of IC as an indicator of the degree of impairment, and the use of the percent of IC as an indicator of land use type. Region III's use of the percent of IC falls within the latter category.

## **b. GIS Analysis to Determine if CII Land Uses are Related to Impaired Waters**

Furthermore, a data layer (based on EPA's Assessment TMDL Tracking and Implementation System-also known as the ATTAINS database) of waters impaired by nutrients, sediment and metals was overlaid with the regulated MS4 information and the Chesapeake Bay watershed. This was used to show where potentially unregulated facilities with impervious surface greater than 70% are located to determine if, in fact, the CII land use categories were related to impaired waters within the Region. EPA chose to analyze those areas which were located on the map that showed the highest amount of impervious area in the vicinity of impaired waters. Specifically, we chose a stream that was a half of a mile from the selected highly impervious area that most likely received discharges from that area. The GIS analysis results showed that most of the areas of 70% or greater impervious surface near impaired waters are currently located near a stream with an established TMDL. The Region analyzed ten TMDLs related to our selection process described above (2 per state) to view a sample of the types and sources of impairments in those highly impervious areas located outside of the regulated MS4 areas. The TMDLs selected include: Bluestone River in West Virginia and Virginia, the New River Watershed and Paint Creek Watershed in West Virginia, Peak Creek in Virginia, the Little Youghiogheny River, and Broadford Lake in Maryland, the West Branch of the Schuylkill River Watershed and the Brush Run Watershed in Pennsylvania, and the Little Assawoman Bay and Tributaries and Ponds of Indian River, Indian River Bay, and Rehoboth Bay in Delaware. In general, the analysis of the sample of TMDLs for impairments located outside of the regulated areas in Region III revealed that there is not sufficient evidence to support that CII sites are the source of the impairments as cited in the Petition. A detailed discussion of each TMDL analysis is discussed in the paragraphs below.

The Bluestone River TMDL was established for bacteria and benthic (sediment) impairments in West Virginia and Virginia. The data analysis that Virginia and West Virginia used to determine the stressor causing the benthic impairment could not be determined; therefore sediment was chosen as the cause of the impairment based on the States' reasoning and assumptions. The TMDL noted that stream banks had poor structure due to livestock access to streams. The TMDL analysis showed that the most likely causes of the impairment were urban runoff, construction activity, and agricultural usage. At the time of TMDL development, there were nine regulated facilities, of which two were attributed to industrial stormwater. There was no active construction or MS4 discharges associated with the TMDL. For the wasteload allocation of the two industrial stormwater permits, their current load was determined to be the allowable load. For the load allocation, which is from the unregulated portion of the watershed, the States' determined that a zero percent reduction was required from developed (urban) land, and a 95% reduction was required from stream edge access (agricultural usage). The TMDL stated that by removing cattle from the stream, both bacteria and sediment would be reduced, thus effectively meeting the load allocation of the TMDL. Because the impairment for both fecal bacteria and sediment is caused by agricultural land uses, and the two regulated industrial sites

required no further reduction from current loads, unregulated CII sites are not required to be subject to additional regulation to meet WQS.

The New River Watershed TMDL was established for total iron, dissolved aluminum, pH, and fecal coliform bacteria for 88 water bodies within the watershed. Because metals loading is associated with sediment, sediment sources were examined. The TMDL analysis revealed that metals and sediment sources for the watershed included mining and non-mining sites, construction stormwater, unpermitted discharges from abandoned mine lands, and bond forfeiture sites. Sediment only sources were from forestry operations, oil and gas well operations, roads, agricultural usage, stream bank erosion, and other land disturbing activities. The nature of the TMDL and pollutants shows that this TMDL was addressing impairments cause by acid mine drainage rather than the CII sites cited in the petition.

The Paint Creek Watershed TMDL was similar to the New River TMDL in that it was impaired for metals and pH. Acid mine drainage was the number one source of pollutants, and while the TMDL did point out small sewage treatment plants, small commercial facilities registered under the industrial general permit, and construction sites registered under the construction general permit as potential pollutant sources, the TMDL stated that “these sources do not discharge significant amounts of the pollutants of concern and are not considered further.” For purposes of this response, it should be noted that this TMDL did not list urban land use as a source of contaminants.

The Peak Creek TMDL was developed for fecal coliform and benthic impairments. The TMDL analysis showed that the benthic impairments stressor was excess metal loadings of copper and zinc. The TMDL listed the sources of copper and zinc from naturally occurring concentrations in soils, elevated concentrations in soils disturbed by historical mining operations, urban stormwater, permitted loads from industrial stormwater, and stormwater from contaminated industrial sites. Additionally, the TMDL analysis determined that the impact of point source discharges of copper and zinc during low flow would not likely approach the acute criteria for aquatic life. It was determined that soils at or from the Allied Signal site (a former chemical plant) were the main source of metals contamination. An 83% reduction of zinc from that site would meet the target load, and load reductions for copper were distributed between Allied Signal (99%), background sources (40%), and urban stormwater (40%). VADEQ had a phased implementation approach for meeting the terms and conditions of this TMDL. The initial phase focused on remediating the Allied Signal site. No implementation for reducing contamination from background sources and urban stormwater were planned at the time the TMDL was approved. The second phase would be implemented if monitoring shows that there has been no reduction of metals from this site and that the stream is still impaired. VADEQ will then take the next steps in determining where the contamination is originating. At this time, unregulated CII sites are not the contamination concern, and therefore, while metals mentioned in the Petition are present in this TMDL, CII sites as defined by the Petition do not require additional regulation to achieve WQS.

