

District Department of the Environment

Stakeholder Meetings on Soil Erosion and Sediment Control and Stormwater Management Regulations

Attached here are:

1) Comments provided to DDOE by:

- DC Appleseed
- US EPA
- The District of Columbia Building Industry Association
- Anacostia Citizen's Advisory Committee, Anacostia Riverkeeper
Anacostia Watershed Society, Audubon Naturalist Society, Casey Trees,
Clean Water Action, DC Environmental Network, DC Smart Schools,
Earthjustice, Friends of the Earth, Global Green USA, GreenHOME,
Groundwork Anacostia River DC, Natural Resources Defense Council,
Potomac Riverkeeper, Sierra Club, Washington DC Chapter, Washington
Parks & People, and Wholeness for Humanity



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April 22, 2009

Director George Hawkins
District Department of the Environment
51 N Street NE
Washington, DC 20002

Re: Comments on Draft Stormwater Regulations

Dear Mr. Hawkins:

This letter provides preliminary comments by DC Appleseed on the draft stormwater regulations we recently received from your staff. We understand that the regulations will be published shortly in proposed form and we strongly support that prompt publication. In that spirit, this letter offers preliminary comments intended to help the District Department of the Environment (DDOE) improve these long-awaited rules, which are aimed at reducing the environmental effects of stormwater, especially upon the Anacostia River.

As you are likely aware, DC Appleseed was actively engaged in the Anacostia Waterfront Corporation's (AWC) effort to adopt strong environmental standards. The AWC adopted those standards in 2007, and they were later codified by the National Capital Revitalization Corporation and Anacostia Waterfront Corporation Reorganization Act of 2008 ("Reorganization Act"). We appreciate DDOE's effort to carry those standards forward into the draft stormwater rules. Our preliminary comments follow, but we would like to emphasize the importance of moving these rules quickly into the public comment period.

1. Variances and Off-site Mitigation

DC Appleseed recognizes, as did the AWC's environmental standards, that there are land parcels within the District where control measures cannot be fully implemented for engineering or geologic reasons, including high groundwater, contamination in underlying soils, or potential flood hazards for Metro. The AWC rules provided for off-site mitigation to accommodate this fact while assuring that new construction results in substantial further progress towards stormwater cleanup.

Similarly, the draft regulations provide for variances where "it is technically difficult" to meet the requirements of the regulations (§ 533.1), and require offsite mitigation in order to offset, by a factor of 1.5, the remaining stormwater flow. The list of factors warranting a variance includes zoning restrictions, space restrictions, post-development peak discharges, or restrictive site conditions (Id. § 533.3).

DC Appleseed is concerned that this language—"technically difficult"—is too elastic and does not provide an enforceable standard to determine when variances are appropriate and when they are not. We suggest spelling out in more detail site-specific conditions that would warrant variances, including geologic and environmental factors like high groundwater, low



permeability, pre-existing soil contamination, and public safety concerns like violation of FEMA flood protection standards referenced in § 529.8. In addition, or alternatively, the regulations might include specific examples of appropriate circumstances for such a variance and how it is contemplated that the off-site mitigation program would work. It would also be helpful to clarify that a variance does not provide a total exemption from requirements, but only from those measures which are impractical for site-specific reasons. For example, it may be impractical to require onsite infiltration of stormwater because of a high water table, but that should not excuse the obligation to reuse stormwater through a “green roof.”

The rules provide for an off-site mitigation fee of \$80,000 per acre. DC Appleseed is concerned that while this is a large sum, it may be significantly less than warranted. For example, the District’s Long-Term Control Plan (LTCP), intended to prevent combined sewer overflows, may cost over two billion dollars. The LTCP will address a stormwater condition arising from the 12,478 acres in the District served by combined sewers (www.dcwasa.com/education/css/combined_sewer.cfm). If one assumes that the construction cost is in fact \$2 billion, this amounts to more than \$160,000 per acre.

We therefore recommend that DDOE use the off-site mitigation fee prescribed by the Reorganization Act (Sec. 456(a)(1)). That Act requires a payment made in lieu of mitigation to be two times the financial equivalent of the volume that would have been required to be treated on-site. DDOE could use a proxy fee of at least \$160,000 per acre with an annual inflation adjustment until it published guidance on the factor-of-two financial equivalent fee.

The draft regulations prefer off-site mitigation to payment of the off-site mitigation fee (§ 534.5). We strongly support this preference. Nonetheless, we note that the costs of prime real estate in recent purchases dwarf the off-site mitigation fee, as some recent transactions have involved purchases at millions of dollars per acre. For some high value, high visibility projects, the currently proposed fee may be a relatively inexpensive way to circumvent the off-site mitigation preference. We therefore suggest that DDOE 1) set some minimum standards to be met before off-site mitigation fees can be considered (e.g. mandatory green roof), or 2) for very high value projects where such minimum standards are not met, require that the per acre fee include five years of average operation and maintenance costs, in addition to the suggested factor-of-two financial equivalent fee for off-site mitigation.

2. Triggers for Applicability

In a city such as the District, which is largely built out, there will likely be more renovation and upgrading of existing buildings than construction of new ones. The draft regulations appropriately address such renovations (§ 526.2, § 599.1). However, we have some comments regarding the “triggers” for applicability.

In § 526.2, existing buildings are subject to certain requirements if Level 3 alterations and repairs have an estimated cost of 50 percent or more of the assessed value of the property. However, in §599.1, Level 3 alterations are defined as the work area exceeding 50 percent of the aggregate building area. DC Appleseed suggests that either of these conditions—50 percent of floor space or 50 percent of the assessed value—should be a sufficient trigger, not both, as the draft might be read to mean.

In addition, the DC Green Building Act of 2006 (“Green Building Act”) has a trigger for LEED requirements if an interior renovation exceeds 50,000 square feet (Sec. 4(a)). We suggest that this same LEED triggering event also apply to stormwater control, as many of the same environmental

concerns come into play for renovations of that size. In particular, for existing buildings located in the combined sewer area of the District, we think this LEED trigger would be an appropriate strengthening of the requirements, given the severity of the consequences of the combined sewer overflows.

We recognize that the current draft is consistent with existing building codes. But we think it is preferable that building codes conform to the Green Building Act, rather than the codes being used to limit that Act or the stormwater requirements.

3. The Water Quality Volume of Runoff (WQv) Formula

The proposed rules sensibly use a formula that accounts for different types of surface cover to determine the amount of WQv that must be managed at a site (§ 529.3 and § 530.4). However, the variable names used in § 529.3 differ from those used in § 530.4. In § 529.3, C="compacted cover" and N="natural cover." In § 530.4, C="turf cover" and N="forest cover." DC Appleaseed recommends that DDOE use the same variable names in both equations.

The rules also state that Runoff Prevention Volume (RPv), Runoff Reduction Volume (RRv), and Runoff Treatment Volume (RTv) should add up to WQv (§ 529.5 and § 530.6). DC Appleaseed is unclear as to why RPv is included in this definition of WQv. First, the formula used to calculate WQv in § 529.3 and § 530.4 already takes RPv into account by applying weights to different types of cover. A development with more natural cover, therefore, will automatically have a smaller WQv by way of the formula. Second, since WQv is the volume of runoff that must be managed, it should not include "prevention," which by definition cannot be technically managed. § 529.6 of the draft regulations seems to recognize that WQv should only be the sum of RRv and RTv by requiring RRv to equal 75 percent of the WQv and RTv to equal 25 percent of the WQv. DC Appleaseed recommends that DDOE omit RPv from the factors that control WQv in § 529.5 and § 530.6.

