

# DISTRICT DEPARTMENT OF THE ENVIRONMENT

## NOTICE OF PROPOSED RULEMAKING

### **Stormwater Management, and Soil Erosion and Sediment Control**

The Director of the District Department of the Environment (Department or DDOE), under the authority identified below, hereby gives notice of the intent to amend chapter 5 (Water Quality and Pollution) of title 21 (Water and Sanitation) of the District of Columbia Municipal Regulations (DCMR), comprehensively amending the stormwater regulations and the soil erosion and sediment control regulations. Specifically, these amendments repeal and replace §§ 500 to 545 and 599, and add §§ 546 and 547.

DDOE also gives notice of its intent to adopt a revised Stormwater Management Guidebook (SWMG). DDOE has updated and expanded the SWMG to be consistent with and provide guidance on compliance with the proposed regulatory amendments. This includes design specifications for stormwater management practices that can be used to achieve compliance. The revised SWMG is approximately five hundred fifty (550) pages long and, therefore, is not published in this *D.C. Register*. It is available at <http://ddoe.dc.gov/proposedstormwaterrule>.

Final rulemaking action shall be taken in not less than ninety (90) days from the date of publication of this notice in the *D.C. Register*. DDOE will accept comments from the public on both the rulemaking and the SWMG throughout the ninety (90) day period. In addition, as discussed further below, DDOE will conduct an extensive stakeholder process and recognizes that an additional public comment period may be necessary if substantial changes are made.

Recognizing the length and detail presented in this preamble, the Department has organized it into sections with headings to make it more readable, as follows:

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## Authority

The authority for the proposed adoption of final rules is set forth below:

- Department of Consumer and Regulatory Affairs Civil Infractions Act of 1985, effective October 5, 1985 (D.C. Law 6-42; D.C. Official Code §§ 2-1801.01 *et seq.* (2008 Repl. & 2012 Supp.)), as amended;
- District Department of the Environment Establishment Act of 2005, §§ 101 *et seq.*, effective February 15, 2006 (D.C. Law 16-51; D.C. Official Code §§ 8-151.01 *et seq.* (2008 Repl. & 2012 Supp.)), as amended;
- National Capital Revitalization Corporation and Anacostia Waterfront Corporation Reorganization Act of 2008, Anacostia Waterfront Environmental Standards Act of 2008, effective March 26, 2008 (D.C. Law 17-138; D.C. Official Code §§ 2-1226.31 *et seq.*) (2007 Repl. & 2012 Supp.)), as amended;
- The Soil Erosion and Sedimentation Control Act of 1977, effective Sept. 28, 1977 (D.C. Law 2-23), as amended by the Soil Erosion and Sedimentation Control Amendment Act of 1994, effective July 8, 1994, (D.C. Law 10-166, 21 DCMR §§ 500-15);
- Uniform Environmental Covenants Act of 2005, effective May 12, 2006 (D.C. Law 16-95; D.C. Official Code §§ 8-671.01 *et seq.* (2008 Repl. & 2012 Supp.)), as amended;
- Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Law 5-188; D.C. Official Code §§ 8-103.01 *et seq.* (2008 Repl. & 2012 Supp.)), as amended;

- Mayor's Order 2006-61, dated June 14, 2006, and its delegations of authority.

## **Background**

These amendments update chapter 5 of title 21 of the DCMR to reflect the current scientific, engineering, and practical understanding in the fields of stormwater management and soil erosion and sediment control. Knowledge and technology in these fields has changed considerably since 1977, when the majority of the soil erosion and sediment control requirements were put into place, and since 1988, when the District's existing stormwater management requirements were established.

In several decades of implementing the stormwater management and soil erosion and sediment control regulations of the District and undertaking numerous restoration projects, the Department has acquired substantial firsthand knowledge and experience of the damage to District waterbodies from impervious development and inadequately managed stormwater. Stormwater impacts District waterbodies with its powerfully erosive volume and the pollution it contains. *See* presentation at <http://ddoe.dc.gov/proposedstormwaterrule> for photographs that illustrate these impacts.

These amendments satisfy the requirements of the District's Municipal Separate Storm Sewer System (MS4) Permit, issued by the United States Environmental Protection Agency under the Clean Water Act (Permit No. DC0000221, available at <http://www.epa.gov/reg3wapd/npdes/dcpermits.htm>). The MS4 permit requires the District to implement a 1.2 inch stormwater retention standard for land-disturbing activities, a lesser retention standard for substantial improvement projects, and provisions for regulated sites to satisfy these standards off site. The MS4 permit sets a deadline for these new requirements to be in effect as of July 22, 2013.

DDOE has also designed these amendments to work in concert with other sustainability initiatives in the District, including the Office of Planning's development of Green Area Ratio requirements under the zoning code.

In developing these amendments, DDOE drew on various sources of information. This included a review of the science, engineering, and practice of stormwater management and soil erosion and sediment control, as well as its own firsthand knowledge of the impact of stormwater on District waterbodies. DDOE evaluated its experience managing the installation, operation, and maintenance of the various types of Best Management Practices (BMPs) that can satisfy the requirements in these amendments. DDOE also considered the regulatory approaches taken in other urban jurisdictions.

Finally, DDOE appreciates the valuable input it has received from residents, engineers, scientists, land developers, environmentalists, and other governmental entities regarding the impacts of these amendments. This includes feedback from listening sessions advertised in the *D.C. Register* in June of 2009 on a pre-proposal, conceptual draft with similar requirements. It also includes more recent input from public and stakeholder meetings on the rules generally and, specifically, on the provisions for off-site retention. DDOE recognizes that these amendments are

significant for the regulated community, for environmental stakeholders, and for the public to whom the District's waterbodies ultimately belong. Accordingly, DDOE gave careful consideration to this input in preparing these amendments, and, as a result, they are significantly changed from the 2009 draft.

## **Summary**

These amendments will provide greater protection for the Anacostia and Potomac Rivers, Rock Creek, and their tributaries. They will improve equity in the allocation of the burden of stormwater management is, and they will promote sustainable development within the District.

The amendments will significantly improve protection for District waterbodies by effecting a fundamental shift in the management of stormwater runoff within the District. Unlike the existing approach in which the fundamental goal of stormwater management is simply to manage the timing and quality of stormwater conveyed into the public sewer infrastructure, these amendments require the retention of stormwater volume on site with a menu of stormwater management practices through which stormwater is absorbed by the soil, infiltrated into the ground, evapotranspired by plants, or stored ("harvested") for use on site. This more closely approximates the "sponginess" of the natural environment, where rainwater is captured by foliage, absorbed into the soil, and infiltrated into groundwater reserves.

These amendments improve equity in how the impacts of stormwater pollution and the burden of stormwater management are distributed in the District. Over the years, inadequate stormwater management has become a leading cause of the severe degradation of District waterbodies such as the Anacostia and Potomac Rivers and Rock Creek. This degradation diminishes the value of these public resources for the residents of and visitors to the District of Columbia. Moreover, that degradation necessitates the use of public resources to pay the costs of managing stormwater that should be borne by those who are causing the stormwater pollution. The principle that the polluter should pay for pollution is a fundamental and established element of equitable environmental policy, and these amendments would more equitably allocate the costs of stormwater management by requiring regulated development sites to do more to reduce the stormwater pollution from their property, especially by retaining stormwater as discussed above.

These amendments will promote sustainable development in the District, not only by improving protection for District waterbodies, but also by providing that protection while maximizing flexibility and cost-savings for regulated sites. First, the amendments allow regulated sites the option of achieving a portion of their stormwater retention requirement off site, but still within the District, without having to first prove that on-site retention is infeasible. Such sites would have two (2) off-site options: use of Stormwater Retention Credits (SRCs) purchased from the private market or payment of an in-lieu fee to DDOE. Second, to facilitate retention on site, the amendments allow a regulated site to exceed the retention requirement in a drainage area ("over-control") in order to compensate for retention that falls short in another drainage area on the site. Third, on-site retention can also be achieved via direct drainage to a Shared Best Management Practice (S-BMP) that may serve multiple sites. Finally, though sites draining into the combined sewer system must retain a minimum volume of stormwater from the entire site, they have the

flexibility to over-control without having to meet minimum requirements for retention or treatment in individual drainage areas on the site.

### **Effective Date and Planned Transition Period**

With the exceptions noted below, DDOE intends for these amendments to become effective six (6) months after their final publication in the *D.C. Register* or on July 22, 2013, whichever occurs first. The point of this transition period is to allow regulated projects, which are often planned, designed, and constructed over multiple years, time to incorporate these new requirements into their design. Though DDOE's intention has been to allow a full six (6) month transition period, the MS4 permit issued to the District by the United States Environmental Protection Agency (EPA) requires that these amendments be effective no later than eighteen (18) months after the effective date of the permit, which makes July 22, 2013, the latest allowable effective date.

The exceptions are for the three (3) sections of this rule related to the certification, lifespan, and ownership of Stormwater Retention Credits (SRCs) and the section on existing retention. DDOE intends for these sections to become effective immediately upon final publication in the *D.C. Register*. These exceptions are necessary to allow SRCs to be available to regulated sites once these rules have fully taken effect.

Any Stormwater Management Plan (SWMP) or Soil Erosion and Sediment Control Plan (SESCP) submitted for the first time after the effective date of these amendments shall meet the requirements of these rules.

In situations where an applicant applies for a new permit because a previous permit application was deemed to have been abandoned, the issued permit expires, or it otherwise becomes invalid, the applicant must also apply for approval of a required SWMP or SESCO. If the new submittal of a SWMP or SESCO comes after the effective date of these amendments, then the submittal must meet the requirements of these amendments.

By way of background, DDOE's review and approval of a SWMP or SESCO operates in the context of a required permit for construction activities issued by the District of Columbia Department of Consumer and Regulatory Affairs (DCRA). In other words, where the stormwater management or soil erosion and sediment control regulations are triggered, DCRA requires the applicant to obtain DDOE approval of the required SWMP or SESCO prior to issuing a permit. Responsibility for obtaining a permit and plan approval lies with the property owner or lessee of the property; however, a designated agent of the owner or lessee may submit such applications on their behalf. At the completion of construction, a project must pass a final DDOE construction inspection before DDOE will give its approval for the issuance of a certificate of occupancy by DCRA.

### **Public Hearings and Informational Meetings on the Rules and the Guidebook**

DDOE intends to hold two (2) public hearings during which DDOE will accept oral and written comments on this rulemaking and the Stormwater Management Guidebook (SWMG). DDOE

plans to hold these hearings roughly forty-five (45) and seventy-five (75) days from the publication of this rule in the *D.C. Register*. DDOE will publish a separate notice in the *D.C. Register* with the dates and times for these hearings. DDOE will also post these dates at <http://ddoe.dc.gov/proposedstormwaterrule>. For the accuracy of the record, DDOE requests that oral statements also be submitted in writing.

DDOE recognizes that the rule and SWMG contain a great deal of information, much of which is technical. To facilitate the public's understanding and ability to comment on this content, DDOE plans to hold a minimum of two (2) informational meetings on each of the three (3) topics listed below. DDOE will post the dates and times for these meetings at <http://ddoe.dc.gov/proposedstormwaterrule>. The topics are:

- Use of DDOE's Stormwater Management Guidebook,
- Use of off-site retention through in-lieu fee or Stormwater Retention Credits, and
- Creation and certification of Stormwater Retention Credits.

In addition, to allow for in-depth discussion of individual topics within the rulemaking and SWMG, DDOE expects to hold small, focused meetings, as requested by stakeholders and members of the public. DDOE will do its best to accommodate all requests for such meetings that it receives. These meetings will be open to the public, though DDOE may cap the number of participants for each meeting in the interest of maintaining a constructive opportunity for participation. DDOE will hold additional meetings on the same topic if necessary. DDOE asks that requests for focused meetings on individual topics be submitted to DDOE as soon as possible and no later than seventy-five (75) days after the publication of this rule in the *D.C. Register*. Instructions for submitting a request will be posted at <http://ddoe.dc.gov/proposedstormwaterrule>. DDOE will post on the same webpage the dates, times, and topics for any meetings that it plans.

### **Submitting Comments**

Interested persons may submit comments, in writing, on this rulemaking and the Stormwater Management Guidebook (SMWG) not later than ninety (90) days from the date of publication of this Notice of Proposed Rulemaking in the *D.C. Register*. Instructions on how to get a copy of this notice and the proposed rules, including the SWMG, and the manner and time period for giving public comment, appear at the end of the following proposed rules.

Oral statements will be heard and considered at the public hearings, but for the accuracy of the record, all statements should be submitted in writing.

### **Discussion of Key Changes Related to Stormwater Management Regulations**

#### **Applicability to Major Regulated Projects**

These amendments retain the existing regulatory trigger for sites with activities that disturb five thousand square feet (5,000 sq. ft.) or more of soil. The amendments refer to these as "major land-disturbing activities."

In addition, for sites with buildings undergoing substantial improvement, the regulations are triggered when the sum of the buildings' footprint and any area of soil disturbance equals five thousand square feet (5,000 sq. ft.) or greater. The amendments refer to these as "major substantial improvement activities," distinguishing the large footprint associated with these projects, as compared to substantial improvement projects generally. A substantial improvement project is a renovation that has a cost that equals or exceeds fifty percent (50%) of the market value of the structure before the project is started. Note that there need not be any soil disturbance for a project to be considered a major substantial improvement activity.

Collectively, the amendments refer to major substantial improvement activities and major land disturbance activities as "major regulated projects."

The requirements for a major substantial improvement activity are less stringent than for a major land-disturbing activity. The less stringent requirement on major substantial improvement activities is based on the Department's recognition that opportunities for installation of stormwater management practices on and around existing structures are often more constrained than projects that are designing a site and building a structure from the ground up.

Inclusion of major substantial improvement activities in these amendments is consistent with District environmental legislation, including the Green Building Act of 2006 (D.C. Law 16-234; D.C. Official Code § 6-1451.01 *et seq.* (Repl. 2008, Supp. 2012)) the Anacostia Waterfront Environmental Standards Act of 2008 (D.C. Law 17-138; D.C. Official Code § 2-1226.31 *et seq.* (2007 Repl. & 2012 Supp.)), and the District's floodplain regulations. The definition of substantial improvement projects in the proposed amendments is essentially the same as the definition used in the legislation and regulation cited above and in the 2006 International Building Code.

If an activity does not meet the five thousand square feet (5,000 sq. ft.) threshold for land disturbance or substantial improvement but is part of a larger common plan of development that does meet that threshold, then that activity is regulated under these amendments.

### **Use of "Best Management Practice" as a Term**

These amendments use the catch-all term "Best Management Practice" (BMP) to refer to all of the various practices and strategies for stormwater management described in these amendments and the Stormwater Management Guidebook (SWMG). This includes retention, detention, and treatment BMPs as well as nonstructural BMPs involving land use, development, or management strategies to minimize the impact of stormwater runoff.

### **Stormwater Detention Requirements**

For major land-disturbing activities, these amendments preserve the existing requirement to detain stormwater in order to maintain post-development peak discharge from the 24-hour, 2-year storm event at a level that is equal to or less than the peak discharge for that size storm under pre-development (natural) conditions. The 2-year detention requirement helps to protect

stream channels and the areas around outfalls from eroding by reducing the peak discharge rate from post-development sites.

The amendments modify the existing detention requirement for the 24-hour, 15-year storm. Under the existing regulations, a regulated site must maintain post-development peak discharge for the 24-hour, 15-year storm at a level that is equal to or less than the peak discharge for that size storm under **pre-development** conditions. These amendments modify that requirement by specifying that post-development peak discharge be maintained at a level that is equal to or less than the peak discharge for that size storm under **pre-project** conditions.

The 15-year detention requirement is intended to prevent flooding of the District, rather than provide stream and river protection, and the modification is based on the Department's understanding that the sewer system is generally designed to convey the 15-year storm from the developed area draining into it. Assuming that sewer capacity in a drainage area was sufficient before a major land-disturbing activity began, it should still be sufficient post-development if the site maintains its discharge at the level of the pre-project discharge for the 15-year storm.

### **Stormwater Retention Volume Performance Standards**

In addition to preserving, with some modifications, the existing requirement to detain stormwater from the 24-hour, 2-year storm event (for stream protection) and the 24-hour 15-year storm event (for flood control), these amendments establish stormwater retention performance standards for major regulated projects.

These amendments refer to the net volume that a major regulated project will be responsible for retaining as the Stormwater Retention Volume (SWRv), which varies from site to site based on the type of regulated activity, as well as the size of a site and the land covers on it. For a major land-disturbing activity, the SWRv is calculated as the volume of runoff that would be generated from a 1.2 inch storm. For a major substantial improvement activity, the SWRv is calculated as the volume of runoff from a 0.8 inch storm. The 1.2 inch storm is the current 90<sup>th</sup> percentile rainfall event for the District of Columbia, meaning that 90 percent of storms are smaller than 1.2 inches. The 0.8 inch storm is the current 80<sup>th</sup> percentile rainfall event for the District.

As discussed below, a major regulated project has considerable flexibility in terms of how it achieves its SWRv. This includes the flexibility to use off-site retention after retaining a minimum of 50 percent of its SWRv on site.

### **Importance of Stormwater Retention Standards for District Waterbodies**

The retention standards in these amendments fill a gap in the District's existing regulatory structure and will provide significantly better protection for District waterbodies. The retention achieved by major regulated projects will allow those sites to more closely approximate natural conditions by keeping stormwater on site rather than allowing it to wash off in large volumes that erode land and stream banks and carry pollution into District waterbodies, thereby damaging aquatic ecosystems and limiting human use. As more and more sites are redeveloped under these

requirements, the District will gradually be transformed into a “spongier” landscape with healthier streams and rivers.

More specifically, there are two (2) primary protections for District waterbodies in the existing regulations. First, there is a water quality requirement to treat (meaning to filter) the volume from up to a 0.5 inch storm. Second, there is a requirement for detention of stormwater volume in order to maintain the **post-development** peak discharge rate for a 24 hour, 2-year frequency storm at a level equal to or less than the **pre-development** peak discharge rate from that size storm. This 2-year detention requirement was intended to protect stream channels from eroding and was based on hydrological data indicating that it is the 2-year storm that typically shapes stream channels under pre-development, natural conditions (Schueler 1987 and Novotny 2003). (References appear at the end of this preamble.)

In the ultra-urban, highly impervious District, these requirements have been beneficial for District waterbodies, but they have also been inadequate, particularly in terms of controlling the volume of stormwater flowing from major regulated project sites. The water quality treatment requirement provides no control of flow rates from these sites, and the 2-year storm detention requirement fails to mimic natural, pre-development conditions in two (2) key ways.

First, the 2-year storm detention requirement limits the impact from 2-year frequency and larger<sup>1</sup> storms on post-development sites by restricting the post-development peak discharge rate to the pre-development peak discharge rate for the 2-year storm. However, a 24-hour, 2-year frequency storm is relatively large, accumulating 3.2 inches over the 24-hour period, and the discharge rate is relatively high. The many smaller storms that occur in a given year are allowed to wash off the site through 2-year flow control structures at the same higher rate of discharge that would be allowed for the 2-year storm. Given that these are highly impervious sites and that there are many of them in the ultra-urban District, the stormwater volume from these storms rapidly accumulates into a powerful force that causes a tremendous amount of erosion to land and stream banks and degrades District waterbodies. By contrast, under pre-development conditions, these smaller storms would result in either no or significantly less runoff. The National Research Council (2008) and others (such as Reese 2009) have elaborated on the importance of reducing runoff volume from these smaller storms in order to protect waterbodies.

Second, though the 2-year storm detention requirement limits the post-development peak discharge rate to the pre-development peak discharge rate, the post-development site discharges at that peak rate for a much longer time period than it would under pre-development conditions. This drawn-out peak discharge rate from the many impervious sites in the District also contributes to stream bank erosion and limits the use of District waterbodies for humans and aquatic life.

The 1.2 inch and 0.8 inch retention standards in these amendments will provide significantly more volume control to protect against erosion than the existing regulations do. These new standards serve as an important complement to the existing 2-year storm detention requirement for channel protection and the existing 15-year storm detention requirement for flood control

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<sup>1</sup> Note that the existing regulations and these amendments also impose detention requirements for the 24-hour, 15-year frequency storm event, which are intended to provide flood control, rather than channel protection.

(ARC 2001 and Schueler 2008). These amendments preserve these storm detention requirements, with the one modification discussed above, which will continue to reduce the impact from larger storms.

These amendments do not preserve the general requirement in the existing regulations for sites to treat the volume from up to a 0.5 inch storm in order to remove pollutants, which is generally not necessary under the new retention standards. The proposed retention standards will effectively provide treatment via retention that keeps stormwater from flowing into the sewer system and into District waterbodies. However, it should be noted that these amendments require drainage areas that do not achieve retention to instead provide a minimum level of treatment, unless the area drains into the combined sewer system.