The Little Youghiogheny River has multiple TMDLs, addressing the pollutants CBOD, NBOD and sediment. The TMDL for CBOD, NBOD, and nutrients lists the two major point sources - Trout Run waste water treatment plant and the Deer Park Spring Water Company - as contributors of the pollutants. The TMDL states low dissolved oxygen is also a concern, and that if wastewater flow from the treatment plant is not carefully controlled, it can cause dissolved oxygen violations more frequently and more severely than they already occur. Low dissolved oxygen is also attributed to the Deer Park Spring Water Company, as well as non-point BOD sources. The non-point sources were determined by in-stream monitoring, and took into account atmospheric deposition to the land, non-point source runoff from urban development, agriculture, forest land, and infiltration from septic tanks. The TMDL also assumes that by using the nutrient management plans already in place in Maryland, the 40% reduction of non-point sources will be addressed. Nutrient management plans are required for agricultural land uses, and are not associated with CII sites as discussed in the Petition. The Little Youghiogheny River TMDL for sediment was also based on point and non-point sources. The TMDL identified the point sources as municipal surface discharges (MS4s), industrial surface discharges, and industrial stormwater permitted discharges. The TMDL established that the predominant non-point source land uses were forest (48%), urban (20%), crop land (18%), and pasture (14%). In addition, the TMDL established that urban land use can be classified as low density with approximately 13% impervious area. Erosion rates for urban pervious, urban impervious and barren land were based on a combination of best professional judgment, literature analysis, and regression analysis. This clearly indicates that the State did not have enough data when writing this TMDL to provide a specific analysis on the erosion rates (sediment contributions) from the urban sector described above. Additionally, the urban land applicable to this TMDL is considered low density, with an imperviousness of only 13%, placing it outside the scope of the CII sites both defined by the Petitioners as well as EPA's analysis of an appropriate imperviousness indicator for a CII sites.

The Broadford Lake TMDL was established for phosphorus. Since there are no point sources to the lake, all load reductions were allocated to the non-point sources. The watershed is made up of mostly forested/herbaceous land use (63%), followed by agricultural uses (25%), urban (9%), and water (3%). The TMDL cites that nutrient management plans are required to be developed by all agricultural lands, and noted that after evaluation and tracking of that program, if the 38% required reduction was not achieved, reevaluation would occur. There is no mention of urban land uses affecting the phosphorus impairment in the TMDL or associated documents.

The West Branch Schuylkill River TMDL was established for aluminum, iron, manganese, and siltation. The TMDL documents listed resource extraction and acid mine drainage as the main sources of the pollutants. These types of discharges are not related to the discharges in the Petition request.

The Brush Run TMDL was established for aluminum, iron, and manganese. The TMDL was similar to the West Branch Schuylkill River, as it listed resource extraction and acid mine

drainage as the main sources of the pollutants. These types of discharges are not related to the discharges in the Petition request.

The TMDL for Little Assawoman Bay and Tributaries and Ponds of Indian River, Indian River Bay, and Rehoboth Bay was developed for nitrogen and phosphorus impairments. The TMDL reductions are based on location regarding non-point sources, and require 100% reduction from all point sources. To determine the load allocation, calculations were made based upon watershed-specific knowledge of livestock populations and manure per land-use categories, method and schedules of organic and mineral fertilizer applications, planting and harvesting dates, and atmospheric depositions of nutrients. The TMDL does not mention any urban land uses as causing or contributing to the impairments identified in the TMDL.

Based on EPA's in-depth review of the aforementioned sample of TMDLs, some of which covered watersheds containing multiple water bodies, there is not sufficient evidence to confirm that unregulated CII sites are the source of the impairments outside of the regulated areas in Region III. Additionally, for the impairments that are listed in the Petition, where EPA saw those impairments in its in-depth review of the sample of TMDLs, there was no information in those TMDLs that CII sites were the major or sole source of the impairment. In fact, EPA's review found that in some cases, the impairments in the TMDLs outside of the regulated areas were completely unrelated to CII sites. In other cases, where stormwater runoff from CII sites might be contributing, many other sources are contributing as well, and often TMDL implementation plans included reducing pollutants from land uses other than CII site land uses. Based on this review, EPA is not exercising its discretion to designate stormwater discharges from CII sites for NPDES permitting at this time.

### **c. Assessments of Total Maximum Daily Loads Mentioned in the Petition**

TMDLs have been prepared for many of the impaired water bodies included in the Petition, and the source assessments that accompany TMDLs provide useful insights into determining whether stormwater from CII sites, or alternatively, urban runoff, is contributing to the impairments.

EPA evaluated the specific TMDLs the Petitioners pointed out in the Petition - namely the Cheat River, Laurel Fork, and Anacostia River TMDLs, - and has determined that the TMDLs cited in the Petition do not provide sufficient evidence for EPA to exercise RDA for the stormwater discharges from CII sites to the waters addressed by the TMDLs.

