BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:	)
Government of the District of Columbia, Municipal Separate Storm Sewer System, NPDES Permit No. DC 0000221	)

EXHIBIT 9

NPDES Permit No. DC0000221
Issuance Date: August 19, 2004
Effective Date: August 19, 2004

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
MUNICIPAL SEPARATE STORM WATER SEWER SYSTEM PERMIT NO. DC0000221

AMENDMENT NO. 1

In compliance with the provisions of the Clean Water Act, 33 U.S.C. 1251 et seq.

Government of the District of Columbia
The John A. Wilson Building
1350 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

is authorized to discharge from all portions of the municipal separate storm sewer system owned and operated by the District of Columbia to receiving waters named

Potomac River, Anacostia River, Rock Creek,
And Tributaries

in accordance with the approved Storm Water Management(s), effluent limitations, monitoring requirements, and other conditions set forth in this Amendment No. 1 herein to Parts I, III, VII, IX, and X of Parts I through X of the previously issued Permit.

The effective issuance date of this Amendment No. 1 is March 14, 2006

This Amendment No. 1 to the Permit and the authorization to discharge shall expire at midnight, on August 18, 2009.

Signed this 13th day of March, 2006.

Jon M. Capacasa, Director
Water Protection Division
United States Environmental Protection Agency
Region III

Exhibit 1

PART I. DISCHARGES AUTHORIZED UNDER THIS PERMIT

C. Limitations to Coverage (Prohibitions) [Replace existing language of C including Title with this]

Section 402(p)(3)(B)(ii) of the Clean Water Act specifically prohibits non-storm water entering the MS-4. The Permit does not authorize the Permittee to discharge pollutants from the MS4 as described herein:

1. Non-Storm Water and Phase I and Phase II Storm Water

Discharges of non-storm water (other than those listed in Part I.B. of this permit) are prohibited except where such discharges comply with all other terms and conditions of this permit and are:

a. Regulated with a General NPDES permit for Phase I or Phase II storm water discharges, or

b. Regulated with a individual NPDES permit.

2. All discharges of pollutants to or from the MS4 system, not regulated by a general or an individual NPDES permit, that cause or contribute to the lowering of water quality from current conditions within the District of Columbia are prohibited.

D. Effluent Limits

[replace existing Subpart D with the following]

1. MEP Effluent Limit - The permittee shall implement the controls, Best Management Practices (BMPs), and other activities necessary to reduce pollutants as set forth in the Upgraded Storm Water Management Plan dated October 19, 2002. Unless and until modified consistent with Part VII.P (Reopener Clause for Permits) of this Permit, the Upgraded Storm Water Management Plan requirements expressed in the form of BMPs, represent the controls necessary to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) in accordance with 40 CFR Part 122.44(k)(2).

2. WQBEL Limit - The permittee shall implement the controls, Best Management Practices (BMPs), and other activities necessary to reduce pollutants to the Maximum Extent Practicable as set forth in the Upgraded Storm Water Management Plan dated October 19, 2002, and all other requirements of this Permit (including but not limited to the narrative prohibitions on discharge of pollutants from the MS4 set forth in I.C. of this Permit). EPA reserves the authority to modify this effluent limit as described below in Part VII.P (Reopener Clause for Permits) of this Permit.

3. Effluent Limits Consistent with TMDL WLA - The permittee shall implement controls, Best Management Practices (BMPs), and other activities necessary to reduce pollutants to the Maximum Extent Practicable as set forth in the Upgraded Storm Water Management Plan dated

October 19, 2002, and to comply with all other requirements of this Permit (including but not limited to the narrative prohibitions on discharge of pollutants from the MS4 set forth in I.C. of this Permit). As further described in Part IX.B. of this Permit, in addition to complying with the effluent limits I.C. and I.D. of this Permit, the Permittee is required to submit and, unless instructed otherwise by EPA, implement the recommendations of implementation plans specific to the Anacostia River Total Maximum Daily Load (TMDL) wasteload allocations (WLAs) and Rock Creek TMDL WLAs in accordance with the schedule set forth in Part III.A. Table 1 of this Permit.

PART III. STORM WATER MANAGEMENT PLAN (SWMP)

C. Annual SWMP Reporting

The [Annual] Report shall include the following separate sections:

6. [keep existing part and add the following - remember this is cross referenced to Part III.D first paragraph] this identification shall include but not be limited to the permittee's calculation of pollutant loads and reductions from the MS4 system in those watershed(s) for which there are applicable TMDL WLAs using the methods described in Part IX.B.

PART VII. STANDARD PERMIT CONDITIONS FOR NPDES PERMITS

P. Reopener Clause for Permits

c. [replace first sentence of existing language with the following; concluding sentence of VII.P unchanged] The Permit may be modified in accordance with 40 C.F.R. Part 124.5, or revoked and reissued to incorporate additional controls in the event that EPA determines that further controls, under the iterative approach, are necessary to (1) ensure that the effluent limits are sufficient to prevent a further lowering of water quality from current conditions and/or (2) to ensure that the effluent limits are consistent with any applicable TMDL WLA allocated to discharge of pollutants from the MS4.

PART IX OTHER APPLICABLE PROVISIONS

A. Waivers and Exemptions

[unchanged, but add additional sentence] As part of its Annual Report to EPA under Part III.C. of this Permit, the permittee shall describe each and every instance in which the District authorized such an exemption and/or granted such a waiver, the nature and location of the activity for which each exemption or waiver was granted, the justification for each exemption or waiver, and the District's basis for finding that the exemption or waiver was consistent with the Federal Clean Water Act and other pertinent guidance, policies, and regulations.

B. TMDL WLA Implementation Plans and Compliance Monitoring

[replace first paragraph of 2004 Permit with the following]

In addition to the duty to comply with the narrative effluent limits in Part I of this Permit, the permittee shall demonstrate compliance as described in this Part and in Part IV (Monitoring and Reporting Requirements). In accordance with the schedule identified in Part III.A. (Compliance Schedule) and Table 1 and below, Permittee shall further submit implementation plans to reduce discharges consistent with any applicable EPA-approved waste load allocation (WLA) component of any established Total Maximum Daily Loadings (TMDL). An applicable TMDL WLA for this Permit means any MS4 WLA established on or before the effective date of this Permit for a receiving stream, segment of a stream, or other waterbody within the District of Columbia as described below.

[next 2 paragraphs, identifying applicable WLAs and associated reductions left unchanged]
[the following paragraph to replace the third paragraph of Part IX.B in 2004 permit]

Demonstration of compliance (as specified in Parts IV and VIII of the Permit) will be calculated using the procedures (i.e., Simple Method) identified in the Upgraded SWMP dated October 19, 2002 (or other procedures approved by EPA via permit modification and shown to be scientifically sound and reliable in estimating actual load reductions), and will be reported by comparing the calculated load for each pollutant to the approved pollutant specific WLAs and its associated storm water load reductions for the receiving waterbody as specified in the Fact Sheet.

[the following two paragraphs to replace the last paragraph of Part IX.B. in 2004 permit]

The TMDL Implementation Plans shall consist of documenting all previous and on-going efforts at achieving the specific pollutant reductions identified in the TMDL WLA and further demonstrating additional controls sufficient to achieve those reductions through an established performance based benchmark. This benchmark shall be applied against annual projected performance standards for purposes of achievement of adequate reductions.

The Permittee shall submit to EPA the applicable TMDL Implementation Plans for the Anacostia River TMDLs within six months of the effective date of this permit and shall implement such Plan. The Permittee shall submit to EPA the applicable TMDL Implementation Plan for the Rock Creek TMDLs within twelve months after the effective issuance date of this Permit and shall implement such Plan.

PART X. PERMIT DEFINITIONS

[Add new definitions]

"Benchmark" or "measurable performance standard"- The term when used in Parts III.C.6. (Annual SWMP Reporting), III.D. (Annual SWMP Implementation Plan) and IX.B (TMDL WLA Implementation Plans and Compliance Monitoring) of the Permit refers to a criteria-based management evaluation tool described in Part IX.B (including but not limited to the Simple Method) for the purpose of making the determination each year as required in Part III.C.6 and

Part III.D. during the term of the Permit.

"Current Conditions"- Refers to a trend analysis which compares existing or baseline data to future data collected through the MS4 monitoring program as described in Part IV (Monitoring and Reporting Requirements) of the Permit to assess the overall performance (i.e., selection of BMPs/LID projects, setting of narrative/numeric effluent limits to MEP and/or water quality based standards) of the Storm Water Management Program within the District of Columbia.

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:	)
Government of the District of Columbia, Municipal Separate Storm Sewer System, NPDES Permit No. DC 0000221	)

EXHIBIT 10

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In Re:	)	
Government of the District of Columbia, Municipal Separate Storm Sewer System	)	Appeal Number: NPDES No. 06-07 Appeal Number: NPDES No. 06-08
NPDES Permit No. DC 0000221	)	
Government of the District of Columbia	)	
Friends of the Earth and Defenders of Wildlife, Petitioners,	)	
U.S. Environmental Protection Agency, Region III, Respondent.	)	

Notice of Withdrawal of Permit Amendment,
Motion for Dismissal with Prejudice and Memorandum in Support Thereof

The United States Environmental Protection Agency, Region III ("Respondent", "EPA" or "the Agency"), hereby notifies the Environmental Appeals Board that, pursuant to 40 C.F.R. § 124.19(d), the Agency is withdrawing portions of Amendment No. 1 ("the Amendment") to the above-captioned Permit, NPDES Permit No. DC0000221 ("the Permit"), and avers that it intends to prepare a draft permit modification under 40 C.F.R. § 124.5 addressing all portions so withdrawn. EPA hereby moves to dismiss with prejudice for the following reasons:

1. On April 19, 2000, EPA issued the District of Columbia ("the District) its first municipal separate storm sewer system ("MS4") permit for discharges of storm water from the

MS4 portion of the District. The Agency then issued Amendment No. 1 to that permit on January 12, 2001, and Amendment No. 2 issued on March 19, 2003. On August 19, 2004, the Agency issued the final second-round permit to the District, with an expiration date of August 18, 2009. On March 14, 2006, following appeals of the August 19, 2004 permit by Defenders of Wildlife and Friends of the Earth (DOW/FOE), EPA issued Amendment No. 1 to the August 19, 2004 permit.

2. The March 14, 2006 Amendment was appealed by both the permittee and DOW/FOE.

3. All three parties to the appeals – EPA, the District and DOW/FOE – have negotiated extensively, but have thus far been unable to reach a negotiated settlement. Despite this withdrawal, negotiations among the parties continue as the Agency prepares a draft permit modification to be public-noticed in the near future.

4. Therefore, EPA is hereby withdrawing the contested permit terms of the March 14, 2006 Amendment No. 1 pursuant to 40 C.F.R. § 124.19(d). The withdrawn permit terms are identified in Attachment "A" hereto, and include the following sections or portions thereof: I.C.2; I.D.2; I.D.3 (indicated language); VII.P.c; IX.B ("Demonstration of Compliance" paragraph); and X, "Current Conditions".

5. Pursuant to 40 C.F.R. § 124.19(d), EPA will prepare a new draft permit modification addressing the withdrawn permit conditions identified in Attachment "A" hereto, and will submit the revised draft permit amendment terms for public comment.

6. Also pursuant to 40 C.F.R. § 124.19(d), all portions of the permit amendment which are not withdrawn by this notice continue to apply.

7. EPA submits that as a result of this withdrawal, the petitions for review of the permit amendment are moot.

WHEREFORE, the Region therefore requests dismissal of the petitions; an appropriate proposed Order dismissing the petitions is enclosed herewith.

Date: 10/29/07

Lori G. Kier

Lori G. Kier
Senior Assistant Regional Counsel
Mail Code 3RC20
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103
(215) 814-2656

District of Columbia Municipal Separate Storm Sewer System Permit
Amendment No. 1

Those sections or portions of sections identified below are withdrawn from the permit modification.

PART I. DISCHARGES AUTHORIZED UNDER THIS PERMIT

C. Limitations to Coverage (Prohibitions)

2. All discharges of pollutants to or from the MS4 system, not regulated by a general or an individual NPDES permit, that cause or contribute to the lowering of water quality from current conditions within the District of Columbia are prohibited.

D. Effluent Limits

2. WQBEL Limit - The permittee shall implement the controls, Best Management Practices 1BMPs), and other activities necessary to reduce pollutants to the Maximum Extent Practicable as set forth in the Upgraded Storm Water Management Plan dated October 19, 2002, and all other requirements of this Permit (including but not limited to the narrative prohibitions on discharge of pollutants from the MS4 set forth in I.C. of this Permit). EPA reserves the authority to modify this effluent limit as described below in Part VII.P (Reopener Clause for Permits) of this Permit.

3. Effluent Limits Consistent with TMDL WLA – -- delete the portion of the first sentence that contains the following language: "as set forth in the Upgraded Storm Water Management Plan dated October 19, 2002 ." The remainder of the paragraph is uncontested.

PART VII. STANDARD PERMIT CONDITIONS FOR NPDES PERMITS

P. Reopener Clause for Permits

c. The Permit may be modified in accordance with 40 C.F.R. Part 124.5, or revoked and reissued to incorporate additional controls in the event that EPA determines that further controls, under the iterative approach, are necessary to (1) ensure that the effluent limits are sufficient to prevent a further lowering of water quality from current conditions and/or (2) to ensure that the effluent limits are consistent with any applicable TMDL WLA allocated to discharge of pollutants from the MS4.

PART IX. OTHER APPLICABLE PROVISIONS

B. TMDL WLA Implementation Plans and Compliance Monitoring

Demonstration of compliance (as specified in Parts IV and VIII of the Permit) will be calculated using the procedures (i.e., Simple Method) identified in the Upgraded SWMP dated October 19, 2002 (or other procedures approved by EPA via permit modification and shown to be scientifically sound and reliable in estimating actual load reductions), and will be reported by comparing the calculated load for each pollutant to the approved pollutant specific WLAs and its associated storm water load reductions for the receiving waterbody as specified in the Fact Sheet.

PART X. PERMIT DEFINITIONS

"Current conditions"- refers to a trend analysis which compares existing or baseline data to future data collected through the MS4 monitoring program as described in part iv (monitoring and reporting requirements) of the permit to assess the overall performance (i.e., selection of bmps/lid projects, setting of narrative/numeric effluent limits to mep and/or water quality based standards) of the storm water management program within the District of Columbia.

CERTIFICATE OF SERVICE

I hereby certify that I have mailed the original and one copy of the foregoing Notice of Withdrawal of Permit Amendment and Motion for Dismissal with Prejudice to the Clerk of the Environmental Appeals Board at the following address:

Ms. Eurika Durr
Clerk of the Board
Environmental Appeals Board (MC 1103B)
U.S. Environmental Protection Agency
1341 G Street, N.W., Sixth Floor
Washington, D.C. 20005

I also certify that I have mailed a copy to each of the addresses below:

David S. Baron, Esq.
Jennifer Chavez, Esq.
Earthjustice Legal Defense Fund
1625 Massachusetts Ave., N.W. #702
Washington, D.C. 20036

David E. Evans, Esq.
Darin K. Waylett, Esq.
McGuire Woods, LLP
One James Center
Richmond, VA 23219

Date: 10/29/07

Lori G. Kier

Lori G. Kier

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In Re:	)	
	)	
Government of the District of Columbia, Municipal Separate Storm Sewer System	)	Appeal Number: NPDES No. 06-07 Appeal Number: NPDES No. 06-08
	)	
NPDES Permit No. DC 0000221	)	
	)	
Government of the District of Columbia	)	
	)	
Friends of the Earth and Defenders of Wildlife,	)	
	)	
Petitioners,	)	
	)	
U.S. Environmental Protection Agency, Region III,	)	
	)	
Respondent.	)	

Proposed Order Dismissing Petitions for Review

For good cause shown, the petitions for review, designated as Board NPDES Appeal Nos. 06-07 and 06-08, are hereby **DISMISSED WITH PREJUDICE.**

So ordered.

ENVIRONMENTAL APPEALS BOARD

Date: _____

_____
Environmental Appeals Judge

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:	)
Government of the District of Columbia, Municipal Separate Storm Sewer System, NPDES Permit No. DC 0000221	)

EXHIBIT 11

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

NOV 1 2 2010

OFFICE OF
WATER

MEMORANDUM

SUBJECT: Revisions to the November 22, 2002 Memorandum "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs"

FROM: James A. Hanlon, Director
Office of Wastewater Management

Denise Keehner, Director
Office of Wetlands, Oceans and Watersheds

TO: Water Management Division Directors
Regions 1 - 10

This memorandum updates aspects of EPA's November 22, 2002 memorandum from Robert H. Wayland, III, Director of the Office of Wetlands, Oceans and Watersheds, and James A. Hanlon, Director of the Office of Wastewater Management, on the subject of "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs" (hereafter "2002 memorandum").

Background

Section III of the 2002 memorandum "affirm[ed] the appropriateness of an iterative, adaptive management best management practices (BMP) approach" for improving stormwater management over time as permitting agencies, the regulated community, and other involved stakeholders gain more experience and knowledge. Since 2002, States and EPA have obtained considerable experience in developing TMDLs and WLAs that address stormwater sources. The technical capacity to monitor stormwater and its impacts on water quality has increased. In many areas, monitoring of the impacts of stormwater on water quality has become more sophisticated and widespread. Better information on the effectiveness of stormwater controls to reduce pollutant loadings and address water quality impairments is now available. In many parts of the country, permitting agencies have issued several rounds of permits for Phase I municipal separate storm sewer systems (MS4s), Phase II MS4s, and stormwater discharges associated with industrial activity, including stormwater from construction activities. Notwithstanding these developments, stormwater discharges remain a significant cause of water quality

impairment in many places, highlighting a continuing need for more useful WLAs and better NPDES permit provisions to restore impaired waters to their beneficial uses.

With this additional experience in mind, EPA is updating and revising the following four elements of the 2002 memorandum to better reflect current practices and trends in permits and WLAs for stormwater discharges:

- Providing numeric water quality-based effluent limitations in NPDES permits for stormwater discharges;
- Disaggregating stormwater sources in a WLA;
- Using surrogates for pollutant parameters when establishing targets for TMDL loading capacity; and
- Designating additional stormwater sources to regulate and treating load allocations as wasteload allocations for newly regulated stormwater sources.

EPA is currently reviewing other elements of the 2002 memorandum and will consider making appropriate revisions in the future.

Providing Numeric Water Quality-Based Effluent Limitations in NPDES Permits for Stormwater Discharges

In today's memorandum, EPA is revising the 2002 memorandum with respect to water quality-based effluent limitations (WQBELs) in stormwater permits. Since 2002, many NPDES authorities have documented the contributions of stormwater discharges to water quality impairment and have identified the need to include clearer permit requirements in order to address these impairments. Numeric WQBELs in stormwater permits can clarify permit requirements and improve accountability and enforceability. For the purpose of this memorandum, numeric WQBELs use numeric parameters such as pollutant concentrations, pollutant loads, or numeric parameters acting as surrogates for pollutants, such as such as stormwater flow volume or percentage or amount of impervious cover.

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 the State determines appropriate for the control of such pollutants. CWA section 402(p)(3)(B)(iii). Under this provision, the NPDES permitting authority has the discretion to include requirements for reducing pollutants in stormwater discharges as necessary for compliance with water quality standards. *Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1166 (9th Cir. 1999).

Where the NPDES authority determines that MS4 discharges have the reasonable potential to cause or contribute to a water quality standard excursion, EPA recommends that, where feasible, the NPDES permitting authority exercise its discretion to include numeric effluent limitations as necessary to meet water quality standards. The 2002

memorandum stated "EPA expects that most WQBELs for NPDES-regulated municipal and small construction stormwater discharges will be in the form of BMPs, and that numeric limitations will be used only in rare instances." Those expectations have changed as the stormwater permit program has matured. EPA now recognizes that where the NPDES authority determines that MS4 discharges and/or small construction stormwater discharges have the reasonable potential to cause or contribute to water quality standards excursions, permits for MS4s and/or small construction stormwater discharges should contain numeric effluent limitations where feasible to do so. EPA recommends that NPDES permitting authorities use numeric effluent limitations where feasible as these types of effluent limitations create objective and accountable means for controlling stormwater discharges.

The Clean Water Act (CWA) requires that permits for stormwater discharges associated with industrial activity comply with section 301 of the Act, including the requirement under section 301(b)(1)(C) to contain WQBELs for any discharge that the permitting authority determines has the reasonable potential to cause or contribute to a water quality standard excursion. CWA section 402(p)(3)(A), 40 CFR 122.44(d)(1)(iii). When the permitting authority determines, using the procedures specified at 40 CFR 122.44(d)(1)(ii) that the discharge causes or has the reasonable potential to cause or contribute to an in-stream excursion of the water quality standards, the permit must contain effluent limits for that pollutant. EPA recommends that NPDES permitting authorities use numeric effluent limitations where feasible as these types of effluent limitations create objective and accountable means for controlling stormwater discharges.

Where WQBELs in permits for stormwater discharges from MS4s, small construction sites or industrial sites are expressed in the form of BMPs, the permit should contain objective and measurable elements (e.g., schedule for BMP installation or level of BMP performance). The objective and measureable elements should be included in permits as enforceable provisions. Permitting authorities should consider including numeric benchmarks for BMPs and associated monitoring protocols or specific protocols for estimating BMP effectiveness in stormwater permits. These benchmarks could be used as thresholds that would require the permittee to take additional action specified in the permit, such as evaluating the effectiveness of the BMPs, implementing and/or modifying BMPs, or providing additional measures to protect water quality.

If the State or EPA has established a TMDL for an impaired water that includes WLAs for stormwater discharges, permits for either industrial stormwater discharges or MS4 discharges must contain effluent limits and conditions consistent with the requirements and assumptions of the WLAs in the TMDL. See 40 CFR § 122.44(d)(1)(vii)(B). Where the WLA of a TMDL is expressed in terms of a surrogate pollutant parameter, then the corresponding permit can generally use the surrogate pollutant parameter in the WQBEL as well. Where the TMDL includes WLAs for stormwater sources that provide numeric pollutant load or numeric surrogate pollutant parameter objectives, the WLA should, where feasible, be translated into numeric WQBELs in the applicable stormwater permits.

The permitting authority's decision as to how to express the WQBEL(s), either as numeric effluent limitations or BMPs, including BMPs accompanied by numeric benchmarks, should be based on an analysis of the specific facts and circumstances surrounding the permit, and/or the underlying WLA, including the nature of the stormwater discharge, available data, modeling results or other relevant information. As discussed in the 2002 memorandum, the permit's administrative record needs to provide an adequate demonstration that, where a BMP-based approach to permit limitations is selected, the BMPs required by the permit will be sufficient to implement applicable WLAs. Improved knowledge of BMP effectiveness gained since 2002 should be reflected in the demonstration and supporting rationale that implementation of the BMPs will attain water quality standards and WLAs.

EPA's regulations at 40 CFR § 122.47 govern the use of compliance schedules in NPDES permits. Central among the requirements is that the effluent limitation(s) must be met "as soon as possible." 40 CFR 122.47(a)(1). EPA expects the permitting authority to include in the permit record a sound rationale for determining that any compliance schedule meets this requirement. Where a TMDL has been established and there is an accompanying implementation plan that provides a schedule for an MS4 to implement the TMDL, the permitting authority should consider the schedule as it decides whether and how to establish enforceable interim requirements and interim dates in the permit.

Lastly, NPDES permits must specify monitoring requirements necessary to determine compliance with effluent limitations. See CWA section 402(a)(2); 40 C.F.R. 122.44(i). Where WQBELs are expressed as BMPs, the permit must require adequate monitoring to determine if the BMPs are performing as necessary. When developing monitoring requirements, the NPDES authority should consider the variable nature of stormwater as well the availability of reliable and applicable field data describing the treatment efficiencies of the BMPs required and supporting modeling analysis.

Disaggregating Stormwater Sources in a WLA

As stated in the 2002 memorandum, EPA expects TMDL authorities will make separate aggregate allocations to NPDES-regulated storm water discharges (in the form of WLAs) and unregulated storm water (in the form of LAs). EPA also recognized that the available data and information usually are not detailed enough to determine waste load allocations for NPDES-regulated storm water discharges on an outfall-specific basis.

EPA still recognizes that decisions about allocations of pollutant loads within a TMDL are driven by quantity and quality of existing and readily available water quality data. However, today, TMDL writers may have better data or better access to data and, over time, may have gained more experience since 2002 in developing TMDLs and WLAs in a less aggregated manner. Moreover, since 2002, EPA has noted the difficulty of establishing clear, effective, and enforceable NPDES permit limitations for sources covered by WLAs that are expressed as single categorical or aggregated wasteload allocations.

Accordingly, for all these reasons, EPA recommends that WLAs for NPDES-regulated stormwater discharges should be disaggregated into specific categories (e.g., separate WLAs for MS4 and industrial stormwater discharges) to the extent feasible based on available data and/or modeling projections. In addition, these disaggregated WLAs should be defined as narrowly as available information allows (e.g., for MS4s, separate WLAs for each one; and, for industrial sources, separate WLAs for different sources or types of industrial sources or discharges.)

Where appropriate, EPA encourages permit writers to assign specific shares of the wasteload allocation to specific permittees during the permitting process.

Using Surrogate for Pollutant Parameters When Establishing Targets for TMDL Loading Capacity

Many waterbodies affected by stormwater discharges are listed as impaired under Section 303(d) due to biological degradation or habitat alteration, rather than for specific pollutants (e.g., metals, pathogens, sediment). Impairment can be due to pollutants where hydrologic changes such as quantity of flow and variation in flow regimes are important factors in their transport. Since the stormwater-source impairment is usually the result of the cumulative impact of multiple pollutants and physical effects, it may be difficult to identify a specific pollutant (or pollutants) causing the impairment. Using a surrogate parameter in developing wasteload allocations for waters impaired by stormwater sources may, at times, be the appropriate approach for restoring the waterbodies.

In the 2009 report *Urban Stormwater Management in the United States,* the National Research Council suggests: "A more straightforward way to regulate stormwater contributions to waterbody impairment would be to use flow or a surrogate, like impervious cover, as a measure of stormwater loading . . . Efforts to reduce stormwater flow will automatically achieve reductions in pollutant loading. Moreover, flow is itself responsible for additional erosion and sedimentation that adversely impacts surface water quality."

Therefore, when developing TMDLs for receiving waters where stormwater sources are the primary source of impairment, it may be suitable to establish a numeric target for a surrogate pollutant parameter, such as stormwater flow volume or impervious cover, that would be expected to provide attainment of water quality standards. This is consistent with the TMDL regulations that specify that TMDLs can be expressed in terms of mass per time, toxicity or other appropriate measure (40 C.F.R. §130.2(i)).

Where a surrogate parameter is used, the TMDL document must demonstrate the linkage between the surrogate parameter and the documented impairment (e.g., biological degradation). In addition, the TMDL should provide supporting documentation to indicate that the surrogate pollutant parameter appropriately represents stormwater pollutant loadings. Monitoring is an essential undertaking to ensure that compliance with the effluent limitations occurs.

Recent examples of TMDLs using flow or impervious cover as surrogates for pollutants in setting TMDL loading targets include: the Eagleville Brook (CT) TMDL and the Barberry Creek (ME) TMDL which used impervious cover as a surrogate; and, the Potash Brook (VT) TMDL which used stormwater flow volume as a surrogate.

Designating Additional Stormwater Sources to Regulate and Treating Load Allocations as Wasteload Allocations for Newly Regulated Stormwater Sources

The 2002 memorandum states that "stormwater discharges from sources that are not currently subject to NPDES regulation may be addressed by the load allocation component of a TMDL." Section 402(p)(2) of the Clean Water Act (CWA) requires industrial stormwater sources, certain municipal separate storm sewer systems, and other designated sources to be subject to NPDES permits. Section 402(p)(6) provides EPA with authority to identify additional stormwater discharges as needing a permit.

In addition to the stormwater discharges specifically identified as needing an NPDES permit, the CWA and the NPDES regulations allow for EPA and NPDES authorized States to designate, additional stormwater discharges for regulation. See 40 CFR 122.26 (a)(9)(i)(C), (a)(9)(i)(D), (b)(4)(iii), (b)(7)(iii), (b)(15)(ii) and 122.32(a)(2). Since 2002, EPA has become concerned that NPDES authorities have generally not adequately considered exercising these authorities to designate for NPDES permitting stormwater discharges that are currently not required to obtain permit coverage but that are significant enough to be identified in the load allocation component of a TMDL. Accordingly, EPA encourages permitting authorities to consider designation of stormwater sources in situations where coverage under NPDES permits would afford a more effective mechanism to reduce pollutants in stormwater discharges than available nonpoint source control methods.

In situations where a stormwater source addressed in a TMDL's load allocation is not currently regulated by an NPDES permit but may be required to obtain an NPDES permit in the future, the TMDL writer should consider including language in the TMDL explaining that the allocation for the stormwater source is expressed in the TMDL as a "load allocation" contingent on the source remaining unpermitted, but that the "load allocation" would later be deemed a "wasteload allocation" if the stormwater discharge from the source were required to obtain NPDES permit coverage. Such language, while not legally required, would help ensure that the allocation is properly characterized by the permit writer should the source's regulatory status change. This will help ensure that effluent limitations in a NPDES permit applicable to the newly permitted source are consistent with the requirements and assumptions of the TMDL's allocation to that source.

Such recharacterization of a load allocation as a wasteload allocation would not automatically require resubmission of the TMDL to EPA for approval. However, if the TMDL's allocation for the newly permitted source had been part of a single aggregated or gross load allocation for all unregulated stormwater sources, it may be appropriate for the NPDES permit authority to determine a wasteload allocation and corresponding

effluent limitation specific to the newly permitted stormwater source. Any additional analysis used to refine the allocation should be included in the administrative record for the permit. In such cases, the record should describe the basis for (1) recharacterizing the load allocation as a wasteload allocation for this source and (2) determining that the permit's effluent limitations are consistent with the assumptions and requirements of this recharacterized wasteload allocation. For purposes of this discussion, it is assumed that the permit writer's additional analysis or recharacterization of the load allocation as a wasteload allocation does not change the TMDL's overall loading cap. Any change in a TMDL loading cap would have to be resubmitted for EPA approval.

If you have any questions please feel free to contact us or Linda Boornazian, Director of the Water Permits Division or Benita Best-Wong, Director of the Assessment and Watershed Protection Division.

cc: Association of State and Interstate Water Pollution Control Administrators
Water Quality Branch Chiefs, Regions 1 – 10
Permits Branch Chiefs, Regions 1 – 10

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:	)
Government of the District of Columbia, Municipal Separate Storm Sewer System, NPDES Permit No. DC 0000221	)

EXHIBIT 12

Responsiveness Summary
National Pollutant Discharge Elimination System (NPDES) Permit Renewal

NPDES PERMIT NUMBER: DC0000221

PERMITTEE NAME and MAILING ADDRESS:
Government of the District of Columbia
The John A. Wilson Building
1350 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

FACILITY LOCATION:
Municipal Separate Storm Sewer System (MS4)

RECEIVING STREAM:
Potomac River, Anacostia River, Rock Creek, and stream segments tributary to each such water body

PUBLIC REVIEW and COMMENT PERIOD:
April 21, 2010 to June 4, 2010

COMMENTERS:

1. Alice Ferguson Foundation, Inc., Tracy Bowen (June 4, 2010)
2. Anacostia Watershed Citizens Advisory Committee, Mike R. Smith (June 4, 2010)
3. Anacostia Watershed Society (form letters) (May – June, 2010)
4. Bekele, Jerusalem (May 28, 2010)
5. Casey Trees, Mark Buscaino (May 13, 2010)
6. Chesapeake Bay Foundation, Lee Epstein (June 4, 2010) and William C. Baker (June 9, 2011).
7. CONTECH® Stormwater Solutions, Dionne Driscoll (June 2, 2010)
8. Council of the District of Columbia, Council Members (June 4, 2010)
9. Departments of the Navy, Army, and Air Force, S.G. Womack [Navy] (May 27, 2010)
10. District of Columbia Building Industry Association, Merrick Malone (June 4, 2010)
11. District Department of the Environment, Hamid Karimi (comment letter dated June 4, 2010; superseding Comment letter dated June 21, 2010; supplement to June 21, 2010 comments to include claimed new authority dated July 22, 2010; and second supplement to June 21, 2010 comments to include claimed new authority dated November 3, 2010)
12. District of Columbia Water & Sewer Authority (DC WASA) (a/k/a DC Water), George Hawkins (June 4, 2010)
13. Earthjustice [Representing: Anacostia Riverkeeper, Potomac Riverkeeper, Waterkeeper Alliance, and D.C. Environmental Network], Jennifer Chavez (June 4, 2010)

14. Friends of Rock Creek's Environment, Beth Mullin (June 4, 2010)
15. Licsko, Z. John (June 4, 2010)
16. Maryland-National Capital Building Industry Association, Raquel Montenegro (June 4, 2010)
17. Minerva, Dana (June 4, 2010)
18. National Association of Clean Water Agencies, Keith J. Jones, Esq. (June 4, 2010)
19. National Association of Flood and Stormwater Management Agencies, Susan Gilson (June 4, 2010)
20. Natural Resources Defense Council [Representing: see groups below], David Beckman *et al* [see contacts below] (June 4, 2010)
21. Short Sign-On Letter from groups and contacts below (June 4, 2010)
22. Smart Growth America, Geoff Anderson (June 4, 2010)

Today's action involves a renewal of the District of Columbia's (DC or the District) 2004 Municipal Separate Storm Sewer System (MS4) Permit. A procedural history of the Permit, since it was initially issued in 2000, can be found at: http://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/77355bee1a56a5aa8525711400542d23/b5e5b68e89edabe98525714f00731c6f!OpenDocument&Highlight=2,municipal. Today's Fact Sheet also contains information about the history of this Permit.

The U.S. Environmental Protection Agency (EPA or the Agency) public-noticed the Draft DC MS4 Permit renewal on April 21, 2010 (Draft Permit), and solicited comments by advertising the Draft Permit in the Washington Times, posting it to the Agency's website, and mailing it to several organizations (including the Permittee, the Clean Water Act (CWA) Section 401-certifying authority (DC Department of Health), the State of Maryland, the Commonwealth of Virginia, the U.S. Fish and Wildlife Service, and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service). EPA also e-mailed copies to several individuals and environmental organizations. The public comment period closed on June 4, 2010.

In response to the public-notification of the Draft Permit, EPA received comment letters from 21 individual Commenters, as well as one letter (that appeared to be the result of a mass mailing recommended by an environmental organization's website) that resulted in approximately 50 separate form letters from area residents. Overall, the comments received were useful and resulted in an improved Final Permit and Fact Sheet, which are being issued today along with this Responsiveness Summary. Each comment letter contained one or more comments that are individually summarized and responded to below. Each letter is identified by an identifying comment number, the organization/agency on behalf of which the comment was submitted (if any), the name of the person submitting the comment, and the date of the comment. Following the initial information, each comment contained in the letter is summarized and followed by EPA's response.

1. Alice Ferguson Foundation, Inc., Tracy Bowen (June 4, 2010).

a. The Commenter indicates that the Permit relies heavily on the as-yet "incomplete and unknown" Anacostia River Trash total maximum daily load (TMDL) Implementation Plan. The Commenter states that since the plan is still in development, it is unknown whether it will reach the waste load allocation (WLA) on the Anacostia or be enforceable when non-compliance occurs.

EPA Response: EPA approved the Anacostia River Trash TMDL on September 21, 2010 (available at: http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/services/pdf/Final_Anacostia_Trash_TMDL.pdf). Section 4.10.1 of today's Final Permit incorporates the implementation and compliance requirements of that TMDL.

b. The Commenter suggests that there is an insufficient definition of public participation for implementation plan development, and that more detail and timelines are needed in Section 8.1 (WQS and TMDL WLA Implementation Plans and Compliance Monitoring). The Commenter also recommends that public participation should be possible throughout the process, and not just during the public comment period.

EPA Response: The Final Permit contains robust opportunities for public participation. For example, Section 2.3 of the Final Permit (Stormwater Management Program Administration/Permittee Responsibilities) lists one of DDOE's major responsibilities as "[m]aking available to the public and other interested and affected parties, the opportunity to comment on the MS4 stormwater management program." Also, the Final Permit increases public participation aspects of the Permit, in part by including TMDL WLA Implementation as part of the District's overall Stormwater Management Plan (SWMP) (moved from Section 8.1 of Draft Permit, "Other Applicable Provisions -- WQS and TMDL WLA Implementation Plans and Compliance Monitoring" to Section 4.10 of Final Permit ["Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA) Planning and Implementation"]). It also requires the Permittee to "make all draft and approved MS4 documents required under this Permit available to the public for comment. The current draft and approved SWMP and the MS4 annual reports deliverable documents required under this Permit shall be posted on the Permittee's website." (Section 4.9.4.3 of Final Permit). *See also* Sections 4.9.4.1 (requirement to create opportunities for the public to participate in the decision making processes involving the implementation and update of the Permittee's SWMP); 4.9.4.2 (requirement to continue to establish a method of routine communication to groups such as watershed associations and environmental organizations that are located in the same watershed/s as the Permittee, or organizations that conduct environmental stewardship projects located in the same watershed/s or in close proximity to the Permittee); 4.9.4.4 (requirement to continue to develop public educational and participation materials in cooperation and coordination with other agencies and organizations in the District); and 4.9.4.5 (requirement to periodically, and at least annually, update its website).

Further, at Section 3, the Final Permit requires that "[a] current plan shall be posted on the District's website at an easily accessible location at all times" and also that "[n]o later than 3 years from the issuance date of this Permit the Permittee shall public notice a fully updated Plan

including all of the elements required in this Permit. No later than 4 years from the issuance date of this Permit the Permittee shall submit to EPA the fully updated plan for review and approval, as part of the application for Permit renewal."

c. The Commenter recommends that there be mention of the geographical distribution of street sweeping, particularly whether or not it will occur over the entire Permit region or in specific areas.

EPA Response: Table 3 (Street Sweeping) of the Final Permit specifies the frequency of street sweeping required on specified types of roadways. Street sweeping is to occur throughout the MS4 area at these frequencies. Section 4.3.6.1.

d. The Commenter states that the Permit needs more detail regarding requirements for a management plan for illegal dumping and improper disposal of refuse in Section 4.7. The Commenter also recommends that the Permit explicitly state that programs on litter reduction, hazardous waste collection and education, illegal dumping enforcement, and other activities be included in the Trash TMDL Implementation Plan.

EPA Response: As to the Anacostia portion of the DC MS4 Permit Area, the Final Permit does not include a requirement for the District to develop a TMDL implementation plan for the Anacostia Trash TMDL. Rather, EPA has determined that a Permit requirement for the District to attain the Anacostia Trash TMDL WLA through a combination of approaches will have the greatest environmental benefit. Reductions must be made through a combination of the following approaches:

- Direct removal from waterbodies, e.g., stream clean-ups, skimmers
- Direct removal from the MS4, e.g., catch basin clean-out, trash racks
- Direct removal prior to entry to the MS4, e.g., street sweeping
- Prevention through additional disposal alternatives, e.g., public trash/recycling collection
- Prevention through waste reduction practices, regulations and/or incentives, e.g., bag fees

Section 4.10.1.

As to the portion of the DC MS4 service area that discharges to the Potomac River, the Potomac River Watershed Trash Treaty, convened by the Commenter, commits the 140-plus signers to achieving a "Trash Free Potomac" by supporting and implementing regional strategies aimed at reducing trash and increasing recycling; increasing education and awareness of the trash issue throughout the Potomac Watershed; and reconvening annually to discuss and evaluate measures and actions addressing trash reduction. *See* Mayor Anthony Williams, *et al.*, *Potomac River Watershed Trash Treaty* (undated) (http://www.fergusonfoundation.org/trash_initiative/trashtreaty_currentSECURE.pdf). EPA expects that for the Potomac, the District will rely on approaches similar to that for the Anacostia, as discussed above.

Further, Section 4.9.4.1 of the Final Permit specifies that that District "shall continue to create opportunities for the public to participate in the decision making processes involving the implementation and update of the Permittee's SWMP." Also, under Section 4.9.4.1, "[t]he Permittee shall continue to implement its process for consideration of public comments on their SWMP." EPA encourages the Commenter to provide comment on the District's SWMP regarding illegal dumping and improper disposal programs when those programs are being developed and/or updated during the Permit term.

e. The Commenter states that there is no specific mention of litter reduction and illegal dumping education in Section 4.9.1, and recommends that it be included.

EPA Response: The previous permit (2004) established an education and outreach program, which included education about litter reduction and illegal dumping. *See* pp. 8-10; 16-19 of 2004 Permit. Therefore, the final permit does not include a specific requirement for these programs; rather, they are included by reference and required to be continued under the final permit. In any event, the Final Permit mentions illegal dumping in Section 4.9.1.2 (a) ("The permittee shall assess current education and outreach efforts and identify areas where additional outreach and education are needed. Audiences and subject areas to be considered include: . . . 4. A household hazardous waste educational and outreach program to control illicit discharges to the MS4 as required herein"). With regard to litter reduction, the Final Permit at Section 4.7 (Illicit Discharge and Improper Disposal) includes numerous provisions that allow for the reduction of litter. Moreover, the SWMP Plan (see Section 3 of the Final Permit) encompasses both litter reduction and illegal dumping, as well as implicitly encourages public participation with the publication of each of its plans. Thus, EPA does not agree that litter reduction needs to be specifically mentioned in Section 4.9.1. Also, as noted in response to the previous comment, Section 4.10.1 of the Final Permit requires that the District attain the Trash TMDL WLA through a combination of approaches.

f. The Commenter indicates that there are no specific details regarding public participation requirements in Section 4.9.4.

EPA Response: The Final Permit contains a number of specific requirements related to public participation, including Section 4.9.4. As noted above in paragraph b and incorporated here, both Sections 2.3 and 4.9.4 of the Permit include robust public participation requirements. EPA encourages the commenter to comment on the District's SWMP, including comments regarding public involvement processes, when those programs are being developed and/or updated during the Permit term.

g. The Commenter recommends amending language in Section 8.1 (WQS and TMDL WLA Implementation Plans and Compliance Monitoring) to make the following statement: "Currently, TMDLs are under development for the Potomac River and a Trash TMDL for the Anacostia River (Refer to Potomac Watershed Trash Summit for a "Trash Free Potomac by 2013" and Potomac Watershed Trash Treaty, executed in 2005)."

EPA Response: The Anacostia Trash TMDL was approved on September 21, 2010 (available at:

http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/services/pdf/Final_Anacostia_Trash_TMDL.pdf), and the Final Permit contains applicable provisions for implementation. With respect to any TMDLs that may be under development, the Final Permit makes allowances for potentially reopening the Permit to address those WLAs (see Section 8.19); this is discussed further in today's Fact Sheet.

2. Anacostia Watershed Citizens Advisory Committee, Mike R. Smith (June 4, 2010).

a. The Commenter indicates that the Permit should specify that any time the District Department of Transportation (DDOT) increases the impervious area of a street, it should provide an equal offset in infiltration capacity or detention capacity such that there is no net increase in peak storm flows to the waters of the District. The Commenter recommends that this requirement be above and beyond any already required installation of "water quality catch basins," and that all trees destroyed during sidewalk construction be replaced in a manner that compensates for the fact that the destroyed trees will most likely be mature trees.

EPA Response: As with all District departments and agencies, DDOT will be required to comply with all relevant aspects of the Final Permit, including the post-construction retention performance standards for non-federal facilities (Section 4.3.7) for development projects. This requirement should address the issue raised by the Commenter related to the expansion of impervious street areas. Further, as to tree destruction, the Final Permit ensures sufficient tree canopy by requiring that the District develop a tree canopy strategy, including a requirement that the District plant 4,150 trees annually, which "shall be calculated as a net increase, such that annual mortality is also included in the estimate." *See* Final Permit at Section 4.1.6.2.

b. The Commenter states that the Permit should ensure that any best management practices (BMPs) to be installed as a requirement of the Permit are constructed such that they will also remove trash. The Commenter recommends that the BMPs would include buoyant materials, high density materials, and neutrally buoyant materials, and that the District of Columbia Department of the Environment (DDOE) BMP manual be upgraded to ensure that all recommended BMPs will remove trash.

EPA Response: The Final Permit requires that the District implement a program to further reduce floatables using source controls and, where necessary, structural controls. Section 4.7.2. Further, the Final Permit requires that within the first 18 months following Permit issuance, the District must finalize a Stormwater Management Guidebook which will specify the District's objectives and specifications for integration of stormwater management technologies. Section 4.2.3. EPA encourages the Commenter to participate in the development of the SWMP, including the portions dealing with illicit discharges and improper disposal, and in the development process for the guidebook.

Finally, the Permit requires specific quantities of trash removal, *see* Section 4.10.1 (Anacostia River Watershed Trash TMDL Implementation). With regard to Storm Drain System Operation and Management and Solids and Floatables Reduction, the Final Permit requires the Permittee to "comply with the Anacostia River Trash TMDL implementation provisions in Part 4.10 of this

Permit and apply the technologies and other activities developed in the Anacostia River Watershed Trash TMDL throughout the entire MS4 Permit Area. The Permittee shall continue to report the progress of trash reduction in the Consolidated Annual Report." Section 4.3.5.4.

c. The Commenter states that the Permit should include a schedule by which trash-free stream miles will be achieved.

EPA Response: The Final Permit requires the Permittee to achieve the Trash TMDL WLA by the fifth year of the Permit. *See* Section 4.10.1. In addition, the Permittee requires that"[a]t the end of the first year the Permittee must submit the trash reduction calculation methodology with Annual Report to EPA for review and approval. . . . The calculation methodology must be consistent with assumptions for weights and other characteristics of trash, as described in the 2010 Anacostia Trash TMDL." The Commenter is further referred to the development documents for the Anacostia Trash TMDL. *See* http://www.epa.gov/reg3wapd/pdf/AnacostiaTMDLPortfolio.pdf.

d. The Commenter indicates that many of the catch basins become filled with trash very quickly (and others are less heavily loaded), and that one annual cleaning is insufficient for optimal pollution control. Further, the Commenter states that the District Water and Area Sewer Authority (WASA) should be required to perform a study of the optimum frequency of cleaning catch basins.

EPA Response: To the extent that the comment refers to WASA (now known as DC Water), EPA understands the comment to concern the Permittee – the District of Columbia. (DC Water is an independent District agency, which as a Stormwater Agency (Section 2.3.1) carries out portions of the permit requirements).

In response to the comment, the Final Permit (Section 3 [SWMP], Table 1 [Elements Requiring EPA Review and Approval] and Section 4.3.5 [Storm Drain System Operation and Management and Solids and Floatables Reduction]) include provisions which require the District (as Permittee) to conduct a study to develop an effective catch basin inspection, cleaning, and repair schedule within eighteen (18) months of Permit issuance. Until the catch basin maintenance study has been completed and approved, the Permittee must continue to ensure that each catch basin within the DC MS4 Permit Area is cleaned at least once annually during the life of the Permit. Section 4.3.5.2. Further, the Permittee is required to continue to use strategies for coordinated catch basin cleaning and street-sweeping that will optimize reduction of stormwater pollutants. *Id.*

e. The Commenter notes that EPA has approved TMDLs for over 20 pollutants for the Anacostia River, and that conventional street sweepers do not collect very much of the pollutants from the streets and most of the streets are seldom swept. The Commenter recommends that DPW should be required to convert to high-efficiency street sweepers for the MS4 areas draining to the Anacostia River, and that existing street sweepers can be used for the combined sewer overflow (CSO) areas and other drainages.

EPA Response: The District has completed two studies regarding street sweeping, which are currently under review by DPW. One purpose of the studies was to assess the performance of existing street sweeping equipment and the necessity for utilizing alternative street sweeping technologies. EPA expects that the District's street sweeping schedule will be modified to reflect the results of these studies.

Meanwhile, EPA notes that the Final Permit contains a schedule for street sweeping, including the newly-added requirement of twice monthly sweeping from March through October for environmental hot spots in the Anacostia River Watershed. (Section 4.3.6, Table 3).

f. The Commenter believes that WASA should be required to prioritize the 2006 survey of outfalls and submit for approval a schedule for repairing the damaged outfalls and eliminating the violations of load allocations.

EPA Response: Initially, EPA notes that the Permittee is the District, and not WASA, and that it is more likely that DDOE would be performing the activities that it recommends. *See* Section 2.3.1 of Final Permit ("The permittee has designated the District Department of the Environment (DDOE) as the agency responsible for managing the MS4 Stormwater Management Program and all activities necessary to comply with the requirements of this permit. . . .").

Second, EPA agrees that establishing priorities for outfall repair is important and has added Section 4.3.5.3 to the Final Permit:

> Within 18 months of the effective date of this Permit, and consistent with the 2006 Outfall Survey, the District shall complete, public notice and submit to EPA for review and approval an outfall repair schedule to ensure that approximately 10% of all outfalls needing repair are repaired annually, with the overall objective of having all outfalls in good repair by 2022. This schedule may be combined with the catch basin maintenance study outlined in 4.3.5.1. The repair schedule shall be fully implemented upon EPA approval.

g. The Commenter notes that there are a significant number of roads and streets that end in "T"s at the boundary of parklands, and suggests that the District be required to perform a survey of such intersections and identify those with erosion problems that cause water quality degradation.

EPA Response: Section 4.3.6.2 of the Final Permit (Streets, Alleys and Roadways) provides: "Standard road repair practices shall include limiting the amount of soil disturbance to the immediate area under repair. Stormwater conveyances which are denuded should be resodded or reseeded and mulched for rapid revegetation, and these areas should have effective erosion control until stabilized." Failure to comply with this provision would constitute a Permit violation.

3. Anacostia Watershed Society (form letters), May – June, 2010.

During May and June 2010, EPA received approximately 50 comment letters from private individuals who appear to be connected with the Anacostia Watershed Society. The letters appear generally identical to one another, and begin by providing support for two categories of requirements contained in the Draft Permit -- specific numbers of green infrastructure projects, and green infrastructure requirements for new development and redevelopment projects. The Commenters also make the comments discussed below.

a. The Commenters request pollution cleanup plans for the Anacostia, Rock Creek and Potomac. (The commenters do not indicate whether they are referring to plans for the rivers or watersheds).

EPA Response: The Final Permit includes pollution cleanup plans for all three receiving streams covered by the Permit: for example, Section 4.10 of the Final Permit includes specific requirements for attainment of TMDL WLAs which are to be included in the overall SWMP. In addition to specific requirements for implementation of Anacostia Trash and Hickey Run TMDLs (Sections 4.10.1 and 4.10.2, respectively), this section includes a requirement for a Consolidated TMDL Implementation Plan (Section 4.10.3), which specifies:

> For all TMDL wasteload allocations assigned to District MS4 discharges, the District shall develop, public notice, and submit to EPA for review and approval a consolidated TMDL Implementation Plan within 2 years of the effective date of this Permit.

As indicated, the above language requires the District to public-notice TMDL Implementation Plans; the Commenters are encouraged to comment on any such draft documents.

b. The Commenters request "[c]ompliance with existing legal water quality standards."

EPA response: The Final Permit does require standards attainment, but acknowledges that attainment may not occur in its entirety during this permit term. Section 1.4.1 of the Final Permit provides that the Permittee must "[e]ffectively prohibit pollutants in stormwater discharges or other unauthorized discharges into the MS4 System as necessary to comply with existing District of Columbia Water Quality standards (DCWQS)." This section also states that "[c]ompliance with the performance standards and provisions contained in Parts 2 through 8 of this permit shall constitute adequate progress toward compliance with DCWQS and WLAs for this permit term."

The Final Permit contains a number of provisions that generally, and specifically, target attainment of water quality standards. Among the general requirements, Section 2.1.1 of the Permit requires the Permittee "shall use its existing legal authority to control discharges to and from the [MS4] in order to prevent or reduce the discharge of pollutants to achieve water quality objectives." Moreover, Section 8.4 (Duty to Mitigate) provides that "[i]n the event that the Permittee or Permitting authority determines that discharges are causing or contributing to a violation of applicable WQS, the Permittee shall take corrective action to eliminate the WQS exceedance or correct the issues and/or problems. . . " Specifically, the Final Permit requires attainment of wasteload allocations in TMDLs applicable to the District's MS4 discharges. See Section 4.10 of the Final Permit. And Section 8.19 of the Permit allows it to be reopened for a

number of reasons, including, *inter alia*, "[t]o incorporate additional controls that are necessary to ensure that the Permit effluent limits are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4."

Also, Section 1.4 of today's Fact Sheet contains additional discussion of these requirements: "EPA made the following modification [to the Final Permit]: 'Compliance with the performance standards and provisions contained in Parts 2 through 8 of this permit shall constitute adequate progress towards compliance with DCWQS and WLAs for this permit term' (*emphasis added*) (Section 1.4 of the Final Permit). Additionally, Section 4.10 of Today's Fact Sheet explains, "The Trash TMDL assigned a specific WLA to MS4 discharges: removal of 103,188 pounds of trash annually. The Final Permit requires the District to attain this WLA as a specific single-year measure by the fifth year of this permit term."

c. The Commenters request specific pollution reduction requirements and timelines for completion.

EPA Response: EPA has included specific pollution reduction requirements and timelines for completion in the Permit. See additional explanations in the Fact Sheet at Section 3 (SWMP Plan) for specific information. The strategies adopted by the District to address relevant pollutants will be included in updated SWMP plans (see section 3 of the Final Permit), and EPA encourages the Commenters to participate in the review and comment process during these updates.

d. The Commenters seek improved public participation, including public review and comment for draft plans, with responses from the District Government and EPA.

EPA Response: EPA agrees that public input to the District's plans for meeting its permit obligations is important. Thus, the Final Permit contains robust opportunities for public participation. For example, Section 2.3.2 of the Final Permit (Stormwater Management Program Administration/Permittee Responsibilities, lists one of DDOE's major responsibilities as "[m]aking available to the public and other interested and affected parties, the opportunity to comment on the MS4 stormwater management program." Also, the Permit provisions for development of off-site mitigation/fee-in lieu, retrofit, tree canopy, and storm drain system operation and management/solids and floatables reduction programs also include such requirements. *See* Sections 4.1.3, 4.1.6, 4.1.7, and 4.3.5, respectively.

By way of additional examples of public notification requirements, the Final Permit increases public participation aspects of the Permit, in part by including TMDL WLA Implementation as part of the District's overall Stormwater Management Plan (SWMP) (moved from Section 8.1 of Draft Permit, ["Other Applicable Provisions -- WQS and TMDL WLA Implementation Plans and Compliance Monitoring"] to Section 4.10 of Final Permit ["Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA) Planning and Implementation")]. It also requires the Permittee to "make all draft and approved MS4 documents required under this Permit available to the public for comment. The current draft and approved SWMP and the MS4 annual reports deliverable documents required under this Permit shall be posted on the Permittee's website." (Section 4.9.4.3 of Final Permit). *See also* Sections 4.9.4.1 (requirement to create opportunities

for the public to participate in the decision making processes involving the implementation and update of the Permittee's SWMP); 4.9.4.2 (requirement to continue to establish a method of routine communication to groups such as watershed associations and environmental organizations that are located in the same watershed/s as the Permittee, or organizations that conduct environmental stewardship projects located in the same watershed/s or in close proximity to the Permittee); 4.9.4.4 (requirement to continue to develop public educational and participation materials in cooperation and coordination with other agencies and organizations in the District); and 4.9.4.5 (requirement to periodically, and at least annually, update its website).

Further, at Section 3, the Final Permit requires that "[a] current plan shall be posted on the District's website at an easily accessible location at all times" and also that "[n]o later than 3 years from the issuance date of this Permit the Permittee shall public notice a fully updated Plan including all of the elements required in this Permit. No later than 4 years from the issuance date of this Permit the Permittee shall submit to EPA the fully updated plan for review and approval, as part of the application for Permit renewal."

4. Bekele, Jeruselum (May 28, 2010).

This Commenter submitted the following documents: Cover E-Mail (June 4, 2010); proposed Permit Mark-Up; Table (with Issues, Current Language, Suggested Language, and Justification); and Write-Up (dated May 28, 2010). For efficiency, the comments are integrated with one another herein, and responded to as if they were one document.

a. The Commenter requests that language be added to Sections 1.2 and 1.3.1 of the Permit which specifies that discharges from facilities covered by other NPDES Permits must also comply with the requirements of the District's MS4 Permit. The Commenter indicates that this is necessary to relieve the District from liability should an industrial discharger contribute flows to the MS4 which do not comply with the District's Permit.

EPA Response: Pursuant to 40 C.F.R. § 122.26(b)(2), discharges of nonstormwater into an MS4 are allowed, provided they are authorized under a separate NPDES Permit. Those Permits include and apply the appropriate industry- and site-specific technology-based and water quality-based effluent limitations for the discharge from those facilities.

b. The Commenter believes that the District should ask EPA to require and issue to all federal facilities in the District, whether they discharge to the MS4 or directly to a waterbody, their own individual NPDES Permits, similar to Delaware. She believes that this would avoid any existing (or percieved) federal exemption and assure that no pollutants from federal facilities enter the District's MS4s and water bodies. The Commenter made several suggested edits throughout the Permit regarding this issue.

EPA Response: This comment is beyond the scope of this permit, which only covers stormwater discharges from the District's MS4. EPA notes that federal facilities with regulated stormwater discharges (*e.g.* stormwater associated with industrial activity or construction activity stormwater discharges) are subject to stormwater permitting requirements, whether discharging to the District's MS4 or directly to a waterbody.

c. The Commenter states that Section 1.3.2 is "egregious" as it puts the federal NPDES Permit above all District laws, regulations, and ordinances.

EPA Response: EPA disagrees with this comment. The language of Section 1.3.2 (Waivers and Exemptions) provides that unauthorized discharges "may constitute a violation of this Permit." Moreover, an NPDES Permit, issued pursuant to the Federal Clean Water Act and applicable Federal regulations, is the control mechanism for the protection of water quality standards in the U.S. and as such is the predominant authority on those actions which impact receiving water.

d. The Commenter requests that Section 2.1 be deleted from the Permit due to the fact that the District described its legal authority in its application; therefore it does not need to be in the Permit.

EPA Response: The Final Permit (Section 2.1.1 – Legal Authority) requires the District to both have adequate legal authority to control discharges *and* to remedy any deficiencies in such legal authority. This language is necessary to ensure that any insufficient legal authority is addressed by the Permittee. Also, to the extent that the Permittee updates its SWMP, *see* Section 3 (Stormwater Management Program Plan) ("The Permittee shall continue to implement, assess and upgrade all of the controls, procedures and management practices, described in this Permit, and in the SWMP dated February 19, 2009, and any subsequent updates."), concomitant changes may need to be made to the legal authority.

e. The Commenter suggests deleting Sections 2.3.1 and 2.3.2 (Stormwater Management Program Administration/Permittee Responsibilities) and instead including such provisions in the "document required under the proposed language" [Note to Reader: Document assumed to be the SWMP document]. The Commenter reasons that Federal regulations only specify in general terms (1) the signatories to Permit applications and reports, and (2) the elements for stormwater management programs, and that Permit language going beyond the regulations prevents the District from any flexibility of running its stormwater programs in an effective manner.

EPA Response: EPA contends that it is appropriate to identify the responsible stormwater agencies designated in the District's Comprehensive Stormwater Management Enhancement Amendment Act of 2008 in the Permit. *See* 56 D.C. Reg. 1353 (February 13, 2009). This will ensure that EPA and the public will be notified of any changes to the parties responsible for SWMP implementation and compliance.

f. With respect to additional pollutant sources (Section 3.1 of Draft Permit and 4.11 of Final Permit), the Commenter suggests striking the following provision: "For the Stormwater Model, analysis of data for these pollution sources shall be reported according to Part 7 herein." She does not explain her rationale but rather indicates that it is "self-explanatory."

EPA Response: EPA does not understand the basis of this request, and does not believe that it is appropriate to speculate. Moreover, EPA continues to believe that the language is appropriate and so has included it in the Final Permit.

g. The Commenter requests that the District not be required to provide the name, address, and description of products of facilities which drain to outfalls as it is not a federal requirement and the effort would be "massive" and "not a wise idea."

EPA Response: The Permit requirement cited by the Commenter is in fact consistent with the applicable federal regulations. Pursuant to 40 C.F.R. § 122.26(d)(2)(ii), MS4s are required, for source identification, to "provide an inventory, organized by watershed of the name and address, and a description (such as SIC codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, stormwater associated with industrial activity." Because this information changes over time, it must be kept current, and the Final Permit reflects this need. The regulations also require that the District develop a SWMP "to monitor and control pollutants in stormwater discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and *industrial facilities that the municipal Permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system* [emphasis added]." 40 C.F.R. § 122.26(d)(2)(iv)(C). In order for the District to determine which facilities may be contributing a substantial pollutant load to the MS4, the baseline information required in Section 4.7 (previously Section 3.2) is needed for each contributing facility. Finally, the regulations further require that the District develop a program to detect and remove sources of illicit discharges and this facility inventory will provided useful information when implementing this requirement. 40 C.F.R. § 122.26(d)(2)(iv)(B).

h. The Commenter suggests deleting Section 3.3 because Section 3 deals with identifying sources, and not with addressing them. In addition, the Commenter contends that the content of the paragraph is "fundamentally flawed". She argues that since the Permit language provides for "controls [to] be designed to prevent and restrict pollutants from coming into contact with stormwater," EPA is imposing controls on the internal waste stream, as opposed to the discharge of pollutants from a point source into waters of the United States.

EPA Response: First, EPA notes that it has moved the relevant provision from Section 3.3 of the Permit (Source Identification) to Section 4.11 (Additional Pollutant Sources), to more accurately reflect the purpose of this requirement. Second, the requirement to prevent and restrict pollutants from coming into contact with stormwater is a means of controlling the discharge of pollutants from a point source (MS4) into a water of the United States (receiving streams covered by the DC MS4 Permit).

i. The Commenter suggests deleting language that appeared at Section 4 of the Draft Permit, which indicated, *inter alia*, that "[t]he set of BMPs specified in the Permit can be adapted as opportunities change, as long as interim compliance deadlines for WLAs are achieved." The Commenter notes that the language is "not clear" and that she did not see

what BMPs were specified in the Permit nor understand by what is meant "interim compliance deadline."

EPA Response: EPA has removed the relevant language from the Final Permit since the language was unnecessary. At the same time, though, EPA notes that the Permit does specify many BMPs, including green roofs, tree canopies, and LID practices and non-structural management practices. With regard to an interim compliance deadline, each WLA has a compliance deadline attached to it, and interim compliance deadlines are set up as steps during the middle of the compliance deadline towards achieving full compliance by the WLA deadline. Such steps, or interim compliance deadlines, allow the Permittee to evaluate whether or not it is on task to meet the final compliance deadline. If the Permittee is on track, nothing needs to be changed. If the Permittee is not on track, however, interim compliance deadlines make it more likely that it will be able to figure out what is not working in a timely fashion. Interim deadlines also allow the Permittee flexibility to change what needs to be fixed in order for it to get back on track to be able to achieve full compliance by the deadline.

j. The Commenter states that "green technology" (GT) is an excellent environmental tool that needs to be promoted and has tremendous value in the areas of air quality, energy savings, and water saving. She also indicates, however, that the utility of GT in reducing pollutants from stormwater discharges (the object of the MS4 Permit) is indirect and is limited to increasing public awareness and public behavior modification at best. She also suggests that it is in District's interest to promote GT for its own reasons and it is not appropriate for EPA to include it in the MS4 Permit unless it has supported evidence (quantified) of stormwater impairment mitigated by specific technology.

EPA Response: As discussed in detail in today's Fact Sheet, EPA agrees with the Commenter that "green technology" practices are excellent tools for controlling stormwater discharges. However, EPA disagrees with the Commenter's point that the value of such practices is indirect and limited to increasing public awareness. Rather, the requirements are "designed to increase the effectiveness of stormwater controls." Fact Sheet at Section 4.1 (Standards for Long-Term Stormwater Management). A number of studies[1] note the water quality benefits of using the technological approaches stipulated in the Permit. EPA believes that it is appropriate to stipulate numeric pollutant objectives in a Permit when that is the most effective way to achieve environmental goals.

With respect to performance standards for new and redevelopment and for retrofits, consistent with the report by the National Research Council, *Urban Stormwater in the United States* (2009), and other stormwater research,[2] EPA has chosen to use flow volume as a proxy for pollutants.

[1] The performance of green infrastructure control measures is well-established through numerous studies and reports, many of which are available at http://cfpub2.epa.gov/npdes/greeninfrastructure/research.cfm#research

[2] These documents include, among many others: Stratus Consulting, *A Triple Bottom Line Assessment of Traditional and Green Infrastructure Options for Controlling CSO Events in Philadelphia's Watersheds* (August 24, 2009) (available at: http://www.epa.gov/npdes/pubs/gi_phil_bottomline.pdf); LimnoTech, Inc., *Analysis of the Pollution Reduction Potential of DC Stormwater Standard* (July 24, 2009); Natural Resources Defense Council and Waterkeeper Alliance, *Economic Costs, Benefits and Achievability of Stormwater Regulations for Construction and Development Activities* (2008); Meliora Environmental Design LLC, *Comparison of Environmental Site Design for Stormwater Management for Three Redevelopment Sites in Maryland* (2008); Riverkeeper, *Sustainable Raindrops:*

Managing stormwater in this way controls the large suite of pollutants found in urban stormwater, results in more implementation measures that are preventive rather than end-of-pipe, and also simultaneously begins to address issues of watershed hydrology.

Further, EPA refers the Commenter to the plethora of publications documenting costs *and benefits* of stormwater retention (or green infrastructure) approaches.[3] In particular, EPA emphasizes that these approaches provide greater enhanced water quality benefits that more traditional approaches typically do not, and that are necessary to meet the water quality objectives of the Clean Water Act.

k. The Commenter suggests deleting the following paragraph from Section 4.1 of the Draft Permit: "In accordance with Section 6.2 herein, the first Consolidated Annual Report submitted within this Permit term shall establish a baseline for the following: (1) percentage of impervious cover within the District; and (2) number and square footage of green roofs as defined herein within the District. In subsequent Consolidated Annual Reports, report on the percentage of decreased impervious cover and increased number and square footage of green roofs and other practices that infiltrate, evapotranspire and harvest stormwater within the District." In support of her suggestion, the Commenter claims that the "information is available."

EPA Response: EPA does not agree with the Commenter's stated basis that the information is otherwise available, and thus declines to make the change. However, EPA also notes that it has moved the above language from section 4.1 of the Draft Permit to section 6.2.1, to a requirement of the Annual Report . Moreover, the information addressed by the Commenter will only be available to EPA (and the public) if the District is required to share such information publicly, and the Annual Reports are an appropriate mechanism for this data.

l. The Commenter states that section 4.1.1.b "is equivalent to EPA granting a waiver to federal facilities."

EPA Response: In the Draft Permit, the Permittee would have been required to apply a different stormwater retention standard for federal facilities' development projects. In the Final Permit, the District is required to implement one performance standard for development projects.. *See* today's Fact Sheet for a discussion of the standard. Neither the Draft nor the Final Permit includes a "waiver" to federal facilities as suggested by the Commenter.

Cleaning New York Harbor by Greening the Urban Landscape (2008) (available at: http://www.riverkeeper.org/wp-content/uploads/2009/06/Sustainable-Raindrops-Report-1-8-08.pdf); City of Portland, Oregon, *Cost-Benefit Evaluation of Ecoroofs* (Nov. 2008) (http://www.portlandonline.com/bes/index.cfm?a=261053&c=50818); EPA, *Reducing Stormwater Costs through Low Impact Development Strategies and Practices* (Dec. 2007) (available at: http://www.epa.gov/owow/NPS/lid/costs07/); *Supplementary Investigation of the Feasibility and Benefits of Low-Impact Site Development Practices for the San Francisco Bay Area* (2007); Richard R. Horner, *Initial Investigation of the Feasibility and Benefits of Low-Impact Site Development Practices for the San Francisco Bay Area* (2007); and Natural Resources Defense Council, *Rooftops to Rivers: Green Strategies for Controlling Stormwater and Combined Sewer Overflows* (June 2006) (available at: http://www.nrdc.org/water/pollution/rooftops/rooftops.pdf).

[3] *See* footnote 2, *supra.*

m. The Commenter suggests that the off-site mitigation program should be open to any project that causes or contributes to an exceedance of an TMDL WLA or WQS and cannot be prevented or that would be made worse by infiltration or retention controls.