A more detailed and technical explanation of why these new retention standards are needed to protect District waterbodies is available in the proposed Stormwater Management Guidebook.

### **Factors Considered in Determining Size of Storm to be Retained**

As a result of the information-gathering process described earlier in this preamble, DDOE recognizes that many stakeholders have strong views about the retention standards in these amendments. Some stakeholders have argued that the 1.2 inch retention standard for major land-disturbing activity will be too difficult and costly to attain. Others have argued for a higher retention standard based on a 1.7 inch storm, which is the ninety-fifth (95<sup>th</sup>) percentile rainfall event for the District. In making this argument, some stakeholders have cited technical guidance from the Environmental Protection Agency that indicates that this is the size event that should be retained in order to approximate pre-development hydrology, which can be thought of as essentially offsetting the impact of development on waterbodies (USEPA 2009).

Ultimately, the District must comply with its EPA-issued Municipal Separate Storm Sewer System (MS4) permit, which specifies a 1.2 inch retention standard for major land-disturbing activities. The MS4 permit also requires that the District incorporate a retention standard for major substantial improvement activities, though it allows some flexibility to use a lower standard for these activities.

Though bound by the MS4 permit, DDOE has carefully considered numerous factors in establishing the standards in these amendments, as well as appropriate provisions to allow flexibility in achieving these standards. In this context, DDOE has concluded that these standards are technically feasible; that they do not impose unreasonable compliance costs; that they will provide significant benefits for District waterbodies; and that they are consistent with requirements being implemented in other jurisdictions.

With respect to technical feasibility, DDOE has concluded that a 1.2 inch retention standard is feasible for the District but has not had sufficient experience with projects retaining more than that volume to justify a higher retention standard at this time. Many retention BMPs have been installed in the District in recent years, both by the District government and the private sector. Some of these were demonstration projects. Some were done to satisfy the water quality treatment requirements in the District's existing regulations, and others were done on a voluntary

basis. DDOE and the larger scientific and engineering community have learned important lessons from these projects and projects done elsewhere and have refined the design and installation of such practices. Furthermore, DDOE has carefully tailored the specifications in its Stormwater Management Guidebook to the constraints of the District's highly urban environment.

Regarding compliance cost, an analysis by Industrial Economics, Inc. assessed the incremental cost to achieve a 1.0 inch retention requirement on three (3) sites in the District and found that the cost was roughly one tenth of one percent (1%) of the total cost of the development project. Though there would be an increased cost associated with a 1.2 inch retention requirement, as compared to the 1.0 inch requirement studied by Industrial Economics, Inc., the Department has no basis to believe that the cost increase would be sufficient to fundamentally change the conclusion that most sites can achieve the requirement at a reasonable cost.

From an environmental perspective, these amendments will substantially improve protections for District waterbodies. As discussed in more detail above, the District's existing stormwater management regulations do not require retention, and incorporation of these standards is a significant step forward. Though DDOE does not disagree with the point that higher standards would provide an even greater benefit for District waterbodies, there are diminishing marginal benefits as these standards are raised, and these benefits must be balanced in the overall context of the significant shift being imposed on the regulated community. Given this overall context, DDOE believes that the standards in these amendments strike an appropriate balance at this point in time.

DDOE also reviewed stormwater management requirements in other urban jurisdictions and the surrounding area. Numerous jurisdictions have set a retention standard for the ninetieth (90<sup>th</sup>) percentile storm event, which for the District is the 1.2 inch rainfall event. However, it is noteworthy that Montgomery County, Maryland has implemented requirements that are at least as protective, or arguably more protective, than those embodied in these amendments. In short, the 1.2 inch retention standard in these amendments is on par with what is being done in other urban areas.

Some stakeholders have suggested that a 1.2 inch retention requirement would drive development away from the District into surrounding jurisdictions, thereby undermining smart growth initiatives that prioritize dense development in urban areas over greenfield development in suburban or rural areas. However, the Department is not aware of any credible study that has documented such an effect. To the contrary, recent research conducted by ECONorthwest on behalf of Smart Growth America, indicates that this is not likely. ECONorthwest researchers interviewed developers and government officials in three jurisdictions that had recently implemented new and significantly stronger stormwater management requirements, including in Montgomery County, MD. They found that stormwater management requirements are not a major driver of decision-making and did not find evidence that such requirements drive development out of urban areas into surrounding greenfield areas. In addition, as discussed below, these amendments, including provisions on use of off-site retention, offer more flexibility than is available in other urban jurisdictions establishing similar retention requirements, making

it even less likely that these new requirements will drive development out of the District to surrounding jurisdictions.

The Department also considered technical feasibility, compliance costs, and environmental benefits in setting a retention standard for major substantial improvement activities at 0.8 inches, or the eightieth (80<sup>th</sup>) percentile storm event. The relatively low requirement for substantial improvement sites is based on an important difference between them and sites that disturb five thousand square feet (5,000 sq. ft.) or more of soil. Namely, the latter have the opportunity to design and build the project from the ground up, taking into consideration the most cost-effective approaches to retaining stormwater. A substantial improvement project does not have that opportunity and is therefore more constrained.

### **Flexibility in Choosing BMPs to Achieve Retention**

These amendments allow regulated sites the flexibility to choose Best Management Practices (BMPs) to achieve a performance standard for retention, without first proving that they are not able to use vegetated BMPs. The Department understands that there are ancillary environmental benefits of vegetated BMPs and of a more vegetated District, but the Department has concluded that not requiring vegetated BMPs is the wiser course, for five (5) reasons.

First, though the Department recognizes that there are ancillary environmental benefits to vegetated BMPs, there are also ancillary environmental benefits from some non-vegetated BMPs. Notably, BMPs that store stormwater for use on site result in the use of less potable water on a site, and water efficiency is a worthwhile environmental benefit.

Second, these amendments inherently incentivize the preservation and creation of vegetated areas and the use of vegetated BMPs. The calculation of a site's required Stormwater Retention Volume (SWR<sub>v</sub>) encourages the creation and preservation of vegetated area.<sup>2</sup> Also, private market costs for BMPs make vegetated BMPs the lowest cost option for compliance generally. Coupled with that cost incentive, limited opportunities for use of non-vegetated practices in the Public Right of Way (PROW) make vegetated BMPs the most likely BMP to be used there.<sup>3</sup>

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<sup>2</sup> The volume in a SWR<sub>v</sub> is calculated based on the types of land covers on a site. Since impervious surfaces cause more stormwater runoff, a site with more impervious surface will have a larger SWR<sub>v</sub> than a site with less impervious surface. In other words, there is an incentive built into the calculation to preserve or incorporate landscaped and natural areas on a site to reduce the volume of stormwater a property must retain through BMPs. This is explained in more detail in the proposed Stormwater Management Guidebook.

<sup>3</sup> Reconstruction projects in the PROW that trigger the retention standards in these amendments typically present limited opportunities for non-vegetated BMPs. The most cost-effective options in the PROW are generally tree boxes and vegetated bioretention in the space between the curb and adjacent property lines. Non-vegetated BMPs that capture and store stormwater for use require not only storage capacity, but also a documented ongoing demand for and plan to use the stormwater, which is typically difficult to achieve during the reconstruction of the PROW. The use of non-vegetated porous pavement in the roadway or in the parking lane has potential, though concerns remain about the structural strength of these materials in the travel lanes of major roadways, so they are not likely to be the first choice for achieving retention volumes. Moreover, in some cases these porous pavements will be able to achieve higher retention volumes if they drain in a treatment train to a nearby vegetated BMP.

Third, there are other initiatives underway to increase vegetation in the District. This includes the District's planned Green Area Ratio (GAR) requirements and the District's planned stormwater fee discount program. It also includes the Department's existing incentives for voluntary installation of vegetated BMPs and the existing requirements in the District's EPA-issued Municipal Separate Storm Sewer System (MS4) permit.<sup>4</sup>

Fourth, though there are general incentives for use of vegetated BMPs, there will be some sites where it will be either relatively difficult or costly to use vegetated BMPs,<sup>5</sup> adding significant compliance costs for these sites and administrative costs for DDOE. In addition to potentially higher costs of installation and opportunity costs from foregoing value-adding amenities, there would likely be higher costs associated with the regulatory review process. The regulated project would have to collect, develop, and submit sufficient data and related documentation to DDOE to prove it could not use vegetated BMPs, and DDOE's determination would typically involve the difficult question of how much effort and money a project must expend to satisfy the requirement. In some cases, making this determination would add time to the review process. All of this imposes increased compliance costs on some major regulated projects and administrative burden on DDOE, which do not seem justified given the marginal increase in vegetated BMPs that such a process might achieve.

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<sup>4</sup> The District Office of Planning is finalizing the requirements of its GAR program, which is expected to go into effect in 2013. The GAR program will require substantial improvement sites that exceed one hundred percent (100%) of the value of the property to have a certain amount of area covered by "green" practices. Though the program will give some credit for non-vegetated practices, the overwhelming majority of eligible practices are vegetated.

DDOE has proposed a stormwater fee discount program, which is expected to go into effect in 2012. Under that program, properties that pay a stormwater utility fee to the District will be able to receive a discount on that fee by installing retention BMPs or converting impervious areas to vegetation. Though non-vegetated BMPs will be eligible, the most cost-effective options are vegetated, as discussed above, and this should result in an increase in vegetated BMPs and vegetated area.

DDOE has numerous existing programs that provide partial subsidies for installation of retention BMPs. This includes the RiverSmart Homes program for residential properties, and the RiverSmart Rooftops program for installation of green roofs, including on commercial properties. Hundreds of District properties have participated in these programs, and DDOE expects the programs and their high participation levels to continue.

The District's MS4 permit also contains requirements that will result in more vegetation in the District. The permit requires the installation of at least four thousand one hundred fifty (4,150) trees each year during the permit's five-year term. It requires the installation of at least three hundred fifty thousand square feet (350,000 sq. ft.) of green roof over the permit term. It also requires the retrofit of eighteen million square feet (18,000,000 sq. ft.) of impervious surface, including one million five hundred thousand square feet (1,500,000 sq. ft.) in the PROW, during the permit term. Though this last requirement can be met without use of vegetated BMPs, they are likely to predominate, for the reasons discussed above.

<sup>5</sup> This is particularly true for lot-line-to-lot-line development projects in the densely developed downtown or other densely developed areas. On these sites, there may be limited open space, or site constraints such as utility lines may prevent a vegetated BMP from being cost-effective. Such sites may be able to most cost effectively achieve retention by using BMPs that store and use stormwater on site. Theoretically, they could go through the expensive process of relocating utility lines. They could install a green roof, though they might prefer to use the rooftop for other amenities that add value to the property.

Finally, requiring a regulated project to use a vegetated BMP unless it has proved that it cannot is likely to restrict market-led innovation that could benefit District waterbodies, and this is a field in which considerable innovation is occurring. Rather than forcing a certain technology, DDOE has opted for a meaningful performance standard that will allow the market and technical community to innovate in providing the most cost-effective solutions. In addition to benefitting the regulated community, cost-effective innovation may bring considerable benefit to District waterbodies. Forty-three percent of the District is impervious. The overwhelming majority of this area currently achieves little or no retention, and the cost to install BMPs could run into the billions of dollars. The development of more cost-effective BMPs may allow the District to leverage its limited resources for retrofitting this vast impervious area and thereby accelerate the restoration of the Anacostia and Potomac Rivers and Rock Creek.

### **Flexibility in Achieving On-Site Retention**

These amendments maximize flexibility for on-site retention by allowing a regulated site to exceed the retention requirement in one drainage area (“over-control”) in order to compensate for retention that falls short in another drainage area on the site. In addition, on-site retention can be achieved via direct drainage to shared Best Management Practices (S-BMPs) that serve multiple sites.

A regulated site may over-control up to a ceiling of the 1.7 inch storm for an individual drainage area on the site in order to offset retention of less than the SWR<sub>v</sub> on another drainage area on the site. However, any drainage area that achieves less than the minimum on-site retention (fifty percent (50%) of the SWR<sub>v</sub>) must provide water quality treatment for that minimum volume (unless it drains to the combined sewer system).

Generally on-site retention provides the greatest benefit to District waterbodies when all drainage areas on the site retain the SWR<sub>v</sub>. However, even in circumstances where over-control results in less than the minimum on-site retention in an individual drainage area, the combination of retention and treatment is more protective than the requirements in the existing regulations. Therefore, the Department believes that allowing over-control is a reasonable way to provide flexibility.

Additional detail on over-control is in the Department’s Stormwater Management Guidebook, but a brief example is provided here to illustrate the concept. Suppose a regulated site with three (3) drainage areas has a net SWR<sub>v</sub> from the 1.2 inch storm that is equal to ten thousand gallons (10,000 gal.) for the entire site. These drainage areas and their corresponding 1.2 inch SWR<sub>v</sub>, 1.7 inch storm ceiling, and minimum retention are given in Table 1. As shown in the table, drainage area 1 (roof) and drainage area 3 (turf) over-control by installing retention BMPs that can hold more than the 1.2 inch SWR<sub>v</sub>. These compensate for retention below the 1.2 inch SWR<sub>v</sub> in drainage 2 (parking lot). The site has complied with the overall 1.2 inch SWR<sub>v</sub>. However, since retention for drainage area 2 is below the minimum retention, the applicant must provide treatment for the difference between the minimum retention and the retention achieved.

<b>Table 1</b>					
	<b>1.2" SWRv</b>	<b>1.7" Ceiling</b>	<b>Minimum Retention</b>	<b>Retention Achieved</b>	<b>WQ Treatment Required?</b>
<b>Drainage 1 - Roof</b>	7,000	9,917	3,500	7,700	No
<b>Drainage 2- Parking</b>	2,000	2,834	1,000	900	Yes, for 100 gallons
<b>Drainage 3 - Turf</b>	1,000	1,417	500	1,400	No
<b>Total</b>	<b>10,000</b>	--	--	<b>10,000</b>	

The Department has also provided flexibility for regulated sites in achieving on-site retention by counting as on-site retention any direct drainage to a S-BMP with sufficient available capacity. In this context, an S-BMP is one that is not on the regulated site but to which drainage can be conveyed from the regulated site. From the standpoint of protecting District waterbodies, use of an S-BMP is as protective as actually having the retention BMP on the regulated site. These S-BMPs may be of particular use for regulated sites that are part of a larger common plan of development.

### **Flexibility through Use of Off-Site Retention**

Recognizing that there may be some sites where it is relatively difficult or costly to retain the entire Stormwater Retention Volume (SWRv) on site, the Department has incorporated provisions that allow a regulated site to achieve a portion of its SWRv off site. Under these provisions, a regulated site must retain on site a minimum volume, equal to fifty percent (50%) of the SWRv. Above that minimum on-site volume, the regulated site may use off-site retention, without having to first demonstrate that it would be infeasible to retain that volume on site. However, in order to retain less than the minimum on-site volume, the site must demonstrate that retention of that volume is technically infeasible or environmentally inappropriate.

The portion of a SWRv that a regulated site does not retain on site is termed the Off-Site Retention Volume (OSRv), and a regulated site's options for achieving its OSRv are the following:

- A. Use Stormwater Retention Credits (SRCs), each of which corresponds to one gallon (1 gal.) of retention for one (1) year;
- B. Pay DDOE's in-lieu fee, the cost of which corresponds to one gallon (1 gal.) of retention for one (1) year; or
- C. A combination of A and B.

The owner of the regulated site may use SRCs that the owner has earned elsewhere in the District or SRCs purchased on the private market.

Just as regulated site owners must maintain their on-site retention BMPs on an ongoing basis, they are responsible for their site's OSRv on an ongoing basis. However, if in the future the regulated site retrofits and achieves its OSRv on site, then it no longer must achieve that volume off site.

SRCs may be banked indefinitely. In achieving its OSRv, the regulated site may pay multiple years' worth of in-lieu fee at one time or purchase multiple years' worth of SRCs from the

market, assuming those SRCs are available. The clock starts on an SRC’s one-year lifespan once that SRC is used to satisfy an OSRv.

### Development of Off-Site Retention Options

As discussed above, the Department is proposing two (2) off-site retention options: the use of Stormwater Retention Credits and the payment of in-lieu fee. In the process of developing these options, the Department considered several key criteria, including: benefit to District waterbodies; flexibility for regulated sites; equity; and administrative feasibility (see Box 1). In doing so, the Department discussed options with numerous economists and other policy experts and also reviewed lessons learned from water quality, clean air, and other existing trading programs and created markets. Citations for some of the related journal articles and other documents that provided helpful background are included in the list of references.

The Department believes that these off-site options present a win-win approach that, compared to strict on-site retention, will maximize the overall benefit for District waterbodies, increase flexibility for regulated sites, and also increase the number of green jobs in the District.

<ul style="list-style-type: none"> <li>❖ Benefit to District waterbodies:               <ul style="list-style-type: none"> <li>➤ No decrease in retention relative to strict on-site retention.</li> <li>➤ No net increase in hot spots relative to strict on-site retention.</li> </ul> </li> <li>❖ Flexibility for regulated sites:               <ul style="list-style-type: none"> <li>➤ Cost savings relative to strict on-site retention.</li> <li>➤ Likelihood of participation of off-site properties.</li> <li>➤ Minimize transaction costs for regulated sites and off-site properties.</li> <li>➤ Maximize simplicity of program for regulated sites and off-site properties.</li> </ul> </li> <li>❖ Equity:               <ul style="list-style-type: none"> <li>➤ No net reduction in environmental justice relative to strict on-site retention.</li> <li>➤ Cost of off-site retention covered by regulated site, as with strict on-site retention.</li> </ul> </li> <li>❖ Administrative feasibility:               <ul style="list-style-type: none"> <li>➤ Maximize use of existing Department procedures and staff.</li> <li>➤ Compliance with District MS4 Permit.</li> <li>➤ Maximize simplicity of program.</li> </ul> </li> </ul>
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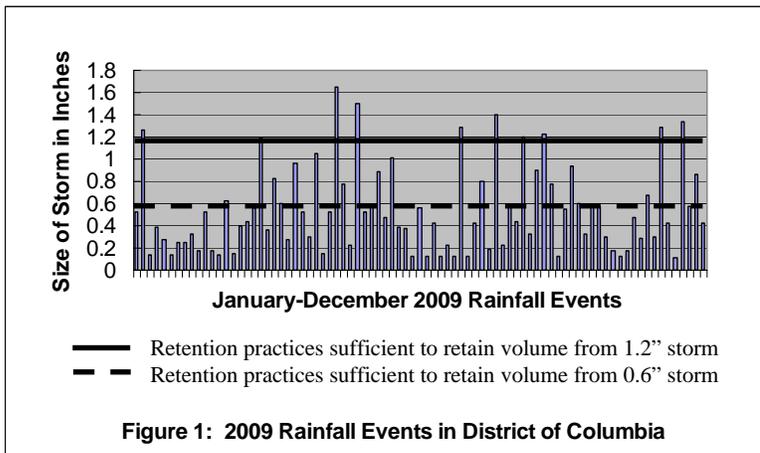
Box 1: Key Criteria for Off-Site Retention Options

To assess the potential benefit for District waterbodies, the District considered the impact on overall retention volumes and the potential for creation of stormwater “hotspots.” With respect to retention, the Department evaluated multiple hypothetical off-site retention scenarios in comparison to a strict on-site retention scenario, and the Department found a significant potential increase in retention via use of off-site retention. For the sake of simplicity, below is a comparison of a strict on-site scenario to a single off-site scenario. In scenario A, site 1 (quarter acre (0.25 ac.) and one hundred percent (100%) impervious) installs retention Best Management Practices (BMPs) to retain the volume from a 1.2 inch storm on site. In scenario B, that same site 1 installs BMPs to retain the volume from a 0.6 inch storm and site 2 (also a quarter acre (0.25 ac.) and one hundred percent (100%) impervious)) installs BMPs to retain the volume from a 0.6 inch storm. During a 1.2 inch storm,

	<b>Scenario A: (On-Site Only) Site 1 - 1.2" Ret.</b>	<b>Scenario B: (On-Site &amp; Off) Site 1 - 0.6" ret. Site 2 - 0.6" ret.</b>	<b>Change via Scenario B</b>
<b>1.2" Storm Volume Retained (gal.)</b>	7,739	7,739	0
<b>Annual Volume Retained (gal)</b>	280,280	440,605	57%
<b>Estimated Retention Cost</b>	\$25,152	\$15,087	-40%

the retention in scenario A is 7,739 gallons, which is equal to the retention in scenario B, as calculated using the Runoff Reduction Method Formula included in these amendments. However, using 2009 rainfall data (downloaded from the National Oceanic and Atmospheric Administration’s (NOAA) National Climatic Data Center for Reagan-National Airport), DDOE also calculated annual retention for each scenario, finding that scenario B results in a fifty-seven percent (57%) increase in combined annual retention (see Table 2).