4. Harmonization with Other Environmental Requirements

The draft regulations appropriately recognize that contaminated soil and groundwater can create obstacles to usual stormwater control practices, such as increasing infiltration of stormwater into the soil. The current language used to address these issues, however, may need refinement. For example, in § 544.10, dewatering operations during excavation that produce contaminated groundwater are required to adopt plans to reduce the discharge. As the volume of discharge is likely dictated by geologic and engineering factors, and not subject to volumetric reduction, the language should be revised to make clear that a reduction in contamination is sought.

Similarly, the language in § 529.10 requires an impermeable liner to prevent contaminated stormwater or groundwater from migrating through stormwater structures into surrounding soil. This may need more explanation, perhaps by example. We think the intent is to restrict onsite infiltration techniques where there is reason to believe contamination from ongoing operations (e.g. vehicle maintenance yard) or from the cleanup of contaminated soil may be spread by onsite infiltration techniques.

Harmonization with hazardous waste requirements would also be in order in connection with § 535.9, which sensibly requires maintenance contractors to advise DDOE of disposal of waste materials from stormwater control facilities. This could be strengthened by requiring that any testing results from waste characterization be promptly provided to DDOE, and that an immediate report be filed on an emergency basis if the removed waste meets the tests for characteristic or listed hazardous waste under

the federal Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901, et seq. The reason for this immediate notification is to alert DDOE to the strong possibility of illicit disposal of hazardous wastes through the stormwater system if the removed waste meets federal hazardous waste definitions.

5. Efficiency Suggestions

Finally, DC Appleseed suggests several steps to make the draft regulations work more efficiently.

Model of Covenant and Easement Language

§536 requires certain covenants and easements to be recorded with respect to maintenance and access. DC Appleseed applauds these requirements. We also suggest that DDOE provide a model of such covenant and easement language in order to improve efficiency for both DDOE and applicants.

Sampling Requirements

With regard to sampling requirements, we suggest that § 548.6 be revised to include an opportunity to take split samples, not only for the owner and DDOE, but for neighbors and citizen groups. This would enhance both enforcement and data integrity.

Consistent Format for Stormwater Management Requirements

The draft regulations provide general stormwater management requirements (§ 529), as well as specific requirements for the Anacostia Waterfront Development Zone (AWDZ) (§ 530). In particular, these sections provide requirements for the volumes of RRv and RTv that must be managed, the types of pollutants that must be treated, and guidance on management techniques.

We understand that the stormwater management requirements for the AWDZ are more aggressive than the general requirements, and are not commenting on the substantive differences. It is DC Appleseed's view, however, that the requirements are more clearly explained in § 530 than in § 529. In particular:

- §530.5 lists specific practices for managing WQv in order of preference whereas §529.7 merely states a preference for vegetated techniques;
- § 530.7 specifically states that RRv should equal one inch at a minimum whereas §529.6(a) only expresses RRv in percentage terms as equal to 75 percent of the WQv at minimum; and
- §530.8(a) identifies pollutants of concern to be removed from RTv whereas §529.6(b) only specifies an 80 percent reduction in Total Suspended Solids for RTv.

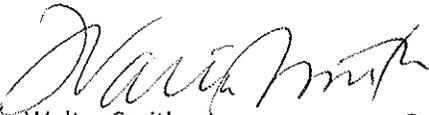
For clarity and readability, DC Appleseed recommends that DDOE express the general stormwater management requirements in the same manner that they are expressed in §530 for the Anacostia Waterfront Development Zone.

Conclusion

We hope these preliminary comments are helpful in your consideration of these draft regulations. In the interest of time, we have not provided comprehensive comments, but will likely do so in response to the proposed rules after they are published.

Again, given the previous delay, we strongly urge the prompt publication of the regulations in proposed form, with whatever interim changes you believe are in order from preliminary comments. This will help assure that DDOE's consideration of these important environmental policy issues is transparent and well grounded in the factual record.

Respectfully submitted,



Walter Smith
Executive Director



Russell V. Randle
Member, DC Appleseed Board of Directors



Notice Comments:

1. 2nd paragraph of Notice. ” The Department is proposing these amendments to protect the waters of the District of Columbia, by encouraging environmentally friendly stormwater management practices, and by strengthening the Department’s stormwater management and sediment and erosion permitting procedures. Specifically, these amendments will **(delete-promote) require** the use of low impact development practices **(also called green infrastructure)** such as rain gardens, cisterns, green roofs, and other green technology best management practices to control and treat stormwater. **These practices will have clear, measureable performance standards.** The amendments will also require that a responsible person on a construction site be trained **and certified** in soil erosion and sediment control; require that persons responsible for the maintenance of stormwater management facilities use a Department-approved contractor if maintenance of the facility is deficient; increase fees to defray the cost of reviewing stormwater management and sediment and erosion control plans and conducting inspections; require the posting of a bond until the successful construction of a stormwater management facility; and authorize property owners to conduct off-site stormwater management mitigation or pay an off-site stormwater management mitigation fee for deficiencies in managing the water quality volume due to technical conditions on the site. “

Comment: Make changes recommended in **bold**.

2. 3rd paragraph of Notice: Notice states “that the Anacostia Waterfront Development Zone surface water runoff volume must be reduced 1 inch and an additional 2 inches treated. The relevant Provision 530.7 does not reflect this requirement entirely.

Comment: Provision 530.7 should be revised to reflect this volume reduction and treatment requirement. Also recommend Provision 530.7 further specify what volume reduction amount is required for all three parameters (RPv, RRv, RTv) or an explanation as to why RPv is not addressed.

3. Paragraphs 4 and 5: paragraphs 4 and 5 are duplicates of each other.

Comment: Delete the redundant paragraph.

4. The regulations should be reviewed by the District to determine that they are not in conflict with any federal laws and regulations, especially the Clean Water Act, including but not limited to TMDLs.

Regulations Comments:

Overall:

1. Regs need reference to TMDLs. (40 C.F.R. 122.44 provides that for waters where a TMDL has been approved, NPDES permits must contain effluent limits and conditions "consistent with the requirements and assumptions of the wasteload allocations in the TMDL", and that discharges to such waterbodies attain or maintain water quality. 40 CFR §122.44(d)(1)(vii)(B); 122.44(d)(2).)

2. Regs should reference the Energy Ind. & Security Act (see proposed language below). R3 tech staff would like this to apply DC-wide since a large portion of the land in DC is federally owned and managed. Additional comments regarding this are made in the following pages. Note that reference in the Act to METF is treated by EPA draft guidance as being 95% capture.

“ In compliance with section 438 of the Energy Independence & Security Act of 2007, 40 U.S.C. § 323, and its implementing regulations, 10 C.F.R. Part 433, the sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet must 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. “

3. Provisions describing LID design elements should be revised to remove qualifiers such as “to the extent feasible and “as practicable”.

4. Level 3 alterations -- where are these defined?

5. Several references to "sewer system" are confusing, since at other places the document refers to "sanitary sewer systems", "combined sewer systems" or "storm sewer systems." Therefore, all such references to "sewer system" should be replaced with more clear terms. Add distinct, separate terms to definition section.

6. In several places, the document uses the term "substantially," but it is not quantified. This will be difficult to enforce. The comment here was primarily directed to Section 530.8(a) where the term applies to the removal of certain pollutants of concern. Section 529.11 uses the 10 mg/l oil and grease criteria in the DC Water Quality Standards as the baseline to achieve an acceptable measurable level of reduction. Suggest similar standards be applied in the case of the pollutants of concern identified in Section 530.8(a). The DDOE Permit and Enforcement folks are working on Standard Operating Procedures for permittees which will be applying under the Multi-Sector General Permit and have identified numeric criteria which may have applicability here also. Suggest coordinating with them to maintain consistency. To ensure adequate enforceability and clarity, we believe a numeric value for quantity of runoff which would be directed to pervious areas should be developed as well.

