

DEPARTMENT OF ENERGY AND ENVIRONMENT

NOTICE OF PROPOSED RULEMAKING

Discharge of Groundwater to the Municipal Separate Stormwater Sewer System (MS4)

The Director of the Department of Energy and Environment (DOEE), pursuant to the authority set forth in the District Department of the Environment Establishment Act of 2005, effective February 15, 2006 (D.C. Law 16-51; D.C. Official Code § 8-151.01 et seq. (2013 Repl. & 2015 Supp.)); the Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Law 5-188; D.C. Official Code § 8-103.01 et seq. (2012 Repl. & 2015 Supp.)), and Mayor's Order 2006-61, dated June 14, 2006, hereby proposes to amend Title 21 (Water and Sanitation) of the District of Columbia Municipal Regulations (DCMR) by adding a new Chapter 16 (Discharge of Groundwater to the Municipal Separate Stormwater Sewer System (MS4)) to regulate the administration of permits that authorize the discharge of uncontaminated groundwater to the Municipal Separate Storm Sewer System (MS4). Uncontaminated discharges of groundwater are those discharges that meet DC's Surface Water Quality Standards (SWQS) or that are treated to comply with the requirements in this chapter.

The District of Columbia is served by two different sewer systems. These are the combined sewer system and separate sewer system. The combined sewer system serves about one third of the District's area and conveys both sanitary waste and stormwater to DC Water's Blue Plains Advanced Wastewater Treatment facility. The separate sewer system covers about two thirds of the District's area. In the separate sewer system, the sanitary sewer conveys sanitary waste to DC Water's Blue Plains Advanced Wastewater Treatment facility and the MS4 conveys stormwater directly to District surface waters without treatment.

This rulemaking will establish a local approval process to authorize the discharge of uncontaminated groundwater to the MS4 while maintaining compliance with the District's MS4 NPDES permit, the federal Clean Water Act, and the District's Water Pollution Control Act. The EPA-issued NPDES permit for the MS4 authorizes the District to discharge stormwater and specified non-stormwater flows, including uncontaminated pumped groundwater and water from foundation and footing drains, when managed properly to ensure water quality is not further impaired and the requirements of the Clean Water Act and implementing regulations are met. The Clean Water Act prohibits the discharge of pollutants to waters of the United States, unless authorized by a NPDES permit. Under the District's Water Pollution Control Act, the discharge of pollutants into the MS4 is prohibited unless authorized by a permit issued by the Mayor. D.C. Official Code §§ 8-103.02, 8-103.06.

This regulation pertains only to discharges of groundwater to the MS4. It does not apply to groundwater discharges to the combined or separate sanitary sewer systems, which must be approved by DC Water. The Groundwater Discharge-to-MS4 individual permits authorized under this chapter are not federal National Pollutant Discharge Elimination System (NPDES) permits. In the District, NPDES permits are issued by the Environmental Protection Agency (EPA). Furthermore, this regulation does not cover discharges of stormwater, unless stormwater has co-

mingled with groundwater and the co-mingled storm/groundwater is discharged to the MS4. In cases of potentially contaminated stormwater from construction activity that has not co-mingled with groundwater, dischargers should instead seek coverage under the EPA's Construction General Permit (CGP) if applicable.

This regulation provides flexibility and predictability to applicants and permittees to ensure that only uncontaminated groundwater is discharged to the MS4. To discharge uncontaminated groundwater to the District's MS4, applicants are required to submit an application form for eligible discharges, an initial discharge characterization report that consists of environmental site assessment reports (i.e., Phase I and Phase II reports) or water quality data for the proposed discharge or both, and an application fee. If the proposed discharge is sampled for water quality on-site, the samples must be taken from groundwater quality monitoring well(s) or a storage tank and analyzed using the EPA's approved methods as established in 40 C.F.R. Part 136. The Department will review all submitted information and, if the environmental assessment reports or the water quality data for the proposed discharge show that contamination is known or suspected, the applicant is required to treat the discharge using a water treatment system to ensure that the proposed discharge complies with the limits and requirements in this chapter. If treatment of the discharge is required, applicants must submit a water treatment system plan that ensures the discharge meets the permit requirements in this chapter.

After review and approval of all submitted information including the water treatment plan, the Department will issue a Groundwater Discharge-to-MS4 individual permit to the applicant that approves discharge into the MS4. The permit will include limits along with monitoring and reporting requirements and will be valid for two years while construction is ongoing or five years after construction is completed.

All permitted sites are required to monitor discharge flow and are subject to permit limits for oil and grease, pH, suspended solids, semi-volatile organic compounds, and volatile organic compounds in the discharge into the MS4. Sites with known or suspected site-specific contamination will be subject to limits related to that contamination. Because the MS4 discharges directly to waterbodies without treatment, the permit limits are based on the District's SWQS. If, however, the surface water quality standard is below the minimum quantifiable level as may be determined by the most sensitive method listed in 40 C.F.R. Part 136, then the minimum quantifiable level is used as the permit limit. U.S. EPA (Office of Water), *Technical Support Document for Water Quality-based Toxics Control* (1991), <https://www3.epa.gov/npdes/pubs/owm0264.pdf> (last visited Jan. 26, 2022).