The increase in overall annual stormwater retention in scenario B versus scenario A has to do with the fact that many of the storms that occur in a year are less than 1.2 inches (see Figure 1). In scenario B, sites 1 and 2, each with 0.6 inch retention capacity, use that full capacity more frequently than the 1.2 inch retention BMP on site 1 in scenario A. Consequently, scenario B results in greater combined retention during most storm events and on an annual basis.



Some stakeholders have argued that the minimum on-site retention volume should be significantly higher than fifty percent (50%) of the SWRv. However, the Department’s analysis indicates that total annual retention achieved by a regulated site and an off-site location is maximized when retention capacity is split equally between the two (2) sites. Given this environmental benefit and the Department’s additional objective of maximizing flexibility for regulated sites, the Department believes that it is reasonable to establish the on-site minimum at fifty percent (50%) of the SWRv.

In addition to evaluating stormwater retention, DDOE considered how the program might create or exacerbate stormwater pollution hotspots. For the purposes of this analysis, DDOE considered stormwater pollution hotspots to be parts of waterbodies with disproportionate stormwater pollution impacts, either in terms of erosive volumes or the pollutants in that volume.

Several important points support DDOE’s conclusion that SRC trading is not likely to have a net negative impact, and may have a net positive impact, in terms of hotspots. First, off-site retention will result in the installation of more BMPs retaining stormwater from developed areas that currently have little or no retention. In addition to providing more overall retention, as discussed above, the volume retained by these BMPs will be more heavily composed of first-flush volume. First-flush volume is the volume that washes off a site during the beginning of a rainstorm, and it tends to have higher concentrations of pollutants than the volume washing off at later points in the storm.

Second, with or without off-site retention, all regulated development sites in the District will achieve significantly more retention than is currently being achieved under the status quo (DDOE's existing regulations do not require retention).

Third, the location of off-site retention BMPs is likely to provide more protection for the relatively vulnerable non-tidal tributaries to the Anacostia and Potomac Rivers and Rock Creek, as compared to strict on-site retention. DDOE assumes a typical off-site retention scenario would shift retention from regulated sites with high retention costs in the densely developed downtown to retrofit sites outside of the downtown core, where the cost of retention is significantly lower. These sites outside of the downtown core typically drain into the relatively vulnerable tributaries. By contrast, much of the District's downtown core drains into the tidal Anacostia and Potomac Rivers. Because of their size and tidal mixing, these waters are generally less sensitive to erosive flow and localized pollutant impacts than the tributaries. In short, off-site retention is likely to result in a further increase in protection for the District's tributaries (its most vulnerable waters), compared to strict on-site retention.

DDOE also evaluated the potential impact of off-site retention in terms of Environmental Justice (EJ). DDOE does not expect a negative EJ impact and sees the potential for a positive EJ impact. For the reasons discussed above, DDOE expects that high-cost retention sites in the densely developed and relatively affluent parts of the downtown business district would be relatively likely to forego on-site retention in favor of purchasing SRCs from low-cost retrofit sites in less densely developed and less affluent areas. This could provide a net increase in the installation of aesthetically pleasing green infrastructure in less affluent parts of the District. In addition to these aesthetic benefits, these retention BMPs would provide more protection for the waterbodies in those communities, helping to make them better resources for community members.

To assess the potential for off-site retention to increase flexibility for regulated sites, the Department evaluated cost savings under the Scenario A and Scenario B discussed above. The Department compared the capital costs for retention under scenario A versus scenario B, assuming that site 1 faces relatively high costs for retention while site 2 faces low costs for retention. Using a cost of three dollars and twenty-five cents (\$3.25) per gallon for retention on site 1 and sixty-five cents (\$0.65) per gallon on site 2 (based on data from an analysis by Industrial Economics, Inc. of the incremental cost to achieve retention on three hypothetical development sites in the District), the Department found that retention cost approximately twenty-five thousand dollars (\$25,000) in scenario A and fifteen thousand dollars (\$15,000) in scenario B. In other words, the cost savings in scenario B was forty percent (40%), as shown in Table 2. Note that this analysis does not take into account opportunity cost, which is likely to significantly increase the cost savings for some regulated sites. This analysis also does not take into consideration transaction costs, which reduce cost savings. The Department has worked to minimize transaction costs in developing its off-site retention options.

Though the potential benefits to District waterbodies apply to both SRCs and in-lieu fee as off-site retention options, the Department's analysis indicates that SRCs will be less expensive than in-lieu fee and, consequently, that in-lieu fee has less potential to provide cost savings and flexibility for regulated sites. In-lieu fee is based on the full cost to the Department to install, operate, and maintain retention BMPs. These costs vary significantly among the Department's

various opportunities for installation of BMPs, but it would not be equitable for the in-lieu fee to fluctuate from one development project to another. Instead, the in-lieu fee must reflect an average of costs for achieving retention through the various opportunities it has for installation of retention BMPs. By contrast, the price of SRCs will reflect the efficiency of the private market in identifying least-cost opportunities for installing, and maintaining retention BMPs, and it can fluctuate from transaction to transaction as opportunities and costs change. The Department believes that ample opportunity exists for installation of BMPs in the highly impervious District (forty-three percent (43%) of the District's land area is impervious). These opportunities include the many sites that are under construction but are not regulated under these amendments; the many properties whose owners are interested in earning discounts on impervious fees; space in the public right of way; and elsewhere.

Finally, because off-site retention would result in the installation of more BMPs on more sites, DDOE expects an associated increase in the number of green jobs in the District, as compared to the number created under strict on-site retention. These include professional design and engineering jobs as well as lower skilled jobs installing and maintaining BMPs.

The off-site retention programs proposed in these amendments have considerable potential to increase the benefit for District waterbodies, maximize flexibility for regulated sites, and also increase the number of green jobs in the District. However, much remains to be seen about how well the programs, especially the innovative SRC trading program, will function in the District and what the social, environmental, and economic impacts will be. The Department intends to evaluate the program and its impacts carefully and adaptively manage as necessary.

### **Cost of In-Lieu Fee**

Unlike the price of a Stormwater Retention Credit (SRC), the cost of in-lieu fee must reflect the Department's relatively limited opportunities for installing retention BMPs. The primary opportunities for the Department are on District-owned properties or, through cost-share/subsidy programs, on private property. However, it is important to note that it is difficult for the Department to ensure long-term maintenance on private properties that participate in cost-share programs. In addition, the in-lieu fee must reflect relatively conservative assumptions about the costs that the Department will face, in order to ensure adequate resources for achieving the necessary retention while equitably charging the same fee to all regulated sites.

In determining the in-lieu fee, the Department assessed the full cost to the District government of providing a gallon of retention for a year, based on its experience to date with installation of retention BMPs. The Department's experience includes the full subsidy of retention BMPs on District facilities, as well as partial subsidies for installation of retention BMPs on private properties. Currently, these programs operate on a relatively small scale, compared to the scale of regulated development in the District, and if a substantial number of regulated sites opt to pay the in-lieu fee, the Department would have to scale up these programs dramatically. Therefore, the Department cannot reasonably assume that it will be possible to provide the necessary retention through only its most cost-effective programs or without the need to lease or purchase land. Recognizing this, the Department calculated the in-lieu fee based on a wide range of projects, taking into account the cost of installation, maintenance, project management, and

project financing. The Department assumed a twenty (20)-year lifecycle for BMPs and factored in land value for those types of BMPs that prevent land from being put to other uses (such as bioretention).

Establishing the in-lieu fee at a level that fully reflects the cost for the District to install retention practices is critical, not only because the District must actually have the resources to install retention BMPs in the event that regulated sites choose that option, but also because there is a danger, especially early in the development of the SRC market, that an artificially low in-lieu fee would undermine the formation of the market. If owners of property with opportunities for voluntary installation of retention BMPs do not believe they will be able to sell SRCs at a price that covers their costs and a fair-market rate of return on their investment, then, generally speaking, they will not install those BMPs. As a result, the SRC market would not fully develop, and the benefits to regulated sites and District waterbodies of achieving legitimate off-site retention at low cost would not be realized.

An artificially low in-lieu fee that undermines formation of a robust SRC market would also be a disservice because it would forestall other public benefits that the market could provide, for at least two (2) reasons. First, under its MS4 Permit and various Total Maximum Daily Loads, the District will face challenging requirements over the coming years for reducing pollutants into District waterbodies and, ultimately, the Chesapeake Bay. Via an established SRC market, the District could have a relatively low-cost option for achieving those targets, which will ease the burden on District taxpayers and on property owners paying impervious fees. Second, establishment of an SRC market would not only provide flexibility to regulated sites and increased retention for District waterbodies, but it should spur the creation of green jobs in the District. This is due to the fact that SRC trading would result in more BMPs being installed at more locations within the District.

The Department's analysis indicates that the purchase and use of SRCs will be the preferred option for regulated sites to satisfy their OSRv. However, given that SRC trading has not yet been established in the District or elsewhere, the Department determined that the in-lieu fee should be included as a fall-back option. To ensure that the in-lieu fee continues over time to reflect the full cost of achieving retention, these amendments include annual inflation-adjustment provisions. Because annual inflation adjustment may not capture all the important changes in the underlying costs, the Department may also periodically re-establish the in-lieu fee based on an evaluation of the underlying costs, referred to as "re-basing." The Department does not expect re-basing to be necessary more frequently than every several years.

### **Certification and Ownership of Stormwater Retention Credits**

The Department will certify Stormwater Retention Credits (SRCs) for eligible Best Management Practices (BMPs) and land cover changes in the District of Columbia. To be eligible, the retention capacity in a BMP or land cover change must:

- A) Achieve retention in excess of regulatory requirements or existing retention, but less than the SRC ceiling,<sup>6</sup> as shown in Figure 2;
- B) Be designed and installed in accordance with a DDOE-approved Stormwater Management Plan (SWMP);
- C) Pass a post-construction final inspection and ongoing inspections; and
- D) Have a current maintenance agreement or contract in place.

In order for SRCs to be available to regulated sites once the requirements in these amendments take effect, the rules allow previously installed BMPs that meet the eligibility requirements to apply for and begin earning SRCs as of the date that these amendments are published as final in the *D.C. Register*. These previously installed BMPs must have been installed after May 1, 2009, in order to be eligible. For sites regulated under the Department’s existing regulations (in other words, before the effective date of these amendments), eligible retention volume is the volume retained in excess of the existing regulatory requirements. For example, for a regulated site that provided treatment for the 0.5 inch storm by installing BMPs capable of retaining the 0.9 inch storm, the eligible retention volume would be the difference between the 0.9 inch storm volume and the 0.5 inch storm volume (in other words, the 0.4 inch storm volume). For unregulated sites eligible retention volume is the volume achieved in excess of existing on-site retention prior to the BMP installation.

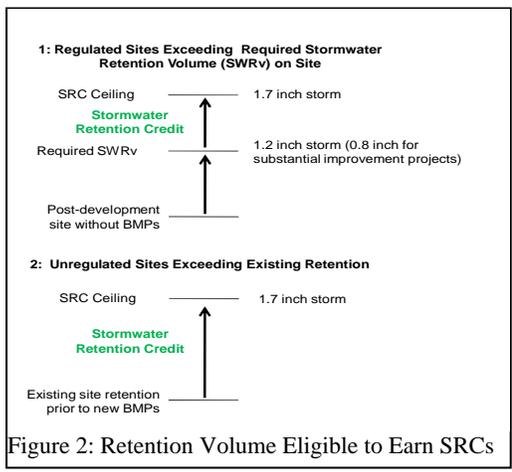


Figure 2: Retention Volume Eligible to Earn SRCs

After approving an application to certify SRCs for eligible retention capacity, DDOE will certify up to three years’ worth of SRCs for that capacity (the three-year period is based on DDOE’s typical three (3)-year inspection cycle). DDOE will assign each SRC a unique serial number for tracking purposes. At the end of that three-year period, the owner of the retention capacity may apply for another three years’ worth of SRCs, and after verifying that the eligibility requirements are still being met, DDOE will certify those SRCs. For example, for a BMP with one thousand gallons (1,000 gal.) of eligible retention capacity, DDOE will certify up to three thousand (3,000) SRCs initially and an additional three thousand (3,000) SRCs at the beginning of each subsequent three-year period, as long as the eligibility requirements (including for inspection and maintenance) continue to be met.

If an applicant does not plan to maintain retention capacity (BMPs or land cover changes) in good working order for the entire three-year period, the applicant should only apply for certification of SRCs corresponding to the period for which maintenance is planned.

<sup>6</sup> The SRC ceiling is important to ensure that an SRC provides a comparable benefit to District waterbodies as would be achieved under strict on-site retention. The 1.7 inch storm is the 95<sup>th</sup> percentile rainfall event in the District of Columbia, meaning that ninety-five percent (95%) of rainfall events are smaller than 1.7 inches. A gallon of retention capacity that is only used by storms larger than 1.7 inches will be used relatively infrequently and therefore provides less retention benefit on an annual basis than a gallon of retention capacity that is filled by smaller storms. Figure 1, showing the size distribution of rainfall events in 2009, helps to illustrate this point.

SRC-generating sites do not need to file a covenant for the maintenance of retention capacity for which the Department has certified SRCs. However, in applying for SRCs, the applicant commits to maintain the retention capacity for the time period for which SRC certification is requested, and the Department will take action for failure to maintain that capacity. First, the Department will not certify additional SRCs in the future for retention capacity that is not maintained. Second, DDOE will require the owner of the capacity to compensate for the retention capacity that was not maintained during a given time period by 1) forfeiting the corresponding number of SRCs (if they have not been sold or used); 2) purchasing replacement SRCs that the Department will then retire; or 3) paying in-lieu fee to the District.

An SRC can be banked indefinitely for future use, and its ownership can be transferred. For a transfer of ownership to be complete, DDOE must approve an application for transfer of ownership in order to track the ownership and use of an SRC, including preventing fraudulent use of an SRC. The owner of an SRC may also retire it without using it.

### **Sites Draining into the Combined Sewer System**

Several stakeholders have suggested that less or no retention or treatment should be required for sites draining into the Combined Sewer System (CSS sites). These stakeholders often cite DC WASA's Long Term Control Plan (LTCP) for reducing Combined Sewer Overflows (CSOs) into the Anacostia and Potomac Rivers and Rock Creek and point out that, once the LTCP is in place, the stormwater from these sites will not discharge into District waterbodies but will instead be treated at the Blue Plains Advanced Wastewater Treatment Plant. The Department has carefully considered the points that have been raised and does not think it is justifiable to exclude CSS sites from the retention requirements. However, these amendments do not require CSS sites to provide water quality treatment.

The Department finds several key reasons why the retention standards in these amendments are important on CSS sites. First, the LTCP has not yet been fully implemented and is expected to take approximately fifteen (15) years to be completed. In the meantime, the reduction of stormwater volume into the CSS remains critical, since it is this volume that triggers CSOs. Second, even when completed, the LTCP, as designed, is not expected to completely stop all CSOs. Third, it is reasonably likely that the population and density of development in the District will continue to increase over the coming decades, and that will result in additional sanitary sewage being discharged into the CSS. As a result, the capacity of the CSS to receive stormwater volume without CSOs will be further reduced, making it critical that a reduction in stormwater volume be achieved over time.

While stormwater retention on CSS sites is necessary to protect District waterbodies and will be required, the Department has determined that it is justifiable to exclude CSS sites from the water quality treatment requirements. Drainage from CSS sites that is not part of a CSO receives treatment at Blue Plains Advanced Wastewater Treatment Plant, and drainage from a CSS site that is part of a CSO is so contaminated with raw sewage that requiring treatment offers relatively little value. By contrast, stormwater retention on CSS sites reduces volume and will help to reduce CSOs.

## **Projects in the Existing Public Right of Way**

The Department understands that construction projects in the existing public right of way (PROW) are faced with a multitude of unique site constraints that vary widely across the District. Limited space outside of the roadway restricts opportunities for infiltration and evapotranspiration, and in many cases the width of the roadway cannot be reduced to create additional space. The roadway itself and the structural integrity of the pavement are a prime concern. Though permeable pavement can be used for alleys and sidewalks, its use for roadways where heavy traffic is expected has not yet been evaluated. Utilities further restrict space under roads and sidewalks, and the infiltration of stormwater into areas with electric, telephone, and cable wires may cause damage to utility lines and lead to power outages.

In developing these amendments, the District recognizes that achieving the SWRv may be technically infeasible in the PROW on many occasions. However, the Department expects each PROW project to exhaust every opportunity to achieve the SWRv, including reducing roadway size as possible in order to achieve the SWRv in an expanded area between the curb line and private property. The Department's Stormwater Management Guidebook outlines the process that a PROW project will follow to ensure that all opportunities to achieve the SWRv are exhausted.

Given the unique constraints that routinely exist in the PROW and the importance of PROW reconstruction for public safety and well-being, the Department believes it is justifiable to exclude PROW projects from the requirement to use Stormwater Retention Credits (SRCs) or pay the in-lieu fee to satisfy any shortfall in attaining the SWRv. This is consistent with the MS4 Permit for the District. PROW projects are the only projects that are exempt from the requirement to use off-site retention for the portion of a required SWRv that is not achieved on site.

Nonetheless, the Department recognizes that the PROW is approximately twenty-five (25%) of the District of Columbia, and retrofitting the PROW with retention BMPs is essential for the protection of District waterbodies. PROW reconstruction projects touch only a tiny fraction of the PROW every year; however, the Department believes that the pace at which the PROW is retrofitted can be significantly increased if PROW can be retrofitted by private parties in order to earn Stormwater Retention Credits (SRCs). To this end, the Department is working with the District Department of Transportation (DDOT) to clarify the circumstances under which private developers can use the PROW for stormwater management. These regulations are not intended to preclude such scenarios.

## **Enhanced Protection for the Anacostia River**

The Department recognizes that the Anacostia Waterfront Environmental Standards Act of 2008 (D.C. Law 17-138; D.C. Official Code § 2-1226.31 *et seq.* (2007 Repl. & 2012 Supp.)), referred to in this section as the Act, requires certain projects along the Anacostia River waterfront to meet standards that provide an enhanced level of protection for the river. However, those requirements have not yet taken effect, and the Council of the District of Columbia is considering an amendment to the Act that would change some provisions and put the Act's

requirements into effect immediately upon the amendment's effective date. At this time, it is unclear what the requirements in the amended Act will be. Rather than causing confusion by including a set of requirements in this rulemaking that may soon be changed, the Department has chosen to simply include a placeholder section that may be used in the future (§ 524).

Former Council Chair Brown introduced an amendment (B19-0745) to the Act on behalf of Mayor Gray on March 27, 2012, which would have put the Act's requirement into effect. The Department and stakeholders testified at the hearing held by the Committee on Environment, Public Works, and Transportation on May 18, 2012. Councilmembers at the hearing discussed the possibility of amending the legislation.

The Department expects that the Act, as amended, will either make its requirements sufficiently clear on its own or that the Department will follow up on the amended Act with a rulemaking that includes enhanced protections for the Anacostia River. If the Department develops a subsequent rulemaking, it may do so as a re-promulgated, revised version of this District-wide rulemaking (with another public comment period), or it may promulgate a separate rulemaking.

## **Maintenance**

Maintenance of Best Management Practices (BMPs) is essential to ensuring protection for District waterbodies on an ongoing basis. A regulated site must maintain its BMPs for the life of the development. If it is achieving a portion of its Stormwater Retention Volume (SWRv) off site, a regulated site must also use SRCs or pay the in-lieu fee until the site is redeveloped in accordance with a newly approved stormwater management plan. To that end, these amendments, similarly to the existing regulations, require the stormwater management plan for the regulated site to include a maintenance agreement and schedule. A declaration of covenants stating the specific maintenance responsibilities approved by the Department must be filed with the owner's deed at the Recorder of Deeds. Any easements necessary to ensure adequate access for inspection and maintenance must also be recorded.

## **Coal Tar Pavement Products**

In the last ten years, a growing body of scientific literature has established that coal tar pavement products contain exceptionally high concentrations of toxic polycyclic aromatic hydrocarbons (PAHs) and that runoff from surfaces sealed with these products is harmful to waterbodies (USGS 2011). Recognizing this, the District passed a ban that makes it illegal to sell, use, or permit to be used on one's property these coal tar pavement products.