7. The regs do not contain information about how developments under 5,000 SF will be addressed. These will be significant portion of developments in such an urbanized area. In looking at 502.4, something different is indicated. Need clarification

8. Consideration should be given to requiring that an "Environmental Footprint" of the project be prepared as part of the project submission plan.

9. Dewatering a site during development and redevelopment construction projects should not be considered a permanent solution to groundwater management and should not be placed into any of the District's sewers without District government approval.

Specific Comments on Regulations:

1. 527.1 The following land disturbing activities are exempt from § 526, and do not require a permit for stormwater management:

(a) Home gardening and individual home landscaping, home repairs, and home maintenance work;

Comment Landscaping which disturbs more than 1 acre would require an NPDES permit.

(f) Construction or grading operations, or both, that disturb less than five thousand square feet (5,000 ft.²) of land area, unless the construction or grading operation is a part of an approved plan which contains provisions for stormwater management.

Comment: The federal language is "...part of a larger common plan of development...", which does not allow projects to be piecemealed to avoid the 1 acre threshold."

2. 527.1 provides for exemptions from provision 5.26.

Comment: Tthe exemption should be provided only for provision 526.1 and 526.5.

Comment: Provision 527.1a needs the clarification. "Individual home landscaping" needs to be defined to distinguish it from vegetative LID practices. (See also Provision 539.1a for another instance of the term "individual home landscaping")

3. 528.6 If the Department determines that more information is needed or that a significant number of changes must be made before the stormwater management plan can be approved, the applicant may withdraw the plan, make the necessary changes, and resubmit the plan. All re-submissions shall contain a list of the changes made.

Comment: Do DDOE have resubmission fees that will "discourage" bad plans in which the intent is to get DDOE to do the design for them? Baltimore has a 3 strike policy where you pay the whole fee again if you can't get your plan right by the 3rd revision

4. 528.8 states that an approved stormwater management plan shall constitute the applicants stormwater management permit. This implies that the plan replaces the permit and it also contradicts what is described in Provision 528.11.

Comment: Clarify Provision 528.8 to state that both the approved stormwater management plan and the permit are regulatory requirements.

5. 528.11 The permittee shall keep the permit and approved stormwater management plan on the site while work is being performed. The permit and approved stormwater management plan shall be made available upon request by the Department during the entire time of progression of the work, until the work is completed. *If an on-site location is unavailable to store the approved stormwater management plan when no personnel are present, notice of the plan's location must be posted near the main entrance at the construction site.*

Comment: Clarify that the permit and plans be made available within a reasonable amount of time, like 4-8 hours or so.

6. 529.3 Comment: Change P from 90% to 95% to be consistent with the draft federal Implementation guidance of EISA. Also, considerations could be given for final practice performance that exceeds the 95% standard.

7. Provisions 529.3 and 530.4 incorporate the equation for water quality volume of runoff that must be managed on site. These equations and the runoff coefficient parameters appear to be based on Tom Schueler's "Technical Support for the Bay-wide Runoff Reduction Method" published April 2008.

Comment: More explanation as to the rationale and how to use the equations needs to be provided either in the preamble to the regulation or that a design guide be cited for better understanding.

Comment: Use the same land use cover types in each equation for WQv or explain why different land use covers are provided (i.e compact cover vs turf cover).

Comment: Add another "P" value for Federal Facility land development. The EISA METF draft guide recommends 95% rainfall event or 1.5".

Comment: EPA needs to understand how this method was derived and ultimately decided upon. This method only accounts for three land use cover types and the runoff coefficients do not relate for instance to what the US Soil Conservation Service publishes for urban watersheds. In addition, the land use cover types and their corresponding runoff coefficients

are not the same as those used by the Chesapeake Bay Program Office. This incongruity could cause problems with future Bay modeling predictions and the input data provided by DC.

8. 529.6 Any stormwater management facility which may receive stormwater runoff shall address water quantity and quality concerns, including but not limited to volume control, pollutants, total suspended solids, and small particulate matter, to meet the following requirements:

- (a) The Runoff Reduction volume (RRv) shall, at a minimum, equal 75% of the WQv; and
- (b) The Runoff Treatment volume (RTv) shall achieve, at a maximum, 25% of the WQv and achieve an 80% reduction in Total Suspended Solids (TSS).

Comment: Since $WQv = RPv + RRv + RTv$ is a linear relationship, minimums of both 75% and 25% of RRv and RTv, respectively, make no sense because those numbers could never change. EPA thinks they either mean a maximum of 25% RTv or something else which needs to be explained better. EPA spoke with Tom Schueler about this equation and he agreed.

9. 529.6: Comment: Can 80% reduction be achieved w/o treatment?

10. 529.7 requires applicant use on-site stormwater management techniques To the MEP.

Comment: Provide some parameters for or a definition of MEP including the incorporation of clear, measureable performance standards.

11. Comment: DC's Building Code should be revised to reflect LEED requirements.

12. 530.4 Any stormwater management facility which may receive stormwater runoff shall manage the runoff through a combination of techniques intended to prevent, reduce, and treat stormwater runoff. The volume of runoff that shall be managed at a site, the water quality volume (WQv), shall be determined as follows:

$$WQv = \frac{P \times (Rv_I \times \%I + Rv_C \times \%C + Rv_N \times \%N) \times SA}{12}$$

WQv = volume, in acre feet
P = 3.2 inches (2-year 24 hour rainfall event for the District)
Rv_I = 0.95 (runoff coefficient for impervious cover)
Rv_C = 0.25 (runoff coefficient for compacted cover)
Rv_N = 0.05 (runoff coefficient for natural cover)
%I = percent of site in impervious cover
%C = percent of site in (delete turf) **compacted** cover
%N = percent of site in (delete forest) **natural** cover

SA = total site area, in acres

Comment: EPA assumes that the corrected terms in “**bold**” should be the same as section 529.3.

13. 530.8 Any stormwater management facility which may receive stormwater runoff shall be designed to ensure that the runoff treatment volume (RTv) discharged from the site passes through a filtering medium designed to meet the following requirement:

(a) Stormwater discharged to the sewer system shall pass through on-site controls designed, constructed, and maintained to substantially remove pollutants of concern, including:

Comment: Needs definition. Why an 80% reduction in TSS outside of Anacostia and no numerics within?

14. 530.10 Comment: Elaborate with more specificity or cite guidelines to more clearly characterize what constitutes "overuse" of fertilizers, herbicides, and pesticides.

15. 533.1: Comment: "technically difficult" is too vague. Should be quantified, or changed to another term (e.g., MEP) which is defined. Examples of such difficulties should be provided (e.g., site constraints, topography, etc.). Suggest that it could be broken into 2 parts, such as:

- technically infeasible - which could mean there is not enough area to install BMPs to meet the WQv requirements; and
- financially infeasible - which could mean that installing the BMPs would be greater than some percentage (maybe 50%) of the total project

Also consider as well, if clear, measurable performance standards are developed and required, you remove ambiguity.

16. 533.3(d) Comment: "restrictive site conditions" needs to be defined.

17. 534.5 EPA suggests that the SWM management fee will be dedicated to use for SW projects (i.e., should not be used for general administration or by other agencies). Section 534.5 discusses authorization to pay a fee for the Department sponsored off-site stormwater mitigation program. EPA assumes the fees collected here would be dedicated solely for implementation activities as discussed in 534.6. Suggest clarifying in the regulations how the fees will be structured for use in stormwater mitigation activities in the District.

18. 534.2 The applicant shall install stormwater management measures sufficient to manage a WQv equal to 1.5 times the WQv deficiency in another previously developed public or private property within the District of Columbia that lacks sufficient stormwater management facilities.