Most permittees will be required to sample the discharge weekly. Permittees can request to reduce monitoring frequency if it is shown after a period of monitoring that the discharge consistently meets the limits established in this chapter, or to cease monitoring of a specific pollutant if pollutant levels are monitored as non-detects for consecutive sampling events.

All persons desiring to comment on the proposed Discharge of Groundwater to the MS4 regulations should file comments in writing not later than sixty (60) days after the publication of this notice in the D.C. Register. Comments should be labeled "Review of the Discharge of Groundwater to the MS4 Regulations" and filed with the Department of Energy and Environment, Water Quality Division, 1200 First Street NE, 5th Floor, Washington, DC 20002,

Attention: Patrick Donohue, or by e-mail to MS4dischargeauthorization@dc.gov. Interested persons may also request a hearing on the Discharge of Groundwater to the MS4 regulations by submitting a request in writing within thirty (30) days of publication of this notice.

Title 21 DCMR, WATER AND SANITATION, is amended by adding a new Chapter 16, DISCHARGE OF GROUNDWATER TO THE MUNICIPAL SEPARATE STORMWATER SEWER SYSTEM (MS4), AS FOLLOWS:

CHAPTER 16 DISCHARGE OF GROUNDWATER TO THE MUNICIPAL SEPARATE STORMWATER SEWER SYSTEM (MS4)

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1600 PURPOSE AND SCOPE

1600.1 The purpose of this chapter is to provide procedures for permitting uncontaminated pumped groundwater discharges directly into the District of Columbia's municipal separate storm sewer system (MS4).

1600.2 The objectives of this chapter are to:

- (a) Protect the integrity of District waters by ensuring that discharges directly into the MS4 do not cause or contribute to exceedance of the District's Surface Water Quality Standards (SWQS);
- (b) Ensure the District is in compliance with its federal NPDES MS4 permit by ensuring that discharges directly into the MS4 comply with the MS4 permit conditions; and
- (c) Establish an individual permitting process for authorizing groundwater discharges directly into the MS4 in accordance with the District's Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Law 5-188; D.C. Official Code § 8-103.01 *et seq.* (2013 Repl. & 2018 Supp.)).

1601 APPLICABILITY

- 1601.1 This chapter applies only to discharges from properties or operations located in the District’s MS4 area. *See* Appendix 1 for the District’s sewer map and link to the Department’s website that includes a tool to identify whether the site location is in the combined or the separate sewer system.
- 1601.2 This chapter applies to all discharges of uncontaminated pumped groundwater directly into the District’s MS4. For the purposes of this chapter, commingled groundwater and stormwater that is pumped to the District’s MS4 will be treated as groundwater.
- 1601.3 The requirements of this chapter apply to all discharges of uncontaminated pumped groundwater to the District’s MS4, even if a site has a separate NPDES General Permit for Discharges from Construction Activity (Construction General Permit (CGP)) or a Multi-Sector General Permit (MSGP) from EPA. Sites with a CGP or MSGP shall comply with the requirements of both their EPA permit and the requirements of this chapter.
- 1601.4 This chapter does not apply to the following discharges:
- (a) Discharges that require a federal NPDES permit other than the CGP or the MSGP;
 - (b) Discharges to the District’s combined or sanitary sewer system; and
 - (c) Direct discharges to the surface waters of the District or the United States that do not flow through the MS4.
- 1601.5 For an ongoing discharge covered under § 1601.2 for which a person obtained a discharge authorization letter from DOEE under the Department’s previous groundwater discharge approval process that was issued before the effective date of this chapter, the person must obtain a permit under this chapter – referred to in this chapter as a Groundwater Discharge-to-MS4 permit – for the ongoing discharge within sixty (60) days of the effective date of this chapter.

1602 ELIGIBILITY

- 1602.1 A person may apply for a Groundwater Discharge-to-MS4 permit to discharge uncontaminated water from a one- or two-family residential home that is not part of a larger development directly into the MS4, under the modified application process outlined in § 1603.2 provided that:
- (a) There is no known or suspected soil or groundwater contamination at the property;
 - (b) No wastewater is mixed with the discharge;

- (c) The discharge is not associated with a major land-disturbing activity or a major substantial improvement activity as defined in 21 DCMR § 599;
- (d) The discharge complies with § 1606.1; and
- (e) If the person discovers contamination during discharge, the person immediately ceases the discharge, notifies the Department, and reapplies in accordance with §§ 1603.3 - 1603.12.

1602.2 A person seeking a Groundwater Discharge-to-MS4 permit under this chapter shall submit an application to the Department in accordance with § 1603.

1603 APPLICATION

1603.1 A person (applicant) seeking a permit from the Department under this chapter shall, via email to MS4DischargeAuthorization@dc.gov or through DOEE's submittal database, submit an application to the Department, which shall include:

- (a) An application form provided by the Department, which will be available on the Department's database website;
- (b) Fees in accordance with § 1613; and
- (c) All supporting information required in this section.