Best Management Practices (BMPs) are meant to provide protection for District waterbodies. The use of coal tar pavement products to seal BMPs is counter-productive and prohibited under these amendments.

## **Discussion of Key Changes Related to Soil Erosion and Sediment Control Regulations**

### **Protection of Best Management Practices During Construction**

In order to ensure that Best Management Practices (BMPs) function properly after construction, these amendments require that protections be put in place to prevent sedimentation and other damage.

#### **Buffers**

The scientific literature has established that the area immediately adjacent to a waterbody is of critical importance for protecting those waterbodies. In recognition of that, these amendments establish a twenty-five foot (25 ft.) buffer adjacent to a waterbody. Soil disturbance within that buffer is prohibited.

#### **Signage**

These amendments require a sign with the appropriate Departmental contact information to be prominently posted on a regulated site. This is intended to make it easier for the public to report erosion and pollution problems and to improve the District's ability to identify and rapidly respond to such problems. The Department may provide these signs to regulated projects.

## **Discussion of Key Changes Related to Both Stormwater Management Regulations and Soil Erosion and Sediment Control Regulations**

#### **Fees**

The fee schedule for services and resources related to compliance with these regulations has been updated to provide greater clarity in the application of fees, to better ensure that fee-based revenue adequately covers the cost to the District of providing such services and resources, and to ensure that the District's fees are within range of similar services in nearby jurisdictions.

#### **Stormwater Inspections**

These amendments largely retain the existing process for inspections, with minor changes to reflect lessons learned through DDOE's administration of the existing inspection program. The proposed process will require a pre-construction inspection and meeting, final inspection within one week of completion of a stormwater management practice, and submission of the as-built plans within twenty-one (21) days thereafter.

### **Organization and Presentation of these Proposed Rules**

A table of contents is provided in this preamble as an aid to navigation through the proposed rules. The Table is not part of the rules.

The Department has reserved section numbers for future use following the general provisions block of sections at the beginning of the rulemaking; after the block of sections on stormwater management; and after the block of sections on soil erosion and sediment control sections. The Department anticipates that it may be necessary to add additional sections to each of these blocks, either before proposing the final version of this rulemaking or thereafter. Leaving reserved sections after each of these blocks will make it easier to add sections at a later date without revising the entire chapter, which can be beneficial for stakeholders who become familiar with the chapter, as well as the Department in its implementation of these provisions.

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**Chapter 5, Water Quality and Pollution, of title 21 of the District of Columbia Municipal Regulations is amended by repealing and replacing Sections 500 to 545 and 599 and adding Sections 546 and 547as follows:**

**The Table of Contents is amended as follows:**

**CHAPTER 5 WATER QUALITY AND POLLUTION**

<b>500</b>	<b>GENERAL PROVISIONS</b>
<b>501</b>	<b>FEES</b>
<b>502</b>	<b>DUTY TO COMPLY</b>
<b>503</b>	<b>INSPECTIONS, NOTICES OF WORK, AND APPROVALS OF CHANGES</b>
<b>504</b>	<b>STOP WORK ORDERS</b>
<b>505</b>	<b>VIOLATIONS AND ENFORCEMENT PROCEDURES</b>
<b>506</b>	<b>ADMINISTRATIVE APPEALS AND JUDICIAL REVIEW</b>
<b>507</b>	<b>PUBLIC HEALTH HAZARDS</b>
<b>508</b>	<b>PREVENTION OF POLLUTION BY WATERCRAFT</b>
<b>509</b>	<b>CORRECTION OF CURRENT EROSION PROBLEMS</b>
<b>510-515</b>	<b>[RESERVED]</b>
<b>516</b>	<b>STORMWATER MANAGEMENT: APPLICABILITY</b>
<b>517</b>	<b>STORMWATER MANAGEMENT: EXEMPTIONS</b>
<b>518</b>	<b>STORMWATER MANAGEMENT: PLAN REVIEW PROCESS</b>
<b>519</b>	<b>STORMWATER MANAGEMENT: PLAN</b>
<b>520</b>	<b>STORMWATER MANAGEMENT: PERFORMANCE REQUIREMENTS FOR MAJOR LAND DISTURBING ACTIVITY</b>
<b>521</b>	<b>STORMWATER MANAGEMENT: PERFORMANCE REQUIREMENTS FOR MAJOR LAND DISTURBING ACTIVITY CONSISTING OF BRIDGE, ROADWAY, AND STREETScape PROJECTS IN THE EXISTING PUBLIC RIGHT OF WAY</b>
<b>522</b>	<b>STORMWATER MANAGEMENT: PERFORMANCE REQUIREMENTS FOR MAJOR SUBSTANTIAL IMPROVEMENT ACTIVITY</b>
<b>523</b>	<b>STORMWATER MANAGEMENT: RESTRICTIONS</b>
<b>524</b>	<b>STORMWATER MANAGEMENT: ENHANCED PROTECTIONS FOR THE ANACOSTIA RIVER</b>
<b>525</b>	<b>STORMWATER MANAGEMENT: SHARED BEST MANAGEMENT PRACTICE</b>
<b>526</b>	<b>STORMWATER MANAGEMENT: RELIEF FROM EXTRAORDINARILY DIFFICULT SITE CONDITIONS</b>
<b>527</b>	<b>STORMWATER MANAGEMENT: USE OF OFF-SITE RETENTION THROUGH THE IN-LIEU FEE OR STORMWATER RETENTION CREDITS</b>
<b>528</b>	<b>STORMWATER MANAGEMENT: MAINTENANCE</b>
<b>529</b>	<b>STORMWATER MANAGEMENT: COVENANTS AND EASEMENTS</b>
<b>530</b>	<b>STORMWATER MANAGEMENT: IN-LIEU FEE</b>
<b>531</b>	<b>STORMWATER MANAGEMENT: CERTIFICATION OF STORMWATER RETENTION CREDITS</b>

- 532 **STORMWATER MANAGEMENT: LIFESPAN OF STORMWATER RETENTION CREDITS**
- 533 **STORMWATER MANAGEMENT: OWNERSHIP OF STORMWATER RETENTION CREDITS**
- 534 **STORMWATER MANAGEMENT: EXISTING RETENTION**
- 535-539 **[RESERVED]**
- 540 **SOIL EROSION AND SEDIMENT CONTROL: APPLICABILITY**
- 541 **SOIL EROSION AND SEDIMENT CONTROL: EXEMPTIONS**
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- 545 **SOIL EROSION AND SEDIMENT CONTROL: BUILDINGS, DEMOLITION, RAZING, AND SITE DEVELOPMENT**
- 546 **SOIL EROSION AND SEDIMENT CONTROL: UNDERGROUND UTILITIES**
- 547 **SOIL EROSION AND SEDIMENT CONTROL: RESPONSIBLE PERSONNEL**
- 548-552 **[RESERVED]**
- 599 **DEFINITIONS**

**500 GENERAL PROVISIONS**

- 500.1 The provisions of this chapter shall be applicable to all sources of pollution affecting the Potomac River and its tributaries within the District of Columbia (the District) including pollution carried by stormwater runoff, discharges from barges and other vessels, and domestic and industrial waste.
- 500.2 An activity which this chapter regulates shall be consistent with the purposes of this chapter.
- 500.3 The purposes of this chapter are:
  - (a) To prevent and control the pollution of the Potomac River and its tributaries, and the waters of the District;
  - (b) To regulate land disturbing activities;
  - (c) To regulate major substantial improvement activities;
  - (d) To prevent accelerated soil erosion and sedimentation;
  - (e) To prevent sediment deposit in the Potomac River and its tributaries, including the District sewer system; and
  - (f) To control health hazards due to pollution of the Potomac River and its tributaries.

- 500.4 No person may commence an activity that this chapter regulates without obtaining an approval that this chapter requires.
- 500.5 A person’s compliance with this chapter shall not relieve a person of responsibility for damage to a person or property.
- 500.6 No Department action under this chapter shall impose liability upon the District of Columbia for damage to a person or property.
- 500.7 A person who is regulated under this chapter may authorize an agent to act for that person; however, authorizing an agent does not change or eliminate that person’s duty, responsibility, or liability.

**501 FEES**

- 501.1 The District Department of the Environment (Department) shall adjust the fees in this section for inflation annually, using the *Engineering News-Record* Construction Cost Index or the Urban Consumer Price Index published by the United States Bureau of Labor Statistics.
- 501.2 An applicant shall pay a supplemental review fee for each Department review after the review for the first resubmission of a plan, and the fee shall be paid before a building permit may be issued.
- 501.3 An applicant for Department approval of a soil erosion and sediment control plan shall pay the fees in Table 1 for Department services at the indicated time, as applicable:

<b>Table 1.</b>	<b>Residential land disturbance of ≥50sf &amp; &lt;500 sf</b>	<b>All other land disturbance of ≥50sf &amp; &lt;5,000 sf</b>	<b>All other land disturbance ≥5,000 sf</b>
<b>Fees for Soil Erosion &amp; Sediment Control Plan Review</b>			
Initial plan review payment due upon filing for building permit	\$50.00	\$435.00	\$1,070.00
Final plan review payment due before issuance of building permit, including:			
*Clearing and grading, over 5,000 square feet (SF)	\$0.15 per 100 SF		
*Excavation over 66 cubic yards (CY)	\$0.10 per CY		
*Filling over 66 cubic yards (CY)	\$0.10 per CY		
*Supplemental review fee	\$100.00	\$100.00	\$1,000.00

- 501.4 An applicant for Department approval of a stormwater management plan shall pay the fees in Table 2 for Department services at the indicated time, as applicable:

<b>Table 2.</b> <b>Stormwater Management Plan Review</b>	<b>Land disturbance of ≥5,000sf &amp; ≤10,000 sf</b>	<b>Land disturbance of &gt;10,000 sf</b>
Initial plan review payment due upon filing for building permit	\$3,300.00	\$6,100.00
Final plan review payment due before issuance of building permit	\$1,500.00	\$2,400.00
Supplemental review fee due before issuance of building permit	\$1,000.00	\$2,000.00

501.5 An applicant for Department approval of a plan and any other person requesting the services in Table 3 shall pay the additional fees in Table 3 for Department services before issuance of a building permit, except:

- (a) If a person is applying for relief from extraordinarily difficult site conditions, the person shall pay the fee upon applying for relief; and
- (b) If a person is not applying for a building permit, the person shall pay before receipt of a service.

<b>Table 3.</b> <b>Additional fees</b>	<b>Land disturbance of ≤10,000 sf</b>	<b>Land disturbance of &gt;10,000 sf</b>
Field visit for soil percolation test	\$300 for ≤ 10 borings; \$600 for > 10	
Review of soil percolation test report	\$150.00	
Soil characteristics inquiry	\$150.00	
Review of geotechnical report	\$70.00/hour	
After-hours inspection fee	\$50/hour	
Stormwater pollution plan review	\$1,100.00	
Dewatering pollution reduction plan review	\$1,100.00	\$2,100.00
Application for relief from extraordinarily difficult site conditions	\$500.00	\$1,000.00

501.6 An applicant for Department approval of a stormwater management plan for a project being conducted to create retention capacity for Department certification of a Stormwater Retention Credit (SRC) shall pay the fees in Table 4 for Department services at the indicated time, as applicable, except that a person who is paying a review fee in Table 2 for a major regulated project shall not be required to pay a review fee in Table 4 for the same project:

<b>Table 4.</b> <b>Review of stormwater management plan to create retention capacity for DDOE certification of stormwater retention credits</b>	<b>Land disturbance of ≤10,000 sf</b>	<b>Land disturbance of &gt;10,000 sf</b>
Initial plan review payment due upon filing for building permit	\$575.00	\$850.00
Final plan review payment due before issuance of building permit	\$125.00	\$200.00
Supplemental review fee due before issuance of building permit	\$500.00	

501.7 An applicant for Department approval of a Green Area Ratio plan shall pay the fees in Table 5 for Department services at the indicated time:

<b>Table 5.</b> <b>Review of Green Area Ratio plan</b>	<b>Land disturbance of ≤10,000 sf</b>	<b>Land disturbance of &gt;10,000 sf</b>
Initial payment due upon filing for building permit	\$575.00	\$850.00
Additional payment due before issuance of building permit	\$125.00	\$200.00
Supplemental review fee (for reviews after first resubmission)	\$500.00	

501.8 The in lieu fee shall be three dollars and fifty cents (\$3.50) per year for each gallon of Off-Site Retention Volume (OSRv).

501.9 The administrative late fee for an in-lieu fee payment shall be ten percent (10%) of the late payment.

501.10 A person shall pay the fees in Table 6 for the indicated resource before receipt of the resource:

<b>Table 6.</b> <b>Resources</b>	<b>Land disturbance of ≤10,000 sf</b>
Paper copy of District Standards and Specifications for Soil Erosion and Sediment Control	\$50.00
Paper copy of District Stormwater Management Guidebook	\$50.00
Paper copy (24" x 36") of District Erosion and Sediment Control Standard Notes and Details	\$25.00

## **502 DUTY TO COMPLY**

502.1 A person who engages in an activity that this chapter regulates shall comply with the provisions of this chapter.

502.2 A person shall conduct all work in accordance with each submittal approved by the Department, including each plan and approved change.

502.3 Each provision of an approved plan shall be complied with as a distinct provision of this chapter.

502.4 A person shall promptly notify the Department of an actual or likely material change in the performance provided for in an approved Stormwater Management Plan (SWMP), including a material change in the volume of stormwater flowing into a Best Management Practice (BMP), a Shared BMP, or a land cover change.

502.5 A person shall undertake a reasonable inquiry to confirm that the facts stated and calculations made are true and correct for each communication with the Department under this Chapter.

502.6 No person shall negligently, recklessly, or knowingly make a false statement in a communication with the Department.

### **503 INSPECTIONS, NOTICES OF WORK, AND APPROVALS OF CHANGES**

503.1 The Department may conduct an inspection of an activity regulated under this chapter, including emergency work that may otherwise be exempt, to ensure compliance with this chapter.

503.2 The Department may require a change to an approved plan if the Department determines that the plan is inadequate to comply with the requirements of this chapter.

503.3 A person may not change an approved plan or its implementation without Department approval, as follows:

- (a) If the change is substantial, the person shall resubmit the revised plan to the Department for approval in accordance with this chapter; and
- (b) If the change is not substantial, the person may secure written approval from the Department in the field or at the Department's office.

503.4 For the purposes of this chapter, a substantial change in an approved plan is a change in design, specification, construction, operation, or maintenance, that the Department determines:

- (a) May result in a failure to comply with a requirement of this chapter; or
- (b) Has a significant effect on the discharge of pollutants to the District's waters.

503.5 The Department may require an additional inspection at a particular stage of construction by specifying that requirement in:

- (a) The approved plan;
- (b) The pre-construction inspection report; or
- (c) The Department's report of the pre-construction meeting.

503.6 No person may proceed with work past a stage of construction that the Department has identified as requiring an inspection unless:

- (a) The Department's inspector has issued an "approved" or "passed" report;

- (b) The Department has approved a plan modification that eliminates the inspection requirement; or
- (c) The Department otherwise eliminates or modifies the inspection requirement in writing.

503.7 A person shall communicate with the Department:

- (a) In order to schedule a pre-construction meeting before commencement of a land disturbing activity, contact the Department at least three (3) business days before the start of the land disturbing activity;
- (b) In order to schedule a pre-construction inspection before beginning construction of a Best Management Practice (BMP), contact the Department at least three (3) business days before the start of the construction;
- (c) In order to schedule an inspection required for a stage of construction or other construction event, contact the Department at least three (3) business days before the anticipated inspection;
- (d) For the completion of a land disturbing activity, give notice to the Department within two (2) weeks of completion of the activity; and
- (e) For the completion of a BMP, and to request a final construction inspection, give notice to the Department within one (1) week of completion of the BMP.

503.8 The Department shall make reasonable efforts to accommodate a request for inspection outside of the Department's normal business hours if the request:

- (a) Is made during the Department's normal business hours;
- (b) Includes the information the Department requires, including the matters to be inspected, the location of the site work to be inspected, and details for site access; and
- (c) Includes payment or proof of payment of the after-hours inspection fee.

503.9 The Department shall determine whether work and construction complies with each approved plan, including conducting a final construction inspection of each BMP and the site.

503.10 A person shall allow the Department, upon presentation of Department credentials, to:

- (a) Enter premises where a regulated practice, measure, or activity is located or conducted, or where required records are kept;
- (b) Access and copy a required record;
- (c) Inspect a regulated site, practice, measure, or activity; and
- (d) Conduct sampling, testing, monitoring, or analysis.

503.11 The Department may require as a precondition to its approval of an inspection that the applicant:

- (a) Make available to the Department for the purposes of the inspection on site, or at the Department's offices, the professional engineer responsible for certifying the "as-built" plans; and
- (b) Secure the seal and signature of this professional engineer certifying that the as-built plans comply with this chapter.

503.12 Upon notice, a person shall promptly correct work which the Department has found fails to comply with an approved plan.

503.13 The Department shall not approve the issuance of a certificate of occupancy for a building until the Department has determined that the approved stormwater management plan for the building site has been implemented for:

- (a) On-site stormwater management; and
- (b) Required off-site retention.

## **504 STOP WORK ORDERS**

504.1 Upon notice from the Department that it has determined that one (1) or more of the following conditions exists, a person shall stop identified work immediately until the situation is corrected:

- (a) Violation of a condition of an approved plan;
- (b) Noncompliance with a notice that requires corrective action;
- (c) Material false statement or misrepresentation of fact in an application that the Department approved for the project;
- (d) During the project, the license of a contractor or subcontractor is void, has expired, or has been suspended or revoked;

- (e) Work involving an activity regulated under this chapter is being conducted:
  - (1) In violation of a provision of this chapter;
  - (2) In an unsafe manner; or
  - (3) In a manner that poses a threat to the public health or the environment; or
- (f) An approval that a provision of this chapter requires has not been obtained.

504.2 A stop work order shall:

- (a) Have immediate effect;
- (b) Be issued in writing, except that it may be issued orally if reduced to writing within twenty-four (24) hours;
- (c) Be provided to:
  - (1) The person who has received an approval under this chapter;
  - (2) The person doing the work; or
  - (3) The person on site who is responsible for the work.

504.3 The stop work order shall identify the:

- (a) Address and location of the work;
- (b) Act or cessation required;
- (c) Time period required to complete corrective action;
- (d) Reason for the order;
- (e) Person issuing the order, including telephone contact, and, if available, email or other electronic means of address; and
- (f) Steps to be taken to challenge or appeal the order.

504.4 The Department shall:

- (a) Post the stop work order at the property; and

- (b) Send the stop work order in a manner likely to insure receipt, including first class mail, fax with return receipt, email with return read receipt, or hand-delivery with certification of service.

504.5 No person shall remove a stop work order posted at a site without the Department's written approval.

504.6 A person who continues work stopped by an order shall be in violation of this chapter for each day of work, except for work:

- (a) Required immediately to stabilize the activity and place the property in a safe and secure condition;
- (b) That the Department orders; or
- (c) Required immediately to eliminate an unsafe condition or threat to the public health or the environment.

## **505 VIOLATIONS AND ENFORCEMENT PROCEDURES**

505.1 Each instance or day of a violation of each provision of this chapter shall be a separate violation.

505.2 Each separate violation of each provision may be subject to:

- (a) A criminal fine and penalty, including imprisonment, and costs; and
- (b) Either:
  - (1) A judicial civil penalty, order for corrective action, and order for damages and related costs, expenses, and fees; or
  - (2) An administrative civil fine, penalty, suspension of an approval, suspension of a permit, corrective action, order to comply with this chapter, and order for related costs, expenses, and fees.

505.3 The District may seek criminal prosecution if a person violates a provision of this chapter pursuant to:

- (a) The Water Pollution Control Act of 1984 (WPCA), effective March 16, 1985 (D.C. Law 5-188; D.C. Official Code § 8-103.16 (2008 Repl. & 2011 Supp.)), as amended; and
- (b) The Soil Erosion and Sedimentation Control Act of 1977, effective Sept. 28, 1977 (D.C. Law 2-23), as amended by the Soil Erosion and

Sedimentation Control Amendment Act of 1994, effective July 8, 1994, (D.C. Law 10-166), *codified in* 21 DCMR §§ 500-15, as amended.