First, Petitioners stated that the Cheat River watershed TMDL in West Virginia "lists runoff from roads as a source of sediments." However, careful review of the TMDL documents revealed that the Cheat River watershed TMDL was developed for the pollutants total iron, total manganese, dissolved aluminum, pH, and fecal coliform bacteria, not sediment or sediment-related parameters. Sediment was considered as a source of impairment because metals often become attached to sediment particles and thus could correlate to the metals impairment in water

bodies. While roads, both impervious and unpaved, were listed as a potential source of sediment, there were also other sources of sediment discussed in the TMDL including: forestry operations, oil and gas well operations, agricultural uses, stream bank erosion, other land-disturbance use (such as residential and urban), and SMCRA bond forfeiture sites from mining.

In order to determine the best way to reduce the pollutants in the TMDL, a model was used to determine the load reductions from each of the land uses contributing metals via precipitation and runoff including forest, pasture, cropland, wetlands, barren, residential/urban impervious, and residential/urban pervious, as well as nonpoint source land use categories such as abandoned mine lands, harvest forest and skid roads, oil and gas operations, paved and unpaved roads, and active mining.

Wasteload allocations focus on reducing pollutants from the already regulated sources, where as the load allocations focus on those sources which are not regulated. The dominant sources in the load allocation were abandoned mine lands, barren land, harvested forest, oil and gas well operations, residential/urban/road, stream bank erosion, undisturbed forest and grassland, and agricultural uses (which were not reduced). The data analysis for the TMDL showed that the greater load reductions would come from iron and aluminum reductions, not from sediment reductions alone. The TMDL determined that sediment TMDLs were not necessary because if a TMDL was developed for iron and aluminum, the necessary sediment reductions would be achieved when the TMDLs for iron and aluminum were achieved. Thus, a TMDL for sediment was not developed.

In addition, active and abandoned mines, as well as bond forfeiture sites are prevalent throughout West Virginia, and discharges from such sites are high in metals; therefore, the TMDL recommends that the best way to get load allocation reduction is to focus on controlling active and abandoned mining operations to reduce the metals and sediment associated with acid mine drainage. It does not indicate that the CII sites are major contributors to the pollutants mentioned in the petition, nor the TMDL.

Next, the Petitioners identified the TMDL for the Laurel Fork watershed in Virginia, stating that the TMDL “lists ‘urban runoff’—defined as surface runoff originating from an urban drainage area including streets, parking lots, and rooftops—as a source of pollutants contributing to low dissolved oxygen.” The TMDL did discuss all possible sources of the cause of low dissolved oxygen, with urban runoff as one of them. However, a more in-depth review of the TMDL documents revealed that the low dissolved oxygen was most likely from problematic sewage treatment plants and unregulated raw sewage discharges—meaning human waste (sewage) is the cause for low dissolved oxygen in the watershed. Additionally, different scenarios were run to see what types of activities provided the most effective and comprehensive load reductions, and none of those scenarios included the urban sector. In fact, the land uses that were listed as resulting in the largest load reductions were abandoned mine lands, disturbed

forest, pasture-hay, livestock access, high tillage row crops, and stream bank erosion (connected to livestock access).

The TMDL also stated that dissolved oxygen itself was not a pollutant source, but that the high organic matter from human waste was affecting the dissolved oxygen levels. The TMDL identified that reclamation of abandoned mine lands and correction of straight pipes as its initial sediment reduction targets, as well as on-site waste management systems, management of livestock and manure, and pet waste management as targets to address the dissolved oxygen and fecal coliform issues. Therefore, this TMDL does not indicate that stormwater discharges from CII sites should be designated.

Lastly, the Petitioners cited the Anacostia River TMDL. Since the Anacostia River has multiple TMDLs associated with it, EPA assumed the TMDL to which the Petitioners were referring was the Anacostia River TMDL for BOD and nutrients for Maryland and Washington DC. The quote used in the Petition related to this TMDL that nutrients impairments can be attributed to stormwater runoff from urban lands “covered by impervious surfaces such as rooftops, paved roads and parking lots”, appears to have been taken out of context from the TMDL. This sentence is found in the section of the TMDL that discusses land uses in the watershed and not pollutant sources.

Further evaluation of the TMDL found that there are multiple sources contributing to nutrients and BOD in the watershed, including stormwater runoff, subsurface drainage, erosion and in-stream scour, industrial and municipal point sources, and CSOs, along with SSOs, broken sanitary lines, and illicit connections. And while it is true that developed land is the predominant source (for BOD the breakdown is 80%, followed by 17% CSOs; for total nitrogen 80% developed, 9% agricultural usage, and 7% CSOs; and for total phosphorous 67% developed, 14% in-stream scour, 13% CSOs, and 3% agricultural usage), the TMDL states “the majority of the Anacostia Watershed is managed under NPDES MS4 Permits for Montgomery County, Prince George’s County, and DC. This provides regulatory assurances that urban stormwater sources will be managed to the maximum extent practicable.” Therefore, CII sites were not considered as being uncontrolled contributors to the pollutants for which this watershed is impaired.

In conclusion, the results of the consideration of the second factor indicate that sufficient data is not readily available to make a determination as to whether any individual or categorical CII discharges contribute to water quality exceedances. In addition, the GIS analysis indicates that areas with impervious cover greater than 70% are, in the vast majority of instances, located within regulated MS4s and the Chesapeake Bay Watershed or being addressed through implementation of local TMDLs. Therefore, they are controlled by other CWA programs and do not require designation at this time.