EPA Response: This comment is beyond the scope of the permit. Rather it concerns the scope of the off-site mitigation program that the District will need to implement under the Permit. The Final Permit does not place any *a priori* limits on the off-site mitigation program to any subset of projects.

n. The Commenter states that the planning, design, and construction of any one capital improvement plan (CIP) project extends well beyond the term of the Permit. Therefore, the Commenter suggests that the Permit should not require implementation of any retrofit project or specific square footage for retrofits. Instead, the Commenter suggests that the language specify that the District will conduct retrofit projects in areas where excessive bacteria, nitrogen, phosphorus, total suspended solids, cadmium, copper, lead, zinc, and trash will occur.

EPA Response: The Agency is tasked with providing "clear and measurable" provisions in Permits. *See e.g.,* EPA, *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed* (July 2010) (available at: http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/MS4GuideR3final07_29_10.pdf). Thus, EPA used best professional judgment to provide the District with a goal which it believes, through past performance as shown by Annual Reports, the District is capable of meeting within this Permit term. On that basis, EPA believes that the performance standard for retofits (18,000,000 square feet over five years, for example) is feasible and appropriate.

o. The Commenter suggests deleting Section 4.1.3. because the pollutant to be removed by tree canopy is not clear.

EPA Response: The tree canopy requirement (now at Section 4.1.6) is included to reduce the volume and velocity of stormwater discharged through the MS4, in addition to reducing pollutant loads. If stormwater is intercepted by tree canopy and infiltrated by tree roots, it can avoid picking up pollutants from impervious surfaces (e.g. roads and sidewalks) and discharging these pollutants into the MS4 and surface waters.[4] Furthermore, tree cover helps intercept rainwater as it falls to the Earth, thus reducing the amount and speed of stormwater, along with filtering pollutants that eventually flow to receiving waters. *See* Section 4.1.6 of today's Fact Sheet for further discussion of the benefits of tre canopy, as well as references cited therein.

p. The Commenter suggests deleting Section 4.1.4. because she believes the benefit of green roof technology is limited to reduction of atmospheric deposition and it is not clear as to what pollutant measured in DC stormwater EPA believes would be removed by green roofs.

[4] Casey Trees, *The Green Build-out Model: Quantifying the Stormwater Management Benefits of Trees and Green Roofs in Washington, DC* (2007) (http://www.caseytrees.org/planning/greener-development/gbo/index.php). See specifically section 4.8 of this report.

EPA Response: EPA disagrees with the Commenter and has declined to make the change to Section 4.1.7 of the Permit (formerly Section 4.1.4). The green roof requirement in the Final Permit is expected to result in benefits that extend far beyond the reduction of atmospheric deposition; rather, such roofs actually reduce stormwater flows -- thereby reducing pollutant loading to the MS4. *See* Section 4.1.7 of today's Fact Sheet for literature sources supporting this requirement, including an EPA study which found that green roofs are capable of removing 50- percent of the annual rainfall volume from a roof through retention and evapotranspiration.

q. The Commenter suggests deleting Section 4.2 of the Draft Permit (Operation and Maintenance of Stormwater Capture Practices) because she believes that if EPA requires any stormwater pollution mitigation measures in areas demonstrated to have stormwater quality impact, EPA should require that all entities (including the District, federal, and private sources) believed to be a potential source of the pollutant(s) in stormwater to take specific steps aimed at reducing/eliminating the pollutant(s).

EPA Response: Today's Fact Sheet (Section 4.2) clearly explains the importance of operation and maintenance activities for the continued performance of stormwater control measures. Given the critical nature of these activities, EPA has declined to delete the language requested by the Commenter.

r. The Commenter suggests removing the following language from Section 4.2.3.a of the Draft Permit: "The Stormwater Management Guidebook shall provide regular updates, as applicable, in a format that facilitates such regular updates, and shall include objectives and specifications for integration of stormwater management technologies, including on-site retention practices, in the areas of: [objectives A through K]." The Commenter suggests the following language: "The Stormwater Management Guidebook shall provide information on green technology that [is] available for application for stormwater quality control in the District. The Guidebook shall be updated as information becomes available." The Commenter believes the District's hydrology is too unique to have general site specifications for land use planners and developers to use, and that it is extensive and the liability is too high. In addition, she believes that if such specifications are developed, it will have a negative impact on the District.

EPA Response: EPA disagrees with the Commenter and has declined to make the change. EPA contends that the purpose of having a Stormwater Management Guidebook is to have a starting point for all land use planners and developers to use when engaging in new and redevelopment. A good example is the State of Maryland's Stormwater Design Manual, which is required for use in every MD MS4 Permit as part of their new and redevelopment section of their Permits. MD is a large state in comparison to the District, thus, if an entire state can manage all of the challenges of stormwater design into one handbook, the District is expected to be able to complete one as well. For more information, EPA refers the Commenter to a document by the Maryland Department of the Environment, *Maryland Stormwater Design Manual, Vols. I & II* (effective October 2000; Revisions effective May 2009) (available at: http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/MarylandStormwaterDesignManual/Pages/programs/waterprograms/sedimentandstormwater/stormwater_design/index.aspx).

s. The Commenter suggests replacing the language in Sections 4.3 – 4.9 with the language in the current 2004 MS4 Permit. All the proposed mangement components, if applicable, should be required of not only "District Government areas", but across the MS4 area (including the District, private, and ferderal areas). Further, the Commenter states that if EPA has specific activities that it recommends the District carry out, EPA may identify the water quality impairment(s) – demonstrated by District stormwater quality analysis – and include those activities that will result in quantifiable reduction of that particular pollutant. Short of identified stormwater quality problems, the MS4 Permit should include all management requirements in general terms to allow the District flexibility to employ appropriate and applicable stormwater quality control measures as the impairments/suspect sources are discovered.

EPA Response: A SWMP is intended to be a dynamic program which changes over time in response to determinations of effectiveness, new information, and changing conditions within the permitted area. The SWMP requirements in the Final Permit (Sections 4.3 – 4.9) reflect EPA's intention to update the SWMP accordingly. Further, the requirements are intended to apply throughout the MS4 area including District, private, and federal lands.

t. The Commenter suggests deleting Section 5.1.1 (Revised monitoring). The Commenter is not clear what EPA's rationale is for the selection of parameters in Table 3. She further suggests removing the three objectives from section 5.1 of the Draft Permit and instead revising the section as follows: "Within one year of the effective date of this Permit the Permittee shall develop, public notice and submit to EPA Region III for approval a revised monitoring plan to meet ~~the following objectives . . .~~ discharge requirements for stormwater."

EPA Response: EPA declines to make the requested change. The Agency is tasked with providing "clear and measurable" provisions in Permits. *See e.g.*, EPA, *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed* (July 2010) (available at: http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/MS4GuideR3final07_29_10.pdf). Simply stating that the revised monitoring plan is to "meet discharge requirements for stormwater," as recommended by the Commenter, is not adequate to ensure that the Permittee meet the stated objectives, nor does it spell out in clear and measurable provisions what exactly the District needs to do. It does not make clear what the discharge requirements for stormwater are, nor does it give an objective goal to reach in order to meet such discharge requirements.

EPA also notes that it has substantially changed the relevant portion of the Permit since the draft; since the Agency issued the District its first MS4 Permit in 2000, the District has monitored approximately 130 pollutants annually in three rotating watersheds (Anacostia River, Rock Creek, and Potomac River) at approximately 20 stations. This monitoring is conducted to determine the pollutants of concern in the District's discharge. Table 3 lists those pollutants. Given the extent of monitoring that has occurred over the last decade, EPA has now determined that the following parameters are the remaining ones that require ongoing monitoring: E. Coli, total nitrogen, total phosphorus, total suspended solids, cadmium, copper, lead, zinc, and trash.

See Final Permit at Section 5.1.1 (Design of the Revised Monitoring Program); Fact Sheet at Section 5.1.

u. The Commenter suggests deleting Section 5.1.2, indicating that it is a federal requirement under Section 106 of the CWA to prepare and submit a water quality report to the EPA. To evaluate the in-stream water quality involves substantial activities beyond evaluation of stormwater sources. It involves determinations on various sources other than stormwater, such as upstream sources, legacy contamination (ground water and sediment contaminations), and discharges from other than stormwater sources. The District water quality program that implements the evaluation of the health of the receiving waters is currently in part funded by the EPA. The Commenter believes that the activitiy should not be a requirement under the NPDES MS4 Permit, and that by making it an MS4 requirement, District taxpayers will have to absorb all the CWA section 106 function costs.

EPA Response: The monitoring station locations for characterizing pollutants of concern in MS4 discharges are separate from the monitoring and analysis performed for the CWA Section 305(b) Report at the CWA Section 106 monitoring stations. The locations of the MS4 monitoring sites are designed to identify pollutants of concern, possible sources of contaminants, and to assess the SWMP, rather than provide an assessment of in-stream overall water quality.

v. The Commenter suggests deleting the phrase "The Permittee must use the information to evaluate the quality of the stormwater program and the health of the receiving waters at a minimum to include:" (p. 27). The Commenter contends that the stormwater quality is not sufficient to determine the "health of the receiving waters." The health of the receiving waters is determined by the amount of pollutants from upstream sources, sediment contamination (legacy), and other discharges.

EPA Response: EPA agrees that stormwater quality is not sufficient to determine the health of receiving waters, and thus has required the District to develop a revised monitoring program, of which one objective is to implement strategies that will adequaltely evaluate health of the receiving waters. *See* Section 5.1.2 of Final Permit.

The comments below were included in the attachment to the Commenter's proposed mark-up of the Permit:

w. The Commenter contends that: (1) the level of reduction achieved through LID is insignificant, and (2) volume reduction is not a stormwater quality issue in the District and should not be an NPDES requirement. The Commenter provides analysis to show that increased flow conditions due to the MS4 area draining directly to the Anacostia River, Potomac River, and Rock Creek, do not contribute to the degradation caused by scouring (i.e. due to increased volume and velocity) in these waterbodies. The Commenter goes on to cite a study conducted by WASA in the Palisades Neighborhood in which low impact development (LID) achieves two percent stormwater reduction, so the Commenter concludes that even if the LID can function as a system that will achieve mitigation of pollutants carried by stormwater, the reduction will be insignificant.

EPA Response: EPA disagrees, and also wants to clarify that the general term LID means many different things, and that the design of stormwater controls, not their labels, determines how effectively they will control stormwater discharges. If a control (even if it falls under the heading of LID) is only designed to achieve a 2% reduction, then that is all it will achieve. Therefore EPA has stipulated a performance standard in this Permit.

With respect to performance standards for new and redevelopment and for retrofits, consistent with the report from the National Research Council, *Urban Stormwater Management in the United States* (2009), and other stormwater research, EPA has chosen to use flow volume as a proxy for pollutants. Managing stormwater in this way controls the large suite of pollutants found in urban stormwater, results in more implementation measures that are preventive rather than end-of-pipe, and also simultaneously begins to address issues of watershed hydrology.

Further, EPA refers the Commenter to the plethora of publications documenting costs *and benefits* of stormwater retention (or green infrastructure) approaches.[5] In particular EPA emphasizes that these approaches provide greater enhanced water quality benefits that more traditional approaches typically do not, and that are necessary to meet the water quality objectives of the Clean Water Act.

5. Casey Trees, Mark Buscaino (May 13, 2010).

a. The Commenter applauds the inclusion of several tree canopy provisions in the Draft Permit, but indicates a concern that some items have not been completed, including: draft strategy for DC to achieve optimal tree canopy; development and implementation of schedule to achieve tree canopy goal; plan for achieving tree canopy goal; and annual documentation of tree survival rate together with stormwater capture estimates.

EPA Response: EPA first notes that the potential failure by a Permittee to comply with a Permit is a compliance issue and not part of the Permit reissuance. In any event, DC has already made significant progress toward developing its tree canopy strategy; DOE reported to EPA (in a recent regular update on the Letter Agreement) that it has in fact finalized the draft strategy as of June 2010, and that it is awaiting comments from stakeholders such as the Commenter and the DC Urban Forestry Administration prior to finalizing the document. EPA encourages the Commenter to provide input on the draft strategy. Further, the Final Permit requires that the Permittee develop a tree canopy strategy no later than one year following issuance of this Permit. See Section 4.1.6.

b. The Commenter believes that off-site mitigation for post-construction impacts should occur within the same subwatershed (10-digit HUC) as the impact.

EPA Response: EPA believes that a requirement for off-site mitigation to occur in the same subwatershed as the impact could constrain the program, since the District is located in a highly-urbanized setting in a relatively small geographic area. In any event, the Final Permit includes a

[5] *See* documents cited in fn. 1 herein, *supra.*

requirement that the District public notice any mitigation or fee-in-lieu program (or both). If the District chooses to develop such a program, EPA encourages the Commenter to participate in the program development process and raise any concerns about the geographical scope of mitigation at that time.

c. The Commenter suggests an apparent contradiction between inclusion of provisions from the 2008 Letter Agreement between EPA and DC, and the Draft Permit requirement to expand tree canopy within one year of Permit issuance. The Commenter also requests that the Permit include the Mayor's goal to have 40 percent tree canopy by 2035.

EPA Response: The Final Permit requires that the District "[a]chieve a minimum annual tree planting rate of at least 4,150 plantings annually within the DC MS4 Permit Area. This total shall be calculated as a net increase, such that annual mortality is also included in the estimate. Ensure that trees are planted and maintained, including requirements for adequately designed and sized tree boxes, to achieve optimal stormwater retention and tree survival rate within the District." *See* Section 4.1.6.2. EPA can only issue Permits that do not exceed a five-year term, 40 C.F.R. § 122.46(a), and so cannot in this Permit require the District to achieve a goal by 2035. Section 4.1.6.3 of the Final Permit requires the Permitee to "annually document the total trees planted and make an annual estimate of the volume of stormwater that is being removed from the MS4" and "[a]lso report annually on the status of achieving 40% canopy District-wide."

d. The Commenter notes that the Urban Forestry Administration (UFA) planting standards cited in the Draft Permit is not an active, accurate link.

EPA Response: EPA appreciates the comment, and has revised the Final Permit to require trees to be planted in accordance with the Planting Specifications issued by the International Society of Arboriculture as appropriate to the site conditions. Final Permit at Section 4.1.6.2.

e. The Commenter believes that it is inappropriate to use a street tree planting standard as the legally required standard for the MS4 Permit as many trees hopefully will be planted in other settings. The Commenter instead recommends that the Permit specify that plantings occur in accordance with the Planting Specifications issued by the International Society of Arboriculture appropriate to the site conditions.

EPA Response: Section 4.1.6.2 of the Final Permit requires that "[t]rees shall be planted in accordance with the Planting Specifications issued by the International Society of Arboriculture as appropriate to the site conditions."

f. The Commenter applauds the inclusion of the performance standard requiring annual documentation of 4,150 total trees planted in the MS4 portion of the District, but at the same time desires a reference to a minimum District-wide planting of 8,600 trees.

EPA Response: The MS4 Permit Area covered by this Permit is limited to areas drained by municipal separate storm sewers. *See* Section 1.1 of the Final Permit. Therefore, it would be outside the scope of the Permit to require District-wide tree planting, as substantial portions of the District are not covered by the MS4 Permit.

g. The Commenter indicates that there is no evidence of compliance with the performance standard of 4,150 annual tree plantings, which was required by the previous Permit. The Commenter also recommends that the Permit require the Permittee to report on the number and size of trees removed from the MS4 Permit Area, to assess total net change.

EPA Response: First, any actual or hypothetical failures by a Permittee to comply with a Permit are potential compliance issues and not part of the Permit reissuance. Regarding the Commenter's second point, the Permit does require that the Permittee report the number of trees planted as a *net* increase, "such that annual mortality is also included in the estimate." See Section 4.1.6.2.

6. Chesapeake Bay Foundation, Lee Epstein (June 4, 2010) and William C. Baker (June 9, 2011)[6].

a. The Commenter indicates that Section 3.3 (Source Identification) should include a full suite of controls with deadlines for implementing them, and that the current provision needs more elaboration and emphasis.

EPA Response: Section 5.4 of the Final Permit (entitled "Area and/or Source Identification Program") provides that "[t]he Permittee shall continue to implement a program to identify, investigate, and address areas and/or sources within its jurisdiction that may be contributing excessive levels of pollutants to the MS4 and receiving waters, including but not limited to those pollutants identified in Table 4 herein." As discussed in greater detail in the Fact Sheet, EPA has determined that the District's ongoing practice is sufficient to ensure that the District has and will address additional pollutant sources as required to minimize and prevent discharges. The strategies adopted by the District to address these pollutants will be included in updated SWMPs, *see* Final Permit at Section 3 ("All existing and new strategies, elements, initiatives, schedules or programs required by this Permit must be documented in the SWMP Plan, which shall be the consolidated document of all stormwater program elements."), and EPA encourages the Commenter to participate in the review and comment process during these updates (*See* Sections 3 (SWMP) and 4.9.4 (Public Involvement and Participation) of the Final Permit).

b. The Commenter agrees with the performance standards for development contained in the Draft Permit, but suggests that the Permit characterize the kinds of practices that are preferred in order to meet these standards. Specifically, the Commenter believes that "softer" BMPs which mimic pre-development hydrology are preferred to meet the retention performance standards.

EPA Response: The Final Permit establishes a performance standard for stormwater controls that the District must apply to all development (Section 4.1.1) (*i.e.*, requirement for implementation of an enforceable mechanism that will adopt and implement the on-site retention of 1.2" volume of stormwater from a 24- hour storm with a 72-hour antecedent dry period

[6] EPA considers the June 9, 2011 letter submitted by the Chesapeake Bay Foundation to be a late comment on the draft permit. While the Agency has no legal obligation to consider comments received after the close of the comment period, we are choosing to consider these comments at this time.

through evapotranspiration, infiltration and/or stormwater harvesting and use). As discussed in Section 4.1 of today's Fact Sheet, EPA determined that the Final Permit should include one performance standard for post-construction stormwater discharges. Because there are many ways that the performance EPA prefers to allow the District to provide whatever guidance it deems necessary to ensure that the performance standard is met and MS4 discharges will be in compliance with Final Permit.

c. The Commenter agrees that the Permit should include off-site mitigation and fee-in-lieu options, but argues that they should only be allowed if the developer clearly demonstrates what the obstacles to installing appropriate BMPs are. Further, the Commenter states that economic obstacles should not be considered unless stormwater management costs are shown to exceed 10 percent of total project costs.

EPA Response: EPA believes that off-site mitigation is a feasible alternative when off-site locations have adequate capacity. The Final Permit (Section 4.1.3, Off-Site Mitigation and/or Fee-in Lieu for all Facilities) requires that the District public-notice any off-site mitigation and/or fee-in-lieu programs. EPA encourages the Commenter to participate in this process and make his points at that time. The Permit also requires that the Permittee submit the program to EPA for review and comment.

In addition to the foregoing safeguards, EPA notes that the Permit expands the minimum requirements for an off-site mitigation and/or fee-in-lieu program by requiring, among other things, that the program include at a minimum: (1) Establishment of baseline requirements for on-site retention and for mitigation projects; (2) Specific criteria for determining when compliance with the baseline requirement for on-site retention cannot technically be met based on physical site constraints; (3) For a fee-in-lieu program, establishment of a system or process to assign monetary values at least equivalent to the cost of implementation of controls; and (4) The necessary tracking and accounting systems to implement this section, including that original and off-site practices stay in place and are adequately maintained. Section 4.1.3 of Final Permit.

Finally, EPA believes that the transaction costs associated with off-site mitigation and/or fee-in-lieu payments will serve as a sufficient deterrent against developers pursuing these options as a first course.

d. The Commenter indicates agreement with the notion that some adjustment to retention standards might be warranted in certain environmentally-beneficial circumstances, but only so long as developers are required to quantify the water quality benefits of the projects they propose. Specifically, the Commenter believes that the Permit should require that mitigation occur in the same watershed as the project; include a ratio of required off-site mitigation (2:1 recommended by Commenter); include a mitigation "floor" of 0.9 inches; that "other environmental benefits" should be well-defined to include the required desirable development types (*e.g.,* transit-oriented development (TOD), walkable, well-located, etc.); require the developer to provide a description of the specific environmental benefits; and finally, the mitigation should be as "certain and enforceable" as possible.

EPA Response: As noted in response to the previous Comment, the Final Permit requires the District to develop specific criteria for determining when compliance with the baseline requirement for on-site retention cannot technically be met based on physical site constraints (or a rationale for why this is not necessary). EPA believes that the District is in the best position to develop these criteria.

As to the Commenter's suggestion that such mitigation activities should occur in the same watershed as the project, EPA notes that the entire District MS4 Area, which is relatively small, ultimately drains to the Potomac River watershed. Water quality benefits are expected to accrue, and EPA does not feel it is necessary to further break down watershed areas for this purpose.

e. The Commenter states that the Permit should include a performance standard "floor" of 0.9 inches water retention for the effective management of stormwater during retrofitting, prior to allowing in-lieu or mitigation and require the retrofit of 18-percent of the MS4's impervious area over five Permit cycles. The comment also mentions retrofit requirements in other jurisdictions outside the District of Columbia.

EPA Response: EPA has determined that the better approach is to allow the District to determine the appropriate requirements for retrofits in the course of developing its retrofit program, while also requiring opportunity for public comment and EPA review and approval. Today's Final Permit is the first of the District's MS4 permits to contain requirements with respect to retrofits for existing discharges. As explained in today's Fact Sheet (Section 4.1.5), EPA expects the District to utilize this permit term to develop design, construction and operation and maintenance protocols to meet the requisite performance standards for retrofits.

Several modifications were made to this provision: Specifically, the Final Permit requires that the District: (1) develop, public notice and submit to EPA for review and approval a program that establishes performance metrics for retrofit projects within two years of Permit effective date; (2) target federal land holders in order to document federal commitments to retrofitting their properties; (3) estimate potential pollutant load and volume reductions achieved through the DC Retrofit program by major water body (Rock Creek, Potomac River, and Anacostia River) for identified parameters; and (4) implement retrofits for stormwater discharges from 18,000,000 square feet of impervious surfaces during the Permit term (with a minimum of 1,500,000 square feet in transportation rights-of-way). *See* Section 4.1.5 of Final Permit ("Retrofit Program for Existing Discharges"). EPA encourages the Commenter to provide comment on the District's SWMP regarding retention standards when they are being developed during the Permit term.

To the extent that the Commenter refers to the retrofit requirements in another jurisdiction, the goal of this Permit is to achieve high-quality retrofits rather than simply to reach a high volume of retrofits.

f. The Commenter states that tree canopy, green roofs, and District-owned property rehabilitation are useful both for what they can individually achieve by way of water quality improvements over time, and as on-going examples for the private sector and the federal government.

EPA Response: EPA appreciates the comment, and agrees that such activities are useful for environmental protection and improvement.

g. The Commenter recommends that construction requirements in the Permit be strengthened because of the need to protect the Chesapeake Bay, which is downstream from the District's discharges. Specifically, the Commenter requests that the Permit include the following: (1) a trigger for applicability of the construction requirements of 10,000 square feet rather than one acre (*i.e.*, 43,560 square feet); (2) required site stabilization within 72 hours of work ceasing (or temporarily ceasing); and (3) a requirement that no more than five acres be actively graded ("opened") at any one time on a construction project.

EPA Response: EPA believes that the requirements for development projects in today's Final Permit are sufficiently protective of the receiving streams, as explained further in Section 4.1 of today's Fact Sheet. In response to the other suggestions in the Comment, EPA notes that: (1) As to the request that the Permit use a numeric "trigger" of 10,000 square feet for construction requirements, the Final Permit is actually more stringent in that it covers projects greater than or equal to *5,000* square feet; and (2) Existing requirements address both of these suggestions (*i.e.*, timing of site stabilization and grading limitations). *See* EPA's "NPDES General Permit for Stormwater Discharges From Construction Activities," 73 Fed. Reg. 40338 (July 14, 2008) ("CGP") (available at: http://www.epa.gov/npdes/pubs/cgp2008_finalPermit.pdf), which applies to permitted construction projects within the District, as well as the Construction and Development Effluent Limitations Guidelines, 40 C.F.R. Part 450. EPA is currently working on a draft rule to replace the CGP, and encourages the Commenter to provide input on the draft rule when it is public-noticed.

As an additional response to this comment, EPA notes that the D.C. Watershed Implementation Plan, submitted as part of EPA's Chesapeake Bay TMDL (available at: http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Columbia_WIP_Bay_TMDL.pdf), outlines the District's construction program (and includes numbers on compliance inspections and enforcement).

h. The Commenter notes that the Permit includes outreach and education/communication minimum performance measures, but states that these measures are too general and need to be accompanied by measurable metrics. Further, the Commenter believes that District's SWMP should include extensive public outreach and involvement.

EPA Response: The Final Permit contains a number of requirements and performance metrics related to public participation. Section 4.9 (Public Education and Participation) contains subsections entitled: Education and Outreach (4.9.1) (requirement to assess current education and outreach efforts and identify areas where additional outreach and education are needed); Measurement of Impacts (4.9.2) (requirement to measure the understanding and adoption of selected targeted behaviors among the targeted audiences); Recordkeeping (4.9.3) (requirement to track and maintain records of public education and outreach activities); and Public Involvement and Participation (4.9.4) (requirement to include opportunities for public involvement).

These requirements strike a balance between the need for public participation in various District stormwater activities while still affording the District some flexibility in designing the program – as long as it addresses the audiences and subject areas identified in the Permit. EPA encourages the Commenter to participate in the development and implementation of the public education portion of the SWMP as provided in Section 4.9.4.

i. The Commenter believes that Section 8 of the Draft Permit (Other Applicable Provisions) is extremely unclear, incomplete, and quite poorly organized, and argues that the District MS4 Permit should be consistent with the developing Chesapeake Bay TMDL. Specifically, the Commenter argues that the DC MS4 Permit should incorporate all TMDL WLAs entirely by reference and should be clear that the WLAs are in fact numeric effluent limitations; the Permit should make clear TMDL Implementation Plan updates must be submitted and that all TMDLs approved in the future are incorporated into the Permit; the Permit should expressly state that the WLAs must be achieved; and finally, the Permit must specifically describe under what circumstances management practices can be used to express WLAs.

EPA Response: EPA agrees that this section of the proposed Permit was poorly organized, and has reorganized accordingly. The previous Section 8, "Other Applicable Provisions," included requirements related to water quality standards and TMDL WLA Implementation Plans as well as a section on compliance monitoring with WQBELs. Section 4 of the Final Permit, "Implementation of Stormwater Control Measures," now includes a separate section entitled Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA) Planning and Implementation (Section 4.10), which has the following subsections: Anacostia River Trash TMDL (Section 4.10.1)[7]; Hickey Run (4.10.2); and Consolidated TMDL Implementation Plan (4.10.3).

EPA has further reorganized the Permit by taking a number of provisions from TMDL implementation plans, and—rather than requiring a new or updated plan—placed specific implementation measures into the Final Permit in order to make them more directly understandable and enforceable.

Finally, as to the Commenter's point that the DC MS4 Permit should be consistent with the Chesapeake Bay TMDL, EPA notes that the Final Permit does in fact incorporate certain underlying requirements of the Bay TMDL -- including necessary reductions of nitrogen, phosphorus and sediment from the District of Columbia (as well as other Bay jurisdictions). When achieved, these reductions will allow the Bay to attain its applicable water quality standards. As background to these anticipated reductions, EPA notes that as part of the Bay TMDL development process, each Bay jurisdiction developed a Watershed Implementation Plan (WIP) to identify how it intends to meet the reductions called for in the TMDL. Section 7.2 of the District's Final Phase I WIP, *Chesapeake Bay TMDL Watershed Implementation Plan District of Columbia Department of the Environment* (November 29, 2010) (available at:

[7] EPA has directly incorporated implementation requirements for the newly-approved Anacostia Trash TMDL (September 21, 2010) at Section 4.10.1 of the Final Permit, and subjected the one element requiring some planning effort (trash reduction calculation methodology) to public notice and comment and to EPA approval.

http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Columbia_WIP_Bay_TMDL.pdf), indicates that it relied in part on the draft MS4 Permit as a guide in development of this document. The WIP specifically anticipates reductions of nitrogen, phosphorus, and sediment contributions to the Bay by 11, 27, and 26 percent, respectively, by relying on the following District commitments:

- Install at least 350,000 sq ft of green roofs over the Permit cycle on District property
- Plant at least 4,150 trees annually with a goal of planting and maintaining 13,500 additional trees by 2014 and increasing its tree canopy from 35% to 40% by 2035
- Insure that all development greater than 5,000 sq ft retain stormwater generated from a 1.2" 24-hour storm
- Promotion of low-impact development

Currently, the District and other Bay jurisdictions are working on their Phase II WIPs. EPA notes that the Final Permit includes a reopener clause (Section 8.19) that allows it to be reopened for a number of reasons, including, *inter alia*, "[t]o incorporate additional controls that are necessary to ensure that the Permit effluent limits are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4."

j. In a June 9, 2011 letter that supplements its initial comments on the draft Permit, the Commenter indicates support for the proposed dual retention standard, *i.e.*, on-site stormwater retention standard of 1.7" from a 24-hour storm for federal development projects, or 0.5" higher than non-federal development projects.

EPA Response: EPA agrees with the Commenter's points that there are several authorities which provide robust justification for federal agencies to implement the 1.7" on-site retention standard for development projects. These authorities inlcude: Executive Orders 13508 and 13514, along with subsequently promulgated strategies and guidance documents; Part 438 of the Energy Independence and Security Act and subsequent guidance; as well as waste load allocations associated with the Chesapeake Bay TMDL. *See* today's Fact Sheet for a discussion of the basis for imposing the 1.2" on-site retention standard on all development projects in the Final Permit. EPA continues to engage with other federal agencies to ensure the achievement federal water quality obligations. At this juncture, federal agencies are considering a voluntary agreement approach to achieve the goals associated with increased stormwater retention.

7. CONTECH® Stormwater Solutions, Dionne Driscoll (June 2, 2010).

a. The Commenter indicates that the Draft Permit relies almost completely on two unit processes to mitigate stormwater impacts (*i.e.*, infiltration and/or on-site stormwater retention/reuse), and that it uses a fairly prescriptive approach in doing so. The Commenter also claims that by mandating the use of a specific BMP rather than focusing on the goal, the water quality of the region may actually suffer from the strict implementation of the prescriptive directives in the Permit. Moreover, the Commenter notes the potential for site-specific limitations which may impede the performance of infiltration, and states that the Draft Permit does not appear to include an allowance for

BMP alternatives to green technologies required by the Permit. The Commenter is concerned that this apparent limitation will curtail the stormwater treatment options available to engineers and developers in the District and does not provide any enhanced assurance that stormwater quality will be improved. In some (potentially many) cases this may limit better site design practices in favor of the fee-in-lieu of treatment.

EPA Response: EPA contends that, for the most part, the Final Permit does not require that any specific management practices or controls be implemented. The Final Permit, appropriately, expresses performance standards or other environmental objectives, but the Permittee may implement any combination of controls that will meet those objectives. As to the point about curtailed treatment options, the Final Permit (Section 4.1.3) requires the District to develop, public notice, and submit to EPA for review and comment an off-site mitigation and/or fee-in-lieu program to be utilized when projects cannot meet stormwater management performance standards.

Finally, with regard to the Commenter's expressed concern that green roofs may result in increased nitrogen discharges, it is true that the outflow from green roofs may have more nitrogen and phosphorus in it than rainfall, depending on the composition of the soil media and/or establishment of media to the roof structure. Typically, though, limiting organics in the media does reduce effluent nitrogen and phosphorus levels. EPA, *Green Roofs for Stormwater Runoff Control,* Pub. No. EPA/600/R-09/026 (February 2009) (available at: http://www.epa.gov/nrmrl/pubs/600r09026/600r09026.pdf); North Carolina Cooperative Extension Service, *Urban Waterways: Permeable Pavements, Green Roofs and Cisterns. Stormwater Treatment Practices for Low-Impact Development* (May 2006) (available at: http://www.bae.ncsu.edu/stormwater/PublicationFiles/BMPs4LID.pdf).

b. The Commenter believes that the Permit should include formal guidance for both the treatment criteria for specific usages of harvested waters *(e.g.*, landscaping, toilet flushing and other interior uses) and overflow control/release requirements for these systems.

EPA Response: This type of guidance is outside of the scope of this Permit. At the same time, EPA notes that there is nothing in the Final Permit prohibiting the District from establishing the authority and implementation guidelines for use of harvested rainwater and overflow controls thereof if it deems that to be necessary.

c. The Commenter indicates that there appear to be no numeric values for pollutant removal goals in the Permit, and that this greatly limits the District's authority and ability to evaluate BMP pollutant removal performance. Further, the Commenter suggests that omitting numeric values for target pollutants limits the District's authority to properly manage the impacts of future development, especially in "hot spot" areas (*e.g.*, gas stations) with concentrated pollution which it claims should be treated rather than infiltrated. The Commenter also states that the proposed limit of 10% discharge of stormwater allowed to leave the site according to the Permit may result in untreated discharges.

EPA Response: The decision as to whether individual limits are numeric or narrative is fact-specific, and a broad statement as to one type of being more protective than the other would be

over-generalizing. In the Final Permit, for example, EPA has included specific numeric limits that are consistent with the Anacostia Trash TMDL. Similarly, the Final Permit contains specific numeric objectives for items like retrofit drainage areas, tree plantings, square footage of green roofs, *see* Sections 4.1.5, 4.1.6 and 4.1.7, respectively. However, for other pollutant reduction measures, narrative provisions EPA has determined that it is more effective to include narrative requirements to achieve environmental goals such as for practices like landscape and recreational facilities management and pesticide, herbicide, fertilizer, and landscape irrigation, *See* Section 4.3.4 of the Final Permit.

With respect to the Commenter's final point above, she appears to be referring to the 1.2" capture requirement contained in the Draft Permit, which according to the draft Fact Sheet represents a 90th-percentile capture. EPA notes that for performance standards for development, EPA has chosen to use flow volume as a proxy for pollutants. This is consistent with the report from the National Research Council, *Urban Stormwater Management in the United States* (2009), and other stormwater research. Managing stormwater in this way controls the large suite of pollutants found in urban stormwater, results in more implementation measures that are preventive rather than end-of-pipe, and simultaneously begins to address issues of watershed hydrology. *See generally id.*

d. The Commenter believes that the fee-in-lieu program contemplated by the Permit will be a "pay to pollute" program, which could result in avoided stormwater controls that fall outside of the realm of green technologies where permitted for use. To approve such BMPs, the Commenter also encourages the adoption of a formalized approval protocol such as those utilized by the Washington Department of Ecology and the New Jersey Department of Environmental Protection.

EPA Response: EPA believes that off-site mitigation is a feasible alternative when off-site locations have adequate capacity. The Final Permit (Section 4.1.3, Off-Site Mitigation and/or Fee-in Lieu for all Facilities) requires that the District public-notice any off-site mitigation and/or fee-in-lieu programs. EPA encourages the Commenter to participate in this process and make her points at that time. The Permit also requires that the Permittee submit the program to EPA for review and comment.

In addition to the foregoing safeguards, EPA notes that the Permit expands the minimum requirements for an off-site mitigation and/or fee-in-lieu program by requiring, among other things, that the program include: (1) Establishment of baseline requirements for on-site retention and for mitigation projects; (2) Specific criteria for determining when compliance with the baseline requirement for on-site retention cannot technically be met based on physical site constraints; (3) For a fee-in-lieu program, establishment of a system or process to assign monetary values at least equivalent to the cost of implementation of controls; and (4) The necessary tracking and accounting systems to implement this section, including that original and off-site practices stay in place and are adequately maintained. Section 4.1.3 of Final Permit.

Finally, EPA believes that the transaction costs associated with off-site mitigation and/or fee-in-lieu payments will serve as a sufficient deterrent against developers pursuing these options as a first course.

e. The Commenter concedes that green technologies are a useful tool in stormwater management, but also states that they are not a "silver bullet" and the District should not be limited to only green technologies for the management of stormwater quality and quantity concerns. The Commenter also mentions that maintenance concerns and costs exist for green technologies as well as for more traditional controls.

Further, EPA refers the Commenter to the plethora of publications documenting costs *and benefits* of stormwater retention (or green infrastructure) approaches.[8] In particular EPA emphasizes that these approaches provide greater enhanced water quality benefits that more traditional approaches typically do not, and that are necessary to meet the water quality objectives of the Clean Water Act.

f. The Commenter suggests that green technologies are not well-suited for all target pollutants, and that the Permit should include an allowance for using the most appropriate stormwater control measures for a site even if they fall outside the realm of green technologies. Any limitation of the most appropriate control limits the owner/developer's ability to meet the MEP.

EPA Response: As explained in response to the previous comment, green technologies offer many benefits with regard to volume control. As a corollary, target pollutants are removed when volume is controlled.

g. The Commenter applauds the inclusion of a retrofit program, but states that the goal of the Permit appears to be related to the amount of controls installed rather than focusing on a performance target, and that the Permit is prescriptive without a clear performance goal. She also states that retrofitting with green technologies may not be the most effective and appropriate solution for the targeted pollutants. The Commenter also refers to certain traditional control technologies that have been introduced in the last 15 years, such as hydrodynamic separators and catch basin inserts.

EPA Response: Because this comment overlaps with the other comments made by this Commenter, the response incorporates those responses above.

8. Council of the District of Columbia, Council Members (June 4, 2010).

a. The Commenters recommend that the Permit identify co-Permittees in addition to the DDOE, such as the DDOT, as parties responsible for implementation.

EPA Response: The Permit specifically indicates that the Permittee is the Government of the District of Columbia, and specifically addresses individual agency responsibilities:

> The Government of the District of Columbia is the Permittee, and all activities of all agencies, departments, offices and authorities of the District must comply with the requirements of this Permit. The Permittee has designated the District Department of the

[8] *See* documents cited in n. 1 herein, *supra.*

Environment (DDOE) as the agency responsible for managing the MS4 Stormwater Management Program and all activities necessary to comply with the requirements of this Permit and the Comprehensive Stormwater Management Enhancement Amendment Act of 2008 by coordinating and facilitating a collaborative effort among other city agencies and departments including but not limited to departments designated as "Stormwater Agencies" by the Comprehensive Stormwater Management Enhancement Amendment Act of 2008:

District Department of Transportation (DDOT);
Department of Public Works (DPW);
Office of Planning (OP);
Office of Public Education Facilities Modernization (OPEFM);
Department of Real Estate Services (DRES);
Department of Parks and Recreation; and
DC Water and Sewer Authority (also known as and hereinafter referred to as DC Water).

Each named entity is responsible for complying with those elements of the Permit within its jurisdictional scope and authorities.

See Final Permit at Section 2.3.1.

b. The Commenters state that all outcomes and plans required by the Permit should be subject to robust public participation including public review and comment for draft plans.

EPA Response: The Final Permit contains robust opportunities for public participation. For example, Section 2.3 of the Final Permit (Stormwater Management Program Administration/Permittee Responsibilities, lists one of DDOE's major responsibilities as "[m]aking available to the public and other interested and affected parties, the opportunity to comment on the MS4 stormwater management program." Also, the Permit provisions for development of off-site mitigation/fee-in lieu, retrofit, tree canopy, and storm drain system operation and management/solids and floatables reduction programs also include such requirements. *See* Sections 4.1.3, 4.1.5, 4.1.6, and 4.3.5, respectively.

By way of additional examples of public notification requirements, the Final Permit increases public participation aspects of the Permit, in part by including TMDL WLA Implementation as part of the District's overall Stormwater Management Plan (SWMP) (moved from Section 8.1 of Draft Permit, "Other Applicable Provisions -- WQS and TMDL WLA Implementation Plans and Compliance Monitoring") to Section 4.10 of Final Permit ("Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA) Planning and Implementation"). It also requires the Permittee to "make all draft and approved MS4 documents required under this Permit available to the public for comment. The current draft and approved SWMP and the MS4 annual reports deliverable documents required under this Permit shall be posted on the Permittee's website." (Section 4.9.4.3 of Final Permit). *See also* Sections 4.9.4.1 (requirement to create opportunities for the public to participate in the decision making processes involving the implementation and

update of the Permittee's SWMP); 4.9.4.2 (requirement to continue to establish a method of routine communication to groups such as watershed associations and environmental organizations that are located in the same watershed/s as the Permittee, or organizations that conduct environmental stewardship projects located in the same watershed/s or in close proximity to the Permittee); 4.9.4.4 (requirement to continue to develop public educational and participation materials in cooperation and coordination with other agencies and organizations in the District); and 4.9.4.5 (requirement to periodically, and at least annually, update its website).

Further, at Section 3, the Final Permit requires that "[a] current plan shall be posted on the District's website at an easily accessible location at all times" and also that "[n]o later than 3 years from the issuance date of this Permit the Permittee shall public notice a fully updated Plan including all of the elements required in this Permit. No later than 4 years from the issuance date of this Permit the Permittee shall submit to EPA the fully updated plan for review and approval, as part of the application for Permit renewal."

c. The Commenter suggests that the Permit should commit the District to particularized, enforceable actions that are specific, objective, and observable. Currently, the Permit is vague, and, in parts, unenforceable.

EPA Response: EPA has stipulated numeric pollutant objectives in a Permit when that is the most effective way to achieve environmental goals. In the Final Permit, for example, EPA has included specific numeric limits that are consistent with the Anacostia Trash TMDL. . Similarly, the Final Permit contains specific numeric objectives for items like retrofit drainage areas, tree plantings, square footage of green roofs, *see* Sections 4.1.5, 4.1.6, and 4.1.7, respectively, and other measurable requirements, on the one hand, However, for some parameters, it is more effective to translate pollutant reduction objectives into more specific narrative provisions, such as specifying narrative requirements for practices like landscape and recreational facilities management and pesticide, herbicide, fertilizer, and landscape irrigation *See* Section 4.3.4 of the Permit.

d. The Commenters are particularly concerned that the Draft Permit does not provide supporting data on the costs of implementing the requirements. They also note that the federal government might not pay the impervious area fee that is designed to support MS4-related activities; therefore, the burden on ratepayers is uncertain.

EPA Response: The NPDES regulations do not require economic analyses to be performed in connection with Permit issuance (as opposed to analyses required in the case of rulemakings, such as regulations). In any event, EPA refers the Commenter to the plethora of publications documenting costs *and benefits* of stormwater retention (or green infrastructure) approaches.[9] In particular EPA emphasizes that these approaches provide greater enhanced water quality benefits that more traditional approaches typically do not, and that are necessary to meet the water quality objectives of the Clean Water Act.

[9] *See* documents cited in fn. 1 herein, *supra.*

As to the Commenter's point that the federal government might not pay the impervious surface assessment, EPA notes first that the scope of this Permit is limited to imposing stormwater controls and effluent limitations on the District as Permittee (see Section 1 of Final Permit); as such, a requirement that a third party pay fees to the Permittee is outside the scope of this Permit. Be that as it may, EPA notes that Senate Bill 3481, which requires the federal government to comply with local stormwater fees that are used to treat and manage polluted stormwater runoff, passed the U.S. Senate and House by unanimous consent on Dec. 21 and Dec. 22, 2010, respectively, and was signed into law by President Obama on January 4, 2011. *A bill to amend the Federal Water Pollution Control Act to clarify Federal responsibility for stormwater pollution*, S. 3481, 111th Congress (2009 - 2010) (available at: http://thomas.loc.gov/cgi-bin/bdquery/z?d111:S3481:). On March 14, 2011, the U.S. Government Accountability Office indicated its willingness to pay the fee in light of the recent legislation. *See* U.S. Government Accountability Office, *Letter re: Public Law 111-378 and Payment of the Stormwater Charge* (March 14, 2011).

9. Departments of the Navy, Army and Air Force, S.G. Womack [Navy] (May 27, 2010).

EPA notes that it met with Department of Defense (DOD) representatives since the close of the Comment period –on October 26, 2010 with DOD and the Navy General Counsel's Office, and on November 23, 2010 with representatives of the Navy Region Mid-Atlantic/DOD Regions 1&3. The purpose of the meetings was simply to discuss the Comment letter, and the parties did not raise new issues at those meetings.

The Commenter, S.G. Womack, indicates that he is the Department of Defense Regional Environmental Coordinator, and that his comments are on behalf of the Departments of Navy, Army, and Air Force. The Comment letter includes the following two enclosures: Memorandum for Acting Assistance Secretary of the Army, *et al.* from Dorothy Robyn, Deputy Undersecretary of Defense, re: DoD Implementation of Stormwater Requirements under Section 438 of the Energy Independence and Security Act (EISA) (Jan. 19, 2010); and Letter from Donald Schregardus, Deputy Assistant Secretary of the Navy, to Jonathan Angier, EPA, re: Stakeholder Input: Stormwater Management Including Discharges from New Development and Redevelopment (Feb. 24, 2010).

EPA acknowledges that it has recently received correspondence from DOD indicating that the Department supports the development of a Memorandum of Understanding with EPA memorializing certain voluntary stormwater management commitments, actions and performance criteria in DC.

a. The Commenter notes that the Energy Independence Security Act of 2007 (EISA) and Clean Water Act (CWA) are two separate statutes and that the District's MS4 Permit is issued under the Clean Water Act. He states that the CWA therefore does not authorize the inclusion of EISA 438 standards in the District's MS4 Permit; rather, EISA § 438 was written to be self-executing by Federal Agencies in the management of stormwater from Federal development and redevelopment projects. The Commenter further suggests that

if EPA chooses to include EISA in the District's MS4 Permit, it would need to engage in rulemaking under the Administrative Procedure Act.

EPA Response: The Draft Permit was not purported to be an implementation of Section 438 of EISA, 42 U.S.C. § 17094. To the extent that the draft Fact Sheet may have implied that the Draft Permit was developed to implement that provision or to EPA Technical Guidance on implementing that provision, EPA is clarifying in the Final Fact Sheet that post-construction performance standards for development are permit terms pursuant to Section 402(p)(3) of the CWA. Nonetheless, EISA Section 438 and the Technical Guidance are relevant for establishing such performance standards for this permit under Section 402(p)(3)(B)(iii), and the permit requirements are *consistent with* EISA (*see* final Fact Sheet at Section 4.1.

b. The Commenter indicates that the Draft Permit holds the federal government to a different standard than non-federal entities, and that it therefore runs afoul of section 313(a) of the Clean Water Act. The Commenter also suggests that the District will not be able to comply with the Permit because it cannot enforce the differential standards, and that Federal facilities are only subject to the CWA to the extent they are treated in non-discriminatory manner.

EPA Response: The Final Permit has been revised to require the same standard to be imposed on all discharges from developed sites of 5,000 square feet or larger within the DC MS4 Permit Area. See today's Fact Sheet for the rationale for this single standard.

c. The Commenter states that the Draft Permit inappropriately incorporates portions of EPA's EISA § 438 Technical Guidance, which is not a legally binding document and should not be included in the Permit as such. He also notes that elements of the Technical Guidance should not be included in the Permit as mandatory requirements.

EPA Response: *See* Response to Comment 9a, *supra*, which is incorporated here.

d. The Commenter argues that the Permit condition requiring Federal Facilities to mimic "meadow" hydrology as a post-development condition (when 95th percentile storm retention standard cannot be met) is inconsistent with the CWA, EISA § 438, and the EPA's Technical Guidance and will result in a mandatory retrofit of existing stormwater discharges following relatively minor construction projects (as small as 5,000 square feet).

EPA Response: The Final Permit does not include the draft provision that is the subject of this comment .

Also, because the standard only applies to new development and redevelopment, local implementation of the standard would not force or mandate retrofits..

e. The Commenter argues that the Permit has eliminated the statutory provision that Federal facilities are to maintain predevelopment hydrology "to the maximum extent technically feasible." The Commenter suggests that the Draft Permit provision requiring the

management of stormwater based on predevelopment hydrology is an absolute requirement with the only alternative being to pay into an in-lieu-fee program or provide off-site mitigation. The Commenter does not believe that EPA has the authority to remove the feasibility allowance, nor does he believe that Federal facilities are authorized to pay into an in-lieu program. He also contends that off-site mitigation would be very problematic for Federal facilities due to constraints on land use.

EPA Response: As noted *supra,* the DC MS4 Permit does not incorporate the EISA standards but instead includes a performance standard to be implemented by the District. The performance standard is informed by the underlying technical record supporting EPA's EISA Technical Guidance, which is relevant to these stormwater discharges. Also, as noted previously, the Final Permit no longer includes the reference to modeling for pre-development hydrology. EPA notes that requirements that may be imposed by the District in implementing the Final permit are separate from, and in addition to, any requirements that may apply to the commenter under EISA § 438.

The Permit does not require any entity to perform off-site mitigation or pay into a fee-in-lieu program. Rather, the Permit requires the District to "develop, public notice, and submit to EPA for review and comment an off-site mitigation and/or fee-in-lieu program to be utilized when projects cannot meet stormwater management performance standards. . . . " *See* Final Permit at Section 4.1.3.

The Commenter also includes comments on individual sections of the Draft Permit, as described below.

f. With regard to section 1.2 of the Draft Permit, which addresses the Permit coverage area, the Commenter states that not all DOD facilities actually drain to the MS4, and that DOD will identify which facilities do and do not drain to the system.

EPA Response: Section 1.2 of the Final Permit states: "This Permit covers all areas within the corporate boundary of the District of Columbia served by, or otherwise contributing to discharges from, the Municipal Separate Storm Sewer System (MS4) owned or operated by the District of Columbia (hereinafter, 'MS4 Permit Area')." Accordingly, development projects involving a DOD facility that are neither served by the system nor contribute to it are not required to be subject to the local control program specified in the Permit.

g. With regard to legal authority (Section 2.1 of Draft Permit), the Commenter suggests that the District may be unable to obtain legal authority with respect to perceived "discriminatory" requirements of the Permit.

EPA Response: EPA responded to this point *supra* at Comment 9.b, and incorporates that response here.

h. As to section 4.1.1 of the Draft Permit (Standards for New Development and Redevelopment), the Commenter argues that: (1) the District is unable to enforce a more stringent performance standard against federal facilities as opposed to non-federal; (2) the

alternative performance standard Permitting modeling of pre-development hydrology to include "meadow" is not an appropriate reference standard; (3) non-federal facilities are allowed adjustments to the performance standard if they can quantify an environmental benefit; it is unfair that federal facilities do not have this same ability; and (4) the Draft Permit is more stringent than the EPA EISA section 438 Technical Guidance because it requires off-site mitigation after retention, whereas the Guidance simply permits such mitigation.

EPA Response: EPA has responded to each of these points, *supra,* and incorporates the responses here. As to the argument that the District cannot enforce a more stringent performance standard against federal facilities, *see* Response 9.b. With regard to the Commenter's concern about the alternative performance standard Permitting modeling of pre-development hydrology to include "meadow," that comment is now moot. *See supra* at Comment Response 9.d. As to the suggestion that it is unfair for federal facilities not to be allowed adjustments to the performance standard if they can quantify an environmental benefit because non-federal facilities have this benefit, EPA has deleted the relevant paragraph in its entirety. Finally, with respect to the Commenter's point that the Draft Permit is more stringent than the EPA EISA section 438 Technical Guidance because it requires off-site mitigation after retention, whereas the Guidance simply Permits such mitigation, EPA posits that the Commenter is incorrect. The Off-Site mitigation program addressed by the Permit, Section 4.1.3, nowhere requires retention prior to mitigation; in addition off-site mitigation is an optional alternative, not a requirement.

i. The Commenter states that with regard to section 4.1.2 of the Draft Permit (Retrofit Program for Existing Discharges), DOD plans to implement urban retrofits outlined in the Guidance for Federal Land Management in the Chesapeake Bay Watershed as mandated by Executive Order 13508. The Commenter also argues that this section of the Draft Permit stipulates a retrofit program including a potential justification for a reduced standard applicable to only non-federal facilities. The Commenter believes that federal facilities should also be able to rely on this alternative performance standard for retrofits.

EPA Response: EPA appreciates knowing that DOD plans to implement urban retrofits, and believes that the retrofit requirements of the Final Permit are consistent with DOD's plans. Those requirements include: (1) develop, public notice and submit to EPA for review and approval a program that establishes performance metrics for retrofit projects within two years of Permit effective date; (2) target federal land holders in order to document federal commitments to retrofitting their properties; (3) estimate potential pollutant load and volume reductions achieved through the DC Retrofit program by major water body (Rock Creek, Potomac River, and Anacostia River) for identified parameters; and (4) implement retrofits for stormwater discharges from 18,000,000 square feet of impervious surfaces during the Permit term (with a minimum of 1,500,000 square feet in transportation rights-of-way). *See* Section 4.1.5 of Final Permit ("Retrofit Program for Existing Discharges"). EPA encourages DOD to provide comment on the District's SWMP regarding retention standards when they are being developed during the Permit term.

j. With regard to tree canopy (Section 4.1.3 of the Draft Permit), the Commenter seeks to have the Permit clarify whether federal lands are included in the area subject to the

performance standard, and notes that DOD may be limited in its ability to satisfy the requirement.

EPA Response: The Final Permit includes as a performance standard that the District must "[a]chieve a minimum annual tree planting rate of at least 4,150 plantings annually within the District." The Permit also requires the District to "identify locations throughout the District where tree plantings and expanded tree boxes are technically feasible and commit to specific schedules for implementation at locations throughout the District, with highest priority given to projects that offer the greatest stormwater retention potential." *See* Section 4.1.6 of Final Permit. While the Permit is silent as to whether trees will be planted on federal lands, the District will have to investigate appropriate locations for planting and would likely exclude those where the requirement cannot be satisfied or locations with low stormwater retention potential.

k. As to Section 4.2 of the Draft Permit (Operation and Maintenance of Stormwater Capture Practices), the Commenter indicates that District development of accountability mechanisms to ensure maintenance of stormwater control measures on DOD properties will need to accommodate the unique aspects of Federal land, such as limitations on deed restrictions and security requirements.

EPA Response: The language of the Final Permit is broad enough to allow the District flexibility to adopt sufficient mechanisms for stormwater control measures that are appropriate to all property holders, including property holders with special access or security requirements like those of DOD.

l. Moreover, the Commenter suggests that with respect to section 4.4 of the Draft Permit (Management Plan for Commercial and Institutional Areas), the District should not establish a duplicative reporting requirement or inspections for DOD facilities with separate NDPES stormwater Permits issued by EPA.

EPA Response: The District currently performs NPDES Permit compliance inspections for facilities, including federal entities, which have separate Permits issued by EPA as part of the Agency's CWA Section 106 Program. DC also maintains an existing inventory of facilities, including federal facilities, which have Construction General Permit and Multi-Sector General Permit coverage issued through EPA Headquarters; these Permits enable such facilities to perform periodic compliance inspections.[10] Section 4.4 of the Final Permit reinforces the District's commitment to continue to perform these activities and does not represent a duplication of effort.

m. Finally, the Commenter requests clarification of Section 4.5 of the Draft Permit, Management Plan for Industrial Facilities and Spill Prevention. He notes that some industrial stormwater Permits issued to Federal facilities cover the entire facility, and

[10] EPA's "NPDES General Permit for Stormwater Discharges From Construction Activities," 73 Fed. Reg. 40338 (July 14, 2008) is available at: http://www.epa.gov/npdes/pubs/cgp2008_finalpermit.pdf), and its "Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP)," 73 Fed. Reg. 56572 (Sept. 29, 2008), is available at: http://www.epa.gov/npdes/pubs/msgp2008_finalpermit.pdf.

suggests that the industrial Permits take precedence over the District's MS4 Permit in order to avoid implementation of duplicative requirements.

EPA Response: If a federal facility has either a separate individual NPDES Permit or coverage under an EPA general Permit, these Permits take precedence over the District's MS4 Permit.

10. District of Columbia Building Industry Association, Merrick Malone (June 4, 2010).

a. The Commenter states as his primary concern that the feasibility and associated cost impacts of proposed stormwater retention standards will not have been adequately established prior to their implementation. Further, the Commenter suggests that EPA should conduct further analyses, including pilot programs, to identify current regulatory obstacles, best management practices, and associated costs.

EPA Response: Today's Fact Sheet contains a detailed discussion of the basis for the stormwater retention standards in the Final Permit. EPA also refers the Commenter to the plethora of publications documenting costs *and benefits* of stormwater retention (or green infrastructure) approaches.[11] In particular EPA emphasizes that these approaches provide greater enhanced water quality benefits that more traditional approaches typically do not, and that are necessary to meet the water quality objectives of the Clean Water Act.

b. The Commenter suggests that EPA needs to acknowledge that public and private cooperation will be critical to achieving the reductions proposed in the Draft Permit. He also wants the Agency to identify financial and technical assistance, such as CWA Section 319 grants, that would be made available to the District given its unique characteristics. Likewise, the Commenter believes that EPA needs to acknowledge that the District may adopt sufficient regulatory flexibility in its new stormwater regulations to ensure that reduction goals can be achieved feasibly and cost-effectively, and that the proposed Permit as written does not incorporate or acknowledge any of these critical elements.

EPA Response: The Permittee is the District of Columbia, which is the only entity that can be required to undertake activities imposed by the Permit. However, the Final Permit does require that the District record information related to private landowners. *See e.g.*, Sections 4.1.7.3 ("[The Permittee must d]ocument the square footage of green roof coverage in the District, whether publicly or privately owned, report any incentive programs implemented during the Permit term, and estimate the volume of stormwater that is being removed from the MS4. . . . "); 4.2.2 ("The District must continue to maintain an electronic inventory of practices on private property to include [operation and maintenance of stormwater capture practices]").

As to identifying financial and technical assistance available to the District, that is also outside the scope of this Permit. However, "Permit requirements do not prohibit the use of 319(h) funds for other related activities that go beyond the requirements of this Permit, nor do they prohibit

[11] *See* documents cited in n. 1 herein, *supra.*

other sources of funding and/or other programs where legal or contractual requirements preclude direct use for stormwater Permitting activities." *See* Final Permit at Section 3.

With regard to regulatory flexibility, EPA does not oversee the promulgation of all District regulations. Instead, the Permit requires the Permittee to "use its existing legal authority to control discharges to and from the Municipal Separate Storm Sewer System (MS4) in order to prevent or reduce the discharge of pollutants to achieve water quality objectives." Section 2.1.1. It also requires that the District update its stormwater regulations, so that they are "at least as protective of water quality as the federal Clean Water Act and its implementing regulations require," Section 2.1.2, which is the legal standard that all states must meet in implementing regulations.

c. The Commenter believes that "meadow" is an inappropriate standard upon which to base the pre-development condition, since the District has not had meadow-like conditions for hundreds of years.

EPA Response: The comment is now moot, as explained *supra* at Comment 9.d.

d. The Commenter states that the proposed 90-95% retention standard required by the Permit is infeasible, imprudent, or both, as many sites in the City either contain "clayey" soils, which cannot retain significant volumes of stormwater, or contaminated soils, where it would be imprudent to require on-site retention and percolation.

EPA Response: EPA notes initially that the Final Permit imposes the same numeric retention standard on both federal and non-federal facilities, i.e., choice by the District of either *90th* percentile storm retention standard or modeling of pre-development hydrology. Moreover, compliance with the Final Permit is not precluded by the mentioned site restraints, and many of them can be successfully overcome. For example, clay soils can be amended or replaced. Infiltration can also be supplemented by practices that evapotranspire or harvest rainwater. At the same time, EPA agrees that there will be some sites where managing this volume of water will be infeasible, and has therefore provided provisions for the District to develop off-site mitigation and/or payment-in-lieu programs (Section 4.1.3).

e. The Commenter argues that EPA's Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP), 73 *Fed. Reg*. 56,572 (Sept. 29, 2008), is inappropriate for covering discharges of sump water or groundwater commingled with stormwater flows into the MS4, and that EPA needs to develop a more appropriate General Permit for these types of discharges.

EPA Response: Issues relating to the MSGP and development of a separate Permit for sump water or groundwater commingled with stormwater flows are outside the purview of the District's MS4 Permit. However, the Commenter may wish to contact the relevant EPA office—Office of Water/Office of Wastewater Management (http://water.epa.gov/aboutow/owm/aboutowm.cfm) – to raise this concern.

f. The Commenter states that the Draft Permit takes a "one size fits all" approach to stormwater regulation, and that this approach is uncommon among agencies and unworkable in practice. He also suggests that the Permit needs to promote a neighborhood-by-neighborhood or watershed-by-watershed approach.

EPA Response: EPA does not see the Federal role as prescribing practices at the micro-level; that is an activity that is more appropriate for the District to perform at its level. Accordingly, the Final Permit contains several performance metrics that call for the District to determine how they are to be best achieved.

g. The Permit does not make it clear that the District of Columbia may use regulatory incentives to achieve its goals. At a minimum, the Permit should explicitly recognize the ability of the District to use trading programs to achieve its goals, and that off-site mitigation may be required due to the fact that the District is largely built out.

EPA Response: As to regulatory incentives, the Final Permit requires (Section 2.1.2) that the District update its stormwater regulations as necessary to address the control of stormwater through the DC MS4 Permit Area. The Permit does not preclude the District from developing regulatory incentives that it believes are appropriate. Specifically with regard to trading programs, the Final Permit requires the District to "develop, public notice, submit to EPA for review and comment, and implement an off-site mitigation and/or fee-in-lieu program to be utilized when projects cannot meet stormwater management standards because of significant site constraints limiting the implementation of the necessary controls. *See* Final Permit at Section 4.1.3.

h. The Commenter states that developers should be given enough flexibility so that they are able to choose the green attributes that work best for their particular project. Stormwater retention should not be allowed to "trump" all other green attributes of a project.

EPA Response: The Final Permit strikes an appropriate balance between allowing the Permittee some flexibility to implement controls and measures (e.g., [1] for development projects, the Permit provides a choice between a numeric retention standard and designing to pre-development hydrology, Section 4.1.1; and [2] off-site mitigation and/or fee-in-lieu program, Section 4.1.3), but at the same time includes performance standards that ensure effective prohibition of pollutants from entering the MS4.

i. The Commenter suggests that the federal government also needs to exercise leadership in the area of stormwater protection, in accordance with the Executive Order on Federal Leadership in Environmental, Energy, and Economic Performance, E.O. 13514, 74 Fed. Reg. 52,115 (October 5, 2009), and require the federal government to pay the District's impervious surface fee.

EPA Response: EPA is aware that the District relies on the impervious surface assessment as a basis for supporting its compliance with the Permit requirements. However, the scope of this Permit is limited to imposing stormwater controls and effluent limitations on the District as Permittee (see Section 1 of Final Permit); as such, a requirement that a third party pay fees to the

Permittee is outside the scope of this Permit. In any event, EPA notes that Senate Bill 3481, which requires the federal government to comply with local stormwater fees that are used to treat and manage polluted stormwater runoff, passed the U.S. Senate and House by unanimous consent on Dec. 21 and Dec. 22, 2010, respectively, and was signed into law by President Obama on January 4, 2011. *A bill to amend the Federal Water Pollution Control Act to clarify Federal responsibility for stormwater pollution*, S. 3481, 111th Congress (2009 - 2010) (available at: http://thomas.loc.gov/cgi-bin/bdquery/z?d111:S3481:). On March 14, 2011, the U.S. Government Accountability Office indicated its willingness to pay the fee in light of the recent legislation. *See* U.S. Government Accountability Office, *Letter re: Public Law 111-378 and Payment of the Stormwater Charge* (March 14, 2011).

j. The Commenter believes that any regulatory costs (including environmental regulation) that encourage sprawl to occur in lower-cost areas undermine smart growth and transit-oriented development (TOD). The District needs statutes and regulations that encourage, not discourage, Smart Growth and TOD.

EPA Response: EPA is not aware of any data supporting the premise that stormwater regulations encourage sprawl; in fact, most available information demonstrates that the converse is usually true.

11. District Department of the Environment, Hamid Karimi (comment letter dated June 4, 2010; superseding Comment letter dated June 21, 2010; supplement to June 21, 2010 comments to include claimed new authority dated July 22, 2010; and second supplement to June 21, 2010 comments to include claimed new authority dated November 3, 2010).

The comments included in the June 4, 2010 letter were described as draft and interim. Comments submitted on June 21, 2010 indicated that they were formal and final, superseding and replacing the comments submitted on June 4, 2010. The Commenter also indicated that the Comments were being submitted on behalf of the Government of the District of Columbia. For this reason, EPA has only responded to the comments contained in the June 21, 2010 Comment letter.

DDOE also submitted two sets of supplemental comments to the June 21, 2010 letter – one on July 22, 2010 and the other on November 23, 2010.

The June 21, 2010 Comment letter includes a narrative summary of major issues and an attachment which provides additional comments and suggested language changes. EPA has taken each edit/comment under advisement; however, the Responsiveness Summary only includes the more substantive of the comments. For example, comments/edits intended merely to clarify existing language that do not change the intent of the language, have not been summarized here. Moreover, repetitive comments/edits made in these documents are not repeated; each unique comment/edit is addressed once.

EPA also notes that it did meet with DDOE representatives since the close of the Comment period – on September 23, 2010, October 20 and 22, 2010, and June 21, 2011.

The purpose of the meetings was to simply discuss the Comment letters and reissuance of the Permit, and DDOE did not raise new issues at those meetings.

a. In the cover letter, the Commenter indicates that he objects to a requirement that the Permittee comply with WQS and TMDL WLAs (Sections 1.4, 4.1, 8, and 9.4 of the Draft Permit), and indicates that this requirement is at odds with language in the draft Fact Sheet acknowledging that WQS attainment is an incremental process. The Commenter also posits that compliance with WLAs should effectively constitute compliance with WQS; therefore, the Permit should not distinguish between these two standards. The Commenter also requests that all Permit conditions requiring it to meet numeric standards be changed to the requirement for BMPs.

EPA Response: EPA has included language in the Final Permit (Section 1.4) that "[c]ompliance with the performance standards and provisions contained in Parts 2 through 8 of this Permit shall constitute adequate progress toward compliance with DCWQS and WLAs for this Permit term." This language is similar to the version in the Draft Permit, except that it adds the word "adequate" as a modifier to "progress toward compliance. . . "

b. Also in the cover letter, the Commenter states that he is very concerned with inclusion of *any* numeric/performance standard for non-federal facilities, and he notes that MS4 Permits in neighboring Maryland and Virginia do not include numeric retention standards. He also suggests that the implementation of a stringent retention standard could greatly encourage sprawl by encouraging development outside of the District in suburban areas.

EPA Response: It is entirely appropriate for the Permit to include quantifiable and enforceable provisions such as performance standards. The Final Permit strikes an appropriate balance between allowing the Permittee some flexibility to implement controls and measures (*e.g.*, requirement for development and implementation of off-site mitigation and/or fee-in-lieu program, Section 4.1.3), while at the same time includes performance standards that ensure effective prohibition of pollutants from entering the MS4.

As to standards in neighboring states, EPA notes that Maryland regulations do include a similar numeric performance standard approach. *See* "Stormwater Management Act of 2007", Md. Code Env't. Article § 4-201 (April 24, 2007); Code of Maryland (COMAR) § 26.17.02.01-1 (which incorporates the Maryland Design Manual (Maryland Department of Environment, *Environmental Site Design (ESD)Process and Computations* (July 2010) *(available at:* http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/Documents/www.mde.state.md.us/assets/document/ESD%20Process%20Computations%20Review.pdf.). The Maryland Design Manual essentially requires developers to design for a "woods in good condition" reference condition for on-site stormwater retention. For purposes of quantity of stormwater managed on-site, the actual number will vary depending on soil type and percent imperviousness; generally, projects will have to manage on site anywhere from 1" to 2.6".

The Virginia stormwater regulations currently in effect contain both performance-based and technology-based numeric criteria. *See* 4VAC Chapter 50 (available at:

http://www.dcr.virginia.gov/soil_and_water/documents/vaswmregs.pdf.). Virginia also has new draft regulations with numeric performance based standards. *See* http://www.dcr.virginia.gov/lr2d.shtml.

Virginia has also indicated in its Chesapeake Bay TMDL Final Phase I Watershed Implementation Plan that it intends to impose more stringent requirements on new development and significant redevelopment within the Bay watershed. *See generally*, Commonwealth of Virginia, *Chesapeake Bay TMDLPhase I Watershed Implementation Plan: Revision of the Chesapeake Bay Nutrient and Sediment Reduction Tributary Strategy* (November 29, 2010) (available at: http://www.deq.state.va.us/export/sites/default/tmdl/pdf/baywip/vatmdlwipphase1.pdf).

c. As to the specific 1.2" retention standard for non-federal facilities, the Commenter suggests that EPA has not demonstrated that such standard can be met—especially in a highly-urbanized setting. The Commenter also states that any bases cited for the retention standard are not comparisons to similarly-situated jurisdictions (e.g., they are for Phase II or construction general Permits, or for less densely-populated areas).