1603.2 An application for a Groundwater Discharge-to-MS4 permit for a one- or two-family residential home that meets the criteria outlined in § 1602.1 shall require the applicant to provide only the following:

- (a) The applicant's name, address, telephone number, and email;
- (b) The name, address, telephone number, and email of the principal contact person for the applicant;
- (c) The address of the site where the proposed discharge will occur; and
- (d) An affidavit that the discharge property and the discharge meet the criteria outlined in § 1602.1.

1603.3 For all other applications, the applicant shall provide all required information in the application form, which shall include:

- (a) The applicant's name, address, telephone number, and email;
- (b) The name, address, telephone number, and email of the principal contact person for the applicant;

- (c) The address of the site where the proposed discharge will occur;
- (d) A map of the site showing the proposed locations of the dewatering activity, discharge point(s) to the MS4, and the size and capacity of the MS4 pipes (available from DC Water);
- (e) If there is proposed dewatering from a well or sump during construction:
 - (1) The well permit number or status of any well permit application filed pursuant to 21 DCMR § 1803;
 - (2) A description of site hydrogeology, focusing on groundwater flow direction, the potential for migration of pollutants in groundwater from on-site and off-site sources, and how such migration could influence groundwater or soil contamination at the site;
 - (3) The radius of influence from groundwater dewatering and any potential sources of contamination within the radius of influence;
 - (4) Confirmation from utility operators or the applicant that dewatering activities will not impact any utilities at the site or within the radius of dewatering influence; and
 - (5) The number, location, and depth of dewatering wells or sumps from which groundwater will be discharged to the MS4;
- (f) A brief history of the site and adjacent properties to include past, current, and future land uses;
- (g) Any information found during records review pursuant to § 1603.3(f), or during a site assessment related to known or suspected sources of contamination, indicating past or current soil and water contamination on the site or adjacent to the site;
- (h) A description of the dewatering practices and proposed discharge, including:
 - (1) Whether the discharge will be continuous or intermittent;
 - (2) Which paragraph of § 1601.2 best describes the discharge;
 - (3) Expected or known discharge volume;

- (4) Whether any subsurface utility structures, such as Metro transportation tunnels, below the groundwater table will be impacted by dewatering; and
- (5) Whether any known or suspected contamination as described in § 1603.3(g) will be impacted by dewatering;
- (i) The number, location, and depth of groundwater quality monitoring wells, test pits, and sumps used to characterize the discharge;
- (j) An initial discharge characterization in accordance with § 1603.4;
- (k) A quality assurance and quality control project work plan prepared in accordance with 21 DCMR Chapter 19;
- (l) A list and copies of geotechnical or other related reports or studies that support the application; and
- (m) A certification and signature by an authorized representative of the applicant stating that the applicant understands and will comply with this chapter.

1603.4 Except as provided in § 1603.9, the applicant shall submit, with the application before any discharge is initiated, an initial discharge characterization report, which shall consist of at least one of the following:

- (a) A Phase I environmental site assessment report that:
 - (1) Has been prepared by an environmental professional;
 - (2) Has been reviewed and approved by the Department for thoroughness, objectivity, and technical accuracy; and
 - (3) Does not identify any known or suspected contamination that may impact soil or groundwater at the site;
- (b) A Phase I environmental site assessment report that identifies one (1) or more contamination types that are known or suspected to impact soil or groundwater at the site and a Phase II environmental site assessment report that:
 - (1) Was prepared by an environmental professional;
 - (2) Has been reviewed and approved by the Department for thoroughness, objectivity, and technical accuracy; and

- (3) Includes chemical analysis of water samples that:
 - (A) Represent the proposed discharge for pollutants associated with the contamination type(s) that are known or suspected to impact soil or groundwater at the site; and
 - (B) Were collected in accordance with § 1603.5 and analyzed in accordance with the methods in § 1604.3;
- (c) A Phase I environmental site assessment report that identifies contamination type(s) that are known or suspected to impact soil or groundwater at the site, and the results of chemical analyses of water samples that represent the proposed discharge. The chemical analysis of the proposed discharge must include reporting on the pollutants associated with the contamination type(s) that are known or suspected to impact soil or groundwater at the site in accordance with the analytical methods determination in § 1604.3; or
- (d) The results of chemical analyses of water samples that represent the proposed discharge for pH, oil and grease, total suspended solids, semi-volatile organic compounds, volatile organic compounds, pesticides, total petroleum hydrocarbons, total polychlorinated biphenyls, metals, and dioxins using the methods in § 1604.3.

1603.5 An applicant submitting an initial discharge characterization report pursuant to § 1603.4(b), (c), or (d) shall collect, at a minimum, three (3) water samples representative of the proposed discharge.

- (a) For the purpose of this subsection, representative samples are samples collected from the same source as the proposed discharge and from sampling points that are evenly distributed across the horizontal extent of the site from which the discharge is expected to be drawn. DOEE reserves the right to require sampling points at locations with known and suspected contamination in order to ensure any potential sources are identified and characterized prior to permit approval.
- (b) An applicant shall submit to the Department the results of chemical analyses of any additional characterization samples that the applicant collects.