**C. Stormwater from CII Sites Addressed by other Programs**

As noted above, one of the three principal factors used by EPA in evaluating discharges for designation under the Phase II regulations was the degree to which such discharges were already being addressed by other environmental programs. Region III evaluated regulatory programs that are currently in place to determine how they addressed CII sites.

While Region III agrees with the Petitioners that many CII sites have significant amounts of impervious surface, which are exposed to a variety of pollutants that can be discharged in stormwater from the sites, our chosen methodology to manage those discharges is to utilize existing programs (a majority of which have components which have been recently updated and the outcomes still pending). The data analysis performed by the Region in response to the Petition shows that the majority of our distinctly urban, highly developed Region is currently covered by some type of stormwater regulation. By utilizing programs in place, Region III is taking full advantage of resources which have already been committed; will save both time and money by avoiding duplication of efforts; and avoids the disruption of ongoing state programs.

**1. Total Maximum Daily Load Allocations in Place, including the Chesapeake Bay TMDL Accountability System**

One of the most significant existing programs that address water quality in the Region falls under the umbrella of the TMDL program. As stated previously, Region III has established a significant number of TMDLs to address impaired waters. In December 2010, Region III established the Chesapeake Bay TMDL and its associated accountability framework. The modeling data associated with the Chesapeake Bay TMDL confirms that 40% to 50% of the stormwater load from urban areas in the Bay watershed is currently regulated by the NPDES program. The remainder of the unregulated urban load, while not subject to NPDES regulation, is also subject to the TMDL accountability framework. Although the TMDL directly addresses only sediment and nutrients, by implementing programs and practices to address those pollutants, the other pollutants identified in the petition are also expected to be reduced in the process.

The Chesapeake Bay TMDL is supported by a process which requires the development and maintenance of state Watershed Implementation Plans (WIPs) which outline the commitments that the jurisdictions will undertake to meet the Bay TMDL allocations by 2025. States are required to develop two year milestones and report to Region III on their progress in meeting their goals in an effort to maintain accountability. Region III committed to provide ongoing oversight and to reinforce our expectations through the milestone reviews to ensure that progress is attained. The Chesapeake Bay TMDL has a significant milestone assessment in the year 2017, and goals are expected to be met in 2025. For example, many states have ramped up their NPDES permitting programs in the wastewater arena and have required the upgrade of nearly 500 large number of treatment plants to address nutrients; the CAFO program is installing various best management practices (BMPs) such as buffers and fencing and utilizing

Nutrient Management Planning to combat excess nutrient impairments; and stormwater permitting programs have committed to including TMDL and watershed planning, and restoration/retrofit requirements in permits as well as implementing BMP programs in an effort to tackle sediment and nutrient impairments. In light of this ongoing process and investments by the States, it is premature to determine that any additional designations of stormwater discharges are warranted. If, after the 2017 assessment, states have not met their TMDL commitments, Region III will evaluate the use of RDA as a supplemental course of action for achieving the desired Bay water quality goals as outlined in our December 29, 2009 letter to the Bay jurisdictions.

### **NPDES Municipal Separate Storm Sewer (MS4) Permits**

Over the past three years, Region III has been working with its state agencies to issue a new generation of MS4 permits that focus on addressing water quality issues. For the first time these renewed permits have specific local TMDL and Chesapeake Bay restoration commitments and are a significant advance over previous generations of permits. We are also working with our states to develop the necessary tools to support those water quality goals defined in their Chesapeake Bay WIPs. These supplementary tools and requirements can encompass the CII facilities described in the Petition that discharge into regulated areas.

#### **2. Phase I MS4 Program**

There are currently 26 Phase I MS4 permits within Region III. Of those permits, eight have recently been renewed (Montgomery County, MD; Baltimore City, MD; Baltimore County, MD; Prince George's County, MD; Anne Arundel County, MD; Washington D.C.; New Castle County, DE; and Arlington County, VA) and others are close to state issuance or under continuing review by Region III. Region III is using this review opportunity to ensure that States use their NPDES authority to include conditions in MS4 permits to meet the TMDL allocations and address impaired waters in addition to restoring impervious surface runoff from existing sources. Many Region III states have included retrofit requirements in renewed permits, which is explained in more detail below. A number of states also committed to include conditions in MS4 permits as a provision of their Chesapeake Bay WIP. These requirements can provide additional water quality improvements from commercial, industrial and institutional discharges in those areas.

##### **a. Restoration/Retrofit Examples**

Region III determined that through the MS4 permitting process, approximately 400 of all of the Region's regulated MS4s are covered by some sort of retrofit/restoration requirement, including Phase I MS4 permits in Maryland, Virginia, Delaware and DC and Phase II MS4 permittees in Pennsylvania located in the Chesapeake Bay watershed. The MS4 permits

described below include retrofit requirements to restore impervious cover. Due to the highly impervious nature of CII sites, many of these retrofits may occur on CII sites.