- 505.4 The District may bring a civil action in the Superior Court of the District of Columbia or any other court of competent jurisdiction, for civil penalties, damages, and injunctive or other appropriate relief pursuant to D.C. Official Code §§ 8-103.17(d) and 8-103.18.
- 505.5 As an alternative to a civil action, the Department may impose an administrative civil fine, penalty, fee, and order for costs and expenses by following the procedures of titles I-III of the Department of Consumer and Regulatory Affairs Civil Infractions Act of 1985, effective July 16, 1985 (D.C. Law 6-42; D.C. Official Code §§ 2-1801 *et seq.* (Repl. 2007 & Supp. 2011)), as amended, (Civil Infractions Act), except that each reference in the Civil Infractions Act to an administrative law judge (ALJ) shall mean an ALJ of the Office of Administrative Hearings (OAH) established pursuant to the Office of Administrative Hearings Establishment Act of 2001, effective March 6, 2002 (D.C. Law 14-76; D.C. Official Code, §§ 2-1831.01 *et seq.* (Repl. 2007 & Supp. 2011)), as amended.
- 505.6 Except when otherwise required by statute, an administrative civil fine shall be calculated according to the schedule of fines for violations of this chapter that has been approved pursuant to the Civil Infractions Act, D.C. Official Code § 2-1801.04.
- 505.7 Administrative adjudication of a civil violation of a provision of this chapter shall be conducted by OAH, pursuant to its rules and procedures.
- 505.8 An administrative adjudicator of a civil violation of a provision of this chapter shall have the same power, authority, and jurisdiction with respect to the matter before it as does the Department.
- 505.9 Neither a criminal prosecution nor the imposition of a civil fine or penalty shall preclude an administrative or judicial civil action for injunctive relief or damages, including an action to prevent unlawful construction or to restrain, correct, or abate a violation on or about any premises, or to recover costs, fees, or money damages. Except that a person shall not, for the same violation of the WPCA, be assessed a civil fine and penalty through both the judicial and the administrative processes.
- 505.10 With respect to a violation of a provision of this chapter, the Department may also pursue and obtain an internal remedy by:
- (a) Advising a person of a violation through the use of a DDOE internal Notice of Violation (NOV); and
  - (b) Issuing and addressing a violation through the use of a DDOE internal

Notice of Infraction (NOI).

505.11 If a term in a provision of this section conflicts with a provision in another section of this chapter, the term in the provision of this section controls.

**506 ADMINISTRATIVE APPEALS AND JUDICIAL REVIEW**

506.1 With respect to a matter governed by this chapter, a person adversely affected or aggrieved by an action of the Department shall exhaust administrative remedies by timely filing an administrative appeal with, and requesting a hearing before, the Office of Administrative Hearings (OAH), established pursuant to the Office of Administrative Hearings Establishment Act of 2001, effective March 6, 2002 (D.C. Law 14-76; D.C. Official Code, §§ 2-1831.01 *et seq.* (Repl. 2007 & Supp. 2012)), as amended, or OAH's successor.

506.2 For the purposes of this chapter, an action of the Department taken with respect to a person shall include:

- (a) Signed settlement of an internal Notice of Infraction (NOI);
- (b) Approval;
- (c) Denial;
- (d) Compliance order;
- (e) Notice of Infraction (NOI);
- (f) Determination;
- (g) Cease and desist order;
- (h) Stop work order;
- (h) Order to show cause; or
- (i) Other action of the Department which constitutes the consummation of the Department's decision-making process and is determinative of a person's rights or obligations.

506.3 For the purposes of this chapter, a DDOE internal Notice of Violation (NOV) or NOI:

- (a) Shall not be an action of the Department that a person may appeal to OAH;

- (b) Shall be responded to within fifteen (15) calendar days of service of the notice, including a written statement containing the grounds, if any, for opposition; and
- (c) Shall not constitute a waiver of compliance or tolling of a period for a fine or penalty.

506.4 If a person fails to agree to or settle an internal NOI or otherwise denies a claim stated in an internal NOI:

- (a) The Department may cancel the internal NOI and file an NOI for adjudication with OAH; or
- (b) The person may request adjudication by OAH.

506.5 A person aggrieved by an action of the Department shall file a written appeal with OAH within the following time period:

- (a) Within fifteen (15) calendar days of service of the notice of the action; or
- (b) Another period of time stated specifically in the section for an identified Department action.

506.6 Notwithstanding another provision of this section, the Department may toll a period for filing an administrative appeal with OAH if it does so explicitly in writing before the period expires.

506.7 OAH shall:

- (a) Resolve an appeal or an NOI by:
  - (1) Affirming, modifying, or setting aside the Department's action complained of, in whole or in part;
  - (2) Remanding for Department action or further proceedings, consistent with OAH's order; or
  - (3) Providing such other relief as the governing statutes, regulations and rules support;
- (b) Act with the same jurisdiction, power, and authority as the Department may have for the matter currently before OAH; and
- (c) By its final decision render a final agency action which will be subject to judicial review.

- 506.8 The filing of an administrative appeal shall not in itself stay enforcement of an action; except that a person may request a stay according to the rules of OAH.
- 506.9 The burden of proof in an appeal of an action of the Department shall be allocated to the person who appeals the action, except the Department shall bear the ultimate burden of proof when it denies a right or enforces an NOI.
- 506.10 The burden of production in an appeal of an action of the Department shall be allocated to the person who appeals the action, except that it shall be allocated:
- (a) To the Department when a party challenges the Department's suspension, revocation, or termination of a:
    - (1) License;
    - (2) Permit;
    - (3) Continuation of an approval; or
    - (4) Other right;
  - (b) To the party who asserts an affirmative defense; and
  - (c) To the party who asserts an exception to the requirements or prohibitions of a statute or rule.
- 506.11 The final OAH decision on an administrative appeal shall thereafter constitute the final, reviewable action of the Department, and shall be subject to the applicable statutes and rules of judicial review for OAH final orders.
- 506.12 An action for judicial review of a final OAH decision shall not be a de novo review, but shall be a review of the administrative record alone and not duplicate agency proceedings or hear additional evidence.
- 506.13 Nothing in this chapter shall be interpreted to:
- (a) Provide that a filing of a petition for judicial review stays enforcement of an action; or
  - (b) Prohibit a person from requesting a stay according to the rules of the court.
- 506.14 If a term in a provision of this section conflicts with a provision in another section of this chapter, the term in the provision of this section controls.

**507 PUBLIC HEALTH HAZARDS**

- 507.1 The Mayor may post notice on the shores of a District waterbody of a related hazard to public health or safety.
- 507.2 Upon determination that a direct or indirect contact with a water body of the District, including immersion, fishing, or boating, poses a hazard to the public health or safety, the Department may take action deemed necessary to protect the public health until the hazard has ended, including a prohibition of all recreational activities on the affected waters of the District.
- 507.3 If the Department takes action to protect the public health from a hazard, the Department shall:
- (a) Notify the Council of the District of Columbia immediately of the action; and
  - (b) Notify the public through media most likely to effectively advise of the hazard, including:
    - (1) Newspapers of general circulation in the District;
    - (2) Radio stations serving the District; and
    - (3) Electronic media.
- 507.4 An action taken by the Department to protect public health from a hazard shall remain in effect until rescinded, or for a period of two (2) weeks, whichever is shorter.
- 507.5 The Department may extend the life of an action taken to protect public health from a hazard beyond a two (2) week period, only if the Council of the District of Columbia, by resolution, so approves.
- 507.6 From District waters designated as a public health hazard, no person shall operate any pumping device or water vessel so as to generate a spray which falls upon the adjacent shore, except as authorized by the Mayor for good cause shown.
- 508 PREVENTION OF POLLUTION BY WATERCRAFT**
- 508.1 The discharge into the Potomac River or its tributaries of any waste, whether liquid or solid, treated or untreated, from any vessel berthed at a marina, dock, or basin, is prohibited.
- 508.2 Each marina, dock, or basin where a vessel or other watercraft is berthed shall be provided with water closets, urinals, and lavatories which are separate for each sex, readily available, and in sufficient numbers to meet the needs of persons using the marina facilities.

508.3 Each marina, dock, or basin where vessels or other watercraft suitable for overnight accommodations are berthed shall be equipped with suitable bathing facilities.

508.4 The Department shall approve the facilities required under this section to be acceptable for the purposes set forth.

**509 CORRECTION OF CURRENT EROSION PROBLEMS**

509.1 In instances where erosion is occurring as the result of natural forces or past land disturbing activities, but in the absence of current land disturbing activities, the Department shall have the authority to inspect the site and to order the property owner to correct the erosion problem.

509.2 Each order to correct existing problems shall specify the general corrective measures to be applied.

509.3 The Department shall maintain and provide to homeowners who are required to correct erosion problems information relating to possible sources of financial assistance for the project.

**510-515 [RESERVED]**

**516 STORMWATER MANAGEMENT: APPLICABILITY**

516.1 No person shall engage in a major regulated project unless the Department has issued an approved stormwater management plan (SWMP) for the project.

516.2 Application for Department approval of a SWMP for a major regulated project shall be made by at least one (1) of the following persons:

- (a) The owner of a property on which a major regulated project is planned;
- (b) The lessee who undertakes a major regulated project, with the owner's permission, on a property that the lessee has leased; or
- (c) The agent of the owner or lessee.

516.3 In preparing and implementing a SWMP, or a part of a SWMP, a person must comply with:

- (a) This chapter;
- (b) The terms and conditions of the SWMP once approved; and
- (c) The Department's orders and directions.

- 516.4 A major regulated project shall comply with the requirements and procedures of this chapter unless a provision exempts compliance.
- 516.5 The owner of a site on which a major regulated project occurs and each person to whom the owner has designated responsibility for management of the site shall ensure that the site complies with the approved SWMP for the site until site redevelopment that follows a Department-approved SWMP occurs.
- 516.6 Responsibility for compliance with an approved SWMP for a site shall pass to a subsequent owner of the site and each person to whom that owner designates responsibility for the management of the site until site redevelopment that follows a Department-approved SWMP occurs.
- 516.7 No person shall engage in a project for the generation of a Stormwater Retention Credit (SRC) unless the Department has issued an approved SWMP for the project, except as otherwise provided in this chapter.

## **517 STORMWATER MANAGEMENT: EXEMPTIONS**

- 517.1 If a major substantial improvement activity demonstrates that it is not part of a common plan of development with a major land disturbing activity, then it is exempt from § 520 (Stormwater Management: Performance Requirements For Major Land Disturbing Activity).
- 517.2 A land-disturbing activity that the Department determines is conducted solely for the purpose of generating a Stormwater Retention Credit (SRC) shall be exempt from the requirements of:
- (a) Section 520 (Stormwater Management: Performance Requirements For Major Land Disturbing Activity);
  - (b) Section 529 (Stormwater Management: Covenants and Easements).
- 517.3 A land-disturbing activity that the Department undertakes with the in-lieu fee payments to satisfy an off-site retention volume shall be exempt from Section 520 (Stormwater Management: Performance Requirements for Major Land Disturbing Activity).

## **518 STORMWATER MANAGEMENT: PLAN REVIEW PROCESS**

- 518.1 In order for the Department to approve a person's proposed stormwater management plan (SWMP), the person and the Department shall undertake the process described in this section.

- 518.2 The Department shall notify an applicant of each determination in the plan review process.
- 518.3 The owner of a site shall submit an initial application for the Department's approval of a major regulated project, including:
- (a) Two (2) sets of the SWMP, certified by a professional engineer registered in the District of Columbia; and
  - (b) Each supporting document specified in the Department's Stormwater Management Guidebook (SWMG).
- 518.4 The Department shall make an initial determination if an application is complete and:
- (a) Accept the application for review;
  - (b) Accept the application for review, with conditions; or
  - (c) Reject the application for review, without prejudice to re-submission.
- 518.5 Upon accepting an application for review, the Department shall determine if:
- (a) The application requires additional information to determine whether or not it meets the requirements for approval;
  - (b) The application meets the requirements for approval;
  - (c) The application meets the requirements for approval, with conditions; or
  - (d) The application does not meet the requirements for approval and shall be disapproved, without prejudice to re-submission.
- 518.6 If the applicant resubmits a SWMP after making changes, the re-submission shall contain a list of the changes made.
- 518.7 The Department may conduct one (1) or more supplemental reviews of a re-submitted application.
- 518.8 After receiving notification that an application meets the requirements for the Department's approval, the applicant shall submit a final pre-construction application including:
- (a) One (1) Mylar copy of the SWMP, certified by a registered professional engineer licensed in the District of Columbia;

(b) Seven (7) paper copies of the SWMP, certified by a registered professional engineer licensed in the District of Columbia; and

(c) Each supporting document specified in the Department's SWMG.

518.9 After the applicant submits a final pre-construction application that meets the requirements for the Department's approval, the Department shall approve the plan, and provide the applicant with one (1) approved copy of the SWMP for the applicant to file at the Recorder of Deeds with the declaration of covenants and, if applicable, an easement.

518.10 The Department shall issue the remaining approved paper copies of the approved SWMP to the applicant after the applicant submits proof to the Department:

(a) That the declaration of covenants and each applicable easement has been filed at the Recorder of Deeds; and

(b) That each applicable fee for Department services has been paid.

518.11 The Department may issue the remaining approved paper copies of the approved SWMP to the applicant before the declaration of covenants is filed if:

(a) The Government of the District of Columbia has conditioned transfer of the property upon the successful acquisition of an approved SWMP or building permit; and

(b) The declaration is to be filed at closing.

518.12 Within twenty-one (21) days of the Department's final construction inspection, the applicant shall submit an as-built package, including:

(a) One (1) Mylar copy of the as-built SWMP certified by a registered professional engineer licensed in the District of Columbia; and

(b) Each supporting document specified in the Department's SWMG.

## **519 STORMWATER MANAGEMENT: PLAN**

519.1 A Department-approved stormwater management plan (SWMP) shall:

(a) Govern all construction for which stormwater management is required;

(b) Govern all applicable maintenance activities; and

(c) Demonstrate compliance with this chapter.

519.2

A submitted SWMP and supporting documentation shall contain information sufficient for the Department to determine whether the SWMP complies with this chapter including:

- (a) Existing site conditions;
- (b) Proposed site design;
- (c) Each land use proposed for the site;
- (d) Identification and location of each proposed Best Management Practice (BMP);
- (e) Stormwater management capacity;
- (f) Environmental characteristics of the site,
- (g) Pre- and post-development hydrologic computations, including:
  - (1) Calculation of required stormwater management volume for:
    - (A) The entire site; and
    - (B) Each individual drainage area; and
  - (2) On-site and off-site retention volumes;
- (h) Design and performance of each proposed BMP;
- (i) Maintenance plan and schedule for each proposed BMP;
- (j) Monitoring plan for each BMP that captures stormwater for use;
- (k) For each proposed BMP not included in the Department's Stormwater Management Guidebook:
  - (1) Separate identification and description; and
  - (2) Documentation of performance and effectiveness;
- (l) Each potential impact of the proposed development on:
  - (1) The District's waterbodies; and
  - (2) Groundwater;

- (m) Construction schedule for:
  - (1) Each BMP; and
  - (2) The related development or improvement project, if any; and
- (n) For the construction and waste material to be stored on site, a description of material and each pollution control measure that will be implemented to minimize exposure to stormwater discharge, including:
  - (1) Each storage practice;
  - (2) A spill prevention response; and
  - (3) The United States Environmental Protection Agency (EPA) identification number, or copy of application to EPA for identification number, for each hazardous waste that will be stored on site.
- (o) Proof of payment of each applicable fee.

519.3 The retention capacity of each BMP in a SWMP shall be calculated using the applicable equations for calculating retention value in chapter three (3) of the Department's Stormwater Management Guidebook (SWMG).

519.4 The pollutant removal efficiency of each BMP in a SWMP shall be calculated using the applicable equation in chapter three (3) of the Department's SWMG.

519.5 The Department may require for each area that a project proposes for use to meet the requirements of this chapter, including a contiguous area or an area with a shared BMP:

- (a) Information listed in this section; or
- (b) A SWMP.

519.6 A submitted SWMP shall use:

- (a) A standard drawing size of twenty-four inches by thirty-six inches (24 in. x 36 in);
- (b) One (1) of the following horizontal scales of profile, unless otherwise approved:
  - (1) One inch equals ten feet (1 in. = 10 ft.);

- (2) One inch equals twenty feet (1 in. = 20 ft.);
  - (3) One inch equals thirty feet (1 in. = 30 ft.);
  - (4) One inch equals forty feet (1 in. = 40 ft.);
  - (5) One inch equals fifty feet (1 in. = 50 ft.); or
  - (6) One inch equals eighty feet (1 in. = 80 ft.);
- (c) One (1) of the following vertical scales of profile, unless otherwise approved:
- (1) One inch equals two feet (1 in. = 2 ft.);
  - (2) One inch equals four feet (1 in. = 4 ft.);
  - (3) One inch equals five feet (1 in. = 5 ft.); or
  - (4) One inch equals ten feet (1 in = 10 ft.); and
- (d) Drafting media that yield first or second generation reproducible drawings with a minimum letter size of No. 4 (1/8 inch).

519.7 A SWMP shall not be approved without the signature and seal of the Director or the Director's designee on the plan.

519.8 For each as-built SWMP that an applicant submits to the Department, an applicant shall provide that a professional engineer registered in the District of Columbia, certifies with seal and signature that:

- (a) The design, and installation for an as-built plan:
  - (1) Conforms to engineering principles applicable to stormwater management; and
  - (2) Complies with the requirements of this chapter; and
- (b) A set of instructions for operation and maintenance of each BMP has been provided to the applicant.

519.9 A SWMP for a project shall be consistent with each other project submittal, including:

- (a) An erosion and sediment control plan; and

(b) A floodplain management plan.

519.10 The approved SWMP for a major regulated project shall be available on site for Department review for the entire period of construction during ordinary business hours.

**520 STORMWATER MANAGEMENT: PERFORMANCE REQUIREMENTS FOR MAJOR LAND DISTURBING ACTIVITY**

520.1 A site that undergoes a major land disturbing activity shall employ each Best Management Practice (BMP) and land cover change necessary to meet the requirements of this section until site redevelopment that follows a Department-approved Stormwater Management Plan (SWMP) occurs.

520.2 A site that undergoes a major land disturbing activity shall maintain the following:

- (a) Post-development peak discharge rate for a twenty-four (24) hour, two (2)-year frequency storm event at a level that is equal to or less than the storm event's pre-development peak discharge rate;
- (b) Post-development peak discharge rate for a twenty-four (24) hour, fifteen (15)-year frequency storm event at a level that is equal to or less than the storm event's pre-project peak discharge rate; and
- (c) Post-development peak discharge rate from a twenty-four (24) hour, one hundred (100)-year storm event at a level that is equal to or less than the storm event's pre-project peak discharge rate if the site:
  - (1) Increases the size of Special Flood Hazard Area (SFHA) as delineated on the effective Flood Insurance Rate Map (FIRM) or
  - (2) Meets the following two conditions:
    - (A) Does not discharge to the sewer system and
    - (B) Has a post-development peak discharge rate for a one hundred (100)-year storm event that will cause flooding to a building.

520.3 A site that undergoes a major land disturbing activity shall:

- (a) Achieve a stormwater retention volume (SWRv) equal to the post-development runoff from the ninetieth (90<sup>th</sup>) percentile rainfall event for the District of Columbia, measured for a twenty-four (24)-hour storm with a seventy-two (72)-hour antecedent dry period (1.2 inch rainfall event);

- (b) Calculate the 1.2 inch SWRV in subsection (a) as follows:

$$SWRV = [P \times [(RV_I \times \%I) + (RV_C \times \%C) + (RV_N \times \%N)] \times SA] \times 7.48 / 12$$

SWRV	=	volume, in gallons, required to be retained
P	=	90 <sup>th</sup> percentile rainfall event for the District (1.2 inches)
RV <sub>I</sub>	=	0.95 (runoff coefficient for impervious cover)
RV <sub>C</sub>	=	0.25 (runoff coefficient for compacted cover)
RV <sub>N</sub>	=	0.00 (runoff coefficient for natural cover)
%I	=	percent of site in impervious cover
%C	=	percent of site in compacted cover
%N	=	percent of site in natural cover
SA	=	surface area in square feet

where, the surface area under a BMP shall be calculated as part of the impervious cover (%I); and

- (c) Calculate the 1.2 inch SWRV for the entire site and each drainage area.

520.4

A site that undergoes a major land disturbing activity may achieve the 1.2 inch SWRV on site or through a combination of on-site retention and off-site retention, under the following conditions:

- (a) The site shall retain on site a minimum of fifty percent (50%) of the 1.2 inch SWRV, calculated for the entire site, unless the Department approves an application for relief from difficult site conditions; and
- (b) The site shall use off-site retention for the portion of the SWRV that is not retained on site.