1603.6 An applicant shall collect samples of the proposed discharge from at least one of the following:

- (a) A groundwater quality monitoring well as follows:

- (1) The well shall be constructed in accordance with applicable provisions of 21 DCMR Chapter 18;
 - (2) There shall be at least three (3) groundwater water quality monitoring wells at the site, and at least one water sample shall be collected from each well; and
 - (3) If two or more contaminated sources are identified inside the estimated radius of influence of the dewatering, the number of wells shall be increased to include all additional sources identified;
- (b) A discharge point of a storage tank (such as a frac tank) or treatment system that contains the proposed discharge as follows:
- (1) For sites with proposed continuous discharges or non-construction sump discharges, the applicant shall continuously pump for a minimum of twenty-four (24) hours at the maximum proposed pump rate between samples;
 - (2) For construction sites with proposed intermittent discharge, the applicant shall pump a volume of at least six thousand (6,000) gallons between samples; and
 - (3) The volume generated during this sample collection shall not be discharged to the MS4 and shall be either containerized on site or disposed of offsite until the discharge is authorized to the MS4; or
 - (4) A discharge point to the sanitary sewer if the applicant currently has a Temporary Discharge Authorization (TDA) from DC Water and is seeking authorization to discharge to the MS4 instead.

1603.7 If the original application does not comply with §§ 1603.4(b)(2), (c), or (d), or §1603.8, the Department may require the applicant to submit an updated environmental site assessment, or to collect and analyze additional water samples that represent the proposed discharge.

1603.8 The results of collected water samples shall not be older than three (3) years at the time of submitting the initial application. If there have been significant changes in site use, structures, or physical condition, DOEE may request more recent data.

1603.9 An applicant for a Groundwater Discharge-to-MS4 permit may submit a table detailing the results of discharge monitoring under a previous permit or authorization, along with the associated Discharge Monitoring Reports (DMRs), instead of an initial discharge characterization report, if the applicant is applying for:

- (a) Renewal of the permit;
- (b) A new Groundwater Discharge-to-MS4 permit for a discharge that was approved by a discharge authorization letter from DOEE under the Department's previous groundwater discharge approval process;
- (c) A new Groundwater Discharge-to-MS4 permit for post-construction discharge after discharging under a previous Groundwater Discharge-to-MS4 permit while construction was ongoing at the same site; or
- (d) An Groundwater Discharge-to-MS4 permit after discharging to the sanitary or combined sewer under a Temporary Discharge Authorization, issued pursuant to 21 DCMR § 1509.

1603.10 If the initial discharge characterization or monitoring report results contain concentrations that exceed the listed numerical limits of the District's SWQS in 21 DCMR § 1104.8, the applicant shall submit a water treatment system plan.

1603.11 A water treatment system plan shall contain each of the following:

- (a) A diagram of all proposed treatment system components, including the influent, effluent, and sampling points;
- (b) A description of how the proposed discharge will be treated to meet the District's SWQS in 21 DCMR § 1104 or permit limits established in accordance with § 1604.4 of this chapter;
- (c) Any relevant manufacturer's specifications on individual system components, including maximum volume constraints and treatment breakthrough curves;
- (d) Safety data sheets (SDS) for all chemicals used during water treatment;
- (e) A description of how the treatment system will be operated and maintained to comply with the District's SWQS in 21 DCMR § 1104 or permit limits established in accordance with § 1604.4 and the requirements of this chapter; and
- (f) Any available data that demonstrates the treatment system will treat the discharge to meet the District's SWQS in 21 DCMR § 1104 or permit limits established in accordance with § 1604.4 of this chapter.

1603.12 After reviewing the application and completing the public notice process in accordance with § 1608 of this chapter, the Department may:

- (a) Approve the application by issuing a Groundwater Discharge-to-MS4 permit under this chapter with monitoring and reporting conditions;
- (b) Request additional information to support the application;
- (c) Request changes that are required to comply with District and Federal laws;
- (d) Disapprove the application if the Department determines the proposed application does not comply with the requirements of this chapter;
- (e) Require the permittee apply for a NPDES discharge permit from the EPA;
or
- (f) Notify the applicant that a permit is not required.

1603.13 If the Department disapproves the application, the applicant may:

- (a) Appeal to the Department in accordance with § 1611;
- (b) Apply for a separate individual discharge permit from the Department;
- (c) Apply for a separate discharge permit from EPA; (d) Apply for approval to discharge into the sanitary sewer through DC Water; or
- (d) Remove and dispose of the water at a wastewater treatment plant in accordance with applicable federal, state, and local law.

1603.14 The applicant shall not begin discharging to the MS4 until the applicant receives a Groundwater Discharge-to-MS4 permit from the Department.

1603.15 A permittee's Groundwater Discharge-to-MS4 permit shall become invalid if the permittee does not begin discharging to the MS4 within one (1) year. An applicant may request an extension of the start-up period by submitting a request via email to MS4DischargeAuthorization@dc.gov or through DOEE's submittal database. The request must explain why more time is necessary.