EPA Response: EPA first notes that the Final Permit requires the District to apply the same performance standard ("1.2" of stormwater from a 24- hour storm with a 72-hour antecedent dry period through evapotranspiration, infiltration and/or stormwater harvesting") to *all* development projects greater than 5,000 square feet within the DC MS4 Permit Area – whether federal or non-federal. *See* Section 4.1.1 (Performance Standard for all Facilities). Second, EPA believes that it is in fact feasible for most development projects to meet that performance standard, *see* today's Fact Sheet at Section 4.1. To the extent that an individual development project cannot meet that standard, EPA has authorized the District to develop an off-site mitigation and/or fee-in-lieu program for all facilities. Section 4.1.3.

d. The Commenter objects to limitations on the types of projects that are eligible for adjustment from the performance standard, including transportation and Smart Growth.

EPA Response: The Final Permit provides the District with flexibility to determine an alternate performance standard for retrofit projects in the right-of-way: "Specific site conditions (as noted in 4.1.3.1) may constitute justifications for setting a performance standard at something less than the standards in 4.1.1, and a similar calculator or algorithm process may be used in conjunction with a specific site analysis." Section 4.1.5.1. Moreover, the Final Permit has reduced the minimum square footage for transportation right-of-way retrofit projects by more than one-half -- from 3,600,000 square feet to 1,500,000 square feet. Section 4.1.5.4.
As to the District's concern about the potential deterrence of Smart Growth projects, EPA is not aware of any data supporting the premise that stormwater regulations encourage sprawl; in fact, most available information demonstrates that the converse is usually true.

e. The Commenter objects to the Permit's requirement that the District promulgate regulations that EPA is aware may be challenged by federal agencies (i.e. Government Accounting Office (GAO) and Department of Defense (DOD)).

EPA Response: The scope of this Permit is limited to imposing stormwater controls and effluent limitations on the District as Permittee (see Section 1 of Final Permit). In any event, EPA notes that Senate Bill 3481, which requires the federal government to comply with local stormwater fees that are used to treat and manage polluted stormwater runoff, passed the U.S. Senate and House by unanimous consent on Dec. 21 and Dec. 22, 2010, respectively, and was signed into law by President Obama on January 4, 2011. *A bill to amend the Federal Water Pollution Control Act to clarify Federal responsibility for stormwater pollution*, S. 3481, 111th Congress (2009 - 2010) (available at: http://thomas.loc.gov/cgi-bin/bdquery/z?d111:S3481:). On March 14, 2011, the U.S. Government Accountability Office indicated its willingness to pay the fee in light of the recent legislation. *See* U.S. Government Accountability Office, *Letter re: Public Law 111-378 and Payment of the Stormwater Charge* (March 14, 2011).

f. The Commenter argues that the Draft Permit contains some language that could complicate its enforcement efforts, citing Section 3.3 (Addressing Potential Pollutant Sources) for emphasizing preventive measures rather than end-of-pipe measures.

EPA Response: EPA notes that the stormwater program has always emphasized pollution prevention measures because they generally tend to be more effective than end-of-pipe treatment measures. EPA does not understand the Commenter's contention that this would complicate enforcement.

NOTE: The following comments are contained in Attachment A to the District's comment letter:

g. The Commenter recommends changing the language of Section 1.2 to indicate that *dechlorinated* water line flushing is authorized, since chlorinated water may cause fish kills and other adverse effects to aquatic life. Further, the Commenter suggests adding language to indicate that discharges which are managed to not *further* impair waterbodies (given the fact that DC waters are already impaired), and indicating that discharges that meet the CWA *to the MEP* are authorized by the Permit.

EPA Response: EPA has made the requested change to add that "dechlorinated" water line flushing is authorized. *See* Final Permit at Section 1.2.

As to the suggestion that the language be modified to reflect the fact that water bodies are already impaired, EPA first notes that the language in the Draft Permit is standard language in stormwater permits. Moreover, the requested language could inaccurately be read to suggest that discharges are permitted to the extent they do not cause or contribute *additional* impairments, which is not the case. Therefore, the Final Permit does not reflect the suggested language.

And with regard to including the reference to MEP, the Final Permit does not contain reference to that standard. Rather, the Fact Sheet supporting the Permit has been revised to more clearly demonstrate how the Permit requirements are expected to represent a reduction of pollutants to the MEP. Thus, EPA has also declined to make this change.

h. The Commenter proposes changes to the language in Section 1.4 of the Draft Permit (Discharge Limitations) to indicate that the District is required to implement a SWMP

which meets the MEP standard rather than WQS. The Commenter also seeks to have the Permit revised to indicate that compliance with the Permit constitutes "overall compliance" compliance with WQS, as opposed to "progress toward compliance" as stated in the Draft Permit.

EPA Response: The Fact Sheet has been revised to more clearly demonstrate how the Permit requirements are expected to represent a reduction of pollutants to the MEP. EPA believes that the term "overall compliance" is vague, and does not add any clarity to the Permit. However, the Final Permit has been revised to state that "[c]ompliance with the performance standards and provisions contained in Parts 2 through 8 of this Permit shall constitute *adequate* progress toward compliance with DCWQS and WLAs for this Permit term." Section 1.4 (emphasis added). This language is similar to the version in the Draft Permit, except that it adds the word "adequate" as a modifier to "progress toward compliance."

i. At Section 2.1.2 of the Draft Permit, the Commenter requests that the Permit allow 18 months to update stormwater regulations, and also seeks the following addition to language in the Draft Permit: "Such regulations . . . shall be consistent with this Permit, and shall be at least as protective of water quality as the federal Clean Water Act and its implementing regulations require."

EPA Response: EPA has made the requested changes in the Final Permit.

j. The Commenter recommends revising language in Section 2.1.3 to replace timing requirements for remedying deficiencies in legal authority with a provision that deficiencies in the legal authority shall be remedied "as soon as possible in accordance with the District's legislative and regulatory process." The Commenter expresses concern that the 120-day time limit for remedying this deficiency is not feasible for the Executive branch of the District, but notes that it is committed to working as quickly as possible to complete rulemaking revisions.

EPA Response: The Final Permit (Section 2.1.1) allows the District up to two years to remedy deficiencies that can only be addressed through legislative action. EPA contends that 120 days is adequate for deficiencies that must be addressed through regulation or Executive branch action.

k. The Commenter requests the following revision to Section 2.1.4 of the Draft Permit: "The Permittee shall ensure that the above legal authority in no way restricts ~~intent of this provision is not to prohibit~~ the Permittee's ability to enter into inter-jurisdictional agreements with other District agencies and/or other jurisdictions affected through this Permit."

EPA Response: EPA has made the requested change (now at Section 2.1.3).

l. The Commenter wants the provision requiring adequate fiscal resources (Section 2.2) to be based upon the fiscal adequacy analysis required in Section 6.2.1.

EPA Response: EPA has declined to make this change because the referenced Section (6.2.1) does not describe the requirements of the Permit; rather, it is a list of reporting requirements.

m. At Section 3.3 of the Draft Permit (Addressing Potential Pollutant Sources), the Commenter recommends adding language to indicate that controls shall be implemented to the MEP standard, and also that they shall be designed to "minimize" pollutants (v. "prevent and restrict"). In support of these suggestions, the Commenter notes that the practices implemented to address the listed pollutants can, at best, minimize loadings but not actually restrict such pollutants. He also points out that several practices are already in place to collect and remove trash from receiving streams – presumably in support of the argument that any related Permit requirements would be duplicative of such ongoing practices.

EPA Response: EPA believes that the changes requested by DDOE would weaken the Permit. However, EPA has amended the Permit language as follows: "Controls shall be designed to prevent and restrict priority pollutants from coming into contact with stormwater. . .". (This provision is now located at Section 4.11 [Additional Pollutant Sources]). This change more accurately reflects EPA's expectation that the Permittee focus on a limited universe of pollutants.

As to the suggestion that the Permit require implementation of controls to the MEP, the Final Permit does not contain reference to that standard. Rather, the Fact Sheet supporting the Permit has been revised to more clearly demonstrate how the Permit requirements are expected to represent a reduction of pollutants to the MEP. Thus, EPA has declined to make this change.

Regarding the trash removal requirements specifically, EPA believes that prevention is possible in many cases and some solutions are preventative. However, understanding that the trash load will never be zero, the Permit also uses the term "restrict". Also, the applicable WLA does allow for a certain trash pollutant load.

Finally, to the extent that the Permit requirements overlap with other authorities or activities already in place (including those required by the Anacostia River Trash TMDL), the Permittee is free to note that in deliverables for consideration by EPA as possible credit toward reductions. (The Permittee would still be responsible for complying with the deliverable requirements of the Final Permit).

n. At Section 4 of the Draft Permit (Stormwater Management Plan) (Section 3 of Final Permit), the Commenter suggests revising language to clarify that the pollutant load will be reduced or eliminated to the MEP. The Commenter also recommends adding language to the Permit that would allow changes to BMPs to "maximize the use of resources or the advancement of technology."

EPA Response: EPA Policy provides that "[i]f the state or EPA has established a TMDL for an impaired water that includes WLAs for stormwater discharges, Permits for either industrial stormwater discharges or MS4 discharges must contain effluent limits and conditions consistent with the requirements and assumptions of the WLAs in the TMDL." EPA, *Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload*

Allocations (WLAs) for Stormwater Sources and NPDES Permit Requirements Based on Those WLAs' (November 12, 2010) (available at: http://www.epa.gov/npdes/pubs/establishingtmdlwla_revision.pdf); *see also* 40 C.F.R. § 122.44(d)(1)(vii)(B) (When developing water quality-based effluent limits, the permitting authority shall ensure that, *inter alia*, "[e]ffluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge. . . . "). While EPA's guidance continues to allow Permit writers to express the Permit in terms of BMPs or numeric effluent limits, this decision is based on the circumstances surrounding the Permit and underlying WLA. As far as the instant Permit, data collected within the receiving watersheds as well as modeling that has occurred through the Chesapeake Bay Watershed Model provide EPA with strong confidence in the TMDL WLAs and the belief that the Permit should be written to meet these numeric WLAs.[12]

With regard to the suggestion to add the MEP standard to this paragraph, see response to the previous comment. As to the recommendation that the Permit allow changes to BMPs based on resource maximization or technological advancement, this Permit provides opportunities to propose alternatives for EPA approval in the context of the Annual Report, which shall include, among other requirements, the following elements: (h) An assessment of any SWMP modifications needed to meet the requirements of this Permit; and (i) Revisions, if necessary, to the assessments of controls and the fiscal analysis reported in the Permit application under 40 C.F.R. § 122.26(d)(2)(iv) and (v). *See* Section 6.2.1 of the Final Permit.

o. The Commenter notes that the references in Table 1 (Required Program Stormwater Elements) to the November 27, 2007 and August 1, 2008 Letters of Agreement are not regulatory references and should not be described as such.

EPA Response: EPA has removed such references in the Final Permit; the Permit now relies solely on Chapter 5 of Title 21 of District of Columbia Municipal Regulations (Water Quality and Pollution) as authority for green technology stormwater management practices in (newly-numbered) Table 2 (Legal Authority for Required Program Stormwater Elements).

p. The Commenter again suggests adding MEP language to the Permit, this time with regard to the requirement to design green technology practices to mimic pre-development site hydrology.

EPA Response: The Final Permit does not contain reference to the MEP standard. Rather, as noted *supra*, the Fact Sheet supporting the Permit has been revised to more clearly demonstrate how the Permit requirements are expected to represent a reduction of pollutants to the MEP. Thus, EPA has declined to make this change.

q. The Commenter suggests revising Section 4.1.1 of the Draft Permit (Standards for New and Redevelopment) to replace the phrase "new development and redevelopment" with the single term "development," which he argues is a "more all-encompassing term that more thoroughly addresses land disturbance."

[12] More information on the Bay Model is available at: http://www.chesapeakebay.net/modeling.aspx.

EPA Response: EPA agrees, and has changed the reference throughout the Permit from "new development and redevelopment" to simply "development." The Permit (Section 9) defines "development" as "the undertaking of any activity that disturbs a surface area greater than or equal to 5,000 square feet. For purposes of Parts 4.1.1 through 4.1.4 of the Permit, the requirements apply to discharges from sites for which design or construction commenced after 18 months from the effective date of this Permit or as required by District of Columbia law, whichever is sooner. The District may exempt development projects receiving site plan approval prior to this date from these requirements."

r. At Section 4.1.1.a.i of the Draft Permit, the Commenter proposes changing the Permit to allow 18 months to incorporate new performance standards for new and redevelopment. This would include 12 months to develop and promulgate regulations and 6 months for Permitting of grandfathered projects that were designed under the old regulations.

EPA Response: EPA has made this change: Section 4.1 of the Final Permit allows 18 months to incorporate new performance standards for development as requested.

s. Also at Section 4.1.1.a.i of the Permit, the Commenter seeks a 1.0" retention standard for non-federal facilities (v. 1.2" as proposed), as well as an on-site retention standard of MEP for public right-of-way projects. In support of his requests, the Commenter includes several pages of discussion and argument about the basis for his requests, such as consistency with District stormwater management regulations and the uniqueness of various site conditions that exist for public right-of-way projects (*e.g.*, limited space, structural integrity of pavement, parking and bridges). Among other sources, the Commenter cites comments by the American Association of State and Highway Transportation Officials to EPA's Stormwater Regulations (Dec. 28, 2009) in support of his position.

EPA Response: EPA notes initially that the Final Permit has been revised to impose the same retention standard on all covered facilities (*i.e.*, non-federal and federal) within the DC MS4 Permit Area; therefore this response addresses all covered facilities. Section 4.1 of today's Fact Sheet contains a detailed rationale for the 1.2" performance standard, explaining why it is the appropriate standard. As further explained in the Fact Sheet, EPA's data suggest that a lowered standard would be insufficient to achieve the District's pre-development hydrology with respect to the volume, rate, and duration of the runoff for most sites, and therefore the Final Permit has retained the 1.2" standard. The Fact Sheet also explains how this figure is further supported by DC's Watershed Implementation Plan, *Chesapeake Bay TMDL Watershed Implementation Plan District of Columbia Department of the Environment*, (November 29, 2010) (available at: http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Columbia_WIP_Bay_TMDL.pdf).

With regard to the request for an MEP standard for public right-of-way projects, the Final Permit does not contain reference to the MEP standard. Rather, the Fact Sheet supporting the Permit has been revised to more clearly demonstrate how certain Permit requirements are expected to result in a reduction of pollutants to the MEP. Thus, EPA has declined to make this change. However, EPA has revised the Permit to require that a minimum of 1,500,000 square feet of

retrofits must be in transportation rights-of-way, whereas the Draft Permit required 3,600,000 square feet of such projects (Section 4.1.5 of Final Permit).

t. The Commenter makes two additional points with regard to Section 4.1.1.a.i of the Permit: (1) the Permit should include an allowance for adjustments to retention standards to promote Smart Growth objectives; and (2) the District's Stormwater Management Regulations are not intended to cover certain types of projects (*e.g.*, utility maintenance and home gardening), and therefore such projects should be exempt from the performance standards for non-federal facilities.

EPA Response: The Final Permit authorizes the District to develop off-site mitigation and/or fee-in-lieu programs (Section 4.1.3), and allowances for adjustments to retention standards may be included as part of these programs. It includes a provision that the District develop specific criteria for determining when compliance with the baseline requirement for on-site retention cannot technically be met. *See* Final Permit at Section 4.1.3.

As to the Commenter's suggestion that the Permit exclude certain types of projects, EPA does not believe that a waiver for development standards for utility maintenance and repair activities is appropriate. While the Permit is silent as to these activities, operation and maintenance of municipal operations and related activities are specifically covered by the federal regulations, 40 C.F.R. § 122.26(d)(2)(iv)(A), as well as in various Agency guidance documents, *see e.g.*, EPA, *MS4 Permit Improvement Guide* (April, 2010). Therefore, EPA has declined to make the requested change.

u. At Sections 4.1.1.a. and 4.1.1.b, the Commenter contends that there is a conceptual problem with Permit requirements to achieve retention of predevelopment runoff volume, since the difference between predevelopment and post-development runoff volumes is what is attributable to development and should be controlled (as opposed to achieving predevelopment hydrology).

EPA Response: The District is responsible for the runoff from the MS4 Permit Area whether it is due to development or not, *i.e.*, the site should function as it did before any development occurred. For example, if the site has a parking lot on it or is otherwise impervious, the property owner or operator must still address the stormwater being discharged from the site and not just maintain the pre-project runoff properties of the site.

v. The Commenter contends that specifying different retention standards for non-federal and federal facilities, but then providing the same alternative to those standards to both non-federal and federal facilities, is problematic. The Commenter's suggestion to resolve this problem would be to specify that non-federal facilities be held to a lesser standard than federal facilities for achieving pre-development hydrology.

EPA Response: The Final Permit has been revised to impose the same retention standard on all covered facilities (*i.e.*, non-federal and federal) within the DC MS4 Permit Area. Today's Fact Sheet contains a detailed rationale for the applicability of this standard to all facilities. To the

extent that the comment deals with the option for projects involving federal facilities to model pre-development hydrology, it is now moot. *See* Comment Response 9.d herein.

w. The Commenter raises a concern that the Department of Defense's disagreement with the dual standard could entangle the District in legal proceedings that would detract from its efforts to control stormwater pollution, as well as expose the District to possible noncompliance with Permit requirements. Also, the Commenter requests that language be included in the Permit which will make clear that EPA (v. DDOE) will take responsibility for ensuring compliance at federal facilities. Finally, the Commenter would like the Permit to indicate that if a federal facility does not comply with stormwater requirements, the District will not be considered to be in violation of the MS4 Permit.

EPA Response: The Final Permit has been revised to impose the same retention standard on all covered facilities (*i.e.,* non-federal and federal) within the DC MS4 Permit Area. Therefore, to the extent that the draft Permit posed the potential to "entangle the District in legal proceedings," as suggested by the Commenter, the issue should be resolved. EPA also notes that the Permit requires that the District implement an enforceable mechanism that will adopt and implement the applicable performance standard; so long as the District implements those requirements, it will be in compliance with the relevant Permit condition. In other words, the District's record clearly demonstrating its efforts to comply with permit requirements that it implement procedures to ensure enforcement may be sufficient for purposes of compliance with the Permit -- even if federal facilities are recalcitrant toward such efforts.

x. The Commenter suggests that EPA delete the last two paragraphs in Part 4.1.1.b. as the first includes language that requires the District to "demonstrate quantitatively that the Permit conditions meet the WLA" in order for implementation of the performance standards to be considered equivalent to WQS and WLAs. The Commenter contends that the second paragraph, which requires that individual discharges from development sites be controlled sufficiently to comply with DC WQS unless fully compensated for by in-lieu or off-site mitigation credits, is an unclear and possibly unachievable standard for development projects to meet.

EPA Response: The language related to water quality standards and wasteload allocations has been removed from Section 4.1. However, Section 1.4 of the Final Permit addresses the issue more generally for all provisions in the permit by requiring compliance with the performance standards and provisions contained in the Permit. Full compliance with the Permit's standards and requirements constitutes adequate progress toward compliance with the District's water quality standards and wasteload allocations for the relevant permit term. Section 4.1.3 of the Final Permit does allow for off-site mitigation and payment-in-lieu specifically as an alternative to on-site compliance with the 1.2" standard.

y. At Section 4.1.1.d of the Draft Permit (Off-Site Mitigation), the Commenter suggests edits which would: allow 18 months to implement an off-site mitigation and fee-in-lieu program; provide for zoning restrictions and "other specific considerations" as justification for why the performance standard cannot be met; require the District to create incentives for meeting the performance standard first, mitigating impacts off-site

second and paying a fee in lieu of complying as a third option, rather than allowing the developer to choose which alternative compliance method to utilize if the performance standard cannot be met; and finally, allow the District to exempt public ROW projects from the mitigation and/or fee-in-lieu requirements.

EPA Response: As requested, the Final Permit (Section 4.1.3) allows the District 18 months to develop, public notice, and implement a mitigation and/or fee-in-lieu program. Rather than including the specific criteria requested by the Commenter, though, the Final Permit provides the District with sufficient flexibility through requiring the program to include at a minimum: (1) Establishment of baseline requirements for on-site retention and for mitigation projects; (2) Specific criteria for determining when compliance with the baseline requirement for on-site retention cannot technically be met based on physical site constraints; (3) For a fee-in-lieu program, establishment of a system or process to assign monetary values at least equivalent to the cost of implementation of controls; and (4) The necessary tracking and accounting systems to implement this section, including that original and off-site practices stay in place and are adequately maintained. *See* Section 4.1.3 of Final Permit.

z. The Commenter suggests that it does not make sense to have payments-in-lieu submitted to the Stormwater Enterprise Fund because DDOT relies on those funds to implement stormwater management practices in the right-of-way.

EPA Response: The Final Permit removes the requirement that payments-in-lieu be submitted to the Enterprise Fund.

aa. The Commenter proposes changing the Performance Standard for retrofits to reduce the square footage minimum in District transportation rights-of-way, and to indicate that 100% of the right-of-way treatment area shall be counted toward the minimum requirement (even if specific site analysis determines that a retention standard less than 1.2" is necessary).

EPA Response: In the Final Permit, EPA has reduced the minimum square footage for transportation right-of-way retrofit projects by more than one-half -- from 3,600,000 square feet to 1,500,000 square feet. Section 4.1.5.4. This section also allows the District flexibility in establishing performance metrics for the different categories of retrofit projects.

bb. The Commenter suggests removing the requirement to "establish agreements" with Federal agencies to conduct retrofits in Section 4.1.2.4 of the Draft Permit. Further, he notes that the 2009 Federal Executive Order 13508 on Chesapeake Bay Protection and Restoration requires a Federal strategy to address water quality pollution in the Chesapeake Bay watershed, which will include retrofits of Federal facilities for stormwater management. These retrofits would be applied to existing facilities, however, and as such may not trigger the District's regulatory process for stormwater management. As these retrofits might be conducted outside this existing regulatory mechanism, the Commenter contends that the District's ability to engage Federal facilities on the subject of retrofits is limited to education, outreach, and identification of retrofit opportunities therefore the Permit language should be edited to reflect this.

EPA Response: EPA has removed the requirement to establish agreements with Federal agencies to conduct retrofits. *See* Section 4.1.5 ("The District, with facilitation assistance from EPA Region III, will also target major Federal landholders, such as the General Services Administration and the Department of Defense, for outreach and education, with the objective of identifying retrofit opportunities and documenting federal commitments.").

cc. As to tree canopy requirements, the Commenter requests that the annual tree planting requirement be amended to apply throughout the District rather than just within the DC MS4 area. Further, the Commenter suggests editing the Permit to provide that the plantings would be done using appropriate BMPs rather than specifying DDOT or UFA guidelines as drafted.

EPA Response: The requirements for tree planting contained in the Final Permit (Section 4.1.5) are documented in the 2008 Modified Letter of Agreement signed by EPA and the District. DDOE, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) (http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF). *See* today's Fact Sheet for additional analysis of the Permit requirements for tree planting. In response to the Comment, EPA has revised the Permit to remove reference to DDOT or UFA guidelines; rather, the Permit requires trees to be planted in accordance with the Planting Specifications issued by the International Society of Arboriculture "as appropriate to the site conditions."

dd. Rather than evaluate all District-owned properties for green roof locations (which it feels is overly burdensome), the Commenter requests that the Permit require the District to evaluate properties that are slated for new construction or redevelopment as part of the District's capital program. Further, the Commenter requests that the Permit only require the *reporting* of schedules rather than committing to a long-term schedule for the construction of green roofs.

EPA Response: EPA has declined to make the requested changes, since it believes that it is appropriate and not unduly burdensome to evaluate all District properties for feasibility as a green roof site. Likewise, EPA feels that the District should be able to commit to the number of required green roofs, and not simply to report on their installation. Also, as noted in response to the following Comment, the District has already committed to a certain square footage of green roofs during the Permit cycle.

ee. The Commenter requests that the Permit be reworded to clarify that the performance standard for green roof installation (350,000 square feet) is to be applied throughout the District rather than solely to District-owned properties.

EPA Response: EPA has declined to make this change, since the Permit language is consistent with the Agency's understanding of ongoing District commitments. *See* DDOE, *Chesapeake Bay TMDL Watershed Implementation Plan District of Columbia Department of the Environment* (November 29, 2010) (available at:

http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Columbia_WIP_Bay_TMDL.pdf) at p. 40.

ff. The Commenter recommends that every new building and renovation project in the District generally, rather than those specifically in the Department of Real Estate Services (DRES) and Office of Public Education Facilities Modernization (OPEFM) inventory, be required to implement on-site retention measures. The Commenter further suggests that this requirement should only apply to projects which require a stormwater management plan and Permit. Finally, the Commenter contends that the language as currently drafted would require that the District install a green roof on every new building and renovation project, which he suggests is not feasible.

EPA Response: EPA understands that the two agencies mentioned in the Comment – DRES and OPEFM -- have control over most District buildings and renovation projects in the District. The Permit requirement that the District ensure that every major renovation/rehabilitation project for District-owned properties within the inventory of DRES and OPEFM include on-site stormwater retention measures is therefore appropriate.

As noted in today's Fact Sheet, the provision at issue was in Section 4.2 Operation and Maintenance of Stormwater Capture Practices of the Draft Permit, and was moved to Section 4.1.5 of the Final Permit since it is a retrofit requirement rather than a maintenance requirement.

As to the comment regarding green roofs, EPA agrees that it would be burdensome to evaluate all District properties for feasibility as a green roof site. However, EPA feels that the District should be able to commit to the square footage of green roofs required by the Final Permit (Section 4.1.7); in fact, it has already committed to a certain square footage of green roofs during the Permit cycle.

gg. Commenter suggests that at Section 4.3.1 of the Permit (Sanitary Sewage System Maintenance Overflow and Spill Prevention), the phrase "through WASA" be added.

EPA Response: The Final Permit (Section 4.3.1) has been amended to include a requirement that the Permittee "coordinate with DC Water" to implement a response protocol for sanitary sewer system overflows. In addition, EPA notes that the Permit specifically identifies "DC Water and Sewer Authority (also known as DC Water)" as one of the departments designated as "Stormwater Agencies" by the Comprehensive Stormwater Management Enhancement Amendment Act of 2008, and provides that "[e]ach named entity is responsible for complying with those elements of the Permit within its jurisdictional scope and authorities." Final Permit at Section 2.3.1.

hh. The Commenter requests the following addition to Section 4.3.2 of the Permit (Public Construction Activities Management): "The Permittee shall implement and comply with the Development and Redevelopment and the Construction requirements in Part 4.6 of this Permit at all Permittee-owned or operated public construction projects or federal construction projects."

EPA Response: EPA has declined to make this change; the Permittee does not have direct authority over federal construction projects. The purpose of this requirement is not to include all parties to which it applies, but rather to make clear that District projects must also comply with the requirements of the Permit.

ii. At Section 4.3.4 (Landscape and Recreational Facilities Management/Pesticide, Herbicide Fertilizer and Landscape Irrigation), the Commenter recommends deleting a requirement that pesticides or fertilizers may not be applied to an area "immediately prior to" a rain event, since it is impossible to predict all precipitation events.

EPA Response: The Final Permit (Section 4.3.4) has been amended to require that the Permittee ensure that "[n]o pesticides or fertilizers are applied to an area immediately prior to an expected rain event; during; or immediately after a rain event; or when water is flowing off the area."

jj. The Commenter believes that Section 4.3.6.3 should be changed to say that the District will evaluate and implement *where appropriate* porous pavement which require less deicing. In support of this argument, Commenter argues that most deicers are applied to main roadways and porous pavement has not been demonstrated to show durability under heavy traffic loads.

EPA Response: The Final Permit (Section 4.3.6) requires, *inter alia*, that "[t]he Permittee shall evaluate and implement the use of porous/permeable surfaces that require less use of deicing materials and activities. This evaluation shall be made a part of an overall investigation of ways to meet the requirements of the Clean Water Act and reported in each Annual Report." Implicit in this requirement is the fact that if an evaluation demonstrates that porous/permeable surfaces are not appropriate, they need not be implemented. At the same time, the Permit requirement will result in a documented evaluation that demonstrates why implementation is or is not appropriate.

As to the durability of porous/permeable pavements, such materials have been shown to hold up under heavy use; in fact, U.S. Department of Transportation has indicated that open-graded friction course is used "mainly on medium and high volume roads." U.S. Department of Transportation, *Context Sensitive Roadway Surfacing Selection Guide, Appendix A – Roadway Surfacing Options Catalog* at p. 74 (August 2005) (available at: http://www.cflhd.gov/programs/techDevelopment/pavement/context-roadway-surfacing/). Also, state transportation departments have used them on heavily-travelled highways, such as in Georgia where state law requires use of porous surfaces on all interstate paving projects where stone matrix asphalt is required, *see* Georgia Department of Transportation, *Georgia Department of Transportation's Progress in Open-Graded Friction Course Development* (undated) at p. 2 (available at: http://www.dot.state.ga.us/doingbusiness/research/Documents/reports/r-OGFC.pdf; and Texas; *see* http://www.arasphalt.com/pdf/rand_porous_friction_course.pdf). (A side benefit of these surfaces is that their porosity reduces slipperiness – thus making them safer. *See e.g.*, Georgia Department of Transportation at p. 6).

kk. The Commenter requests that MEP language be included in Section 4.4.3 with regard to additional on-site controls to be required at critical sources.

EPA Response: The Final Permit does not contain reference to the MEP standard. Rather, the Fact Sheet supporting the Permit has been revised to more clearly demonstrate how certain Permit requirements are expected to represent a reduction of pollutants to the MEP. Thus, EPA has declined to make this change.

ll. The Commenter suggests deleting a sentence under Section 4.8 of the Permit (Flood Control Projects) which required the Permittee to provide an explanation "as to how the implementation of these [flood control] procedures will meet the requirements of the Clean Water Act."

EPA Response: The sentence to which the Commenter objects has been removed from the Final Permit.

mm. The Commenter contends that improvements in a target audience's understanding of stormwater issues may not be measureable, and therefore recommends removing this word from Section 4.9.1 of the Permit (Education and Outreach).

EPA Response: The goal of the education and outreach component of the SWMP is to improve District residents' understanding of the causes and effects of stormwater pollution, as well as to educate them about how they can reduce those impacts; therefore this is what must be measured in order to demonstrate compliance with the related provisions. Moreover, EPA contends that it is in fact possible to measure the effects of public education and outreach. *See e.g.*, EPA, *Stormwater Phase II Final Rule Public Education and Outreach Minimum Control Measure* (Jan. 2000, rev. Dec. 2005) (available at: http://www.epa.gov/npdes/pubs/fact2-3.pdf); EPA, *Process for Developing Measurable Goals Under a General Permit* (undated; last accessed Feb. 3, 2011) (available at: http://cfpub.epa.gov/npdes/stormwater/measurablegoals/part2.cfm). (Although the first reference was written for Phase II communities and the second for general Permit issuers, they are equally applicable to Phase I entities such as the Permittee).

nn. The Commenter recommends revising Section 5.1.1. of the Permit (Revised Monitoring Plan) to allow the District to use the Simple Method and/or other appropriate modeling tools and data on BMP efficiencies as detailed in the District of Columbia SWMP and Anacostia and Rock Creek TMDL WLA Implementation Plans. Further, the Commenter suggests adding language to the Permit which indicates that cadmium monitoring will be conducted to determine if cadmium should be considered a pollutant of concern, since cadmium does not have an MS4 WLA.

EPA Response: As written, the Final Permit is silent as to the method that must be used for calculating pollutant loading estimates, which allows the Permittee flexibility to choose the method that it feels is most appropriate (including those specified in its Comment letter).

As to the request to add language specifying that cadmium was not a pollutant of concern, but that evaluation of monitoring results will be made in DMRs to see whether it should be listed, discharge monitoring reports submitted by the District demonstrate that it has in fact experienced detectable levels of cadmium at various monitoring stations during recent years. As such, it is a

"pollutant of concern" for purposes of the Permit, and EPA has declined to make the requested change.

oo. At Section 5.1.3 of the Permit, the Commenter suggests a revision to indicate that monitoring data would not be the sole tool used during program assessment. The Commenter argues that the District will evaluate program effectiveness by using monitoring data as well as data on sediment-correlated reductions and data on the effectiveness of structural and non-structural BMPs for pollutant reduction.

EPA Response: Section 5.1 of the Permit (Revised Monitoring Program) describes the minimum uses of monitoring information to evaluate the quality of the stormwater program. EPA encourages the District to include additional monitoring analysis in the Revised Monitoring Program as appropriate to evaluate the quality of the stormwater program and the health of the receiving waters.

pp. The Commenter requests that the reporting deadline established in Section 5.1.3.2. be extended to six months prior to Permit expiration to allow maximum time for storm event sampling.

EPA Response: This comment is no longer relevant. The Revised Final Permit requires the District to develop a new monitoring strategy, with some short-term interim monitoring requirements. *See* Section 5.

qq. The Commenter requests that the Permit be amended to state that storm event sampling can be conducted using grab or composite samples per 40 C.F.R. § 122.21(g)(7).

EPA Response: The language suggested by the Commenter is similar to a portion of 40 C.F.R. § 122.21(g)(7) that is addressed to non-stormwater discharges. In contrast, EPA's language in the Final Permit (Section 5.2.3) mirrors the portion of that regulation that covers stormwater discharges. EPA also notes that the relevant regulatory provision is cross-referenced at Table 2, Legal Authority for Selected Required Program Stormwater Elements.

rr. The Commenter suggests that the analytical method listed for Mercury at Section 5.7.2 of the Draft Permit is likely incorrect.

EPA Response: EPA appreciates the Comment, and has revised the Permit to indicate that Method 1631E is to be used for Mercury. (The previous reference was likely a typographical error). *See* Final Permit at Section 5.6.2.

ss. As to Section 6.2.1.d (reporting on projected cost of SWMP implementation), the Commenter suggests replacing "notwithstanding" prior to statute list with "subject to."

EPA Response: EPA has made the requested change at Section 6.2.1.d of the Final Permit.

tt. The Commenter believes that Section 8.1.1 of the Permit (WQS and TMDL WLA Implementation Plans and Compliance Monitoring) should be revised to include MEP language with regard to meeting TMDL WLAs.

EPA Response: The Final Permit does not contain reference to the MEP standard. Rather, the Fact Sheet supporting the Permit has been revised to more clearly demonstrate how certain Permit requirements are expected to represent a reduction of pollutants to the MEP. Thus, EPA has declined to make this change.

uu. The Commenter requests an extension to the one-year deadline for the District to develop/update TMDL Implementation Plans to 18 months as required by Section 8.1 of the Draft Permit (WQS and TMDL WLA Implementation Plans and Compliance Monitoring). The Commenter argues that it will take at least 18 months to perform analytical and field work required to develop and/or update these plans while incorporating time into that process to allow for meaningful public involvement. At the same section, the Commenter suggests that the Permit allow that, in the event that currently-approved TMDLs are vacated or no longer in effect, the District will be allowed an *additional* 18 months to update required TMDL Implementation Plans from the new date of TMDL establishment.

EPA Response: The Final Permit has been reorganized so that general TMDL Implementation Plans are no longer required; rather specific implementation requirements to attain WLAs have been included. Also, the Permit now requires a Consolidated TMDL Implementation Plan two years after the effective date of the Permit: "For all TMDL wasteload allocations assigned to District MS4 discharges, the District shall develop, public notice and submit to EPA for review and approval a consolidated TMDL Implementation Plan within 2 years of the effective date of this Permit."[13] Section 4.10.3 (Consolidated TMDL Implementation Plan). This provides the Permittee with an additional six months to develop plans for WLAs developed during the life of this Permit.

vv. Also at Section 8.1 of the Draft Permit, the Commenter suggests modifying the requirement for sediment TMDLs to allow the Permittee -- in addition to using sediment implementation plans—to use more direct methods such as BMP efficiencies and/or monitoring for demonstrating specific pollutant waste load reductions. Further, the Commenter believes that the District should be permitted to use reductions in sediments to plan for and track reductions in appropriate pollutants for which that correlation has been demonstrated in the literature, including conventional pollutants and these allowances should be stated in the Permit in Section 8.1.2.

[13] The permit goes on to provide that the Consolidated TMDL Implementation Plan "shall place particular emphasis on the pollutants in Table 4, but shall also evaluate other pollutants of concern for which relevant WLAs exist. The District shall fully implement the Plan upon EPA approval. This Plan shall preempt any existing TMDL implementation plans for the relevant WLAs. For any new TMDL approved during the permit term with wasteload allocations assigned to District MS4 discharges, the District shall update this Plan within six months and include a description of revisions in the next regularly scheduled annual report." *Id.*

EPA Response: The requirements for the Consolidated TMDL Implementation Plan in the Final Permit (now located at Section 4.10.3) do not preclude the use of any plans, data, information, etc. that the District may want to include in the development of its Consolidated TMDL Implementation Plan.

Moreover, EPA Policy provides that "[i]f the state or EPA has established a TMDL for an impaired water that includes WLAs for stormwater discharges, Permits for either industrial stormwater discharges or MS4 discharges must contain effluent limits and conditions consistent with the requirements and assumptions of the WLAs in the TMDL." EPA, *Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Stormwater Sources and NPDES Permit Requirements Based on Those WLAs'* (November 12, 2010) (available at: (http://www.epa.gov/npdes/pubs/establishingtmdlwla_revision.pdf); *see also* 40 C.F.R. § 122.44(d)(1)(vii)(B) (When developing water quality-based effluent limits, the permitting authority shall ensure that, *inter alia*, "[e]ffluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge. . . . "). While EPA's guidance continues to allow Permit writers to express the Permit in terms of BMPs or numeric effluent limits, this decision is based on the circumstances surrounding the Permit and underlying WLAs. As far as the instant Permit, data collected within the receiving watersheds, as well as modeling that has occurred through the Bay Watershed Model, provide EPA with strong confidence in the TMDL WLAs and the belief that the Permit should be written to meet these numeric WLAs.[14]

ww. At Section 8.1 of the Draft Permit (WQS and TMDL WLA Implementation Plans and Compliance Monitoring) the Commenter makes several suggestions.

EPA Response: Based on multiple comments on the inadequacy of the TMDL provisions in the Draft Permit, EPA has modified the relevant provisions. The Final Permit requires the District to develop a Consolidated TMDL Implementation Plan for all TMDLs for which the MS4 has been assigned a wasteload allocation. Section 4.103. Because multiple commenters expressed interest in TMDL implementation planning, the Permit requires the District to public- notice the Plan. *Id.*

Further, EPA Policy provides that "[w]here a TMDL has been established and there is an accompanying implementation plan that provides a schedule for an MS4 to implement the TMDL, the Permitting authority should consider the schedule as it decides whether and how to establish enforceable interim requirements and interim dates in the Permit." EPA, *Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Stormwater Sources and NPDES Permit Requirements Based on Those WLAs'* (November 12, 2010) (available at: http://www.epa.gov/npdes/pubs/establishingtmdlwla_revision.pdf). EPA contends that the substantive requirements of the Final Permit are appropriate for implementing applicable TMDLs.

[14] *See* n. 12 herein for link to Bay Model.

xx. The Commenter objects to the requirement to conduct evaluations and make potential changes to TMDL Implementation Plans on an annual basis. Instead, the Commenter proposes that the District evaluate and potentially modify each management approach as part of the larger assessment of each TMDL Implementation Plan as part of the District's Stormwater Management Plan submittal prior to Permit expiration (every five years). The Commenter submitted proposed edits to the Permit language to reflect his recommendations.

EPA Response: EPA has reorganized and clarified the requirements for TMDL WLA Planning and Implementation at Section 4.10 of the Final Permit. Further, EPA has placed specific implementation measures into the Permit in order to make them more directly understandable and enforceable. EPA has similarly directly incorporated implementation requirements for the recently-approved Anacostia Trash TMDL (Sept. 21, 2010) (available at: http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/services/pdf/Final_Anacostia_Trash_TMDL.pdf), and subjected the one element requiring some planning effort to public notice and comment and to EPA approval.

In addition, EPA notes that the Permit incorporates certain underlying requirements of the Chesapeake Bay TMDL, including necessary reductions of nitrogen, phosphorus and sediment from the District of Columbia (as well as other Bay jurisdictions) that—when attained—will allow the Bay to attain its applicable water quality standards. As background to these anticipated reductions, EPA notes that each Bay jurisdiction developed a Watershed Implementation Plan (WIP) to identify how it intends to meet the reductions called for in the TMDL. Section 7.2 of the District's Final Phase I WIP (submitted as part of the Chesapeake Bay TMDL), *Chesapeake Bay TMDL Watershed Implementation Plan District of Columbia Department of the Environment* (November 29, 2010) (available at: http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Columbia_WIP_Bay_TMDL.pdf), indicates that it relied in part on the Draft DC MS4 Permit as a guide in development of the WIP. This document, which represents DC's Phase I WIP, specifically anticipates reductions of nitrogen, phosphorus, and sediment contributions to the Bay by 11, 27, and 26 percent, respectively, by relying on District commitments such as:

- Install at least 350,000 sq ft of green roofs over the Permit cycle on District property
- Plant at least 4,150 trees annually with a goal of planting and maintaining 13,500 additional trees by 2014 and increasing its tree canopy from 35% to 40% by 2035
- Insure that all development greater than 5,000 sq ft retain stormwater generated from a 1.2" 24-hour storm
- Promotion of low-impact development

yy. The Commenter recommends that the compliance schedule in Table 5 (p.41), which is referred to in this section and appears on page 34, should be revised to require the Potomac River TMDL Implementation Plan eighteen months after EPA approval of the Potomac River TMDLs rather than one year.

EPA Response: Through the Final Permit, the District is now required to develop a Consolidated TMDL Implementation Plan for most District TMDLs, including the Potomac River TMDL. That Plan is due within two years of the effective date of this Permit.

zz. The Commenter proposes that the District be allowed to identify appropriate monitoring locations as part of the Revised Monitoring Plan (Section 5.1); he indicates that the District would be in a better position to choose locations to evaluate the effectiveness of the Hickey Run Strategy rather than the Permit specifying monitoring locations.

EPA Response: Per Section 5.1.1 of the Final Permit, the District must submit to EPA a Revised Monitoring Program, which will include locations of sampling stations within one year of the effective date of the Permit. The Commenter is invited to include such recommendations as part of that process. Meanwhile, the interim monitoring requirements described in Section 5.2 apply until the Revised Monitoring Program is submitted and approved. *See* today's Fact Sheet for the rationale for maintaining the ongoing monitoring provisions as part of the Interim Monitoring Program.

aaa. The Commenter requests that Section 9.4 of the Permit (Duty to Mitigate) be modified as follows:

> In the event that the Permittee or Permitting authority identifies non-compliance with this Permit, ~~determines that discharges are causing or contributing to a violation of applicable WQS,~~ the Permittee shall take corrective action as soon as possible to achieve compliance, using an adaptive management approach as appropriate. This action will constitute compliance with applicable WQS and WLAs. The methods used to adaptively manage the stormwater management program will be documented in subsequent annual reports or in revisions to the Stormwater Management Plan, as appropriate. ~~eliminate the WQS exceedance or correct the issues and/or problems by requiring the party or parties responsible for the alleged violation(s) comply with Part I.C.1 (Limitations to Coverage) of this Permit. The methods used to correct the WQS exceedances shall be documented in subsequent annual reports and in revisions to the Stormwater Management Plan dated February 19, 2009.~~

In support of its requested language change, the Commenter cites an Oregon State Court of Appeals ruling, *Tualatin Riverkeepers v. Oregon Dep't of Envt'l Quality*, 235 Ore. App. 132, *; 230 P.3d 559, (April 28, 2010),[15] and indicates that its request to include a

[15] The Comment includes a footnote following this case name reference, which EPA believes it intended to use to provide a citation to the referenced decision. In fact, the Comment includes a reference to a different and unrelated decision, *Anacostia Riverkeeper, Inc., et al. v. EPA.* EPA believes that this footnote was in error and pasted in from the preceding footnote in DOE's comment letter. Therefore, for purposes of this response, EPA is assuming that the Commenter intended to only reference the Oregon decision for this point.

EPA also notes the subsequent appellate history of *Tualatin Riverkeepers:* several months after DDOE submitted its comments on the Draft DC MS4 Permit, the Oregon Supreme Court denied the Petition for Review. 349 Ore. 173; 243 P.3d 468 (Oct. 21, 2010).

provision that failure to meet an approved benchmark should not be considered a Permit violation (unless the Permittee has also failed to follow the adaptive management process to improve the stormwater management plan) is in alignment with that state court decision.

EPA Response: In the *Tualatin Riverkeepers* decision, the state Permits at issue already contained language similar to that requested by the Commenter. Therefore, the Court did not need to reach the issue of whether those Permits were *required* to include such language. In any event, the *Tualatin Riverkeepers* Court also suggested that its ruling was limited to Oregon State law:

> Petitioners do not contend that the municipal stormwater permits violate the requirements of *federal* law. In *Defenders of Wildlife v. Browner*, 191 F3d 1159, 1163, reh'g *en banc* denied, 197 F.3d 1035 (9th Cir. 1999), the court explained the background of the regulation of municipal stormwater and explained the requirements of federal law with respect to such stormwater and state water quality standards. The court held that permits providing for discharges of municipal stormwater need not require strict compliance with state water quality standards under the federal law. Although the Environmental Protection Agency (EPA) has discretion to require such compliance as it determines appropriate, the federal statutory scheme requires only that municipal stormwater dischargers "'reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and systems, design and engineering methods, and other such provisions as the Administrator * * * determines appropriate for the control of such pollutants.'" *Id.* at 1165 (quoting 33 USC § 1342(p)(3)(B)(iii) (omission in original)).

235 Ore. App. at 139; 230 P.3d at 563, n. 8 (emphasis added). Therefore, that decision is not a basis for changing the relevant permit language at Section 8.4 (Duty to Mitigate, formerly Section 9.4). In the instant case, EPA -- as the Permit writer -- has made a decision to include the overarching language that "[c]ompliance with all performance standards and provisions contained in this Permit shall constitute adequate progress toward compliance with DCWQS and WLAs for this Permit term." *See* Final Permit at Section 1.4; discussion at Section 1.4 of Fact Sheet. Therefore, the Agency has determined that it is unnecessary to include the language requested by Commenter in connection with an individual Permit section, such as the Duty to Mitigate.

bbb. Commenter proposes deleting Section 9.17 (Bypass) and recommends deleting the definition for "severe property damage" if the "Bypass" language in Part 9.17 is also deleted.

EPA Response: The bypass provision is a standard condition required to be placed in all NPDES Permits, pursuant to 40 C.F.R. § 122.41. Because MS4 Permits such as the one issued to the District are within the category of NPDES Permits, those general regulations apply to this and other MS4 Permits. (Note that the provision has been moved to Section 8.17 of the Final

Permit.) Accordingly, EPA has also declined to delete the definition for "severe property damage."

ccc. Commenter seeks to have definitions of "Internal Sampling Station" and "Significant Materials" removed from Section 10 of the Permit (now Section 9), presumably because the terms are not used elsewhere in the document.

EPA Response: EPA appreciates the Comments, and has deleted the definitions.

ddd. The Commenter requests a change to the definition of "retrofit," and argues that the definition should be broadened to include not only modifications to stormwater conveyance systems, but also new BMPs constructed on development sites. He further notes that the requested definition would allow the District to replace traditional BMPs with non-traditional BMPs, such as bioretention cells.

EPA Response: EPA has revised the Final Permit to define "retrofit" as "improvement in a previously developed area that results in reduced stormwater discharge volumes and pollutant loads and/or improvement in water quality over current conditions." *See* Section 9 of Final Permit.

eee. The Commenter cites a recent Court ruling as a basis for seeking an exclusion from liability under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. §§ 9601, *et seq.*, 42 U.S.C. § 9607(a)(3). The Commenter expresses concern that compliance with the MS4 Permit could render it liable under CERCLA because of the ruling in *United States of America v. Washington State Dep't of Transp.*, 716 F. Supp. 2d 1009 (W.D. Wash. June 7, 2010). The Commenter asks that EPA state in the Permit that it intends to regulate municipal stormwater discharges under a federal Permitting scheme, not under a CERCLA liability theory. The Commenter further states that the District would be remiss if its expenditures of stormwater fees on MS4 Permit compliance -- even while achieving beneficial stormwater controls to protect and restore District waters -- also led to CERCLA liability.

EPA Response: EPA does not believe that it is appropriate to state in the Final Permit that it intends to regulate municipal stormwater discharges solely under a federal Permitting scheme for several reasons. First, while it is true that DC's MS4 Permit is in no way intended to create CERCLA liability for the District, the case cited by the Commenter, *United States v. Washington State Dep't of Transportation (WSDOT),* 716 F. Supp. 2d 1009 (W.D. Wash. June 7, 2010), is not a basis for making the requested change to the Permit.[16] The issue in *WSDOT* was whether the Court had enough information to grant summary judgment regarding a Permittee's contention that the releases of hazardous substances in stormwater discharges were "federally permitted releases." While the Court noted that it was "undisputed" that two stormwater Permits existed, it

[16] EPA notes that the same litigation has resulted in two additional summary judgment decisions – one re: coal tar contamination, 2010 U.S. Dist. LEXIS 68100, and the other re: arranger liability for coal tar discharges, 2010 U.S. Dist. LEXIS 121759. Neither decision is relevant to this permit, so they are not discussed herein. The Final (Amended) Judgment in this case was recently filed. *United States v. Washington State Dep't of Transportation (WSDOT,* Case No. C08-5722RJB (W.D. Wash. April 8, 2011).

denied summary judgment as to Federally-permitted releases because of the dispute as to: (1) whether WSDOT was in compliance with those Permits; (2) the scope of the Permits; (3) whether there were releases outside that scope; and (4) whether the injury was divisible. *See id.* at *18-*19.

Second, if the District (or one of its agencies, such as DDOT), were to be held liable under CERCLA because of actions taken in compliance with its MS4 Permit, whether or not the MS4 Permit says anything specific about CERCLA liability is irrelevant to determining whether such agency is liable under CERCLA.

Third, to the extent that the Commenter claims that potential liability under CERCLA will serve as a disincentive against performing stormwater management activities, EPA has no information that any requirement under the Final Permit would in any way whatsoever increase pollutant delivery to the stream, and certainly not the sorts that are regulated under CERCLA.

Finally, if the Permit were to include a statement like the one requested by the Commenter, *i.e.*, that EPA does not intend to regulate the MS4 under a CERCLA theory of liability, it could imply that EPA considered the Permit to result in liability under other statutes it administers—something with which the Permittee would no doubt take issue.

fff. The Commenter notes that the U.S. Government Accountability Office (GAO) submitted a letter dated September 29, 2010 to DC DOE deeming the District's stormwater fee a tax that it will not pay. The Commenter suggests that GAO's position that liability for the stormwater fee arises as a result of property ownership (v. provision of a service or granting of a privilege) is contrary to EPA's finding that the amount of surface imperviousness in an area directly corresponds to the amount of harmful downstream pollution from stormwater runoff. As a result, the Commenter requests that the Permit be revised to address several new issues, including a decrease in fee revenue that would otherwise be relied upon for treatment of stormwater discharged to the MS4. Similarly, the Commenter indicates that, as the Permittee, it may be unable to meet its obligations contained in the Stormwater Management Plan (incorporated into the Permit) and that acceptance of the Permit may be in violation of the federal Anti-Deficiency Act, 31 U.S.C. §§ 1341, 1342, 1349, 1351, as well as several provisions of the D.C. Official Code, including §§ 47-355.01-355.08, § 47-105, and § 1-204.46. The Commenter thus suggests several options for EPA in dealing with the expected non-payment of fees: (1) suspend issuance of the MS4 Permit, until the determination that the MS4 charge is a permissible fee is resolved by Courts or other political mechanisms; (2) reduce the number and/or scope of the management practices that the Permit would require the District to implement; or (3) implement alternative Permitting options for the approximately 1,498 federal properties and other properties who refuse coverage under the MS4 Permit by issuing those entities individual Permits or a general Permit specific to their operations.

EPA Response: EPA is aware of GAO's correspondence, and the Agency is aware that the District relies on the impervious surface assessment as a basis for supporting its compliance with the Permit requirements. However, the scope of this Permit is limited to imposing stormwater

controls and effluent limitations on the District as Permittee (see Section 1 of Final Permit). In any event, EPA notes that Senate Bill 3481, which requires the federal government to comply with local stormwater fees that are used to treat and manage polluted stormwater runoff, passed the U.S. Senate and House by unanimous consent on Dec. 21 and Dec. 22, 2010, respectively, and was signed into law by President Obama on January 4, 2011. *See A bill to amend the Federal Water Pollution Control Act to clarify Federal responsibility for stormwater pollution,* S. 3481, 111th Congress (2009 - 2010) (available at: http://thomas.loc.gov/cgi-bin/bdquery/z?d111:S3481:). On March 14, 2011, the U.S. Government Accountability Office indicated its willingness to pay the fee in light of the recent legislation. *See* U.S. Government Accountability Office, *Letter re: Public Law 111-378 and Payment of the Stormwater Charge* (March 14, 2011).

12. District of Columbia Water & Sewer Authority (DC WASA) (a/k/a DC Water), George Hawkins (June 4, 2010).

The Commenter, District of Columbia Water & Sewer Authority (DC WASA), a/k/a DC Water, has made comments and suggested revisions, line-by-line, directly to the Draft Permit. EPA has taken each edit/comment under advisement; however, the Agency has only summarized the more substantive of them for the purposes of this response document. For example, comments/edits intended merely to clarify existing language that do not change the intent of the language, have not been summarized here. The comments/edits are summarized by applicable Permit section, but repetitive comments/edits made in multiple sections are not repeated. Each unique comment/edit is addressed once herein.

a. Section 1.1: The Commenter suggests adding language to indicate that the Permit covers federally-owned lands.

EPA Response: EPA contends that the existing description of the Permit coverage area is adequate to describe the area covered by the Final Permit, and that there is no reason to specify individual types of facilities that are covered by the Permit. *See* Section 1.1 of Final Permit ("This permit covers all areas within the jurisdictional boundary of the District of Columbia served by, or otherwise contributing to discharges from, the Municipal Separate Storm Sewer System (MS4) owned or operated by the District of Columbia. This permit also covers all areas served by or contributing to discharges from MS4s owned or operated by other entities within the jurisdictional boundaries of the District of Columbia unless those areas have separate NPDES MS4 permit coverage or are specifically excluded herein from authorization under the District's stormwater program. Hereinafter these areas collectively are referred to as "MS4 Permit Area".).

b. Section 1.2: The Commenter suggests deleting a reference to the requirement for stormwater controls to be managed so that water quality is not impaired and also so that the requirements of the CWA and EPA regulations are met. The Commenter suggests that "applying the controls required in the Permit should be enough."

EPA Response: While EPA has included in the Final Permit requirements for certain controls that are expected to result in improved water quality, as discussed in detail in today's Fact Sheet, it has deliberately kept certain aspects of the program flexible, since there are some areas in

which the Permittee is in the best position to determine how to apply the program. As a result, the Permit continues to include the overall requirement that stormwater practices generally comply with the Clean Water Act and its implementing regulations.

c. Section 1.4: The Commenter suggests deleting language requiring the District to prohibit pollutants into the MS4 System as necessary to comply with WLAs, as well as a requirement that stormwater discharges be consistent with applicable WLAs for applicable TMDLs. Further the Commenter suggests removing language stating that compliance with the Permit would constitute progress towards achieving compliance with WQS. Commenter contends that these provisions are inconsistent with the BMP/MEP approach.

EPA Response: Section 301(b)(1)(C) of the CWA, 33 U.S.C. § 1311(b)(1)(C), requires the achievement of limitations, including those necessary to meet applicable water quality standards (WQS). Section 402(p)(3)(B) of the CWA, 33 U.S.C. § 1342(p)(3)(B)(iii), provides that Permits for discharges from municipal storm sewers "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." When read together, these two sections suggest that municipal sources control their discharges to the MEP, with the ultimate achievement of WQS which is expected to occur over several permit cycles. This is consistent with the construct of EPA's Final Phase II Storwater Rule, *National Pollutant Discharge Elimination System--Regulations for Revision of the Water Pollution Control Program Addressing Stormwater Discharge*, 64 Fed. Reg. 68722, 68731 (Dec. 8, 1999) (available at: http://cfpub.epa.gov/npdes/regresult.cfm?program_id=6&type=1&sort=name&view=all) ("At this time, EPA determines that water quality-based controls, implemented through the iterative processes described today are appropriate for the control of such pollutants and will result in reasonable further progress towards attainment of water quality standards. *See* Sections II.L and II.H.3 of the preamble."); *id.* at 68753 ("EPA envisions application of the MEP standard as an iterative process."); *id.* at 68754 ("EPA also believes the iterative approach toward attainment of water quality standards represents a reasonable interpretation of CWA section 402(p)(3)(B)(iii)."). *See also* further discussion at Section 1.4 of today's Fact Sheet.

d. Section 2.1.1: With regard to legal authority, the Commenter recommends substituting a reference to "in order to prevent or reduce the discharge of pollutants to achieve water quality objectives" to "in accordance with this Permit."

EPA Response: Requiring activities in accordance with the Permit within the Permit itself is circular. Moreover, the existing language is consistent with the purpose of the CWA, which is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Section 101 of the CWA, 33 U.S.C. § 1251.

e. Section 2.1.2: The Commenter suggests increasing the deadline at Section 2.1.2 from one year to eighteen months.

EPA Response: EPA has made this requested change to Section 2.1.2, which requires the District to update and implement its Stormwater Regulations.

f. Section 2.1.5: The Commenter has proposed the following addition to this section:

> "[The District shall r]eview and revise, where applicable, building, health, road and transportation, and other codes and regulations to remove barriers to, and facilitate, as appropriate, the implementation of" certain standards.
>
> The Commenter includes a note that the insertion of the term "appropriate" is warranted to reflect the balancing of public/social needs that must occur when seeking to integrate updates to the stormwater code with building, health, transportation and other public health and safety codes.

EPA Response: EPA contends that the existing language of Section 2.1.4 (formerly 2.1.5) is sufficient as drafted. The performance standards themselves include sufficient allowances for the District to balance other public needs during implementation, and the language continues to indicate that the review and revision shall occur "where applicable."

g. Section 2.3: The Commenter proposes editing the Permit text to clarify that the responsibility for complying with the Permit is outlined in the 2000 MS4 Task Force Memorandum of Understanding.

EPA Response: Section 2.3 of the Final Permit addresses stormwater management program administration and permittee responsibilities. Specifically, Section 2.3.1 provides that the Government of the District of Columbia is the permittee, and that activities of all agencies, departments, offices and authorities of the District must comply with the requirements of this permit. That Section also provides that DDOE is the stormwater administrator, and that it is to coordinate and facilitate a collaborative effort among certain city agencies, including: District Department of Transportation (DDOT); Department of Public Works (DPW); Office of Planning (OP); Office of Public Education Facilities Modernization (OPEFM); Department of Real Estate Services (DRES); Department of Parks and Recreation; and DC WASA. Further, "[e]ach named entity is responsible for complying with those elements of the permit within its jurisdictional scope and authorities."

Moreover, Section 2.3.2 of the Final Permit specifically indicates that DDOE is to coordinate, and all agencies are to implement, provisions of the MS4 Task Force Memorandum of Understanding (MOU) dated 2000, including updated matrix of responsibilities (January 2008), any subsequent updates, and other institutional agreements to coordinate compliance activities among agency partners to implement the provisions of the Permit.

h. Section 3.1: Commenter indicates that the definition for "significant change" is too vague.

EPA Response: The definition of "significant change" is consistent with the definitions used in the 2000 and 2004 Permits and was previously approved by EPA when it was first proposed by the District.

i. Section 3.2: The Commenter indicates that the section entitled "Outfalls" does not belong within the heading "Source Identification."

EPA Response: EPA appreciates the comment, and has moved the relevant provision to Section 4.7.1.b of the Final Permit, under "Illicit Discharges and Improper Disposal."

j. Section 3.3: With regard to "Addressing Potential Pollutant Sources," the Commenter suggests inserting edits to use the word "control" in place of "minimize and prevent" and "reduce or eliminate" in relation to addressing discharges of pollutants of concern from the MS4.

EPA Response: The relevant language is now located at Section 4.11 (Additional Pollutant Sources). EPA contends that the existing language at Section is consistent with the Clean Water Act's directive that MS4 Permits "require controls to *reduce* the discharge of pollutants. . . . " 33 U.S.C. Section § 1342(p)(3)(B)(iii).

k. Section 4, Table 1: The Commenter suggests deleting reference to the Letters of Agreement issued under the current Permit.

EPA Response: Because the Letters of Agreement existed only for purposes of the Permit issued in 2004, the reference has been removed. However, the Final Permit incorporates many of the underlying requirements of those Letters of Agreement, to the extent that they contained obligations yet to be performed or finalized. (Note that the language at issue has been moved to Section 3, Table 2 of the Final Permit.)

l. Section 4.1.1: The Commenter requests a clarification on the size threshold for new and redevelopment standards, *i.e.*, whether it is 5,000 square feet disturbed or developments which create 5,000 square feet of impervious area.

EPA Response: The performance standard applies to "any project undertaking development that disturbs land greater than or equal to 5,000 square feet." Section 4.1.1 of Final Permit (Standards for Stormwater Discharges from Development).

m. Section 4.1.1: The Commenter requests that EPA carefully consider the impacts on redevelopment that the new standards would have. He also requests that EPA provide a "grandfather" provision to allow projects "already in the pipeline" to continue under existing standards. Finally, the Commenter would like for EPA to specify that utility maintenance and repair activities do not have to comply with these standards.

EPA Response: As to the suggestion that EPA carefully consider the impacts of the performance standard threshold on redevelopment, the Agency notes that requirements for stormwater controls do not generally contribute to sprawl; in fact, most available information demonstrates

that the converse is usually true. EPA also notes that 5,000 square feet is already the threshold for requiring when land disturbance projects (such as development) in the District must develop and implement a SWMP, and DC's Final Phase I Watershed Improvement Plan (submitted as part of the Chesapeake Bay TMDL) identifies this as the size threshold needed in order to meet the relevant WLAs. *See* District of Columbia, *Chesapeake Bay TMDL Watershed Implementation Plan District of Columbia Department of the Environment* (November 29, 2010) (available at: http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Columbia_WIP_Bay_TMDL.pdf).

With regard to the request for "grandfathering," the Final Permit does not actually impose standards for new and redevelopment, but rather requires the District to implement an "enforceable mechanism" for adoption of new standards for development through its regulatory process. *See* Section 4.1.1. This process will allow the regulated community time to prepare for the new standards, as well as the ability to participate in the public process.

As to the Commenter's suggestion that the Permit exclude certain types of projects, EPA does not believe that a waiver for development standards for utility maintenance and repair activities is appropriate. While the Permit is silent as to these activities, operation and maintenance of municipal operations and related activities are specifically covered by the federal regulations, 40 C.F.R. § 122.26(d)(2)(iv)(A), as well as in various Agency guidance documents, *see e.g.*, EPA, *MS4 Permit Improvement Guide* (April, 2010). Therefore, EPA has declined to make the requested change.

n. Section 4.1.1.a: The Commenter requests a three-year deadline for full implementation of the standards as well as a phased, escalating standard which would start with 0.75 in. and reassess in five years to determine if 1.0 in. is appropriate and attainable and so on.

EPA Response: EPA has revised the deadline for full implementation of the standards from one year to 18 months. Section 4.1.1. The Agency believes that this new time-frame balances the District's ability to adopt the standard with the need to have it in place as soon as practicable. EPA disagrees that a phased implementation of the standard is appropriate, since available data suggest that such a standard can (and should) be readily implemented.

o. Section 4.1.1.b: The Commenter requests a compliance schedule for implementing requirements regarding standards at federal facilities, and also indicates that there is no objection to imposing evapotranspiration, infiltration or harvesting requirements on federal facilities.

EPA Response: EPA notes initially that the Final Permit has been revised to impose the same retention standard on all covered facilities (*i.e.*, non-federal and federal) within the DC MS4 Permit Area; therefore this response addresses all covered facilities. As discussed further in today's Fact Sheet, EPA believes that the appropriate deadline for the District to implement the additional federal facility retention standard is 18 months following Permit issuance, and the Final Permit has been updated accordingly.

p. Section 4.1.1.b: In addition to the preceding comment on this section, the Commenter suggests that two additional paragraphs formerly appearing at this Section were unnecessary. Those paragraphs stated that: (1) discharges controlled in accordance with certain Permit standards would be considered to be as stringent as necessary; and (2) pollutants in the discharge must be controlled to meet certain standards.

EPA Response: EPA agrees that the two cited provisions were unnecessary as duplicative with other provisions, and has addressed this concern by removing those two paragraphs from the Final Permit.

q. Section 4.1.1.d: The Commenter requests a two-year deadline for implementing the District's required off-site mitigation and in-lieu of programs. Further, the Commenter proposes adding language to indicate that affordability, cost-effectiveness and "other considerations such as historic preservation" should be included as factors determining feasibility for meeting stormwater management standards.

EPA Response: The Final Permit increases the deadline for implementation of off-site mitigation and/or fee-in-lieu programs from one year to 18 months, which was the amount of time requested by DDOE.[17] As to the suggested language regarding affordability, etc., the Permit includes several minimum requirements for such a program to ensure that the District appropriately consider feasibility for meeting stormwater management standards: (1) Establishment of baseline requirements for on-site retention and for mitigation projects; (2) Specific criteria for determining when compliance with the baseline requirement for on-site retention cannot technically be met based on physical site constraints; (3) For a fee-in-lieu program, establishment of a system or process to assign monetary values at least equivalent to the cost of implementation of controls; and (4) The necessary tracking and accounting systems to implement this section, including that original and off-site practices stay in place and are adequately maintained. Section 4.1.3 of Final Permit.

r. With regard to Section 4.1.2 of the Draft Permit (Retrofits), the Commenter recommends maintaining the one-year deadline for federal facilities, but extending the deadline to three years for non-federal facilities to comply with existing development retrofit requirements. Further the Commenter suggests adding language to indicate that tree planting would count toward the District's retrofit objective.

EPA Response: EPA has increased the deadline for the District to develop, public notice, and submit to EPA for review and approval a program that establishes performance metrics for retrofit projects. *See* Section 4.1.5 of Final Permit. This program will apply uniformly to all dischargers – including federal and non-federal facilities. However, EPA also notes that the Permit requires the District to "work with major Federal landholders, such as the General Services Administration and the Department of Defense, with the objective of identifying retrofit

[17] EPA defers to DDOE's request, as the District has designated that agency as the entity responsible for managing the MS4 Stormwater Management Program and all activities necessary to comply with the requirements of this Permit and the Comprehensive Stormwater Management Enhancement Amendment Act of 2008. Final Permit at Section 2.3.1.

opportunities, documenting federal commitments, and tracking pollutant reductions from relevant federal actions." Final Permit at Section 4.1.5.2.

As to the comment that tree planting should count toward the District's retrofit objective, the Final Permit contains sufficient flexibility to allow the District to count activities within its tabulation of retrofit projects that it feels are appropriate for inclusion.

s. With regard to Section 4.1.6 of the Draft Permit (Tree Canopy), the Commenter suggests an edit to the Permit to indicate that locations for tree plantings should be identified where feasible and *appropriate*, and that the District should *identify* specific schedules for implementation rather than committing to them. Further, the Commenter requests that the District only be held to an overall five-year cumulative tree planting goal rather than annual targets.

EPA Response: EPA contends that an annual tree planting standard is appropriate for assessing the progress and evaluating compliance with the District's SWMP tree planting requirement. For a discussion of the basis of the Permit requirements for tree canopy in the District (now at Section 4.1.6 of the Permit), including a reference to the comprehensive Casey Trees *Green Build-Out Model, see* Section 4.1.6 of today's Fact Sheet.

t. With regard to Draft Permit Section 4.1.4 (Green Roof Projects), the Commenter suggests editing the Permit to indicate that green roof projects be identified which are "practicable and appropriate" rather than technically feasible. Further, the Commenter proposes to edit the text to indicate that a schedule for implementing green roof projects on District property should be completed by the end of the Permit term, rather than the projects themselves as is currently required in the Permit draft.