For example, in the City of Seaford, Delaware, an existing large paved parking lot at Our Lady of Lourdes Catholic Church is proposed to be retrofitted with porous pavers, bio-retention and tree plantings, in an effort to mimic natural hydrology, reduce effective imperviousness and promote on-site recharge.

| Jurisdiction  | Phase I MS4s | Current Phase II MS4s | Census 2010 New Phase II MS4s <sup>12</sup> | Permits with Retrofit req't |
|---------------|--------------|-----------------------|---|-----------------------------|
| Delaware      | 1            | 4                     | 9   | 1                           |
| DC            | 1            | 0                     | 0   | 1                           |
| Maryland      | 11           | 87                    | 23  | 11                          |
| Pennsylvania  | 2            | 728                   | 139   | 327                         |
| Virginia      | 11           | 90                    | 17  | 11 <sup>13</sup>            |
| West Virginia | 0            | 48                    | 10  | 48 <sup>14</sup>            |

The DC MS4 permit was written specifically to address the more than 380 TMDL wasteload allocations (WLAs) applicable to the District of Columbia. Therefore, in the DC MS4 permit, DC is required to retrofit 18,000,000 square feet of impervious surface, 1,500,000 of which is to be inside the transportation rights-of-way, install 350,000 square feet of green roofs, and remove 103,188 pounds of trash annually as a specific single-year measure by the end of the permit term. In addition to requirements that must be met by the end of the permit term, the permittee must also sweep 641 acres of roadways and plant 4,150 trees annually. DC is currently required to monitor at six outfalls throughout each watershed in DC for *E. coli*, total nitrogen, total phosphorus, total suspended solids, cadmium, copper, lead, zinc, and trash. DC has already updated its stormwater regulations to reflect the aforementioned retention standard. Additionally, by the end of the permit term, DC must update its monitoring program, its stormwater pollution prevention plan, and develop a consolidated TMDL implementation plan to address all applicable TMDL WLAs in the District, with specific benchmarks and milestones, as well as final attainment dates for each applicable TMDL WLA. All of the aforementioned

<sup>12</sup> New MS4 values based upon EPA's evaluation of 2010 census data. This information was shared with the R3 jurisdictions for verification and we are still in the process of finalizing the numbers.

<sup>13</sup> The reissued Arlington County MS4 permit is to be used as a template for the remaining 10 VA Phase I MS4 permits; therefore EPA is listing all Phase I permits in VA as including a retrofit condition.

<sup>14</sup> Permittees that cannot meet the 1" on-site retention standard in the current permit can opt to use off-site mitigation. Mitigation must be for retrofit or redevelopment projects, and cannot be applied to new development.

efforts move the District towards meeting all TMDLs within the District, as well as the Chesapeake Bay TMDL. Additionally, DC has implemented numerous voluntary programs geared towards private land owners, including a District-wide off-set and trading program which promotes retrofits on large private properties (mainly commercial properties) both inside and outside the MS4 area, the RiverSmart Homes and Schools programs, which promote retrofits on homes and schools near waterbodies, and a program by which homeowners can do simple things, such as installing rain barrels, to receive a discount on the stormwater fees charged by the District.

Virginia's recently reissued Arlington County Phase I MS4 permit also contains a retrofitting requirement to identify seven projects to implement from its watershed retrofit plan in addition to planting a minimum of 2,000 trees on County lands and developing a program to distribute a minimum of 2,000 trees to private property owners. Arlington County also implements a StormwaterWise Landscape program which provides cost-sharing and technical assistance for the installation of small scale best management practices to reduce stormwater runoff from private properties. By the end of the permit term, the County is required to have funding to accommodate a minimum of 200 participants in the StormwaterWise program.

Delaware's reissued New Castle County Phase I MS4 permit requires the development of a Water Quality Improvement Plan. The Plan identifies potential projects, estimated costs, and potential funding sources for projects that aim to meet TMDL allocations and applicable water quality standards. The Water Quality Improvement Plans are also required to consider all available BMP options and propose at least a 3% decrease in untreated Effective Impervious Area as defined within the permit. Restoration shall be done through development and redevelopment in conjunction with revitalizing or retrofitting existing BMPs in need of repair and the introduction of new green technology BMPs.

Maryland has 11 Phase I MS4 permits that were required during their prior permit cycle to complete the restoration of 10% of the County's impervious surface area that was identified during the previous permit term. The permit also requires permittees to begin to implement an additional 10% restoration during the permit term for a total goal of 20% restoration. The permit further requires monitoring to determine the effectiveness of the restoration efforts toward achieving water quality. In conjunction with the terms of Maryland's Chesapeake Bay WIP, the four Phase I permits that were noticed for final determination as well as the remaining Phase I draft permits that Region III has seen to date require an additional 20% restoration of impervious surface on top of the efforts that were expected during the current permit cycle.

b. Industrial/Commercial Language in Phase I MS4 Permits

Federal regulations at 40 CFR § 122.26 (d)(2)(iv)(C) require Phase I MS4 permittees to include the description of a program to monitor and control pollutants from industrial facilities that the permittee determines are contributing a substantial pollutant loading to the MS4 system

as an element of their management program. The regulation further includes identification of priorities and procedures for inspections as well as a monitoring program. In Region III there are a number of examples of recently reissued Phase I permits which include the requirement to identify and inspect industrial and commercial areas. Therefore, industrial and commercial sites identified in the petition and located within regulated Phase I MS4s would be subject to some level of oversight under these permits.