1604 DISCHARGE PERMIT REQUIREMENTS

1604.1 A permittee may discharge into the MS4 if the permittee complies with the permit limits established in their individual permit in accordance with this section, the monitoring requirements in § 1605, the special conditions in § 1606, and the reporting of discharge monitoring results in § 1607. If the application required a treatment plan in accordance with § 1603.10, an inspection of the treatment system is also required prior to discharge.

- 1604.2 Each permittee shall monitor the approved discharge using the analytical methods listed in their individual permit for each contaminant and contaminant group and in accordance with the quality assurance and quality control project work plan required by § 1603.2(k). One- and two-family residential home permittees who apply under § 1603.2 are not required to monitor the permitted discharge.
- 1604.3 Analytical methods required in Groundwater Discharge-to-MS4 permits will be based on 40 C.F.R. Part 136 unless a new method will achieve lower reporting limits closer to or below permit limits. A permittee or applicant may submit a written request to the Department for approval of an analytical method not published or incorporated by reference in 40 C.F.R. Part 136 if the proposed analytical method:
- (a) Has a method detection limit (MDL) and a reporting limit (RL) below the permit limit listed in the permittee or applicant's individual permit; or
 - (b) Has an MDL and a RL below the MDL and the RL of the approved analytical method listed in the permit.
- 1604.4 Each permit shall require monitoring of the discharge for the pollutants listed in § 1604.5 and any other pollutants identified in the permit. The concentration of each pollutant shall not exceed the limits set forth in the individual permit, which shall be established as follows:
- (a) Except as provided in § 1604.4(b), (c), and (d), limits will be based on the District of Columbia SWQS in 21 DCMR § 1104, including the calculation of select dissolved metals standards using an equation that assumes a hardness value of one hundred milligrams per liter (100 mg/L) (measured as CaCO₃) in the receiving water body;
 - (b) If the SWQS is below the minimum quantifiable level as may be determined by the approved analytical method for the pollutant, then the minimum quantifiable level shall serve as the permit limit;
 - (c) The permit limits for dissolved iron, manganese, nickel, and zinc may exceed the SWQS in 21 DCMR § 1104 if:
 - (1) The proposed discharge is into waters in which the SWQS is not already exceeded for these contaminants; and
 - (2) The applicant completes an approved Reasonable Potential Analysis (RPA) using the calculation found in Appendix 2 and demonstrates there is no reasonable potential for the discharge to cause an exceedance of the SWQS in the receiving water, in accordance with §§ 1606.6-1606.12; and

- (d) Contaminants that are identified in the discharge that do not have an associated SWQS in 21 DCMR § 1104 may be assigned permit limits based on EPA technical guidance, total maximum daily loads, the narrative water quality standards in § 1606.1 of this chapter, or other government or private entity peer-reviewed research. The Department will cite the guidance or other source of the numeric permit limit if it is not from the SWQS in 21 DCMR § 1104.

1604.5 All permits where any monitoring is required shall require the monitoring of the following parameters for the duration of discharge:

- (a) Flow rate;
- (b) Oil and grease;
- (c) Field tested pH;
- (d) Total suspended solids;
- (e) Volatile organic compounds (VOCs) with standards listed in 21 DCMR § 1104;
- (f) Semi-volatile organic compounds (SVOCs) with standards listed in 21 DCMR § 1104; and
- (g) Any known or suspected contaminants present in the discharge.

1604.6 In addition to the pollutants listed in § 1604.5, each permit shall require discharge monitoring for each pollutant associated with a contamination type at the site in accordance with §§ 1604.7 through 1604.12.

1604.7 A permit for a site with known or suspected contamination related to petroleum or fuel products shall require monitoring for the following contaminants and contaminant groups in addition to those included in § 1604.5:

- (a) Dissolved lead;
- (b) Total petroleum hydrocarbons as gasoline range organics (TPH-GRO);
and
- (c) Total petroleum hydrocarbons as diesel range organics (TPH-DRO).

1604.8 A permit for a site with known or suspected contamination related to pesticides and herbicides shall require monitoring for relevant contaminants and contaminant groups listed by name in the permit, in addition to those included in § 1604.5.