520.5

A site that undergoes a major land disturbing activity may achieve on-site retention by retaining more than the 1.2 inch SWRV in a drainage area, subject to the following conditions:

- (a) At least fifty percent (50%) of the SWRV from each drainage area, unless it drains into the combined sewer system, shall be:
- (1) Retained; or
  - (2) Treated to remove sixty percent (60%) of total suspended solids;
- (b) Retention in excess of a 1.2 inch SWRV for one drainage area may be applied to the volume required for another drainage area;

- (c) The requirement for retention of a minimum of fifty percent (50%) of the 1.2 inch SWRv for the entire site shall be achieved, unless the Department approves an application for relief from difficult site conditions; and
- (d) Retention of volume greater than that from a 1.7 inch rainfall event, calculated using the SWRv equation with a P equal to 1.7 inches, shall not be counted toward on-site retention.

520.6 A major land disturbing activity may achieve on-site retention by directly conveying volume from the regulated site to a shared BMP with available retention capacity.

**521 STORMWATER MANAGEMENT: PERFORMANCE REQUIREMENTS FOR MAJOR LAND DISTURBING ACTIVITY CONSISTING OF BRIDGE, ROADWAY, AND STREETScape PROJECTS IN THE EXISTING PUBLIC RIGHT OF WAY**

521.1 This section applies only to a major regulated project that consists entirely of bridge, roadway, or streetscape work in the existing public right of way (PROW).

521.2 A project in the existing PROW may comply with a requirement in this chapter to retain a Stormwater Retention Volume (SWRv) by:

- (a) Retaining fifty percent (50%) of the SWRv on site and using off-site retention for the remaining volume; or
- (b) Retaining on site the SWRv to the maximum extent practicable (MEP).

521.3 A project in the existing PROW that elects to retain on site the SWRv to the MEP shall:

- (a) Achieve the SWRv; or
- (b) Apply to the Department for relief from extraordinarily difficult site conditions and comply with the Department's determination.

521.4 A PROW project for which the Department grants relief for a volume of the SWRv shall not be required to:

- (a) Provide treatment for that volume; or
- (b) Use off-site retention for that volume.

521.5 A PROW project that applies for relief shall demonstrate that reducing the proposed roadway size in order to create an expanded area for retention of a

volume of the SWR<sub>v</sub> between the curb line and private property is technically infeasible or environmentally harmful.

**522 STORMWATER MANAGEMENT: PERFORMANCE REQUIREMENTS FOR MAJOR SUBSTANTIAL IMPROVEMENT ACTIVITY**

522.1 If a major substantial improvement activity has demonstrated that it is not part of a common plan of development with a major land disturbing activity, then it shall comply with the provisions of this section; otherwise, it shall comply with the requirements for a major land disturbing activity.

522.2 A site that undergoes a major substantial improvement activity shall employ each Best Management Practice (BMP) and land cover change necessary to meet the requirements of this section until the property is redeveloped in compliance with these regulations.

522.3 A site that undergoes a major substantial improvement activity shall:

(a) Achieve a stormwater retention volume (SWR<sub>v</sub>) equal to the post-development runoff from the eightieth (80<sup>th</sup>) percentile rainfall event for the District of Columbia, measured for a 24-hour storm with a seventy-two (72)-hour antecedent dry period (0.8 inch rainfall event);

(b) Calculate the 0.8 inch SWR<sub>v</sub> in subsection (a) as follows:

$$SWR_v = [P \times [(R_{vI} \times \%I) + (R_{vC} \times \%C) + (R_{vN} \times \%N)] \times SA] \times 7.48 / 12$$

- SWR<sub>v</sub> = volume, in gallons, required to be retained
- P = 80<sup>th</sup> percentile rainfall event for the District (0.8 inches)
- R<sub>vI</sub> = 0.95 (runoff coefficient for impervious cover)
- R<sub>vC</sub> = 0.25 (runoff coefficient for compacted cover)
- R<sub>vN</sub> = 0.00 (runoff coefficient for natural cover)
- %I = percent of site in impervious cover
- %C = percent of site in compacted cover
- %N = percent of site in natural cover
- SA = surface area in square feet

where, the surface area under a BMP shall be calculated as part of the impervious cover (%I); and

(c) Calculate the 0.8 inch SWR<sub>v</sub> for the entire site and each drainage area.

522.4 A site that undergoes a major substantial improvement activity may achieve the 0.8 inch SWR<sub>v</sub> on site or through a combination of on-site retention and off-site retention, under the following conditions:

- (a) The site shall retain on site a minimum of fifty percent (50%) of the 0.8 inch SWRv, calculated for the entire site, unless the Department approves an application for relief from difficult site conditions; and
- (b) The site shall use off-site retention for the portion of the SWRv that is not retained on site.

522.5 A site that undergoes a major substantial improvement activity may achieve on-site retention by retaining more than the 0.8 inch SWRv in a drainage area, subject to the following conditions:

- (a) At least fifty percent (50%) of the SWRv from each drainage area, unless it drains into the combined sewer system, shall be:
  - (1) Retained; or
  - (2) Treated to remove sixty percent (60%) of total suspended solids;
- (b) The excess of a 0.8 inch SWRv for one drainage area may be applied to the volume required for another drainage area;
- (c) The requirement for retention of a minimum of fifty percent (50%) of the 0.8 inch SWRv for the entire site shall be achieved, unless the Department approves an application for relief from difficult site conditions; and
- (d) Retention of volume greater than that from a 1.7 inch rainfall event, calculated using the SWRv equation with a P equal to 1.7 inches, shall not be counted toward on-site retention.

522.6 A major substantial improvement activity may achieve on-site retention by directly conveying volume from the regulated site to a shared BMP with available retention capacity.

**523 STORMWATER MANAGEMENT: RESTRICTIONS**

523.1 The Department may restrict use of an infiltration Best Management Practice (BMP) to prevent contamination of soil or groundwater and require submittal of and compliance with a Stormwater Pollution Prevention Plan (SWPPP) if:

- (a) An applicant proposes to engage in a land use activity that has the potential to pollute stormwater runoff, as specified in the Department’s Stormwater Management Guidebook (SWMG); or
- (b) Surface contamination is present at the site.

- 523.2 To prevent stormwater migration in underlying soil or groundwater in an area determined to have sub-surface contamination of soil or groundwater, the Department may:
- (a) Prohibit use of an infiltration BMP; or
  - (b) Limit use of an infiltration BMP, including a requirement that an impermeable liner be used.
- 523.3 The Department may require a BMP that may receive contaminated runoff in excess of applicable standards to include pollution control measures, including a baffle, skimmer, oil separator, grease trap, or other mechanism which prevents release of oil and grease in concentrations exceeding ten milligrams per Liter (10 mg/L).
- 523.4 The Department may require a BMP that receives runoff from an animal confinement area to be connected to a sanitary or combined sewer and to meet pretreatment requirements of the District of Columbia Water and Sewer Authority.
- 523.5 No person shall use a coal tar product, or other toxic material, to seal a BMP.
- 524 [RESERVED] STORMWATER MANAGEMENT: ENHANCED PROTECTION FOR THE ANACOSTIA RIVER**
- 525 STORMWATER MANAGEMENT: SHARED BEST MANAGEMENT PRACTICE**
- 525.1 A Shared Best Management Practice (S-BMP) may, upon approval by the Department:
- (a) Provide stormwater management for a major regulated project in satisfaction of an on-site stormwater management requirement of that project; and
  - (b) Be eligible for Department certification of a Stormwater Retention Credit (SRC).
- 525.2 A Department-approved S-BMP may provide stormwater management for a nearby property if:
- (a) Stormwater flow from the nearby property is directly conveyed to the S-BMP; and
  - (b) The S-BMP has sufficient capacity.

- 525.3 To obtain Department approval of the use of an existing S-BMP, a major regulated project shall show how each requirement of the project will be met by the S-BMP, including:
- (a) Submit an as-built SWMP for the S-BMP that is accurate as of the time of submittal;
  - (b) Prove sufficient capacity of the S-BMP;
  - (c) Demonstrate the adequacy of each stormwater conveyance from the major regulated project to the S-BMP; and
  - (d) Show each drainage area conveying stormwater into the S-BMP from the major regulated project.
- 525.4 To obtain Department approval of the use of a proposed S-BMP, a major regulated project shall show how each requirement of the project will be met by the S-BMP, including:
- (a) Submit a Department-approved stormwater management plan for the S-BMP;
  - (b) Prove sufficient capacity of the S-BMP;
  - (c) Demonstrate the adequacy of each stormwater conveyance from the major regulated project to the S-BMP; and
  - (d) Show each drainage area conveying stormwater into the S-BMP from the major regulated project.
- 525.5 A major regulated project that uses a S-BMP to meet a requirement shall not pass the Department's final inspection until the S-BMP passes the Department's final inspection and is operational.
- 525.6 After an alteration to a S-BMP to provide stormwater management for another site, the site with the S-BMP shall:
- (a) Pass the Department's inspection; and
  - (b) Submit an as-built SWMP, showing each area draining into the S-BMP and the means of conveyance.
- 525.7 The Department may certify a SRC for a S-BMP if the S-BMP meets each requirement for certification.

525.8 A site with a S-BMP that provides a volume of stormwater management to satisfy an on-site requirement of a major regulated project shall be responsible for maintenance of the S-BMP capacity to manage that volume and shall record that responsibility in a declaration of covenants.

525.9 If the Department determines that a S-BMP has ceased satisfying an on-site retention requirement for a site that underwent a major regulated project, the site shall be responsible for retaining the required volume on site or via use of off-site retention.

**526 STORMWATER MANAGEMENT: RELIEF FROM EXTRAORDINARILY DIFFICULT SITE CONDITIONS**

526.1 If compliance with the minimum on-site retention requirement is technically infeasible or environmentally harmful, the applicant may apply for relief from extraordinarily difficult site conditions.

526.2 The Department shall not provide relief unless the applicant proves that compliance with the minimum on-site retention requirement is technically infeasible or environmentally harmful.

526.3 In order to support its case for relief, the applicant shall provide the following information demonstrating technical infeasibility or environmental harm:

- (a) Detailed explanation of each opportunity for on-site installation of a retention BMP that was considered and rejected, and the reasons for each rejection; and
- (b) Evidence of site conditions limiting each opportunity for a retention BMP, including, as applicable:
  - (1) Data on soil and groundwater contamination;
  - (2) Data from percolation testing;
  - (3) Documentation of the presence of utilities requiring impermeable protection; and
  - (4) Evidence of the applicability of a statute, regulation, court order, pre-existing covenant, or other restriction having the force of law.

526.4 An applicant for relief shall submit:

- (a) A complete application; and
- (b) Proof of payment of the applicable fee.

526.5 The Department shall not consider an incomplete application for relief; except that if an application is substantially complete, the Department may begin consideration.

526.6 In determining whether to grant relief, the Department may consider:

- (a) The applicant's submittal;
- (b) Other site-related information;
- (c) An alternative design;
- (d) The Department's Stormwater Management Guidebook (SWMG);
- (e) Another BMP that meets the SWMG's approval requirements; and
- (f) Relevant scientific and technical literature, reports, guidance, and standards.

526.7 After considering whether an application meets the requirements of this section, the Department may:

- (a) Require additional information;
- (b) Grant relief;
- (c) Grant relief, with conditions;
- (d) Deny relief; or
- (e) Deny relief in part.

526.8 No relief shall be granted unless, for the volume of relief granted, the Stormwater Management Plan (SWMP) for the project provides for:

- (a) Treatment to remove sixty percent (60%) of total suspended solids; and
- (b) Use of off-site retention.

**527 STORMWATER MANAGEMENT: USE OF OFF-SITE RETENTION THROUGH IN-LIEU FEE OR STORMWATER RETENTION CREDITS**

527.1 A site that undergoes a major regulated project shall use off-site retention to achieve each gallon of its Off-Site Retention Volume (OSR<sub>v</sub>).

- 527.2 No person shall allow a portion of their OSRv obligation to be unfulfilled for any period of time.
- 527.3 A person shall achieve each gallon of OSRv for each year by:
- (a) Using one (1) Stormwater Retention Credit (SRC); or
  - (b) Paying the in-lieu fee to the Department.
- 527.4 An obligation to use off-site retention for a gallon of OSRv shall end if:
- (a) On-site retention of the gallon is achieved in compliance with a Department-approved Stormwater Management Plan (SWMP); or
  - (b) Site redevelopment that follows a Department-approved SWMP occurs.
- 527.5 No person shall use a SRC to achieve an OSRv without obtaining the Department's approval.
- 527.6 Only the owner of a SRC may apply to the Department for approval to use a SRC to achieve an OSRv.
- 527.7 The Department shall track the use of off-site retention to achieve an OSRv.
- 527.8 An application to use a SRC to achieve an OSRv shall be on a form that the Department provides and shall include:
- (a) The unique serial number of the SRC; and
  - (b) Information about the site applying to use the SRC, including property location and stormwater management on the property.
- 527.9 A person may use a Department-certified SRC without regard to the location within the District of the BMP or land cover change that generated the SRC.
- 527.10 The Department shall not approve an application to use a SRC to achieve an OSRv if the SRC is no longer valid, including because:
- (a) The SRC has already been used to achieve one (1) year of OSRv; or
  - (b) The Department has retired the SRC.
- 527.11 The one (1)-year lifespan of a SRC and of the in-lieu fee begins on the date that it is used to achieve an OSRv.

- 527.12 A site's obligation to use off-site retention to achieve its OSRv shall begin on the date of successful completion of the Department's final construction inspection.
- 527.13 For each gallon of required OSRv, the property owner shall provide the Department at least four (4) weeks before the proposed usage date:
- (a) For use of a SRC, a completed application to use the SRC; and
  - (b) For use of an in-lieu fee:
    - (1) Notification of intent to use an in-lieu fee; and
    - (2) Proof of payment of the fee.
- 527.14 If a lapse in satisfaction of the obligation to achieve an OSRv occurs, the Department shall declare the property owner out of compliance and:
- (a) Assess the property owner the in-lieu fee annually for each gallon of OSRv;
  - (b) Pro-rate the assessment to the period of lapsed compliance if the property owner comes into compliance; and
  - (c) Assess an administrative late fee.
- 527.15 Upon receipt of a notice related to noncompliance as set forth in 527.14, the property owner shall immediately:
- (a) Comply; and
  - (b) Pay fees and charges assessed.
- 527.16 If the Department finds that an obligation has terminated or that its administration of payments would be improved, it may:
- (a) Pro-rate the amount of SRCs used and adjust appropriately in the Department's tracking system; and
  - (b) Pro-rate the in-lieu fee and refund.

## **528 STORMWATER MANAGEMENT: MAINTENANCE**

- 528.1 Each owner or designee of each lot and parcel that is part of a site that undertook a major regulated project shall be responsible for maintenance required by the Stormwater Management Plan (SWMP) approved by the Department and shall record that responsibility in a declaration of covenants.

- 528.2 The Department may assign maintenance responsibility for a Shared Best Management Practice (S-BMP) in an approved SWMP after considering:
- (a) How maintenance will be achieved;
  - (b) Each lot and parcel's responsibility relative to its reliance on each S-BMP and land cover change to comply with this chapter;
  - (c) Administrative feasibility; and
  - (d) Accountability and enforceability.
- 528.3 The owner, governmental agency, or other person charged with maintenance responsibility shall ensure that a BMP and a land cover change on a lot or parcel is maintained in good working order if:
- (a) The BMP was installed or land cover change was effected to meet the requirements of this chapter for a major regulated project; or
  - (b) The Department certified a Stormwater Retention Credit (SRC) for a gallon of retention capacity created by the BMP or land cover change.
- 528.4 Maintenance of each BMP and land cover change shall comply with the applicable Department-approved SWMP, including promptly repairing and restoring each:
- (a) Grade surface;
  - (b) Wall;
  - (c) Drain;
  - (d) Structure;
  - (e) Foundation;
  - (f) Sign;
  - (g) Plant; and
  - (h) Erosion or sediment control measure.
- 528.5 If the Department finds that a BMP or land cover change is not being properly maintained:

- (a) The Department may require that the condition be corrected; and
- (b) The governmental agency, owner, or other person charged with maintenance responsibility shall correct the condition.

528.6 If an owner or other person charged with maintenance responsibility fails or refuses to correct a condition as the Department directs, the Department may:

- (a) Declare the owner or person out of compliance;
- (b) Take corrective action itself or through procurement;
- (c) Assess the cost incurred and fees; and
- (d) Assess a fine or penalty.

528.7 If the Department determines that the condition of a BMP or land cover change presents an actual or imminent harm to the environment or the public health, the Department may:

- (a) Declare the owner or other person charged with maintenance responsibility out of compliance;
- (b) Take protective and corrective action itself or through procurement without prior notice to the owner;
- (c) Assess the cost incurred and fees; and
- (d) Assess a fine or penalty.

528.8 Waste material from the repair, maintenance, or removal of a BMP or land cover change shall be removed, and the maintenance contractor shall submit a written report to the Department within forty-eight (48) hours after disposing of the waste material. The report shall include:

- (a) The name, address, phone number, and business license number of the contractor transporting the waste materials;
- (b) Date of removal;
- (c) The address of the BMP;
- (d) Type of BMP serviced;
- (e) Amount and type of waste material removed;

- (f) The name and location of the facility where the waste material was disposed of; and
- (g) A sworn statement that disposal was in compliance with applicable federal and District law.

**529 STORMWATER MANAGEMENT: COVENANTS AND EASEMENTS**

529.1 The owner of each lot and parcel that is part of a site that undertook a major regulated project shall make, swear to, and record with the Recorder of Deeds:

- (a) A declaration of covenants that includes the on-site and off-site responsibilities in the Department-approved Stormwater Management Plan (SWMP) approved by the Department; and
- (b) An easement that the Department requires to ensure access for inspection and maintenance of the BMP.

529.2 An agency of the District government shall not be required to make or record a declaration of covenants, except that, if a District-owned property is sold to a private owner or leased for more than three (3) years, the property's SWMP must be incorporated in a declaration of covenants and recorded as a burden on the property or the leasehold.

529.3 A declaration of covenants and an easement shall:

- (a) Be legally sufficient as determined by the Department or the Department's designee;
- (b) Be binding on all subsequent owners;
- (c) Include an agreement to indemnify the District of Columbia, its officers, agents, and employees from and against all claims or liability that may arise out of or in connection with, either directly or indirectly, any of the owner's actions or omissions with regard to the construction, operation, maintenance or restoration of the BMP; and
- (d) Provide for inspection of and access to the BMP at reasonable times by the Department or its authorized representative.

529.4 If the Department determines that a change to an approved SWMP for a site affects the terms of a declaration of covenants or an easement required by this chapter, the owner of each affected lot or parcel of that site shall revise as the Department approves and record the declaration of covenants or easement accordingly.

**530 STORMWATER MANAGEMENT: IN-LIEU FEE**

- 530.1 The base in-lieu fee established by the Department for a purpose of this chapter shall represent the full life-cycle cost for the Department to retain one gallon (1 gal.) of stormwater for one (1) year, including the following costs:
- (a) Project planning;
  - (b) Project design;
  - (c) Project management;
  - (d) Construction and installation;
  - (e) Operations and maintenance;
  - (f) Project financing;
  - (g) Land acquisition;
  - (h) Administration of the in-lieu fee program; and
  - (i) Legal support for the in-lieu fee program.
- 530.2 The Department shall annually adjust the base in-lieu fee to account for inflation, using the *Engineering News-Record* Construction Cost Index or the Urban Consumer Price Index published by the United States Bureau of Labor Statistics.
- 530.3 The Department may re-evaluate the costs underlying the in-lieu fee and re-base the in-lieu fee as the Department determines necessary.
- 530.4 An in-lieu fee payment shall be based on the in-lieu fee in effect at the time payment is made.
- 530.5 An in-lieu fee payment shall:
- (a) Be used solely to achieve increased retention in the District of Columbia;
  - (b) Be deposited in the Stormwater Permit Compliance Enterprise Fund, established by the Comprehensive Stormwater Management Enhancement Amendment Act of 2008 (D.C. Law 17-371; D.C. Official Code § 8-152.02 *et seq.* (2008 Repl. & 2011 Supp.)), as amended.