EPA Response: The Final Permit, Section 4.1.7, imposes a standard of "technically feasible" for identifying appropriate sites for green roofs, which EPA believes captures the Commenter's suggestion as to practicability and appropriateness. Given the inclusion of this standard, the Permit requires implementation of projects during this Permit term.

u. Section 4.2.1: The Commenter suggests adding a reference to the use of off-site mitigation and fees-in-lieu with regard to operation and maintenance of stormwater capture practices at District-owned and -operated practices.

EPA Response: The requested reference would be superfluous, given the inclusion of Section 4.1.3 (Off-Site Mitigation and/or Fee-in Lieu for all Facilities); EPA has declined to make this change.

v. Section 4.2.2: The Commenter suggests editing the text to require the District to maintain a database of stormwater practices on private property beginning the fourth year of the Permit term.

EPA Response: The District already maintains an electronic inventory of stormwater capture practices on non-District owned property; accordingly, the Final Permit (Section 4.2.2) has been updated to reflect the need to continue the program.

w. Section 4.2.3.a: The Commenter requests an extension on the deadline for the finalization of DC DOE's Stormwater Management Guidebook from 18 months to 30 months.

EPA Response: EPA views the Stormwater Management Guidebook as a critical component under the Final Permit and, upon consultation with DC DOE, considers 18 months an appropriate amount of time to complete this ongoing project task.

x. Section 4.3.1: The Commenter proposes language requiring the District to coordinate with WASA on sanitary sewer overflow (SSO) issues, and to notify WASA when SSOs occur.

EPA Response: The Final Permit requires the District, as Permittee, to coordinate and facilitate a collaborative effort among other city agencies and departments, including WASA among others. *See* Section 2.3.1 (Stormwater Management Program Administration/Permittee Responsibilities). In addition, EPA has revised the Permit as follows to reflect the comment (changes indicated are against Draft Permit):

The permittee shall <u>coordinate with DC Water</u> to implement a<u>n effective</u> response ~~plan~~ <u>protocol</u> for overflows of the sanitary sewer system into the MS4. The response ~~plan~~ <u>protocol</u> shall clearly identify agencies responsible and telephone numbers and e-mail for any contact and shall contain at a minimum, procedures for:

1. Investigating any complaints received within 24 hours of the incident report.
2. Responding within two hours to overflows for containment.
3. Notifying appropriate sewer, public health agencies and the public within 24 hours when the sanitary sewer overflows to the MS4.

Section 4.3.1 of the Final Permit.

y. Section 4.3.4: WASA notes that the requirement that the Permittee use pesticides only if monitoring indicates they are needed might preclude routinely-scheduled applications pursuant to an Integrated Pest Management (IPM) program.

EPA Response: EPA is unaware of any impacts on IPM programs that would be adversely affected by the Permit requirement that the Permittee use pesticides only if monitoring indicates they are needed. However, if that is the case, the IPM programs should be revised to comply with the Permit (v. allowing unnecessary pesticides in stormwater).

z. Section 4.3.5: With regard to storm drain system operation and management, and solids and floatables reduction, the Commenter recommends removing a requirement that the

Permittee comply with the Anacostia River Trash TMDL, claiming that it is unnecessary in this portion of the Permit (because it is addressed elsewhere).

EPA Response: While Section 4.10.1 of the Final Permit does address the need for implementation of the Anacostia Trash TMDL, Section 4.3.5 accomplishes something different: it expands the underlying technologies and other activities developed as part of the TMDL across the entire DC MS4 Permit Area, not just the Anacostia River Watershed. EPA believes that this requirement is appropriate, achievable and protective of water quality, and has thus left it in the Final Permit.

aa. Section 4.3.6: As to streets, alleys, roadways and sidewalks, the Commenter recommends that the Permit require a cleaning schedule with the annual implementation plan, rather than annual catch basin cleanings.

EPA Response: Section 4.3.6.1, Table 3, of the Final Permit contains a schedule for street sweeping, including the newly-added requirement of twice monthly sweeping from March through October for environmental hot spots in the Anacostia River Watershed. In addition, the Final Permit expands Section 4.3.5.3 (Storm Drain System Operation and Management and Solids and Floatables Reduction), including a requirement to complete, public notice and submit to EPA for approval an outfall repair schedule to ensure that approximately 10% of all outfalls needing repair are repaired annually, with the overall objective of having all outfalls in good repair by 2022.

bb. Section 4.3.7.3: With regard to recordkeeping and tracking of inspections and maintenance at municipal facilities, the Commenter suggests striking the requirement that "[a]ny residual water following infrastructure maintenance shall be self-contained and disposed of legally in accordance with the Clean Water Act."

EPA Response: The Commenter provides no support for its recommendation, other than to indicate that the language is "unclear and likely should be deleted." EPA notes that DC DOE did not raise an objection to the language, and the Agency believes that the current practice of self-containment and disclosure of residual wash water is appropriate to continue in order to meet water quality objectives.

cc. Section 4.3.9: The Commenter suggests revising the section on Emergency Procedures to "allow preventive maintenance ahead of an upset condition" or to remove it altogether.

EPA Response: The federal regulation on "upsets," 40 C.F.R. § 122.41(n), defines the term as "an exceptional incident in which there is unintentional and temporary noncompliance with technology based Permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation." (The Final Permit includes the same definition at Section 9). If the Permit were be revised to add preventive maintenance to the instances covered by emergency procedures, it would become inappropriately less stringent than the federal regulation. EPA therefore declines to make the requested change.

dd. Section 4.3.10: For the section on municipal officer training, the Commenter suggests adding a reference to "appropriate individuals."

EPA Response: Commenter's suggestion would be redundant; the first sentence of this section indicates that the training program is for "employees whose job functions may impact stormwater program implementation."

ee. Section 4.4.2: The Commenter requests that follow-up inspections of commercial facilities based on non-compliance be considered one of the two mandatory inspections, rather than having to wait a minimum of six months between inspections.

EPA Response: EPA appreciates the input and has reflected the suggestion by making the following addition to this section:

> The Permittee shall continue to inspect all commercial facilities identified in Part 4.4.1 herein and any others found to be critical sources twice during the five-year term of the Permit. A minimum interval of six months between the first and the second mandatory compliance inspection is required, unless a follow-up inspection to ensure compliance must happen sooner.

ff. Section 4.4.3: With respect to compliance assurance, the Commenter believes that the requirement for the Permittee to verify that operators are implementing an appropriate control strategy makes the District responsible for discharges from these sources. He suggests that the requirements should be to ensure that these sources are complying with their stormwater management programs, and not that those requirements are sufficient to protect water quality.

EPA Response: EPA disagrees that the Permit requirement for ensuring that operators are implementing an appropriate control strategy makes the District responsible for stormwater discharges from these sources. This responsibility is one of oversight and enforcement, and does not expand the universe of discharges or dischargers covered by this Permit.

gg. Section 4.6: As to Stormwater Management for Construction Sites, the Commenter suggests revising the requirement that the Permittee monitor the discharge from construction sites for sediment to make such inspections "periodic;" he also notes that the requirement to monitor construction site effluent is a "major task." In addition, the Commenter suggests that the final paragraph of Section 4.6 be modified to refer to "applicable" TMDL deadlines.

EPA Response: The Draft Permit required the Permittee to ensure compliance enforcement activities at or above the 2008 level. Partially in response to this Comment, EPA has revised the Permit as follows to more clearly articulate the inspection and enforcement responsibilities of the Permittee with regard to construction sites:

[The Permittee shall c]ontinue to implement ~~an~~ inspection and enforcement ~~plan for carrying out~~ procedures, including but not limited to inspection of permitted construction sites that disturb more than 5,000 square feet of soil as follows:

1. First inspection prior to ground disturbing activities to review planned sediment and erosion control measures;
2. Second inspection to verify proper installation and maintenance of sediment and erosion control measures;
3. Third inspection to review planned installation and maintenance of stormwater BMPs;
4. Fourth inspection to verify proper installation of stormwater management practices following final stabilization of the ~~objectives~~ project site; and ~~of the SWMP dated February 19, 2009. Maintain~~
5. Other inspections ~~and~~ as necessary to ensure compliance ~~and enforcement~~ with relevant standards and requirements. ~~activities at or above the 2008 level.~~

Section 4.6.3 of Final Permit (changes indicated are against Draft Permit). As discussed further in Section 4.6 of today's Fact Sheet, this schedule is already consistent with the District's inspection policies and therefore should not result in additional burden.

With respect to the comment that the Permit reference discussion of progress toward meeting "applicable" TMDL deadlines, EPA contends that the listed items are in fact those that contain such applicable deadlines. The requirements are to report progress in each Annual Report as follows: (i) an explanation as to how the implementation of these procedures will meet the requirements of the Clean Water Act; (ii) an explanation as to how the implementation of these procedures, particularly with regard to District "waivers and exemptions," will meet the requirements of the Clean Water Act; and (iii) discussion of progress toward meeting TMDL and the District Watershed Implementation Plan deadlines. Section 4.6.6 of Final Permit. (Note that the requirement to report on progress toward meeting DC WIP deadlines is an addition to this Permit from the Draft).

hh. Section 4.7: In the section on Management Plan for Illicit Discharges and Improper Disposal, the Commenter suggests several changes, including modifying paragraph 1.e to refer to the requirements of this Permit, as opposed to the Clean Water Act as written. He also recommends revising paragraph 1.f to delete the statement that the Permittee shall carry out the necessary monitoring activities with the goal of meeting CWA requirements. Moreover, the Commenter requests deleting the requirement in paragraph 1.g that the implementation of this program shall be reported in each of the Annual Reports.

EPA Response: The Final Permit has removed the overly-broad reference to demonstration of compliance with the CWA by modifying this section as follows (now Section 4.7.1.f):

Such a program [for illicit discharges and improper disposal] shall include, at a minimum, the following: . . . ~~An enforcement plan~~ Enforcement procedures for illicit discharges set forth in Part 4 herein. ~~The Permittee shall provide a justification for the~~

~~control plan in the Annual Report in demonstrating its compliance with the requirements of the Clean Water Act.~~

The Permit has also been revised to remove the requirement that the Permittee carry out monitoring activities with the goal of meeting CWA requirements.

> All necessary inspection, surveillance, and monitoring procedures to remedy and prevent illicit discharges. ~~The Permittee shall carry out the necessary monitoring activities with the goal of meeting the requirements of the Clean Water Act.~~ The Permittee shall submit an inspection schedule, ~~plan,~~ inspection criteria, ~~and~~ documentation regarding protocols and parameters of field screening, and allocation of resources as a part of each Annual Report.

Final Permit at Section 4.7.1.g. This modification is appropriate because outfall screening is required by other provisions in the Permit, including Sections 4.3.5.3, 4.7.1.b and 5.4.

As to the paragraph on spills in this section (Paragraph 4.7.1.g), EPA has made the requested change: the Final Permit deletes the requirement that implementation of this program be reported in each Annual Report, since that provision was duplicative with another section immediately below it.

ii. Section 4.8: For flood control projects, the Commenter recommends deleting the following provision from the requirement that the Permittee assess potential impacts on water quality: "In addition, submit the flood control measures necessary to meet the requirements of the Clean Water Act with these Reports/Plans." Further, the Commenter would like the language requiring data collection on impervious cover modified so that the requirement begins six months after the effective date of this Permit. (The Draft Permit had simply indicated that the requirement was "after the effective date.") Finally, the Commenter recommends removal of a requirement that the Permittee explain how the implementation of procedures would be used to meet CWA requirements.

EPA Response: All requested changes have been made.

jj. Section 4.9: The Commenter suggests editing the Permit language to indicate that the outreach program be designed to *improve* the target audiences' understanding of stormwater rather than *achieve measurable improvement* in the understanding of stormwater.

EPA Response: The goal of the education and outreach component of the SWMP is to improve District residents' understanding of stormwater effects and how they can reduce their impacts; therefore, this is what must be measured in order to demonstrate compliance with the related provisions.

kk. Section 5.2.3: The Commenter requests modifying the paragraph on sample collection by replacing a requirement that samples be taken in each hour of discharge for the entire

discharge with "representative grab" requirement, and adding that minimum separation period should occur "whenever possible."

EPA Response: The Draft Permit appropriately describes the methodology for wet weather monitoring and is consistent with 40 C.F.R. § 122.21(g)(7)(ii). Therefore, EPA has not made any changes to this language at Section 5.2.3 (Sample Type, Collection, and Analysis). In any event, this requirement is part of the Interim Monitoring Program, which EPA has chosen not to modify for the Final Permit simply because the provisions are largely an extension of the same requirements and methods already approved and established under prior permits. *See* Section 5.2 of today's Fact Sheet for additional explanation. EPA encourages the Commenter to provide input as the District develops its Revised Monitoring Program.

ll. Section 5.10: For retention of monitoring information, the Commenter suggests that such information be retained for three years (as opposed to five, as required by the Draft Permit), and that it be retained from the date of the sample, measurement or report (as opposed to from the expiration date of this Permit, as required by the Draft Permit).

EPA Response: The Commenter relies on 40 C.F.R. § 122.41(j)(2) in support of its request to change the retention period for monitoring information. However, that provision also provides that the Permit must require a period of "at least 3 years" for retention of monitoring information, and that the period "may be extended by request of the Director at any time." Because the District's stormwater management program is continually evolving, and because of the importance of this program nationally, EPA has determined that a five-year retention period is appropriate for at least the current Permit cycle.

To the extent that the Commenter requests that the information be retained from the date of the sample, measurement or report, that change has been made. The Permit language has been revised as follows:

> The Permittee shall continue to retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation for a period of at least five (5) years from the <u>date of the sample, measurement or report</u> expiration ~~date of this Permit~~.

Final Permit at Section 5.9 (Retention of Monitoring Information).

mm. Section 6: The Commenter notes that TMDL reporting required by Table 5 in the Draft Permit (Permit Deliverables) is rolled into the Annual Report requirement.

EPA Response: The Commenter does not explain his concern, but to the extent he may have been addressing perceived duplicative reporting requirements, EPA notes that Table 6 of the Final Permit (Permit Deliverables, Table 5 of the Draft Permit) has been revised to require only three items: Outfall DMR, Annual Report, and MS4 Permit Application. In the Draft Permit, the Table also included "Annual Report/Implementation Plan (Consolidated)." Additionally, EPA notes that TMDL Implementation Plan requirements, including reporting, have been moved

to Section 4.10.3 of the Final Permit so that the Final Permit does not contain duplicative reporting requirements.

nn. Section 6.2.1.d: The Commenter recommends replacing "notwithstanding" prior to statute list with "subject to," and notes that neither EPA nor the District can ignore these statutory limitations.

EPA Response: EPA has made the requested change in the Final Permit.

oo. Section 6.2.4: As to signature and certification, the Commenter recommends deleting the requirement that the Permittee include a statement or resolution that the Permittee's governing body or agency has reviewed submissions.

EPA Response: EPA first notes that it has revised the Permit to require that deliverables be signed in accordance with 40 C.F.R. § 122.22(b) ("All reports required by Permits, and other information requested by the Director shall be signed by a person described in paragraph (a) of this section. . . "), as opposed to being consistent with the Permit itself. However, EPA has declined to make the requested change because of the importance of review at high levels of District Government to ensure that appropriate checks and balances have occurred. (Note that this provision has been moved to Section 6.2.3 of the Final Permit.)

pp. Section 6.2.6: The Commenter suggests deleting language which both describes EPA's authority to revise District submittals and to require the District to comply with the revisions. In addition, the Commenter recommends adding language which allows deadlines tied to the approval of a previous submittal to be extended if EPA does not approve the submittal within 60 days.

EPA Response: The Commenter did not explain its rationale for the recommendation, and DC DOE has not indicated that the draft language on EPA approval would be in any way problematic, so EPA has declined to make this change.

qq. Section 8.1.1: The Commenter recommends inserting a provision that TMDL WLA compliance is a "goal," and that compliance with TMDL WLAs is achieved through the implementation of BMPs to the MEP.

EPA Response: Initially, EPA notes that it has rewritten the Permit to move the provisions of Section 8 of the Draft Permit (Other Applicable Provisions) to Section 4.10 of the Final Permit (Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA) Planning and Implementation). As to the Commenter's suggestions, the Agency has declined to make the first change, since TMDL WLA compliance is a requirement and not simply a goal. With regard to the Commenter's request to include a provision on TMDL WLA compliance, the Commenter is referred to Section 1.4 of the Final Permit ("Compliance with the performance standards and provisions contained in Parts 2 through 8 of this Permit shall constitute adequate progress toward compliance with DCWQS and WLAs for this Permit term.").

rr. Section 8.1.3 (paragraphs A – D): The Commenter suggests deleting language referring to interim compliance deadlines for achieving WLAs, and replacing it with a requirement to provide an estimated date for achieving compliance with WLAs using an iterative program of BMPs to the MEP. The Commenter also recommends that the requirement for the TMDL Implementation Plan include an "estimated" percentage of pollutant load reductions "anticipated to be" specified in the implementation plan, as opposed to an "interim compliance deadline for achieving" such reductions.

EPA Response: Section 4.10.3 of the Final Permit (formerly Section 8.1.3) requires compliance schedules for both interim milestones and final attainment; it is not one or the other. Using applicable EPA Guidance, the permit has been revised to include interim compliance deadlines and numeric milestones for achieving the TMDL WLA. *See* "Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Stormwater Sources and NPDES Permit Requirements Based on Those WLAs'" (November 12, 2010) (available at: http://www.epa.gov/npdes/pubs/establishingtmdlwla_revision.pdf). This approach is being taken as a result of the increased knowledge and development in stormwater control techniques within the District and will enable better monitoring and tracking toward compliance.

As to the request that the Permit require an iterative program of BMPS "to the maximum extent practicable," the Final Permit does not contain reference to the MEP standard. Rather, the Fact Sheet supporting the Permit has been revised to more clearly demonstrate how the Permit requirements are expected to represent a reduction of pollutants to the MEP. At the same time, EPA notes that the Permit continues to allow the Permittee flexibility to decide how it will meet the WLAs.

Finally, with respect to the Commenter's request that the Permit specify an estimated percentage of pollutant load reductions, the language in the permit does not preclude this. If the District feels that it would be appropriate to include the estimated percentage of pollutant load reductions that it anticipates, it can certainly provide such information. However, EPA notes that WLAs are typically expressed as loads (i.e., not percentages); therefore, it would be advisable to express the interim milestones this way.

ss. Section 8.1.3 (paragraph E): The Commenter suggests revising a provision of the Draft Permit on demonstration of WLA achievement as follows: "If an annual evaluation of monitoring data indicates that these practices are insufficient progress towards meeting WLA, the Permittee shall adjust its management program accordingly ~~towards meeting the water quality standards and appropriate TMDLs~~."

EPA Response: In response to the Comment, EPA has clarified the Final Permit by including the following provision in place of the one described above (and moving it to Section 4.10 of the Final Permit (Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA) Planning and Implementation):

> 4.10.4 Adjustments to TMDL Implementation Strategies. If evaluation data, as outlined in the monitoring strategy being developed per Part 5.1, indicate insufficient progress

towards meeting any WLA covered in 4.10.1, 4.10.2 or 4.10.3, the permittee shall adjust its management programs to compensate for the inadequate progress within 6 months to address the deficiencies, and document the modifications in the Consolidated TMDL Implementation Plan. The Plan modification shall include a reasonable assurance demonstration of the additional controls to achieve the necessary reductions.

tt. Section 9.6: As to retention of records, the Commenter suggests revising the retention period from five years from the expiration date of the Permit to three years from the date of the sample, measurement, report, or application.

EPA Response: Pursuant to 40 C.F.R. § 122.41(j)(2), the records retention requirement for records and reports required by the Permit is "at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time." Because the District's stormwater management program is continually evolving, and because of the importance of this permit nationally, EPA has determined that a five-year retention period is appropriate for at least the current Permit cycle, and has thus declined to make the proposed change. (Relevant language is now at Section 8.6 of Final Permit.)

uu. Section 9.17: The Commenter proposes deleting this section, which addresses bypasses.

EPA Response: This provision is a standard condition required to be placed in all NPDES Permits, pursuant to 40 C.F.R. § 122.21. Because MS4 Permits such as the one issued to the District are within the category of NPDES Permits, those general regulations apply to this and other MS4 Permits. Note that the provision has been moved to Section 8.17 of the Final Permit.

vv. Definitions: The Commenter indicates that the Permit should define development and redevelopment to exclude utility repairs, maintenance, or associated activities.

EPA Response: While the Permit is silent as to utility repairs, EPA does not believe that a waiver for development standards for utility maintenance and repair activities is appropriate. In fact, operation and maintenance of municipal operations and related activities are specifically covered by the federal regulations, 40 C.F.R. § 122.26(d)(2)(iv)(A), as well as in various Agency guidance documents, *see e.g.*, EPA, *MS4 Permit Improvement Guide* (April, 2010). Therefore, EPA has declined to make the requested change.

13. Earthjustice [respresenting: Anacostia Riverkeeper, Potomac Riverkeeper, Waterkeeper Alliance, and D.C. Environmental Network], Jennifer Chavez (June 4, 2010).

a. The Commenter incorporates comments submitted by Natural Resources Defense Council (NRDC).

EPA Response: See Letter No. 20 responses herein.

b. The Commenter expresses concern that the Draft Permit provisions do not satisfy the requirement for compliance with water quality standards. Specifically, the Commenter states that "[t]he Permit has no express requirement for the MS4 to achieve reductions needed to meet standards at all, much less by any specified time. Instead, the Region relies on the District—the Permittee—to "manage, implement and enforce a stormwater management program" as the means by which the EPA purports to ensure compliance with WQS, TMDL allocations, and other legal requirements for NPDES Permits."

EPA response: First, EPA contends that the Permit does require standards attainment. Section 1.4 of the Final Permit provides that the Permittee must "[e]ffectively prohibit pollutants in stormwater discharges or other unauthorized discharges into the MS4 System as necessary to comply with existing District of Columbia Water Quality standards (DCWQS)." If the District does not comply with this requirement, it would be in violation of the Permit. In addition, Section 2.1.1 of the Permit requires the Permittee to have "legal authority to control discharges to and from the [MS4] in order to prevent or reduce the discharge of pollutants to achieve water quality objectives." Moreover, Section 8.4 (Duty to Mitigate) provides that "[i]n the event that the Permittee or Permitting authority determines that discharges are causing or contributing to a violation of applicable WQS, the Permittee shall take corrective action to eliminate the WQS exceedance or correct the issues and/or problems. . . " And Section 8.19 of the Permit allows it to be reopened for a number of reasons, including, *inter alia*, "[t]o incorporate additional controls that are necessary to ensure that the Permit effluent limits are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4."

Second, EPA acknowledges that such standards attainment may not occur in its entirety during this Permit cycle. This is consistent with EPA's Phase II Stormwater Final Rule, *National Pollutant Discharge Elimination System--Regulations for Revision of the Water Pollution Control Program Addressing Stormwater Discharge,*64 Fed. Reg. 68722, 68731 (Dec. 8, 1999) (available at: http://cfpub.epa.gov/npdes/regresult.cfm?program_id=6&type=1&sort=name&view=all) ("At this time, EPA determines that water quality-based controls, implemented through the iterative processes described today are appropriate for the control of such pollutants and will result in reasonable further progress towards attainment of water quality standards. *See* Sections II.L and II.H.3 of the preamble."); *id.* at 68753 ("EPA envisions application of the MEP standard as an iterative process."); *id.* at 68754 ("EPA also believes the iterative approach toward attainment of water quality standards represents a reasonable interpretation of CWA section 402(p)(3)(B)(iii).").

c. The Commenter states that the Region cannot presume, without supporting evidence, that the effluent limitations expressed in the Permit are based on compliance with the District of Columbia's water quality standards in accordance with the Clean Water Act. Nor does the Commenter believe that it is lawful for the Region to presume without supporting evidence that discharges controlled in accordance with the standards for development shall be considered to be as stringent as necessary to ensure that the discharges do not cause or contribute to an excursion above: (1) any applicable TMDL WLAs; or (2) DC WQS. Finally, the Commenter indicates that it is unlawful for the Region to presume, without supporting evidence, that compliance with all performance standards and

provisions contained in this Permit shall constitute progress toward compliance with DCWQS.

EPA Response: Initially, the Commenter is referred to today's Fact Sheet, which clearly explains EPA's rationale for presuming that compliance with the performance standards and provisions contained in Parts 2 through 8 of the Permit will constitute adequate progress toward compliance with DCWQS and WLAs for this Permit term. At the same time, the Agency has also determined that it is appropriate to allow the District the necessary flexiblity to achieve compliance with water quality standards while implementing the controls that are most conducive to achieving other municipal goals. Therefore, EPA has for each Permit requirement determined whether the Final Permit should either contain a prescriptive requirement/performance standard, or whether the District is in the best position to make such determinations. See today's Fact Sheet for additional discussion.

The Commenter is also referred to certain requirements in the Final Permit regarding the Annual Report (Section 6.2.1), including the following, which ensure that EPA is kept apprised of progress related to the District's stormwater program:

- A review of the status of program implementation and compliance (or non-compliance) with all provisions and schedules of compliance contained in this Permit, including documentation as to compliance with performance standards and other provisions and deliverables contained in Section 4 of the Permit
- A review of monitoring data and any trends in estimated cumulative annual pollutant loadings, including TMDL WLAs and TMDL implementation activities
- An assessment of the effectiveness of controls established by the SWMP
- Identification of water quality improvements or degradation through application of a measurable performance standard as stated throughout this Permit
- Results of storm and water quality modeling and its use in planning installation of control systems and maintenance and other activities
- The amount of impervious cover within the District, and within the three major watersheds in the District (Anacostia, Potomac and Rock Creek)
- The percentage of effective impervious cover reduced annually, including but not limited to the number and square footage of green roofs installed in the District, including the square footage of drainage managed by practices that meet the performance standards in 4.1.1 of the Permit

The Permittee's failure to meet these (or other Annual Report-related) requirements would constitute a violation of the Permit. Also, as described further in section 6.2 of the Fact Sheet, these requirements—when properly implemented—have all been shown through modeling and practice to assist communities in attaining water quality standards. If these amounts reported in the Annual Report are not met, not only is it a violation of the Permit, but a violation of water quality standards as well. Thus, the Annual Report is supporting evidence of whether or not water quality standards are being met, and since the underlying information is based on Permit requirements are, there is an element of accountability by the Permittee to meet such requirements—in turn attaining water quality standards.

d. The Commenter states that "the Region must impose clear and specific conditions that, when implemented will achieve water quality standards" and that "the Permit is plagued by vague and unclear requirements that are certain to produce little to nothing in the way of concrete reductions."

EPA response: EPA has revised the Permit to ensure additional clear and specific conditions that will result in improved water quality. *See e.g.*, Sections 4.1.1 (Standard for Stormwater Discharges from Development); 4.1.5 (Retrofit Program for Existing Discharges); 4.1.6 (Tree Canopy); 4.1.7 (Green Roof Projects); and 4.3.6 (Streets, Alleys and Roadways). At the same time, the Agency has also determined that it is appropriate to allow the District the necessary flexiblity to achieve compliance with water quality standards while implementing the controls that are most conducive to achieving other municipal goals. Therefore, EPA has for each Permit requirement determined whether the Final Permit should either contain a prescriptive requirement/performance standard, or whether the District is in the best position to make such determinations. *See* today's Fact Sheet for additional discussion.

By way of further example, Section 4.10.1 of the Final Permit requires the Permittee to "attain removal of 103,188 pounds of trash annually, as determined in the Anacostia River Watershed Trash TMDL, as a specific single-year measure by the fifth year of this Permit term." In contrast, the Draft Permit simply required the Permittee to reduce trash volume (and report thereon), and develop and implement Anacostia River Trash TMDL Implementation Plan.

Also, the Final Permit incorporates certain numeric performance standards that are driven by the Chesapeake Bay TMDL, and which are expected to reduce quantities of nitrogen, phosphorus, and sediment from the District of Columbia (as well as other Bay jurisdictions). As background to these anticipated reductions, EPA notes that each Bay jurisdiction developed a Watershed Implementation Plan (WIP) to identify how it intends to meet the reductions called for in the TMDL. The District's Final Phase I WIP, *Chesapeake Bay TMDL Watershed Implementation Plan District of Columbia Department of the Environment* (November 29, 2010) (available at: http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Columbia_WIP_Bay_TMDL.pdf) (DC WIP), specifically anticipates reductions of nitrogen, phosphorus, and sediment contributions to the Bay by 11, 27, and 26 percent, respectively, by relying on the following District commitments:

- Install at least 350,000 sq ft of green roofs over the Permit cycle on District property
- Plant at least 4,150 trees annually with a goal of planting and maintaining 13,500 additional trees by 2014 and increasing its tree canopy from 35% to 40% by 2035
- Insure that all development greater than 5,000 sq ft retain stormwater generated from a 1.2" 24-hour storm
- Promotion of low-impact development

Section 7.2 of DC WIP. Currently, the District and other Bay jurisdictions are working on their Phase II WIPs. EPA notes that the Final Permit includes a reopener clause (Section 8.19) that allows it to be reopened for a number of reasons, including, *inter alia*, "[t]o incorporate additional controls that are necessary to ensure that the Permit effluent limits are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4."

e. The Commenter states that "the Region has not even attempted to incorporate the "maximum extent practicable" ("MEP") standard into the Permit. Because the Region's Permits action must be supposed by record evidence and a reasoned explanation, the failure to demonstrate compliance with the MEP standard is arbitrary and capricious and not in accordance with the CWA § 402(p), 33 U.S.C. § 1342(p)."

EPA response: The Final Permit does not contain reference to the MEP standard. Rather, the Fact Sheet supporting the Permit has been revised to more clearly demonstrate how the Permit requirements are expected to represent a reduction of pollutants to the MEP.

f. The Commenter believes that EPA should explicitly require the MS4 to achieve the pollution reductions necessary to comply with TMDL loads that have been allocated to the DC MS4 system. Further, Commenter suggests that WLAs must be incorporated as numeric effluent limitations in the Permit itself, since the Draft Permit does not require actual attainment of WLAs in the stormwater management program, and the Region has not supplied a basis for concluding that the District's program will, in fact, achieve reductions needed to meet applicable WLAs. The Commenter states, "[i]t is also not sufficient for the Permit to rely on the District to implement a stormwater management plan that is 'consistent with applicable wasteload allocations (WLAs) for each approved Total Maximum Daily Load (TMDL) for each receiving water body.'"

EPA response: With regard to being consistent with WLAs and TMDLs, see response to comment "c" above, the response to which is incorporated here by reference. As to achievement of reductions to attain applicable WLAs, Section 1.4.2 of the Final Permit has been revised to require that discharges 'attain' applicable wasteload allocations rather than just 'be consistent' with them. Also, Section 4.10.3 of the Final Permit requires that the District develop, public notice, and submit to EPA for review and approval a consolidated TMDL Implementation Plan including:

1. A specified schedule for compliance with each TMDL that includes numeric benchmarks that specify annual pollutant load reductions and the extent of control actions to achieve these numeric benchmarks;
2. Interim numeric milestones for TMDLs where final attainment of applicable waste load allocations requires more than one permit cycle. These milestones shall originate with the third year of this permit term and every five years thereafter;
3. Demonstration using modeling of how each applicable WLA will be attained using the chosen controls, by the date for ultimate attainment;
4. The Consolidated TMDL Implementation Plan elements required in this section will become enforceable permit terms upon approval of such Plans, including the interim and final dates in this section for attainment of applicable WLAs; and
5. Where data demonstrate that existing TMDLs are no longer appropriate or accurate, the Plan shall include recommended solutions, including, if appropriate, revising or withdrawing TMDLs.

Also, the Permit provides protection in the event that the Permittee makes insufficient progress toward attaining any WLA:

> If evaluation data, as outlined in the monitoring strategy being developed per Part 5.1, indicate insufficient progress towards attaining any WLA covered in 4.10.1, 4.10.2, or 4.10.3, the permittee shall adjust its management programs within 6 months to address the deficiencies, and document the modifications in the Consolidated TMDL Implementation Plan. The Plan modification shall include a reasonable assurance demonstration of the additional controls to achieve the necessary reductions. Annual reports must include a description of progress as evaluated against all implementation objectives, milestones, and benchmarks, as relevant, outlined in Part 4.10.

Final Permit at Section 4.10.4. With the foregoing provisions in the Final Permit, EPA believes that the District's stormwater management program will achieve the reductions needed to attain applicable WLAs. If such reductions are not met, it is a violation of the Permit. As such, the Final Permit is also consistent with EPA policy, *see e.g.*, "Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Stormwater Sources and NPDES Permit Requirements Based on Those WLAs'" (November 12, 2010) (available at: http://www.epa.gov/npdes/pubs/establishingtmdlwla_revision.pdf).

g. The Commenter believes that the Permit violates anti-backsliding requirements of the CWA, since a previous iteration of the Permit contained an aggregate numeric effluent limit for four outfalls into Hickey Run but it now lacks any numeric effluent limits on discharges from any MS4 outfalls, including those that discharge into Hickey Run. The Commenter suggests that the Final Permit must restore numeric effluent limits for Hickey Run that are at least as stringent as the prior version of the Permit.

EPA Response: The prohibition against backsliding is contained in section 402(o)(1) of the CWA, 33 U.S.C. § 1342(o)(1) ("[A] Permit may not be renewed, reissued, or modified … subsequent to the original issuance of such Permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous Permit."). The Commenter implies that a Permit that replaces a numeric effluent limit with a non-numeric one is somehow automatically less stringent on that parameter. However, the narrative requirement only violates the anti-backsliding prohibition if the two provisions are comparable. *See e.g., Communities for a Better Environment v. State Water Resources Control Bd.*, 132 Cal. App. 4th 1313 (August 29, 2005) (performance-based and water quality-based limits not comparable for purposes of anti-backsliding analysis). In this case, the two provisions are not comparable: EPA has determined that compliance with the performance standards in the Final Permit will result in more water quality protections for the DC MS4's receiving streams than did the previous aggregate numeric limit. EPA also notes that monitoring on Hickey Run indicates that the stream may no longer be impaired for oil and grease. EPA has retained provisions in the Final Permit for additional control measures in Hickey Run in the event additional monitoring indicates they are necessity. However, EPA believes it equally likely that monitoring this permit term may confirm that stormwater discharges to this water body no longer cause or contribute to exceedances of water quality standards for oil and grease.

h. The Commenter believes that the Permit relies heavily on programs and plans that will be developed by the District after the Permit is issued and outside of the public notice and comment procedures for the MS4 Permit. The Commenter suggeststst that this violates notice and comment requirements because those plans and programs will not have been submitted to public scrutiny. Further, the Commenter argues that the Region must specify that any modifications to the Permit are subject to public notice and comment procedures.

EPA Response: The Final Permit contains robust opportunities for public participation. For example, Section 2.3.2 of the Final Permit (Stormwater Management Program Administration/Permittee Responsibilities), lists one of DDOE's major responsibilities as "[m]aking available to the public and other interested and affected parties, the opportunity to comment on the MS4 stormwater management program." The Permit contains many other examples of public participation requirements, including, *inter alia,* provisions for development of off-site mitigation/fee-in lieu, retrofit, tree canopy, and storm drain system operation, and reduction programs for solids and floatables. *See* Sections 4.1.3, 4.1.5, 4.1.6, and 4.3.5, respectively.

By way of additional examples of public notification requirements, the Final Permit increases public participation aspects of the Permit, in part by including TMDL WLA Implementation as part of the District's overall Stormwater Management Plan (SWMP) (moved from Section 8.1 of Draft Permit ("Other Applicable Provisions—WQS and TMDL WLA Implementation Plans and Compliance Monitoring") to Section 4.10 of Final Permit ("Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA) Planning and Implementation")). The Permit also requires the Permittee to "make all draft and approved MS4 documents required under this Permit available to the public for comment. The current draft and approved SWMP and the MS4 annual reports deliverable documents required under this Permit shall be posted on the Permittee's website." Section 4.9.4.3 of Final Permit. *See also* Sections 4.9.4.1 (requirement to create opportunities for the public to participate in the decision making processes involving the implementation and update of the Permittee's SWMP); 4.9.4.2 (requirement to continue to establish a method of routine communication to groups such as watershed associations and environmental organizations that are located in the same watershed(s) as the Permittee, or organizations that conduct environmental stewardship projects located in the same watershed/s or in close proximity to the Permittee); 4.9.4.3 (requirement to make all draft and approved MS4 documents required under the permit available for public comment and to be posted on the District's website)[18]; 4.9.4.4 (requirement to continue to develop public educational and participation materials in cooperation and coordination with other agencies and organizations in the District); and 4.9.4.5 (requirement to periodically, and at least annually, update its website).

[18] The Permit contains additional requirements for website posting: Section 3 (Current SWMP shall be posted on the District's website at an easily accessible location at all times); Section 6.2 ("The permittee shall submit an Annual Report to EPA on the effective yearly date of the permit for the duration of the permitting cycle. At the same time the Annual Report it submitted to EPA it shall also be posted on the District's website at an easily accessible location.").

Also, the Final Permit (Section 4.9.1.2) has requirements to reach specific public interest groups, including but not limited to, the general public (including home-based and mobile businesses); homeowners, landscapers and property managers; and engineers, contractors, developers, review staff, and land use planners.

Finally, EPA notes that the Permit allows Permit modification pursuant to 40 C.F.R. § 122.62, and that—unless such changes are "minor"—a Draft Permit must be prepared and other procedures in part 124 followed. This provision also ensures that the public would have an opportunity to participate in any changes to the Permit.

14. Friends of Rock Creek's Environment (FORCE), Beth Mullin (June 4, 2010).

a. The Commenter believes that the Draft Permit needs greater specificity that can be measured, monitored, and enforced, and that the Final Permit should set forth strong and meaningful standards and deadlines for realistic fulfillment of its generally stated goals. She provides examples of such requirements for green infrastructure projects, including a request for: benchmarks for tree plantings; a targeted square footage of green roofs; stronger on-site retention standards for new development and redevelopment projects; and specific numeric requirements for new storm drain screens and trash traps.

EPA Response: EPA agrees that enforceability of the Permit is important, and has thus revised the Permit to impose additional clear and specific conditions that will result in improved water quality. *See e.g.,* Sections 4.1.1 (Standards for Stormwater Discharged from Development); 4.1.5 (Retrofit Program for Existing Discharges); 4.1.6 (Tree Canopy); 4.1.7 (Green Roof Projects); and 4.3.6 (Streets, Alleys and Roadways). Today's Fact Sheet also discusses the greater enforceability anticipated through the Final Permit. At the same time, the Agency has also determined that it is appropriate to allow the District the necessary flexiblity to achieve compliance with water quality standards while implementing the controls that are most conducive to achieving other municipal goals. Therefore, EPA has for each Permit requirement determined whether the Final Permit should either contain a prescriptive requirement/performance standard, or whether the District is in the best position to make such determinations. *See* today's Fact Sheet for additional discussion.

b. The Commenter indicates that the Permit must fully incorporate existing and future TMDLs and waste load allocations.

EPA Response: The Final Permit incorporates all TMDL WLAs applicable to the DC MS4 as of the effective date of the Permit, including the Anacostia River Watershed Trash TMDL Implementation (Section 4.10.1) and Hickey Run TMDL Implementation (Section 4.10.2), as well as all other "TMDL wasteload allocations assigned to District MS4 discharges." (This would include, *inter alia,* Chesapeake Bay TMDL WLAs). Section 4.10.3. As to future TMDLs and wasteload allocations, the Permit provides that "[f]or any new TMDL approved during the permit term with wasteload allocations assigned to District MS4 discharges, the District shall update this Plan within six months and include a description of revisions in the next regularly scheduled annual report." *Id.* Also, the Final Permit includes a reopener clause (Section 8.19) to

ensure that the Permit can be amended as necessary to maintain consistency with future TMDL WLAs that are allocated to the discharge of pollutants from the MS4 during the Permit cycle.

c. The Commenter requests that the Permit include sound monitoring plans.

EPA Response: As discussed in greater detail at Section 5.1 of today's Fact Sheet, the monitoring requirements for the District's stormwater program have been significantly updated and improved from the last permit cycle. This revision reflects the fact that the District has already performed broad monitoring of a variety of parameters over the last two permit cycles. Among other requirements, the District's revised monitoring program must meet a number of important objectives, including: (1) making wet weather loading estimates; (2) evaluating the health of the receiving waters, to include biological and physical indicators; and (3) performing any additional necessary monitoring for purposes of source identification and wasteload allocation tracking. Final Permit at Section 5.1.1.

d. The Commenter states that meaningful public participation should be sought and considered throughout the Permit implementation.

EPA Response: The Final Permit contains robust opportunities for public participation. For example, Section 2.3.2 of the Final Permit (Stormwater Management Program Administration/Permittee Responsibilities), lists one of DDOE's major responsibilities as "[m]aking available to the public and other interested and affected parties, the opportunity to comment on the MS4 stormwater management program." The Permit contains many other examples of public participation requirements, including, *inter alia*, provisions for development of off-site mitigation/fee-in lieu, retrofit, tree canopy, and storm drain system operation. and management/solids and floatables reduction programs also include such requirements. *See* Sections 4.1.3, 4.1.5, 4.1.6, and 4.3.5, respectively.

By way of additional examples of public notification requirements, the Final Permit increases public participation aspects of the Permit, in part by including TMDL WLA Implementation as part of the District's overall Stormwater Management Plan (SWMP) (moved from Section 8.1 of Draft Permit ("Other Applicable Provisions -- WQS and TMDL WLA Implementation Plans and Compliance Monitoring") to Section 4.10 of Final Permit ("Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA) Planning and Implementation")). The Permit also requires the Permittee to "make all draft and approved MS4 documents required under this Permit available to the public for comment. The current draft and approved SWMP and the MS4 annual reports deliverable documents required under this Permit shall be posted on the Permittee's website." Section 4.9.4.3 of Final Permit. *See also* Sections 4.9.4.1 (requirement to create opportunities for the public to participate in the decision making processes involving the implementation and update of the Permittee's SWMP); 4.9.4.2 (requirement to continue to establish a method of routine communication to groups such as watershed associations and environmental organizations that are located in the same watershed(s) as the Permittee, or organizations that conduct environmental stewardship projects located in the same watershed/s or in close proximity to the Permittee); 4.9.4.3 (requirement to make all draft and approved MS4 documents required under the permit available for public comment and to be posted on the

District's website)[19]; 4.9.4.4 (requirement to continue to develop public educational and participation materials in cooperation and coordination with other agencies and organizations in the District); and 4.9.4.5 (requirement to periodically, and at least annually, update its website).

Also, the Final Permit (Section 4.9.1.2) has requirements to reach specific public interest groups, including but not limited to, the general public (including home-based and mobile businesses); homeowners, landscapers and property managers; and engineers, contractors, developers, review staff, and land use planners.

Finally, EPA notes that the Permit allows modification pursuant to 40 C.F.R. § 122.62, and that -- unless such changes are "minor" -- a Draft Permit must be prepared and other procedures in part 124 followed. This provision also ensures that the public would have an opportunity to participate in any changes to the Permit.

15. Licsko Z. John (June 4, 2010).

a. The Commenter asks what the recurrence interval for the 24-hour storm is in the area covered by the Permit.

EPA Response: The recurrence interval for the one-year, 24-hour storm in Washington DC is approximately 2.5 inches. A rainfall of 1.2 inches is approximately equal to the one-year, one-hour storm. A map of the one-year, 24-hour storm in the District is available from the following source: National Oceanic and Atmospheric Administration, *Delaware, District of Columbia, Maryland, Virginia, West Virginia: Isopluvials of 60 minute precipitation (inches) 0 10 20 30 40 50 with Average Recurrence Interval of 1 year* (August 2006) (available at: ftp://hdsc.nws.noaa.gov/pub/hdsc/data/orb/na14orbv3_va1y60m.pdf).

b. The Commenter suggests that annual loading estimates for pollutants should be based on the hydrologic cycle, and not the calendar year, and should include a statistically representative estimate of annual pollutants loads that considers the pollutant load from both storm events as well as base flow conditions. The reporting of these loading estimates needs to include a reference to a background or reference loading estimate (*i.e.*, a predevelopment condition that assumes a meadow condition.)

EPA Response: Section 5.1 of the Final Permit requires the District to develop a revised monitoring program within one year of Permit issuance. The District is required to public notice this revised program. EPA encourages the Commenter to participate in this process.

[19] The Permit contains additional requirements for website posting: Section 3 (Current SWMP shall be posted on the District's website at an easily accessible location at all times); Section 6.2 ("The permittee shall submit an Annual Report to EPA on the effective yearly date of the permit for the duration of the permitting cycle. At the same time the Annual Report it submitted to EPA it shall also be posted on the District's website at an easily accessible location.").

c. The Commenter asserts that an assessment of the biological health of a system needs to include not only a biological or physical assessment of a site's health relative to a reference condition, but a consideration of the biological integrity of the sampling site which includes its biological connectivity to downstream aquatic habitats, the health, extent and connectivity of riparian habitat, the effects of hydrologic alterations, the effects of changes in the quality and availability organic matter in the stream, the effects of shading and temperature, as well biological fragmentation (*i.e.*, absence or over abundance of predators or competing evasive species).

EPA Response: Section 5.1 of the Final Permit requires the District to develop a revised monitoring program within one year of Permit issuance. The District is required to public notice this revised program. EPA encourages the Commenter to participate in this process.

d. The Commenter asks for what time frames must the "event mean concentrations" be reported.

EPA Response: The Final Permit provides that: "[t]he permittee must use the information to evaluate the quality of the stormwater program and the health of the receiving waters at a minimum to include: 1. The permittee shall estimate annual cumulative pollutant loadings for pollutants listed in Table 4. Pollutant loadings and, as appropriate, event mean concentrations, will be reported in DMRs and annual reports on TMDL implementation for pollutants listed in Table 4 in discharges from the monitoring stations in Table 5." Section 5.1.2 of Final Permit.

e. The Commenter suggests that the interception of rainfall by a mature tree canopy will not provide water quality benefits. A reduction in runoff volume due to interception will only result in an increase in the concentration of pollutants in runoff, when it does occur. In fact, while there may be other benefits, an increase in tree canopy will likely result in a higher annual loading for pollutants such as total phosphorus, nitrogen, and total suspended solids.

EPA Response: Section 4.1.6 of today's Fact Sheet contains a discussion of the benefits of tree planting, and provides substantial literature support for that requirement in the Permit. EPA also notes that the Final Permit includes a requirement for the District to public-notice its tree-planting strategy. EPA encourages the Commenter to participate in this process.

f. The Commenter questions how the performance standard for green roofs will be related to water quality improvements.

EPA Response: See Section 4.1.7 of today's Fact Sheet for a discussion of the benefits of green roofs, and literature support therefor. For example, one EPA study found that green roofs are capable of removing 50 percent of the annual rainfall volume from a roof through retention and evapotranspiration.[20]

[20] EPA, *Green Roofs for Stormwater Control*. EPA/600/R-09/026. February 2009 (available at: http://www.epa.gov/nrmrl/pubs/600r09026/600r09026.pdf).

g. The Commenter indicates that an evaluation of the appropriateness of the application loading rates as well the types of pesticides used by commercial applicators in an urban environment needs to be completed. Pesticide loading rates based on agriculture uses are not necessarily appropriate in an urban setting. The evaluation also needs to include a review of the risks versus the benefits of pesticide being used.

EPA Response: Section 4.3.4 of the Final Permit requires that the District only use pesticides if monitoring indicates a need and according to established guidelines according to an integrated pest management program (IPM) approach. The Permit also contains additional requirements to ensure that pesticide and fertilizer use within the DC MS4 Permit Area do not threaten water quality. These requirements are intended to ensure that application rates appropriate to the target organism and weather are used.

h. The Commenter questions what level of non-compliance with stormwater controls will be considered acceptable.

EPA Response: The Final Permit requires the District to meet various performance standards, compliance schedules, and benchmarks. Not meeting these requirements constitutes a permit violation.

i. The Commenter questions how the proposed sampling schedule (Section 5.2.3) supports the development of annual event mean concentration (EMC) value for the monitoring parameters in Table 3?

EPA Response: To support the current and projected sampling schedule for the current and proposed monitoring parameters, the annual pollutant loads for each watershed (Anacostia, Rock Creek, and Potomac) sampled were calculated using the Simple Method (EPA, 1992) utilizing the wet weather EMCs, the total drainage area, and land use distribution within each sewershed. The Simple Method equation also applies a dimensionless correction factor to adjust for storms where no runoff occurs, a dimensionless runoff coefficient for the land use type, and a unit conversion factor for chemical constituents in concentration units of mg/L and for bacteria in units of MPN/100mL to assist with the calculations. The Simple Method can estimate pollutant loads without extensive rainfall-runoff volume data using the sample analysis results available. Generally, the Simple Method is expected to overestimate pollutant loads as compared to more dynamic models that incorporate pollutant concentration and runoff coefficients as functions of initial conditions and rainfall intensity and duration in estimating pollutant loads. The average EMC for each monitoring station was calculated as the geometric mean of the measured EMCs. ASCE/EPA, *Urban Stormwater BMP Performance Monitoring: Guidance Manual* (2002).

j. The Commenter suggests that storm event data needs to include a summary all rainfall and runoff event occurring during a monitoring year (preferably hydrologic year), not just for sampled events. Without this data it is impossible to assess the representativeness of the samples that are collected.

EPA Response: Section 5.1 of the Final Permit requires that the District solicit public comments when developing the revised monitoring program. EPA encourages the Commenter to

participate in this process. Further, EPA will provide this comment to the District for consideration in developing their revised monitoring program.

16. Maryland-National Capital Building Industry Association, Raquel Montenegro (June 4, 2010).

a. The Commenter believes that private (*i.e.*, non-federal) developers will be unable to achieve the performance standard contained in Section 4.1.1.a of the Draft Permit unless certain specific characteristics of the District are addressed, such as existing density, limited green space, adjacent building foundations, and existing storm drainage which will limit the ability to use evapotranspiration, infiltration and/or stormwater harvesting and clay soils

EPA Response: EPA refers the Commenter to publications documenting costs *and benefits* of stormwater retention (or green infrastructure) approaches such as *Analysis of the Pollution Reduction Potential of DC Stormwater Standards* (LimnoTech. Inc., July 24, 2009); *Reducing Stormwater Costs through Low Impact Development Strategies and Practices* (EPA, December 2007) (http://www.epa.gov/owow/NPS/lid/costs07/); *Economic Costs, Benefits and Achievability of Stormwater Regulations for Construction and Development Activities* (Report to Natural Resources Defense Council and Waterkeeper Alliance, 2008); *Comparison of Environmental Site Design for Stormwater Management for Three Redevelopment Sites in Maryland* (Meliora Environmental Design LLC, 2008); *Cost-Benefit Evaluation of Ecoroofs* (City of Portland, 2008) (http://www.portlandonline.com/bes/index.cfm?a=261053&c=50818); *Rooftops to Rivers, Green Strategies for Controlling Stormwater and Combined Sewer Overflows* (Natural Resources Defense Council, June 2006) (http://www.nrdc.org/water/pollution/rooftops/rooftops.pdf); *Sustainable Raindrops* (Riverkeeper, 2006) (http://www.riverkeeper.org/wp-content/uploads/2009/06/Sustainable-Raindrops-Report-1-8-08.pdf); *A Triple Bottom Line Assessment of Traditional and Green Infrastructure Options for Controlling CSO Events in Philadelphia's Watersheds* (Stratus Consulting, August 24, 2009) (http://www.epa.gov/npdes/pubs/gi_phil_bottomline.pdf); *Initial Investigation of the Feasibility and Benefits of Low-Impact Site Development Practices for the San Francisco Bay Area* and *Supplementary Investigation of the Feasibility and Benefits of Low-Impact Site Development Practices for the San Francisco Bay Area at 4-5* (Richard R. Horner, 2007); and a proliferation of other case studies and reports. In particular EPA emphasizes that these approaches provide enhanced water quality benefits that more traditional approaches typically do not, and that are necessary to meet the water quality objectives of the Clean Water Act.

Further, EPA believes that a number of site constraints can be successfully overcome. For example, clay soils can be amended or replaced. Infiltration can also be supplemented by practices that evapotranspire or harvest rainwater. EPA agrees that there will be some sites where managing this volume of water will be infeasible, and has therefore provided provisions for off-site mitigation and payment-in-lieu (Section 4.1.3).

b. The Commenter believes that the new standard for new devleopment and redevelopment is a substantial increase, and asks the following questions: What process will be

established to ensure that practices which are utilized to meet the new retention standard will be accepted, approved and adopted (quickly) once proven effective? What allowance will be permitted when the cost of utilizing current environmental site design (ESD) measures places a project under water?

EPA Response: Section 4.9.4.1 of the Final Permit requires that the District "continue to create opportunities for the public to participate in the decision making processes involving the implementation and update of the Permittee's SWMP. The Permittee shall continue to implement its process for consideration of public comments on its SWMP." Therefore, the public will be invited to paricipate in the development of the review and approval process to implement the new performance standards. EPA encourages the Commenter to participate in this process.

c. The Commenter suggests that the retention standard for new development and redevelopment include a 10-percent degree of tolerance so that the post-development runoff does not have to match the predevelopment exactly.

EPA Response: EPA believes that it is better to have very specific standards that are enforceable, and then a process (Section 4.1.3) that provides for exceptions when they are individually warranted, rather than an unconditional 'bye' for all projects, some of which may not warrant it.

d. The Commenter generally supports the notions of an off-site mitigation and fee-in-lieu program, but expresses a concern that opportunities to provide off-site mitigation are extremely limited. The Commenter therefore suggests that EPA consider the use of dedicated open space or the use of public facilities for off-site mitigation. Also, the Commenter believes that the mitigation program criteria are unclear and lack transparency for both the applicant and the reviewing entity.

EPA Response: Section 4.9.4.1 of the Final Permit requires that the District "continue to create opportunities for the public to participate in the decision making processes involving the implementation and update of the Permittee's SWMP" Further, Section 4.1.3. specifically requires that the public be involved in the development of the off-site mitigation program (if the District chooses to develop one). Therefore, it is a Permit requirement that the District invite the public to paricipate in the development of the off-site mitigation and/or fee-in-lieu programs. EPA encourages the Commenter to participate in this process and raise its concerns at that time.

e. The Commenter believes that if developers rely on the alternative mitigation and fee-in lieu programs (as they will likely do given limitations for on-site mitigation), this will increase the cost of affordable housing undermining the goal of maintaining, or increasing, a diverse population.

EPA Response: EPA is not aware of any information to substantiate the Commenter's claim that required stormwater controls will increase housing prices and reduce the availability of affordable housing.

f. The Commenter requests that projects "in process" be allowed to continue to comply with existing standards, *i.e.*, "grandfathered."

EPA Response: The Final Permit requires that the Permittee implement an enforceable mechanism to adopt the new performance standards within 18 months following Permit issuance. Section 4.1.1. Therefore, the performance standards for development will not actually be in place for some time – thus allowing developers to finalize existing projects and at the same time preparing to adopt the standard for new projects.

g. The Commenter asks how the the new performance standards for new development and redevelopment will affect projects with an individual Permit granted by EPA for District projects.

EPA Response: Permittees (including the District) that have been issued individual Permits by EPA will be expected to comply with those Permits. If a particular activity would be more suited for coverage by the Final Permit, the District can request coverage through a modification or termination process to the existing individual Permit. However, a compelte review of such individual Permits is outside the scope of issuance of today's Final Permit.

h. The Commenter is concerned about the burden that compliance with the Permit will place on the District, both from a fiscal and also from a workforce perspective. Also, the Commenter believes that the U.S. General Accounting Office's decision to dismiss the federal government's obligation to pay the stormwater fee should be "revisited, rethought, and overturned."

EPA Response: EPA is aware that the District relies on the impervious surface assessment as a basis for supporting its compliance with the Permit requirements. However, the scope of this Permit is limited to imposing stormwater controls and effluent limitations on the District as Permittee (see Section 1 of Final Permit); as such, a requirement that a third party pay fees to the Permittee is outside the scope of this Permit. In any event, EPA notes that Senate Bill 3481, which requires the federal government to comply with local stormwater fees that are used to treat and manage polluted stormwater runoff, passed the U.S. Senate and House by unanimous consent on Dec. 21 and Dec. 22, 2010, respectively, and was signed into law by President Obama on January 4, 2011. *A bill to amend the Federal Water Pollution Control Act to clarify Federal responsibility for stormwater pollution*, S. 3481, 111th Congress (2009 - 2010) (available at: http://thomas.loc.gov/cgi-bin/bdquery/z?d111:S3481:). On March 14, 2011, the U.S. Government Accountability Office indicated its willingness to pay the fee in light of the recent legislation. *See* U.S. Government Accountability Office, *Letter re: Public Law 111-378 and Payment of the Stormwater Charge* (March 14, 2011).

17. Minerva, Dana (June 4, 2010).

a. The Commenter refers to a statement in the draft Fact Sheet (p. 8) that EPA intends the off-site mitigation and fee-in-lieu portions of the Permit to encourage more brownfields development and discourage suburban sprawl. She argues that the statement implies that EPA believes that strong onsite stormwater requirements promote sprawl and requests that it be reworded to indicate that these programs allow development of any type of land,

including infill and Brownfields lands, when full implementation is not practicable because of site conditions.

EPA Response: EPA agrees that requirements for stormwater controls do not generally contribute to sprawl; in fact, most available information demonstrates that the converse is usually true.

b. The Commenter believes that off-site mitigation should not be promoted unless necessary because of onsite conditions, because in very developed watershed like the Anacostia, it is not clear at all that there is much space available for offsite mitigation.

EPA Response: EPA believes that off-site mitigation is a feasible alternative when off-site locations have adequate capacity. The Final Permit (Section 4.1.3, Off-Site Mitigation and/or Fee-in Lieu for all Facilities) requires that the District public-notice any off-site mitigation and/or fee-in-lieu programs. EPA encourages the Commenter to participate in this process and make her points at that time. The Permit also requires that the Permittee submit the program to EPA for review and comment.

In addition to the foregoing safeguards, EPA notes that the Permit expands the minimum requirements for an off-site mitigation and/or fee-in-lieu program by requiring, among other things, that the program include at a minimum: (1) Establishment of baseline requirements for on-site retention and for mitigation projects; (2) Specific criteria for determining when compliance with the baseline requirement for on-site retention cannot technically be met based on physical site constraints; (3) For a fee-in-lieu program, establishment of a system or process to assign monetary values at least equivalent to the cost of implementation of controls; and (4) The necessary tracking and accounting systems to implement this section, including that original and off-site practices stay in place and are adequately maintained. Section 4.1.3 of Final Permit.

Finally, EPA believes that the transaction costs associated with off-site mitigation and/or fee-in-lieu payments will serve as a sufficient deterrent against developers pursuing these options as a first course.

c. The Commenter states that adoption of differential post-construction stormwater management standards and extensive waivers for redevelopment would insure that less affluent and diverse populations within the city will experience continued water pollution, and they will experience redevelopment which is less “green” than those who can afford to live in new developments in the District or in Maryland. The Commenter also indicates that if EPA is going to consider policy matters other than the practicability of implementation, it should address another critical policy issue: environmental justice.

EPA Response: The performance standard for all development within the DC MS4 Permit Area is the same regardless of type of development or community affluence and diversity. As to the off-site mitigation/fee-in-lieu programs, the Final Permit does not include a mitigation ratio for these activities. However, as noted in response to the previous comment, the Final Permit does include stringent requirements for these programs, and EPA also anticipates that on-site stormwater retention will be favored as a matter of fact.

d. The Commenter believes that the Fact Sheet should more clearly identify reports and plans to which it refers, and that the Permit should require that all such plans be made available on the DDOE website.

EPA Response: Section 3 of the Final Permit stipulates "The Stormwater Management Program is comprised of all requirements in this Permit. All existing and new strategies, elements, initiatives, schedules or programs required by this Permit must be documented in the SWMP Plan, which shall be the consolidated document of all stormwater program elements. Updates to the plan shall be consistent with all compliance deadlines in this Permit. A current plan shall be posted on the District's website at an easily accessible location at all times." Section 4.9.4.3 also requires that all draft and approved documents required under this Permit be available to the public for comment.

e. The Commenter states that certain requirements in Section 2 of the Permit (Legal Authority) do not contain actual deadlines, but rather require compliance, *e.g.*, "as soon as possible."

EPA Response: EPA appreciates the comment, and has reviewed the Permit to ensure that the final revised document replaces narrative requirements with schedules, and adds deadlines where appropriate. For example: Section 2.1.1 (requirement to remedy deficiencies): "as soon as possible" changed to "within two years of effective date"

f. The Commenter suggests that the Permit not address funding arrangements between MS4 Task Force member agencies.

EPA Response: This section has been deleted from the Final Permit.

g. The Commenter recommends including the interim compliance deadlines for the TMDL WLAs in the Permit that are referred to in Section 4, since the implementation plans are difficult for the public to obtain.

EPA Response: The Final Permit requires greater public access to relevant plans through a requirement for posting on the District's website: "All existing and new strategies, elements, initiatives, schedules or programs required by this Permit must be documented in the SWMP Plan, which shall be the consolidated document of all stormwater program elements. Updates to the plan shall be consistent with all compliance deadlines in this Permit. A current plan shall be posted on the District's website at an easily accessible location at all times." *See* Section 3 of the Final Permit.

h. The Commenter raises a number of issues relating to the following statement in the Draft Permit: "The Permittee mitigation program may allow adjustments to retention standards for redevelopment, high density development, transit-oriented development and other development patterns in non-federal facility areas for which the District can quantify water quality, water quantity, climate change adaptation or other environmental benefits." (Section 4.1.1.d. of the Draft Permit).

First, the Commenter questions the meaning of some of the terms in the foregoing section. Second, she states that allowing adjustments are allowed only when benefits can be quantified could result in a huge loophole and opens a probably futile debate on an issue that USEPA could quite reasonably refuse to engage in. Third, the Commenter questions how program benefits will be assessed. Fourth, she believes that "the role of the EPA is to implement the Clean Water Act to provide clean water, and there is no exception that says 'unless EPA decides (or more to the point, the Permittee decides) that some other societal benefit is more important.'" The Commenter recommends that EPA insist on standards for ALL development and redevelopment insure that water quality is protected and restored, except when not practicable because of site conditions. The Commenter goes on to say, however, that if these adjustments are allowed in the Permit, EPA should approve them and the public should be allowed to review/comment.

EPA Response: EPA substantively agrees with this comment and has removed most of the language the commenter objected to. In addition, EPA has added a requirement for DDOE to public-notice the off-site mitigation/fee-in-lieu program, and to submit it to EPA for review and comment.

i. As to retrofit requirements, the Commenter notes that she is pleased to see a performance standard for this item, but indicates that EPA should review and approve retrofits, and that the public be given an opportunity for review and comment before final.

EPA Response: EPA believes that it is not necessary or feasible for the Agency to review and approve individual retrofit projects proposed in the District; however, the Final Permit (Section 4.1.5 (Retrofit Program for Existing Discharges)) requires that the District submit retrofit program performance metrics to EPA for review and approval. In addition, the Final Permit specifically provides that the District must public-notice the performance metrics for retrofit projects. *Id.* EPA encourages the Commenter to participate in this process, including possibly requesting that the public participation protocol include public review/comment for all retrofit projects.

j. The Commenter requests a clarification of the following statement, which she says is oddly worded: "Upon completion of the structural assessment, the Permittee shall commit to installing 350,000 square feet of green roofs. . ." Draft Permit at p. 11. She goes on to question whether the District is required to commit to installing the green roofs or to install them.

EPA Response: Final Permit has been updated to address this comment. Section 4.1.7.1 of the Permit now requires that the District complete the structural assessment, and Section 4.1.7.2 now contains a requirement that the Permittee must install 350,000 square feet of green roofs on District properties during the term of the Permit (including schools and school administration buildings).

k. The Commenter requests that more detail be provided regarding the implementation of the plans described in Section 4.3 – 4.9 of the Draft Permit—specifically, deadlines, update schedules, EPA review/approval, and public participation requirements.

EPA Response: The Final Permit requires that the SWMP Plan include all applicable deadlines and schedules: "All existing and new strategies, elements, initiatives, schedules or programs required by this Permit must be documented in the SWMP plan, which shall be the consolidated document of all stormwater program elements. Updates to the plan shall be consistent with all compliance deadlines in this Permit. A current plan shall be posted on the District's website in an easily accessible location at all times." *See* Section 3 of the Final Permit. The Final Permit goes on to require that: "[n]o later than 3 years from the issuance date of this Permit the Permittee shall public notice a fully updated Plan including all of the elements required in this Permit. No later than 4 years from the issuance date of this Permit the Permittee shall submit to EPA the fully updated plan for review, as part of the application for Permit renewal." *Id*. Finally, Section 4.9.4.1 requires that the District provide opportunities for the public to participate in the decision making processes involving the implementation and update of the Permittee's SWMP.

l. The Commenter expresses concern that Permittees are allowed to determine the cost-benefit and affordability of stormwater management program components rather than the EPA.

EPA Response: The cost-benefit analysis requirement has been removed from Section 6.2.2.i. of the Final Permit.

18. National Association of Clean Water Agencies, Keith J. Jones, Esq. (June 4, 2010).

a. The Commenter is generally supportive of green infrastructure requirements, but states a concern that the overall scope of the Draft Permit and the broad reach of many of its requirements will have a significant negative impact on the city and its residents without evidence of potential environmental benefit. The Commenter is also concerned with the financial costs facing the District to comply with the Draft Permit, especially without additional federal funding to assist with the activities required by the Permit. Further, the Commenter believes that it is hypocritical for EPA as a federal agency to impose costs on the District when federal facilities located within the District have determined that they will not pay DC's impervious surface area fee. Moreover, the Commenter believes that EPA should refrain from issuing a new stormwater Permit for the District until such time as the federal government is willing to pay its share of the associated costs (i.e. stormwater fee).

EPA Response: EPA acknowledges that the District and covered entities within the DC MS4 Permit Area may experience short-term adjustments to the new standards, but EPA does not expect the cost of these activities to increase long-term. In fact, the approaches required by the Final Permit generally are more cost-effective than conventional approaches. *See e.g., Analysis of the Pollution Reduction Potential of DC Stormwater Standards* (LimnoTech. Inc., July 24, 2009); *Reducing Stormwater Costs through Low Impact Development Strategies and Practices*

(EPA, Dec. 2007) (http://www.epa.gov/owow/NPS/lid/costs07/); *Economic Costs, Benefits and Achievability of Stormwater Regulations for Construction and Development Activities* (Report to Natural Resources Defense Council and Waterkeeper Alliance, 2008); *Comparison of Environmental Site Design for Stormwater Management for Three Redevelopment Sites in Maryland* (Meliora Environmental Design LLC, 2008); *Cost-Benefit Evaluation of Ecoroofs* (City of Portland, 2008) (http://www.portlandonline.com/bes/index.cfm?a=261053&c=50818); *Rooftops to Rivers, Green Strategies for Controlling Stormwater and Combined Sewer Overflows* (Natural Resources Defense Council, June 2006) (http://www.nrdc.org/water/pollution/rooftops/rooftops.pdf); *Sustainable Raindrops* (Riverkeeper, 2006) (http://www.riverkeeper.org/wp-content/uploads/2009/06/Sustainable-Raindrops-Report-1-8-08.pdf); *A Triple Bottom Line Assessment of Traditional and Green Infrastructure Options for Controlling CSO Events in Philadelphia's Watersheds* (Stratus Consulting, August 24, 2009) (http://www.epa.gov/npdes/pubs/gi_phil_bottomline.pdf); *Initial Investigation of the Feasibility and Benefits of Low-Impact Site Development Practices for the San Francisco Bay Area* and *Supplementary Investigation of the Feasibility and Benefits of Low-Impact Site Development Practices for the San Francisco Bay Area at 4-5* (Richard R. Horner, 2007); and a proliferation of other case studies and reports.

As to the Commenter's concern that federal facilities have determined that they will not pay the District's impervious surface area fees, the Agency is aware that the District relies on the impervious surface assessment as a basis for supporting its compliance with the Permit requirements. However, the scope of this Permit is limited to imposing stormwater controls and effluent limitations on the District as Permittee (see Section 1 of Final Permit). In any event, EPA notes that Senate Bill 3481, which requires the federal government to comply with local stormwater fees that are used to treat and manage polluted stormwater runoff, passed the U.S. Senate and House by unanimous consent on December 21 and December 22, 2010, respectively, and was signed into law by President Obama on January 4, 2011. *A bill to amend the Federal Water Pollution Control Act to clarify Federal responsibility for stormwater pollution,* S. 3481, 111th Congress (2009 - 2010) (available at: http://thomas.loc.gov/cgi-bin/bdquery/z?d111:S3481:). On March 14, 2011, the U.S. Government Accountability Office indicated its willingness to pay the fee in light of the recent legislation. *See* U.S. Government Accountability Office, *Letter re: Public Law 111-378 and Payment of the Stormwater Charge* (March 14, 2011).

b. The Commenter is concerned that the retrofit requirements for new development and redevelopment in the Draft Permit are too extensive and that they will impose a huge financial cost on the District and its ratepayers without a clear understanding of water quality benefits. Instead of the retrofit program proposed in the Draft Permit, the Commenter recommends that a series of pilot programs for impervious area retrofits be substituted in the Permit, allowing time to study both the environmental and cost effectiveness of these efforts before requiring a more wide-scale program.