- 1604.9 A permit for a site with known or suspected contamination related to polychlorinated biphenyls (PCBs) shall require monitoring for the following contaminant groups in addition to those included in § 1604.5:
- (a) Total PCBs; and
 - (b) PCB Arcolor 1016, 1221, 1232, 1242, 1248, 1254, 1260, and 1268.
- 1604.10 A permit for a site with known or suspected contamination related to polycyclic aromatic hydrocarbons (PAHs) shall require monitoring for the following contaminants and contaminant groups in addition to those included in § 1604.5:
- (a) PAHs listed under the PAH heading in 21 DCMR § 1104;
 - (b) Phthalates listed under the Phthalate Esters heading in 21 DCMR § 1104; and
 - (c) 2,3,7,8-TCDD.
- 1604.11 A permit for a site with known or suspected contamination related to metals shall require monitoring for the following contaminants and contaminant groups in addition to those included in § 1604.5:
- (a) Dissolved arsenic, cadmium, copper, chromium VI, chromium III, iron, manganese, nickel, silver, and zinc;
 - (b) Total recoverable mercury; and
 - (c) Free cyanide.
- 1604.12 A permit for a site with known or suspected contamination related to dioxins and furans shall require monitoring for the following dioxins and furans in addition to those included in § 1604.5:
- (a) 2,3,7,8-TCDD;
 - (b) 1,2,3,7,8-PeCDD;
 - (c) 1,2,3,4,7,8-HxCDD;
 - (d) 1,2,3,6,7,8-HxCDD;
 - (e) 1,2,3,7,8,9-HxCDD;
 - (f) 1,2,3,4,6,7,8-HpCDD;
 - (g) OCDD;

- (h) 2,3,7,8-TCDF;
- (i) 1,2,3,7,8-PeCDF;
- (j) 2,3,4,7,8-PeCDF;
- (k) 1,2,3,4,7,8-HxCDF;
- (l) 1,2,3,6,7,8-HxCDF;
- (m) 2,3,4,6,7,8-HxCDF;
- (n) 1,2,3,7,8,9-HxCDF;
- (o) 1,2,3,4,6,7,8-HpCDF;
- (p) 1,2,3,4,7,8,9-HpCDF; and
- (q) OCDF.

1604.13 A permit for a site with known or suspected contamination related to dioxins and furans shall also require the reporting of the dioxin and furan Toxic Equivalency Quotient (TEQ), as calculated in accordance with EPA's Toxic Release Inventory, available at <https://www.epa.gov/toxics-release-inventory-tri-program/dioxin-and-dioxin-compounds-toxic-equivalency-information>.

1604.14 The permit shall also require monitoring for any other contaminants - as determined by the Department and identified in the individual permit - that are known or suspected to be present.

1605 MONITORING REQUIREMENTS

1605.1 For a discharge proposed to last twenty-four (24) hours or less, the permit shall require the collection of at least one (1) sample of the discharge.

1605.2 For discharges proposed to last more than twenty-four (24) hours and less than one (1) week, the permit shall require the collection of at least three (3) samples of the discharge. One (1) sample shall be collected on the first day of discharge and one (1) sample shall be collected on the last day of discharge.

1605.3 For construction discharges that last one (1) week or more, the permit shall initially require the collection of at least one (1) sample of the discharge per week, except as provided in § 1605.4.

1605.4 After the full dewatering system, including all proposed wells or sources, is drawing groundwater from the widest expected radius of influence during construction, the permittee may request the Department's approval to reduce the sampling frequency of the discharge. The Department will approve the request if

the results from consecutive sampling events show levels of the required pollutants that meet the permit limits as follows:

- (a) If four (4) consecutive weekly samples meet the permit limits, the permittee may take one (1) sample per month;
- (b) If six (6) consecutive monthly samples meet the permit limits, the permittee may take one (1) sample per three (3)-month period; and
- (c) If four (4) consecutive 3-month period samples meet the permit limits, the permittee may take one (1) sample per six-month period for the remainder of the permit.

1605.5 For non-construction discharges, including post-construction discharges, into the MS4, the permit shall require the collection of:

- (a) One (1) sample per month; or
- (b) If six (6) consecutive monthly samples meet the permit limits, the permittee may request the Department's approval to take one (1) sample per six (6)-month period.

1605.6 The permittee may request the Department's approval to cease monitoring of a pollutant. The Department may approve the permittee's request to cease monitoring of a pollutant, except for the pollutants in § 1604.5, if:

- (a) The level of the pollutant is non-detectable in six (6) consecutive samples; and
- (b) There is no condition on the site or offsite (i.e., a site within the dewatering radius of influence) that is likely to cause an increase in the level of the pollutant.

1605.7 The permittee may request the Department's approval to modify or remove a treatment system. The Department may approve the permittee's request to modify or remove a treatment system if:

- (a) The influent meets the permit limits for the pollutants affected by the modification or removal of the treatment system, confirmed by six (6) samples collected:
 - (1) Consecutively, following the permit-required monitoring schedule;
 - (2) From a location that the influent reaches before reaching any component of the treatment system; and
 - (3) In addition to all permit-required effluent monitoring samples; and

- (b) There is no condition within the dewatering radius of influence identified through groundwater modeling or pump testing that is likely to cause a permit limit exceedance in the influent.

1605.8 The permittee shall collect each discharge sample at a location that is representative of the discharge into the MS4 and as close as feasible to the point of entry to the MS4. A sample is representative of the discharge if it is collected from a point downstream of:

- (a) Any water treatment system; and
- (b) Any addition to or alteration of the discharge that may increase or decrease contamination of the discharge before it enters the MS4.

1605.9 The permittee shall monitor the discharge as required by the permit. One- and two-family residential homes that meet the criteria in § 1602.1 shall not be required to conduct monitoring except when monitoring requirements are specifically stated in the permit.