Comment: If DDOE does not already have one, they should create a list or registry

of prioritized areas or properties in which to direct mitigation so as to get the greatest water quality improvements. An analysis of priority areas would be beneficial to try to direct permittee efforts to areas where the greatest benefits can be realized.

19. 534.5 In general, applicant sponsored off-site stormwater management mitigation is preferable to participation in the Department sponsored off-site mitigation program.

Comment: DDOE might want to re-evaluate the off-site mitigation fee structure to determine if \$80,000 per acre (on page 6) is adequate to sustain the mitigation program, especially when property acquisitions may be necessary.

20. 534.6 Off-site stormwater management mitigation fees shall be used by the Department to fund stormwater management activities such as retrofit projects, watershed or stream restoration, and research and studies within the watershed.

Comment: Is this is a secure fund that could not be tapped for other purposes?

21. 535.1 The owner of the property on which a stormwater management facility has been constructed, or any other person or agent in control of the property, or any Governmental agency charged with the maintenance responsibility, shall maintain the facility in proper working condition, and promptly repair and restore whenever necessary all grade surfaces, walls, drains, structures, vegetation, erosion and sediment control measures, and other protective devices.

Comment: Clarification should be made that this be relative to design or upgrade, not just that it “looks good”. Comparing them to as-built plans would be key.

22. 535.3 If an inspection by the Department shows that the stormwater management facility is not being properly maintained, the owner, agent in control of the property, or governmental agency charged with the maintenance responsibility shall perform the required maintenance, and/or correct the deficiencies as directed by the Department.

Comment: Not just “or” ?

23. 535.9 Waste materials resulting from the repair or maintenance of a stormwater management facility shall be transported, and the maintenance contractor shall submit a report to the Department within forty-eight (48) hours after disposing of the waste materials. The report shall include:

Comment: It seems like there should be more to this sentence and it was inadvertently cut off. Something like: “...to an appropriate disposal location...”

24. 536.1 Comment: EPA is not clear on what the intention was here by including the

following sentence in the Regulations: A governmental agency shall not be required to record a covenant. Please clarify why there is an exemption for these types of property owners.

25. 538.1 No person shall engage in any land disturbing activity including, but not limited to, stripping, grading, excavating, and filling of land without obtaining a soil erosion and sediment control permit.

Comment: Suggest adding the term “grubbing” to this sentence.

26. 538.7 The permittee shall keep the permit and approved soil erosion and sediment control plan on the site while work is being performed. The permit and approved soil erosion and sediment control plan shall be made available upon request by the Department during the entire time of progression of the work, until the work is completed. *If an on-site location is unavailable to store the approved soil erosion and sediment control plan when no personnel are present, notice of the plan’s location must be posted near the main entrance at the construction site.*

Comment: Add “ Plan must be available within 8 hours (same as comment on 528.11).

27. 539.1 The following minor land disturbing activities are exempt from the requirement to obtain a soil erosion and sediment control permit:

(a) Home gardening and *individual home landscaping*, home repairs, and home maintenance work;

Comment: Unless > 1 acre (same as comment on 527.1.a).

28. 544.11(a) Comment: Since a significant portion of developments in an urbanized area setting can be under 5000 square feet, the following sentence seemed somewhat "out of context" from the rest of the Regulations: The Department may waive the Certification of Training for responsible personnel requirement for a project less than five thousand (5,000) square feet. The Department may want to clarify the reasons and/or provide examples regarding the applicability of granting a waiver here.

29. 545.4 The following is stated “ The District of Columbia Soil Erosion and Sediment Control certification and training shall be valid for a three (3) year period and is automatically renewed unless the Department notifies the individual in writing or announces to the public that recertification is required due to a change in course content.”

Comment: Suggest that rather than an automatic renewal of the re-certification, that the person holding the certification be responsible for reapplying to be certified prior to the end of the three year period and required to take a refresher course and test as part of the process. The concern here is that notification in writing and/or public notification places responsibility on the Department rather than on the responsible party

to maintain and keep track of their certification status.

35. 548.4 and 548.5 Comment: Suggest changing the reference from "applicant" to "permittee" for consistency under Section 548.

Shane Farthing
Land Use and Development Coordinator
Office of the Director
District Department of the Environment

Mr. Farthing,

Thank you for the opportunity to comment on the draft of the proposed rulemaking package. I appreciate the difficulty of crafting progressive stormwater rules and support the overall framework of the rule which emphasizes the use of green infrastructure/Low Impact Development practices as the preferred approach to managing stormwater and reducing combined sewer overflows.

My comments are listed below:

Page 1 – I suggest that you rewrite the last paragraph which is unclear. I think the objective of the rule is to reduce CSO's, stormwater runoff, reduce the costs of managing stormwater infrastructure and more effectively protect the Potomac and Anacostia rivers. Green infrastructure/LID are the preferred methods for achieving the goals of the rule for the reasons that you specify.... Delete redundant paragraph on page 2.

Page 6 - 526.2 – There appears to be an inconsistency in the program regarding Level 3 alterations and the thresholds that trigger coverage under these requirements. I suggest that DDOE revisit these categories and make them consistent to avoid confusion and loopholes. It is not clear who is covered by what requirement and what the basis for coverage is. This same comment applies to 526.4 in regards to “land disturbing activities.”\

I suggest that you include Section 438 of the Energy Independence and Security Act (EISA) as a requirement for federal facilities located within the district.

Page 7 528.3 - revise “plans.” to read “plan(s).”???

Page 9 529.1 – I understand the intent of this requirement. However, I am concerned that adequate area may not exist to infiltrate or retain the water discharged from the downspouts. How does DDOE intend to handle such cases? Perhaps an off ramp or other waiver should be cited here for cases where disconnecting all downspouts will put the applicant out of compliance with the requirement that reads, “The stormwater shall flow away from the building and shall not flow over property lines onto adjacent lots, unless it runs into natural water courses.” This may not be feasible in all cases.

Pages 10-14 – I recommend that you either: 1) apply the Anacostia Waterfront Development Zone Requirements (AWDZR) to the entire District; or 2) combine the two sections 529 and 530 into **one** more easily digestible set of requirements. As the rule is currently structured, it is confusing and difficult to interpret. I see no reason DDOE cannot adopt the AWDZR requirements throughout the District. In fact, I suggest that DDOE adopt a much stronger requirement, e.g., management of the 95th or 90th percentile storm or its volumetric equivalent (refer to EISA Section 438 draft guidance EPA is currently circulating).

Page 10 529.1-529.13 are not well crafted, i.e., they don't provide a clear methodology, rationale and set of requirements that are well explained and integrated. Section 530.5 is much clearer in terms of what DDOE is requiring. I suggest that DDOE develop a set of consistent, simple and clear procedures that are easily understood and implemented. I support the use of the hierarchy used in 530.5. If DDOE elects to use separate performance requirements for the Anacostia Waterfront Development Zone and the rest of the District, I suggest that one methodology be presented that includes two distinct performance standards for clearly identified and mapped areas.

Page 10 – 529.3 – I find the formula for WQv to be overly complicated and not intuitively obvious in terms of its intent. The typical applicant will not understand the importance and need for such a complicated system of weighting factors.

Page 10 529.4 (a) – The use of traditional green infrastructure (GI) practices such as natural area conservation, soil conservation, reforestation, etc are good ideas. However, it may be difficult to objectively assess whether the applicant has used these techniques and to what degree. How will DDOE ascertain this point? I suggest that these be guiding principles for site design that apply to all site in the District.