**531 STORMWATER MANAGEMENT: CERTIFICATION OF STORMWATER RETENTION CREDITS**

- 531.1 No person other than the Department shall have the power and authority to certify a Stormwater Retention Credit (SRC); and no SRC shall be valid and usable for the purposes of this chapter unless the Department certifies it.
- 531.2 The Department shall:
- (a) Assign a unique serial number to each SRC; and
  - (b) Retain and track information about each SRC, including final sale price.
- 531.3 A gallon of retention capacity in a Best Management Practice (BMP) or land cover change is eligible for SRC certification if it meets the following eligibility requirements:
- (a) The gallon retained by the BMP or land cover change shall be:
    - (1) In excess of the Stormwater Retention Volume (SWRV) for a major regulated project or, for a site that is not regulated, in excess of existing retention; and
    - (2) No more than the SRC ceiling;
  - (b) Design, installation, and operation shall comply with a Department-approved Stormwater Management Plan (SWMP);
  - (c) The Department's final construction inspection shall be successfully completed;
  - (d) A Department inspection shall be successfully completed within six (6) months before the Department decides to certify an SRC; and
  - (e) An executed maintenance contract or a signed promise to follow a maintenance plan for the period of time for which the certification of SRCs is requested, in compliance with the Department-approved SWMP for the BMP or land cover change, shall be in place.
- 531.4 The SRC-eligible retention volume described in 531.3(a) shall be calculated using the formulas in chapter seven (7) of the Department's Stormwater Management Guidebook.
- 531.5 The Department shall begin accepting applications for SRC certification after this section is published as final in the *D.C. Register*.
- 531.6 A person submitting an application for SRC certification shall be the owner of the retention capacity or shall have been assigned the right to a SRC that is certified.

- 531.7 The Department may reject as premature an application for SRC certification if it is submitted more than three (3) months before the end of the preceding period of time for which the Department had certified a SRC for the retention capacity.
- 531.8 The Department shall not consider an incomplete application for SRC certification.
- 531.9 A complete application for SRC certification shall include:
- (a) A completed Department application form;
  - (b) Documentation of the right to the SRC that would be certified;
  - (c) A copy of the Department-approved SWMP for the retention capacity and the area draining into it;
  - (d) A copy of the as-built SWMP for the retention capacity and the area draining into it, certified by a professional engineer registered in the District of Columbia and meeting the requirements of this chapter;
  - (e) An executed maintenance contract or a signed promise to follow a maintenance plan for the period of time for which the certification of SRCs is requested; and
  - (f) Other documentation that the Department requires to determine that the eligibility requirements are satisfied.
- 531.10 If the Department determines that a complete application meets the eligibility requirements, it shall certify up to three (3) years' worth of SRCs for each gallon of retention.
- 531.11 The Department shall not certify an SRC:
- (a) For a period of time that overlaps with the period of time for which the Department has already certified an SRC for the same retention capacity;
  - (b) For a period that begins earlier than the date of the submittal of a complete application; or
  - (c) For ineligible retention capacity.
- 531.12 The Department may waive submittal of documentation required for a complete application if the Department has the documentation on file that reflects current conditions, except that the Department shall not waive submittal of a current maintenance agreement or maintenance contract for the BMP or land cover change.

- 531.13 The Department may conduct an inspection of a BMP or land cover change for the purposes of this section before certification of an SRC and after certification.
- 531.14 For the purposes of certifying an SRC for retention capacity that was installed without an approved SWMP prior to the date these regulations are published as final in the *D.C. Register*, the Department may accept the following as a complete initial application:
- (a) An application on a Department-provided form;
  - (b) A copy of the as-built SWMP for the retention capacity and the area draining into it, certified by a professional engineer registered in the District of Columbia that the SWMP meets the requirements of this chapter;
  - (c) Documentation of site conditions prior to installation of the retention capacity;
  - (d) A copy of a current maintenance agreement or maintenance contract for the BMP or land cover change; and
  - (e) Other documentation that the Department requires to determine that the eligibility requirements are satisfied.
- 531.15 At the Director's discretion and to allow for the aggregation of SRCs, the Department may approve a SWMP that proposes aggregation of retention from small sites under a common design and that:
- (a) Would not otherwise trigger a stormwater management performance requirement in this chapter;
  - (b) Proposes the use of a common design for multiple installations of a BMP;
  - (c) Specifies well-defined technical criteria for location and placement of each BMP;
  - (d) Specifies details for how multiple installations will be constructed, operated, and maintained;
  - (e) Contains requirements for inspection by the Department or a Department-approved third party;
  - (f) Demonstrates the technical capacity to locate, design, install, and maintain each BMP; and

(g) Demonstrates that the requirements of this chapter will be met.

**532 STORMWATER MANAGEMENT: LIFESPAN OF STORMWATER RETENTION CREDITS**

532.1 A Stormwater Retention Credit (SRC) may be banked indefinitely, until:

- (a) It is used to achieve a gallon of off-site retention volume (OSR<sub>v</sub>) for one (1) year; or
- (b) The Department retires it.

532.2 The Department shall retire an SRC if:

- (a) An SRC owner submits a complete Department-provided application for retirement and the Department approves it; or
- (b) A final determination to retire a SRC is made pursuant to this section.

532.3 If the Department determines that there is a retention failure associated with a certified SRC, the Department may:

- (a) If the SRC has not been sold or used:
  - (1) Deny use of the SRC to achieve an OSR<sub>v</sub>;
  - (2) Deny an application for transfer of ownership of the SRC;
  - (3) Retire the SRC; and
  - (4) Give notice to the owner of the SRC of the right to contest the denial or retirement through the administrative appeals process pursuant to Section 506 of this chapter, and give public notice of the denial or retirement on the Department's website for fifteen (15) days;
- (b) If the SRC has been sold or used:
  - (1) Order the original SRC owner to replace the SRC with another SRC; or
  - (2) Assess on the original SRC owner the in-lieu fee corresponding to the SRC; and

- (3) Give notice to the original SRC owner of the right to contest the determination through the administrative appeals process pursuant to Section 506 of this chapter.

532.4 If a person fails to comply with the Department's order to replace an SRC or pay the in-lieu fee within sixty (60) days, the Department may assess an administrative late fee of ten percent (10%) of the corresponding in-lieu fee payment.

532.5 If a retention failure associated with a SRC occurs, the Department may calculate compensatory SRCs and the in-lieu fee to reflect the time period for which the retention failure occurred.

### **533 STORMWATER MANAGEMENT: OWNERSHIP OF STORMWATER RETENTION CREDITS**

533.1 A Stormwater Retention Credit (SRC) may be bought and sold.

533.2 No person may sell a SRC that:

- (a) Has already been used to achieve an off-site retention volume (OSR<sub>v</sub>); or
- (b) The person does not own.

533.3 No person may complete a transfer of SRC ownership without receiving the Department's approval.

533.4 A complete application for transfer of SRC ownership shall be in writing on a Department-provided form that includes:

- (a) The unique serial number of each SRC;
- (b) Identification of the seller and the buyer, including contact information; and
- (c) The purchase price.

533.5 Only the existing owner of an SRC (the seller) and the proposed SRC owner (the buyer) shall apply to transfer SRC ownership.

533.6 Before approving a transfer of SRC ownership, the Department shall verify the ownership and status of each SRC.

533.7 The Department shall undertake efforts to publicly share information of the price, purchase, sale, value, time, certification, and use of an SRC that is not personal, proprietary, a trade secret, or otherwise confidential.

**534        STORMWATER MANAGEMENT: EXISTING RETENTION**

534.1        A person may apply for certification of a Stormwater Retention Credit (SRC) for existing retention capacity that increased retention relative to prior conditions in the limited circumstances described in this section.

534.2        The Department may certify an SRC for existing retention only if the BMP or land cover change that provides the retention:

- (a)        Was installed after May 1, 2009; and
- (b)        Achieves retention in compliance with the specifications and calculations in the Department’s Stormwater Management Guidebook (SWMG).

534.3        For the purposes of certifying an SRC for existing retention, a person shall submit the following as a complete application:

- (a)        A completed, Department-provided application form;
- (b)        A copy of the as-built SWMP for the retention capacity and the area draining into it, certified by a professional engineer registered in the District of Columbia that the SWMP meets the requirements of this chapter;
- (c)        Documentation of site conditions prior to installation of the retention capacity;
- (d)        An executed maintenance contract or a signed promise to follow a maintenance plan for the period of time for which the certification of SRCs is requested; and
- (e)        Other documentation that the Department requires to determine that the eligibility requirements for certification of SRCs are satisfied.

**535-539        [RESERVED]**

**540        SOIL EROSION AND SEDIMENT CONTROL: APPLICABILITY**

540.1        No person shall engage in razing or land disturbing activity, including stripping, clearing, grading, grubbing, excavating, and filling of land, without obtaining the Department’s approval of a soil erosion and sediment control plan, unless exempted in this chapter.

540.2        Notwithstanding any exemptions provided in this Chapter, a person who engages in a demolition project that results in debris, dust, or sediment leaving the site

shall apply each necessary control measure, upon receiving instruction to do so by the Department.

- 540.3 Notwithstanding any exemptions provided in this chapter, a person who exposes erodible material and causes erosion shall apply each necessary control measure, upon receiving instruction to do so by the Department.
- 540.4 A person who applies for Department approval of a soil erosion and sediment control plan shall be the owner of the property where the activity is to take place.
- 540.5 The owner's designation of an agent does not remove the owner's responsibility, liability, or obligation under this chapter.
- 540.6 The approved soil erosion and sediment control plan shall govern all construction work on the property requiring the control of soil erosion and sediment.
- 540.7 At the Director's discretion, the Department may establish conditions for a general or blanket approval of soil erosion and sediment control plans that are solely covering specified activities carried out under and complying with specifications approved by the Department. These conditions may include requirements for an applicant to provide notice to the Department and comply with inspections as would normally be required under this chapter. The Department shall establish and revise any such conditions as necessary and publish them on its website as updates to the District of Columbia Standards and Specifications for Soil Erosion and Sediment Control.

## **541 SOIL EROSION AND SEDIMENT CONTROL: EXEMPTIONS**

- 541.1 The following land disturbing activities are exempt from the requirement to comply with the soil erosion and sediment control provisions of this chapter, except as noted below and in the Section on applicability:
- (a) For an individual house, townhouse, or rowhouse:
    - (1) Gardening;
    - (2) Landscaping;
    - (3) Repairs;
    - (4) Maintenance;
    - (5) Stormwater retrofits, provided that:
      - (A) The soil allows for percolation; and

- (B) The retrofit location is no closer than ten feet (10 ft.) from a building foundation;
- (6) Utility service connection, repair, or upgrade;
- (b) A project for which the total cost is less than nine thousand dollars (\$9,000);
- (c) Tilling, planting, or harvesting of agricultural or horticultural crops;
- (d) Installation of fencing, a gate, signpost, or a pole;
- (e) Emergency work to protect life, limb or property, and emergency repairs, except that the following is not exempted to the extent described:
  - (1) The land disturbed must still be shaped and stabilized in accordance with the requirements of this chapter;
  - (2) Generally applicable control measures shall be used; and
  - (3) A plan shall be submitted within three (3) weeks after beginning the emergency work; and
- (f) Activities that disturb less than fifty square feet (50 sq. ft.).

**542 SOIL EROSION AND SEDIMENT CONTROL: PLAN**

- 542.1 The soil erosion and sediment control plan shall not be approved without the date and signature of the Director or the Director's designee stamped on the plan.
- 542.2 The approved soil erosion and sediment control plan for a project shall be available on site for Department review for the entire period of construction during ordinary business hours.
- 542.3 The Department shall approve a soil erosion and sediment control plan only if the Department determines the following:
  - (a) The plan meets the requirements of this chapter and of the Department's Standards and Specifications for Soil Erosion and Sediment Control;
  - (b) The applicant has paid each applicable fee; and
  - (c) The applicant has certified, in writing, that he or she will implement each control measure specified in the plan.
- 542.4 The Department may, with respect to a soil erosion and sediment control plan:

- (a) Reject a submission as incomplete;
- (b) Approve;
- (c) Deny;
- (d) Approve or deny in part; and
- (e) Require conditions or modifications.

542.5 If a plan is disapproved, the Department shall notify the applicant in writing, providing the specific reasons for the disapproval of the plan.

542.6 The Department may suggest modifications, terms, and conditions necessary to comply with the requirements of this chapter.

542.7 A soil erosion and sediment control plan may cover multiple phases of a project.

542.8 The applicant shall submit two (2) sets of prints of the soil erosion and sediment control plan to the Department for review.

542.9 The applicant shall, at a minimum, provide the following information on the soil erosion and sediment control plan:

- (a) A title that indicates the plan is a soil erosion and sediment control plan;
- (b) A project narrative;
- (c) The address of the property;
- (d) The lot, square, or parcel numbers;
- (e) The name, address, and telephone number of:
  - (1) The property owner;
  - (2) The developer; and
  - (3) The plan designer;
- (f) For sites where work will be done on slopes in excess of fifteen percent (15%), the seal and signature of a registered professional engineer, licensed in the District of Columbia;

- (g) A vicinity sketch indicating north arrow, scale, and other information necessary to locate the property;
- (h) One of the following horizontal scales of profile, unless otherwise approved:
  - (1) One inch equals ten feet (1 in. = 10 ft.);
  - (2) One inch equals twenty feet (1 in. = 20 ft.);
  - (3) One inch equals thirty feet (1 in. = 30 ft.);
  - (4) One inch equals forty feet (1 in. = 40 ft.);
  - (5) One inch equals fifty feet (1 in. = 50 ft.); or
  - (6) One inch equals eighty feet (1 in. = 80 ft.);
- (i) One of the following vertical scales of profile, unless otherwise approved:
  - (1) One inch equals two feet (1 in. = 2 ft.);
  - (2) One inch equals four feet (1 in. = 4 ft.);
  - (3) One inch equals five feet (1 in. = 5 ft.); or
  - (4) One inch equals ten feet (1 in. = 10 ft.);
- (j) Existing features that may be relevant factors in the development of an erosion prevention plan, such as vegetation, wildlife habitat, water areas, and topsoil conditions;
- (k) The existing and proposed topography, including clear identification of all areas of slope greater than fifteen percent (15%);
- (l) The proposed grading and earth disturbance including:
  - (1) Surface area involved;
  - (2) Volume of spoil material;
  - (3) Volume of borrow material; and
  - (4) Limits of clearing and grading including limitation of mass clearing and grading whenever possible;

- (m) Storm drainage provisions, including:
  - (1) Velocities and quantities of flow at outfalls; and
  - (2) Site conditions around each point of surface water discharge from the site;
  
- (n) Erosion and sediment control provisions to minimize on-site erosion and prevent off-site sedimentation including:
  - (1) Provisions to preserve topsoil and limit disturbance;
  - (2) Details of grading practices;
  - (3) Methods to minimize, to the extent practicable, off-site vehicle tracking of sediment and generation of dust; and
  - (4) Design details for structural control measures, including size and location of each erosion and sediment control measure, including:
    - (A) Use of a crushed stone dike on each access road that is above grade; and
    - (B) Use of a stabilized construction entrance for a construction project on each access road;
  
- (o) Details of each interim and permanent stabilization measure, including statement of intent to adhere to the following, by placing the statement on the soil erosion and sediment control plan:

“Following initial land disturbance or re-disturbance, permanent or interim stabilization shall be completed within seven (7) calendar days for the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than three (3) horizontal to one (1) vertical (3:1); and fourteen (14) days for all other disturbed or graded areas on the project site. The requirements of this paragraph do not apply to those areas which are shown on the plan and are being used for material storage other than stockpiling, or for those areas on which actual construction activities are being performed. Maintenance shall be performed as necessary so that stabilized areas continuously meet the appropriate requirements of the District of Columbia Standards and Specifications for Soil Erosion and Sediment Control;”
  
- (p) The sequence of construction, including:

- (1) A description of the relationship between the implementation and maintenance of controls, including permanent and interim stabilization and the various stages or phases of earth disturbance and construction; and
- (2) A schedule and time frame for each of the following activities:
  - (A) Clearing and grubbing for those areas necessary for installation of perimeter controls;
  - (B) Construction of perimeter controls;
  - (C) Remaining clearing and grubbing;
  - (D) Road grading;
  - (E) Grading for the remainder of the site;
  - (F) Utility installation, including the use or blocking of storm drains after construction;
  - (G) Final grading, landscaping, or stabilization; and
  - (H) Removal of controls;
- (q) A general description of the predominant soil types on the site, as described by the appropriate soil survey information available from the United States Department of Agriculture National Resources Conservation Service;
- (r) A soils report, including recommendations for areas with unstable soils, identified in the Christiana-Sunnyside Association by the District of Columbia Soil Survey. This soils report shall be obtained from a geotechnical engineering entity; and
- (s) A statement placed on the soil erosion and sediment control plan stating that the applicant shall contact the Department to schedule a pre-construction meeting before the commencement of a land disturbing activity.

542.10 Following approval of the plan, the applicant shall request the Department's approval at each of the following stages of construction:

- (a) Installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading; and

- (b) Final stabilization of the site before the removal of erosion and sediment controls. Final stabilization means that all land disturbing activities at the site have been completed and either of the following two (2) criteria are met:
  - (1) A uniform (for example, evenly distributed, without large bare areas) perennial vegetative cover with a density of seventy percent (70%) of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or
  - (2) Equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

542.11 When contaminated groundwater or soil is encountered during land disturbing activity, the applicant shall notify the Department immediately by the most expeditious means possible, and then in writing.

542.12 When contaminated groundwater is encountered during land disturbing activity, the applicant shall submit as soon as practicable to the Department for review and approval a separate detailed dewatering pollution reduction plan for reducing or eliminating contamination from the discharge, which shall include:

- (a) A site description;
- (b) Identification of the potential source of the contaminant;
- (c) Description of control measures to reduce pollutant discharges;
- (d) Monitoring procedures and a monitoring schedule;
- (e) A maintenance and inspection schedule;
- (f) Record keeping and reporting; and
- (g) Contact information for an on-site responsible person, including mobile phone and email address.

542.13 A soil erosion and sediment control plan shall be designed in compliance with this chapter by a District-registered:

- (a) Professional engineer;
- (b) Land surveyor; or
- (c) Architect.

- 542.14 In support of a plan which it submits for approval, the applicant shall provide additional information that the Department considers necessary.
- 542.15 A copy of each approved plan shall be at the construction site from the date of commencement of the construction activities to the date of final stabilization and shall be made available for the Department's inspection.

**543 SOIL EROSION AND SEDIMENT CONTROL: REQUIREMENTS**

- 543.1 Erosion and sediment control measures shall be those the Department approves.
- 543.2 The Department shall maintain a copy of its Standards and Specifications for Soil Erosion and Sediment Control on its website and make a hard copy available for review at its offices.
- 543.3 Soil erosion and sediment control measures shall prevent transportation of sediment from the site.
- 543.4 There shall be a rebuttable presumption of compliance with this section if waterway crossings and stream bank protection measures are designed and installed in compliance with the Department's Standards and Specifications for Soil Erosion and Sediment Control.
- 543.5 Best Management Practice (BMPs) shall be protected from sedimentation and other damage during construction to ensure proper post-construction operation.
- 543.6 Erosion and sediment control measures shall be in place before and during land disturbance, except as otherwise specifically stated.
- 543.7 Erosion and sediment control measures shall be in place to stabilize an exposed area as soon as practicable after construction activity has temporarily or permanently ceased but no later than fourteen (14) days following cessation, except that temporary or permanent stabilization shall be in place at the end of each day of underground utility work that is not contained within a larger development site.
- 543.8 Permanent stabilization of streets and parking areas shall be with base course crushed stone or other Department-approved measures.
- 543.9 Measures shall be implemented and corrective action taken, including as specified by the Department, to prevent the discharge to District sewers or District waterbodies of erodible material or waste material including those materials that have been transported off site.

- 543.10 A site disturbing greater than five thousand square feet (5,000 sq. ft.) of land shall:
- (a) Follow a Department-approved stormwater pollution prevention plan (SWPPP); and
  - (b) Post a legible copy of the SWPPP on site.
- 543.11 There shall be a rebuttable presumption of compliance with this section if a SWPPP employs the measures specified in the Department's Standards and Specifications for Soil Erosion and Sediment Control.
- 543.12 A person shall avoid work on a slope in excess of fifteen percent (15%), to the maximum extent practicable. Where avoidance is not practicable, the Soil Erosion and Sediment Control Plan for the site shall be designed, signed, and sealed by a registered professional engineer, licensed in the District of Columbia, and the applicant shall incorporate additional protection strategies which the Department may require in order to prevent erosion or transportation of sediments from the site.
- 543.13 The maximum area that may be exposed at any one (1) time during grading shall be two and one-half acres (2.5 ac.).
- 543.14 Except on an area that is undergoing construction, perimeter controls that disturb land, including dikes, swales, ditches, and perimeter slopes, shall be stabilized within one (1) week of initial land disturbance or redisturbance:
- (a) On the surface of each disturbed area; and
  - (b) On each associated slope greater than three (3) horizontal to one (1) vertical (3:1).
- 543.15 Runoff from the site shall be controlled by either diverting or conveying the runoff through areas with erosion and sediment control measures, such as through the installation of lined conveyance ditches, channels, or checkdams.
- 543.16 Critical area stabilization shall be applied to each cut and fill slope:
- (a) That is equal to or steeper than 3:1;
  - (b) That is flatter than 3:1 if the Department determines that the soil characteristics require it; and
  - (c) To every cut and fill slope when when construction is out-of-season for planting and until permanent protection can be provided.