1606 SPECIAL CONDITIONS

1606.1 A discharge authorized by this chapter shall be free from substances in amounts or combinations that do any one of the following:

- (a) Settle to form visible deposits;
- (b) Float as debris, scum, or oil;
- (c) Produce detectable odor or color;
- (d) Cause injury to, are toxic to, or produce adverse physiological or behavioral changes in humans, plants, or animals;
- (e) Introduce aquatic life not native to the District or result in the dominance of nuisance species that threaten the diversity or abundance of native species; or
- (f) Impair the biological community that naturally occurs in the waters or depends upon the waters for its survival and propagation.

1606.2 A discharge shall be free from substances in amounts or combinations that cause fire or explosion in the MS4 pipes.

1606.3 A discharge authorized by this chapter shall not:

- (a) Exceed the volumetric capacity of the receiving MS4 pipe at the approved discharge location;
- (b) Affects water levels in nearby wetlands or surface water bodies;
- (c) Be discharged onto the ground surface or any public space; and
- (d) Be discharged during a flash flood watch.

1606.4 The permittee shall use best management practices for construction dewatering and discharges in accordance with 21 DCMR Chapter 5.

1606.5 If the permittee submitted a water treatment system plan pursuant to § 1603.10 as part of the approved application, the permittee shall treat the discharge in accordance with the plan prior to discharge into the MS4. The permittee shall not change the approved water treatment system plan unless the permittee:

- (a) Submits to the Department, via email to MS4DischargeAuthorization@dc.gov or DOEE's submittal database, a request to modify the water treatment system in accordance with § 1609.3, and
- (b) Obtains the Department's approval of the modification in accordance with § 1609.4.

1606.6 A discharge containing iron, manganese, nickel, or zinc shall meet one of the following:

- (a) Iron, manganese, nickel, and zinc levels in the discharge are lower than the District's SWQS; or
- (b) The discharge is treated using a treatment system designed and intended to achieve the permit limits and:
 - (1) The treatment system is designed, maintained, and operated in accordance with the proposed treatment plan as outlined in § 1603.11; and
 - (2) The permittee demonstrates that there is no reasonable potential for the discharge to cause or contribute to exceedance of a surface water quality standard in the receiving water using the procedures in §§ 1606.7 through 1606.9.

1606.7 If iron, manganese, nickel, or zinc levels exceed the District's SWQS after treatment, the applicant must complete the Reasonable Potential Analysis template provided by the Department in Appendix 2 to this chapter using the background concentration and critical flow condition information in Appendices 3

and 4 to this chapter to determine whether the discharge has a reasonable potential to cause or contribute to an exceedance of District SWQS in the receiving water.

- 1606.8 The permittee shall submit the Reasonable Potential Analysis calculation to the Department for review and approval.
- 1606.9 If the results of the Reasonable Potential Analysis show that the discharge will not cause or contribute to an exceedance of District SWQS in the receiving surface water body for the metals listed in § 1606.6, then the pumped groundwater will be presumed uncontaminated for the metals.
- 1606.10 If the results of the Reasonable Potential Analysis show that the discharge will cause or contribute to an exceedance of District SWQS in the receiving surface water body for any of the metals listed in § 1606.6, the permittee shall add additional on-site treatment capacity and run the Reasonable Potential Analysis again with the new discharge monitoring results. The permittee shall then repeat procedures described in § 1606.7 and § 1606.8 until the conditions described in § 1606.9 are met.
- 1606.11 The Department will not accept a Reasonable Potential Analysis:
- (a) If the surface water body that receives the permittee's discharge is listed on the District of Columbia's 303d List as impaired by the metal or the surface water body has a Total Maximum Daily Load (TMDL) for the metal;
 - (b) For zinc in the Anacostia River and Rock Creek; or
 - (c) For manganese in the Anacostia River.
- 1606.12 If the Department approves the amended water treatment system plan and the permittee's Reasonable Potential Analysis for a metal listed in § 1606.6, the permittee shall continue monitoring the discharge for the metal to demonstrate compliance with § 1606.6(b).
- 1606.13 The permittee shall comply with all conditions of the individual permit.

1607 REPORTING OF DISCHARGE MONITORING RESULTS

- 1607.1 Each permittee shall submit discharge monitoring results to the Department via e-mail to MS4DischargeMonitoring@dc.gov or to DOEE's submittal database for each monitoring event, including:
- (a) A Discharge Monitoring Report (DMR) in a format provided by the Department, including a table for sample results, analytical methods used, and permit limits; and

- (b) Dated and signed analytical reports of the monitoring results from a certified laboratory.