Page 10 529.4(2) - “as approved by the District” may be a problematic phrase. I suggest that DDOE better define this phrase and be very specific about what the criteria DDOE will use to “approve” these practices.

Page 11 529.6 – Terms such as “address” are vague and will need to be interpreted. I suggest that you avoid such terms or more clearly define what is intended. 529.6(a) and (b) – if this section is not restructured, I suggest the following language, “At a minimum, 25% of the WQv shall be treated to achieve an 80% TSS reduction or greater (I suggest that DDOE consider a 25 mg/l TSS maximum discharge concentration as the required performance standard in lieu of the current language.)

Page 11 529.9 - the use of the term “stormwater hotspot” may be problematic from a definitional perspective. I suggest you rethink this section and specify specific land uses, facility types or activities that will be covered under this section. You may also want to just address this issue by stating that practices selected shall not endanger groundwaters or similar language. This will put the applicant on notice that they cannot use infiltration systems where there is a high likelihood of groundwater contamination due to pollutants on the site or generated from activities on the site. If conditions exist on the site that preclude the use of infiltration practices, DDOE should specify a process/off ramp to ensure that the site is designed to the maximum extent practicable to reduce runoff or achieve DDOE’s performance requirements. Such a process should be explicit and detailed.

Page 11 529.10 – Specify that any bioretention facility or infiltration device designed to temporarily retain runoff be designed with an impermeable liner to prevent groundwater contamination where contaminated soils exist on site.

General comment – I suggest that DDOE address or refer to guidance that DDOE will issue that is incorporated by reference in the rule. How does DDOE intend to deal with bioretention designs in regards to liners, underdrains, overdrains, by pass devices etc.?

Page 13 530.5 Will DDOE allow or encourage overland flow discharges to vegetated areas, e.g., forested areas? Will credit be provided for such practices? 530.5(3) What design requirements must large filtered cells for growing trees meet for structural integrity? Will these requirements be addressed in guidance? If so, note this fact.

General comment – terms such as “maintained to substantially remove” need to be clearly defined.

Page 15 532.2 I suggest that you cross reference the District’s tree protection and replacement requirements in this section or other appropriate sections. The use of trees and the establishment of mature tree canopy is an important practice for stormwater runoff reduction. I also suggest that you promote tree planting as a practice.

General comment – How does DDOE plan to deal with sites where infiltration of runoff causes basement flooding adjacent structures that are not owned by the applicant?

Page 18 532.4 Does DDOE have the authority to perform required maintenance or to contract out maintenance and bill the property owner or establish a lien on the property if stormwater practices require maintenance, rehabilitation or replacement?

Page 18 533 – Delete the variance section. It is unnecessary and creates a large problematic loop-hole.

Page 534.2 Does this provision provide an opportunity for the applicant to pay into a dedicated fund that DDOE is charged with using to implement stormwater management measures on other sites to control the requisite volume of water or pollutant concentrations. I suggest that the WQv for 534.2 be at a minimum 2 or 2.5 times the amount required for the applicant's site to be a significant disincentive to opt out of constructing onsite stormwater practices.

Page 20 534.5 Define "demonstrate to the satisfaction of the Department." I suggest that DDOE provide a process that includes the necessary level of detail necessary for the applicant to know exactly what DDOE requires to meet this requirement, i.e., to use the offsite mitigation ramp

Please feel free to contact me at (202-566-1201) or Abby Hall at (202-566-2086) if you have any questions about these comments.

Sincerely,

Robert Goo
Office of Wetlands, Oceans and Watersheds
US EPA

Additional comments from Abby Hall, USEPA

Introduction – Better explain why DDOE is using a GI/LID approach. Enumerate the benefits of a GI/LID approach.

- Create a simplified version of this introduction or a fact sheet to explain the purpose and overall approach used in the rule, i.e., a GI/LID approach based on infiltration, evapotranspiration and rainwater harvest and use.
- Use the Anacostia Waterfront Development format and requirements District wide.
- Explain in the introduction why the AWD standards differ from the ones that apply to the rest of DC and why.
- Why do you single out green roofs in the introduction? They are just one practice and you shouldn't favor them over other solutions.
- Page 4 ESC plan review. What are you assessing extra fees for additional cubic yards (\$0.10)?
- Page 6 District Sponsored Off-site Stormwater Management Mitigation Fee – this fee should be calculated based on the estimated costs, either for the mitigated site or the new site. Refer to Santa Monica, CA requirements for an example of this type of requirement.
- Page 7 - 528 – Where does this fall in the overall permitting process?
- Page 9 529.1 - last sentence – modify to read, “and shall not flow over property lines... into the street and public system... ”
- Page 10 529.3 - how do these coefficients compare to one another and how relevant are they?
- Page 10 529.4 Unclear requirements - is this a hierarchy?
- Page 11 329.7 Define MEP.
- Page 15 – 532.2 Require these requirements District wide.

**KEY CONCERNS OF THE DEVELOPMENT COMMUNITY
REGARDING DDOE'S PROPOSED STORMWATER REGULATIONS**

We understand that environmental agencies are becoming increasingly concerned about the role that stormwater runoff plays in contributing to pollutants in receiving bodies of water. We also understand that discharges from Combined Sewer Overflow (CSO) systems continue to be a significant issue in many jurisdictions, including the District of Columbia, and that the District's MS4 permit with the Environmental Protection Agency commits it to taking fairly significant steps in using greener technologies to combat the District's CSO problems. However, the DDOE's proposed stormwater regulations put a *disproportionate burden* of these obligations upon the development community *without an adequate legal basis* for doing so. The development community's building practices have been, and continue to be, *completely legal* under the law.

We strongly recommend that the DDOE model its approach instead on policies adopted in other jurisdictions, which rely largely on *incentives* to encourage greener stormwater measures, rather than taking the punitive approach that is outlined in the proposed regulations. Other jurisdictions have recognized that green infrastructure practices are evolving and require study and financial assistance. They don't apply a sledgehammer for failure to achieve strict and rigid requirements such as those outlined in the proposed rule. An approach using carrots, rather than sticks, would be much more consistent with Director Hawkins' remarks last June to the DCBIA when he talked about providing new *incentives to encourage* greener stormwater management practices. Accordingly, we strongly recommend that an advisory group involving key stakeholders be formed that can provide input on the significant *policy and technical issues* presented by the draft stormwater regulations. We have outlined some of these issues below.

- I. The proposed regulations are very punitive in nature.
 - A. The proposed *performance bond* is onerous and unnecessary. The process for determining the amount of the bond, when it will be posted, and when it will be released, is completely unclear under the proposed regulations. There also is *no authority* for requiring that such a bond be posted under applicable law.
 - B. The proposed *indemnification* provisions in the proposed covenant are onerous, burdensome, and not authorized by applicable law.
 - C. The circumstances under which *off-site mitigation* will be allowed are unduly stringent and place an unjustified burden on the developer to establish the need for off-site mitigation. In addition, the standards for granting or denying a request for off-site mitigation are vague and unclear. Most sites in the District have significant space limitations that will make it difficult to achieve the District's storm water management goals on-site in many instances. These types of stringent requirements will directly affect the economic feasibility of building in the District.