For example, Delaware's New Castle County Phase I MS4 permit requires, at Part II.A.5.a, that the Good Housekeeping plan developed by the permittee:

"Include the current inventory with provisions to update the inventory annually for all facilities owned or operated by any of the permittees located in the MS4 service area that either maintain coverage under the NPDES industrial stormwater general permit program or that have the potential to contribute polluted discharges as a result of stormwater. These facilities can include, but are not limited to, maintenance yards, municipally-owned parking lots, Del-DOT-operated parking lots, or municipally-owned parks. This list is to be submitted in the Annual Report package. All facilities on the list must be inspected annually."

Additionally, the Washington D.C. Phase I MS4 permit requires in Part 4.4:

"The permittee shall establish and implement policies and procedures to reduce the discharge of pollutants in stormwater runoff from all commercial and institutional (including federal) areas covered by this permit.

The permittee shall ensure maintenance of all stormwater management controls in commercial and institutional land areas in accordance with the following provisions:

1. Tracking all controls;
2. Inspecting all controls on a regular basis, according to an inspection schedule;
3. Ensure compliance with the MS4 permit and municipal ordinances at commercial and institutional facilities."

Moreover, the recently reissued Arlington County Phase I MS4 permit requires in Part 1.B.2.h:

"The permittee shall implement a program to identify and control pollutants in stormwater discharges to the MS4 from industrial and high risk runoff facilities (e.g., municipal landfills; other treatment, storage, or disposal facilities for municipal waste; hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to EPCRA Title III, Section 313) and any other industrial or commercial discharges the permittee determines are contributing a significant pollutant loading to the MS4..."

### 3. Phase II MS4 Program

Of the five states in Region III, four currently have a general permit to cover Phase II MS4s, with the fifth anticipated in 2014. (Delaware previously covered Phase II permittees under individual permits, but in 2013 submitted a general permit to Region III since additional

MS4 jurisdictions were identified in the 2010 Census.) Coverage under those general permits applies to greater than 1,500 MS4 communities, with the greatest number (almost 1,000) belonging to Pennsylvania. One aspect of these MS4 permits is that the permittee ensure that discharges into the MS4 (particularly from industrial and commercial sites) are composed entirely of stormwater. In addition, with the 2010 Census results, Region III expects that approximately 200 new MS4s will require NPDES regulation. This expansion of MS4 coverage will only serve to reduce the already low degree of discharges from industrial, institutional and commercial facilities in Region III located outside a regulated MS4.

Pennsylvania's Phase II general permit requires that permittees located within the Chesapeake Bay watershed (approximately 325) develop and implement upon approval a Pollutant Reduction Plan. The permit requires municipalities to develop a strategy, including a schedule, to implement BMPs to reduce nitrogen, phosphorus, and sediment associated with existing stormwater discharges into the regulated MS4. Since reducing impervious surface is paramount to any pollutant reduction program, this requirement can further serve to address discharges from industrial, institutional and commercial facilities within these regulated MS4s.

#### 4. New and Redevelopment Regulations Outside of Regulated MS4 Areas

In addition to robust TMDL and MS4 programs, Region III state agencies have well established state-wide regulations that in some cases go beyond federal requirements, which further address stormwater pollution from new development and redevelopment related to CII sources. In most cases, these regulations go above and beyond what is required by the federal statutes-and apply throughout the entire state, not only within regulated MS4 boundaries.

In Pennsylvania, Chapter 102 regulations require post-construction stormwater controls for new and redevelopment-along with long term operation and maintenance of post-construction BMPs. The Post-Construction Stormwater Management (PCSM) plan has to provide an analysis to show how the site will manage the net change for storms up to and including the 2-year/24-hour storm event when compared to preconstruction runoff volume and water quality where existing predevelopment non-forested pervious areas must be considered meadow in good condition or its equivalent. The Maryland Stormwater Management Act requires the use of Environmental Site Design in all new development and redevelopment. New DC regulations require on-site retention of 1.2 inches of stormwater from both new and redevelopment, and also include a 0.8 inch on-site retention standard for projects that do not necessarily disturb any land, but include renovations that increase the value of the property more than 50% of its current value, in addition to an offset and trading program in the event that reduction standards cannot be attained on-site. Delaware's revised Sediment and Stormwater regulations include criteria for new and redevelopment as well as performance criteria for post-construction stormwater management in addition to an offset provision in the event that reduction standards cannot be attained. Virginia's modified Stormwater Management Program Regulations established new design criteria for post-construction runoff control for new and redevelopment. In addition to the

EPA construction General Permit (CGP), the District of Columbia regulates construction projects outside the scope of EPA's CGP. All construction projects must go through the permitting process, regardless of size or type, and such project goes through the District Department of the Environment (DDOE) when District-wide stormwater regulation requirements come into play—when the project meets the threshold of disturbing 5,000 square feet (which is more stringent than EPA's 1 acre or more). This includes, but is not limited to, meeting on-site retention standards, developing a Stormwater Pollution Prevention Plan, having all post-construction BMP plans approved by a professional engineer, and having a covenant in the deed when construction is finalized and whenever ownership is transferred where the maintenance responsibility of all post-construction BMPs transfers over to the new owner.

When taking all of these new regulatory items into account, it is evident that our states are committed to implementing aggressive programs that will go far in preventing additional degradation of our Region's waters due to construction and development. In particular, these regulations were developed to reduce the amount of newly impervious surfaces generated and ensure the treatment of runoff from all categories of sites, including CII sites, which will only serve to aid in reducing the pollutants identified in the Petition. However, it will require time to determine if indeed these practices are making a difference since most these regulations were promulgated within the past few years.