EPA Response: EPA notes that the costs to the District to administer the retrofit program are for activities such as site plan reviews and inspections, which would be incurred regardless of the standard set by the Permit. Further, EPA contends that the retrofit requirements contained in the

Final Permit are a feasible and effective way to control discharges from existing development. See Section 4.1 of today's Fact Sheet for more discussion.

c. The Commenter states that the potential to create numeric limits for stormwater discharges is another area of concern, arguing that such limits would run counter to the requirement of Section 402(p) of the Clean Water Act that municipal stormwater Permits include controls to reduce the discharge of pollutants to the "maximum extent practicable." (MEP). The Commenter cites *Defenders of Wildlife v. Browner,* 191 F.3d 1159 (9th Cir. 1999), *reh'g en banc denied*, 197 F.3d 1035 (9th Cir. 1999) in support of its argument that numeric limits do not belong in MS4 Permits. The Commenter also disputes EPA's statement in the draft Fact Sheet that the "meaning of the MEP standard has continued to evolve since it was first articulated two decades ago," arguing that with regard to the issue of numeric effluent limits in stormwater Permits, the MEP standard has not evolved at all since numeric effluent limits continue to be prohibited in MS4 Permits. Finally, the Commenter also believes that any references in the Permit to numeric effluent limits should be removed, and that the Permit should further clarify that compliance with TMDL WLAs will be done through best management practices.

EPA Response: EPA disagrees that either section 402(p) of the Clean Water Act, 33 U.S.C. § 1342(p), or *Defenders of Wildlife v. Browner*, 191 F.3d 1159 (9th Cir. 1999) preclude the inclusion of numeric limits for stormwater discharges in NPDES Permits. Specifically, EPA disagrees that such numeric limits are counter to the Clean Water Act standard of MEP. While EPA expected the initial rounds of small MS4 Permits to set forth mostly narrative, BMP-based requirements, the Agency expected that later Permits could and would require more specific Permit requirements. At the same time, it certainly did not rule out the imposition of numeric effluent limitations in MS4 Permits. *See e.g.*, EPA, *National Pollutant Discharge Elimination System--Regulations for Revision of the Water Pollution Control Program Addressing Stormwater Discharge,*64 Fed. Reg. 68722, 68788 (Dec. 8, 1999) (available at: http://cfpub.epa.gov/npdes/regresult.cfm?program_id=6&type=1&sort=name&view=all).[21]

The Agency also contends that the Commenter misreads *Defenders of Wildlife.* That decision states that when EPA is the Permit-issuing authority, it has the "authority to determine that ensuring strict compliance with state water-quality standards is necessary to control pollutants. . . . Under 33 U.S.C. § 1342(p)(3)(B)(iii), EPA's choice to include either management practices or

[21] The Preamble provides:

> For this reason, today's rule specified that the "compliance target" for the design and implementation of municipal stormwater control programs is "to reduce pollutants to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the CWA." The first component, reductions to the MEP, would be realized through implementation of the six minimum measures. The second component, to protect water quality, reflects the overall design objective for municipal programs based on CWA section 402(p)(6). The third component, to implement other applicable water quality requirements of the CWA, recognizes the Agency's specific determination under CWA section 402(p)(3)(B)(iii) of the need to achieve reasonable further progress toward attainment of water quality standards according to the iterative BMP process, as well as the determination that State or EPA officials who establish TMDLs could allocate waste loads to MS4s as they would to other point sources.

numeric limitations in the Permits was within its discretion." *Defenders of Wildlife*, 191 F.3d at 1166-67. EPA guidance contains additional support for EPA's authority to include WQBELs in MS4 Permits. *See e.g.,* "Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Stormwater Sources and NPDES Permit Requirements Based on Those WLAs'" at 2 (Nov. 12, 2010) (available at: http://www.epa.gov/npdes/pubs/establishingtmdlwla_revision.pdf)[22]; and "MS4 Permit Improvement Guide," http://www.epa.gov/npdes/pubs/ms4Permit_improvement_guide.pdf (April 2010).

In fact, EPA's Environmental Appeals Board relied on the *Defenders of Wildlife* decision in an Opinion relating to an appeal of a previous iteration of the very Permit at issue here:

> The notion that effluent limits may be expressed as either numeric limits or as some other restriction that limits the discharge of pollutants, such as BMPs, has been stated in EPA guidance and has been endorsed by this Board. In essence, because the term 'effluent limitation' is defined to mean any restriction on quantities, rates, and concentrations of pollutants, effluent limits required by 40 C.F.R. § 122.44(d)(1) therefore may be expressed as either numeric limits or as BMPs, both of which serve to limit quantities, rates or concentrations of pollutants (citations removed).

In re: Government of the District of Columbia Municipal Separate Storm Sewer System, 10 E.A.D. 323 (Feb. 20, 2002) (available at: http://www.epa.gov/eab/disk11/dcms4.pdf). In other words, so long as EPA has a record that the particular type of limit or control is appropriate, it can include such control in a Permit. In the case of the District's Final Permit, EPA has specifically found that numeric limits/quantifiable provisions are appropriate in many areas, as discussed in detail in today's Fact Sheet.

c. The Commenter generally supports standards for new evelopment and redevelopment that call for a certain percentage of stormwater to be reatined on-site, but states that there should also be alternative options available due to site-specific constraints. The Commenter also states that it has technical feasibility and cost concerns with the 90% capture rate required by the Draft Permit. The Commenter also raises a concern that this requirement will have a chilling effect on new development and redevelopment in the District. Further, the Commenter seeks to have the performance standard contained in the Draft Permit revised to encourage on-site capture based on site-specific considerations without establishing any specific capture rate.

EPA Response: It is EPA's experience that Permits which simply "encourage" activities rarely achieve their objectives, and are not enforceable. EPA also believes that technical feasibility of retention practices to capture a 90th percentile storm volume, and more, are well established.

[22] That document provides: "Since 2002, many NPDES authorities have documented the contributions of stormwater discharges to water quality impairment and have identified the need to include clearer permit requirements in order to address these impairments. Numeric WQBELs in stormwater permits can clarify permit requirements and improve accountability and enforceability. For the purpose of this memorandum, numeric WQBELs use numeric parameters such as pollutant concentrations, pollutant loads, or numeric parameters acting as surrogates for pollutants, such as such a s stormwater flow volume or percentage or amount of Impervious cover."

There are no data to suggest that stormwater requirements of any kind have influenced development in any community. In fact, communities with stringent stormwater retention standards, *e.g.*, Portland, Seattle, have generally had development/redevelopment rates that exceed the national average.

19. National Association of Flood and Stormwater Management Agencies (NAFSMA), Susan Gilson (June 4, 2010).

a. The Commenter states that the legal arguments regarding EPA's obligation to implement the statutory standard of reducing pollutants to the "maximum extent practicable" (MEP) set forth in NAFMSA's August 19, 2004 Petition for Leave to Intervene and in NAFSMA's written comments of August 12, 2005 are applicable to the current Draft Permit, and are incorporated herein by reference.

EPA Response: In the referenced documents, NAFSMA argued that the CWA requires inclusion of *only* an MEP standard for MS4 discharges, and that the statute does not require specific narrative or numeric limits to ensure compliance with state water quality standards or TMDLs. EPA agrees that the inclusion of such standards is not required; however, it is clear that this type of standard is not in any way precluded, assuming that it is supported by a sufficient record. Also, EPA disagrees with the Commenter's contention that numeric limits are counter to the Clean Water Act standard of MEP. While EPA expected the initial rounds of small MS4 Permits to set forth mostly narrative, BMP-based requirements, the Agency expected that later Permits could and would require more specific Permit requirements. At the same time, it certainly did not rule out the imposition of numeric effluent limitations in MS4 Permits. *See e.g.*, EPA, *National Pollutant Discharge Elimination System--Regulations for Revision of the Water Pollution Control Program Addressing Stormwater Discharge*, 64 Fed. Reg. 68722, 68788 (Dec. 8, 1999) (available at: http://cfpub.epa.gov/npdes/regresult.cfm?program_id=6&type=1&sort=name&view=all)[23]

The Agency also contends that the Commenter misreads *Defenders of Wildlife.* That decision states that when EPA is the Permit-issuing authority, it has the "authority to determine that ensuring strict compliance with state water-quality standards is necessary to control pollutants. . . . Under 33 U.S.C. § 1342(p)(3)(B)(iii), EPA's choice to include either management practices or numeric limitations in the Permits was within its discretion." *Defenders of Wildlife*, 191 F.3d at

[23] The Preamble provides:

> For this reason, today's rule specified that the "compliance target" for the design and implementation of municipal stormwater control programs is "to reduce pollutants to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the CWA." The first component, reductions to the MEP, would be realized through implementation of the six minimum measures. The second component, to protect water quality, reflects the overall design objective for municipal programs based on CWA section 402(p)(6). The third component, to implement other applicable water quality requirements of the CWA, recognizes the Agency's specific determination under CWA section 402(p)(3)(B)(iii) of the need to achieve reasonable further progress toward attainment of water quality standards according to the iterative BMP process, as well as the determination that State or EPA officials who establish TMDLs could allocate waste loads to MS4s as they would to other point sources.

1166-67. EPA guidance contains additional support for EPA's authority to include WQBELs in MS4 Permits. *See e.g.,* "Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Stormwater Sources and NPDES Permit Requirements Based on Those WLAs'" at 2 (November 12, 2010) (available at: http://www.epa.gov/npdes/pubs/establishingtmdlwla_revision.pdf)[24]; and "MS4 Permit Improvement Guide," http://www.epa.gov/npdes/pubs/ms4Permit_improvement_guide.pdf (April 2010).

In fact, EPA's Environmental Appeals Board relied on the *Defenders of Wildlife* decision in an Opinion relating to an appeal of a previous iteration of the very Permit at issue here:

> The notion that effluent limits may be expressed as either numeric limits or as some other restriction that limits the discharge of pollutants, such as BMPs, has been stated in EPA guidance and has been endorsed by this Board. In essence, because the term 'effluent limitation' is defined to mean any restriction on quantities, rates, and concentrations of pollutants, effluent limits required by 40 C.F.R. § 122.44(d)(1) therefore may be expressed as either numeric limits or as BMPs, both of which serve to limit quantities, rates or concentrations of pollutants (citations removed).

In re: Government of the District of Columbia Municipal Separate Storm Sewer System, 10 E.A.D. 323, 2002 EPA App. LEXIS 1 (Feb. 20, 2002). In other words, so long as EPA has a record that the particular type of limit or control is appropriate, it can include such control in a Permit. In the case of the District's Final Permit, EPA has specifically found that numeric limits/quantifiable provisions are appropriate in many areas, as discussed in detail in today's Fact Sheet.

b. The Commenter indicates that she supports the comments submitted by the National Assocation of Clean Water Agencies, and that NAFSMA shares NACWA's concerns about the unprecedented regulatory and financial burdens that the Draft Permit would place upon the District and its ratepayers without any clear knowledge of how much environmental benefit will be achieved in return.

EPA Response: EPA acknowledges that the District and covered entities within the DC MS4 Permit Area may experience short-term adjustments to the new standards, but EPA does not expect the cost of these activities to increase long-term. In fact, the approaches required by the Final Permit generally are more cost-effective than conventional approaches. *See e.g., Analysis of the Pollution Reduction Potential of DC Stormwater Standards* (LimnoTech. Inc., July 24, 2009); *Reducing Stormwater Costs through Low Impact Development Strategies and Practices* (EPA, Dec. 2007) (http://www.epa.gov/owow/NPS/lid/costs07/); *Economic Costs, Benefits and Achievability of Stormwater Regulations for Construction and Development Activities* (Report to

[24] That document provides: "Since 2002, many NPDES authorities have documented the contributions of stormwater discharges to water quality impairment and have identified the need to include clearer permit requirements in order to address these impairments. Numeric WQBELs in stormwater permits can clarify permit requirements and improve accountability and enforceability. For the purpose of this memorandum, numeric WQBELs use numeric parameters such as pollutant concentrations, pollutant loads, or numeric parameters acting as surrogates for pollutants, such as such a s stormwater flow volume or percentage or amount of Impervious cover."

Natural Resources Defense Council and Waterkeeper Alliance, 2008); *Comparison of Environmental Site Design for Stormwater Management for Three Redevelopment Sites in Maryland* (Meliora Environmental Design LLC, 2008); *Cost-Benefit Evaluation of Ecoroofs* (City of Portland, 2008) (http://www.portlandonline.com/bes/index.cfm?a=261053&c=50818); *Rooftops to Rivers, Green Strategies for Controlling Stormwater and Combined Sewer Overflows* (Natural Resources Defense Council, June 2006) (http://www.nrdc.org/water/pollution/rooftops/rooftops.pdf); *Sustainable Raindrops* (Riverkeeper, 2006) (http://www.riverkeeper.org/wp-content/uploads/2009/06/Sustainable-Raindrops-Report-1-8-08.pdf); *A Triple Bottom Line Assessment of Traditional and Green Infrastructure Options for Controlling CSO Events in Philadelphia's Watersheds* (Stratus Consulting, August 24, 2009) (http://www.epa.gov/npdes/pubs/gi_phil_bottomline.pdf); *Initial Investigation of the Feasibility and Benefits of Low-Impact Site Development Practices for the San Francisco Bay Area* and *Supplementary Investigation of the Feasibility and Benefits of Low-Impact Site Development Practices for the San Francisco Bay Area at 4-5* (Richard R. Horner, 2007); and a proliferation of other case studies and reports.

c. NAFSMA shares in NACWA's concern about the technical feasibility and cost of achieving specific, mandatory levels of onsite stormwater retention in a highly urbanized environment such as the District.

EPA Response: EPA is aware that on-site stormwater retention may be difficult in a highly-urbanized environment such as the District. Accordingly, the Final Permit (Section 4.1.3) contains a requirement that the District develop, public notice, and submit to EPA for review and coment an off-site mitigation and/or fee-in-lieu program to be utilized when projects cannot meet stormwater management performance standards otherwise required by the Permit. It is EPA's experience that such programs can be used to fully resolve the lack of ability for on-site stormwater retention.

d. The Commenter wishes to have the qualifier "to the maximum extent practicable" ("MEP") added to various portions of the Permit, since it believes that MEP is the only standard that EPA can lawfully apply to municipal stormwater discharges, in accordance with Section 402(p) of the Clean Water Act.

EPA Response: EPA believes that it is appropriate (and even often desirable) for the Permit writer to interpret and translate those pollutant objectives into more specific narrative provisions when that will be the most effective way to achieve environmental goals. Hence, the Final Permit contains specific numeric objectives for retrofit drainage areas, tree plantings, square footage of green roofs, and other measurable requirements, and narrative requirements for items like landscape and recreational facilities management and pesticide, herbicide, fertilizer, and landscape irrigation. *See* Section 4.3.4. The Permit reflects what EPA as the Permit writer determines are the maximum extent practicable pollutant reductions that the Permittee can achieve with respect to its discharges. MEP language does not belong in the Permit itself, because it is the responsibility of the Permit writer—and not the –Permittee—to make this determination.

20. Natural Resources Defense Council [Representing: see groups below], David Beckman, *et al* [see contacts below] (June 4, 2010).

The Comment letter includes hard copy attachments: (1) "Green Infrastructure in the District of Columbia: Implications for the District's Stormwater Permit," by Diane M. Cameron (June 4, 2010) (hereinafter, "Cameron Report"); (2) e-mail from Diane M. Cameron, Conservation Program Director, Audubon Naturalist Society Consultant to the Natural Resources Defense Council; (3) Memorandum from Biohabitats, Inc. and Horsely Witten Group, Inc. to Meo Curtis, Montgomery County DEP Re: Third Draft Review of Montgomery County Code (Dec. 14, 1999); (4) DC MS4 Permit Letter of Agreement (August 1, 2008); (5) "Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for Ventura County, Richard R. Horner (2007); (6) Initial Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for the San Francisco Bay Area, Richard R. Horner (2007); (7) Supplementary Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for the San Francisco Bay Area, Richard R. Horner (2007); (8) State of California, California Regional Water Quality Control Board, Los Angeles Region, Order No. 01-182, NPDES Permit No. CAS004001, Waste Discharge Requirements for Municipal Stormwater and Urban Runoff Discharges within the County of Los Angeles and the Incorporated Cities Therein, except the City of Long Beach (Dec. 13, 2001), as amended; (9) State of West Virginia, Department of Environmental Protection, Division of Water and Waste Management, General NPDES Water Pollution Control Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems, Permit, No. WV0116025 (June 22, 2009). The Commenters also included a compact disk containing the documents relied on in the comments.[25]

EPA sincerely thanks NRDC for providing this voluminous supporting information, which was reviewed as part of Permit reissuance. The references were useful in adding to the understanding of the Commenters points, and provided support for certain elements of the Final Permit and today's Fact Sheet.

EPA notes also that it met with some of these Commenters on August 3, 2010. The purpose of the meeting was simply to discuss the Comment letter, and the parties did not raise new issues at that meeting. Attendees included representatives from th following organizations: Earthjustice, DC Environmental Network, Casey Trees, Chesapeake Bay Foundation, Anacostia Watershed Society, NRDC, Sierra Club, NRDC, and Anacostia Waterkeeper.

According to the Comment letter, the comments were submitted by the following individuals representing the listed organizations:

David Beckman, Director, Water Program
Noah Garrison, Attorney, Water Program
Lawrence Levine, Sr., Attorney, Water Program
Rebecca Hammer, Legal Fellow, Water Program
Cori Lombard, Legal Fellow, Water Program
Natural Resources Defense Council

[25] The compact disk was transmitted via letter from Rebecca Hammer dated June 3, 2010.

Neal Fitzpatrick, Executive Director
Audubon Naturalist Society

Paul F. Walker, Ph.D., Director, Security and Sustainability
Global Green USA

Chris Weiss, Director
DC Environmental Network

Gwyn Jones, Chair
Sierra Club, DC Chapter

Beth Mullin, Executive Director
FORCE – Friends of Rock Creek's Environment

Brent Bolin, Director of Advocacy
Anacostia Watershed Society

Maisie Hughes, Director, Planning and Design
Casey Trees

Andy Fellows, Chesapeake Regional Director
Clean Water Action

Ed Merrifield, President
Potomac Riverkeeper

Julie Lawson, Chair, DC Chapter
Surfrider Foundation

Dottie Yunger, Executive Director
Anacostia Riverkeeper

Irv Sheffey, Associate Field Organizer
DC Environmental Justice & Community Partnerships Program
Sierra Club

a. The Commenters indicate that they incorporate by reference the comments of Earthjustice and the Chesapeake Bay Foundation.

EPA Response: EPA has responded to those comments elsewhere herein, and incorporates those responses here.

b. The Commenters state that, under section 706 of the Administrative Procedure Act ("APA"), an agency's issuance of an MS4 Permit may not be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." Under this standard, the agency must examine all of the relevant data and articulate a satisfactory explanation for its action, including a "rational connection between the facts found and the choice made." The Commenters believe that neither the draft Permit, accompanying Fact Sheet, nor other documents that have been made available to the public suffice to meet these obligations.

EPA Response: EPA agrees that the Commenters have correctly cited the applicable APA standard of review, 5 U.S.C. § 706, for agency activities such as EPA-issued MS4 Permits. However, the Agency contends that it has exfamined all relevant data and correctly articulated its actions—both in the Draft Permit/Fact Sheet that were public-noticed in April 2010, and through the Final Permit/Fact Sheet and this Responsiveness Summary.

c. The Commenters note that polluted stormwater runoff can damage receiving waters, and that the District has 414 storm sewer otufalls that discharge stormwater and associated pollution into the Anacostia and Potomac Rivers, Rock Creek, and their tributaries. The Commenters also state that these waters are impaired for several pollutants which are associated with discharges from the MS4, and that they continue to be impaired without improvement despite the fact that the DC MS4 Permit is in its third Permit cycle and that several TMLDs have been developed for each water body. The Commenters conclude that a failure to progress toward achieving water quality standards confirms the need for an effective and enforceable MS4 Permit that will stem stormwater pollution and achieve improvements in water quality.

EPA Response: EPA agrees that polluted stormwater runoff can be damaging to receiving waters, and that the District's impaired water bodies need to be improved. Both points are discussed in detail in today's Fact Sheet. Unfortunately, the unique nature of TMDL delisting makes progress difficult to evaluate: delisting under CWA 303(d) does not occur over time but rather only once receiving waters are no longer impaired. Also, it is difficult to identify water quality improvements in highly-urbanized areas like the District, especially when there is little space available to add green infrastructure. Therefore, reductions in the magnitude and frequency of impairments are not generally tracked or documented.

As to the point that water impairments persist for several pollutants associated with MS4 discharges, EPA believes that the green infrastructure practices called for in the Final Permit and being implemented by the District are proven approaches to improving water quality. While the Agency believes that water quality improvements have occurred within the District as a result of such actions, there have been few delistings from the District's Section 303(d) list of impaired waters. As currently assessed, streams are either identified as impaired or not impaired. Therefore, reductions in the magnitude and frequency of impairments are not tracked or documented. The revised monitoring program and the green infrastructure requirements associated with the Final Permit are expected to result in documentation of such improvements, as explained at several locations in today's Fact Sheet.

d. The Commenters state that the Permit does not anywhere ensure that the Permittee will reduce discharges of pollutants to the maximum extent practicable (MEP), which is required by the CWA and its implementing regulations. The Commenters also indicate that the Draft Permit allows for future development of substantive pollution control programs by the Permittee without public or EPA comment, and in many instances does not clearly state when such program development must occur. The Commenters also believe that the Permit must contain "specific measurable criteria" with clearer and more enforceable provisions, and they cite Draft Permit provisions that they feel are overly vague, *e.g.*, section 4.2.2 (Non-District Owned and Operated Practices); section 4.3.6.4 (chemical deicers, salt, sand, and/or sand/deicer mixtures); section 6.2.2. (Annual Report requirements); section 8.1 (Implementation Plans). The Commenters also request that the Permit contain more specific deadlines for compliance, and suggest that it runs counter to Agency guidance by including references to "other policies" and "other management practices."

EPA Response: EPA has updated the Final Permit to remove all references to the MEP standard (except for the statement that "This Program has been determined to reduce the discharge of pollutants to the maximum extent practicable," *see* Permit at Section 3). Instead, information supporting the fact that the discharges are expected be reduced to the MEP is now contained in today's Fact Sheet.

Next, as to the Commenters' point that the Draft Permit allows for future development of substantive pollution control programs by the Permittee without public or EPA comment, the Permit contains robust examples of opportunities for public input and EPA approval for activities like: SMWP development (Section 3) ("No later than 3 years from the issuance date of this Permit the Permittee shall public notice a fully updated Plan including all of the elements required in this Permit."); off-site/in-lieu program (Section 4.1.3); retrofit projects (Section 4.1.5); optimal catch basin inspections, cleaning and repairs (Section 4.3.5); and Consolidated TMDL Implementation Plan (Section 4.10.3). There is also a general requirement that the District "continue to include ongoing opportunities for public involvement through advisory councils, watershed associations and/or committees, participation in developing updates to the stormwater fee system, stewardship programs, environmental activities or other similar activities. The Permittee shall facilitate opportunities for direct action, educational, and volunteer programs such as riparian planting, volunteer monitoring programs, storm drain marking or stream clean up programs." Section 4.9.4.

As to the Commenters' suggestion that the Permit lacks specific measurable criteria with regard to certain activities, the inclusion of numeric performance standards for many of the required activities ensures the District's accountability. *See e.g.*, Sections 4.1.1 (Standard for Stormwater Discharges from Development); 4.1.5 (Retrofit Program for Existing Discharges); 4.1.6 (Tree Canopy); 4.1.7 (Green Roof Projects); and 4.3.6 (Streets, Alleys and Roadways). While the Commenters point out that requirements for some other activities are "too vague to be enforceable," EPA has for each Permit requirement determined whether the Final Permit should either contain a prescriptive requirement/performance standard, or whether the District is in the best position to make such determinations. See the Fact Sheet for additional discussion.

With regard to the Commenters' concern that the Permit does not contain specific deadlines for compliance, the Final Permit responds to this point by including more specific deadlines for certain activities, *see e.g.*: Section 2.1.1 (requirement to remedy deficiencies in the legal authority to carry out these requirements): "as soon as possible" changed to "within two years of effective date"

e. The Commenters indicate that they are troubled by the perceived lack of numeric effluent limits contained in the Draft Permit, and suggest that the Draft Permit delegates the task of developing many BMPs to the Permittee in its plans. The Commenters further state that MS4 Permits must contain effluent limits for all pollutants for which an MS4's discharges cause or contribute to a violation of water quality standards for an individual pollutant, including Rock Creek (impaired for bacteria and metals), Anacostia River (impaired for metals, TSS and O&G), and the Potomac River (impaired for bacteria and metals).

EPA Response: Numeric limits are extremely difficult to calculate and enforce in stormwater Permits, where the nature of the influent is highly variable. *See e.g.*, EPA, *National Pollutant Discharge Elimination System--Regulations for Revision of the Water Pollution Control Program Addressing Stormwater Discharge,* 64 Fed. Reg. 68722, 68753 (Dec. 8, 1999) (available at: http://cfpub.epa.gov/npdes/regresult.cfm?program_id=6&type=1&sort=name&view=all) ("Wet weather discharges from MS4s introduce a high degree of variability in the inputs to the models currently available for derivation of water quality based effluent limitations, including assumptions about in-stream and discharge flow rates, as well as effluent characterization. In addition, EPA anticipates that determining compliance with any such numeric limitations may be confounded by practical limitations in sample collection."). Accordingly, the Final Permit does not contain numeric *effluent* standards; rather, it inlcudes numeric *performance* standards. *See e.g.,* Sections 4.1.1 (Standard for Stormwater Discharges from Development); 4.1.5 (Retrofit Program for Existing Discharges); 4.1.6 (Tree Canopy); 4.1.7 (Green Roof Projects); and 4.3.6 (Streets, Alleys and Roadways).

f. The Commenters believe that the Draft Permit anticipates that the Permittee's "Upgraded SWMP" (Stormwater Management Program) will serve as the baseline for the Permittee's SWMP, but that the SWMP does not constitute a complete program adequate under the CWA because: (1) the SWMP was not circulated for review along with the draft Permit; (2) the Draft Permit and associated Fact Sheet contain no findings or other evidence to support the consistency of the 2009 SWMP with applicable requirements such as the MEP standard; (3) most of the specific commitments in the SWMP that implement CWA regulations were accomplished, or should have been, during 2009, and the plan is therefore out-of-date; and (4) the "measurable outcomes" set forth in the SWMP are too often neither measurable nor reasonably specific enough to determine what outcome is promised and will be used to determine the District's compliance with the Draft Permit.

EPA Response: In response to the Commenters' concerns, the Final Permit ensures that the SWMP is more of a "living document": "No later than 3 years from the issuance date of this

Permit the Permittee shall public notice a fully updated Plan including all of the elements required in this Permit. No later than 4 years from the issuance date of this Permit the Permittee shall submit to EPA the fully updated plan for review and approval, as part of the application for Permit renewal." Final Permit at Section 3.

As to the Commenters' point that the 2009 SWMP might not be consistent with applicable requirements, EPA has revised the Permit to ensure that the program is updated as necessary, rather than relying on the version that was dated February 19, 2009. *See e.g.,* Section 4.1 (Standard for Long-Term Stormwater Management), which was revised to require that the Permittee continue to develop, implement, and enforce "a program in accordance with this Permit and the Permittee's updated SWMP Plan that integrates green technology stormwater management practices at the site and neighborhood levels through policies, regulations, ordinances and incentive programs." Formerly, this Section referred to the February 19, 2009 SWMP Plan.

Regarding the need to have updated requirements in the Permit, given that some of those contained in the SWMP have been completed, EPA has in fact endeavored to keep the Permit current in terms of remaining requirements. This is also more likely because of the conversion in the Final Permit from reference to provisions of the February 19, 2009 SWMP to the updated SWMP Plan.

Finally, with respect to the request for Permit requirements that are actually measurable and specific enough to determine what outcome is promised, EPA has revised the Final Permit to include such requirements. *See e.g.,* Sections 4.1.1 (Standard for Stormwater Discharges from Development); 4.1.5 (Retrofit Program for Existing Discharges); 4.1.6 (Tree Canopy); 4.1.7 (Green Roof Projects); and 4.3.6 (Streets, Alleys and Roadways).

g. The Commenters note that the 2008 Letter of Agreement was agreed to by the Permittee as an "enhancement" to its MS4 Permit; therefore, the commitments in the Letter should be made requirements of the Permit.

EPA Response: EPA has considered each requirement of the 2008 Letter of Agreement, and incorporated most of those requirements into the body of the Final Permit, to the extent that they have not already been completed. EPA has not included in the Permit those items that were in the 2008 Letter of Agreement, but which have since been completed, including for example: (1) requirement to implement recommendations for funding mechanism and fee structure by December 31, 2008; (2) requirements for rain gardens; and (3) requirement to submit details of implementation of the enhanced program for street sweeping and fine particle removal in the Upgraded SWMP (Feb. 19, 2009).

h. The Commenters suggest that the Permit needs more requirements directed toward controlling trash within the District, as well as numeric trash reduction targets by the end of the Permit term, with mandatory demonstrations of reasonable annual progress toward those targets.

EPA Response: The Final Permit incorporates requirements of the Anacostia Trash TMDL (approved September 21, 2010 (available at: http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/services/pdf/Final_Anacostia_Trash_TMDL.pdf)). *See* Section 4.10.1 ("The Permittee shall attain removal of 103,188 pounds of trash annually, as determined in the Anacostia River Watershed Trash TMDL, as a specific single-year measure by the fifth year of this Permit term."). The Permit also sets forth the approaches that the District must take: direct removal from waterbodies, *e.g.*, stream clean-ups, skimmers; direct removal from the MS4, *e.g.*, catch basin clean-out, trash racks; direct removal prior to entry to the MS4, *e.g.*, street sweeping; prevention through additional disposal alternatives, *e.g.*, public trash/recycling collection; and prevention through waste reduction practices, regulations and/or incentives, *e.g.*, bag fees. Moreover, the Permit requires the District to submit a trash reduction calculation methodology with its Annual Reports.

i. The Commenters state that the Draft Permit does not require the Permittee to meet applicable water quality standards, but rather merely asks the Permittee to make "progress" toward WQS attainment. The Commenters also take issue with the statement in EPA's draft Fact Sheet that "attainment of water quality criteria is an incremental process…so long as Permittees reduce the discharge of pollutants to the MEP within each Permit cycle." Finally, the Commenters believe that by not including language requiring the District to meet water quality standards, the Permit is backsliding from inferred requirements to do so included in the 2004 Permit.

At a separate location in their comment letter, the Commenters state that EPA has acted arbitrarily and capriciously by failing to establish a record showing that attaining water quality standards is infeasible. Because of the overlap between the two points above (requirement for WQS attainment and need for showing of infeasibility of WQS attainment), they are addressed together below.

EPA response: The Final Permit does require standards attainment. Section 1.4 of the Final Permit provides that the Permittee must "[e]ffectively prohibit pollutants in stormwater discharges or other unauthorized discharges into the MS4 as necessary to comply with existing District of Columbia Water Quality standards (DCWQS)." If the District does not comply with this requirement, it would be in violation of the Permit. In addition, Section 2.1.1 of the Permit requires the Permittee to have "legal authority to control discharges to and from the [MS4] in order to prevent or reduce the discharge of pollutants to achieve water quality objectives." Moreover, Section 8.4 (Duty to Mitigate) provides that "[i]n the event that the Permittee or Permitting authority determines that discharges are causing or contributing to a violation of applicable WQS, the Permittee shall take corrective action to eliminate the WQS exceedance or correct the issues and/or problems. . . " And Section 8.19 of the Permit allows it to be reopened for a number of reasons, including, *inter alia*, "[t]o incorporate additional controls that are necessary to ensure that the Permit effluent limits are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4."

EPA acknowledges that such standards attainment may not occur in its entirety during this Permit cycle. This is consistent with the construct of EPA's Phase II Stormwater Rule, *National Pollutant Discharge Elimination System--Regulations for Revision of the Water Pollution*

Control Program Addressing Stormwater Discharge,64 Fed. Reg. 68722, 68731 (Dec. 8, 1999) (available at: http://cfpub.epa.gov/npdes/regresult.cfm?program_id=6&type=1&sort=name&view=all) ("At this time, EPA determines that water quality-based controls, implemented through the iterative processes described today are appropriate for the control of such pollutants and will result in reasonable further progress towards attainment of water quality standards. See sections II.L and II.H.3 of the preamble."); *id.* at 68753 ("EPA envisions application of the MEP standard as an iterative process."); *id.* at 68754 ("EPA also believes the iterative approach toward attainment of water quality standards represents a reasonable interpretation of CWA section 402(p)(3)(B)(iii).").

As to the suggestion that the previous Permit was more stringent by requiring standards attainment during the Permit cycle, and therefore the current Permit is backsliding, EPA contends that the requirements have not changed. Both the 2004 Permit and current reissuance require incremental standards attainment. Therefore, backsliding has not occurred since the current Permit is no less stringent than the prior one.

j. The Commenters indicate that the Draft Permit lacks the required certifications from the District and affected neighboring states under Section 401(a) of the CWA, and that certification by the DC Deparmtent of Health alone was insufficient to meet the section 401 requirements.

EPA Response: EPA requested (by letter dated April 21, 2010) that DDOE certify the Final Permit within the forty-five (45) day public review and comment period. DDOE requested a time extension until August 4, 2010, to review the comments received and to furnish the certification. The letter stated that the certification would be waived if it was not received by August 4, 2010. By letter dated August 17, 2010 to DDOE, the certification was waived by DDOE for EPA.

Moreover, at the time that EPA public-noticed the Draft Permit, it mailed individual copies to both the State of Maryland and the Commonwealth of Virginia—neither of which commented on the Draft Permit. (Copies of relevant documents are included in today's Administrative Record.)

k. The Commenters believe that the Draft Permit is counter to EPA's stated policy goals and efforts in other arenas, especially with regard to the Chesapeake Bay.

EPA Response: EPA notes that the Final Permit is in fact in accord with EPA's policies generally. Specifically with regard to the Chesapeake Bay, EPA notes that the Permit incorporates certain requirements of the Chesapeake Bay TMDL, including necessary reductions of nitrogen, phosphorus, and sediment from the District of Columbia (as well as other Bay jurisdictions) that—when –attained—will allow the Bay to attain its applicable water quality standards. As background to these anticipated reductions, EPA notes that each Bay jurisdiction developed a Watershed Implementation Plan (WIP) to identify how it intends to meet the reductions called for in the TMDL. Section 7.2 of the District's Final Phase I WIP, *Chesapeake Bay TMDL Watershed Implementation Plan District of Columbia Department of the Environment*, (November 29, 2010) (available at:

http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Columbia_WIP_Bay_TMDL.pdf) indicates that it relied in part on the draft MS4 Permit as a guide in development of this document. DC's Final Phase I WIP specifically anticipates reduction of nitrogen, phosphorus, and sediment contributions to the Bay by 11, 27, and 26 percent, respectively, by relying on the following District commitments:

- Install at least 350,000 sq ft of green roofs over the Permit cycle on District property
- Plant at least 4,150 trees annually with a goal of planting and maintaining 13,500 additional trees by 2014 and increasing its tree canopy from 35% to 40% by 2035
- Insure that all development greater than 5,000 sq ft retain stormwater generated from a 1.2" 24-hour storm
- Promotion of low-impact development

Currently, the District and other Bay jurisdictions are working on their Phase II WIPs. EPA notes that the Final Permit includes a reopener clause (Section 8.19) that allows it to be reopened for a number of reasons, including, *inter alia*, "[t]o incorporate additional controls that are necessary to ensure that the Permit effluent limits are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4."

In addition, EPA has worked with the District (along with other Bay watershed jurisdictions) to ensure that watershed implementation plans (WIPs) contain the following features: (1) new and redeveopment performance standards; (2) regulation of additional discharges outside the MS4 coverage area; and (3) retrofits for existing discharges. *See* "Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed" (July 2010). The Final Permit contains relevant requirements for each of the foregoing points. *See* Sections 4.1 as to new and redevelopment standards and regulation of additional discharges (although this is not overly relevant for the District, it is included) and 4.1.5 (Retrofit Program for Existing Discharges).

Further, EPA's preliminary modeling for the Bay TMDL demonstrates that, through compliance with the DC MS4 Permit, the District's 2025 WLAs for nitrogen and phosphorous will be met, and that it is very close for sediment. In fact, Permit requirements alone would significantly cut the sediment gap from 27% to 4%.

l. The Commenters note that TMDLs establish wasteload allocations (WLAs), and that once a TMDL has been adopted, NPDES Permits are required to contain clear and specific requirements, including effluent limitations and conditions, consistent with the assumptions and requirements of the approved WLA. The Commenters further state that the Draft Permit does not demonstrate that its effluent limits will be sufficient to meet adopted WLAs. Additionally, the Commenters indicate that MS4 Permits which contain BMPs rather than numeric limits must have an administrative record to support that the BMPs are expected to be sufficient to implement the WLA in the TMDL.

EPA Response: EPA agrees that once a TMDL has been adopted, NPDES Permits must contain conditions that are consistent with the assumptions and requirements of the approved WLA, *see* 40 C.F.R. § 122.44(d)(1)(vii)(B) (When developing water quality-based effluent limits, the permitting authority shall ensure that, *inter alia*, "[e]ffluent limits developed to protect a

narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge. . . ."). However, the Agency also posits that it is within its discretion to determine whether ensuring strict compliance with state water-quality standards is necessary to control pollutants: "Under 33 U.S.C. § 1342(p)(3)(B)(iii), EPA's choice to include either management practices or numeric limitations in the Permits was within its discretion." *Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1166-67 (9th Cir. 1999); *see also In re: Government of the District of Columbia Municipal Separate Storm Sewer System*, 10 E.A.D. 323, 2002 EPA App. LEXIS 1 (Feb. 20, 2002) ("[E]ffluent limits required by section 122.44(d)(1) . . . may be expressed as either numeric limits or as BMPs, both of which serve to limit quantities, rates or concentrations of pollutants" (citations removed)). In the case of the District's Final Permit, EPA has specifically found that the BMPs and other provisions included in the Permit are sufficient to achieve TMDL WLAs. *See* Fact Sheet discussion at 4.10.

m. The Commenters state that the Draft Permit nowhere clearly states that compliance with WLAs is required, and the Permit's iterative, adaptive management approach to TMDL implementation represents another way in which it fails to actually require compliance with WLAs. The Commenters believe that this is counter to law and practice.

EPA Response: EPA agrees that the language in the Draft Permit was inadequate, and it has been modified to require that discharges must comply with applicable TMDL WLAs. *See* Section 1.4 of the Final Permit ("The Permittee must manage, implement and enforce a stormwater management program (SWMP) in accordance with the Clean Water Act and corresponding stormwater NPDES regulations, 40 C.F.R. Part 122, to meet the following requirements: . . . [m]eet applicable waste load allocations (WLAs) for each approved Total Maximum Daily Load (TMDL) for each receiving water body, consistent with 33 U.S.C. § 1342(p)(3)(B)(iii); 40 C.F.R. § 122.44(k)(2) and (3). . . .").

Examples of such requirements in the Permit include: Section 4.10.1 (achieve Anacostia River TMDL WLA for trash); Section 4.10.2 (requirement to complete implementation measures for Hickey Run TMDL); and Section 4.10.3 (where planning is ongoing, such plan(s) must include specified schedule for compliance for each WLA).

Further, the Final Permit (Section 4.10.4, Adjustments to TMDL Implementation Strategies) requires the Permittee to correct any failures to comply with WLAs:

> If evaluation data, as outlined in the monitoring strategy being developed per Part 5.1, indicate insufficient progress towards meeting any WLA covered in 4.10.1, 4.10.2, or 4.10.3, the Permittee shall adjust its management programs to compensate for the inadequate progress within 6 months to address the deficiencies, and document the modifications in the TMDL Implementation Plan. The Plan modification shall include a reasonable assurance demonstration of the additional controls to achieve the necessary reductions. Annual reports must include a description of progress as evaluated against all implementation objectives, milestones and benchmarks, as relevant, outlined in Part 4.10.

EPA contends that this language is now sufficiently robust to ensure that the Permittee continues to progress toward meeting WLAs. EPA also notes that the public will have additional opportunities for input when the District's Consolidated Implementation Plan, over which EPA has review and approval authority.

n. The Commenters believe that the Draft Permit fails to include schedules of compliance for applicable WLAs, which they argue is required by EAB precedent, including *District of Columbia Water & Sewer Auth.*, slip op. at 25-34 (March 19, 2008), 13 E.A.D. 714. They also indicate that the Draft Permit unlawfully defers to TMDL Implementation Plans, to be developed by the Permittee, for establishment of numeric benchmarks for pollutant load reductions to impaired water bodies and associated timelines for achieving those benchmarks.

EPA Response: EPA notes that there are no regulations prohibiting Permits from requiring Permittees to develop TMDL Implementation plans, or for many of the implementation requirements to be in the plan rather than the Permit. EPA has reorganized and clarified these requirements in Section 4.10 of the Final Permit. Further EPA has revised the Permit to put specific implementation measures into the final document in order to make them more directly understandable and enforceable. Similarly, EPA has directly incorporated implementation requirements for the newly-approved Anacostia Trash TMDL (Sept. 21, 2010) (available at: http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/services/pdf/Final_Anacostia_Trash_TMDL.pdf), and subjected the one element requiring some planning effort to public notice and comment and to EPA approval.

Also, with regard to the Chesapeake Bay, EPA notes that the Permit incorporates certain requirements of the Chesapeake Bay TMDL, including necessary reductions of nitrogen, phosphorus, and sediment from the District of Columbia (as well as other Bay jurisdictions) – that—when attained—will allow the Bay to attain its applicable water quality standards. As background to these anticipated reductions, EPA notes that as part of the Bay TMDL development process, each Bay jurisdiction developed a Watershed Implementation Plan (WIP) to identify how it intends to meet the reductions called for in the TMDL. Section 7.2 of the District's Final Phase I WIP, Chesapeake Bay TMDL Watershed Implementation Plan Distric*t of Columbia Department of the Environment,* (November 29, 2010) (available at: http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Columbia_WIP_Bay_TMDL.pdf) indicates that it relied in part on the draft MS4 Permit as a guide in development of its This document, which represents DC's Phase I WIP, specifically anticipates reduction of nitrogen, phosphorus, and sediment contributions to the Bay by 11, 27, and 26 percent, respectively, by relying on the following District commitments.

- Install at least 350,000 sq ft of green roofs over the Permit cycle on District property
- Plant at least 4,150 trees annually with a goal of planting and maintaining 13,500 additional trees by 2014 and increasing its tree canopy from 35% to 40% by 2035
- Insure that all development greater than 5,000 sq ft retain stormwater generated from a 1.2" 24-hour storm
- Promotion of low-impact development

Currently, the District and other Bay jurisdictions are working on their Phase II WIPs. EPA notes that the Final Permit includes a reopener clause (Section 8.19) that allows it to be reopened for a number of reasons, including, *inter alia*, "[t]o incorporate additional controls that are necessary to ensure that the Permit effluent limits are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4."

o. The Commenters claim that a perceived inconsistency between the Draft Permit and WLAs/TMDLs precludes any new discharge or increased discharge pursuant to the CWA and the Ninth Circuit's decision in *Friends of Pinto Creek v. U.S. EPA*, 504 F.3d 1007, 1012 (9th Cir. 2007). In addition, the Commenters note that this general proposition has an exception—where a TMDL has been performed, and the new source can demonstrate that, under the TMDL, the plan is designed to bring the waters into compliance with applicable WQS. The Commenters do not believe that the Draft Permit can meet this standard because it does not guarantee that there are sufficient pollutant load allocations remaining.

EPA Response: The Commenter correctly notes that no Permit may be issued to a "new source or a new discharger" if the discharge from its construction or operation will cause or contribute to the violation of water quality standards. (The Commenter does not cite 40 C.F.R. § 122.4(i), but extracts language from that provision.) However, as the Commenter also states, the definition of "new discharger" includes "any building, structure, facility, or installation: (a) From which there is or maybe a 'discharge of pollutants;' . . . (c) Which is not a 'new source;' and (d) Which has never received a finally effective NDPES Permit for discharges at that 'site.'" 40 C.F.R. § 122. However, the discharges covered by the DC MS4 Permit are in no way "new," in fact, EPA notes that the District's Permit is over a decade old.

Moreover, to the extent that the Commenter relies on the Ninth Circuit's *Pinto Creek* decision, that case is readily distinguishable from the facts of the instant Permit for several reasons, including because the *Pinto Creek* decision involved a new source (Carlota Copper Company), which the District is not. It is also inapposite because of the type of NPDES Permit considered by the Ninth Circuit: the Carlota Permit covered mining-related discharges, whereas the DC MS4 Permit addresses municipal stormwater discharges.

p. The next concern raised by the Commenters is that the Draft Permit fails to require water quality monitoring to determine TMDL compliance for all TMDL pollutants, which they state is inconsistent with the CWA and otherwise arbitrary and capricious.

EPA Response: EPA agrees that the current evaluation framework is no longer the most appropriate approach for a monitoring program, and thus is requiring the District to develop a new monitoring program (as part of its revised stormwater management program) that will, among many other important objectives, "determine if relevant WLAs are being attained within specified timeframes in order to make modifications to relevant management programs, as necessary" (Section 5.1.1). This plan will be subject to public input and EPA approval.

q. The Commenters believe that green infrastructure measures specified in the Permit, such as green roofs and tree planting, not only control stormwater pollution, but have the

added benefits of improving air quality, reducing energy costs, and creating green jobs. However, the Commenters provide examples of where they believe these requirements need to be strengthened: expanded tree planting and retrofit requirements. As to retrofits, the Commenters compare this Permit to the one issued to Montgomery County, Marlyand's MS4, which they believe is more expansive. The Commenters also feel that the the Permit should require that DC Low-Impact Development projects within the Anacostia Restoration Plan should be given priority when selecting projects for retrofitting within the Anacostia watershed. They also believe that the Draft Permit provision requiring a minimum of 3,600,000 square feet of this objective to be "in transportation rights-of-way" should be elaborated.

EPA Response: The tree planting requirements in the Final Permit are appropriate based upon a study which was developed to meet the District Mayor's Tree Canopy goal for District, *see* Casey Trees, *The Green Build-out Model: Quantifying the Stormwater Management Benefits of Trees and Green Roofs in Washington* (May 15, 2007) (available at: (http://www.caseytrees.org/planning/greener-development/gbo/index.php). Moreover, the Final Permit requires that the District report annually on the progress made towards meeting this goal. Section 4.1.6.2. As to retrofits, the Final Permit contains a performance standard requiring the District to develop a retrofit program within two years of the effective date of the final document, including establishment of performance metrics. (Section 4.1.5.1). EPA fully expects the specific details of the program to be worked out during the public review and comment process, as well as the final EPA approval process. EPA recommends that the Commenters provide feedback to the District during this process.

With regard to the Commenters' comparison of this Permit to the one issued to Montgomery County, Maryland, EPA's goal with the instant Final Permit is to maximize the retfofits with repect to environmental performance (*i.e.*, quality), as opposed to simply focusing on quantity as in the case of Montgomery County. EPA's intention with this Permit is to ensure that the District develops beneficial (*i.e.*, protective) design standards, operation & maintenance standards, etc. for retrofits, so that retrofitting will be done correctly. EPA fully expects that Permits issued in future cycles will include more aggressive implementation requirements.

r. The Commenters believe that the Draft Permit uses the appropriate on-site stormwater retention standard, but that related Permit provisions should be clarified and strengthened to ensure effective implementation of the standard. For example, the Commenters seek a "stepwise" approach which they believe would ensure maximum possible on-site retention, and a greater than 1:1 mitigation ratio where off-site mitigation is allowed. Further, the Commenters suggest that the Permit be revised to ensure that off-site mitigation projects are green infrastructure-based and occur in the same watershed as the original project, wherever feasible. They also feel that EPA should delete from the Permit the allowance for "adjustments to the retention standards for redevelopment, high density development," and certain other categories of projects.

EPA Response: Section 4.1.3 requries that the District develop an off-site mitigation and/or fee-in-lieu program with requirements sufficient to encourage on-site stormwater management as a first option for meeting stormwater performance. Further this section specifies the following site

constraints appropriate in the determination of infeasibility for meeting stormwater standards: limited capacity for infiltration because of buried utilities, soil contamination, limitation in non-building space, high groundwater; no or minimal onsite uses for harvested stormwater; lack of structural capacity in a redeveloped building for green roofs."

In addition to the foregoing safeguards, EPA notes that the Permit expands the minimum requirements for an off-site mitigation and/or fee-in-lieu program by requiring, among other things, that the program include at a minimum: (1) Establishment of baseline requirements for on-site retention and for mitigation projects; (2) Specific criteria for determining when compliance with the baseline requirement for on-site retention cannot technically be met based on physical site constraints; (3) For a fee-in-lieu program, establishment of a system or process to assign monetary values at least equivalent to the cost of implementation of controls; and (4) The necessary tracking and accounting systems to implement this section, including that original and off-site practices stay in place and are adequately maintained. *See* Section 4.1.3 of Final Permit.

In addition, Section 4.9.4.1 of the Final Permit requires that the District "continue to create opportunities for the public to participate in the decision making processes involving the implementation and update of the permittee's SWMP. The permittee shall continue to implement its process for consideration of public comments on their SWMP.." Further, Section 4.1.3. specifically requires that the public be involved in the development of the off-site mitigation program (if the District chooses to develop one). Therefore, the public will be invited to participate in the development of the program and suggest a mitigation ratio or other program specifics. EPA encourages the Commenters to participate in this process.

With regard to the Commenters' suggestion that EPA delete the adjustments allowed to the performance standard previously included for certain categories of development, such as transit-oriented development, EPA appreciates the comment and has deleted this provision from the Final Permit.

s. The Commenters recommend that the Permit require the District to review its codes and policy documents in order to ensure the removal of barriers to green infrastructure techniques, that any code revisions be subject to public comment, and that individual site plans be open to public review. Additionally, the Commenters seek to have the Permit clarify the requirement concerning incentives for "green landscaping."

EPA Response: EPA contends that the Draft Permit requirement on code and policy review was sufficient to ensure removal of barriers to green infrastructure, and so has retained that provision in the Final Permit. *See* Section 2.1.4 (The Permittee must "[r]eview and revise, where applicable, building, health, road and transportation, and other codes and regulations to remove barriers to, and facilitate the implementation of the following standards: (1) standards resulting from issuance of District stormwater regulations required by Section 2.1, paragraph 1 herein; and (2) performance standards required by this Permit.").

As to the green landscaping program required by the Permit, EPA deliberately refrained from being overly prescriptive in the Final Permit because it believes that the District is in the best

position to develop the program on its own. *See* Section 4.1.4 ("No later than one year following Permit issuance, the Permittee shall develop an incentive program to increase the quantity and quality of planted areas in the District while allowing flexibility for developers and designers to meet development standards. The Incentive Program shall use such methods as a scoring system to encourage green technology practices such as larger plants, permeable paving, green roofs, vegetated walls, preservation of existing trees, and layering of vegetation along streets and other areas visible to the public.").

t. The Commenters believe that the Permit's public participation elements are insufficient. They refer to the relevant provisions as "vague and confusing."

EPA Response: The Final Permit contains robust opportunities for public participation. For example, Section 2.3 of the Final Permit (Stormwater Management Program Administration/Permittee Responsibilities), lists one of DDOE's major responsibilities as "[m]aking available to the public and other interested and affected parties, the opportunity to comment on the MS4 stormwater management program." Further, the Permit provisions for development of off-site mitigation/fee-in lieu, retrofit, tree canopy, and storm drain system operation/programs for solids and floatables reduction also include such requirements. *See* Sections 4.1.3, 4.1.5, 4.1.6, and 4.3.5, respectively.

By way of additional examples of public notification requirements, the Final Permit increases public participation aspects of the Permit, in part by including TMDL WLA Implementation as part of the District's overall Stormwater Management Plan (SWMP) (moved from Section 8.1 of Draft Permit, "Other Applicable –Provisions—WQS and TMDL WLA Implementation Plans and Compliance Monitoring") to Section 4.10 of Final Permit ("Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA) Planning and Implementation"). It also requires the Permittee to "make all draft and approved MS4 documents required under this Permit available to the public for comment. The current draft and approved SWMP and the MS4 annual reports deliverable documents required under this Permit shall be posted on the Permittee's website." Section 4.9.4.3 of Final Permit. *See also* Sections 4.9.4.1 (requirement to create opportunities for the public to participate in the decision making processes involving the implementation and update of the Permittee's SWMP); 4.9.4.2 (requirement to continue to establish a method of routine communication to groups such as watershed associations and environmental organizations that are located in the same watershed/s as the Permittee, or organizations that conduct environmental stewardship projects located in the same watershed/s or in close proximity to the Permittee); 4.9.4.4 (requirement to continue to develop public educational and participation materials in cooperation and coordination with other agencies and organizations in the District); and 4.9.4.5 (requirement to periodically, and at least annually, update its website).

Further, at Section 3, the Final Permit requires that "[a] current plan shall be posted on the District's website at an easily accessible location at all times" and also that "[n]o later than 3 years from the issuance date of this Permit the Permittee shall public notice a fully updated Plan including all of the elements required in this Permit. No later than 4 years from the issuance date of this Permit the Permittee shall submit to EPA the fully updated plan for review and approval, as part of the application for Permit renewal."

21. Short Sign-on Letter from Individuals/Groups Listed Below (June 4, 2010).

Tracy Bowen
Executive Director
Alice Ferguson Foundation

Dottie Yunger
Executive Director
Anacostia Riverkeeper

Brent Bolin
Director of Advocacy
Anacostia Watershed Society

Diane Cameron
Director of Conservation Programs
Audubon Naturalist Society

Maisie Hughes
Director, Planning and Design
Casey Trees

Beth Mullin
Executive Director, FORCE
Friends of Rock Creek's Environment

Paul F. Walker, Ph.D.
Director, Security and Sustainability
Global Green USA

Gwyn Jones
Chair
Sierra Club, DC Chapter

Irv Sheffey
Associate Field Organizer
DC Environmental Justice & Community Partnerships Program
Sierra Club

Julie Lawson
Chair, DC Chapter
Surfrider Foundation

Lee Epstein
Lands Program Director
Chesapeake Bay Foundation

Andy Fellows
Chesapeake Regional Director
Clean Water Action

Chris Weiss
Director
DC Environmental Network

Pete Ensign
Executive Director
DC Greenworks

Jennifer Chavez
Associate Attorney
Earthjustice

Cori Lombard & Rebecca Hammer
Legal Fellos
Natural Resources Defense Council

Ed Merrifield
President
Potomac Riverkeeper

These Commenters indicate in their short sign-on letter that the following draft provisions must be clarified or strengthened: specific numbers of green infrastructure projects; green infrastructure requirements for new development and redevelopment projects

(including an on-site stormwater retention standards for federal and non-federal projects); a retrofit program that will systematically remediate existing runoff problems in the District, over time; pollution cleanup plans (via effectively and fully incorporating existing and future TMDLs and their Waste Load Allocations, for the Anacostia River, Rock Creek and the Potomac River); compliance with existing legal water quality standards; pollution reduction requirements and programs; and outcomes and plans to be subject to robust public participation, with adequate responses from the District government and the EPA.

EPA Response: As discussed in greater detail below, EPA contends that the performance standards and schedules included in the Final Permit adequately address the areas raised by the Commenters as needeing clarification or strengthening. At the same time, EPA asserts that some level of flexibility is necessary in certain areas to allow the District to address pollutant sources as appropriate to minimize and prevent discharges. The Commenters are referred to today's Fact Sheet for more discussion of how performance standards in the Permit were developed.

As to the specific number of green infrastructure projects required by the Permit, the Commenters are directed to the examples of tree planting and green roof requirements. *See* Final Permit, Sections 4.1.6.2 ("achieve a minimum net annual tree planting rate of 4,150 plantings annually within the District MS4 area"); and 4.1.7.2 ("The permittee shall install at a minimum 350,000 square feet of green roofs on District properties during the term of the permit (including schools and school administration buildings).

With regard to the Commenters' request for on-site stormwater retention standards for federal and non-federal new and development and redevelopment projects, the Final Permit contains significant language at Section 4.1.1 ("Standard for Stormwater Discharges from Development"). EPA notes that the Final Permit has been revised from the draft to make two changes: (1) Throughout the Permit, the terms "new development and redevelopment" have been changed to simply "development." The Permit also includes a definition for this term. (2) The two performance standards at Section 4.1.1 have been revised so that both federal and non-federal facilities are subject to the same standard.

For retrofits, the Final Permit (Section 4.1.5) contains requirements to remediate existing runoff problems, such as an obligation that the District Program implement retrofits for stormwater discharges from 18,000,000 square feet of impervious surfaces over the Permit term. The Permit also requires that a minimum of 1,500,000 square feet of this objective to be in transportation rights-of-way.

As to pollution cleanup plans, the Final Permit contains expansive requirements related to effectively and fully incorporating existing and future TMDLs and their Waste Load Allocations, for receiving streams covered by this Permit. *See* Section 4.10. Also, for any additional pollutant sources not addressed elsewhere in the Permit, the District must continue to compile and submit pertinent information on known or potential pollution sources, in, *inter alia,* land use activities, runoff characteristics and major structural controls. *See* Section 4.11. Moreover, the Permit's ropener clause ensures that future TMDLs and WLAs can be incorporated into the Permit. *See* Section 8.19 ("The Permit may be modified or revoked and reissued, including but

not limited to, any of the following reasons: 1. To incorporate any applicable effluent standard or limitation issued or approved under Sections 301, 304, or 307 of the Clean Water Act, and any other applicable provision, such as provided for in the Chesapeake Bay Agreements based on water quality considerations. . . .").

With regard to compliance with existing legal water quality standards, the Final Permit requires the District to "manage, implement and enforce a stormwater management program . . . to meet the following requirements: . . . [e]ffectively prohibit pollutants in stormwater discharges or other unauthorized discharges into the MS4 as necessary to comply with existing District of Columbia Water Quality standards (DCWQS). . . . " Section 1.4. EPA notes, however, that the attainment of water quality criteria is an incremental process, consistent with section 402(p)(3)(B) of the Clean Water Act, 33 U.S.C. § 1342(p)(3)(B)(iii), so long as Permittees reduce the discharge of pollutants to the maximum extent practicable (MEP) within each Permit cycle. *See* Section 1.4 of today's Fact Sheet for a further discussion of these concepts.

For pollution reduction requirements and programs, EPA contends that the District's overall SWMP satisfies the need for such activities. *See* Section 3 ("This Program has been determined to reduce the discharge of pollutants to the maximum extent practicable.").

Moreover, the Permit contains numerous requirements for robust public participation. *See e.g.*, Sections 3 ("No later than 3 years from the issuance date of this Permit the Permittee shall public notice a fully updated Plan including all of the elements required in this Permit."); 4.1.3 ("Within 18 months of the effective date of this Permit, the District shall develop, public notice, and submit to EPA for review and comment an off-site mitigation and/or fee-in-lieu program. . . "); 4.1.5 ("Within 2 years of the effective date of this Permit the District shall develop, public notice, and submit to EPA for review and approval a program that establishes performance metrics for retrofit projects."); 4.3.5 ("Within 18 months of the effective date of this Permit, the District shall complete, public notice and submit to EPA for review and approval a plan for optimal catch basin inspections, cleaning and repairs."); and 4.9.4 (Public Involvement and Participation. The Permittee shall continue to include ongoing opportunities for public involvement through advisory councils, watershed associations and/or committees, participation in developing updates to the stormwater fee system, stewardship programs, environmental activities or other similar activities. The Permittee shall facilitate opportunities for direct action, educational, and volunteer programs such as riparian planting, volunteer monitoring programs, storm drain marking or stream clean-up programs.").

22. Smart Growth America, Geoff Anderson (June 4, 2010).

a. The Commenter believes that, when it comes to stormwater, there is a hierarchy of development typologies, from best to worst, with a whole range of types of developments in between. He indicates that the most protective type of development is one that is located on a brownfield, in an already developed area with higher densities, a mix of uses and transportation options. It is a development that takes an existing site with high imperviousness and little, if any, stormwater controls and retrofits or redevelops that site to significantly reduce stormwater runoff through infiltration, evapotranspiration and reuse, while accommodating more people and with a greater diversity of uses. The

Commenter also lists several advantages from this type of development. Further, the Commenter suggests that the least protective development is one that is built in a far-flung greenfield location which converts large amounts of natural landscape to impervious surface while using minimal stormwater controls, and he lists several disadvantages from this type of development.

EPA Response: The Agency agrees with these points, and believes that the Permit reflects them in various ways, especially throughrequirements of the SWMP.

b. The Commenter suggests that there are several principles which should be followed when considering the District's draft MS4 Permit: (1) environmentally-protective actions should be the easiest to achieve (with the most incentives) and the most degrading actions the hardest; (2) regulated entities should be treated equitably, so that a required action should be commensurate with the environmental impact of the action; (3) pollution reductions should be sought from the places where it is easiest and most cost effective to obtain them; (4) hot spots of pollution should be avoided, particularly in densely-populated areas; (5) given already-degraded waters, the Permit should seek as much pollution reduction as can be feasibly achieved from all sources knowing that, in some cases, these reductions are unlikely to be sufficient to achieve water quality goals. The Commenter then states that the Permit should seek to regulate stormwater in a manner that is consistent with each of these principles, balancing one against the other where full reconciliation is impossible.

EPA Response: (1) Through the inclusion of green infrastructure requirements, the Permit does in fact make environmentally-protective actions the easiest to achieve. The Permit also includes a requirement that the District develop an off-site mitigation and/or fee-in-lieu program (Section 4.1.3 of Final Permit), but EPA believes that the transaction costs associated with off-site mitigation and/or fee-in-lieu payments will serve as a sufficient deterrent against developers pursuing these options as a first course. (2) The Permit does in fact treat regulated entities equitably according to environmental impact. For example, Section 4.1.3 of the Permit provides that the off-site mitigation and/or fee-in-lieu program "may also include incentives for achieving other important environmental objectives such as ongoing measurable carbon sequestering, energy savings, air quality reductions in green house gases, or other environmental benefits for which the program can develop methods for quantifying and documenting those outcomes." Also, the performance standard for all development within the DC MS4 Permit Area is the same regardless of type of development or community affluence and diversity. (3) EPA contends that pollution reductions anticipated by the Permit will come through the easiest and most cost-effective methods, *e.g.*, low-impact development and other preventative measures, as opposed to traditional stormwater controls which are more expensive. (For more discussion, *see* today's Fact Sheet at Section 4.1.1 (Standards for Stormwater Discharges from Development)). (4) EPA agrees that hot spots of pollution should be avoided, particularly in densely-populated areas. In fact, the Final Permit is expected to result in lower stormwater runoff throughout the DC MS4 Permit Area, and not to cause additional concentrations of stormwater pollution. (5) EPA agrees that the Permit should seek as much pollution reduction as can be feasibly achieved from all sources, and believes that the Final Permit accomplishes that goal.

c. The Commenter believes that the potential for an adjustment should be applied upfront to the base retention requirement on a project-by-project basis. As currently drafted, the potential for an adjustment to the performance standard is triggered only after it has been determined that the 1.2" standard cannot "technologically be met based on physical site constraints," and would then apply only to the (likely) less-costly offsite mitigation or payment in lieu requirements.

EPA Response: The Commenter appears to be referencing the provision for off-site mitigation and/or fee-in lieu for all facilities at Section 4.1.3 of the Permit (Section 4.1.1.d of the Draft Permit). The Commenter is correct that such provision is triggered only when projects cannot meet otherwise applicable stormwater management performance standards, and not as an equal alternative to those standards. As discussed in greater detail at Section 4.1.3 of today's Fact Sheet, this provision is included in the Permit in acknowledgement that meeting the performance standard in 4.1.1 may occasionally be challenging, and because EPA understands that an offset system is critical to situations when on-site stormwater control measures are not feasible. *See e.g.*, National Research Council, *Urban Stormwater Management in the United States* (2009). EPA also notes that the off-site mitigation and/or fee-in-lieu program developed by the District will be subject to public notice, and the Agency encourages the Commenter to provide input in this process.

d. The Commenter states that the Draft Permit does not contain sufficient guidance on the specifics of quantifying "environmental benefits" of various development types, and that Section 4.1.1.a should include a requirement that, within a one-year period of the effective date of the Permit, the District, with the assistance of the EPA, will establish environmental performance metrics and the corresponding reductions in standards for "redevelopment, high density development, transit-oriented development and other development patterns."

EPA Response: EPA believes that the performance standard for stormwater discharges from development (Section 4.1.1 of Final Permit) sufficiently balances the need for a prescriptive program against the need for flexibility by the District. Also, EPA notes that Section 4.1 of the Final Permit has been clarified to cover standards for stormwater discharges from all "development." That term is now defined as "the undertaking of any activity that disturbs a surface area greater than or equal to 5,000 square feet." *See* Section 9 (Permit Definitions).

e. The Commenter is concerned that if meeting the performance standards outlined in the current Permit is cost-prohibitive, it will deter development of lower revenue-generating developments and/or drive development out of the District. In order to prevent this, the Commenter suggests that if it is not feasible to meet the standard using LID or green infrastructure to the MEP, the Permit should allow a step-down or "off ramp" to traditional BMPs for water quality, that is, approaches (*e.g.*, sand filters) that filter pollutants but ultimately drain into the MS4. If meeting the water quality goal through a combination of LID/green infrastructure and BMPs is still not feasible, then a waiver into an offsite mitigation or payment-in-lieu program should be permitted.

EPA Response: EPA believes that off-site mitigation is a feasible alternative when off-site locations have adequate capacity. The Final Permit (Section 4.1.3, Off-Site Mitigation and/or Fee-in Lieu for all Facilities) requires that the District public-notice any off-site mitigation and/or fee-in-lieu programs. EPA encourages the Commenter to participate in this process and make his points at that time. The Permit also requires that the Permittee submit the program to EPA for review and comment.

In addition to the foregoing safeguards, EPA notes that the Permit expands the minimum requirements for an off-site mitigation and/or fee-in-lieu program by requiring, among other things, that the program include at a minimum: (1) Establishment of baseline requirements for on-site retention and for mitigation projects; (2) Specific criteria for determining when compliance with the baseline requirement for on-site retention cannot technically be met based on physical site constraints; (3) For a fee-in-lieu program, establishment of a system or process to assign monetary values at least equivalent to the cost of implementation of controls; and (4) The necessary tracking and accounting systems to implement this section, including that original and off-site practices stay in place and are adequately maintained. *See* Section 4.1.3 of Final Permit.

f. The Commenter believes that the MEP standard should include a cost feasibility component, and he proposes that the District establish a ceiling for stormwater costs as a percentage of the project construction budget. He also indicates that Section 4.1.1.a of the Permit should include an adequate study period for determining what the ceiling should be, and he cites analogous cost feasibility standards.

EPA Response: First, EPA notes that the Permit reflects what EPA, as the Permit writer, determines are the maximum extent practicable pollutant reductions that the Permittee can achieve with respect to its discharges. Therefore, MEP language is not included in the Permit itself but rather in the Fact Sheet; it is the responsibility of the Permit writer—and not the Permittee—to make this determination.

Second, the separate "Reporting on Funding" required by the Draft Permit was eliminated, as discussed further in today's Fact Sheet. However, the Final Permit requires annual reporting on projected costs and budget for the coming year as well as expenditures and budget for the prior year. *See* Section 6.2.1.d of Final Permit. While the District is required to meet the provisions of the Permit, how it chooses to allocate resources to comply with the Permit is an internal decision beyond a demonstration of basic budget considerations as outlined in the Permit itself.

g. The Commenter recommends that EPA should evaluate and consider Permitting a lower threshold for allowing certain kinds of development that provide important social benefits that would otherwise have to sacrifice important amenities that provide substantial economic value and quality of life benefits to use less expensive, traditional BMPs in order to achieve full on-site retention.