- D. The proposed regulations do not acknowledge the fact that it will be more difficult to achieve these "green" objectives in areas of the District that are not downtown and that are trying to attract big box retailers.
 - E. The automatic termination of the permit after one year is unduly harsh, particularly in these difficult economic times.
 - F. The penalty provisions are unduly harsh given that the conduct at hand – development -- is completely legal.
 - G. The requirement to achieve a *1-inch volume reduction* in the Anacostia Waterfront Development Zone is unduly harsh and will deter development in that portion of the City. The prior requirement was simply to *treat* a rainfall event of that magnitude.
- II. The proposed regulations would substantially increase the cost of development in the City.
- A. The development community needs time to assess the potential cost implications of these proposed requirements on different types of projects; we have not had the opportunity to do so yet.
 - B. The proposed regulations provide for numerous, costly fees at various points in the application process. Some of these fees are outside the control of the developer and will interject substantial uncertainty into the cost of the project. Other fees are (or should be) covered by the salaries of the employees who are doing their jobs. Still other fees could be consolidated into a single fee, rather than nickel and diming the developer throughout the application process.
 - C. The proposed regulations are unclear whether public space can be used if the site is too small to hold the stormwater management facility. Developers will need the cooperation of DDOT in placing stormwater management facilities in public spaces in many instances. The inability to do so readily will substantially impair the economic feasibility of many projects in the District.
 - D. The list of exemptions and variances in sections 527, 533, and 539 is unduly narrow.
 - E. The timing of various submittals needs to be re-visited. Some of the required submittals would not occur until after the stormwater permit has been obtained. For example, sealed civil design details should be all that is necessary in order to obtain the permit, and additional details can be provided after the Contractor has been selected.

- F. We are concerned about the absence of details regarding the process for determining who will be considered an "approved contractor" in the District. The lack of a sufficient number of approved contractors could substantially increase the cost of development in the District.
 - G. The upper limit on the area that can be exposed at any given time is onerous, and the basis for this limitation is unclear.
 - H. Given the substantial number of requirements in the proposed regulations, there needs to be a timeline and schedule of all required submittals included in the rules.
 - I. The proposed regulations should allow any type of recharge, and not limit this requirement to vegetated recharge only. Other types of recharge are effective, and the inability to use these other types of recharge will limit the designer's flexibility on any given site.
- III. The proposed regulations would delay development because of the lack of certainty and predictability in the process.
- A. The proposed regulations do not provide any time limits on DDOE review, which will interject substantial delay and uncertainty into the site development process.
 - B. The proposed regulations contain vague language that makes it difficult to anticipate with certainty what is expected of the developer. For example, the regulations discuss "stormwater hotspots" and the "potential to pollute stormwater runoff" or to "increase downstream discharge" in section 529, without providing any guidance on the scope of these concerns.
 - C. Under the proposed regulations, DDOE has complete discretion over whether the plans are acceptable or not. DDOE needs to be held to some type of clear standard.
 - D. There needs to be a clear Grandfathering Provision and a clear date when the regulations will go into effect. The proposed regulations need to be phased in, and their impact on pending projects needs to be clarified. We assume that they would not apply to projects that are in the works (e.g., have obtained PUD approval).
 - E. The need to have OAG signoff on the stormwater covenant will delay the process.
 - F. The requirement to post financial security is burdensome and not authorized by applicable law. In addition, the amount of financial security that will be required is totally within the discretion of DDOE, which is not acceptable. There needs to be a clear legal basis for requiring the posting of financial assurances in the first

place, and some standard with regard to the amount to be posted and the process for releasing the bond.

- G. The need to have a buffer zone near "any" waterbody is unduly vague.
 - H. The proposed regulations need to include a clear map of the Anacostia Waterfront Development Zone so that parties will understand where the more stringent requirements apply.
- IV. There is no statutory authority for many of the requirements in the proposed regulations.
- A. The legal authority for the covenant is unclear and needs to be provided/described.
 - B. The identified statutes do not authorize the posting of bonds or other financial assurances. Moreover, the amount of the bonds is unclear and totally subjective.
 - C. There is no basis in the statutes cited to require the developer to develop a pollution prevention plan or to require the property owner to identify the source of contamination.
 - D. The statutes cited do not provide DDOE with authority for ongoing inspections.
 - E. The statutes cited do not authorize DDOE to take corrective action and then to seek to recoup those costs from the property owner.
 - F. The statutes cited do not provide any basis for requiring an indemnity from the property owner.
 - G. The statutes cited do not require that the legal property owner (and only that party) obtain the permits.
 - H. The time periods for appeal are unreasonably short.
 - I. There need to be clearer standards for permit revocation or termination.
- V. Other technical concerns
- A. Information on removal rates for pollutants is required for design criteria for both targets to be achieved and for assumptions during design.
 - B. Section 530.5 and 530.8 need to be expanded upon to provide quantitative information.
 - C. Improvements in private space and in public space need to be addressed to clarify maintenance of BMPs by either private or public entities. Public/private

arrangements may sometimes be in the best interest of the City and the environment, such as allowing a developer to provide off-site retrofitting of a roadway area or other public area within the same drainage area in place of putting it on the developer's property. A one time perpetual maintenance contribution could be paid to the City to offset the maintenance responsibility. DC WASA, DDOT, and DDOE need to agree on maintenance if it will be a public entity.

- D. The variety inherent in urban redevelopment in the District calls for *flexibility* in design criteria based on use, density and location within the District. There is too much inflexibility in various portions of the proposed regulations.
 - E. In instances where there is *direct discharge* to either the Potomac or Anacostia Rivers, by way of a separate storm sewer of adequate capacity, *the requirement for volume reduction should be waived*. Volume reduction in areas with buildings on lot lines may actually cause undue hydrostatic loads on basement walls, and may not be practical.
 - F. Some of the language in the proposed regulations is inconsistent with EPA's interest in encouraging "green remediation" (e.g., section 544.4)
 - G. A number of the time limits are unreasonable. For example, the developer should have up to 45 days to submit its As Built drawings.
 - H. We need to be able to review the science behind the proposed rules, and to see how DDOE arrived at the rules based on the science, and we need to see the results of DDOE's research on similar rules throughout the region and elsewhere in the country.
 - I. DDOE needs to explain in writing the basis for disapproval of any stormwater management plans, with citations to applicable statutes and regulations.
 - J. Given the complexity of these regulations, when they are released for public notice and comment, the public needs to be given at least 60 days (not 30 days) to comment on them.
 - K. There is no need to repeat Federal requirements (*see, e.g.*, section 526.5) in the District's stormwater management regulations.
 - L. The District's updated Stormwater Management Guidebook is not posted on the DDOE website, but needs to be available for review in connection with this rulemaking.
- VI. A better outcome can be achieved if DDOE includes all key stakeholders in the process and has an open dialogue about these issues.

- A. An open dialogue with affected stakeholders (including developers, lenders, the environmental community, DDOT, and WASA) will achieve a better outcome. Such a process has worked well in the past, such as when the Anacostia Waterfront Development Zone regulations were developed, or when the Underground Storage Tank regulations were amended to incorporate risk-based corrective action principles.

- B. Certain projects, such as brownfields projects/VCP and VRAP sites, need to be treated differently. These sites are very difficult to finance and redevelop, and adding yet another layer of stringent requirements will only make them impossible to finance or redevelop. Yet redevelopment of these types of sites is critical if we are going to encourage Smart Growth and Transit Oriented Development in the District.

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**Anacostia Citizen's Advisory Committee • Anacostia Riverkeeper
Anacostia Watershed Society • Audubon Naturalist Society • Casey Trees • Clean Water Action
DC Environmental Network • DC Smart Schools • Earthjustice • Friends of the Earth
Global Green USA • GreenHOME • Groundwork Anacostia River DC
Natural Resources Defense Council • Potomac Riverkeeper
Sierra Club, Washington DC Chapter • Washington Parks & People
Wholeness for Humanity**

April 22, 2009

Director George Hawkins
DC Department of the Environment
51 N Street, NE, 6th Floor
Washington, DC 20002

RE: Comments on DRAFT Storm Water Management and DC Soil and Erosion Control Regulations

Dear Mr. Hawkins:

Thank you for this opportunity to submit these preliminary comments on behalf of the undersigned organizations, which are working to curtail stormwater pollution and restore degraded waterways in the District. We fully support the expressed goal of the new regulations “to promote the use of low impact development practices such as rain gardens, cisterns, green roofs, and other green technology best management practices to control and treat stormwater.” We also support the goal of incorporating the Anacostia Waterfront Corporation’s enhanced environmental stormwater management standards into the regulations and would like, when possible, to see these cutting-edge standards apply to all District neighborhoods.