#### 5. Industrial Permits and Regulations beyond Federal Requirements

The majority of Region III states regulate federally recognized industrial sources under general permits. However, many States in Region III have separate NPDES permits or regulations for categories of industrial activities that are exempt from federal regulation or do not require federal NPDES permit coverage. These existing programs serve to further the objective of regulating the pollutants identified in the petition (such as sediment and metals) from stormwater associated with industrial type activities and promote overall water quality throughout the Region.

Some examples of conditions in state industrial general permits going beyond federal requirements include the following. Pennsylvania's Industrial General Permit requires sector-specific BMPs (including sectors not contained in the EPA Multi-Sector General Permit), Preparedness Prevention and Contingency Plans, and an individual permit if the applicant discharges to a water body with an approved TMDL. Maryland's Industrial General Permit includes restoration language to help achieve Chesapeake Bay TMDL reductions. The permit requires in Part III.A.1.a that a permittee "must select, design, install and implement restoration of 20% of the untreated impervious surface area at your facility or equivalent control measures for the reduction of nutrients." Moreover, Maryland maintains separate permits to address discharges to surface waters and/or groundwater for a number of additional industrial-type discharges, including runoff from boatyards (i.e., not only from marina vehicle/vessel maintenance and equipment cleaning operations per federal regulation); groundwater seepage

from coal and mineral mining-in addition to stormwater discharges to surface waters; and overflow, drawdown and cleaning water discharged from swimming pools and spas. West Virginia's Industrial General Permit requires an individual permit for stormwater discharges to impaired waters with an approved TMDL wasteload allocation so that each site is given specific permit conditions, instead of allowing the discharger to follow the generic requirements of the general permit. This is in contrast to EPA's MSGP which allows sites to maintain coverage under the general permit regardless of whether a site discharges to impaired waters, and regardless of whether there is an applicable TMDL wasteload allocation. Virginia and Delaware are currently in the process of updating their Industrial General Permits. The review process will give EPA the opportunity to ensure that the revised permit and regulations include appropriate controls to address impaired waters, including waters impaired for the pollutants listed in the Petition, and any other additional requirements to address discharges from industrial sites.

In Pennsylvania and West Virginia there is also a separate general permit for stormwater discharges related to construction and erosion control at oil and gas facilities. Pennsylvania's general permit applies to earth disturbance activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities that disturb five or more acres at one time over the life of the project. Oil and gas facilities are subject to the same Chapter 102 regulations as traditional development and are required to construct and maintain E&S BMPs and submit a post-construction management plan to PADEP for approval. They also have to comply with state anti-degradation regulations. West Virginia's general permit applies to any discharge of stormwater from oil and gas field construction activities or operations such as exploration, production, processing or treatment operations or transmission facilities, disturbing one acre or greater of land area. The permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) and Groundwater Protection Plan (GPP). Both the SWPPP and the GPP are required to identify operations and potential sources of pollution and describe and ensure the implementation of practices and procedures to protect surface waters and groundwater from the identified pollutants in the petition.

Pennsylvania and West Virginia also have general permits for facilities that are remediating groundwater due to petroleum contamination. While these discharges are not directly related to stormwater, most are discharged back to surface waters. In Pennsylvania, such sites are not allowed to discharge to High Quality or Exceptional Value waters, even with more stringent permit limits or an individual permit; permittees are required to monitor for not only petroleum-related contaminants, but also total suspended solids (TSS) and dissolved iron. Permittees cannot exceed 30 mg/L monthly average and 75 mg/L instantaneous maximum for TSS nor 7.0 mg/L instantaneous maximum for dissolved iron; and the permit may be terminated or coverage denied in the first place if it is found that any discharge will cause or have the potential to cause an excursion of state water quality standards. In West Virginia, such discharges must go to a publicly-owned treatment works if one is available; may not go to an impaired water subject to an approved TMDL unless the discharge is consistent with the

conditions and assumptions of the approved TMDL, nor may the discharge cause or have the potential to cause exceedances of state water quality standards; and permittees are required to monitor for not only petroleum related contaminants, but also total recoverable iron, total recoverable lead, and total recoverable manganese. Such discharges to streams must be treated and may not exceed 50 u/L, 1.5 mg/L, and 1.5 mg/L, respectively, as instantaneous maximum values.

West Virginia also has a general permit for bridge washing, deck washing, and hydroblasting construction projects. Such activities require the monitoring for the discharge of total residual chlorine, total recoverable lead, total recoverable copper, and total recoverable zinc. Any paint chips, or dirt and debris containing paint chips, must be collected and disposed of as hazardous materials in a landfill, unless proven to be non-hazardous. Disposal of these pollutants in a landfill is still required. All water must be filtered, and in some instances captured and pH-adjusted and treated for excess total residual chlorine, or be de-chlorinated. All dirt and debris is collected and disposed of properly.

#### 6. Effectiveness of Existing State Stormwater Programs

##### a. Permitting

A heavy investment has been ongoing in Region III to address urban sector/stormwater issues in an effort to strengthen the performance of the core program. From a strategic perspective, Region III believes that limited state and federal resources would be best focused on enhancing the effectiveness of the core MS4 permitting tools which have a much wider coverage and impact on the existing built environment than trying to capture such a small percentage of unregulated entities outside the regulated MS4 area through the use of RDA.