EPA Response: The Permit and regulations authorizing the Permit are applied to effectively prohibit pollutants into the MS4 system. The controls, procedures and management practices included in the SWMP are implemented to meet this requirement. Ancillary benefits which

occur are of additional benefit, but the primary objective of the SWMP is to comply with existing water quality standards.

h. The Commenter believes that the Permit should include an incentive program to encourage projects to exceed the applicable standard, whether it is the full 1.2" or a lower standard due to quantifiable environmental benefits. Incentives could include density bonuses, fast tracking and fee waivers. Moreover, the Commenter recommends that the Permit should establish a trading system for stormwater control credits that would be awarded to projects that exceed site requirements.These credits could be sold to redevelopment projects on more difficult to develop sites within the same watershed, where onsite mitigation is not feasible (but not including development on greenfields or in areas of high sensitivity).

EPA Response: The District has provided and continues to provide incentives programs to implement its various stormwater management activities. EPA encourages the Commenter to participate in the public involvement process during the update of the Stormwater Regulations.

i. The Commenter suggests that EPA should undertake or commission a substantial cost benefit modeling study for green infrastructure and other on-site retention techniques. The proposed study should be designed with the input and oversight of a panel of all stakeholders, including environmentalists, developers, engineers, and the government, and should look at 10 or so project types across a range of soil conditions and consider 3 or 4 retention standards. Moreover, the study should consider both the technology and space costs of various LID and green infrastructure approaches, as well as the cost savings to municipalities.

EPA Response: The Commenter's suggestions is outside the scope of this Permit; however, EPA is separately engaged in a national rulemaking to establish a program to reduce stormwater discharges from new development and redevelopment and make other regulatory improvements to strengthen its stormwater program. *See* EPA, *Proposed National Rulemaking to Strengthen the Stormwater Program* (last visited March 30, 2011) (available at: http://cfpub.epa.gov/npdes/stormwater/rulemaking.cfm). EPA encourages the Commenter to participate in this process.

j. As to retrofitting requirements, the Commenter believes that the Permit is vague as to who will be affected by such requirements—*i.e.*, public property and rights of way, private development, or both. Further, he suggests that the Permit is not clear as to how payment-in-lieu or offsite mitigation applies to public property unless the intent is that private development can have the option to mitigate in public rights of way or that payment-in-lieu can be used for public retrofit projects. On the other hand, if retrofit requirements are to be applied to private development, then that should also be made clearer, and an entirely different set of compliance standards will need to be established.

EPA Response: EPA has rewritten the portion of the Permit dealing with retrofits, Section 4.1.5, to more clearly require, *inter alia,* the following: (1) It is the District's responsibility to develop

a retrofit program; (2) the District will target major federal landholders; (3) The District shall estimate load and volume reductions; and (4) A certain number of retrofits must be implemented through the overall DC Retrofit program. The Commenter is correct that the Permit is not overly prescriptive as to who must perform the retrofits, but that is intentional. As discussed in today's Fact Sheet, EPA believes that the District is in the best position to develop performance metrics for retrofits, which is a Permit requirement. For example, the District may establish an incentive program to encourage private landowners to perform retrofits on their properties. Also, the Permit requires that the public be invited to paricipate in the development of these programs as well as the retrofit program. EPA encourages the Commenter to participate in this process.

With regard to the off-site mitigation and/or fee-in lieu program for all facilities, the Permit is also not overly prescriptive, although it does require the District to public-notice the program and submit it to EPA for review and comment. However, the Permit does establish some parameters as minimum requirements for this type of program, including: (1) Establishment of baseline requirements for on-site retention and for mitigation projects; (2) Specific criteria for determining when compliance with the baseline requirement for on-site retention cannot technically be met based on physical site constraints; (3) For a fee-in-lieu program, establishment of a system or process to assign monetary values at least equivalent to the cost of implementation of controls; and (4) The necessary tracking and accounting systems to implement this section, including that original and off-site practices stay in place and are adequately maintained. Section 4.1.3 of Final Permit.

k. The Commenter states that geat cities are necessary to protect water quality. Sprawl can be reduced if cities are desirable places to live.

EPA Response: EPA agrees with these points.

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:	)
Government of the District of Columbia, Municipal Separate Storm Sewer System, NPDES Permit No. DC 0000221	)

EXHIBIT 13

FACT SHEET

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4)
Permit No. DC0000221 (Government of the District of Columbia)

NPDES PERMIT NUMBER: DC0000221 (Reissuance)

FACILITY NAME AND MAILING ADDRESS:

Government of the District of Columbia
The John A. Wilson Building
1350 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

MS4 ADMINISTRATOR NAME AND MAILING ADDRESS:

Director, District Department of the Environment
1200 First Street, N.E., 6th Floor
Washington, D.C. 20002

FACILITY LOCATION:

District of Columbia's Municipal Separate Storm Sewer System (MS4)

RECEIVING WATERS:

Potomac River, Anacostia River, Rock Creek, and Stream Segments Tributary
To Each Such Water Body

INTRODUCTION:

Today's action finalizes reissuance of the District of Columbia Municipal Separate Storm Sewer System (MS4) Permit. In the Final Permit EPA has continued to integrate the adaptive management approach with enhanced control measures to address the complex issues associated with urban stormwater runoff within the corporate boundaries of the District of Columbia, where stormwater discharges via the Municipal Separate Storm Sewer System (MS4).

Since the United States Environmental Protection Agency, Region III (EPA) issued the District of Columbia (the District) its first MS4 Permit in 2000, the Agency has responded to a number of legal challenges involving both that Permit (as well as amendments thereto) and the second-round MS4 Permit issued in 2004. For the better part of ten years, the Agency has worked with various parties in the litigation, including the District and two non-governmental organizations, Defenders of Wildlife and Friends of the Earth, to address the concerns of the various parties. The Agency has engaged in both litigation and negotiation, including formal

mediation.[1] These activities ultimately led to an enhanced stormwater management strategy in the District, consisting of measurable outputs for addressing the issues raised during the litigation and mediation process.

FACILITY BACKGROUND AND DESCRIPTION:

The Government of the District of Columbia owns and operates its own MS4, which discharges stormwater from various outfall locations throughout the District into its waterways.[2]

On April 21, 2010 EPA public noticed the Draft Permit. The Draft Fact Sheet published with that Draft Permit contains more extensive permit background information, and the reader is referred to that document for the history of the District of Columbia MS4 permit.

The public comment period closed on June 4, 2010. EPA received comments from 21 individual commenters and an additional 53 form letters. The Draft Permit, Draft Fact Sheet, and comments received on those documents are all available at: http://www.epa.gov/reg3wapd/npdes/draft_permits.html. The Final Permit reflects many of the comments received. EPA is simultaneously releasing a responsiveness summary responding to these comments.

ACTION TO BE TAKEN:

EPA is today reissuing the District of Columbia NPDES MS4 Permit. The Final Permit replaces the 2004 Permit, which expired on August 18, 2009 and has been administratively extended since that time. The Final Permit incorporates concepts and approaches developed from studies and pilot projects that were planned and implemented by the District under the 2000 and 2004 MS4 permits and modifying Letters of Agreement, and implements Total Maximum Daily Loads (TMDLs) that have been finalized since the prior permit was issued, including the Chesapeake Bay TMDL. A number of applicable measurable performance standards have been incorporated into the Final Permit. These and other changes between the 2004 Permit and today's Final Permit are reflected in a Comparison Document that is part of today's Permit issuance.

WATER QUALITY IN DISTRICT RECEIVING WATERS:

The District's *2008 Integrated Report to the Environmental Protection Agency and U.S. Congress Pursuant to Sections 305(b) and 303(d) Clean Water Act*[3] documents the serious water

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1 A procedural history of Permit appeals can be viewed at the EPA Environmental Appeals Board web: http://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/77355bee1a56a5aa8525711400542d23/b5e5b68e89edabe98525714f00731c6f!OpenDocument&Highlight=2,municipal.

2 Portions of the District are served by a combined sanitary and storm sewer system. The discharges from the combined sewer system are not subject to the MS4 permit, but are covered under NPDES Permit No. xxxx issued to the District of Columbia Water and Sewer Authority.

3 District Department of the Environment, *The District of Columbia Water Quality Assessment, 2008 Integrated Report to the Environmental Protection Agency and U.S. Congress Pursuant to Sections 305(b) and 303(d) Clean Water Act* (hereinafter "2008 Integrated Report").

quality impairments in the surface waters in and around the District. A number of the relevant designated uses are not being met, *e.g.*, aquatic life, fish consumption, and full body contact, and there are a number of specific pollutants of concern that have been identified (for additional discussion on relevant TMDLs *see* Section 4.10 of this Final Fact Sheet).

Commenters on the Draft Permit expressed some frustration over very slow progress or even lack of progress after a decade of implementation of the MS4 program and even longer for other water quality programs. EPA appreciates this concern. Although the District's receiving waters are affected by a range of discharge sources, discharges from the MS4 are a significant contributor of pollutants and cause of stream degradation. EPA also recognizes, however, that stormwater management efforts that achieve a reversal of the ongoing degradation of water quality caused by urban stormwater discharges entail a long term, multi-faceted approach.

Consistent with the federal stormwater regulations for characterizing discharges from the MS4 (40 C.F.R. §122.26(d)(2)(iii)), the first two permit terms for the District's MS4 program required end-of-pipe monitoring to determine the type and severity of pollutants discharging via the system. The monitoring program was not designed to evaluate receiving water quality *per se*, therefore detection of trends or patterns was not reasonably possible. Today's Final Permit includes requirements for a Revised Monitoring Program, and one of the objectives for the program is to use a suite of approaches and indicators to evaluate and track water quality over the long-term (*see* discussion of Section 5.1 in this Final Fact Sheet).
There have been identified improvements in some areas. For example the *2008 Integrated Report* noted improvements in the diversity of submerged aquatic vegetation in the Potomac River, as well as improvements in fish species richness in Rock Creek. Biota metrics are often the best indicators of the integrity of any aquatic system.

EPA also notes that there are a variety of indirect measures indicative of improvement. The federal stormwater regulations foresaw the difficulty, especially in the near-term, of detecting measurable improvement in receiving waters, and relied instead on indirect measures, such as estimates of pollutant load reductions (40 C.F.R. §122.26(d)(2)(v)). The District documents these types of indirect measures in its annual reports, *e.g.*, tons of solids collected from catch basin clean-outs, amount of household hazardous waste collected, number of trees planted, square footage of green roofs installed, and many other measures of success.[4]

EPA believes that documenting trends in water quality, whether improvements, no change, or even further degradation, is an important element of a municipal water quality program. Today's Final Permit recognizes this principle, both in the types of robust measures required as well as the transition to new monitoring paradigms. EPA encourages all interested parties to provide the District with input during the development of these program elements.

THIS FACT SHEET:

(http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/information2/water.reg.leg/DC_IR_2008_Revised_9-9-2008.pdf

4 District MS4 Annual Reports can be found at: http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,495855.asp

This Final Fact Sheet is organized to correspond with the chronological organization and numbering in today's Final Permit. Where descriptions or discussions may be relevant to more than one element of the Final Permit the reader will be referred to the relevant section(s).

To keep today's Final Fact Sheet of readable length, many of the elements included in the fact sheet published with the Draft Permit (Draft Fact Sheet) on April 21, 2010 have not been repeated, but are referenced. Readers are referred to the Draft Fact Sheet published with the Draft Permit for additional discussion on provisions that have been finalized as proposed.[5] The Final Fact Sheet does discuss significant changes since the 2004 Permit (even if discussed in the Draft Fact Sheet). The Final Fact Sheet also contains additional explanation of the Final Permit where commenters requested additional clarification. In addition, this Final Fact Sheet explains modifications to the Final Permit where provisions were changed in response to comments.

In many cases EPA made a number of very simple modifications to the Final Permit, *e.g.*, a word, phrase, or minor reorganization, simply for purposes of clarification. These modifications were not intended to change the substance of the permit provisions, only to clarify them. Most of those types of edits are not discussed in this Final Fact Sheet, but EPA has provided a Comparison Document of the Draft and Final Permits for readers who would like that level of detail.

Many commenters noted that the Draft Permit was not logically organized. EPA agrees. The major reorganization principles include:

1) There is a new Section 3, Stormwater Management Program (SWMP) Plan consolidating the various plans, strategies and other documents developed in fulfillment of permit requirements.
2) All implementation measures, *i.e.*, those stipulating management measures and implementation policies, are included in Section 4 of today's Final Permit. This includes "Source Identification" elements (Section 3 in the Draft Permit) and "Other Applicable Provisions" elements (Section 8 in the Draft Permit), which included TMDL requirements.
3) All monitoring requirements are consolidated in Section 5 of the Final Permit.
4) All reporting requirements are consolidated in Section 6 of the Final Permit.

EPA also refers readers to the Responsiveness Summary released today along with the Final Permit and Final Fact Sheet, for responses to comments and questions received on the Draft Permit. That document contains additional detailed explanations of the rationale for changes made to the Draft Permit in the Final Permit.

Finally, EPA made significant effort to avoid appending or incorporating by reference other documents containing permit requirements into the Final Permit. In the interest of clarity

5 The Permit and Fact Sheet proposed on April 21, 2010 can be viewed at: http://www.epa.gov/reg3wapd/npdes/draft_permits.html

and transparency EPA, to the extent possible, has included all requirements directly in the permit. Thus, EPA reviewed a variety of documents with relevant implementation measures, *e.g.*, TMDL Implementation Plans and the 2008 Modified Letter of Agreement to the 2004 permit[6], and translated elements of those plans and strategies into specific permit requirements that are now contained in the Final Permit. This Fact Sheet provides an explanation of the sources of provisions that are significant and are a direct result of one of those strategies.

1. DISCHARGES AUTHORIZED UNDER THIS PERMIT

(1.2 Authorized Discharges): The Final Permit authorizes certain non-stormwater discharges, including discharges from water line flushing. One commenter noted that many of these discharges, especially from potable water systems, contain concentrations of chlorine that may exceed water quality standards. EPA agrees, and has therefore clarified that dechlorinated water line flushing is authorized to be discharged under the Final Permit.

(1.4 Discharge Limitations): Comments on the language in Part 1.4 varied widely. Some commenters did not believe it was reasonable to require discharges to meet water quality standards. Other commenters believed this to be an unambiguous requirement of the Clean Water Act.

Today's Final Permit is premised upon EPA's longstanding view that the MS4 NPDES 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 F.R. 47990 (Nov. 16, 1990).

EPA is aware that many permittees, especially those in highly urbanized areas such as the District, likely will be unable to attain all applicable water quality standards within one or more MS4 permit cycles. Rather the attainment of applicable water quality standards as an incremental process is authorized under section 402(p)(3)(B)(iii) of the Clean Water Act, 33 U.S.C. § 1342(p)(3)(B)(iii), which requires an MS4 permit "to reduce the discharge of pollutants to the maximum extent practicable" (MEP) "and such other provisions" deemed appropriate to control pollutants in municipal stormwater discharges. To be clear, the goal of EPA's stormwater program is attainment of applicable water quality standards, but Congress expected that many municipal stormwater dischargers would need several permit cycles to achieve that goal.

Specifically, the Agency expects that attainment of applicable water quality standards in waters to which the District's MS4 discharges, requires staged implementation and increasingly more stringent requirements over several permitting cycles. During each cycle, EPA will continue to review deliverables from the District to ensure that its activities constitute sufficient progress toward standards attainment. With each permit reissuance EPA will continue to increase

6 District Department of the Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

stringency until such time as standards are met in all receiving waters. Therefore today's Final Permit is clear that attainment of applicable water quality standards and consistency with the assumptions and requirements of any applicable WLA are requirements of the Permit, but, given the iterative nature of this requirement under CWA Section 402(p)(3)(B)(iii), the Final Permit is also clear that "compliance with all performance standards and provisions contained in the Final Permit shall constitute adequate progress toward compliance with DCWQS and WLAs for this permit term" (Section 1.4).

EPA believes that permitting authorities have the obligation to write permits with clear and enforceable provisions and thus the determination of what is the "maximum extent practicable" under a permit is one that must be made by the permitting authority and translated into provisions that are understandable and measurable. In this Final Permit EPA has carefully evaluated the maturity of the District stormwater program and the water quality status of the receiving waters, including TMDL wasteload allocations. In determining whether certain measures, actions and performance standards are practicable, EPA has also looked at other programs and measures around the country for feasibility of implementation. Therefore today's Final Permit does not qualify any provision with MEP thus leaving this determination to the discretion of the District. Instead each provision has already been determined to be the maximum extent practicable for this permit term for this discharger.

EPA modified the language in the Final Permit to provide clarity on the expectations consistent with the preceding explanation. Specifically Section 1.4.2 of the Final Permit requires that discharges 'attain' applicable wasteload allocations rather than just 'be consistent' with them, since the latter term is somewhat ambiguous.

In addition, the general discharge limitation 'no increase in pollutant loadings from discharges from the MS4 may occur to receiving waters' was removed because of the difficulty in measuring, demonstrating and enforcing this provision. Instead, consistent with EPA's belief that the Final Permit must include all of the enforceable requirements that would achieve this principle, the following discharge limitation is substituted: "comply with all other provisions and requirements contained in this permit, and in plans and schedules developed in fulfillment of this permit."

In addition, EPA made the following modifications: "Compliance with <u>the</u> performance standards and provisions contained in <u>Parts 2 through 8 of</u> this permit shall constitute adequate progress towards compliance with DCWQS <u>and WLAs for this permit term</u>" (*underlined text added*) (Section 1.4 of the Final Permit). EPA eliminated circularity with the addition of "Parts 2 through 8", clarifying that this requirement does not circle back to include the statements in 1.4.1 and 1.4.2, but rather interprets them. Also, although WLAs are a mechanism for attainment of water quality standards, EPA added the specific language "and WLAs" to make this concept explicit rather than just implicit. In addition this revised language emphasizes that the specific measures contained in the Final Permit, while appropriate for this permit term, will not necessarily constitute full compliance in subsequent permit terms. It is the expectation that with each permit reissuance, additional or enhanced requirements will be included with the objective

of ensuring that MS4 discharges do not cause or contribute to an exceedance of applicable water quality standards, including attainment of relevant WLAs.

2. LEGAL AUTHORITY, RESOURCES, AND STORMWATER PROGRAM ADMINISTRATION

(2.1 Legal Authority): Several commenters pointed out that there were a number of requirements in the Draft Permit without clear compliance schedules or deadlines, or with deadlines that did not correspond well to others in the permit. In the Final Permit, EPA has made several revisions to address these comments. For example, EPA changed a requirement that deficiencies in legal authority must be remedied "as soon as possible" to a 120-day requirement for deficiencies that can be addressed through regulation, and two years for deficiencies that require legislative action (Section 2.1.1). Also, EPA increased the compliance schedule for updating the District's stormwater regulation from twelve months to eighteen months, *id.,* so that this action could be adequately coordinated with the development of the District's new offsite mitigation/payment-in-lieu program (for more discussion see Section 4.1.3 below).

(2.2 Fiscal Resources): One commenter suggested eliminating the reference to the District's Enterprise Fund since funding was likely to come from a number of different budgets within the District. EPA agrees with this comment and has removed this reference.

On the other hand, many commenters noted that the implementation costs of the District's stormwater program will be significant. EPA agrees. The federal stormwater regulations identify the importance of adequate financial resources [40 C.F.R. §122.26(d)(1)(vi) and (d)(2)(vi)]. In addition, after seeing notable differences in the caliber of stormwater programs across the country, EPA recognizes that dedicated funding is critical for implementation of effective MS4 programs.[7,8,9] In 2009 the District established, and in 2010 revised, an impervious-based surface area fee for service to provide core funding to the stormwater program[10] (understanding that stormwater-related financing may still come from other sources as they fulfill multiple purposes, *e.g.,* street and public right-of-way retrofits). In conjunction with the 2010 rule-making to revise the fee the District issued a Frequently Asked Questions document[11] that indicates the intent to restrict this fee to its original purpose, *i.e.*, dedicated funding to implement the stormwater program and comply with MS4 permit requirements. EPA believes this action is essential, and he expects that the District will maintain a dedicated source of funding for the stormwater program.

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7 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

8 National Association of Flood and Stormwater Agencies, Funded by EPA, *Guidance for Municipal Stormwater Funding* (2006) http://www.nafsma.org/Guidance%20Manual%20Version%202X.pdf

9 EPA, *Funding Stormwater Programs* (2008) http://www.epa.gov/npdes/pubs/region3_factsheet_funding.pdf

10 District of Columbia, Rule 21-566 Stormwater Fees, http://www.dcregs.dc.gov/Gateway/RuleHome.aspx?RuleID=474056

11 District of Columbia, FAQ Document *Changes to the District's Stormwater Fee* (2010) http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/information2/water.reg.leg/Stormwater_Fee_FAQ_10-5-10_-final.pdf

3. STORMWATER MANAGEMENT PROGRAM (SWMP) PLAN

A number of commenters were confused by the wide variety of plans, strategies and other written documents required by the Draft Permit. A number of commenters were also concerned about public access to several of these documents.

In today's Final Permit EPA is clarifying that any written study, strategy, plan, schedule or other element, existing or new, is part of the District Stormwater Management Program Plan. It is EPA's intent that all elements of the program be described in this central 'Plan'. This does not mean that the Plan cannot consist of separate documents. EPA understands that stand-alone elements may aid in implementation in certain situations. However, EPA is clarifying that all such documents are inherent components of the Plan.

To address the accessibility issue EPA is also requiring that the most current version of the Plan be posted on the District website. As such, all elements that may be documented in separate documents and deliverables must be posted at this location (a hyperlink to any element of the program in a different document is sufficient).

Moreover, today's Final Permit requires the District to public notice a fully updated Plan (to include all existing and new elements required by the Final Permit) within three years of the effective date of this Final Permit, and to then submit that Plan to EPA within four years of the effective date of the Final Permit. This schedule will enable this evaluation of the Plan to be part of EPA's evaluation of the Districts stormwater management program in preparation for the next reissuance of the permit.

The Final Permit requires the District to develop a number of new initiatives. Many commenters raised concerns about the rigor and suitability of these new elements in the absence of a requirement for public input, and in the absence of EPA review and approval. In light of those concerns EPA reviewed all elements of the Draft Permit, and where appropriate has added requirements to the Final Permit both for public notice and opportunity to comment and for submittal to EPA for review and approval. Not every new element has been subjected to this requirement. However, EPA agrees that the opportunity for the public and EPA to review new program elements that will become major components of the stormwater management program is reasonable. Thus, for provisions that EPA believes will be important foundations of the program in years to come, EPA has added a requirement for public notice and EPA review and approval. A new Table 1 in the Final Permit summarizes the elements that must now be submitted to EPA for review and approval.

TABLE 1
Elements Requiring EPA Review and Approval

Element	Submittal Date (from effective date of this permit)
Anacostia River Watershed Trash Reduction Calculation Methodology (4.10)	1 year
Catch Basin Operation and Maintenance Plan (4.3.5.1)	18 months
Outfall Repair Schedule (4.3.5.3)	18 months
Off-site Mitigation/Payment-in-Lieu Program (4.1.3)	18 months
Retrofit Program (4.1.6)	2 years
Consolidated TMDL Implementation Plan (4.10.3)	2 years
Revised Monitoring Program (5.1)	2 years
Revised Stormwater Management Program Plan (3)	4 years

4. IMPLEMENTATION OF STORMWATER CONTROL MEASURES

(4.1 Standard for Long-Term Stormwater Management): One of the fundamental differences between today's Final Permit and earlier permits is the inclusion of measurable requirements for green technology practices, sometimes referred to as "low-impact development" or "green infrastructure." These requirements, which include green roofs, enhanced tree plantings, permeable pavements, and a performance standard to promote practices such as bioretention and water harvesting, are designed to increase the effectiveness of stormwater controls by reducing runoff volumes and associated pollutant loads.[12,13] In past years, stormwater management requirements in permits did not include clear performance goals, numeric requirements or environmental objectives. Today's Final Permit stipulates a specific standard for newly developed and redeveloped sites, and also emphasizes the use of "green infrastructure" controls to be used to meet the performance standard. These permit requirements are intended to improve the permit by providing clarity regarding program performance and promoting the use of technologies and strategies that do not rely solely on end-of-pipe detention measures to manage runoff. EPA notes that much of this emphasis is based on changing paradigms in stormwater science, technology and policy (see discussion below), but also points out that the groundwork for this framework was laid during the prior permit term, and all of the green infrastructure elements agreed to in the 2008 Modified Letter of Agreement to the 2004 Permit.[14]

In the natural, undisturbed environment precipitation is quickly intercepted by trees and other vegetation, or absorbed by soils and humic matter on the surface of the ground where it is

12 The performance of green infrastructure control measures is well-established through numerous studies and reports, many of which are available at http://cfpub2.epa.gov/npdes/greeninfrastructure/research.cfm#research

13 Jay Landers, *Stormwater Test Results Permit Side-by-Side Comparisons of BMPs* (2006) Civil Engineering News http://www.unh.edu/erg/civil_eng_4_06.pdf

14 District Department of the Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222*, (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

used by plants, becomes baseflow (shallow groundwater feeding waterways) or infiltrates more deeply to aquifers. During most storms very little rainfall becomes stormwater runoff where the landscape is naturally vegetated or in cases where there are permeable soils. Runoff generally only occurs with larger precipitation events, which constitute a very small proportion of the storms that occur in Washington, DC. In contrast to natural settings, traditional development practices cover large areas of the ground with impervious surfaces such as roads, driveways, sidewalks, and buildings. In addition, the remaining soils are often heavily compacted and are effectively impervious. Under developed conditions, stormwater runs off or is channeled away even during small precipitation events. The collective force of the increased stormwater flows entering the MS4 and discharging through outfalls into receiving streams scours streambeds, erodes stream banks, and causes large quantities of sediment and other entrained pollutants, such as metals, nutrients and trash, to enter the water body each time it rains[15,16,17]. Stormwater research generally shows a high correlation between the level of imperviousness in a watershed and the degree of overall degradation of water quality and habitat. This principle is so well-settled that EPA has not included individual study results here, but refers interested readers to an excellent compendium of relevant studies compiled by the Maryland Department of Natural Resources at http://www.dnr.state.md.us/irc/bibs/effectsdevelopment.html.

To date stormwater management approaches generally have been focused primarily on flood management, in particular extended detention controls, such as wet ponds or dry detention basins, or on in-pipe or end-of-pipe treatment systems. Extended detention approaches are intended to reduce downstream flooding to the extent necessary to protect the public safety and private and public property. End-of-pipe systems are intended to filter or settle specific pollutants, but typically do not reduce the large suite of pollutants in storm water, nor do anything to address degradation attributable to increased discharge volumes. These approaches occurred largely by default since stormwater permits and regulations, including those with water quality objectives, did not stipulate specific, measurable standards or environmental objectives. In addition, water quality was not the primary concern during the early evolution of stormwater management practices.

There are multiple potential problems with extended detention as a water quality management practice, including the fact that receiving stream dynamics are generally based on balances of much more than just discharge rates.[18] Stream stability, habitat protection and water quality are not necessarily protected by the use of extended detention practices and systems. In fact the use of practices such as wet detention basins often results in continued stream bank

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15 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

16 Schueler, Thomas R., *The Importance of Imperviousness* (2000) Center for Watershed Protection, http://yosemite.epa.gov/R10/WATER.NSF/840a5de5d0a8d1418825650f00715a27/159859e0c556f1c988256b7f007525b9/$FILE/The%20Importance%20of%20Imperviousness.pdf

17 E. Shaver, R. Horner, J. Skupien, C. May, and G. Ridley. *Fundamentals of Urban Runoff Management: Technical and Institutional Issues – 2nd Edition*, (2007) North American Lake Management Society, Madison, WI. http://www.deq.state.ms.us/mdeq.nsf/0/A8E8B82B89DCDDCE862573530049EEE0/$file/Fundamentals_full_manual_lowres.pdf?OpenElement

18 Low Impact Development Center, *A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption* (2007) http://pepi.ucdavis.edu/mapinfo/pdf/CA_LID_Policy_Review_Final.pdf

destabilization and increased pollutant loadings of sediment, phosphorus and other pollutants due to bank and channel erosion. Numerous studies have documented the physical, chemical and biological impairments of receiving waters caused by increased volumes, rates, frequencies, and durations of stormwater discharges, and the critical importance of managing stormwater flows and volumes to protecting and restoring our nation's waters[19,20].

Traditional stormwater management is very heavily focused on extended detention approaches, *i.e.*, collecting water short-term (usually in a large basin), and discharging it to the receiving water over the period of one to several days, depending on the size of the storm. Extended detention practices are first and foremost designed to prevent downstream flooding and not to protect downstream channel stability and water quality. For decades, water quality protection has been a secondary goal, or one omitted entirely during the design of these facilities. Over time it has become apparent through research and monitoring that these traditional practices do not effectively protect the physical, chemical or biological integrity of receiving waters[21]. Furthermore, operation and maintenance of these systems to ensure they perform as designed requires a level of managerial and financial commitment that is often not provided, further diminishing the effectiveness of these practices from a water quality performance perspective. A number of researchers have documented that extended detention practices fail to maintain water quality, downstream habitat and biotic integrity of the receiving waters.[22,23,24,25] As a result, today's Final Permit shifts the District's practices from extended detention approaches to water quality protection approaches based on retention of discharge volumes and reduced pollutant loadings.

(4.1.1 Standard for Stormwater Discharges from Development): The 2008 National Research Council Report (NRC Report) on urban stormwater confirmed that current stormwater control efforts are not fully adequate. Three of the NRC Report's findings on stormwater management approaches are particularly relevant:

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19 Daren M Carlisle, David M Wolock, and Michael R Meador , *Alteration of streamflow magnitudes and potential ecological consequences: a multiregional assessment*, , Front Ecol Environ, (2010)

20 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

21 EPA, *Protecting Water Quality from Urban Runoff* (2003) http://www.epa.gov/npdes/pubs/nps_urban-facts_final.pdf

22 C.R. MacRae, *Experience from Morphological Research on Canadian Streams: Is Control of the Two Year Frequency Runoff Event the Best Basis for Stream Channel Protection?* (1997) in Effects of Watershed Development and Management on Aquatic Ecosystems, ASCE

23 R. Horner, C. May, E. Livingston, D. Blaha, M. Scoggins, J. Tims & J. Maxted, *Structural and Nonstructural BMPs for Protecting Streams* (2002) Seventh Biennial Stormwater Research & Watershed Management Conference http://www.p2pays.org/ref/41/40364.pdf

24 D.B. Booth & C.R. Jackson, *Urbanization of Aquatic Systems – Degradation Thresholds, Stormwater Detention and the Limits of Mitigation* (1997) Journal of the American Water Resources Association 22(5) http://clear.uconn.edu/projects/TMDL/library/papers/BoothJackson_1997.pdf

25 E. Shaver, R. Horner, J. Skupien, C. May, and G. Ridley. *Fundamentals of Urban Runoff Management: Technical and Institutional Issues – 2nd Edition*, (2007) North American Lake Management Society, Madison, WI. http://www.deq.state.ms.us/mdeq.nsf/0/A8E8B82B89DCDDCE862573530049EEE0/$file/Fundamentals_full_manual_lowres.pdf?OpenElement

1) Individual controls on stormwater discharges are inadequate as the sole solution to stormwater impacts in urban watersheds;
2) Stormwater control measures such as product substitution, better site design, downspout disconnection, conservation of natural areas, and watershed and land-use planning can dramatically reduce the volume of runoff and pollutant loadings from new development; and
3) Stormwater control measures that harvest, infiltrate, and evapotranspire stormwater are critical to reducing the volume and pollutant loading of storms.

The NRC Report points out the wisdom of managing stormwater flow not just for the hydrologic benefits as described above, but because it serves as an excellent proxy for pollutants, *i.e.*, by reducing the volume of stormwater discharged, the amount of pollutants typically entrained in stormwater will also be reduced. Reductions in the number of concentrated and erosive flow events will result in decreased mobilization and transport of sediments and other pollutants into receiving waters. The NRC Report also noted that it is generally easier and less expensive to measure flow than the concentration or load of individual pollutant constituents. For all of these reasons EPA has chosen to use flow volume as the management parameter to implement policies, strategies and approaches.

The objective of effective stormwater management is to replicate the pre-development hydrology to protect and preserve both the water resources onsite and those downstream by eliminating or reducing the amount of both water and pollutants that run off a site, enter the MS4, and ultimately are discharged into adjacent water bodies. The fundamental principle is to employ systems and practices that use or mimic natural processes to: 1) infiltrate and recharge, 2) evapotranspire, and/or 3) harvest and use precipitation near to where it falls to earth.

Retaining the volume of all storms up to and including the 95th percentile storm event is approximately analogous to maintaining or restoring the pre-development hydrology with respect to the volume, rate, and duration of the runoff for most sites. In the mid-Atlantic region the 95th percentile approach represents a volume that appears to reasonably represent the volume that is fully infiltrated in a natural condition and thus should be managed onsite to restore and maintain this pre-development hydrology for the duration, rate and volume of stormwater flows. This approach also employs and/or mimics natural treatment and flow attenuation methods, *i.e.*, soil and vegetation, that existed on the site before the construction of infrastructure (*e.g.*, building, roads, parking lots, driveways). The 95th percentile volume is not a “magic” number; there will be variation among sites based on site-specific factors when replicating predevelopment hydrologic conditions. However, this metric represents a good approximation of what is protective of water quality on a watershed scale, it can be easily and fairly incorporated into standards, and can be equitably applied on a jurisdictional basis.

In the Draft Permit EPA proposed two sets of performance standards to be implemented by the District: on-site retention of the 90th percentile volume, or 1.2” for all non-federal projects, and on-site retention of the 95th percentile volume, or 1.7” for all federal projects.

In determining ‘maximum extent practicable’ for discharges from development involving

federal facilities EPA considered several factors in the Draft Permit:

1) Energy Independence and Security Act (EISA) Section 438 and EPA Guidance[26]: Entitled "Storm water runoff requirements for federal development projects," EISA section 438 provides: "The sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 share feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow."

   Guidance for federal agencies to implement EISA section 438 has been in place since December 2009, and sets forth two optional approaches to meeting the statutory requirements: a performance objective to retain the volume from the 95th percentile storm on site for any federally sponsored new development or redevelopment project and a site-specific hydrologic analysis to determine the pre-development runoff conditions and to develop the site such that the post-development hydrology replicates those conditions "to the maximum extent technically feasible."

2) Executive Orders:
   a. Executive Order 13508 - Chesapeake Bay Protection and Restoration: Calling the Chesapeake Bay a national treasure, E,O. 13508, issued May 12, 2009, establishes a mandate for federal leadership, action and accountability in restoring the Bay. Among the provisions of the Executive Order, section 202(c) directs the strengthening of stormwater management practices at Federal facilities and on Federal lands within the Chesapeake Bay watershed. In addition, section 501 directs federal agencies to implement controls as expeditiously as practicable on their own properties. As required by section 502, EPA issued guidance for federal land management practices to protect and restore the Bay, which includes guidance for managing existing development, as well as redevelopment, new development Thus federal agencies have an executive directive to be leaders in stormwater management in the District and throughout the Chesapeake Bay watershed.[27]

   b. Executive Order 13514 - Federal Leadership in Environmental, Energy, and Economic Performance E.O 13514, issued Oct. 5, 2009, directs the federal government to "lead by example" and includes a requirement for federal agencies to implement EPA's EISA Section 438 guidance (see Sections 2(d)(iv)[28] and 14).

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26 EPA, *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act* (2009) http://www.epa.gov/owow_keep/nps/lid/section438/

27 EPA, *Guidance for Federal Land Management in the Chesapeake Bay Watershed*, Chapter 3. Urban and Suburban, (2010) 841-R-10-002 (http://www.epa.gov/owow_keep/NPS/chesbay502/pdf/chesbay_chap03.pdf)

28 Sec. 2. Goals for Agencies. In implementing the policy set forth in Section 1 of this order, and preparing and implementing the Strategic Sustainability Performance Plan called for in Section 8 of this order, the head of each agency shall: . . . (d) improve water use efficiency and management by: . . . (iv) implementing and

3) Water Quality**:** These performance standards are aappropriate as water quality-based effluent limitations in the Final Permit. In order to meet the necessary water quality requirements of the Clean Water Act, and to be consistent with the assumptions and requirements of the wasteload allocations for the Chesapeake Bay TMDL, EPA has determined that this performance standard is necessary. In fact, the District's final Phase I WIP acknowledges reasonable assurance demonstration for meeting its obligations to implement the Chesapeake Bay TMDL on an expectation that federal new development and redevelopment projects will achieve a 1.7" stormwater retention objective[29].

EPA concluded in the Draft Permit, and maintains in the Final Permit, that in this first permit in which a performance standard is being required, a retention standard of 1.2" represents the "maximum extent practicable" (MEP) for the District to implement at this time. In the District of Columbia area the 90th percentile event volume is estimated at 1.2 inches. This volume was calculated from 59 years (1948-2006) of rainfall data collected at Reagan National Airport using the methodology detailed in the Energy Independence and Security Act (EISA) Section 438 Guidance[30]. EPA expects that the performance objective shall be accomplished largely by the use of practices that infiltrate, evapotranspire and/or harvest and use rainwater.

EPA's MEP determination included evaluating what has been demonstrated to be feasible in the mid-Atlantic region as well as in other parts of the country. Because on-site retention of the 90th percentile rainfall event volume and analogous approaches have been successfully implemented in other locations across the nation as requirements of stormwater permits, state regulations and local standards [31,32,33,34,35,36,37,38,39] and under a wide variety of climates and

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achieving the objectives identified in the stormwater management guidance referenced in Section 14 of this order. Sec. 14. Stormwater Guidance for Federal Facilities. Within 60 days of the date of this order, the Environmental Protection Agency, in coordination with other Federal agencies as appropriate, shall issue guidance on the implementation of Section 438 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17094).

29 District of Columbia Department of Environment, *Chesapeake Bay TMDL Watershed Implementation Plan* (2010)
http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Coluimbia_WIP_Bay_TMDL.pdf

30 EPA, *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act* (2009)
http://www.epa.gov/owow_keep/nps/lid/section438/

31 EPA, *The Municipality of Anchorage and the Alaska Department of Transportation and Public Facilities Municipal Separate Storm Sewer System Permit*, NPDES No. AKS052558 (2010)
http://yosemite.epa.gov/r10/water.nsf/NPDES+Permits/MS4+requirements+-+Region+10/$FILE/ATTCZX11/AKS052558%20FP.pdf

32 California Regional Water Quality Control Board Los Angeles Region, *Ventura County Municipal Separate Storm Sewer System Permit*, NPDES No. CAS004002 (2009)
http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/ventura_ms4/Final_Ventura_County_MS4_Permit_Order_No.09-0057__01-13-2010.pdf

33 Montana Department of Environmental Quality, *General Permit for Stormwater Discharge Associated with Small Municipal Separate Storm Sewer System*, NPDES No. MTR040000 (2010)
http://www.deq.mt.gov/wqinfo/mpdes/StormWater/ms4.mcpx

34 Tennessee Department of Environment and Conservation, *General Permit for Discharges from Small Municipal Separate Storm Sewer Systems*, NPDES No. TNS000000, (2010)
http://state.tn.us/environment/wpc/stormh2o/finals/tns000000_ms4_phase_ii_2010.pdf

conditions, EPA considers this performance standard to be proven and therefore 'practicable' at this point in time. EPA believes that application of this performance standard will result in a significant improvement to the *status quo* and that it will provide notable water quality benefits. This approach will also provide a sound foundation and framework for future management approaches, strategies, measures and practices as the program evolves over subsequent permit cycles. In this context, EPA notes that there may be a need to improve upon this standard in the future, and expects to evaluate implementation success, performance of practices and the overall program, and water quality in the receiving waters when determining whether or not to modify this requirement in a future permit cycle.

EPA received a number of comments on these proposed development performance standards. Many commenters supported this approach. A few were opposed, largely to the numbers rather than the retention framework. Only one federal agency, the Department of Defense, to whom the 95th percentile standard would apply, opposed this provision, on the basis that they should not be subject to the higher standard.

In response to comments EPA revised the Final Permit to require the District to implement a performance standard of on-site retention of 1.2" for all development projects, regardless of who owns or operates the development. EPA's rationale for including a single performance standard for all development projects is based on the fact that this permit is issued to the District of Columbia and the MEP determination must be based on what is practicable for that permittee even though certain property owners discharging to the District's MS4 may have the ability as well as the mandate to achieve more. EPA concludes that it would be not be inappropriate to include the 1.7" performance standard in a permit to a federal permittee. This permit, however, is being issued to a non-federal permittee.

Therefore today's Final Permit includes a performance standard for stormwater discharges from development that disturbs an area of land greater than or equal to 5,000 square feet. The requirement must be in effect 18 months from today. The Permit requires the design, construction, and maintenance of stormwater management practices to retain rainfall onsite, and

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35 West Virginia Department of Environmental Protection, General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems, NPDES WV0116025 (2009) http://www.dep.wv.gov/WWE/Programs/stormwater/MS4/permits/Documents/WV%20MS4%202009%20General%20Permit.pdf

36 North Carolina Department of Environment and Natural Resources, *General Permit to Construct Operate and Maintain Impervious Areas and BMPs Associated with a Residential Development Disturbing Less than 1 Acre*, State Permit No. SWG050000 (2008) http://portal.ncdenr.org/c/document_library/get_file?uuid=724171cc-c208-4f39-a68c-b4cd84022cd9&groupId=38364

37 State of Maryland, *Stormwater Management Act of 2007*, Environment Article 4 §201.1 and §203 http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/Pages/Programs/WaterPrograms/SedimentandStormwater/swm2007.aspx

38 City of Philadelphia, *Stormwater Regulations*, §600.0 Stormwater Management (2006) http://www.phillyriverinfo.org/WICLibrary/StormwaterRegulations.pdf

39 EPA, See Chapter 3, *Green Infrastructure Case Studies: Municipal Policies for Managing Stormwater with Green Infrastructure* (2010) http://www.epa.gov/owow/NPS/lid/gi_case_studies_2010.pdf

prevent the off-site discharge of the rainfall volume from all events less than or equal to the 90th percentile rainfall event.

The District's Phase I Watershed Implementation Plan (WIP) for the Chesapeake Bay TMDL[40] based its proposed nutrient and sediment reductions, and the associated reasonable assurance demonstration, on these performance standards, i.e., 1.2" for non-federal projects and 1.7" for federal projects. In establishing the Chesapeake Bay TMDL, EPA used the information in the Bay jurisdictions' final Phase I WIPs, including that of the District, where possible. Thus the wasteload allocations (WLAs) in the TMDL[41] are based, in part, on the expectation that all development in the District will be subject to these standards.

EPA notes that all federal facilities still must comply with the EISA requirements. The District will track the performance of federal development projects subject to the District's stormwater regulations, and therefore document those achieving better than 1.2" onsite retention. However, the District cannot, nor should they be expected to, enforce the EISA requirements.

EPA dropped the option for determination of the predevelopment runoff conditions based on a full hydrologic and hydraulic analysis of the site. EISA guidance had provided this option to federal facilities and EPA did not want to provide an *a priori* limitation to federal projects in the Draft Permit, but rather provide the District with the flexibility to include it if they determined it to be administratively feasible. However, since the Final Permit no longer includes an additional requirement for federal facilities, this provision is no longer necessary to provide federal facilities options consistent with EISA. With respect to non-federal facilities, in the seventeen months since the Draft Permit was proposed the District has continued with the process of finalizing their stormwater regulations, and has determined that inclusion of this option is not necessary or reasonable, and EPA concurs.

Several commenters raised the issue of costs associated with implementation of the performance standard. EPA has responded by noting that there are many locations where this stormwater management framework has already been implemented (*see* footnote 22), and also where costs have been well documented to be competitive or instances where infrastructure costs were less expensive because of avoided costs, *e.g.*, reduced infrastructure, narrower roads and otherwise fewer impervious surfaces, reduced or eliminated curbs and gutters, no or fewer buried storm sewers. In addition, where cost-benefit analyses have been conducted, green infrastructure practices are even more cost effective because of the wide array of additional benefits[42] that do not accrue when traditional stormwater management practices are used.[43,44,45,46,47,48,49,50,51,52,53,54]

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40 District of Columbia Department of Environment, *Chesapeake Bay TMDL Watershed Implementation Plan* (2010) http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Coluimbia_WIP_Bay_TMDL.pdf

41 EPA, *Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment* (2010) http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html

42 EPA, Managing Wet Weather with Green Infrastructure website, Benefits: (http://cfpub2.epa.gov/npdes/home.cfm?program_id=298)

43 LimnoTech, *Analysis of the Pollution Reduction Potential of DC Stormwater Standards* (2009)

44 EPA, *Reducing Stormwater Costs through Low Impact Development Strategies and Practices* (2007)

Several commenters took issue with the inclusion of any numeric performance standard for discharges from development. As discussed above EPA believes that stormwater discharge permits should include clear and enforceable standards, and where feasible, numeric limits are preferred. As discussed above, for the purpose of requiring the permittee to ensure adequate management of discharges from development, a numeric performance standard is a proven means of establishing a clear and enforceable requirement. EPA recognizes that there will be development projects that may not be able to meet the performance standard on site because of site conditions or site activities that preclude the use of extensive green infrastructure practices. Thus as proposed in the Draft Permit, the Final Permit requires the District to develop an alternative means of compliance for development projects under these circumstances (*see* discussion of Section 4.1.3 Off-Site Mitigation and/or Fee-in-Lieu for all Facilities).

In July 2010 EPA Region III issued *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed*.[55] This document provides direction to all NPDES permitting authorities in the Region and establishes expectations for the next generation of MS4 permits. Based on many of the reasons already articulated in this Final Fact Sheet, EPA directed states to incorporate performance-based standards into permits and regulations with the objective of maintaining or restoring a pre-development hydrologic site condition for newly developed and redeveloped sites. In fact most states with authorized NPDES permit programs in the Chesapeake

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http://www.epa.gov/owow/NPS/lid/costs07/

45 Report to Natural Resources Defense Council and Waterkeeper Alliance, *Economic Costs, Benefits and Achievability of Stormwater Regulations for Construction and Development Activities* (2008)

46 Meliora Environmental Design LLC, *Comparison of Environmental Site Design for Stormwater Management for Three Redevelopment Sites in Maryland* (2008)

47 City of Portland Environmental Services, *Cost-Benefit Evaluation of Ecoroofs* (2008) http://www.portlandonline.com/bes/index.cfm?a=261053&c=50818

48 Natural Resources Defense Council, *Rooftops to Rivers, Green Strategies for Controlling Stormwater and Combined Sewer Overflows* (2006) http://www.nrdc.org/water/pollution/rooftops/rooftops.pdf

49 Riverkeeper, *Sustainable Raindrops* (2006) http://www.riverkeeper.org/wp-content/uploads/2009/06/Sustainable-Raindrops-Report-1-8-08.pdf

50 City of Philadelphia Water Department, *A Triple Bottom Line Assessment of Traditional and Green Infrastructure Options for Controlling CSO Events in Philadelphia's Watersheds* (2009) http://www.epa.gov/npdes/pubs/gi_phil_bottomline.pdf

51 Richard R. Horner, *Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices for Ventura County,* and *Initial Investigation of the Feasibility and Benefits of Low-Impact Site Development Practices for the San Francisco Bay Area,* and *Supplementary Investigation of the Feasibility and Benefits of Low-Impact Site Development Practices for the San Francisco Bay Area,* (2007) http://docs.nrdc.org/water/files/wat_09081001b.pdf

52 J. Hathaway and W.F. Hunt. *Stormwater BMP Costs*. (2007) www.bae.ncsu.edu/stormwater/PublicationFiles/DSWC.BMPcosts.2007.pdf.

53 Center for Neighborhood Technology and American Rivers, *The Value of Green Infrastructure: A Guide to Recognizing Its Economic, Environmental and Social Benefits* (2010) http://www.cnt.org/repository/gi-values-guide.pdf

54 J. Gunderson, R. Roseen, T. Janeski, J. Houle, M. Simpson. *Cost-Effective LID in Commercial and Residential Development* (2011) Stormwater http://www.stormh2o.com/march-april-2011/costeffective-lid-development-1.aspx

55 EPA, *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed* (2010) http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/MS4GuideR3final07_29_10.pdf

Bay Watershed have incorporated numeric on-site retention standards into final or draft regulations or permits.

In addition, this provision is consistent with the 2008 Modified Letter of Agreement to the 2004 Permit[56] in which the District committed to promulgate stormwater regulations that implement "Low Impact Development", *i.e.*, measures that infiltrate, evapotranspire and harvest stormwater.

(4.1.2 Code and Policy Consistency, Site Plan Review, Verification and Tracking): In Region III's *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed*, EPA emphasized the importance of establishing accountability measures around performance measures. The best standards will not provide the necessary environmental outcomes if they are not properly implemented, and the only way to ensure proper implementation is to ensure that stormwater control measures are properly designed and installed.

Today's Final Permit requires the District to ensure that all codes and policies are consistent with the standards in the Final Permit, and to establish and maintain adequate site plan review procedures, and a post-construction verification process (such as inspections or submittal of as-builts) to ensure that controls are properly installed.

Ensuring that local codes, ordinances and other policies are consistent with the requirements of the permit is critical element of success. A number local governments attempting to implement green infrastructure measures have found their own local policies to be one of the most significant barriers[57], *e.g.*, parking codes that require over-sized parking lots, plumbing codes that don't allow rainwater harvesting for indoor uses, or street design standards that prohibit the use of porous/pervious surfaces. EPA has published a document, the *Water Quality Scorecard*, to assist local governments in understanding and identifying these local policy barriers and also provides options for eliminating them.[58] EPA is not requiring the District to use the *Scorecard* or any other specific method, but recommends a systematic assessment of local policies in the context of the requirements of the Final Permit in order to comply with the provisions of this Section.

EPA and others have long recognized the importance of site plan review in ensuring that development projects are designed according to standards and regulations, and a verification process following construction that projects were constructed as designed and approved.[59,60,61,62]

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56 District Department of Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

57 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

58 EPA, *Water Quality Scorecard, Incorporating Green Infrastructure Practices and the Municipal, Neighborhood and Site Scales* (2009) http://www.epa.gov/smartgrowth/pdf/2009_1208_wq_scorecard.pdf

59 EPA, *Post-Construction Plan Review*, Menu of BMPs http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=factsheet_results&view=specific&bmp=123

Most local governments, including the District, already have some form of site plan review and post-construction verification process for development projects. Today's Final Permit includes them as critical accountability elements of the District stormwater program.

In addition, today's Final Permit requires the District to track volume reductions from all projects. This is a critical element of determining whether wasteload allocations are being achieved.

One commenter noted that EPA had not imposed a clear compliance schedule for this requirement. The Final Permit includes a deadline of the end of the permit term for full compliance with this requirement, acknowledging that updating codes, ordinances and other policies may be a time-consuming process that typically requires consultation and support from elected officials, coordination amongst multiple departments and agencies, e.g., the Office of Planning, the Department of Transportation and the Department of the Environment, as well as public involvement.

(4.1.3 Off-Site Mitigation and/or Fee-in Lieu for all Facilities): Today's Final Permit requires the District to establish a program for Off-site Mitigation and/or Fee-In-Lieu within 18 months of the effective date of the Final Permit. The Final Permit provides the District flexibility to develop a program with either one of those elements or both. Specifically the Permit states:

The program shall include at a minimum:

1) Establishment of baseline requirements for on-site retention and for mitigation projects. On-site volume plus off-site volume (or fee-in-lieu equivalent or other relevant credits) must equal no less than the relevant volume in Section 4.1.1;
2) Specific criteria for determining when compliance with the baseline requirement for on-site retention cannot technically be met based on physical site constraints, or a rationale for why this is not necessary;
3) For a fee-in-lieu program, establishment of a system or process to assign monetary values at least equivalent to the cost of implementation of controls to account for the difference in the performance standard, and the alternative reduced value calculated; and
4) The necessary tracking and accounting systems to implement this section, including policies and mechanisms to ensure and verify that the required stormwater practices on the original site and appropriate required off-site practices stay in place and are adequately maintained.

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60 Center for Watershed Protection, *Managing Stormwater in Your Community, A Guide for Building an Effective Post-Construction Program* (2008) http://www.cwp.org/documents/cat_view/76-stormwater-management-publications/90-managing-stormwater-in-your-community-a-guide-for-building-an-effective-post-construction-program.html

61 EPA, *MS4 Permit Improvement Guide* (2010) http://www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf

62 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

This provision is included in today's Final Permit in acknowledgement that meeting the performance standard in 4.1.1 may be challenging in some situations. The NRC Report noted that an offset system is critical to situations when on-site stormwater control measures are not feasible.[63] In cases where a full complement of onsite controls is not feasible, offsite practices should be employed that result in net improvements to watershed function and water quality at the watershed scale. The *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed* contemplates offsets in MS4 programs.[64] EPA has also articulated expectations in the Chesapeake Bay TMDL that it expects the Bay jurisdictions to account for growth via offset programs that are consistent with Section 10 and Appendix S of the Chesapeake Bay TMDL.[65]

EPA received numerous comments on this provision. No commenter was opposed to an offset program *per se*, but there were various opinions on how it should function. Because there was so much general interest in how this program would be shaped, EPA is responding to these comments by requiring the program be subject to public notice followed by submittal to and review by EPA. EPA believes this provides all of those with an interest in this program the opportunity to provide meaningful input. EPA will also review the program to ensure that it has adequate tracking and enforceability components, and meets the water quality objectives of the Final Permit. It is EPA's expectation that these mechanisms will be described by the permittee in the proposed implementation scheme. EPA emphasizes that accountability measures (*e.g.*, inspections, maintenance, tracking) will be critical to ensure the success of the program, and therefore the District's plan will be closely scrutinized for those measures prior to implementation.

The Final Permit includes an option for the District to include incentives for other environmental objectives, e.g., carbon sequestration, in the offset program. As noted, because of the wide array of opinions EPA feels that consideration of some of these other environmental objectives deserve a full vetting by the community. The District is not required to include any incentives or credits along these lines in the program. If it chooses to do so, anything implemented to achieve those other environmental objectives must be subject to the same level of site plan review, inspection, and operation and maintenance requirements as stormwater controls implemented in fulfillment of other permit requirements.

Finally, for the duration of this permit term, the Final Permit exempts District owned and operated transportation rights-of-way projects from the requirement to mitigate stormwater off-site or pay into a fee-in-lieu program for development projects where the on-site performance standard cannot be met. This decision was based on the District request for short-term relief while the District Department of Transportation develops new stormwater management design, construction, and operation and maintenance processes, protocols, requirements and

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63 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

64 EPA, *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed* (2010) http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/MS4GuideR3final07_29_10.pdf

65 EPA, *Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment* (2010) http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html

specifications for transportation systems and public rights of way. EPA notes that this exemption does not apply to other District owned projects.

(4.1.4 Green Landscaping Incentives Program): Green infrastructure regulatory and incentive programs are becoming common across the country.[66,67] Landscaping requirements that provide flexibility and a suite of options from which to select appropriate green infrastructure practices and systems, e.g. Seattle's Green Factor[68], have proven to be quite popular with developers, land owners and municipal officials.

The green landscaping provision is consistent with the 2008 Modified Letter of Agreement to the 2004 Permit[69] that articulated a long list of specific green infrastructure measures to be implemented, coupled with the commitment by the District to develop green infrastructure policies and incentives. Because these green landscaping provisions fill an important gap in the District's suite of green infrastructure-related policies, EPA specifically identified landscaping as an important area for development of incentives.

Other than general support EPA received little comment on this provision, thus the Final Permit has not been modified from the Draft Permit.

(4.1.5 Retrofit Program for Existing Discharges): Changes in land cover that occurred when urban and urbanizing areas were developed have changed both the hydrology and pollutant loadings to receiving waters and have led to water quality problems and stream degradation. In order to protect and restore receiving waters in and around the District stormwater volume and pollutant loadings from sites with existing development must be reduced. Due to historical development practices, most of these areas were developed without adequate stormwater pollutant reduction or water quality-related controls. To compensate for the lack of adequate stormwater discharge controls in these areas, EPA is requiring the District to include retrofit elements in the stormwater management program.[70,71,72]

EPA has acknowledged the importance of including retrofit requirements in MS4 permits.[73,74] The Chesapeake Bay TMDL allocations are founded on the expectation of

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66 EPA, *Green Infrastructure Incentive Mechanisms*, Green Infrastructure Municipal Handbook Series, (2009) http://www.epa.gov/npdes/pubs/gi_munichandbook_incentives.pdf

67 EPA, *Green Infrastructure Case Studies: Municipal Policies for Managing Stormwater with Green Infrastructure* (2010) http://www.epa.gov/owow/NPS/lid/gi_case_studies_2010.pdf

68 City of Seattle, *Seattle Green Factor*, http://www.seattle.gov/dpd/Permits/GreenFactor/Overview/

69 District Department of Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

70 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

71 Schueler, Thomas. *Urban Subwatershed Restoration Manual No. 1: An Integrated Framework to Restore Small Urban Watersheds* (2005)

72 EPA, *Green Infrastructure Retrofit Policies*, Managing Wet Weather with Green Infrastructure Municipal Handbook Series (2008) http://www.epa.gov/npdes/pubs/gi_munichandbook_retrofits.pdf

73 EPA, *MS4 Permit Improvement Guide* (2010) EPA 833-R-10-001,

stormwater retrofits in the District (*see* Section 8 of the TMDL[75]), based on actions outlined in the District's final Phase I WIP developed for the Chesapeake Bay TMDL.[76]

EPA received quite a few comments on this set of requirements. Some commenters strongly approved of the retrofit provisions in the Draft Permit, while others expressed concerns.

Today's Final Permit requires the District to develop performance metrics for retrofits, using the performance standard in Section 4.1.1 as the starting point, *i.e.*, if projects can meet the environmental objectives specified in Part 4.1.1 they should. However, understanding the challenges associated with retrofitting some sites, the Final Permit allows that the performance metrics for retrofit projects may vary from the performance standard in 4.1.1, *e.g.*, different requirements may apply to differing sets of circumstances, site conditions or types of projects. EPA believes the most important first step in a robust retrofit program is to set stringent environmental objectives, thus the requirement to develop clear and specific performance standards. EPA fully expects the District to utilize this permit term to develop design, construction and operation and maintenance protocols to meet the requisite performance standards.

Several modifications were made to this provision:

1) Because there was so much interest in this provision EPA added a requirement for public notice.
2) Because there were so many opinions on how this program should function, EPA removed some of the criteria in the Final Permit to allow the community to shape the program. In exchange EPA included a requirement that the relevant performance metrics be submitted to EPA for review and approval.
3) The compliance schedule for development, public notice and submittal to EPA of performance metrics for a retrofit program has been extended from one year to 18 months at the request of the District. EPA believes the additional time will allow better coordination of the offset program with the District's stormwater regulations (also with an 18 month compliance schedule), and allow adequate time for a public notice process and an EPA review.

Also included in the permit is a requirement that the District must work with federal agencies to document federal commitments to retrofitting their properties. Consistent with Executive Order 13508 on the Chesapeake Bay, the federal strategies developed pursuant thereto, and in fulfillment of the Chesapeake Bay TMDL, federal agencies have obligations to

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http://www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf

74 EPA, *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed* (2010) http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/MS4GuideR3final07_29_10.pdf

75 EPA, *Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment* (2010) http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html

76 District of Columbia Department of Environment, *Chesapeake Bay TMDL Watershed Implementation Plan* (2010) http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Coluimbia_WIP_Bay_TMDL.pdf

implement substantive stormwater controls. In order to accurately account for loads from federal lands that discharge through the District MS4 system, the District needs to be able to track the pollutant reductions resulting from federal actions. To do so the District will need to identify federal facilities and properties and work with federal agencies to identify retrofit opportunities on federal lands and properties and track progress in retrofitting these lands and properties.

In addition, the Final Permit requires the District to make pollutant load and volume reduction estimates for all retrofit projects for the nine pollutants in Table 4, and by each of the major District watersheds (Anacostia River, Rock Creek, Potomac River).

The Final Permit requires the District to implement retrofits to manage runoff from 18,000,000 square feet of impervious surfaces during the permit term. Of that total, 1,500,000 square feet must be in transportation rights-of-way. Although these initial drainage area objectives are not especially aggressive, EPA believes that a strong foundation for the retrofitting program must first be established. EPA can then set more aggressive drainage area objectives in subsequent permits. In its comments on the Draft Permit the District contended that the requirement in the Draft Permit for the retrofitting of 3,600,000 square feet of impervious surfaces in transportation rights-of-way was more than it could accomplish in a single permit term. The District suggested 1,500,000 square feet, almost 60% less than what was required in the Draft Permit would be achievable. In consideration of these comments, the total square footage of retrofitted impervious surfaces that must be in transportation rights-of-way is 1,500,000 square feet. EPA notes that the total square footage retrofit requirement is unchanged. EPA believes that this requirement will establish a strong foundation for the implementing a retrofitting program overall and in transportation rights-of-way, which can be followed in subsequent permits with more aggressive drainage area objectives. In addition, the Final Permit includes an additional provision that is intended to enhance the District's retrofit opportunities (*see* next paragraph).

The Final Permit establishes a requirement for the District to adopt and implement stormwater retention requirements for properties where less than 5,000 square feet of soil is being disturbed but where the buildings or structures have a footprint that is greater than or equal to 5,000 square feet and are undergoing substantial improvement. Substantial improvement, as consistent with District regulations at 12J DCMR § 202, is any repair, alteration, addition, or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. Although this specific element was not included in the Draft Permit, it reflects the fact that the District has already considered this provision in their proposed stormwater regulations, and is consistent with the overall retrofit approach in the Draft Permit. Both the District and EPA believe this will promote retrofitting on smaller sites that would not otherwise be subject to the performance standard in the stormwater regulations.

This section of the Final Permit also requires the District to ensure that every major renovation/ rehabilitation project for District-owned properties within the inventory of Department of Real Estate Services (DRES) and Office of Public Education Facilities Modernization (OPEFM) includes on-site retention measures to manage stormwater. This

requirement is based in part on EPA's understanding that these two agencies have control over most District buildings and renovation projects in the District. This provision was in Section 4.2 Operation and Maintenance of Stormwater Capture Practices of the Draft Permit, and was moved to Section 4.1.5 of the Final Permit since it is a retrofit requirement rather than a maintenance requirement.

(4.1.6 Tree Canopy): Several studies have documented the capacity for planting additional trees in the District and quantified the benefits.[77,78,79,80] The District commitments to the tree planting requirements of the Final Permit are documented in the 2008 Modified Letter of Agreement to the 2004 Permit,[81] and the District's Chesapeake Bay TMDL WIP.[82] The number was derived from the District Urban Tree Canopy Goal[83] of planting 216,300 trees over the next 25 years, an average of 8,600 trees per year District-wide. Adjusting this number for the MS4 area of the District, the Final Permit requires the District to develop a strategy to plant new trees at a rate of at least 4,150 annually.

There was some interest from commenters in providing input to the tree canopy strategy, thus the Final Permit includes a requirement for the District to public notice this strategy. Also, in response to several comments, EPA has clarified the annual number as a net increase in order to account for mortality.

(4.1.7 Green Roof Projects): Quite a few studies have documented the water quality benefits of green roofs.[84,85,86] The Green Build-out Model, a project specifically carried out to

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77 Casey Trees, *The Green Build-out Model: Quantifying the Stormwater Management Benefits of Trees and Green Roofs in Washington, DC* (2007) (http://www.caseytrees.org/planning/greener-development/gbo/index.php).

78 University of Vermont and the U.S. Forest Service, A Report on Washington D.C.'s Existing and Potential Tree Canopy (2009) http://www.caseytrees.org/geographic/key-findings-data-resources/urban-tree-canopy-goals/documents/UnivofVermontUTCReport4-17-09.pdf

79 Casey Trees, et al. *See* several District tree inventories: http://www.caseytrees.org/geographic/tree-inventory/community/index.php

80 Casey Trees, *The Green Build-out Model: Quantifying the Stormwater Management Benefits of Trees and Green Roofs in Washington, D.C.* (2007) http://www.caseytrees.org/planning/greener-development/gbo/documents/GBO_Model_Full_Report_20051607.pdf

81 District Department of Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

82 District of Columbia Department of Environment, *Chesapeake Bay TMDL Watershed Implementation Plan* (2010) http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Coluimbia_WIP_Bay_TMDL.pdf

83 Casey Trees, Urban Tree Canopy Goal website: http://www.caseytrees.org/geographic/key-findings-data-resources/urban-tree-canopy-goals/index.php

84 EPA, *Green Roofs for Stormwater Runoff Control* (2009) http://www.epa.gov/nrmrl/pubs/600r09026/600r09026.pdf

85 E. Oberndorfer et al, *Green Roofs as Urban Ecosystems: Ecological Structures, Functions, and Services* (2007) BioScience 57(10):823-833 http://www.bioone.org/doi/full/10.1641/B571005

86 M. Hathaway, W.F. Hunt, G.D. Jennings, *A Field Study of Green Roof Hydrologic and Water Quality Performance* (2008) Transactions of American Society of Agricultural and Biological Engineers, Vol. 51(1): 37-44 http://www.bae.ncsu.edu/people/faculty/jennings/Publications/ASABE%20Hathaway%20Hunt%20Jennings.pdf

evaluate the potential in the District for using green roofs and other green infrastructure measures to reduce flows and pollutants from the District's wet weather systems, documented significant opportunities for green roof implementation.[87]

The District commitments to green roof implementation are documented in the 2008 Modified Letter of Agreement to the 2004 Permit,[88] and the District Chesapeake Bay TMDL Watershed Implementation Plan.[89] The District is required to evaluate the feasibility of installing green roofs on District-owned buildings, and to install at least 350,000 square feet of green roof during the permit term.

(4.2 Operation and Maintenance of Retention Practices): Operation and maintenance, required pursuant to 40 C.F.R. 122.26(d)(2)(iv)(A)(*1*) and (*3*), is critical for the continued performance of stormwater control measures.[90,91] EPA has consistently noted the importance of operation and maintenance in regulatory guidance.[92,93,94] Today's Final Permit requires the District to ensure adequate maintenance of all stormwater control measures, both publicly and privately owned and operated.

The District has two years from the effective date of the Final Permit to develop and implement operation and maintenance protocols for all District owned and operated stormwater management practices. The District is also required to provide regular and ongoing training to all relevant contractors and employees.

The District is required to develop operation and maintenance mechanisms to ensure that stormwater practices are maintained and operated to meet the objectives of the program and that they continue to function over multiple permit cycles to provide the water quality benefits intended by design. Such mechanisms may include deed restrictions, ordinances and/or maintenance agreements to ensure that all non-District owned and operated stormwater control measures are adequately maintained. In addition the District must develop and/or refine

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87 Casey Trees, *The Green Build-out Model: Quantifying the Stormwater Management Benefits of Trees and Green Roofs in Washington, D.C.* (2007) http://www.caseytrees.org/planning/greener-development/gbo/documents/GBO_Model_Full_Report_20051607.pdf

88 District Department of Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

89 District of Columbia Department of Environment, *Chesapeake Bay TMDL Watershed Implementation Plan* (2010) http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Coluimbia_WIP_Bay_TMDL.pdf

90 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

91 EPA Website: Stormwater Control Operation and Maintenance. http://www.epa.gov/owow/NPS/ordinance/stormwater.htm

92 EPA, *MS4 Permit Improvement Guide* (2010) EPA 833-R-10-001, http://www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf

93 EPA, *MS4 Program Evaluation Guidance* (2007) EPA-833-R-07-003, http://www.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf

94 EPA, *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed,* (2010) http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/MS4GuideR3final07_29_10.pdf

verification mechanisms, such as inspections, and an electronic inventory system to ensure the long-term integrity of stormwater controls in the District.

In addition the District is required to develop a Stormwater Management Guidebook and associated training within eighteen months of the effective date of the Final Permit. This requirement is based on commitments in the 2008 Modified Letter of Agreement to the 2004 Permit[95]. Completion of the Guidebook has been delayed pending finalization of the District's revised stormwater regulations. However EPA expects Guidebook completion to parallel finalization of the District's revised stormwater regulations, which incorporate the standards and requirements of the Final Permit.