- 543.17 A cut and fill slope:
- (a) Shall be protected against erosion from stormwater runoff by use of structural diversions that are protected by vegetation or matting; and
  - (b) Shall be protected in five foot (5 ft.) vertical increments as each increment is completed.
- 543.18 Stockpiled material shall be:
- (a) Covered at the end of each work day;
  - (b) Remain covered on days when construction work is not conducted at the site; and
  - (c) If stockpile material is not being used or added, it shall be stabilized and protected with mulch, temporary vegetation, hydro-seed or plastic within fifteen (15) calendar days after its last use or addition.
- 543.19 Sediment traps or basins and other erosion and sediment controls shall be:
- (a) Installed no later than the first phase of land grading;
  - (b) Installed as soon as new site-related runoff is detected; and
  - (c) Employed at all times to protect inlets or storm sewers below silt-producing areas.
- 543.20 Debris basins, diversions, waterways, and related structures shall be seeded and mulched, or have sod or a stabilization blanket installed immediately after they are built.
- 543.21 Construction site access measures to minimize off-site vehicle tracking shall :
- (a) Be installed no later than the first day of construction;
  - (b) Stabilize each construction entrance;
  - (c) Include each additional measure required to keep sediment from being:
    - (1) Tracked, or otherwise carried, onto public streets by construction vehicles; and
    - (2) Washed into a storm drain or waterway; and
  - (d) Comply with all other Department requirements.

- 543.22 Off-site accumulations of sediment:
- (a) Shall be removed daily during construction; and
  - (b) Shall be removed immediately if the Department so requires after an inspection.
- 543.23 Maintenance shall be performed to keep stabilized areas constantly stabilized.
- 543.24 A sign that notifies the public to contact the Department in the event of erosion or other pollution shall be prominently posted on every site subject to this chapter, and the sign shall:
- (a) Be in plain view of and readable by the public at a distance of twelve feet (12 ft.);
  - (b) Be placed at each entrance to the site or as directed by the Department; and
  - (c) Provide contact information identified by the Department, including telephone numbers and email address.

#### **544 SOIL EROSION AND SEDIMENT CONTROL: ROADWAY PROJECTS**

- 544.1 Rough graded rights-of-way awaiting installation of utilities or pavement shall be protected by the installation of interceptor dikes across rights-of-way so located as to limit roadway grade to a length between dikes of not more than five hundred feet (500 ft.).
- 544.2 Temporary diversion dikes and flumes shall be used to carry runoff down cut-and-fill slopes to an outlet approved by the Department as part of the soil erosion and sediment control plan.
- 544.3 A permanent drainage structure, including diversions at top-of-slope cuts and diversions to lead runoff to a storm sewer or other suitable outlet, shall be installed at the completion of rough grading.

#### **545 SOIL EROSION AND SEDIMENT CONTROL: BUILDINGS, DEMOLITION, RAZING, AND SITE DEVELOPMENT**

- 545.1 Erosion shall be controlled by the installation of gutters and downspouts as soon as practicable.
- 545.2 Measures shall be taken to achieve a non-eroding velocity for stormwater exiting from a roof or downspout or to temporarily pipe that stormwater directly to a storm drain.

- 545.3 The site work shall maximize the preservation of natural vegetation and limit the removal of vegetation to that which is necessary for construction or landscaping activity.
- 545.4 If site conditions preclude employment of other means of erosion control, the Department may approve installation of small dikes constructed along a low-lying perimeter area of a job site.
- 545.5 In an area close to a waterbody, a buffer must be established:
- (a) By not disturbing the land immediately adjacent to the waterbody, except to restore native vegetation;
  - (b) Of at least twenty-five feet (25 ft.) on both sides of the water body, measured perpendicular to and horizontally from the top of bank; and
  - (c) With vegetation or other measure required by the Department to insure that the buffer acts as a filter to trap sediment and keep it onsite.

**546 SOIL EROSION AND SEDIMENT CONTROL: UNDERGROUND UTILITIES**

- 546.1 If the land disturbing activity involves work on an underground utility, the site shall comply with the following requirements:
- (a) No more than five hundred linear feet (500 ft.) of trench shall be open;
  - (b) All excavated material shall be placed on the uphill side of a trench;
  - (c) Interim or permanent stabilization shall be installed upon completion of refilling; and
  - (d) When natural or artificial grass filter strips are used to collect sediment from excavated material, mulches and matting shall be used in order to minimize erosion of these materials.

**547 SOIL EROSION AND SEDIMENT CONTROL: RESPONSIBLE PERSONNEL**

- 547.1 If a site involves a land disturbance of five thousand square feet (5,000 sq. ft.) or more, a responsible person shall be on site during land-disturbing activity to ensure that the activity complies with this chapter.
- 547.2 A responsible person shall be certified through a training program that the Department approves.

- 547.3 During construction, the responsible person shall have available on site documentation of successful completion of a Department-approved training program.
- 547.4 A Department-approved training program shall cover the following topics, as demonstrated in the training syllabus:
- (a) The detrimental effects of sediment pollution to waterbodies;
  - (b) The benefits of proper and effective erosion and sediment control implementation and maintenance;
  - (c) The purpose and provisions of the District of Columbia erosion and sediment control laws, rules, and regulations;
  - (d) A description of sediment as a pollutant;
  - (e) The process of:
    - (1) Erosion;
    - (2) Sediment transport; and
    - (3) Sediment deposition;
  - (f) Proper implementation of erosion and sediment control;
  - (g) Recognition and correction of improperly implemented erosion and sediment controls;
  - (h) Proper maintenance of erosion and sediment controls; and
  - (i) Responsibilities of supervisory and enforcement personnel.

**548-552 [RESERVED]**

**Section 599 is amended to delete the section and replace it with the following:**

**599 DEFINITIONS**

- 599.1 When used in this chapter, the following terms and phrases shall have the meanings ascribed:

**Animal confinement area** - An area, including a structure, used to stable, kennel, enclose, or otherwise confine animals, not including confinement of a domestic animal on a residential property.

**Applicant** - A person or their agent who applies for approval pursuant to this chapter.

**As-built plan** - A set of architectural, engineering, or site drawings, sometimes including specifications, that certifies, describes, delineates, and presents details of a completed construction project.

**Best Management Practice (BMP)** - Structural or nonstructural practice that minimizes the impact of stormwater runoff on receiving waterbodies and other environmental resources, especially by reducing runoff volume and the pollutant loads carried in that runoff.

**Buffer** - An area along a stream, river, or other natural feature that provides protection for that feature.

**Building permit** - Authorization for construction activity issued by the District of Columbia Department of Consumer and Regulatory Affairs.

**Clearing** - The removal of trees and brush from the land excluding the ordinary mowing of grass, pruning of trees or other forms of long-term landscape maintenance.

**Common plan of development** - Multiple, separate, and distinct land disturbing, substantial improvement, or other construction activities taking place under, or to further, a single, larger plan, although they may be taking place at different times on different schedules.

**Compacted cover** - An area of land that is functionally permeable, but where permeability is impeded by increased soil bulk density as compared to natural cover, such as through grading, construction, or other activity and will require regular human inputs such as periodic planting, irrigation, mowing, or fertilization. Examples include landscaped planting beds, lawns, or managed turf.

**Control measure** - Technique, method, device, or material used to prevent, reduce, or limit discharge.

**Construction** - Activity conducted for the:

- (a) Building, renovation, modification, or razing of a structure; or
- (b) Movement or shaping of earth, sediment, or a natural or built feature.

**Critical area stabilization** - Stabilization of areas highly susceptible to erosion, including down-slopes and side-slopes, through the use of brick bats, straw, erosion control blanket mats, gabions, vegetation, and other control measures.

**Cut** - An act by which soil or rock is dug into, quarried, uncovered, removed, displaced, or relocated and the conditions resulting from those actions.

**Demolition** - The removal of part or all of a building, structure, or built land cover.

**Department** - The District Department of the Environment or its agent.

**Dewatering** - Removing water from an area or the environment using an approved technology or method, such as pumping.

**Director** - The Director of the District Department of the Environment.

**District** - The District of Columbia.

**Drainage area** - Area contributing runoff to a single point.

**Easement** - A right acquired by a person to use another person's land for a special purpose.

**Electronic media** - Means of communication via electronic equipment, including the internet.

**Erosion** - The process by which the ground surface, including soil and deposited material, is worn away by the action of wind, water, ice, or gravity.

**Excavation** - An act by which soil or rock is cut into, dug, quarried, uncovered, removed, displaced or relocated and the conditions resulting from those actions.

**Existing retention** - Retention on a site, including by each existing Best Management Practice (BMP) and land cover, before retrofit of the site with installation of a new BMP or land cover change.

**Exposed area** - Land that has been disturbed or land over which unstabilized soil or other erodible material is placed.

**Grading** - Causing disturbance of the earth, including excavating, filling, stockpiling of earth materials, grubbing, root mat or topsoil disturbance, or any combination of them.

**Impervious cover** - A surface area which has been compacted or covered with a layer of material that impedes or prevents the infiltration of water into the ground, examples include conventional streets, parking lots, rooftops, sidewalks, pathways with compacted sub-base, and any concrete, asphalt, or compacted gravel surface and other similar surfaces.

**Infiltration** - The passage or movement of surface water through the soil profile.

**Land cover** - Surface of land that is impervious, compacted, or natural.

**Land cover change** - Conversion of land cover from one type to another, typically in order to comply with a requirement of this chapter or to earn certification of a Stormwater Retention Credit.

**Land disturbing activity** - Movement of earth, land, or sediment, including stripping, grading, grubbing, trenching, excavating, transporting, and filling of land.

**Low Impact Development (LID)** - A land planning and engineering design approach to manage stormwater runoff within a development footprint. It emphasizes conservation, the use of on-site natural features, and structural best management practices to store, infiltrate, evapotranspire, retain, and detain rainfall as close to its source as possible with the goal of mimicking the runoff characteristics of natural cover.

**Major land disturbing activity** - Activity that disturbs, or is part of a common plan of development that disturbs, five thousand square feet (5,000 sq. ft.) or greater of land area.

**Major regulated project** - A major land-disturbing activity or a major substantial improvement activity.

**Major substantial improvement activity** - Substantial improvement activity and associated land disturbing activity, including such activities that are part of a common plan of development, for which the combined footprint of improved building and land-disturbing activity is five thousand square feet (5,000 sq. ft.) or greater. A major substantial improvement activity may include a substantial improvement activity that is not associated with land disturbance.

**Natural cover** - Land area that is dominated by vegetation and does not require regular human inputs such as irrigation, mowing, or fertilization to persist in a healthy condition. Examples include forest, meadow, or pasture.

**Nonstructural BMP** - A land use, development, or management strategy to minimize the impact of stormwater runoff, including conservation of natural cover, or disconnection of impervious surface.

**Off-site retention** - Use of a stormwater retention credit or payment of in-lieu fee in order to achieve an off-site retention volume under these regulations.

**Off-Site Retention Volume (OSRv)** - A portion of a required stormwater retention volume that is not retained on site.

**On-site retention** - Retention of a site's stormwater on that site or via conveyance to a shared best management practice on another site.

**On-site stormwater management** - Retention, detention, or treatment of stormwater on site or via conveyance to a shared best management practice.

**Owner** - The person who owns real estate or other property, or that person's agent.

**Peak discharge** - The maximum rate of flow of water at a given point and time resulting from a storm event.

**Person** - A legal entity, including an individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, cooperative, the District government and its agencies, and the federal government and its agencies.

**Post-development** - Describing conditions that may be reasonably expected to exist after completion of land development activity on a site.

**Practice** - A system, device, material, technique, process, or procedure that is used to control, reduce, or eliminate an impact from stormwater; except where the context indicates its more typical use as a term describing a custom, application, or usual way of doing something.

**Pre-development** - Describing conditions of meadow land and its relationship to stormwater before human disturbance of the land.

**Pre-project** - Describing conditions, including land covers, on a site that exist at the time that a stormwater management plan is submitted to the Department.

**Publicly-owned or publicly-financed project** - Project which is:

- (a) Initially funded in the Fiscal Year 2008 budget or later; or
- (b) Constructed or substantially improved:
  - (1) As a result of a property disposition by lease or sale where District-owned or District instrumentality-owned property is leased or sold to private entities; or
  - (2) Where fifteen percent (15%) or more of a project's total project cost is publicly financed in Fiscal Year 2009 or later.

**Public Right of Way (PROW)** - The surface, the air space above the surface (including air space immediately adjacent to a private structure located on public space or in a public right of way), and the area below the surface of any public street, bridge, tunnel, highway, lane, path, alley, sidewalk, or boulevard.

**Raze** - The complete removal of a building or other structure down to the ground.

**Responsible person** - Construction personnel knowledgeable in the principles and practices of erosion and sediment control and certified by a Department-approved soil erosion and sedimentation control training program to assess conditions at the construction site that would impact the effectiveness of a soil erosion or sediment control measure on the site.

**Retention** - Keeping a volume of stormwater runoff on site through infiltration, evapotranspiration, storage for non-potable use, or some combination of these.

**Retention capacity** - The volume of stormwater that can be retained by a best management practice or land cover change.

**Retention failure** - Failure to retain a volume of stormwater for which there is an obligation to achieve retention, including retention that an applicant promises to achieve in order to receive Department-certified Stormwater Retention Credits (SRCs). Retention failure may result from a failure in construction, operation, or maintenance; a change in stormwater flow; or a fraud, misrepresentation, or error in an underlying premise in an application.

**Retrofit** - A best management practice or land cover change installed in a previously developed area to improve stormwater quality or reduce stormwater quantity relative to current conditions.

**Runoff** - That portion of precipitation (including snow-melt) which travels over the land surface, and also from rooftops, either as sheet flow or as channel flow, in small trickles and streams, into the main water courses.

**Sediment** - Soil, including soil transported or deposited by human activity or the action of wind, water, ice, or gravity.

**Sedimentation** - The deposition or transportation of soil or other surface materials from one place to another as a result of an erosion process.

**Shared Best Management Practice (S-BMP)** - A Best Management Practice (BMP), or combination of BMPs, providing stormwater management for stormwater conveyed from another site or sites.

**Site** - A tract, lot or parcel of land, or a combination of tracts, lots, or parcels of land for which development is undertaken as part of a unit, sub-division, or project. The mere divestiture of ownership or control does not remove a property from inclusion in a site.

**Soil** - All earth material of whatever origin that overlies bedrock and may include the decomposed zone of bedrock which can be readily excavated by mechanical equipment.

**Soil Erosion and Sediment Control Plan** - A set of drawings, calculations, specifications, details, and supporting documents related to minimizing or eliminating erosion and off-site sedimentation caused by stormwater on a construction site. It includes information on construction, installation, operation, and maintenance.

**Soils report** - A geotechnical report addressing all erosion and sediment control-related soil attributes, including but not limited to site soil drainage and stability.

**Storm sewer** - A system of pipes or other conduits which carries or stores intercepted surface runoff, street water, and other wash waters, or drainage, but excludes domestic sewage and industrial wastes.

**Stormwater** - Flow of water that results from runoff, snow melt runoff, and surface runoff and drainage.

**Stormwater management** - A system to control stormwater runoff with structural and nonstructural Best Management Practices, including: (a) quantitative control of volume and rate of surface runoff and (b) qualitative control to reduce or eliminate pollutants in runoff.

**Stormwater Management Guidebook (SWMG)** - The current manual published by the Department containing design criteria, specifications, and equations to be used for planning, design, and construction, operations, and maintenance of a site and each Best Management Practice on the site.

**Stormwater Management Plan (SWMP)** - A set of drawings, calculations, specifications, details, and supporting documents related to the management of stormwater for a site. A SWMP includes information on construction, installation, operation, and maintenance.

**Stormwater Pollution Prevention Plan (SWPPP)** - A document that identifies potential sources of stormwater pollution at a construction site, describes practices to reduce pollutants in stormwater discharge from the site, and may identify procedures to achieve compliance.

**Stormwater Retention Credit (SRC)** - One gallon (1 gal.) of retention capacity for one (1) year, as certified by the Department.

**Stormwater Retention Credit Ceiling** - Maximum retention for which the Department will certify an SRC, calculated using the SWRV equation with P equal to 1.7 inches.

**Stormwater Retention Volume (SWRV)** - Volume of stormwater from a site for which the site is required to achieve retention.

**Stripping** - An activity which removes or significantly disturbs the vegetative surface cover including clearing, grubbing of stumps and rock mat, and top soil removal.

**Substantial improvement** - A repair, alteration, addition, or improvement of a building or structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before the improvement or repair is started.

**Structural best management practice** - A practice engineered to minimize the impact of stormwater runoff, including a bioretention, green roof, permeable paving system, system to capture stormwater for non-potable uses, etc.

**Supplemental review** - A review that the Department conducts after the review it conducts for a first re-submission of a plan.

**Swale** - A narrow low-lying stretch of land which gathers or carries surface water runoff.

**Waste material** - Construction debris, dredged spoils, solid waste, sewage, garbage, sludge, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste.

### **Getting Copies and Submitting Written Comments**

A person may obtain a copy of this Notice and the Proposed Rules by any of the following: (1) download from <http://ddoe.dc.gov/proposedstormwaterrule> (2) e-mail a request to [SWRule@dc.gov](mailto:SWRule@dc.gov), with “Request copy of proposed stormwater rule” in the subject line; (3) stop by DDOE’s offices and ask for a copy at the 5th floor reception desk at the address below (mention “DDOE Stormwater Rule”); (4) write Attn: Brian Van Wye, Natural Resources Administration, 1200 First Street, N.E., 6th Floor, Washington, D.C. 20002, Attention: Stormwater Rule”, and put “Requesting a copy” on the outside of the envelope; or (5) calling 202-741-2121.

The Department is committed to considering the public’s comments in a rulemaking process that is open and observes the privacy rights of commenters. A person desiring to comment on the proposed rulemaking or the Stormwater Management Guidebook must file comments, in writing, not later than ninety (90) days after the date of publication of this notice in the *D.C. Register*.

**For the proposed rules**, comments should identify the commenter and be clearly marked “Stormwater Rule” and either: (1) mailed or hand-delivered to Attn: Brian Van Wye, Natural Resources Administration, 1200 First Street, N.E., 5th Floor, Washington, D.C. 20002, Attention: Stormwater Rules; (2) e-mailed to [SWRule@dc.gov](mailto:SWRule@dc.gov), with the subject indicated as “Stormwater Rule Comments”; or (3) comments may also be delivered in person orally or in writing at the public hearings, which will be announced in a separate *D.C. Register* notice.

**For the proposed Stormwater Management Guidebook**, copies may be obtained electronically from the Department website at <http://ddoe.dc.gov/proposedstormwaterrule>. Due to the length of the document, DDOE will not be providing hard copies. A copy may be reviewed at DDOE’s office by arrangement by contacting [SWGGuidebook@dc.gov](mailto:SWGGuidebook@dc.gov) with subject line “Arrange to review Guidebook” or by calling 202-727-5160. Written comments on the SWMG should be clearly marked “Stormwater Guidebook” and emailed to [SWGGuidebook@dc.gov](mailto:SWGGuidebook@dc.gov) or mailed to the following address, which can also be used for hand delivery: DDOE, Attn: Rebecca Stack, Natural Resources Administration, 1200 First St. NE, 5<sup>th</sup> Floor, Washington, D.C. 20002.

Except as stated below, the Department will not consider anonymous comments. The Department will consider each timely received, identified comment before publishing a final rule. All comments will be treated as public documents, and will be made available for public viewing on the Department’s website, unless a comment contains copyrighted material, confidential personal or business information, or other information whose disclosure is restricted by statute (“non-public”).

Ordinarily, the Department will look for the commenter's name and address on the comment. If a comment is sent by email, the email address will be automatically captured and included as part of the comment that is placed in the public record and made available on the Internet. If the Department cannot read a comment due to technical difficulties, and the email address contains an error, the Department may not be able to contact the commenter for clarification, and may not be able to consider the comment. Including the commenter's name and contact information in the comment will avoid this difficulty.

If a commenter considers information to be NON-PUBLIC, the commenter must advise the Department, in writing, when the comment is submitted. When the Department identifies a comment containing copyrighted material, the Department will provide a reference to that material on the website. When the Department identifies information that has been correctly described as non-public it will either (i) return the entire comment and decline to consider it; (ii) redact or otherwise conceal the non-public information and consider the rest of the comment; or (iii) communicate with the commenter to determine what part, if any, of the comment it might consider as part of the public record.