As mentioned above, Region III has focused on ensuring that the next generation of MS4 permits are a vast improvement from previous iterations. The number of permit objections issued by Region III has increased drastically over the past few years as evidence of our commitment. Region III is also committed to ensuring that new MS4 permits contain defined performance standards and retrofit requirements and that all permits contain provisions to address TMDLs and impaired water bodies. In fact, water quality issues are at the forefront of the permit objections that the Region has issued over the past three years.

EPA is also under obligation to review permits to ensure that they are consistent with the commitments made by the states in their Chesapeake Bay WIPs to achieve the reductions allocated in the TMDL.

b. Enforcement

In accordance with EPA's National Enforcement Initiative, Region III has committed to perform audits on all Phase I MS4s within the Region by 2016. To date, 24 of the 26 Phase I MS4s have been inspected. All Phase I MS4s within the Chesapeake Bay watershed have been inspected. Enforcement actions from those inspections have resulted in approximately \$408,000 in penalties. Additionally, since 2010, 21 Phase II MS4s have been subject to EPA inspection, including not only municipalities but also six non-traditional MS4s (4 State DOTs, 2 military facilities) and two institutional sites (George Mason University and Towson University). EPA has also conducted Phase II annual report reviews in three of our five states to assist for inspection targeting. Enforcement from these inspections has resulted in greater than 100 actions and approximately \$207,000 in penalties. In addition to enforcement action and penalties, MS4 inspections have also resulted in supplemental environmental projects and increased awareness throughout the Region of the MS4 program as a whole.

For example, audits of the Maryland Phase I MS4s revealed to enforcement personnel that the current MS4 permits fell short of adequately requiring identification and inspection of commercial and industrial facilities that drain into the municipal system. As a result of the audits, permit reviewers were alerted to this shortcoming and were able to ensure that the new generation of MS4 permits contained specific language to include commercial and industrial components as required by federal regulations.

Moreover, in the past year, EPA has performed inspections at industrial facilities in the DC and Virginia areas with further inspections scheduled for spring 2014. Compliance determinations for those inspections are currently ongoing.

c. State Program Assessments

Additionally, between 2011 and 2013, Region III performed state-wide assessments of the entire stormwater program for each of the five states that are authorized to administer the NPDES program. The result of the assessments came in the form of written reports which contain observations from the reviews as well as the Region's recommendations to enhance each of the State's management of the overall stormwater program. Some common recommendations from those assessments related to industrial permit coverage include: (1) development of a process to identify non-filers and sites where permit coverage is required but not yet obtained; (2) increasing the number of inspections and enforcement to promote compliance; and (3) obtaining industrial permits for municipal facilities.

d. Chesapeake Bay WIP Oversight

In accordance with the Chesapeake Bay TMDL, states were required to map out strategies to achieve the reductions allocated to them. As part of this process, states are required to develop 2 year milestones and submit on the ground BMP statistics to show how reductions are being achieved. EPA is required to evaluate these milestones and state's progress toward meeting allocation goals through model runs of the input data. EPA has committed to taking federal actions against States where milestones are not met and/or progress toward meeting reductions is not realized.

**VI. CONCLUSION**

Region III realizes that there exists an observable link between urban water impairments and impervious surfaces. EPA wholly supports the need for improved stormwater controls and stormwater pollution prevention. However, after reviewing the information provided by Petitioners as well as other sources of information, Region III has concluded that there is at present insufficient data on which to base a categorical designation of currently unregulated stormwater discharges from commercial, industrial and institutional sites in the Region. The Petition provides no information directly connecting the stormwater from a particular CII source, or category of CII sources, to any specific water body impairments, and the Region does not have that level of information reasonably available. In addition, our analysis in response to this petition indicates that water quality protection programs that cover the majority of CII stormwater discharges in the Region are in place.

Region III states have made significant urban/stormwater reduction commitments in their Chesapeake Bay WIPs, submitted meaningful MS4 permit requirements to deal with impaired waters, and adopted state specific standards and permits beyond those required by federal regulations to regulate categories of industrial activities. The implementation of these programs will require a significant resource commitment by the states, the Region, and the regulated community for many years to come. Region III is committed to working with the states to ensure that these programs and activities are implemented and meet their water quality objectives. If it becomes apparent that these programs are not meeting their objectives, then the Region will need to consider alternative tools, including RDA.

Region III agrees with the Petitioners that RDA is a viable tool, in appropriate circumstances, to utilize along with others described in the paragraphs above to address the concerns identified in the Petition. Region III and our state agencies have a vested interest in addressing urban stormwater and existing impervious surfaces-as evidenced in the existing programs and tools described above, and the previous discussion of the various programs and permit requirements clearly shows that our investment in this priority is high. At this time, Region III is not proposing to perform wholesale designation of entire categories of land use as requested in the Petition; however, the Region is prepared to evaluate the use of RDA to address

impaired waters in a targeted manner where there is adequate evidence and documentation of a facility's causing and contributing explicitly to water quality impairments.

Pending the outcome of our continued oversight of the Chesapeake Bay TMDL, NPDES permit reviews, enforcement inspections and the RDA strategy proposed above, Region III will be better prepared to discuss whether and to what extent we would find it necessary to require additional NPDES permitting of industrial, commercial and institutional facilities as requested in the Petition.