(4.3 Management of District Government Areas): Requirements in this section of the Final Permit largely continue provisions in the 2004 Permit. EPA received few comments on most elements of this section of the Draft Permit. The following revisions were made:

1) The District now must notify not only public health agencies within 24-hours in the event of a sanitary sewer overflow, but also ensure adequate public notification procedures within that same time period (Section 4.3.1 of the Final Permit). EPA emphasizes that this provision in no way authorizes sanitary sewer overflow discharges either directly or via the MS4. Those discharges are expressly prohibited.
2) Within 18 months of the effective date of the Final Permit, the District shall complete, public notice and submit to EPA for review and approval a plan for optimal catch basin inspections, cleaning and repairs. The District shall fully implement the plan upon EPA approval. This revision is based on comments that the catch basin maintenance provisions on the Draft Permit were vague and not within the context of a comprehensive plan (Section 4.3.5.1 of the Final Permit).
3) Section 3.2 of the Draft Permit required the District to update its outfall inventory. One commenter noted that the District's 2006 Outfall Survey had already essentially accomplished this, and that meanwhile many of these outfalls were in severe disrepair, thus contributing to increased sediment loading to receiving waters. EPA agrees this is a serious concern, and has thus modified the Final Permit to require the District to undertake the following: within 18 months of the effective date of the Final Permit, and consistent with the 2006 Outfall Survey, the District shall complete, public notice and submit to EPA for review and approval an outfall repair schedule to ensure that approximately 10% of all outfalls needing repair are repaired annually, with the overall objective of having all outfalls in good repair by 2022 (Section 4.3.5.3 of the Final Permit).
4) Consistent with the District's *Enhanced Street Sweeping and Fine Particle Removal Strategy*,[96] an additional element has been included in Table 3, Street Sweeping. The

95 District Department of Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

96 District Department of the Environment, *Municipal Separate Storm Sewer System Program Annual Report* (2010)

table now documents that environmental hotspots in the Anacostia River Watershed will now be swept at least two times per month from March through October.

(4.6 Management of Construction Activities): Requirements in this Section of the Final Permit largely continue provisions in the 2004 Permit. Several commenters suggested that these provisions needed to be significantly improved, including specifying more stringent effluent limitations, in order to address the impairments attributable to sediment.

While permitting authorities have a fair amount of latitude to modify many elements of a permit based on public comments, inclusion of a *de novo* numeric effluent limitation, when neither the Draft Permit nor the Draft Fact Sheet suggested such an option would require further public notice. Therefore, this Final Permit does not include a numeric effluent limitation for sediment discharged in stormwater from active construction sites.

However, EPA agrees that construction activities cause serious water quality problems, and has revised this section to require more robust oversight of construction stormwater controls. A significant cause of water quality problems caused by construction activities is the failure of construction site operators to comply with existing regulations. Thus, EPA expects increased inspections and enforcement activity to result in improved compliance and therefore reduced sediment loads.[97] Therefore the Final Permit includes construction site inspection frequency requirements to ensure compliance with the District erosion and sediment requirements.

(4.8 Flood Control Projects): Requirements in this Section of the Final Permit largely continue provisions in the 2004 Permit. EPA received few comments on this section. The following revision was made: a start date of six months after the effective date of the Final Permit was added for the requirement to collect data on the percentage of impervious surface area located in flood plain boundaries for all proposed development.

(4.10 Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA) Planning and Implementation): There are several TMDLs with wasteload allocations that either directly or indirectly affect the District's MS4 discharges. The following are those that EPA has determined to be relevant for purposes of implementation via the Final Permit:

1. TMDL for Biochemical Oxygen Demand (BOD) in the Upper and Lower Anacostia River (2001)
2. TMDL for Total Suspended Solids (TSS) in the Upper and Lower Anacostia River (2002)
3. TMDL for Fecal Coliform Bacteria in the Upper and Lower Anacostia River (2003)
4. TMDL for Organics and Metals in the Anacostia River and Tributaries (2003)
5. TMDL for Fecal Coliform Bacteria in Kingman Lake (2003)
6. TMDL for Total Suspended Solids, Oil and Grease and Biochemical Oxygen Demand in Kingman Lake (2003)

97 EPA, *Office of Enforcement and Compliance Assurance Accomplishments Report* (2008) http://www.epa.gov/compliance/resources/reports/accomplishments/oeca/fy08accomplishment.pdf

7. TMDL for Fecal Coliform Bacteria in Rock Creek (2004)
8. TMDL for Organics and Metals in the Tributaries to Rock Creek (2004)
9. TMDL for Fecal Coliform Bacteria in the Upper, Middle and Lower Potomac River and Tributaries (2004)
10. TMDL for Organics, Metals and Bacteria in Oxon Run (2004)
11. TMDL for Organics in the Tidal Basin and Washington Ship Channel (2004)
12. TMDL for Sediment/Total Suspended Solids for the Anacostia River Basin in Maryland and the District (2007) [pending resolution of court vacature, Anacostia Riverkeeper, Inc. v. Jackson, No. 09-cv-97 (RCL)]
13. TMDL for PCBs for Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland and Virginia (2007)
14. TMDL for Nutrients/Biochemical Oxygen Demand for the Anacostia River Basin in Maryland and the District (2008)
15. TMDL for Trash for the Anacostia River Watershed, Montgomery and Prince George's Counties, Maryland and the District of Columbia (2010)
16. TMDL for Nitrogen, Phosphorus and Sediment for the Chesapeake Bay Watershed (2010)

On July 25, 2011, in connection with a challenge by the Anacostia Riverkeeper and other environmental organizations, the U.S. District Court for the District of Columbia vacated EPA's approval of a total maximum daily load (TMDL) for sediment in the Anacostia River. While the court ruled in EPA's favor on a number of issues of significant importance to the TMDL program and that the TMDL adequately would achieve the designated aquatic life use, the court held that EPA's decision record did not adequately support EPA's determination that the TMDL would lead to river conditions that would support the primary (swimming) and secondary (boating) contact recreation and aesthetic designated uses. Based on its holding regarding the recreational and aesthetic uses, the court vacated the TMDL, but stayed its vacatur for one year to give EPA sufficient time to address the court's concerns. This TMDL is included in the above list (#12), because EPA expects this vacatur to be resolved within the time frame for TMDL efforts outlined in this permit. However, District planning and implementation efforts on this TMDL are not required until such time as the legal challenge is resolved and the TMDL is established.

Most EPA developed TMDLs for the District, as well as all District developed and EPA approved TMDLs can be found at the following website: http://www.epa.gov/reg3wapd/tmdl/dc_tmdl/index.htm.

The Chesapeake Bay TMDL for nitrogen, phosphorus and sediment is available at: http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html.

The District also has a number of TMDL-related documents on its website: http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,495456.asp.

In addition, the tidal Anacostia River is listed as impaired for TSS and BOD, and the Upper Potomac River is listed as impaired for pH. TMDL establishment by EPA is pending for both.

As part of permit reissuance EPA has reviewed several existing TMDL implementation plans, including those for the Potomac River, Anacostia River and Rock Creek. EPA has identified the relevant implementation actions from those Plans and included them as requirements of the Final Permit, *e.g.*, green roofs, tree plantings. This approach provides more clarity for the District and the general public, and is also consistent with the obligation of NPDES permit writers to articulate enforceable provisions in permits to implement TMDL WLAs.

EPA took the same approach with the Anacostia River Watershed Trash TMDL[98] (Trash TMDL) (Part 4.10.1 of the Final Permit), which was finalized in September 2010. This TMDL was well-developed with quantifiable information about the sources and causes of impairment. The Trash TMDL assigned a specific WLA to MS4 discharges: removal of 103,188 pounds of trash annually. The Final Permit requires the District to attain this WLA as a specific single-year measure by the fifth year of this permit term. The Final Permit provision is based on the annual trash WLA for the District MS4. In the TMDL, annual WLAs were divided by 365 days to obtain daily WLAs. Given the fact that the daily and annual WLAs are congruent with each other, use of the annual WLA as the permit metric is consistent with the assumptions and requirements of the TMDL and is a more feasible measure for monitoring purposes.

Because the Anacostia River Watershed Trash TMDL provided a solid foundation for action, EPA determined the implementation requirements and included them in the Final Permit rather than require the District to develop a separate implementation plan. The Permit requires the District to determine a method for estimating trash reductions and submit that to EPA for review and approval within one year of the effective date of the Final Permit. In addition, the District must annually report the trash prevention/removal approaches utilized, and the overall total weight (in pounds) of trash captured for each type of approach.

On December 29, 2010, the U.S. Environmental Protection Agency established the Chesapeake Bay TMDL[99] to restore clean water in the Chesapeake Bay Watershed. The TMDL identifies the necessary reductions of nitrogen, phosphorus and sediment from Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia that, when attained, will allow the Bay to meet applicable water quality standards. EPA based the TMDL allocations, where possible, on information provided by the Bay jurisdictions in their final Phase I WIPs. The TMDL requires the Bay jurisdictions to have in place by 2017 the necessary controls to attain 60% of the reductions called for in the TMDL, and to have all controls in place by 2025. EPA has committed to hold jurisdictions accountable for results along the way, including ensuring that NPDES permits contain provisions and limits that are consistent with the assumptions and requirements of the relevant WLAs.

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98 Maryland Department of the Environment and District of Columbia Department of Environment, *Total Maximum Daily Loads of Trash for the Anacostia River Watershed, Montgomery and Prince George's Counties, Maryland and the District of Columbia* (2010) http://www.epa.gov/reg3wapd/pdf/AnacostiaTMDLPortfolio.pdf

99 EPA, *Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment* (2010) http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html

The District's final Phase I Chesapeake Bay WIP proposed very aggressive targets for pollutant reductions in its MS4 program.

Pollutant of Concern	% Reductions in Urban Runoff Loads by 2025 from 2009 Baseline	Reductions in Urban Runoff Loads by 2025 from 2009 Baseline
Total Nitrogen	17	29,310 lbs/yr
Total Phosphorus	33	7,740 lbs/yr
Sediment	35	2,192 tons/yr

These numbers are from the District's final input deck to the Chesapeake Bay Model in association with the final Phase I WIP.

The Final Permit requires a very robust set of measures, based on a determination that these measures are necessary to ultimately achieve the specified reductions. EPA took a similar approach with the Chesapeake Bay TMDL as it did with the aforementioned TMDLs, and incorporated specific implementation measures into the Final Permit. Although EPA did not finalize the Chesapeake Bay TMDL until December 2010, EPA had a reasonably clear understanding of what would be needed even prior to publishing the Draft Permit because of the significant amount of data, modeling output and other information available in advance of its finalization, as well as many months of ongoing discussions with the District about the elements of its final Phase I WIP.[100] Based on the final TMDL , EPA is assured that the Final Permit is consistent with the assumptions and requirements of the WLAs in the TMDL.

In partial fulfillment of attaining the Chesapeake Bay WLAs, the Final Permit contains: a new performance standard for development, a requirement for an offset program for development, numeric requirements for tree plantings and green roof installation, numeric requirements for retrofits, and a variety of other actions. The relevant sections of this Final Fact Sheet discuss those provisions more fully.

There will be two additional permit terms prior to 2025 during which the District will implement many additional and/or more robust measures to attain its Bay TMDL WLAs. Provisions, targets and numeric thresholds in this Final Permit are not necessarily the ones that will be included in subsequent permits. EPA believes, however, that the 2011 Final Permit sets the foundation for a number of actions and policies upon which those future actions will be based.

Section 4.10.2 of the Final Permit requires the District to implement and complete the proposed replacement/rehabilitation, inspection and enforcement, and public education aspects of the strategy for Hickey Run to satisfy the applicable oil and grease TMDL wasteload allocations. In addition, the District is required to install end-of-pipe management practices at four identified outfalls to address oil and grease and trash in Hickey Run no later than the end of this permit term. Implementation requirements to attain these WLAs were initiated during prior

100 District of Columbia Department of Environment, *Chesapeake Bay TMDL Watershed Implementation Plan* (2010) http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Coluimbia_WIP_Bay_TMDL.pdf

permit terms. The requirements of today's Final Permit are intended to bring the District to the concluding stages of attaining the Hickey Run oil and grease and trash WLAs.

The 2003 District of Columbia TMDL for oil and grease in the Anacostia River noted that the waterbody was no longer impaired by oil and grease. In particular data from Hickey Run, which provided the basis for listing the Anacostia River as an impaired water body, had demonstrated consistent compliance with applicable water quality standards for oil and grease: for twenty-one samples taken in Hickey Run between January and December 2002, no values exceeded the 10mg/L standard, and only one sample exceeded a 5 mg/L detection limit value. The 2003 TMDL further concluded that on-going implementation activities, which included public education and automobile shop enforcement actions, caused a significant decrease in ambient pollutant concentrations.[101] The Final Permit includes a provision for additional controls on oil and grease in Hickey Run should monitoring during this permit term indicate it is necessary. However, per the demonstration noted above, EPA believes it likely this may not be necessary.

One commenter indicated that the shift from an aggregate numeric effluent limit for four outfalls into Hickey Run in the 2004 permit to a management practice-based approach in the Draft Permit violated the Clean Water Act's prohibition against backsliding, section 402(o)(1) of the CWA, 33 U.S.C. § 1342(o)(1) ("[A] Permit may not be renewed, reissued, or modified … subsequent to the original issuance of such Permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous Permit"). In response, EPA notes that a non-numeric effluent limitation is not automatically less stringent than a numeric effluent limitation. A different (numeric or non-numeric) effluent limitation only violates the anti-backsliding prohibition if it can be fairly compared to the prior numeric limit and found to be less stringent than that requirement. *See e.g., Communities for a Better Environment v. State Water Resources Control Bd.*, 132 Cal. App. 4th 1313 (August 29, 2005) (finding that no backsliding had occurred where the effluent limit in existing permit was not "comparable" to WQBEL in previous permit). In this case EPA 1) notes that additional controls on oil and grease may not be needed (as explained above), and 2) has determined regardless that compliance with the performance standards in the Final Permit will result in improved water quality protections for the District MS4 receiving streams more effectively than did the previous numeric effluent limitations (see discussions in relevant sections).

Section 4.10.3 of today's Final Permit requires the District to develop a Consolidated TMDL Implementation Plan (Consolidated Plan) for all TMDL wasteload allocations assigned to District MS4 discharges. All applicable WLAs must be considered in this plan, though the TMDLs listed at the beginning of this Section form the basis for District action to meet this requirement. EPA has evaluated these TMDLs along with existing water quality data and has concluded that *E. coli*, total nitrogen, total phosphorus, total suspended solids, copper, lead, zinc and trash are critical pollutants of concern for District waters, and should be the focus of implementation measures as well as of a revised monitoring program (*see* Section 5.1 for a

101 District of Columbia, *Final Total Maximum Daily Load for Oil and Grease in the Anacostia River* (2003) http://www.epa.gov/reg3wapd/tmdl/dc_tmdl/AnacostiaRiver/AnacoatiaOilReport.pdf

discussion of the latter).

The rationale for a Consolidated Plan is to allow for more efficient implementation of control measures. In many cases TMDLs have been developed on a stream segment basis, which is not always the most logical framework for implementation of controls. In addition, the solutions for reducing many pollutants and/or improving water bodies will be the same stormwater control measures and/or policies, and it would be wasteful of resources and duplicative to have separate implementation plans under those circumstances.

The Final Permit requires the Consolidated Plan to include:

1) Specified schedules for attaining applicable wasteload allocations for each TMDL; such schedules must includes numeric benchmarks that specify annual pollutant load reductions and the extent of control actions to achieve these numeric benchmarks.
2) Interim numeric milestones for TMDLs where final attainment of applicable wasteload allocations requires more than one permit cycle. These milestones shall originate with the third year of this permit term and every five years thereafter.
3) Demonstration using modeling of how each applicable WLA will be attained using the chosen controls, by the date for ultimate attainment.
4) The Consolidated TMDL Implementation Plan elements required in this section will become enforceable permit terms upon approval of such Plans, including the interim and final dates in this section for attainment of applicable WLAs.
5) Where data demonstrate that existing TMDLs are no longer appropriate or accurate, the Plan shall include recommended solutions, including, if appropriate, revising or withdrawing TMDLs.

Some of the applicable TMDLs developed within the District were based on limited or old data. In those cases the District may choose to reevaluate these waters and impairments to determine if revising or withdrawing the TMDL, or other action, would be appropriate.

The District has two years from the date of Final Permit issuance to develop, public notice and submit the Consolidated Plan to EPA for review and approval. EPA believes the required elements (1-5, above) will ensure clarity and enforceability, but also encourages interested parties to participate in the public process. EPA added this public notice requirement to the Final Permit because of the significant interest expressed by commenters on District TMDLs.

Section 4.10.4, Adjustments to TMDL Implementation Strategies, requires the District to make mid-course improvements to implementation measures and policies whenever data indicate insufficient progress towards attaining any relevant WLA. The District must adjust its management programs to compensate for the inadequate progress within 6 months, and document the modifications in the Consolidated TMDL Implementation Plan. The Plan modification shall include a reasonable assurance demonstration of the additional controls to achieve the necessary reductions, *i.e.*, quantitatively linking sources and causes to discharge

quality. In addition, annual reports must include a description of progress as evaluated against all implementation objectives, milestones and benchmarks, as relevant.

Finally, with respect to any new or revised TMDL that may be approved during the permit term, the Final Permit makes allowances for reopening the permit to address those WLAs (see Section 8.19 of the Final Permit: Reopener Clause for Permits), if necessary. EPA believes that reopening the permit will not typically be necessary since the Final Permit requires the District to update the Consolidated Plan within six months for any TMDL approved during the permit term with wasteload allocations assigned to District MS4 discharges, and also to include a description of revisions in the next regularly scheduled annual report.

(**4.11 Additional Pollutant Sources)**: Requirements in this Section of the Final Permit largely continue provisions in the 2004 Permit. EPA notes that the provisions of this section were mostly included in Section 3 of the Draft Permit.

5. MONITORING AND ASSESSMENT OF CONTROLS

(5.1 Revised Monitoring Program): As included in the Draft Permit, the monitoring requirements for the District's stormwater program have been significantly updated from the last permit cycle. This revision reflects the fact that the District has already performed broad monitoring of a variety of parameters over the last two permit cycles. The Phase I stormwater regulations require representative sampling for the purpose of discharge characterization in the first permit term, or initial years of the program (40 C.F.R. §122.26(d)(1)(iv)(E)). The District now has a decade worth of this type of data, and it is timely to update the monitoring program to more effectively evaluate the effectiveness of the program, and to more effectively and efficiently use the District's funds for this purpose. As noted in the National Research Council's report *Urban Stormwater Management in the United States* [102], the quality of stormwater from urbanized areas has been well-characterized. Continuing the standard end-of-pipe monitoring typical of most MS4 programs has produced data of limited usefulness because of a variety of shortcomings (as detailed in the report). The NRC Report strongly recommends that MS4 programs modify their evaluation metrics and methods to include biological and physical monitoring, better evaluations of the performance/effectiveness of controls and overall programs, and an increased emphasis on watershed scale analyses to ascertain what is actually going on in receiving waters. The report also emphasizes the link between study design and the ability to interpret data, *e.g.*, having enough samples to ensure that conclusions are statistically significant.

Consistent with these goals, the Final Permit requires the District to develop a Revised Monitoring Program to meet the following objectives:

1) Make wet weather loading estimates of the parameters in Table 4 from the MS4 to receiving waters. Number of samples, sampling frequencies and number and locations of

102 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

sampling stations must be adequate to ensure data are statistically significant and interpretable.

2) Evaluate the health of the receiving waters, to include biological and physical indicators such as macroinvertebrates and geomorphologic factors. Number of samples, frequencies and locations must be adequate to ensure data are statistically significant and interpretable for long-term trend purposes (not variation among individual years or seasons).

3) Any additional necessary monitoring for purposes of source identification and wasteload allocation tracking. This strategy must align with the Consolidated TMDL Implementation Plan required in Part 4.10.3 For all pollutants in Table 4 monitoring must be adequate to determine if relevant WLAs are being attained within specified timeframes in order to make modifications to relevant management programs, as necessary.

The Final Permit requires the District to public notice the Revised Monitoring Program, and to submit it to EPA for review and approval within two years of the effective date of the Final Permit.

EPA also significantly refined the list of required pollutant analytes/parameters for which monitoring is required from over 120 to 9:

(Table 4 from the Final Permit)
Monitoring Parameters

Parameter
E. coli
Total nitrogen
Total phosphorus
Total Suspended Solids
Cadmium
Copper
Lead
Zinc
Trash

These parameters are those for which relevant stormwater wasteload allocations exist, or (in the case of cadmium) where monitoring data indicate that the pollutant is occurring in discharges at concentrations and frequencies to consider it a pollutant of concern. End-of-pipe analytical monitoring is an expensive undertaking, and EPA feels strongly that the District's water quality-related evaluations will be much more robust and actionable with an enhanced focus on true pollutants of concern, along with the elimination of analytes for which monitoring routinely shows non-detect concentrations, and/or those to which notable water quality problems have not been linked.

One modification has been made to this list for the Final Permit from the Draft Permit.

The Draft Permit required evaluation of Trash reductions in the relevant sections for the Anacostia River Watershed Trash TMDL (4.10.1), but failed to include it in Table 4 (Table 3 of the Draft Permit). EPA has added trash as a monitoring parameter to this table to correct that oversight.

(5.2 Interim Monitoring): During the interim period from the effective date of the Final Permit until EPA approves the Revised Monitoring Program, the Final Permit requires the District to largely continue the monitoring program established and updated under the 2000 and 2004 permits, except the monitoring program is only required for the list of monitoring parameters in Table 4, which has been reduced to the nine parameters as discussed above.

EPA received several comments and questions on the interim monitoring requirements. Individual responses are included in the Responsiveness Summary published with the Final Permit and this Final Fact Sheet. EPA chose to not modify the interim monitoring provisions for the Final Permit because: 1) they are largely an extension of the same requirements and methods already approved and established under prior permits, which will ensure that data collected during the interim monitoring period are comparable to data collected during the past decade, thus providing "apples to apples" comparisons in data interpretation; and 2) EPA believes that the District's monitoring-related resources are more effectively spent developing a robust revised program, rather than revising the interim program.

(5.4 Area and/or Source Identification Program): The Final Permit provides that "[t]he permittee shall continue to implement a program to identify, investigate, and address areas and/or sources within its jurisdiction that may be contributing excessive levels of pollutants to the MS4 and receiving waters, including but not limited to those pollutants identified in Table 4 herein." This is identical in substance to section 5.5 in the Draft Permit and essentially continues the requirements from the 2004 MS4 Permit. EPA received a comment that this provision has been inadequate to identify sources contributing pollutants to MS4 discharges. EPA recognizes that this provision is general, but believes that the District's ongoing practices are sufficient during the interim monitoring period. EPA notes that the Final Permit requires the Revised Monitoring Program to include any additional necessary monitoring for purposes of source identification and wasteload allocation tracking. The public will have a chance to comment on the proposed objectives and methods in Plan, and EPA will review and approve this Plan. Therefore there will be several opportunities to ensure that the District has robust methods for identify additional pollutant inputs to District MS4 discharges.

(5.7 Reporting of Monitoring Results): In response to several comments, and because of the potential availability of electronic reporting in the future, EPA made several modifications to this Section of the Final Permit. When available the District may submit monitoring data through NetDMR, a national tool for regulated Clean Water Act permittees to submit discharge monitoring reports (DMRs) electronically via a secure Internet application to EPA. *See* http://www.epa.gov/netdmr/. However, if this system is not available to the National Marine Fisheries Service, then the District must continue to submit hard copies. The Final Permit eliminates the requirement for the District to submit monitoring reports to itself. This section

clarifies (consistent with Section 6.2) that all monitoring results from a given year be summarized in the following annual report.

6. REPORTING REQUIREMENTS

Permit reporting is required pursuant to 40 C.F.R. § 122.41(l). EPA has made a number of minor edits to this section primarily for the purposes of: maintaining consistency with other Sections of the Final Permit (as those provisions necessitated changes in reporting, the Final Fact Sheet discusses those changes in association with the relevant Section); eliminating redundancy; and to provide clarification.

(6.2 Annual Reporting): Consistent with comments from a number of commenters regarding public access to documents, today's Final Permit requires the District to post each Annual Report on its website at the same time the Report is submitted to EPA.

The separate 'Reporting on Funding' in the Draft Permit has been eliminated in the Final Permit because it was largely redundant with other reporting requirements, and because it was beyond the scope of what is needed from the District. The Final Permit requires annual reporting on projected costs and budget for the coming year as well as expenditures and budget for the prior year, including (i) an overview of the District's financial resources and budget, (ii) overall indebtedness and assets, (iii) sources for funds for stormwater programs, and (iv) a demonstration of adequate fiscal capacity to meet the permit requirements. However, EPA has concluded that additional detail would be superfluous. In addition, beyond a demonstration of basic budget considerations as outlined in the Final Permit, how the District chooses to allocate resources to comply with the permit is an internal decision.

EPA has also included a provision for an Annual Report Meeting in this permit in order to improve communication between the District and the Agency. This meeting will provide an opportunity for EPA to obtain more in-depth knowledge of the District's program, and should also enhance feed-back on the program. The permit requires the District to convene the first Annual Report Meeting within 12 months of issuance of the permit. If both parties agree that this first meeting was successful, the Annual Report meeting shall be extended for the duration of the permit term.

7. STORMWATER MODEL

The Stormwater Model and associated Geographical Information System are tools used by the District to help track and evaluate certain components of the water quality program. The Final Permit requires the use and maintenance of this system as a component of the District's Stormwater Management Program. There were no modifications to this Section between the Draft Permit and the Final Permit.

8. STANDARD PERMIT CONDITIONS FOR NPDES PERMITS

The provisions in Part 8 are requirements generally applicable to all NPDES permits, pursuant to 40 C.F.R. § 122.41, as well as other applicable conditions pursuant to § 122.49 and specific statutory or regulatory provisions as noted in the permit. No changes were made to this section of the permit.

9. PERMIT DEFINITIONS

Most changes to this section from the Draft Permit consist of minor clarifications. In addition, several terms were eliminated from this section because they do not appear elsewhere in the Final Permit: 'goal', 'internal sampling station', 'significant spills', and 'significant materials'. The definition of 'MS4 Permit Area' was removed because it is already defined in Part 1.1.

A definition of "development" was added to clarify that development is "the undertaking of any activity that disturbs a surface area greater than or equal to 5,000 square feet." The definition further clarifies that the relevant performance standard for development applies to projects that commence after 18 months from the effective date of the Final Permit or as soon as the District's stormwater regulations go into effect, whichever is sooner.

The definition of 'green roof' was modified to allow for the fact that some types of ecoroofs may be constructed without vegetation or soil media.

The definition of "retrofit" was modified to focus on environmental outcomes, *i.e.*, reductions in discharge volumes and pollutant loads and improvements in water quality, rather than implementation of conveyance measures.

The definition of "predevelopment hydrology" was enhanced to clarify that the phrase refers to a "stable, natural hydrologic site condition that protects or restores to the degree relevant for that site, stable hydrology in the receiving water, which will not necessarily be the hydrologic regime of that receiving water prior to any human disturbance in the watershed." This definition is consistent with several seminal publications on the topic including *Urban Stormwater Management in the United States*[103] and references therein, *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*[104], and *Guidance for Federal Land Management in the Chesapeake Bay Watershed*[105], issued in fulfillment of Part 502 of E.O. 13508.

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103 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

104 EPA, *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act* (2009) http://www.epa.gov/owow_keep/nps/lid/section438/

105 EPA, *Guidance for Federal Land Management in the Chesapeake Bay Watershed*, Chapter 3. Urban

RELATIONSHIP TO NON-POINT SOURCE PROGRAM:

It should be noted that the measures required by the Permit are separate from those projects identified in the District's EPA-approved Non-Point Source Management Plan as being funded wholly or partially by funds pursuant to Section 319(h) of the Clean Water Act. See Section 3 of Permit ("These Permit requirements do not prohibit the use of 319(h) funds for other related activities that go beyond the requirements of this Permit, nor do they prohibit other sources of funding and/or other programs where legal or contractual requirements preclude direct use for stormwater permitting activities.").

ADMINISTRATIVE RECORD:

Copies of the documents that comprise the administrative record for the Permit are available to the public for review at the Martin Luther King, Jr. Public Library, which is located at 901 G Street, N.W. in Washington, D.C. An electronic copy of the proposed and final Permits and proposed and Final Fact Sheets are also available on the EPA Region III website, http://www.epa.gov/reg3wapd/npdes/draft_permits.html. For additional information, please contact Ms. Kaitlyn Bendik, Mail Code 3WP41, NPDES Permits Branch, Office of Permits and Enforcement, EPA Region III, United States Environmental Protection Agency, 1650 Arch Street, Philadelphia, Pennsylvania 19103-2029.

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and Suburban, EPA841-R-10-002, (2010) (http://www.epa.gov/owow_keep/NPS/chesbay502/pdf/chesbay_chap03.pdf)

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:	)
Government of the District of Columbia, Municipal Separate Storm Sewer System, NPDES Permit No. DC 0000221	)

EXHIBIT 14

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 10 2007

OFFICE OF
WATER

MEMORANDUM

SUBJECT: Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits

FROM: James A. Hanlon, Director
Office of Wastewater Management

TO: Alexis Strauss, Director
Water Division
EPA Region 9

Recently, in discussions with Region 9, questions have been raised concerning the use of compliance schedules in National Pollutant Discharge Elimination System (NPDES) pennits consistent with the Clean Water Act (CWA) and its implementing regulations at 40 C.F.R. § 122.47. The use of compliance schedules in NPDES permits is also the subject of ongoing litigation in California. The purpose of this memo is to provide a framework for the review of permits consistent with the CWA and its implementing regulations.

When maya permitting authority include a compliance schedule in a permit for the purpose of achieving a water quality-based effluent limitation?

In *In The Matter of Star-Kist Caribe, Inc.,* 3 E.A.D. 172, 175, 177 (1990), the EPA Administrator interpreted section 301(b)(l)(C) of the CWA to mean that 1) after July 1, 1977, pennits must require immediate compliance with *(i.e.,* may not contain compliance schedules for) effluent limitations based on water quality standards adopted before July 1, 1977, and 2) compliance schedules are allowed for effluent limitations based on standards adopted after that date only if the State has clearly indicated in its water quality standards or implementing regulations that it intends to allow them.

What principles are applicable to assessing whether a compliance schedule for achieving a water quality-based effluent limitation is consistent with the CWA and its implementing regulations?

1. "When appropriate," NPDES permits may include "a schedule of compliance leading to compliance with CWA and regulations ... as soon as possible, but not later than the applicable statutory deadline under the CWA." 40 C.F.R. § 122.47(a)(1). Compliance schedules that are longer than one year in duration must set forth interim requirements and dates for their achievement. 40 c.F.R. § 122.47(a)(3).

2. Any compliance schedule contained in an NPDES permit must be an "enforceable sequence of actions or operations leading to compliance with a [water quality-based] effluent limitation ["WQBEL"]" as required by the definition of "schedule of compliance" in section 502(17) of the CWA. *See also* 40 c.F.R. § 122.2 (definition of schedule of compliance).

3. Any compliance schedule contained in an NPDES pennit must include an enforceable final effluent limitation and a date for its achievement that is within the timeframe allowed by the applicable state or federal law provision authorizing compliance schedules as required by CWA sections 301(b)(1)(C); 502(17); the Administrator's decision in *Star-Kist Caribe, Inc.* 3 E.A.D. 172, 175, 177-178 (1990); and EPA regulations at 40 C.F.R. §§ 122.2, 122.44(d) and 122.44(d)(I)(vii)(A).

4. Any compliance schedule that extends past the expiration date of a pennit must include the final effluent limitations in the pennit in order to ensure enforceability of the compliance schedule as required by CWA section 502(17) and 40 C.F.R. § 122.2 (definition of schedule of compliance).

5. In order to grant a compliance schedule in an NPDES pennit, the pennitting authority has to make a reasonable finding, adequately supported by the administrative record, that the compliance schedule "willlead[] to compliance with an effluent limitation ... " "to meet water quality standards" by the end of the compliance schedule as required by sections 301(b)(I)(C) and 502(17) of the CWA. *See also 40* C.F.R. §§ 122.2, 122.44(d)(1)(vii)(A).

6. In order to grant a compliance schedule in an NPDES pennit, the permitting authority has to make a reasonable finding, adequately supported by the administrative record and described in the fact sheet (40 C.F.R. § 124.8), that a compliance schedule is "appropriate" and that compliance with the final WQBEL is required "as soon as possible." *See* 40 C.F.R. §§ 122.47(a), 122.47(a)(I).

7. In order to grant a compliance schedule in an NPDES pennit, the permitting authority has to make a reasonable finding, adequately supported by the administrative record, that the discharger cannot immediately comply with the WQBEL upon the effective date of the pennit. 40 C.F.R. §§ 122.47, 122.47(a)(1).

8. Factors relevant to whether a compliance schedule in a specific permit is "appropriate" under 40 C.F.R. § 122.47(a) include: how much time the discharger has already had to meet the WQBEL(s) under prior pennits; the extent to which the discharger has made good faith efforts to comply with the WQBELs and other requirements in its prior pennit(s); whether there is any need for modifications to treatment facilities, operations or measures to meet the WQBELs and if so, how long would it take to implement the modifications to treatment, operations or other measures; or whether the discharger would be expected to use the same treatment facilities, operations or other measures to meet the WQBEL as it would have used to meet the WQBEL in its prior permit.

9. Factors relevant to a conclusion that a particular compliance schedule requires compliance with the WQBEL "as soon as possible," as required by 40 C.F.R. § I22.47(a)(I) include: consideration of the steps needed to modify or install treatment facilities, operations or other measures and the time those steps would take. The pennitting authority should not simply presume that a compliance schedule be based on the maximum time period allowed by a State's authorizing provision.

10. A compliance schedule based solely on time needed to develop a Total Maximum Daily Load is not appropriate, consistent with EPA's letter of October 23, 2006, to Celeste Cantu, Executive Director of the California State Water Resources Control Board, in which EPA disapproved a provision of the Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries for California.

11. A compliance schedule based solely on time needed to develop a Use Attainability Analysis is also not appropriate, consistent with EPA's letter of February 20, 2007, to Doyle Childers, Director Missouri Department of Natural Resources, nor is a compliance schedule based solely on time needed to develop a site specific criterion, for the same reasons as set forth in the October 23, 2006, (referenced in Paragraph 10) and February 20, 2007 letters.

If you have any questions, please contact me at (202) 564-0748 or have your staff contact Linda Boornazian at (202) 564-0221.

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:	)
Government of the District of Columbia, Municipal Separate Storm Sewer System, NPDES Permit No. DC 0000221	)

EXHIBIT 15

Re: Draft Fact Sheet
National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4)
Draft Permit No. DC0000221 (Government of the District of Columbia)

NPDES PERMIT NUMBER: DC0000221 (Reissuance)

FACILITY NAME AND MAILING ADDRESS:

Government of the District of Columbia
The John A. Wilson Building
1350 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

MS4 ADMINISTRATOR NAME AND MAILING ADDRESS:

Director, District Department of the Environment
1200 First Street, N.E., 6th Floor
Washington, D.C. 20002

FACILITY LOCATION:

District of Columbia's Municipal Separate Storm Sewer System (MS4)

RECEIVING WATERS:

Potomac River, Anacostia River, Rock Creek, and Stream Segments Tributary
To Each Such Water Body

INTRODUCTION:

Today's action involves a renewal of the 2004 Permit. In the draft Permit, EPA has continued to integrate the Permit's adaptive management approach with enhanced control measures to address the complex issues associated with urban stormwater runoff within the corporate boundaries of the District of Columbia.

Since the United States Environmental Protection Agency, Region III (EPA or the Agency) issued the District of Columbia (the District or Permittee) its first Municipal Separate Storm Sewer System (MS4) Permit in 2000, the Agency has responded to a number of challenges involving both that Permit (as well as amendments thereto) and the second-round MS4 Permit issued in 2004. For the better part of ten years, the Agency has worked with various challengers -- including the Permittee and two non-governmental organizations, Defenders of Wildlife (DOW) and Friends of the Earth (FOE) – to address the needs and concerns of the various parties while at the same time following applicable legal requirements. The Agency has

engaged in both litigation and negotiation, including formal mediation.[1] These activities ultimately led to an enhanced stormwater management strategy in the District, consisting of measurable outputs for addressing the issues raised during the mediation process.

FACILITY BACKGROUND AND DESCRIPTION:

The Government of the District of Columbia owns and operates its own MS4, which discharges stormwater during wet weather events from various outfall locations throughout the District into its waterways. On April 19, 2000, EPA issued the District its first Stormwater Phase I National Pollution Discharge Elimination System (NPDES) Permit for the control and management of stormwater discharges originating from those MS4 outfalls. The Agency proposed Amendment No. 1 to that Permit on October 16, 2000, and simultaneously withdrew portions of the issued Permit. On January 12, 2001, the Agency issued Amendment No. 1 to the 2000 Permit. DOW and FOE (collectively, " DOW/FOE") appealed both the 2000 Permit and Amendment No. 1 to the EPA Environmental Appeals Board (EAB), which resulted in a remand of a number of provisions of the Permit. *See* "Order Granting Motion for Partial Reconsideration," *In re: Government of the District of Columbia Municipal Separate Storm Sewer System*, 10 E.A.D. 323 (Feb. 20, 2002).

As a consequence of the remand, the Agency issued Amendment No. 2 to the 2000 MS4 Permit on March 19, 2003. The Amendment revised the Permit provisions for addressing permit modifications in accordance with 40 C.F.R. § 122.62. The EAB decision also required the Agency to re-evaluate "aggregate" versus "individual" limits for the Hickey Run outfalls, to modify the monitoring and sampling requirements for those outfalls, to provide additional record support for the Region's determination that the system-wide controls required by the Permit would ensure compliance with applicable water quality standards, and to clarify through the Permit the District's limited discretion to grant waivers and exemptions under its stormwater regulations. These aspects of the decision were addressed as part of the next permitting cycle.

On August 19, 2004, the Agency issued the second-round permit to the District, with an expiration date of August 18, 2009. The 2004 Permit, like its 2000 predecessor, covers only the MS4 outfalls within the corporate boundaries of the District of Columbia, excluding the combined and separate sanitary sewer systems which are covered under the NPDES Permit for the Blue Plains Treatment Facility.[2]

Shortly after the 2004 MS4 Permit was issued, DOW/FOE appealed many of the same issues that had previously been the subject of contention under the 2000 MS4 Permit. Following extensive negotiations between EPA and the petitioners (DOW/FOE), EPA published a draft Amendment for public comment and sought certification under Section 401 of the Clean Water

[1] A procedural history of Permit appeals can be viewed at the EPA Environmental Appeals Board web site: http://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/77355bee1a56a5aa8525711400542d23/b5e5b68e89edabe98525714f00731c6f!OpenDocument&Highlight=2,municipal.

[2] When the first MS4 permit was issued to the District in April, 2000, administration of the daily operations of the MS4 Permit was performed by the District of Columbia Water and Sewer Authority (DC WASA). In 2006, the newly-created District Department of the Environment (DDOE) assumed responsibility from the District of Columbia Department of Health (DDOH) for NPDES permit-related matters. And in February 2007, administration of the MS4 Permit was transferred from DC WASA to DDOE.

Act (CWA), 33 U.S.C. § 1341, by DDOH. As a result of the DOH certification, EPA revised the language of the draft Amendment to rely on "current conditions" as the water quality standard baseline and to build upon these conditions through the use of best management practices (now, commonly referred to as "stormwater control measures," or "SCMs") for compliance with applicable water quality standards. EPA issued Amendment No. 1 to the 2004 MS4 Permit on March 14, 2006.

DOW/FOE then appealed aspects of Amendment No. 1. The Amendment was also appealed by DC WASA and the Government of the District of Columbia (the Permittee). As a result of the appeal, EPA, DOW/FOE, and the District began an alternative dispute resolution process to formulate a solution to the remaining issues. The parties' goal was to enable the District to progress toward meeting its obligations under the current MS4 Permit by achieving compliance with applicable water quality standards in an urban environment through the use of best management practices. On October 29, 2007, the Agency withdrew the contested portions of Amendment No.1, and on November 8, 2007, the EAB dismissed the appeal as moot.

In light of the dismissal of the appeal, the Agency attempted several times to issue another amendment to the 2004 MS4 Permit to address the issues that had been negotiated through the alternative dispute resolution process. Each attempt was rejected by the various parties for different reasons, and the draft amendment was deferred for reconsideration of the issues until the current MS4 Permit renewal process began in 2009. While the alternative dispute resolution process was unable to produce a satisfactory three-party (*i.e.*, DOW/FOE, WASA/Permittee, and EPA) outcome, the District and EPA reached a two-party agreement on a series of enhancements to the 2004 MS4 Permit. These enhancements, which were documented through a Letter of Agreement (the Letter) dated November 7, 2007 (modified August 1, 2008), include a series of actions, deliverables, commitments, and deadlines for the District's MS4 program on a range of topics, including: tree canopy, implementation of Low Impact Development (LID) practices, green roofs, and enhanced street sweeping. Each of these activities was expected to contribute directly to improvements in the way that stormwater is managed and water quality issues are addressed within the District's urban environment. The commitments in the Letter required significant new activities, which emphasized the shifting nature of the MS4 program within the District from planning to implementation of the plans with specific objectives and measurable benchmarks.

Since the August 19, 2004 Permit expired on August 18, 2009, it has been administratively extended.

PROPOSED ACTION TO BE TAKEN:

EPA is today proposing a reissuance of the District of Columbia MS4 Permit for public review and comment. The new Permit is intended to replace the 2004 Permit, which is currently in effect under an administrative extension. The new Permit has been designed around the concepts, ideas, studies, and pilot projects that were planned and implemented by the District through the 2000 and 2004 MS4 permits and modifying Letters. A number of applicable measurable benchmarks and performance standards have been incorporated into the draft

document from these prior efforts. These new requirements will enable the Agency to monitor the District's progress in reducing and managing the effects of urban stormwater runoff from their sources prior to entering and leaving the MS4 waste stream within the next Permit term.

DISCHARGE LIMITATIONS:

The control of stormwater is important because stormwater run-off directly affects watershed functions, and water quality in receiving waters. The increase of impervious surfaces and compacted soils that are often part of new development and redevelopment increases surface runoff and decreases ground water infiltration. These changes can increase the volume and velocity of runoff, the frequency and severity of flooding, peak storm flows as well as the type, concentration, and quantity of pollutants in discharges. Moreover, stormwater research shows a high correlation between the level of imperviousness in a watershed and the degree of overall degradation of water quality and habitat.[3]

Against this background, today's draft Permit is premised upon EPA's longstanding view that the MS4 NPDES permit program is both an iterative and an adaptive management process for pollutant reduction and 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 F.R. 47990 (Nov. 16, 1990). While the 2000 and 2004 Permits were mainly concerned with the development of a well-rounded program designed to effectively manage urban stormwater through the required deliverables under each of the permits, the District (starting with the Letters of Agreement) has been significantly expanding its efforts beyond the initial planning stages. The draft Permit will continue these efforts and allow for further development of the scheme for controlling stormwater from one of planning into one of implementation with associated environmental improvements.

In that regard, EPA is aware that many Permittees, especially those in highly urbanized areas such as the District, will be unable to attain all Water Quality Standards within the first several MS4 permit cycles. Rather, the attainment of water quality criteria is an incremental process, consistent with section 402(p)(3)(B) of the Clean Water Act, 33 U.S.C. § 1342(p)(3)(B)(iii), so long as permittees reduce the discharge of pollutants to the maximum extent practicable (MEP) within each permit cycle. In other words, the goal of EPA's stormwater program is attainment of water quality standards, but Congress expected that many municipal stormwater dischargers would need several Permit cycles to achieve that goal. While some dischargers may already have achieved a point where they can attain WQS, the requirements of today's draft Permit are specific to the District and its receiving streams. EPA believes that such limitations should be developed on a case-by-case basis.

Specifically, the Agency expects that water quality standards attainment in waters to which the District's MS4 discharge will require an iterative approach with staged implementation and increasingly more stringent requirements over several permitting cycles.

[3] See the Center for Watershed Protection for more information. www.cwp.org and www.stormwatercenter.net

During each cycle, EPA will continue to review deliverables from the District to ensure that its activities constitute sufficient progress toward standards attainment.

This approach recognizes that progress toward attaining water quality criteria requires an ongoing examination of and improvement to existing structural and nonstructural controls coupled with implementation of new activities that serve as stormwater control measures. The basis for the controls is: (1) "reducing the discharge of pollutants from the MS4 to the MEP; (2) to protect water quality; and (3) to satisfy the appropriate requirements of the Clean Water Act." As such, the approach is authorized by Section (p)(3)(B)(iii), which provides for "such other provisions as the Administrator …. determines appropriate" for the control of discharges of pollutants from an MS4 system.

Consistent with the staged implementation of standards attainment, the Permit requires that the District report annually on estimated pollutant reductions from best management practices (BMPs) implementation. However, the Agency understands that multi-year capital projects may result in uneven annual progress toward pollutant reduction, so annual adjustment of management practices may be unwarranted and inefficient.

Further, the measures in the draft Permit are intended to reduce the impairments in the MS4's receiving waters, which are caused by bacteria, total nitrogen and phosphorous, solids and metals.

STANDARDS FOR LONG-TERM STORMWATER MANAGEMENT:

Green Technology Practices

The fundamental difference between today's draft Permit and previous generation permits is the imposition of measurable requirements for green technology practices, sometimes referred to as "low-impact development" or "green infrastructure." These requirements, which include green roofs, enhanced tree plantings, and bioretention and water reuse onsite (to slow the rate of runoff of stormwater flows from paved areas), are designed to serve as or increase the effectiveness of stormwater controls. In past years, stormwater management standards were written with provisions that promoted or required extended detention controls, such as extended detention wet ponds, dry detention basins or constructed wetlands.

There are multiple potential problems with extended detention as a water quality management practice, including the fact that receiving stream dynamics are generally based on balances of much more than just discharge rates. [4] Extended detention practices are first and foremost designed to prevent downstream flooding and not to protect downstream channel stability and water quality. For decades, water quality protection has been a secondary goal, or one omitted entirely during the design of these facilities. Over time it has become apparent through research and monitoring that these practices do not effectively protect the physical,

[4] A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption. Low Impact Development Center, December 2007.

chemical or biological integrity of our receiving waters[5]. Furthermore, operation and maintenance of these systems to ensure they perform as designed requires a level of managerial and financial commitment that is often not provided. A number of researchers have documented that detention ponds fail to meet their design goals in terms of maintaining water quality, downstream habitat and biotic integrity of the receiving waters.[6,7,8,9] As a result, today's draft Permit shifts the District's practices from detention to water quality protection.

New Development and Redevelopment: Non-Federal Facilities

As noted above, the Clean Water Act requires that MS4 permits include sufficient controls so that dischargers reduce the discharge of pollutants to the MEP. The meaning of the MEP standard has continued to evolve since it was first articulated two decades ago. At one time, stormwater permits only contained broad narrative limitations; more recently, such permits have included numeric standards for stormwater capture. In fact, the 2004 version of the DC MS4 Permit did not contain numeric performance standards for on-site retention of stormwater for new development and redevelopment and retrofit projects. However, today's draft Permit includes a requirement that the Permittee adopt one of the following performance standards for non-federal areas greater than 5,000 square feet that are undergoing new or redevelopment:

1. The design, construction and maintenance of stormwater controls to achieve on-site retention of "1.2" volume of stormwater from a 24- hour storm; or
2. The design, construction and maintenance of stormwater controls to achieve the retention of the modeled predevelopment runoff volume of stormwater from a 24- hour storm.

The Permit includes two options for the District, so that it can determine which one is more appropriate to its circumstances. The first option, on-site retention of 1.2", represents a 90th percentile capture of 1.2" for a 24-hour rainfall event with an option for a prescriptive requirement in order to provide site designers with maximum flexibility in selecting control practices appropriate for the site. In setting this standard, EPA relied on the District's proposed modifications and updates to its stormwater management regulations and the reductions required through established total maximum daily loadings (TMDLs) for certain of the metals which were determined from previous stormwater monitoring activities to be potential pollutants of concern. EPA also considered an 85th percentile capture rate of 1-inch, which would be in accordance with the District's proposed stormwater management regulations, the former Anacostia Waterfront Corporation stormwater management regulations, and the metals reduction levels from the TMDLs. However, EPA felt that such a standard would not provide sufficient water

[5] U.S. EPA, *Protecting Water Quality from Urban Runoff*, Nonpoint Source Control Branch, EPA-841-F-03-003, February 2003.

[6] MacRae, C.R. Experience from Morphological Research on Canadian Streams: Is Control of the Two Year Frequency Runoff Event the Best Basis for Stream Channel Protection? Kingston, Ontario, Canada.

[7] May, C, Livingston, E. Blaha, D, Scoggins, M. & Tims, J. Structural and Nonstructural BMPs for Protecting Streams. Watershed Management Institute, Crawfordville, Florida.

[8] Booth, D.B. & Jackson, C.R. 1997. Urbanization of Aquatic Systems – Degradation Thresholds, Stormwater Detention and the Limits of Mitigation. Journal of the American Water Resources Association 22(5).

[9] Fundamentals of Urban Runoff Management, Chapter 10, North American Lake Management Society. http://www.nalms/org/Resources/PDF/Fundamentals/Fundamentals_Chapter_10.pdf

quality protections, and that ongoing new construction and retrofit opportunities make this reasonable. In addition, the Agency feels that the 1.2" level of capture for new construction is also reasonable since most of the construction activities in the District currently do not involve new sites, but rather redevlopment opportunities. If the District had more open land available for new development, and thus the opportunity for additional types of control measures, EPA may have included a capture level closer to the 95% required for federal facilities.

The second option, *i.e.,* a standard that mimics predevelopment hydrology, is appropriate because significant research suggests that practices which mimic the natural water cycle – activities that result in the infiltration, evapotranspiration and capture and use of stormwater – are simultaneously advantageous for protecting the physical, chemical and biological characteristics of receiving waters. This is because such practices are designed to mimic the way natural vegetated landscapes respond to precipitation events. When rain falls or snow melts, vegetated areas (forests, prairies and grasslands, gardens and trees) intercept, evaporate and absorb much of the rainfall. Some of the precipitation is also absorbed or infiltrated into the soil. Ideally, site designs and plans should make use of these natural systems and processes as much as possible to mimic or preserve the site hydrology, *i.e.,* the balance of plant uptake of water, infiltration of runoff into the soil and groundwater table, and the natural runoff patterns into natural drainageways and streams. Most bioinfiltration measures are designed to not discharge at all during small storm events, which means that pollutants do not reach the receiving water.[10]

Under natural conditions approximately 10% of the volume of precipitation falling to earth runs off to surface waters via surface/overland flow.[11] Nearly all of the remaining amount of stormwater infiltrates, or is intercepted or taken up by plants. Mother Nature's elegant system can be successfully adapted in developed and developing watersheds to protect receiving waters from both pollutants and altered hydrology. Today's draft Permit proposes a simple performance standard to approximate 10% discharge, with most of the remainder handled on-site.

Moreover, by imposing a numeric standard for stormwater capture, this Permit is consistent with those in a number of other jurisdictions, including: Anchorage, Alaska (Phase I); Ventura County, California (Phase I); Montana (Phase II MS4 General Permit); New Jersey (Stormwater Management Rules); North Carolina (Phase II MS4 General Permit); Ohio (Ohio Construction General Permit for the Big Darby Creek Watershed); and West Virginia (Phase II MS4 General Permit).

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[10] *See e.g.,* the following research studies on bioretention practices and permeable pavements: Dr. Allen Davis, University of Maryland, http://www.ence.umd.edu/~apdavis/LID-Publications.htm; Dr. William Hunt, North Carolina State University, http://www.bae.ncsu.edu/topic/bioretention/publications.html; Dr. Michael E. Dietz, Utah State University, "Low Impact Development Practices: A Review of Current Research and Recommendations for Future Directions", http://www.springerlink.com/content/nq44j610685n4112/; Dr. Jack Clausen, University of Connecticut, http://www.bae.ncsu.edu/programs/extension/wqg/319/319index_files/Ct-98.1.pdf.

[11] Federal Interagency Stream Restoration Working Group (FISRWG). 1998. Stream Corridor Restoration: Principles, Processes and Practices. PB98-158348LUW.

New Development and Redevelopment: Federal Facilities

This draft Permit requires that federal facilities undergoing new development and redevelopment projects greater than 5,000 square feet also adopt one of two numeric capture standards:

1. The design, construction and maintenance of stormwater controls to achieve on-site retention of "1.7" volume of stormwater from a 24- hour storm; or

2. The design, construction and maintenance of stormwater controls to achieve the retention of the modeled predevelopment runoff volume of stormwater from a 24- hour storm.

As with non-federal facilities, the Permittee has two options for a standard. The 1.7" on-site retention standard reflects EPA's recent guidance document entitled "Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act" (Dec. 2009) ("EISA Technical Guidance"), http://www.epa.gov/greeningepa/documents/epa_swm_guidance.pdf. The EISA Technical Guidance establishes strict stormwater runoff requirements for federal development and redevelopment projects that exceed 5,000 square feet to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to temperature, rate, volume, and duration of flow. Section 438 is intended to address the inadequacies of the historical detention approach to managing stormwater and promote more sustainable practices that have been selected to maintain or restore predevelopment site hydrology. In this case, the guidance uses the 95th percentile capture rate of 1.7 inches for a 24-hour rainfall event and provides an option which allows site designers the maximum flexibility t select control practices appropriate for the site. Because new development and redevelopment projects of 5,000 sq. feet or greater are already subject to the EISA requirement, it is reasonable to establish these alternative standards for retention of stormwater on site to control stormwater discharges from these facilities through the MS4 to the maximum extent practicable.

Off-Site Mitigation and Incentive Program

In addition, the draft Permit proposes to require the District to establish an Offset and Fee-In-Lieu program. The program, as stated in the permit, shall include at a minimum: establishment of baseline requirements to be applied for mitigation projects, specific criteria for determining when full compliance with the performance standard cannot technically be met, and specific procedures for evaluating when an off-site mitigation is not feasible and in-lieu credits must be substituted to satisfy this requirement. While the draft Permit would not allow the Permittee to cause an increase in overall pollutant loadings from the System to impaired waters, the Offset and Fee-In-Lieu programs are expected to allow some flexibility while ensuring ongoing environmental improvements. In requiring these programs, it is EPA's express intent to encourage more brownfields development, and to avoid suburban sprawl. Redeveloping already degraded sites can reduce regional land consumption and minimize new land disturbance. Minimizing land disturbance and impervious cover is critical to maintaining watershed health.

The amount of land that is converted, or "disturbed," from undeveloped uses, such as forests and meadows, to developed uses, such as lawns, buildings, parking lots, and playing fields, significantly affects watershed health. Research now shows that the volume of runoff from highly compacted lawns is almost as high as that from paved surfaces.[12,13] This research indicates that lawns and other residential landscape features do not function, with regard to water, in the same way as non-degraded natural areas. In part, the difference arises because developing land in greenfield areas involves wholesale grading of the site and removal of topsoil, which can lead to severe erosion during construction, and soil compaction by heavy equipment.

Typically, there is little or no increase in net runoff when redeveloping underused properties such as vacant properties, brownfield sites, or greyfield sites, since new impervious cover replaces existing impervious cover. For example, an abandoned shopping center (a greyfield property) is often almost completely impervious cover and is already producing high volumes of runoff.[14] If this property were redeveloped, the net runoff would not increase since the property was already predominately impervious cover. In many cases, redevelopment of these properties breaks up or removes some portion of the impervious cover, converting it to pervious cover and allowing for some stormwater infiltration. In this case, redevelopment of these properties can produce a net improvement in regional water quality by decreasing total impervious area and its associated runoff. Redevelopment activities can also reduce regional land consumption. By building on underused, already degraded land, the pressure to convert previously undeveloped land is reduced. Numerous studies support the environmental benefits of redevelopment.

On the other hand, the purpose of these provisions is to disincentivize the use of alternatives unless really needed, but also to provide a financial foundation for implementation of public stormwater management projects, including off-site measures where those needs have been identified. With the wide array of management practices that can infiltrate, evapotranspire, and capture and use stormwater there should be very few situations where management of 1.2 or 1.7 inches (depending on whether an area is non-federal or federal) of stormwater, using combinations of those mechanisms is not possible. However, it is certainly reasonable to expect that a series of physical constraints may exist, particularly in redevelopment situations, making it infeasible to manage an entire inch of stormwater. Therefore this draft Permit would require the Permittee to create off-site mitigation and/or payment-in-lieu programs.

DC Retrofit Program

In recognition of the importance of retrofitting existing controls with more aggressive stormwater control measures, the Permit contains a requirement that the District establish a Retrofit Program to be organized by its three major watersheds – the Anacostia and Potomac Rivers and Rock Creek. The DC Retrofit Program uses as a starting point the same performance standard as required for non-federal areas within the District, but allows the District to take into

[12] Schueler, Tom. 1995. "The Peculiarities of Perviousness." *Watershed Protection Techniques*. 2.1.
[13] Schueler, Tom. 2000. "The Compaction of Urban Soil." *Techniques for Watershed Protection*. Ellicottt City, MD: Center for Watershed Protection.
[14] Sobel, Lee and Steven Bozdin. 2002. Greyfields into Goldfields: Dead Malls Become Living Neighborhoods. San Fransico, CA: Congress for New Urbanism.

consideration specific site considerations as possible justifications for setting a performance standard at something less than such non-federal standard.

The Permit also requires that the DC Retrofit Program manage runoff from 18,000,000 square feet of impervious surfaces over the Permit term. A minimum of 3,600,000 square feet of this objective must be in transportation rights-of-way. EPA has conveyed its intent to include a requirement in the new District MS4 permit comparable to the condition in the new permit for Montgomery County, Maryland that requires treatment for an additional 20% of impervious surface. An approximate 18,000,000 square foot requirement for the District would be comparable to the 20% treatment requirement for Montgomery County, taking into account the relative differences in undeveloped (pervious) space available in each jurisdiction with which to provide impervious surface treatment.

MONITORING AND ASSESSMENT OF CONTROLS:

The monitoring section of the draft Permit has been updated to reflect the fact that the District has already performed broad monitoring of a variety of parameters over the last two permit cycles. Today's draft Permit limits the monitoring requirements to those pollutants which have caused historical contamination of the District's receiving streams: E. Coli, total nitrogen, total phosphorous, total suspended solids, cadmium, copper, lead and zinc. Other additions and modifications to the draft MS4 Permit include reducing the number of monitoring stations to sample for the pollutants of concern based on previous monitoring under the rotating watershed approach with provisions for making changes to their existing program during the permit cycle; requiring complete implementation of the Hickey Run strategy as described in the District's Upgraded Stormwater Management Plan dated February 19, 2009; development of total maximum daily loading (TMDL) implementation plans for the Anacostia Trash TMDL and the Potomac River TMDL, as well as updating of the current TMDL implementation plans for the Anacostia River and Rock Creek Watersheds with required metrics for monitoring progress and compliance with the TMDLs. (Refer to the District Department of the Environment's website for a listing of the DC TMDLs on its webpage and the Anacostia River/Rock Creek TMDL Implementation Plans). An offset/ "net" improvement program for stormwater control measures in impaired waters; linking of TMDL implementation plans with Chesapeake Bay stormwater management goals and objectives of the District's Watershed Implementation Program (WIP); and providing a measure for achieving and calculating treatment impervious surfaces in the District based on the use of a wide range of stormwater controls.

Currently, TMDLs are under development for the Potomac River and for the Anacostia River (Refer to Potomac River Summit for a "Trash Free" River by 2013 and Potomac River Watershed Trash Treaty executed in 2005). Upon approval by EPA, the TMDL implementation plan(s) will be incorporated into the District's SWMP. DC is a member of the Treaty, which will ensure consistent coverage of MS4s in the Anacostia.

RELATIONSHIP TO NON-SOURCE POINT PROGRAM

Finally, it should be noted that the measures required by the Permit are separate from those projects identified in the District's EPA-approved Non-Point Source Management Plan as being funded wholly or partially by funds pursuant to section 319(h) of the Clean Water Act. These Permit requirements do not prohibit the use of 319(h) funds for other related activities that go beyond the requirements of this Permit, nor do they prohibit other sources of funding and/or other programs where legal or contractual requirements preclude direct use for stormwater permitting activities.

CONTACT/ DOCUMENT INFORMATION:

A copy of the draft documents which comprise the draft administrative record for the proposed draft Permit are available to the public for review at the Martin Luther King, Jr. Public Library which is located at 901 G Street, N.W. in Washington, D.C. An electronic copy of the proposed draft Permit and draft Fact Sheet are also available on the EPA Region III website. For additional information, please contact Mr. Garrison D. Miller, Mail Code 3WP41, NPDES Permits Branch, Office of Permits and Enforcement, EPA Region III, United States Environmental Protection Agency, 1650 Arch Street, Philadelphia, Pennsylvania 19103-2029.

Attachments:
1) Letters of Agreement (August 1, 2008)
2) Summary of Permit Changes

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:	)
Government of the District of Columbia, Municipal Separate Storm Sewer System, NPDES Permit No. DC 0000221	)

EXHIBIT 16

Comment Response Document
Regarding the Total Maximum Daily Load of Trash for the Anacostia River Watershed, Montgomery and Prince George's Counties, Maryland and The District of Columbia

The Maryland Department of the Environment (MDE) and The District Department of the Environment (DDOE) have conducted a public review of the proposed Total Maximum Daily Loads (TMDLs) of Trash for the Anacostia River Watershed, Montgomery and Prince George's Counties, Maryland and The District of Columbia (DC). The public comment period was open from April 19, 2010 through May 18, 2010. DDOE and MDE received seven sets of written comments. Certain comments were directed specifically to a particular jurisdiction, while others are applicable to both jurisdictions. Of the latter, either a single response is given jointly for both, or, where the responses of the jurisdictions differ, separate responses are provided for each.

Below is a list of commentors, their affiliation and the date comments were submitted. In the pages that follow, comments are categorized, summarized with responses from MDE and DDOE.

List of Commentors

Author	Affiliation	Date	Comment Number
Mike Smith	Anacostia Watershed Citizens Advisory Committee (AWCAC)	May 13, 2010	31 through 38
George S. Hawkins	District of Columbia Water and Sewer Authority (WASA)	May 14, 2010	1 through 3, 13
William Bullard	Navy/DoD REC Support	May 18, 2010	7 and 28
Paul Calamita and Lisa M. Ochsenhirt	Maryland Association of Municipal Wastewater Agencies, Inc. (MAMWA) and Storm Water Association of Maryland (SWAM)	May 18, 2010	8 through 10, 29, 30, 39, 43
Jon P. Devine, Jr., Chris Weiss and Rebecca Hammer	Natural Resources Defense Council (NRDC)/D.C. Environmental Network (DCEN)	May 18, 2010	11, 12, 18 through 22
Jennifer C. Chavez	Earthjustice	May 18, 2010	4, 5, 6, 16, 17, 40, 41
James R. Foster, Brent C. Bolin and Masaya Maeda	Anacostia Watershed Society	May 18, 2010	14, 15, 23, 24, 42
Laura Chamberlin	Alice Ferguson Foundation, Inc.	May 18, 2010	25 through 27

COMMENTS ON TMDL ENDPOINT

Comment #1
Submitted by: District of Columbia Water and Sewer Authority (WASA)
"Representatives of WASA and the District Department of Environment (DDOE) have met on several occasions in recent months to discuss WASA's concerns regarding DDOE's proposal to use 100 percent removal of the baseline trash load as the TMDL target. Specifically, WASA expressed its concern that the TMDL might be construed to require removal and/or control of 100 percent of the trash discharged from the combined sewer system (CSS), thereby effectively imposing a no-trash discharge standard for the CSS.

WASA's concern is based on both practical and legal considerations. The technology and resources simply do not exist to eliminate the discharge of all trash from the CSS as reflected in the alternatives analysis underlying WASA's Long Term CSO Control Plan (LTCP). The LTCP (which together with the underlying alternatives analysis are incorporated by reference in these comments) calls for the capture and control of 98 percent of the volume of combined sewer flows in the Anacostia watershed in the average year at a cost of approximately $1.7 billion.[1] The LTCP also provides for the control of solids and floatables in the CSO discharges remaining after implementation of the LTCP. While these controls, together with implementation of the Nine Minimum Controls in WASA's NPDES permit, are designed to capture and or control as much as 98 percent of the trash that otherwise would be discharged to the Anacostia River from the CSS, they will not eliminate such discharges. These controls were adopted and approved following detailed evaluation of a variety of alternatives (including complete separation of the CSS), and therefore, reflect the extent to which WASA can reasonably be expected to remove and/or control the discharge of trash from the CSS."

[1] The total estimated cost to implement the entire LTCP, including CSO discharges to the Anacostia, the Potomac, and Rock Creek, is approximately $2.4 billion.

Response #1
Section 303(d) of the Clean Water Act requires TMDLs to be established for impaired or threatened waters at a level necessary to implement the applicable water quality standards, with consideration of seasonal variations and a margin of safety. Similarly, federal regulations at 40 C.F.R. §130.7(c) require TMDLs to be developed at levels necessary to attain and maintain the applicable narrative and numerical water quality standards, with consideration of seasonal variations, critical conditions, and a margin of safety. TMDLs are to include wasteload allocations for point sources and load allocations for nonpoint sources.

As indicated, the endpoint for this TMDL is equal to 100 percent removal of the calculated baseline trash load in the Anacostia watershed. It is the best professional judgment of the Maryland Department of Environment (MDE) and the District Department of Environment (DDOE) that this TMDL endpoint will result in compliance with the narrative water quality criteria for trash in Maryland and the District, which describe unacceptable trash levels in subjective terms such as *objectionable*, *nuisance*, and *unsightly*.

Federal regulations require NPDES permit conditions be consistent with the assumptions and requirements of available WLAs. The WLAs will be considered by the permitting authority in a

manner that is consistent with the TMDL, permitting regulations, and the stormwater conveyance system of each permittee to provide objective and measurable basis for compliance.

Comment #2
Submitted by: WASA
"There is no basis for concluding that discharges of trash from the CSS must be eliminated in order to comply with the District's narrative water quality standard. To the contrary, the District Department of Health (DDOE's predecessor agency) has specifically found that the LTCP will, when implemented, comply with the District's numeric and narrative water quality standards.[2] Thus, the District has already determined that discharges of trash from the CSOs remaining after LTCP implementation will comply with its narrative water quality standard, and there is no legal basis for establishing a TMDL with a target or waste load allocation requiring greater removal and/or control of trash than will be achieved by the LTCP."

[2] See November 4, 2004 Memorandum from Caroline Burnett to Bruce Brennan titled "DOH Legal Sufficiency Review of the District of Columbia Certification of the Long Term Control Plan Submitted by WASA Pursuant to the 1994 CSO Policy", which is incorporated by reference in these comments.

Response #2
As stated in Response #1, the CWA and its implementing regulations require TMDLs to be developed to meet applicable water quality standards, which may be expressed as numeric water quality criteria or narrative criteria for the support of designated uses. The TMDL must be developed to meet the requirements of the applicable water quality standards – not the requirements of the LTCP. The TMDL target provided in this TMDL is designed to achieve the narrative water quality standards for trash in Maryland and the District. These standards, described in Section 1.4 of the TMDL Report, describe unacceptable levels of trash in subjective terms such as *objectionable*, *nuisance*, and *unsightly*. The District Department of Environment and the Maryland Department of Environment used their best professional judgment to determine that the narrative standards would be satisfied by 100% removal of the calculated baseline load.

MDE and DDOE agree the applicable water quality standards do not require zero (0) trash discharge as an endpoint. Neither the District nor Maryland have any water quality criteria that require the complete elimination of a given pollutant. Even extremely toxic substances have acceptable discharge limits. The TMDL endpoint was therefore set at 100 percent removal of the calculated baseline load, which, as explained in the TMDL Report, is not the same as zero trash in the water.

Comment #3
Submitted by: WASA
"In response to WASA's concerns, DDOE has verbally assured WASA that it is not DDOE's intent to require removal and/or control of 100 percent of the trash discharged from the CSS. Rather, DDOE has stated to us that it intends to establish waste load allocations for the CSS that reflect the predicted performance of the selected controls in the LTCP and implementation of the Nine Minimum Controls required by WASA's NPDES permit. Unfortunately, DDOE's intent, as expressed to WASA, is not memorialized in the TMDL document. Therefore, we request that DDOE modify the TMDL document to clearly state that the waste load allocations for the CSS

reflect the predicted performance of the selected controls in the LTCP and the Nine Minimum Controls and that WASA will be deemed to be in compliance with these allocations so long as it complies with the LTCP-derived performance standards and Nine Minimum Controls requirements in its NPDES permit.