These new directions are sorely needed to reduce stormwater pollution into the Anacostia and Potomac Rivers and Rock Creek, all of which are impaired by contaminated stormwater discharges. In addition to reducing sewer overflows and stormwater discharges, the benefits of doing this right are many. Cleaner water, enhanced water supplies, reduced flooding, cleaner air, reduced urban temperatures, increased energy efficiency, source water protection, habitat protection and community livability are all benefits the District could enjoy with strong and effective regulations.

Based on our initial review of the regulations, we believe them to provide less protection for DC’s water resources than is necessary to achieve DC’s water quality and community goals and to comply with applicable statutes and regulations. We believe that stronger regulations are not only required legally, but can be supported in terms of technical merit, feasibility, and consistency with the approaches of other jurisdictions. We would appreciate the opportunity to discuss those issues in more depth with you and your staff at your earliest convenience.

Our initial technical comments on the draft regulations follow:

- (1) Conformance to requirements of National Capital Revitalization Corporation and Anacostia Waterfront Reorganization Act of 2008 (“NCRC”). The proposed regulations fail to conform to NCRC in the following ways:
 - Fails to reference compliance with green building standards per Sections 452 and 455 of the NCRC
 - Fails to define publicly owned or publicly financed per Section 453(a)(2) of the NCRC.
 - Fails to include requirements for integrated environmental design standards per Section 454 of the NCRC
 - Fails to include site planning and preservation standards per Section 458 of the NCRC

- Fails to include standards for marinas per Section 457 of the NCRC
- Fails to include standards for roadways per Section 458(6) of the NCRC
- Limits applicability of Anacostia Waterfront Development Zone (AWDZ) requirements for non-land disturbing activities to existing buildings in which the roof drains are connected to a sewer (Notice of Proposed Rulemaking (NPR) 530.2). There are other sources of stormwater from existing buildings other than roof drains. In addition roof runoff can be a problem even if not connected to a sewer if it is not infiltrated or stored and re-used, such as with a rain barrel or cistern. We suggest that the AWDZ standards apply to all level 3 alterations and repairs of existing buildings in which the estimated cost equals or exceeds 50% of the assessed value irrespective of whether the downspouts are connected to a sewer

(2) Stormwater Management:

- **502.4 --** What is the basis for determining the per impervious acre off-site District sponsored mitigation fee? Is there a ratio applied in the calculation of the fee, similar to the off-site mitigation ratio of 1.5:1? If not, a District sponsored mitigation fee ratio of 2:1 is suggested.
- **526.2** – We suggest that these provisions also apply to all level 3 alterations and repairs of existing buildings in which the estimated cost equals or exceeds 50% of the assessed value irrespective of whether the downspouts are connected to a sewer
- **527.1** – The exemptions should be from 526.1, not 526
- **528** – Integrated environmental design standards should apply District-wide, not just in the AWDZ. Such as approach is really essential to being able to use low impact development approaches, rather than underground filters, to manage stormwater on-site.
- **529.1** – The provision is internally inconsistent as to whether only roof downspouts or other areas need to discharge to vegetated areas. We would suggest that all impervious surfaces affected by the alteration (roofs, driveways, patios, alleys, etc) should be disconnected
- **529.3-.7** These provisions should be modeled after the 530.4-.8. The law requires that the controls reduce pollutants to the maximum extent practicable. Since one inch retention reduces pollutant loadings more than $\frac{3}{4}$ ", the one inch standard needs to be citywide unless it has been demonstrated that it is not practicable to do so even with the off-site mitigation provision that the regulations also contain. No such showing has been, or likely could be made, to our knowledge.
- **529.3 --** The wording of this provision is unclear. As currently written, stormwater management facilities that receive runoff are intended to manage it through prevention, which is not possible. The provision should identify that runoff prevention practices are incorporated at the site level separate from stormwater management facilities and are beneficial because they reduce the WQv requiring subsequent treatment. Suggest language similar to:

“Sites shall be designed to manage stormwater by using runoff prevention practices that minimize the conversion of precipitation to runoff and stormwater management facilities designed to reduce and treat stormwater runoff. When used, runoff prevention practices decrease the water quality volume of runoff (WQv) required to be managed at the site by limiting the creation of stormwater. The WQv to be managed at a site shall be determined as follows:”

1. The use of three site conditions (i.e., impervious, compacted, and natural covers) is supported as representative of typical site conditions. However, it is suggested to revise the runoff coefficient for compacted cover. The proposed 0.25 runoff coefficient for compacted cover appears to represent natural conditions. Based on a review of the literature, a runoff coefficient of 0.5 or greater is suggested for compacted cover conditions. The table below presents a summary of runoff coefficients.^{1,2,3}

Type of Development or Surface	Runoff Coefficient
Neighborhood areas	0.50 – 0.70
Residential	
- Multi-units, detached	0.40 – 0.60
- Multi-units, attached	0.60 – 0.75
- Suburban	0.25 – 0.40
Impervious soils	0.40 – 0.65
Impervious soils with turf	0.30 – 0.55
Meadow	0.10 – 0.50
Forest	0.05 – 0.25
Parks	0.10 – 0.25
Lawns	0.10 – 0.35

- **529.4** – This provision should clearly indicate preference for vegetated methods
- **529.5** -- The equation provided in this provision appears to be incorrect. The intent of the regulation is to have the Runoff Reduction volume (RRv) and the Runoff Treatment volume (RTv) equal the Water Quality volume (WQv). The Runoff Prevention volume (RPv) should not be included in the equation because it has already been factored in to the WQv (see previous comment for §529.3). Two revisions are proposed for this provision. If the comments on §529.6 are implemented, the following modification is suggested,

“The combination of practices in §529.4 shall manage the WQv required as set forth in §529.3, so that Runoff Reduction Volume (RRv) = WQv. The Runoff Prevention Volume (RPv) gained from using Runoff Prevention Practices decreases the WQv and the subsequent RRv.”

If the suggested modification to §529.6 is not implemented, suggest modifying this provision to read:

“The combination of practices in §529.4 shall manage the WQv required as set forth in §529.3, so that Runoff Reduction Volume (RRv) + Runoff Treatment Volume (RTv) = WQv. The Runoff Prevention Volume (RPv) gained from using Runoff Prevention Practices decreases the WQv and the subsequent RRv and RTv.”

- **529.6** – Why was the Runoff Reduction Volume set at 75% of the WQv? Selecting the 90th percentile rain event as the basis for the WQv is a good first step; however, it is increasingly recognized that stormwater retention is a critical factor for adequate stormwater management. Of its many findings in its urban stormwater report, the National Research Council found that:⁴

¹ Schwab, G.O., D.D. Fangmeier, W.J. Elliot, and R.K. Frevert, Soil and Water Conservation Engineering: Fourth Edition, John Wiley & Sons, New York, New York, 1993.

² Design and Construction of Sanitary and Storm Sewers, American Society of Civil Engineers and the Water Pollution Control Federation, 1969.

³ Purdue University, *Runoff Coefficients, C, for the Rational Formula*, cobweb.ecn.purdue.edu/~sedspec/sedspec/doc/runoff.doc.

⁴ National Research Council, *Urban Stormwater Management in the United States*, October 2008.