I want to add that it would also be in the District's interest to also make clear in the TMDL document that it is not DDOE's intent to require removal and/or control of 100 percent of the trash discharged from the District's municipal separate storm sewer system (MS4). As is the case with the CSS, trash discharged to the Anacostia from the MS4 originates in runoff from streets and other impervious areas within the District that as a practical matter can not be controlled to eliminate the discharge of all trash. While measures such as catch basin cleaning, street sweeping, and other best management practices can be employed to reduce the amount of trash entering the MS4, as with the CSS, the technology and resources simply do not exist to eliminate the discharge of all trash from the MS4 given the size of the areas contributing storm water to the MS4 as weather pattern variables affecting the discharge of trash, including rainfall intensities, duration, frequencies, and spatial and time distribution."

Response #3
The TMDL endpoint does not impose a zero-discharge requirement for the District's CSS or any other permittee assigned a WLA in the TMDL. Rather than have WLAs equal to zero under all conditions, the draft WLAs are instead expressed as numeric (non-zero) estimates - based upon the best available data - of the actual trash loads that are generated and must therefore be captured, on average, by each permittee. For example, the baseline trash load (and therefore the WLA) for the District's CSS was calculated at 93,586 lbs/year.[1] To comply with this WLA, WASA must demonstrate that it has captured or removed an average of 93,586 pounds of trash consistent with the assumptions of the TMDL and the requirements of the NPDES program. This is very different from requiring zero trash discharge. Thus, the draft TMDL report explicitly states that, "a TMDL target equal to 100 percent removal of the baseline load is not the same as zero (0) trash in the waterway."[2] Please refer to Responses #1 and #2 for additional information.

[1] Draft TMDL Report, p.42, Table 23.
[2] Draft TMDL Report, p.39.

Comment #4
Submitted by: EarthJustice
"The applicable water quality standards, including designated uses and narrative, require trash to be eliminated from point and non-point sources. *See* Draft TMDL at 8-11. In particular, Washington, D.C. has adopted water quality standards requiring that "[t]he surface waters of the District shall be free from substances attributable to point or nonpoint sources discharged in amounts that . . . [s]ettle to form objectionable deposits [or] [f]loat as debris, scum, oil or other matter to form nuisances. . . ." 21 D.C.M.R. § 1104.3. In addition, Class A waters "shall be free of discharges of untreated sewage, litter and unmarked, submerged or partially submerged, man-made structures which would constitute a hazard to the users." *Id.* § 1104.1(a) and (b). Maryland water quality standards provide that Maryland waters "may not be polluted by… [a]ny material, including floating debris,… in amounts sufficient to… [b]e unsightly;… [c]reate a nuisance;

or… [i]nterfere directly or indirectly with designated uses…." COMAR § 26.08.02.03(B)(2). Because even small amounts of trash are detrimental to the applicable designated uses and cause impairments of the foregoing water quality standards, the trash TMDLs must be set at zero.

Response #4
The commentor would read terms such as "amounts that … form objectionable deposits" and "amounts that … form nuisances" out of 21 DCRM § 1104.3, "which would constitute a hazard to the users" out of 21 ECMR § 1104.1(a) and (b), and "in amounts sufficient to …." out of COMAR § 26.08.02.03(B)(2). These terms in the regulations must be assigned meaning. While an endpoint of zero would meet these narrative criteria, this does not mean that any endpoint other than zero would not achieve the narrative criteria. Indeed, the more logical reading of these terms is that they do not require an endpoint of zero. As explained in Response #2, there are no water quality criteria in the District or Maryland that require the complete elimination of a given pollutant. Even extremely toxic substances have acceptable discharge limits. The TMDL endpoint is therefore defined as 100 percent removal of the calculated baseline trash load, not zero trash in the water. In the best professional judgment of MDE and DDOE – the agencies responsible for developing and interpreting the applicable narrative criteria – this is an appropriate TMDL endpoint that, when achieved, will result in compliance with water quality standards in both jurisdictions. As set forth in Response # 6, MDE and DDOE's interpretation of their narrative water quality criteria for purposes of this TMDL is consistent with applicable EPA guidance.

Comment #5
Submitted by: EarthJustice
"In addition to the CWA and state water quality standards, these Trash TMDLs must comply with EPA regulations governing TMDLs. Under those regulations, TMDLs are supposed to consist of the "sum of the individual [wasteload allocations] for point sources and [load allocations] for nonpoint sources and natural background." 40 C.F.R. § 130.2(i). Wasteload allocations and load allocations are defined as a "portion of a receiving water's loading capacity...," *id.* § 130.2(g) and (h), which is defined as "[t]he greatest amount of loading that a water can receive without violating water quality standards." *Id.* § 130.2(f). This formulation requires the TMDL allocations to be set equal to the highest amount of trash that can be discharged and still ensure compliance with water quality standards—*i.e.* zero. The draft "wasteload allocations" and "load allocations" in the draft TMDL are expressed as negative figures (reductions) that, collectively, are supposed to result in "100 percent removal of the baseline load." The problem with this approach is that there is no basis for concluding that even full compliance with the negative allocations proposed in the draft will result in 100 percent removal of trash from point and nonpoint source discharges into the Anacostia. In fact, the draft clearly concedes that the TMDL target "is not the same as zero (0) trash in the waterway." *Id.* Because it cannot be shown that any amount of trash can be discharged into the Anacostia and its tributaries while still ensuring compliance with water quality standards, the load allocations and wasteload allocations in the final TMDLs must be set at zero."

Response #5
Section 303(d)(1)(C) of the Clean Water Act requires loads "to be established at a level necessary to implement the applicable water quality standards". Federal regulations at 40 CFR 130.2(i) provide flexibility on how the TMDLs can be expressed in terms of "either mass per time, toxicity, or other appropriate measures." In this case, expression of the WLAs and LAs in terms of trash to be removed before it enters the waterbody is an appropriate measure. With respect to the commentor's point that the TMDL endpoint must be zero, see Response #4.

Comment #6
Submitted by: EarthJustice
"The draft TMDL claims that the applicable narrative criteria, which prohibits "objectionable, nuisance, and unsightly" trash is subjective, and cites a 1986 EPA guidance suggesting that a quantifiable threshold cannot be developed for such narrative standards. This decades-old document is directly refuted by EPA's own more recent guidance documents describing various methods for translating narrative criteria into appropriate numeric values. *See, e.g*. EPA Protocol for Developing Sediment TMDLs, EPA 841-B-99-004 (October 1999); and EPA, Developing Water Quality Criteria for Suspended and Bedded Sediments (SABs); Potential Approaches (Draft, August 2003). Although these guidance documents concern total suspended solids and not trash, the methods for translating narrative criteria based on aesthetic and other such factors into numeric limits are relevant to this trash TMDL. Thus, the fact that some of the applicable criteria are expressed in narrative form cannot excuse an unlawful approach to this Trash TMDL."

Response #6
MDE and DDOE's interpretation of the narrative water quality criterion for trash is consistent with EPA's *Quality Criteria for Water 1986* (known as the Gold Book). The recommended narrative criteria suggested by the Gold Book is consistent with the narrative criteria in both the District and Maryland. The Gold Book states with regard to aesthetic qualities that such "concepts may vary within the minds of individuals encountering the waterway" and that in such cases, narrative criteria are used because "a rationale for these qualities cannot be developed with quantifying definitions." Though more than 20 years old, the Gold Book section remains EPA's applicable guidance on this type of narrative water quality criteria. See EPA, *National Recommended Water Quality Criteria* (2009) (available at www.epa.gov/waterscience/criteria/wqctable/nrwc-2009.pdf) (citing narrative statement in the Gold Book with reference to aesthetic criteria).

EPA's Protocol for Developing Sediment TMDLs cited in Comment #6 - intended for sediment TMDLs only – provides various examples of methods for establishing sediment TMDLs consistent with narrative criteria, including user surveys, literature values, indicator relationships, and best professional judgment (BPJ). The guidance states: "It is important to note that this guidance document presents a suggested approach, but not the only approach to TMDL development." The guidance further states "it is sometimes infeasible to develop numeric targets based on the methods described above because adequate information is not available or relationships between designated uses and selected indicators are not well understood. In this case, it may be feasible to develop target values based on the best professional judgment of resource professionals involved in TMDL development."[1] In this TMDL, the narrative criteria

for trash and the associated TMDL endpoint were interpreted and developed using BPJ. Therefore, the TMDL is consistent with this guidance document to the extent it applies.

The second document referenced Comment #6, Developing Water Quality Criteria for Suspended and Bedded Sediments (SABs); Potential Approaches, is a draft document. Further, the draft document applies to criteria development, not TMDL development, and applies strictly to sediment, not trash. Finally, the document focuses primarily on the protection of aquatic life, and to the extent it references the other uses, no specific guidance is provided. Therefore, the TMDL is consistent with the EPA's applicable guidance and is not inconsistent with the two documents cited by the commentor.

[1] Protocol for Developing Sediment TMDLs, p.4-21

Comment #7
Submitted by: Department of Defense, Regional Environmental Coordinator
"We recognize the difficulty in developing a TMDL to address an impairment for a narrative standard. In this instance, the narrative criteria in both jurisdictions describe unacceptable levels of trash in subjective terms such as objectionable, nuisance, and unsightly. The TMDL does not try to determine some quantity of trash that could be discharged to the Anacostia River before being deemed by the general public as objectionable. Rather the approach is to remove all sources of trash entering the Anacostia, expressed as lbs removed. In effect, the TMDL becomes a goal of zero trash in the Anacostia. While this is a worthy goal, from a science based standpoint zero trash in the Anacostia is not necessary to insure the health of aquatic biota or humans, or the designated use of the river….Therefore, we recommend that the TMDL be revised to make it explicitly clear the stated WLAs and the zero trash condition in the Anacostia are goals and not enforceable strictly as a numeric standard."

Response #7
See Response #3. The TMDL endpoint is not the same as zero trash in the water. This is made explicitly clear in the TMDL report.

Comment #8
Submitted by: Maryland Association of Municipal Wastewater Agencies, Inc. (MAMWA) and the Stormwater Association of Maryland (SWAM)
"Maryland's Narrative Water Quality Standards Do Not Require Zero Trash. MDE, DCDOE and several co-authors have written the Draft Trash TMDL to require dischargers to remove (or prevent the introduction of) 100% of the baseline load of trash annually discharged into the Anacostia. MDE and DCDOE assert that this level of reduction will bring the Anacostia into compliance with Maryland's and D.C.'s water quality standards.

MAMWA and SWAM disagree that 100% removal (or prevention) is necessary for water quality standards compliance. Furthermore, to the extent that MDE may be inclined to use this approach to develop future TMDLs for other parts of the state, MAMWA and SWAM strongly object. No water quality standard requires zero amounts of any pollutant. The standards recognize that pollutants, even toxic pollutants, will occur in certain amounts and are appropriately regulated at threshold levels of impact/effect. Trash/debris is and should be no different.

Maryland's narrative water quality standards, which would apply to discharges of trash and debris are, in relevant part, as follows:

B. General Water Quality Criteria. The waters of this State may not be polluted by:

(1) Substances attributable to sewage, industrial waste, or other waste that will settle to form sludge deposits that:

(a) Are **unsightly**, putrescent, or odorous, and create a **nuisance**, or

(b) Interfere directly or indirectly with designated uses;

(2) Any material, including floating debris, oil, grease, scum, sludge, and other floating materials attributable to sewage, industrial waste, or other waste **in amounts sufficient to**:

(a) Be **unsightly**;

(b) Produce taste or odor;

(c) Change the existing color to produce **objectionable** color for aesthetic purposes;

(d) Create a nuisance; or

(e) Interfere directly or indirectly with designated uses…

Maryland's water quality standards for trash and debris are narrative and subjective (as evidenced by the bolded terms above). They do not state that "no" or "none" of substances such as trash are permissible. It is only when the amount of trash in a water body reaches a threshold amount that becomes "unsightly," "objectionable," etc. that a discharge is problematic per the standard.

MDE and DCDOE acknowledge the fact that the water quality standards do not require a 100% removal/prevention target in the Draft Trash TMDL text ("…there might be a quantity of trash that could be discharged to the Anacostia River before being deemed by the general public as objectionable…"). Yet, MDE and DCDOE refuse to calculate that amount and establish a more achievable target, despite the fact that a target of less than 100% would comply with standards: "Whatever that level might be, the District and Maryland have concluded that removal of 100 percent of the baseline load would achieve the applicable narrative water quality criteria. Removal of 100 percent of the baseline load also would be sufficient to avoid interference with designated uses." Translated, MDE and DCDOE have admitted in the document that they are requiring removal (or prevention) at levels that are higher than those needed to meet water quality standards. MAMWA and SWAM object to this approach, particularly in light of the operational and financial difficulty involved in attempting to achieve the TMDL target. Localities can sweep streets and clean catch basins at reasonable frequencies to reduce discharges of trash, but they cannot reasonably prevent any discharge of trash. Moreover, localities cannot patrol every mile of shore line to ensure that people are not throwing trash directly into the water. Localities certainly cannot intercept trash that blows or runs off of private property before it reaches a waterbody.

In conclusion, Maryland's water quality standards do not require that Maryland's waters are entirely free of an annual average amount of trash. This is simply not achievable, and MDE's decision to go to such an extreme is unwarranted."

Response #8
See Responses #1, 2 and 4. To the extent that the commentor states that the TMDL is more stringent than minimally necessary to achieve the applicable water quality standards, that would be consistent with inclusion of a margin of safety.

Comment #9
Submitted by: MAMWA and SWAM
"MDE's Mandate That MS4 Dischargers Remove 100% of the Baseline Trash Load Goes Beyond MEP. Section 402(p)(3)(B) of the Clean Water Act requires that permits for municipal storm sewers "…require controls to reduce the discharge of pollutants to the **maximum extent practicable**…". MS4s must have programs in place that control the discharge of pollutants from their systems to the maximum extent practicable (MEP). This is the legal compliance standard, and it is implemented by iterative best management practices (BMPs) that are meant to improve the MS4's performance over time and based upon adaptive management.

MDE's proposal to require removal (or prevention) of 100% of the average annual trash baseline load is not consistent with the MEP standard. It is simply not practicable for an MS4 locality to remove (or prevent) trash at this level. As noted above, much of the trash/debris in a waterbody is introduced by sources over which localities have little to no control. This does not mean that localities are unwilling to take reasonable steps to keep trash and debris out of the waters in their communities—they are often eager to do so--, but asking an economically stressed community to remove (or prevent) 100% of the average amount of trash in a river is unreasonable and beyond MEP."

Response #9
Section 303(d) of the Clean Water Act requires TMDLs to be established for impaired or threatened waters at a level necessary to implement the applicable water quality standards, with consideration of seasonal variations and a margin of safety. Federal regulations at 40 C.F.R. §130.7(c) track the statute and require TMDLs to be developed at levels necessary to attain and maintain the applicable narrative and numerical water quality standards, with consideration of seasonal variations, critical conditions, and a margin of safety. TMDLs are to include wasteload allocations for each point source and load allocations for nonpoint sources.

Neither the CWA nor EPA's implementing regulations require the state or EPA to consider the costs or the technology required to implement the TMDL when establishing the TMDL at a level necessary to implement the applicable water quality standards. In the best professional judgment of MDE and DDOE, the agencies responsible for developing and interpreting the narrative criteria for trash, 100 percent removal of the baseline trash load is an appropriate TMDL endpoint that, when achieved, is expected to result in compliance with water quality standards in both jurisdictions.

Maximum extent practicable (MEP) is a permitting standard required for permits issued to municipal separate storm sewer systems (MS4s), pursuant to section 402(p)(3)(B)(iii) of the Clean Water Act, 33 U.S.C. § 1412(p)(3)(B)(iii). As explained in the Preamble to EPA's Phase II stormwater regulations, NPDES permits for MS4 systems must, at a minimum, require the operator to develop, implement, and enforce a stormwater management program designed to

reduce the discharge of pollutants from a regulated system to satisfy the appropriate water quality requirements of the Clean Water Act. Implementing the applicable water quality requirements of the CWA "recognizes the Agency's specific determination under the [Act] of the need to achieve reasonable further progress toward attainment of water quality standards according to the iterative BMP process, as well as the determination that State or EPA officials who establish TMDLs could allocate waste loads to MS4s as they would to other point sources." See 64 Fed. Reg. 68722, 68752-53 (Dec. 8, 1999).

Comment #10
Submitted by: MAMWA and SWAM
"The 100% Trash Removal Target Sets Up Affected Communities to Fail and Opens the Door To Citizen Litigant Control Over Trash Reduction Programs. MAMWA and SWAM are concerned that imposing a 100% removal (or prevention) requirement from the outset, before vetting trash reduction programs to see what level of reduction is realistically attainable, will set up affected communities to fail. That inevitable failure will be met with lawsuits, with litigants seeking attorneys' fees and, more importantly, control over local storm water programs.

In order to prevent this from happening, MDE should impose a much lower trash removal (or prevention) target, and should identify it as the maximum practical reduction for the foreseeable future. MDE could retain the option to increase the target in the future based upon the actual progress achieved over time."

Response #10
See Response #9.

Comment #11
Submitted by: Natural Resources Defense Council (NRDC) and the District of Columbia Environmental Network (DCEN)
"Under EPA regulations, a TMDL is supposed to be "the sum of the individual wasteload allocations for point sources and load allocations for nonpoint sources and natural background." In turn, both wasteload allocations and load allocations are supposed to consist of "portions of a receiving water's loading capacity," and "loading capacity" is defined as "the *greatest* amount of loading that a water can receive without violating water quality standards." In other words, the rules require this TMDL to be expressed as a number that represents the highest amount of trash pollution that is allowed to enter the river in compliance with water quality standards. There is no such number in the TMDL document. To the contrary, the TMDL document clearly states that the "TMDL target equal to 100 percent removal of the baseline load is not the same as zero (0) trash in the waterway," and does not otherwise attempt to quantify the amount of trash that could be added to the Anacostia without violating water quality standards.

At various places in the draft, the document implicitly acknowledges that this approach is not truly a TMDL, insofar as it describes what a TMDL is *supposed* to be:

- "A TMDL establishes the amount of a pollutant that a waterbody can assimilate without exceeding its water quality standard for that pollutant."
- "A TMDL is the total amount of pollutant that can be assimilated by the receiving waterbody while still achieving water quality standards or goals."

- "TMDLs represent an attempt to quantify the pollutant load that can be present in a waterbody and still ensure attainment and maintenance of water quality standards."

These restatements of the law are consistent with the regulations quoted above and, critically, with the plain meaning of the phrase "total *maximum* daily *load*" in the Clean Water Act. Congress's use of that term – which clearly contemplates some upper limit on loading – cannot be ignored. As you well know, this provision of the Clean Water Act has been the subject of recent litigation, with the U.S. Court of Appeals for the D.C. Circuit deciding a case in 2006 excoriating EPA for interpreting "daily" not to mean "daily" within the TMDL program; it is hard to imagine that the court would be inclined to accept a reading where a "maximum . . . load" does not include a maximum load."

Response #11
See Response # 4 and 5.

Comment #12
Submitted by: NRDC and DCEN
"The solution is obvious – set a TMDL equivalent to zero. To comply with the requirements for an approvable TMDL and to avoid the problems created by over-reliance on the effort to monitor trash discharges to the watershed, the draft TMDL should be revised to specify a maximum loading rate at or near zero. As discussed below, complying with water quality standards means effectively eliminating garbage from permittees' discharges.

In the District, the Anacostia River and all but two of its tributaries are considered "Class A" waters, which "*shall be free of discharges of* untreated sewage, *litter* and unmarked, submerged or partially submerged, man-made structures which would constitute a hazard to the users." In addition, all of "the surface waters of the District shall be free from substances attributable to point or nonpoint sources discharged in amounts that . . . [s]ettle to form objectionable deposits [or] [f]loat as debris, scum, oil or other matter to form nuisances. . . ."

In Maryland, all waters are designated at least as "Use I" waters, which means they must protect several basic uses, including water contact recreation. In addition, Maryland has a generally applicable narrative water quality criterion which provides that "the waters of this State may not be polluted by . . . [a]ny material, including floating debris, . . . in amounts sufficient to . . . [b]e unsightly; . . . [c]reate a nuisance; or . . . interfere directly or indirectly with designated uses. . . ." These jurisdictions' standards require virtually all trash to be removed from the watershed by the TMDL. Maryland law demands that trash be eliminated so as to ensure that conditions are not unsightly or do not interfere with water contact recreation, which common sense and experience tell us will happen when even a very small amount of trash is found in the water. The District requires that waters be free of litter discharges. Accordingly, we believe that an adequate TMDL will need to effectively eliminate trash discharges anywhere in the watershed.

Such an approach would be consistent with the way that the State and regional water quality boards that developed the trash TMDL for the Los Angeles River watershed handled their trash target. Specifically, "despite many objections from affected municipalities, the Trash TMDL set a numeric target of zero trash as 'even a single piece of trash can be detrimental, and no level of

trash is acceptable in waters of the state.' Moreover, in light of the unique nature of trash pollution, a zero TMDL would serve water quality goals even without a detailed analysis of what amount of pollution could be acceptable; as the court in California noted in reviewing the Los Angeles River TMDL:

> *the evidence amply shows that because of the nature of trash, including Styrofoam containers and other materials that are undiluted by water, in contrast to chemical pollutants, and the dangers to wildlife of even small amounts of trash, an assimilative capacity study would be difficult to conduct and of little value at the outset. For instance, given the ill effects of trash in a water body it is unlikely such a study would determine the Los Angeles River may be loaded with a certain percentage of trash without affecting beneficial uses, particularly since a TMDL must include a margin of safety that "takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality." (33 U.S.C. § 1313(d)(1)(C).) In any event, the Trash TMDL requires the Regional Board to reconsider the zero trash target after a 50 percent reduction of trash is achieved, and no party suggests a trash reduction of at least 50 percent is unwarranted or unattainable. Because of this escape hatch, compliance with a zero trash target may never actually be mandated. The Water Boards' decision not to conduct or require an assimilative capacity study is within their expertise, not the court's, and we defer to them on the issue.*

We strongly encourage that the draft TMDL be revised to set a zero loading target. The good work that has gone into the effort to estimate current loadings to the river can still be useful without being the lone basis for the obligations to clean up the river; for instance, if replicated, it could help determine if jurisdictions are on track to achieve their goals.

Response #12
See Response # 4

COMMENTS ON BASELINE LOAD & TMDL ALLOCATIONS

Comment #13
Submitted by: WASA
"Clarify in the TMDL that the annual load for the combined sewer system is based upon the LTCP average year, defined as the average of the loads for the years 1988, 1989 and 1990. This will remove uncertainty regarding the climatic basis for establishing the baseline load.

Clarify in the TMDL that evaluation of removal of baseline trash load for the combined sewer system is based on the capture provided by the LTCP. The capture provided by the LTCP is the difference in volume of overflows between the pre-LTCP and the predicted volume of overflows remaining after completion of the LTCP.

Indicate in the TMDL that the calculated pound per day of trash removed is based on the annual load divided by 365 days. This is important because CSOs are episodic events driven by rainfall and trash loading will not occur from this source when there is no rainfall."

Response #13
WASA exhibit 1 suggests adding average year language to Section 1.5 and 5.1. It is more appropriate in 5.2.2. Based upon these comments, several sections of the TMDL report have been revised, and will read as follows:

Section 5.1

The baseline load is defined as the annual trash load calculated from monitoring data obtained through storm drain and CSO monitoring and in-stream sampling. The baseline load represents a typical annual load. The numeric target is derived from the narrative water quality criteria and includes an explicit margin of safety (MOS).

Section 5.2.2

On the basis of the *District of Columbia Combined Sewer System Long Term Control Plan* (2002), the estimated CSO overflow volume in an average year is 1.282 billion gallons. It is assumed that the current condition of the combined sewer system represents the Scenario with Phase I controls and pump station rehabilitation. The annual average overflow volume in the Upper Anacostia CSO drainage area is 854.81 million gallons, and in the Lower Anacostia CSO drainage area, it is 427.19 million gallons. Given the known trash loading rate (73 pounds per million gallons of overflow) and the average overflow volumes, the estimated baseline trash load from the District CSO system is 93,586 pounds per year. For the CSS, the annual load is the LTCP average year. This is the average of the loads for the years 1988, 1989 and 1990. Table 23 provides a summary of the baseline wasteload to be removed or captured from discharges from the CSS.

Section 5.3

TMDLs must be expressed in terms of a daily load. For this TMDL the calculated annual quantity of trash that must be removed was divided by 365 days to obtain the daily load. Compliance with these TMDLs will require the removal of 100 percent of the daily baseline trash load calculated as an average.

Additional Comments Submitted by DCWASA via Exhibit 1:

Executive Summary pg ix:

- Change “100 percent removal” to “100 percent removal or capture” – **Completed.**
- Change “baseline load is defined as the annual trash load calculated from monitoring data obtained through storm drain monitoring…” to “obtained through storm drain monitoring and combined sewer overflow (CSO)…” – **Completed.**
- Change “quantities of trash that must be removed or prevented from entering” to “trash that must be removed, captured or otherwise prevented from entering” – **Not changed**. Existing phrase is self-explanatory.

Executive Summary pg xi

- Change “100 percent removal” to “100 percent removal or capture” – **Not changed**. Capture is already included elsewhere.
- Add “performance standards established for the LTCP in the Blue Plains NPDES Permit” to the bulleted list – **Not changed**. Too specific and Blue Plains permit is already mentioned above and performance standards should be addressed through the permit, not in the TMDL.

Section 1.5

- Change "100 percent removal" to "100 percent removal or capture" – **Completed.**
- Add sentence about CSS capture provided in the LTCP and sentence about annual load of LTCP average year – **Not changed**. LTCP is discussed in Section 5.2.2, which includes additional changes based on WASA comments.
- Change "baseline load is defined as the annual trash load calculated from monitoring data obtained through storm drain monitoring…" to "obtained through storm drain monitoring and combined sewer overflow (CSO)…" – **Completed.**

Section 5.1

- Change "baseline load is defined as the annual trash load calculated from monitoring data obtained through storm drain monitoring…" to "obtained through storm drain monitoring and combined sewer overflow (CSO)…" – **Completed.**
- Add sentence about annual load of LTCP average year – **Not changed.** LTCP is discussed in Section 5.2.2, which includes additional changes based on WASA comments.

Section 5.2.2

- Change "a summary of the baseline wasteload to be removed from the CSO system" to "a summary of the baseline wasteload to be removed or captured from discharged from the CSS" – **Completed.** Section 5.2.2 was revised to reflect multiple comments from DCWASA. See Response to Comment 13.

Section 5.4

- Indicate that the critical condition for the CSS was previously determined to be the LTCP average year. – **Completed.** Sentence added "For the CSS, the critical condition is addressed through the hydrological variability of the three years (1988, 1989 and 1990) used to develop the LTCP."

Section 6

- Change "calculated as an average of the measured or estimated removal rate" to "calculated as an average of the measured or estimated removal or capture rate" – **Completed.**
- Add sentence about CSS capture provided in the LTCP – **Not changed.** Section 5.2.2 addresses this topic.

Section 6.4

- Add sentences about target load calculation for CSS and permit compliance. – **Not changed.** Target load calculation is addressed in Section 5.2.2. TMDL will not address permit compliance issues.

Comment #14
Submitted by: Anacostia Watershed Society
"It may be too difficult to measure the amount of grass clippings entering the Anacostia River. In order to measure the amount, a net with about 1" mesh may be installed. It may not be practical to monitor for grass clippings. In fact, the Anacostia Watershed Society (AWS) discontinued the use of 1" mesh net to capture trash. The grass clippings formed a filter that captured fine sediment particles and the net was almost completely clogged with sediment which backed up the stream water behind the trap.

Though measuring the weight of grass clippings may be impracticable, too much organic matter input into a waterbody could produce objectionable odor, color, and turbidity. When it decays in

the water it sucks up oxygen lowering dissolved oxygen and may impose negative impacts on aquatic animals. Thus, the trash TMDL should acknowledge the potential water quality impact posed by grass clippings and should mention the need of better management of lawns.

It may be difficult to enforce private property owners to collect grass clippings or educate them not to leave grass clippings on impervious surfaces where it is expected to be washed off; it is very practicable that public entities such as National Park Service or District Department of Transportation request their contractors and employees to collect grass clippings and bring it to composting facilities. Another suggestion is that after the mowing the contractor could collect clippings on impervious surfaces and properly spread it over the lawn area so that the clippings will not be washed away to stormwater drain system. Over time contractors will be educated and it could be a de facto standard to collect grass clippings even on private lands."

Response #14
Although organic matter such as grass clippings and leaves can be components of trash, organic matter was not considered in the calculations of the baseline trash because there was no reasonable method to distinguish between intentionally or accidentally deposited organic matter and naturally occurring organic matter. Control measures implemented to capture non-organic trash are assumed to also be effective at capturing organic matter; however because organic matter was not included in the baseline trash load calculations, any organic matter collected through implementation activities should not count towards the TMDL. Specific implementation measures and strategies to address man-made and/or organic trash loads will be addressed by the individual jurisdictions.

Comment #15
Submitted by: Anacostia Watershed Society
"We'd like to reiterate that neutrally buoyant trash pieces such as (especially small) food wrappers and cellophane should be addressed carefully. Practices that could capture these neutrally buoyant trash pieces, both small and large, should be used first. Only after those practices are strategically and carefully used, other low rated practices should be used."

Response #15
Neutrally buoyant trash was accounted for in the baseline point source load, since the point source trash was captured and counted before it reached a waterbody. Specific implementation measures and strategies to address trash loads will be addressed by the individual jurisdictions.

Comment #16
Submitted by: EarthJustice
"The draft TMDL states that waste load allocations for point sources address trash items that can travel through sewer systems while load allocations for nonpoint sources are assigned to "larger trash and debris that are attributed to activities such as dumping." The draft also suggests that smaller trash items entering along the tributaries and river are "presumed to be either a small part of the total trash load, or would eventually have been washed down a storm drain." However, there is no basis for broadly presuming that nonpoint source trash is only, or even mainly, attributable to the dumping of large items. In fact, all types and sizes of trash and debris make their way into streams from nonpoint areas. Although it is not clear whether or how these

statements affect the baseline estimates (and although TMDL allocations must in any case be set at zero), the final TMDL must be revised to eliminate this presumption and make clear that permits and other control measures required to comply with the final TMDLs cannot be limited by such a presumption."

Response #16
Without *a priori* knowledge of the origin of individual pieces of trash, broad assumptions were necessary in order to distinguish between the point and nonpoint sources of trash and avoid double counting when loading rates were extrapolated to the entire watershed. During the stream surveys smaller items were noted, but there was no way to establish their source. Because all land area in the watershed was assumed to contribute to the point source load and all stream miles were used in the calculation of the nonpoint source load, an individual piece of trash small enough to fit through the storm drain was assumed to have gone through the storm drain system for the purposes of establishing the loading rates. Although an individual piece of trash small enough to fit through the storm system may have actually arrived from a nonpoint source area, it cannot also be counted as part of the nonpoint source load because it would in effect be counted twice as all the land area was assumed to contribute to the point source load and all stream miles were assumed to contain a nonpoint source load. Similarly, larger items were attributed only to the non-point source load.

The distinction between point and nonpoint source trash types is necessary for the calculation of the loads, and does not imply that small pieces of trash are only attributable to point source loading or that all nonpoint source trash is attributable to dumping activities. This artificial distinction was made in order to avoid double counting during the calculation of the baseline point and nonpoint source loads and should not influence the implementation measures required to comply with the TMDL.

Comments #17
Submitted by: EarthJustice
"We appreciate the goal of attempting to quantify the amount of trash entering the Anacostia. However, ultimately the TMDLs cannot be based on estimates of baseline loads, for the reasons discussed in the prior section. Moreover, although it might be permissible to include specific load reduction goals that are based on estimates of current loading, the baseline loads contemplated in the draft document are extremely low compared to prior government estimates, including AWRP's and MWCOG's "Anacostia Watershed Trash Reduction Strategy" report. That report estimated that 20,000 tons of trash per year are discharged into the Anacostia. In stark contrast, the draft TMDLs include allocations totaling only 1,199,345 pounds or approximately 600 tons per year (1,199,345 lbs. ÷ 2,000 = 600 tons). *See* Draft TMDLs at Tables E1-E8. This figure appears preposterous in light of the statement in the draft TMDL showing the that WASA Floatables program alone recovers ~400 tons of trash per year. Draft TMDL at 49…

….even if the final TMDL is revised to include legally required allocations equal to zero (and by law it must be), any load reduction goals based on estimates of the current baseline loads must be revised in order to have any chance of being effective. At an absolute minimum, the final document must compare its estimate of baseline loads to prior estimates and explain not only why those estimates were wrong, but also how it can be reasonably determined that the extremely smaller baseline underlying the draft TMDL is a more accurate and reliable estimate."

Response #17
Although often cited, the estimate that 20,000 tons of trash are discharged into the Anacostia per year is not based on data from the Anacostia Watershed. This value was noted to be "generally accepted" because it has been often repeated and cited; however, this is only the case because until now there has never been a comprehensive effort to monitor the actual trash loading in the Anacostia Watershed.

The value of 20,000 tons was derived by extrapolating from an Austin, Texas study of a 50-acre downtown area where 90 high efficiency storm drain filters were installed. According to the Prince George's County report that originally developed the estimate for the Anacostia River Watershed, Austin collected 1,000 lbs of trash per week, which were noted as "primarily litter."[1] Prince George's County used 1000 lbs/50 acres/week and extrapolated this to the urban areas of the Maryland portion of the Anacostia Watershed (38,994 acres) to get 390 tons of trash generation weekly, which equals 20,280 tons per year. The details of the Austin, Texas study were not provided, and the characterization of the study area was not discussed. It is unknown if this 50-acre study area was chosen because it represents a typical urbanized area in Austin, or if it was chosen because it represents an area of exceptionally high trash generation. Texas has a different rainfall regime and different topography and geology from the Anacostia watershed. It is not clear whether the study collected trash once a week for several weeks, several seasons, or just a few times, and there is no discussion of how rainfall events affected monitoring. Additionally, although it was noted that the trash collected was primarily litter, this does not quantify what portion was organic matter. MDE and DDOE feel that an estimate of the baseline load of trash based on recent monitoring data from numerous monitoring locations within the Anacostia Watershed is more credible than relying on a gross estimate extrapolated from 20-year old monitoring data from one location in Austin, Texas.

As indicated in the TMDL the loading rates across jurisdictions are highly variable from location to location and among land uses. Assuming the downtown area of Austin (presumably high density, paved, commercial and industrial land) is similar to the heavily urbanized portions of the District, the point source loading rates for industrial, commercial, institutional and public facilities compare favorably. Monitoring data from the Anacostia River watershed indicated that loading rates for other land uses, even in urbanized areas are consistently lower in the District, indicating that the Austin, Texas data may be a poor predictor of overall watershed loading for the Anacostia. Additionally, sampling data from Maryland indicate that loading rates are consistently even lower than the District loading rates for almost all land uses.

[1]Prince George's County Department of Environmental Resources. 1994. Anacostia River Waterfront Environmental Restoration and Economic Revitalization Floatable Trash Abatement Study. Requested by The Stakeholders of the Anacostia River.

Comment #18
Submitted by: NRDC and DCEN
"Even if one were to accept that a TMDL could lawfully be structured as a degree of estimated baseline pollution removed (a premise we reject), the integrity of the TMDL would depend on the accuracy of the baseline estimate. This is true because the draft seems to contemplate that dischargers will be in compliance with the document's wasteload allocations if they show that

they have taken out at least as much trash as their goals (pegged to their estimated "baseline" discharge), even if they still have significant trash in their discharge. There will be no maximum limit on the amount of trash that they can discharge. The only way that this scheme even approaches a zero discharge standard is if the surveys that were done were precisely correct. For the reasons discussed below, we have significant concerns with relying on the precision of the trash surveys conducted.

First, the surveys are based on snapshots of trash discharges combined with information about regional land uses. For both Maryland and the District, as we understand the effort, a total of 18 stormwater outfalls were monitored. Following these surveys, areas throughout the watershed were assigned trash loading rates based on the land use type draining to the MS4, on the assumption that areas with similar land uses to those areas that were monitored would have similar loading rates. While we do not mean to understate the effort involved with monitoring 18 sites – indeed, it strikes us as difficult and time-consuming – we note that it only covered a miniscule fraction of the Anacostia watershed's MS4 outfalls, of which there are 3,225. As such, the potential variability of loading rates from the 99.4 percent of the outfalls that were not monitored is an important reason to be concerned that the surveys do not accurately reflect actual trash pollution rates."

Response #18
It is unreasonable to expect that monitoring could be conducted at every single MS4 outfall in the watershed or even a majority. Thus, monitoring was conducted at a subset of outfalls. While there is certainly variability between loading rates at individual outfalls, time and funding limit the extent to which over 3,000 outfalls can be monitored. Attempts were made to select locations that represented specific land use drainage areas. This was done to avoid creating one mixed use loading rate that would be applied to the entire watershed, which would likely have more deviation from actual trash loading rates across the watershed than deriving land use specific loading rates. Monitoring data incorporated into the TMDL constitutes the best available data for the Anacostia Watershed.

Comment #19
Submitted by: NRDC and DCEN
"Second, the design of the monitoring effort itself appears to be subject to under-counting trash items. For instance, in DC, the draft document explains that "it was determined that the large amount of organic debris moving through the storm sewer system during the fall and winter would overwhelm the trash traps; therefore, monitoring was not conducted during those seasons." In Maryland, "to reduce the likelihood of major blowouts during larger, more intense rainfall events, the six trash fences had a maximum operational/working height of approximately 2 feet above the invert of the channel." In both DC and Maryland, smaller trash items could pass through the traps, as the DC effort used one-inch diameter mesh, and the MWCOG effort used two-inch fencing plus some additional sub-sampling using a one-inch sub-sampler.

Response #19
Trash trap loading rates were developed based on an annual average per inch of rain, not a total count for the year, so suspending monitoring during the fall and winter should not inherently bias the average trash load towards lower numbers.

The leaf litter volume was high enough that leaving the traps in place through a fall or winter storm would be to risk a blowout. If the traps blowout, trash cannot be counted accurately anyway. Attempting to count whatever trash remains trapped after a blowout of the system would certainly underestimate the total amount of trash for that collection period, artificially lowering the average loading rate. The same rationale explains why the trash fences in Maryland only had an operational height of 2 feet above the invert of the channel. Organic matter was an overwhelming majority of what was captured in the Maryland trash traps and nets, regardless of season, but was especially problematic in the fall and winter. Even in April, the total amount of materials collected from the Ray Road trash nets in Maryland was 1,692 pounds. Only 62 pounds were actually trash, and the remaining 1,630 pounds were organic and inorganic debris. There were no reports in the data collected from Maryland indicating that trash had overtopped the trash fences and was therefore undercounted.

With regard to under sampling of small items, initially subsamplers with 1" diameter mesh size were installed on the trash traps in an attempt to collect smaller trash items. It was quickly discovered that the organic materials became entrapped in the 1" opening and collected sediments behind the trap. As the traps became clogged with sediment, they caused a backup of water upstream. During monitoring, items smaller than the mesh openings were consistently identified, indicating that the high organic material content was creating a finer filter through which small trash items could not easily pass.

Comment #20
Submitted by: NRDC and DCEN
"Third, some of the loading rates for different land uses give us pause. For example, in Maryland, the low-density residential rate was based on a single site, and was set at 1.195 pounds per acre per year, whereas the low-density loading rate in the District was 4.52 lb/ac/yr; no explanation is offered for a 278% higher loading rate in the District. Similarly, for Maryland, loading rates for commercial, industrial, and institutional areas are based on a single site and set at 2.22 lb/ac/yr, whereas the District has far higher rates – 22.08 lb/ac/yr for commercial areas, 18.90 lb/ac/yr for industrial areas, and 25.45 lb/ac/yr for institutional areas. These dramatic differences are not discussed. Finally, Maryland's extractive, transportation, and bare ground areas' loading rates were not monitored and are based on the commercial/industrial/institutional rate of 2.22 lb/ac/yr, even though the transportation and similar areas' loading rate in the District is 31.12 lb/ac/yr."

Response #20
The higher loading rates in the District than in Maryland are likely explained by the inherent differences in the jurisdictions. In cases where Maryland's point source monitoring did not adequately represent a specific land use, the District's data were used. The land uses where District data were substituted were limited to the land uses that could reasonably be assumed to be similar between the jurisdictions. These included open land, forest and agriculture. Maryland's transportation, extractive and bare ground land uses were considered to have a loading rate similar to the commercial, institutional and industrial rate in Maryland because these land uses were frequently associated with each other spatially within the watershed.

Additionally with regard to the differences in loading rates between transportation land use in Maryland and the District, the jurisdictions define transportation differently in the geospatial data. In the District, transportation land use represents roadways, while in Maryland roadways are not separated out from the adjoining land uses. The Maryland transportation land use represents transportation facilities, such as airports and train stations. These facilities likely more closely resemble the commercial, industrial and institutional land uses in Maryland than they do the District roadway land use.

Comment #21
Submitted by: NRDC and DCEN
"Fourth, the total estimate of trash being added to the watershed is significantly lower than the one prior estimate that was widely publicized. It was previously reported that an estimated 20,000 tons of trash enter the river annually. Recently, staff involved with the development of the draft TMDL indicated that this prior estimate was based on an estimate from outside our region, and of uncertain reliability. Maybe so – however, it bears reflecting that this prior, generally accepted, estimate is 3,228% higher than the estimate contained in the Draft TMDL, which is approximately 601 tons/year. In a similar vein, the Draft TMDL states that the "Anacostia River Floatable Debris Removal Program, operated by the District's Water and Sewer Authority (DC-WASA) in cooperation with the U.S. Army Corps of Engineers, removes about 400 tons of trash per year from the Anacostia River (DC WASA 2009). Skimmer boats collect floatable debris from the Anacostia Mainstem." It is hard to believe that this single program on the mainstem of the river removes 2/3 of the trash that annually enters the entire watershed."

Response #21
If the commentor is concerned over a lack of sufficient data points (as expressed in Comment #18) then the study using one data point from Austin TX should be considered equally unreliable, if not more so,. As explained in Response #17, the only reason it is "generally accepted" that 20,000 tons of trash are deposited in the Anacostia Watershed annually is that there has never been a systematic collection of data specific to this watershed. MDE and DDOE feel that it is more accurate to rely on the results of monitoring data collected from numerous locations within the actual Anacostia River watershed, rather than data from one location in Austin, TX that were collected 20 years ago.

Clement Oguns, Sewer Maintenance Supervisor for DC WASA, indicated that 400 tons is the annual collection goal for the Anacostia River Floatables Debris Program. The actual amount collected annually varies based largely on precipitation conditions. Mr. Oguns indicated that the total weight of materials collected each year includes trash, as well as organic material, such as logs, leaves, grass or any other floating materials. The individual components collected are not inventoried for data analysis, but in all the DC WASA *Quarterly Operations Reports for Combined Sewer Outfall Facilities* from 2008-2010, materials collected by the program are listed as bottles, cans, natural debris and plastics.

During the CSO Fresh Creek trash collection pilot program, it was noted that 90 percent of the material captured during the CSO monitoring was organic matter. Similarly, materials collected from the MS4 storm drains also consistently indicated an equally high proportion of organic

matter. It would not be unreasonable to expect that direct collection of floating material from the river would also contain a high portion of organic matter. Organic matter was not included in the trash loading rates for the TMDL. If organic matter is excluded from the calculations of materials collected through the Anacostia River Floatable Debris Program, it is unlikely that such a large proportion of the trash that annually enters the river is being collected through this activity.

Comment #22
Submitted by NRDC and DCEN
"Finally, there would seem to be a number of complications involved with establishing a TMDL (and component load and wasteload allocations) that is based on the "baseline" loading weights measured during the monitoring efforts.

1. If population or precipitation rates increase in the watershed, and that increase brings more trash into the river, the compliance target apparently will not change, because the target is based on the current estimated loadings.
2. It might provide an incentive to ignore the non-weighty trash.
3. It is going to be difficult, if this TMDL is implemented, for permitted systems and pollution control officials to know what amount of trash is reduced. It is one thing to have a trash trap at the end of a pipe, since you can capture and weigh the trash. But it will be much harder to quantify the weight of reduced trash if a municipality improves its street sweeping or litter education programs. A limit on the discharge rate, by contrast, can be monitored at the point of discharge."

Response #22
MDE and DDOE take note of the concerns stated by the commentor. The TMDL is based on the monitoring conducted over several months/seasons and captures a range of rainfalls in the region. This represents an average year condition. It is possible that the trash loading may vary year to year depending on rainfall and other factors. The TMDL therefore requires 100 percent removal of the baseline, with compliance based upon a multi-year average of total trash removal to account for year to year variability in trash loadings.

MDE and DDOE also understand the challenge in evaluating controls and measuring success during the implementation of the TMDL. However, the issues such as weighty vs. non-weighty trash and evaluation of institutional controls are beyond the scope of the TMDL and should be addressed through TMDL implementation plans. It is expected that specific permits would address baseline estimates, if needed, through monitoring and other means, and provide guidance for evaluating control measures, including both structural and non-structural or institutional controls.

Finally, if the amount of trash entering the Anacostia River increases due to population changes or other factors, or if the long-term average precipitation changes substantially, the TMDL should be revised to reflect the new rate of removal necessary to comply with the applicable narrative water quality standards.

COMMENTS ON TMDL IMPLEMENTATION

Comment #23
Submitted by: Anacostia Watershed Society
"LID installation should be considered as one of the most effective trash reduction practices as a along term solution. One important fact is that stormwater runoff carries trash to a water body. If stormwater runoff could be significantly reduced or eliminated altogether, most trash would remain on the land to be picked up later. Despite having a severe snow storm in February 2010, there was no trash found during that month in the Nash Run Trash Trap.

The trash TMDL and its to-be-developed implementation plan should clearly mention the importance of stormwater runoff reduction and that LID has to be used to reduce the runoff that carries trash into the stream. The LID practices may be most effective to keep small pieces of trash out of the streams."

Response #23
MDE and DDOE generally agree that LID is a very cost effective best management practice that reduces runoff and pollutant loads from urban and suburban land. We also recognize the importance of stormwater runoff reduction in reducing the amount of trash conveyed to a stream. Jurisdictions will evaluate all available options to effectively control trash as well as other pollutants for the development of the implementation plans.

Comment #24
Submitted by: Anacostia Watershed Society
"In order that the implementation plan should be developed correctly, the trash TMDL should mention that implementation practices have to be rated or prioritized from the most favored practices to least favored practices. For example, the trash boom should be rated as a least favored technique though it is still a very important practice. The trash boom can collect only floatables such as empty and capped plastic bottles, and glass bottles. However, there are so many neutrally buoyant trash pieces such as food wrappers, cellophane, plastic bags, etc that will be rarely captured by the trash boom. Technologies that can capture trash as close to its source as possible and that can capture small pieces of trash should be rated high."

Response #24
The TMDL document lists a range of controls or practices that can be considered for implementing the TMDL. The document does not prioritize such practices. Because urban and suburban lands could have a number of variables or constraints, a single practice or control may not be applicable for all places or conditions. Jurisdictions will consider all available technologies or control practices for the development of the implementation plan that will be cost effective as well as meet the goals of the TMDL. MDE and DDOE also agree with the commentor that **it is preferable that** trash be captured as close to its source as possible and that controls be designed to capture large as well as small pieces of trash.

Comment #25
Submitted by: Alice Ferguson Foundation
"Just as the development of the TMDL was collaborative and participatory with community stakeholders, we also hope that the development of the implementation plan for the TMDL will be participatory and multi-jurisdictional. Since each jurisdiction that is within the Anacostia Watershed; Prince George's County, Montgomery County, and the District of Columbia, is responsible for development of separate implementation plans it is possible that three completely unique plans will be developed with varying levels of effectiveness and enforceability. With the river flowing through each of the jurisdiction it seems logically that collaboration on implementation continue to the fullest extent possible. Without collaboration, one jurisdiction may be placed with the burden of another's ineffectiveness. Additionally, with such diverse stakeholders throughout the region who will be effective partners in implementation it will be crucial to maintain continued involvement from all stakeholders in order to maintain momentum towards trash reduction on the Anacostia."

Response #25
Jurisdictions will develop specific TMDL implementation plans as part of their permit requirements. MDE and DDOE expect permit requirements to be comparable. We agree that implementation plans should be developed in coordination with stakeholders and should have public input in the development process. All implementation plans should be developed to achieve the goals of the TMDL as soon as possible.

Comment #26
Submitted by: Alice Ferguson Foundation
"We expect the Implementation Plans to be comprehensive strategies which include all possible BMPs along with specific and accountable numbers for those BMPs and a timetable for implementation. We also expect there to be innovative plans for increasing education to reduce littering and dumping from the source. Additionally, since non-point source trash will not be enforced via the MS4 permits and other stormwater controls we expect other mechanisms for enforcement of illegal dumping will be considered in the implementation plan.

However, just as important as a detailed plan for removal of the baseline is the need for a timetable to evaluate the effectiveness of this TMDL. A strategy for monitoring and revaluation will be needed to determine if the baseline load that was calculated is indeed an accurate target for trash reduction in the Anacostia. If, after each jurisdiction fulfills their required 100% daily baseline removal at the rates calculated and there is still trash present throughout the watershed, then there needs to be continued monitoring and analysis in order to obtain a more accurate number. The need for a strategy for evaluation should be included under *Section 6. Reasonable Assurance for TMDL Implementation* to ensure that there is recognition that this process will need evaluation."

Response #26
Even though implementation plans are beyond the scope of the TMDL development process, implementation plans should consider all available technologies for removal or capture of trash before it is discharged into a waterbody. MDE and DDOE agree all implementation plans should

have a timetable for implementation as well as a strategy for evaluation. In addition we believe all implementation plans must have a comprehensive monitoring plan for evaluating effectiveness of controls to reduce trash.

Comment #27
Submitted by: Alice Ferguson Foundation
"One of the great challenges of any TMDL is enforcement of a pollutant with non-point source origins. Without knowing the source of a pollutant it is difficult to enforce. The TMDL addresses that by categorizing trash into non-point and point source, using the NPDES permits to hold jurisdictions responsible for point source trash. However, the recently approved Montgomery County MS4 and the recently released DC MS4 permit refer to the Implementation Plans of the TMDL for BMPs and enforcement. We recognize that this means that violating the Implementation Plan will mean a violation of the MS4 permit, however without knowledge of what this Implementation Plan will be, it is difficult to have assurance that the TMDL will be enforceable. Thus, it will be necessary for each implementation plan to have sufficient descriptions of monitoring and enforceable actions. There is also the challenge of enforcing across jurisdictional lines as trash that can move through a sewer can also flow down the river to another jurisdiction. This issue will need to be addressed in all the implementation plans developed. The challenge of enforcement, again, points to the need for Implementation Plan development to be participatory and collaborative throughout the process, not just during a public comment period."

Response #27
As permits will be used to implement the TMDLs, the permits are expected to also specify how the implementation will be tracked, evaluated and enforced. It is beyond the scope of the trash TMDL to specify what and how the enforcement will take place. However, MDE and DDOE recognize the importance of stakeholder involvement in the development of implementation plans and the need for comparable levels of effort across the jurisdictions to realize the benefit of reducing the trash in the entire watershed.

Comment #28
Submitted by: Department of Defense, Regional Environmental Coordinator
"From a practical standpoint, implementing the TMDL will be difficult and expensive. We agree that BMPs and programs such as those listed in Section 6.5 of the TMDL need to be implemented and maintained. Of concern, is the documentation that may be required to demonstrate that 100% capture has been achieved. In addition, the TMDL does not provide sufficient guidance to regulators or the regulated public regarding requirements for an acceptable implementation plan. For example, as currently written the TMDL could be interpreted to require collection and weighing of all trash collected on a daily basis. This would not be practical and we doubt this is the intent, but the public could claim that it was necessary to meet the zero trash target. Even more problematic, since numeric WLA's are stated in the TMDL it could be claimed that compliance with the TMDL demands the collected and weighed trash equal or surpass the daily and annual WLAs. The fact that the WLA are merely derived estimates/averages may not be well enough understood… We also recommend that the TMDL provide additional guidance regarding what will be considered an acceptable implementation plan."

Response #28
It is beyond the scope of the TMDL to specify implementation strategies for the TMDL. MDE and DDOE understand and realize that there will be a need for developing appropriate methods or strategies for implementing the trash TMDL. However, it is expected that specific permits to address such issues in a manner that is consistent with the TMDL and provide practical ways for evaluating controls for reducing trash depending on specific sources or facilities.

Comment #29
Submitted by: MAMWA and SWAM
"The TMDL Should Initially Impose a More Realistic Level of Control and Reevaluate Higher Requirements Over Time. Because the narrative water quality standards do not require zero trash, MDE (and DCDOE and EPA) should develop the TMDL in an iterative fashion, starting with an initial five or ten year trash removal (or prevention) target that is more realistic and achievable through the implementation of BMPs. MAMWA and SWAM fail to understand why the TMDL would not require several escalating phases of reduction (i.e., 25% reduction, followed by 50%, etc.), rather than setting up the affected communities to fail as they certainly won't get 100% reduction for years, if ever."

Response #29
It is beyond the scope of the TMDL to prescribe implementation strategies. It is expected that implementation plans developed by the jurisdictions will incorporate specific strategies and milestones for achieving the TMDL reduction goals.

Comment #30
Submitted by: MAMWA and SWAM
"The Trash TMDL Will Divert Resources from Addressing Aquatic Life Impairments Such as Nutrients. MAMWA and SWAM are concerned that the Anacostia trash TMDL will divert resources from TMDLs that address water quality impairments that matter to aquatic life (rather than aesthetics (trash) for the infrequent human use of the River).

If MDE (and DCDOE and EPA) insist on promulgating the Draft Trash TMDL, we urge you to include a section which specifically allows affected localities to prioritize their efforts in implementing TMDLs across their system. Otherwise, the Anacostia trash TMDL may take [the] place of efforts to address more important impairments such as reducing nutrients to the Chesapeake Bay."

Response #30
It is the goal of the Jurisdictions to make the Anacostia swimmable and fishable. The river is impaired for trash and other pollutants. Our objective is to restore the river as soon as possible as we all can benefit from this natural resource. We understand that resources are limited and need to be prioritized. As trash can also bring other pollutants associated with it and can itself harm aquatic life, removal of trash from the river certainly is a priority. However, it is up to each jurisdiction to allocate their resources effectively, and in way that maximizes the benefit for the waterbody.

Comment #31
Submitted by: Anacostia Watershed Citizens Advisory Committee (AWCAC)
"The District of Columbia has enacted a 5 cent fee on plastic bags from stores selling food items. Based upon revenue to date from the fee it appears that there has been tremendous reduction in the number of plastic bags used by citizens of the District. We are greatly disappointed that the Maryland Department of Environment chose to oppose a similar bill in their own legislature. This is an ill omen of the State's willingness to implement the trash TMDL."

Response #31
MDE supports the objectives of the proposed "bag bill," recycling and waste reduction. MDE opposed the bill's reallocation, redirection, and dilution of the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund. Additionally, the bill required MDE to conduct two public outreach programs in the next six months and this timeline was not realistic. MDE hopes to see future legislative efforts regarding this topic.

Comment #32
Submitted by: AWCAC
"Efforts are underway to establish a municipal food composting center in the Anacostia Watershed. If such a facility were established then it would be possible to use legislation to reduce Styrofoam packaging of takeout food. This would further reduce one of the prevalent trash categories found in the Anacostia River. It will require cooperation between all of the jurisdictions."

Response #32
Comments noted.

Comment #33
Submitted by: AWCAC
"We recommend that all of the permits which have received an allocation for reduction in the TMDL be reopened immediately and have conditions added to implement the TMDL. This includes all federal facilities, the City of Takoma Park, the Maryland National Capital Park and Planning Commission, school systems, the University of Maryland, and all other MS4 permit holders."

Response #33
The decision to reopen the MS4 permits (or any other permits) affected by this TMDL will be left to the discretion of the appropriate permitting authority and is beyond the scope of the TMDL document.

Comment #34
Submitted by: AWCAC
"We recommend that the Maryland State Highway permit be reopened immediately and trash reduction requirements be added. In particular, storm drains and bridges need to be retrofitted such that trash is not drained straight to the waterways that they cross or feed into. Bridges that have structural support members in the stream channel should be surveyed biannually and the trash accumulations removed."

Response #34
See Response #33.

Comment #35
Submitted by: AWCAC
Montgomery and Prince Georges County transportation departments should be required to implement design standards for storm drains and bridges such that trash is not discharged to the waterways and the structural supports do not accumulate trash. Their permits should include requirements for biannual maintenance of storm drains and bridges which chronically accumulate trash.

Response #35
In Montgomery County's NPDES municipal stormwater permit issued previously this year, MDE formalized the County's role in implementing the Trash Treaty's Action Agreement. This stormwater permit obligates the County to develop trash reduction strategies, implement control measures, and monitor program effectiveness all in an effort to reach the goal of a trash free Potomac River. The public education and participation recommendations made by the AWCAC have already been included in the County's stormwater permit in the form of plans to increase recycling and trash management, and holding public forums as the County's program is further developed and implemented. All of this is over and above the County's routine trash collection programs. Likewise, the State Highway Administration (SHA) and Prince George's County have significant ongoing trash collection and maintenance programs.

Comment #36
Submitted by: AWCAC
"We believe that the public participation requirement of the development of each implementation plan should include adequate public notice and at least one public forum."

Response #36
See Response #25.

Comment #37
Submitted by: AWCAC
We commend both the District of Columbia and Montgomery County for extending their trash reduction efforts to basins such as Rock Creek and the Potomac. The Prince George's County MS4 permit should contain similar language"

Response #37
See Response #35.

Comment #38
Submitted by: AWCAC
The State of Maryland, Montgomery County, Prince George's County and the District each need to insure that their stormwater regulations are updated to include trash reduction BMPs. All new BMPs installed in their jurisdictions should include the capability to reduce trash discharges to zero. Each stormwater permit for development or redevelopment in the Anacostia watershed

should be evaluated by the issuing agency in light of required reductions for each individual pollutant for which a TMDL has been approved. These pollutants should be listed in those permits such that the developer is clear on the requirements that must be maintained over the life of the project.

Response #38
MDE and DDOE value the recommendation for implementing the trash TMDL, as well as other TMDLs. However, it is beyond the scope of the TMDL to specify implementation strategies for the TMDL. MDE and DDOE understand and realize that there will be a need for developing appropriate methods or strategies for implementing the trash TMDL. However, we expect specific permits to address such issues in a manner that is consistent with the TMDL and provide practical ways for evaluating controls for reducing trash depending on specific sources or facilities.

OTHER COMMENTS

Comment #39
Submitted by: MAMWA and SWAM
"MDE Has Not Provided a Reasonable Basis for Concluding That 100% Trash Removal is Attainable. MAMWA and SWAM are concerned that despite best efforts and the expenditure of enormous public resources, 100% trash removal (or prevention) will not be attainable. We question MDE's basis for determining that such removal (or prevention) perfection across municipalities is achievable.

Accordingly, we ask that in response to this comment, MDE (and DCDOE and EPA) specifically identify where in the Country trash TMDLs have been developed and the level of removal (or prevention) over time which has been achieved to date."

Response #39:
Section 6 of the TMDL provides significant explanation of the many programs that provide reasonable assurance that the TMDL will be met. Included in these programs are the Montgomery County, Prince George's County, and DC MS4 permits. These permits will be used to apply a legal requirement on the various localities to achieve the TMDL. There are also several voluntary initiatives which strive to meet the same goal as the TMDL, including the Potomac River Trash Treaty and the Anacostia Watershed Trash Reduction Plan. With the combination of the regulatory and voluntary initiatives, MDE and DDOE feel confident that a reasonable basis has been provided that the TMDL is achievable.

According to the USEPA's Assessment Total Maximum Daily Load (TMDL) Tracking and Implementation System (ATTAINS) there are currently 65 approved Trash TMDLs, all in the State of California. MDE and DDOE are not able to comment on the results of other States TMDLs.

Comment #40
Submitted by: EarthJustice
"Because it cannot be shown that any amount of trash can be discharged into the Anacostia and its tributaries while still ensuring compliance with water quality standards, the load allocations and wasteload allocations in the final TMDLs must be set at zero. However, there is still a legal requirement and a practical need for a valid margin of safety, as required by the CWA, 33 U.S.C. § 1313(d)(1)(C). The draft TMDL claims that "an implicit MOS was incorporated into the Anacostia Trash TMDL since the TMDL requires 100 percent removal of the baseline load and the LAs and WLAs were calculated using conservative assumptions." Draft TMDL at 43. As explained above and as expressly stated in the draft, the allocations in the draft do not even purport to achieve removal of 100 percent of all trash from discharges into the Anacostia. Rather, they purport to achieve removal of an estimated "baseline load," that itself is both highly dubious as well as impossible to determine with certainty. Therefore, the fact that the allocations total the entire estimated "baseline load" is simply ineffectual at establishing a legally adequate margin of safety.

One solution to this problem is to include an implicit margin of safety providing that, in order to comply with the TMDL, point source and nonpoint source discharges must ultimately be reduced to zero pounds of trash, regardless of the initial estimated baseline load and regardless of the initial allocations. For several reasons, including the one noted above, there is a great deal of uncertainty surrounding the estimate of current pollutant loading of trash to the Anacostia. Trash is not a pollutant for which the District and Maryland have been reliably monitoring for a long period. Therefore, there needs to be a proportionately commensurate margin of safety – the level of uncertainty in estimating the pollutant loading needs to be matched by a robust margin of safety. Since the load reduction requirement is 100%, there needs to be a mechanism built in to this TMDL for increasing the load reductions if it becomes apparent, from later monitoring or other data, that the estimated baseline loading has in fact been underestimated."

Response #40
With regard to the statement that the final TMDLs must be set at zero, see Response #4.

While the commentor states that "*One solution to this problem is to include an **implicit** margin of safety,*" MDE and DDOE assume that the commentor is requesting an *explicit* margin of safety, as an implicit margin of safety is already included in the TMDL. Based on the admitted uncertainty in the estimation of trash loads, MDE and DDOE have decided to add an explicit margin of safety of 5% to the TMDL.

Comment #41
Submitted by: EarthJustice
"CWA regulations require that "[d]eterminations of TMDLs shall take into account critical conditions for stream flow, loading, and water quality parameters." 40 C.F.R. § 130.7(c)(1). The draft report at x-xi suggests that the TMDL addresses critical conditions because the baseline monitoring data were collected "over four seasons and included monitoring after rain events." Discussions in section 2 of the report suggest that this monitoring was conducted mainly in March-August 2009, along with some monitoring in 2007 and 2008. There is no explanation of whether this period of three years contained larger than average storms. If not, the mere fact that

data were collected in all four seasons is not enough to demonstrate that critical conditions have been accounted for."

Response #41
It is inaccurate to state that monitoring "*was conducted mainly in March – August 2009*." In the TMDL report, Sections 2.2.1 – 2.2.4 describe the four different sampling programs that were conducted in support of the TMDL. Section 2.2.1 details the District of Columbia Stormwater Outfall Monitoring, which occurred between March and August 2009. Section 2.2.2 details the Montgomery and Prince George's County Stormwater Outfall Monitoring, which occurred between October 2008 and July 2009. Section 2.2.3 details the District of Columbia In-Stream Monitoring, which occurred between August 2007 and June 2008. Section 2.2.4 details the Montgomery and Prince George's County In-Stream Monitoring, which occurred between June 2008 and April 2009.

While the main rationale that critical conditions are accounted for was monitoring over all four seasons, this was not the only rationale presented in the TMDL. As stated in Section 5.4 of the TMDL, "*the critical conditions for trash are high flow events because these events represent conditions during which trash is most easily transported to and through streams and the sewer system."* Section 5.4 goes on to describe several sampling events that occurred after high-flow events, "*including one storm with over 3 inches of rain during the event, and several storms with maximum intensities between 3 and 4 inches per hour.*" As well, the annual rainfall for 2008 and 2009 were both well above the 50 year average annual rainfall, which could itself be considered to represent a critical condition.

Comment #42
Submitted by: Anacostia Watershed Society
"The definition of trash should be explicitly mentioned in the TMDL. For example, it would need to clearly be stated if small pieces of trash and some type of organic material are included in the TMDL and will be included in the implementation plan or not. Also, the trash TMDL allocates the amount of trash to be eliminated from each source by weight. If the definition of trash is not clear, each responsible entity may focus on heavy trash removal first leaving small pieces of trash unaddressed to satisfy legal responsibilities. Small pieces of trash are eaten by many aquatic animals which they cannot digest nor excrete; this often leads to starvation, suffocation, and the death of these animals. If the definition is not clear, an entity might want to count tree logs' weight that were flowing in a stream and removed. However, the trash monitoring conducted for the TMDL development did not weigh tree logs. So, the weight of tree logs should not be included in the allocated amount. Secondly, an entity might remove only large trash pieces such as bottles and cans instead of items like cellophane, cigarette butts, and small candy wrappers if trash is not defined well and if allocation is made only by weight. Thirdly, AWS captured an abundance of grass clippings on our trash trap located in Nash Run, a tributary of the Anacostia River. If trash is not defined well, these types organic trash will not be addressed.

The trash definition should at least cover these points:

- All man-made objects that are broken off, removed, or thrown away intentionally and sometimes un-intentionally.
- Natural matter that was removed or thrown away intentionally and sometimes unintentionally due to human activities

Trash could include cans and bottles, food wrappers, small plastic pieces, cigarette butts, and grass clippings from lawn mowing activity. Small pieces of trash, grass clippings, etc. should be removed as thoroughly as possible to the maximum extent practicable."

Response #42
The definition of trash is stated in Section 1.0 of the TMDL. The definition reads "*Trash is defined by the Anacostia River Watershed Trash TMDL Work Group as all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials thrown or deposited on the land or water."* As noted, the definition of trash was thoroughly discussed, and agreed upon by the TMDL Workgroup, prior to release of the TMDL. The TMDL workgroup included representatives from MDE, DDOE, EPA, Prince George's County Department of Environmental Resources (DER), Montgomery County Department of Environmental Protection (DEP), Anacostia Watershed Society, Alice Ferguson Foundation, NRDC, and MWCOG. Therefore, it is the opinion of MDE and DDOE that the definition currently provided in the TMDL is adequate to address the issues mentioned in the comment.

Comment #43
Submitted by: MAMWA and SWAM
"Trash and Debris in the Anacostia Watershed Should Be Addressed Locally, Not Through a TMDL. MAMWA and SWAM do not oppose cleaning up the Anacostia River. However, this work should be done at the local level, with local commitments to the clean-up, and implementation using existing programs.

As support for this position, MAMWA and SWAM would note the work that is being done on the Potomac River pursuant to the Potomac Trash Treaty. This aggressive, non-regulatory, regional approach has a goal of zero trash in the Potomac by 2013. In order to meet the goal, the 105 signatories have agreed to take a number of specific steps: implement regional programs to reduce trash in the water and to increase recycling; increase public education and outreach efforts to teach citizens about trash; and meet annually to discuss efforts. MAMWA and SWAM suggest that MDE and the DCDOE consider whether it would be possible to design a similar approach for the Anacostia Watershed.

This would be far preferable to finalizing a TMDL for the Anacostia. As discussed below, neither the water quality standards nor the nature of trash itself lend itself well to a proscriptive TMDL document. Even one of the most basic aspects of the TMDL--removal (or prevention) of a specific amount of trash, versus setting allocations to limit the introduction of a substance into

the water—makes it clear that trying to regulate the clean-up of trash and debris in a regulatory document is awkward at best."

Response #43
As stated in the TMDL, Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's (EPA's) Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* [CFR] Part 130) **direct** require states to develop Total Maximum Daily Loads (TMDLs) for impaired waterbodies. Therefore, MDE and DDOE have **authority** to establish this TMDL.

While the TMDL is developed at the State/District level, the implementation will be achieved at the local level with full support of the local communities. MDE and DDOE strongly agree with you on the value of the Potomac River Trash Treaty and expect that this will be one of the many mechanism s used to achieve the TMDL. Additionally, this TMDL has been developed with full participation and support of various local organizations, including: Prince George's County DER, Montgomery County DEP, Anacostia Watershed Society, Alice Ferguson Foundation, NRDC, and MWCOG.