- a. Nonstructural 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 load from a new development; and
- b. Stormwater control measures that harvest, infiltrate, and promote evapotranspiration of stormwater are critical to reducing the volume and pollutant loading of small storms.

It is suggested to require that all of the WQv be retained, thus setting the $WQv = RRv$. A 1-inch retention requirement is already incorporated into the proposed standards for the Anacostia area and would apply similar standards for the whole of the District. In addition, many municipalities have adopted 1-inch or greater retention standard. For example:

- a. Philadelphia has adopted a 1-inch on-site retention standard for new development and redevelopment;
 - b. Battery Park City in New York has adopted an on-site retention standard that requires that the first 2.4 inches of rainfall falling on a roof and setbacks be collected, treated, and stored.
 - c. The draft West Virginia MS4 general permit includes a 1-inch retention standard.
 - d. Montgomery County has a 2.6” channel protection volume standard and one inch water quality volume standard (Montgomery County Code, 19-26).
- If Comment 1 above is not implemented, then in part (b), it seems like the requirement should read, “The Runoff Treatment volume (RTv) shall achieve, at a *maximum*, 25% of the WQv...” The RRv and RTv cannot both be set as minimum values.
 - In addition, treatment should reduce all pollutants for which the receiving water is impaired so that they do not cause or contribute to that impairment. 40 CFR 122.4(d) and 40 CFR 122.4(i). Volume treatment that maintains predevelopment hydrology would be one means of reducing pollutant loads to meet water quality standards.
 - **529.9** – It is appropriate to ensure that infiltration does not contaminate groundwater, but that should apply to activities that have the potential to pollute groundwater, not stormwater, and, even so, there may be ways to infiltrate with pretreatment or with liners, so that groundwater is protected
 - **530.4** --_The wording of this provision is unclear. As currently written, stormwater management facilities that receive runoff are intended to manage it through prevention, which is not possible. The provision should identify that runoff prevention practices are incorporated at the site level separate from stormwater management facilities and are beneficial because they reduce the WQv requiring subsequent treatment. Suggest language similar to:

“Sites shall be designed to manage stormwater by using runoff prevention practices that minimize the conversion of precipitation to runoff and stormwater management facilities designed to reduce and treat stormwater runoff. When used, runoff prevention practices decrease the water quality volume of runoff (WQv) required to be managed at the site by limiting the creation of stormwater. The WQv to be managed at a site shall be determined as follows:”

The use of three site conditions (i.e., impervious, compacted, and natural covers) is supported as representative of typical site conditions. However, it is suggested to revise the runoff coefficient for compacted cover. The proposed 0.25 runoff coefficient for compacted cover appears to represent natural conditions. Based on a review of the literature, a runoff coefficient of 0.5 or greater is suggested for compacted cover conditions. The table below presents a summary of runoff coefficients.

Type of Development or Surface	Runoff Coefficient
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Neighborhood areas	0.50 – 0.70
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Meadow	0.10 – 0.50
Forest	0.05 – 0.25
Parks	0.10 – 0.25
Lawns	0.10 – 0.35

It is suggested to modify the language in §530.5 and §529.4 to be the same. Runoff prevention practices are identified in §529.4 but not in §530.5, and stormwater treatment practices are presented inconsistently between the two sections

- **530.6** -- The equation provided in this provision appears to be incorrect. The intent of the regulation is to have the Runoff Reduction volume (RRv) and the Runoff Treatment volume (RTv) equal the Water Quality volume (WQv). The Runoff Prevention volume (RPv) should not be included in the equation because it has already been factored in to the WQv (see previous comment for §530.4). It is suggested to modify this provision to read:

“The combination of practices in §530.5 shall manage the WQv required as set forth in §530.4, so that Runoff Reduction Volume (RRv) + Runoff Treatment Volume (RTv) = WQv. The Runoff Prevention Volume (RPv) gained from using Runoff Prevention Practices decreases the WQv and the subsequent RRv and RTv.”

- **530.7** -- Is it intended that the Runoff Reduction volume always be a minimum of 1 inch regardless of the effects of the Runoff Reduction volume? Or is the intent to have the Runoff Prevention volume + the Runoff Reduction volume = 1 inch?
- **530.10** – Are there guidelines that could be referred to here re overuse of fertilizers, herbicides, and pesticides? If not, DDOE should develop some because this is so vague as not to be of much value.
- **533** – This variance provision is overly broad and likely to be unenforceable. We suggest deleting this and relying instead on the mitigation provision (534) to address situations of technical infeasibility and we also suggest that DC work to change zoning and building code provisions that conflict with LID instead of allowing them to trump effective stormwater requirements. If this provision is retained, it should specify the criteria that would determine eligibility for a variance, not a vague, subjective standard like “technical difficulty.”
- **534.5** -- What is the cost basis for assessing off-site fees when off-site mitigation is not an available option?
- **540.6** - The draft proposes to establish a maximum exposed area of no greater than 220,000 square feet. This is the equivalent of a “phasing” requirement that enables up to 5 acres at one time to be cleared, graded, and exposed to erosion. This is not acceptable. We propose instead that D-DOE establish a maximum exposed area of no greater than 2.5 acres at a time, one-half of the current/ proposed maximum exposed area. Two-and-a-half acres is plenty of space to be able to clear and grade and prepare sites for construction. Closer coordination of cut and fill and earthwork operations will enable this smaller phasing requirement to be fulfilled.

- **540.8** - The draft regulations use a 14-day maximum for exposed soils to be stabilized. This is much too long. We propose instead that a maximum of two days be used as the soil stabilization time frame. Site operators can choose from the many options on the market for soil stabilization that work on an immediate (same-day) basis, including: geotextile blankets; hydroseeding; straw mulches, and other products.
- **540.11** - Runoff conveyance ditches and channels should be lined and should incorporate checkdams. Both of these channel enhancements help to ensure that additional erosion and sedimentation does not take place during conveyance.
- **540.11** – Basin enhancements: Sediment basins should incorporate porous baffles to lengthen residence time, and surface outlets including surface skimmers. The latter technologies enable the cleanest water, from the top of the basin, to be drawn off first.
- **540.11** – Turbidity control:
 - a. DDOE should establish numeric turbidity limits for construction sites, as EPA has proposed for sites greater than 30 acres as part of its proposed Effluent Guideline for the construction industry. Below we note our proposed numeric turbidity limits and the range of approaches for complying with them.
 - b. For sites of 1 to 30 acres: We refer here to the NRDC – Waterkeeper comments to EPA on the Effluent Guideline for the Construction and Development industry. We propose that a numeric turbidity limit of less than 200 NTU be applied to all sites of 1 to 30 acres. This NTU limit can be complied with through either the use of physical erosion prevention and sediment control methods, or through a combination of these methods with the use of chemical coagulants and filtration.
 - c. For sites of greater than 30 acres, we propose that D-DOE adopt EPA’s proposed 13 NTU standard which is based upon use of “Active Treatment Systems” that employ a combination of enhanced sediment control basins and conveyances along with active chemical coagulant treatment and filtration.
- **540.14** - Stockpiles should be given a maximum of two days to be covered or otherwise fully stabilized and protected from the elements. The current text uses a 7-day timeframe for stockpile stabilization and this is too long.
- **543.1 (c)** - The same two-day exposed soil/ sediment pile stabilization requirement should be applied to linear utility projects as to all other projects. We also propose removal of the word “immediate” in this section and replacement with the proposed two-day stabilization requirement; the word “immediate” is vague and subject to interpretation.

Thank you for the opportunity to comment on these regulations in advance of the formal public comment period. If you have any questions please feel free to contact Nancy Stoner at 202-289-2394 or Chris Weiss at 202-222-0746 for assistance.

Sincerely,

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