- 1607.2 The permittee shall submit the DMRs for each monitoring event no later than thirty (30) days after the sampling event.
- 1607.3 A permittee may request an extension of time to submit monitoring results by submitting a request in writing to the Department describing the reason for the request.
- 1607.4 The Department may grant an extension of time to submit monitoring results for no more than an additional thirty (30) days based on good cause shown.
- 1607.5 If the site has an active leaking underground storage tank case, the permittee shall submit a copy of each DMR to the Department's Underground Storage Tank Branch via e-mail to UST.DOEE@dc.gov. If the site is enrolled in the Voluntary Cleanup Program or is subject to a response action or order pursuant to D.C. Official Code § 8-634.01, the permittee shall also submit a copy of the discharge monitoring results to the Department's Land Remediation and Development Branch via e-mail to DOEE.brownfields@dc.gov.
- 1607.6 If the analytical results of discharge monitoring exceed the permit limits, the permittee shall notify the Department within twenty-four (24) hours via e-mail to MS4DischargeMonitoring@dc.gov or via DOEE's submittal database.
- 1607.7 A permittee shall submit the results of any additional discharge samples that the permittee collects (in compliance with their Groundwater Discharge-to-MS4 permit or for other purposes) to the Department via e-mail to MS4DischargeMonitoring@dc.gov or via DOEE's submittal database.

1608 PUBLIC NOTICE AND REVIEW OF GROUNDWATER DISCHARGE-TO-MS4 PERMIT APPLICATIONS

- 1608.1 Before issuing a Groundwater Discharge-to-MS4 permit, the Department shall provide notice of the intent to issue the permit and the opportunity for a public hearing and may provide notice of an opportunity for the public to review the proposed project and submit written comments about the application.
- 1608.2 The public notice shall be given by:
- (a) Publication for at least one (1) business day in a daily newspaper of general circulation in the District; or
 - (b) Publication in the D.C. Register.

- 1608.3 The Department may also provide for a comment period, of a duration determined by the Department, if and to the extent that the Department determines that a comment period would be in the public interest. After that comment period has ended and the Department has held a public hearing, if requested, the Department shall:
- (a) Consider and review the written comments, testimony, and other information received; and
 - (b) Grant, deny, or modify the proposed permit.
- 1608.4 The Department may request additional information from the applicant or give the applicant an opportunity to provide additional information to address concerns raised during the public comment period or public hearing.
- 1608.5 The applicant may request, in writing, that the Department withhold its decision until additional information can be provided.
- 1608.6 If the applicant fails to provide additional information requested by the Department within six (6) months, the Department may consider the application as withdrawn.

1609 MODIFICATION AND TERMINATION

- 1609.1 A permittee shall be responsible for compliance with their Groundwater Discharge-to-MS4 individual permit until coverage is transferred or terminated in accordance with this section.
- 1609.2 If ownership of the permitted property changes or the permittee wishes to transfer the Groundwater Discharge-to-MS4 permit, the permittee shall notify the Department in writing within thirty (30) days of the change in ownership or transfer. The notice shall be signed by an authorized representative of the prospective new permittee and shall certify that the prospective new permittee understands and will comply with the permit and this chapter. The Department shall approve or disapprove transfer of the permit in accordance with § 1609.4.
- 1609.3 A permittee may request a modification of their individual permit by submitting a request in writing to the Department via DOEE's submittal database or email to MS4DischargeAuthorization@dc.gov, which shall include:
- (a) A description of the reason for the requested modification;
 - (b) Any proposed change to a treatment plan;
 - (c) Any proposed Reasonable Potential Analysis; and
 - (d) Any information supporting the request.

- 1609.4 After reviewing the request for a modification and all other supporting and required information, the Department may:
- (a) Approve the modification;
 - (b) Approve the modification with conditions;
 - (c) Disapprove the modification; or
 - (d) Require the permittee to apply for a different individual discharge permit from the Department or obtain a separate discharge permit from the U.S. Environmental Protection Agency (EPA).
- 1609.5 The permittee shall submit a request to terminate their individual permit within thirty (30) days after either of the following:
- (a) The permittee has permanently ceased the permitted discharge; or
 - (b) The permittee has obtained a separate discharge permit from the U.S. Environmental Protection Agency (EPA) for the permitted discharge.
- 1609.6 The Department shall terminate the permit if requested by the permittee in accordance with § 1609.5, or may terminate coverage if:
- (a) The application form or any report required by this chapter contains inaccurate information;
 - (b) Any requirement of the individual permit, this chapter, or the Act has been violated; or
 - (c) There is a change in conditions that requires treatment, reduction, or elimination of the discharge.
- 1609.7 Except as otherwise provided in §§ 1609.5 and 1609.6, a Groundwater Discharge-to-MS4 individual permit for construction discharges shall expire two (2) years after Departmental approval of the application and may be renewed for two (2)-year periods if necessary.
- 1609.8 Except as otherwise provided in §§ 1609.5 and 1609.6, a Groundwater Discharge-to-MS4 individual permit for non-construction discharges shall expire five (5) years after Departmental approval of the application and may be renewed for five (5)-year periods.
- 1609.9 No later than sixty (60) calendar days before expiration of a Groundwater Discharge-to-MS4 individual permit pursuant to §§ 1609.7 or 1609.8, a permittee may submit an application for renewal of the permit by submitting a renewal

application to the Department on a form provided by the Department via DOEE's submittal database or email to MS4DischargeAuthorization@dc.gov.

- 1609.10 After reviewing the renewal application, the Department may:
- (a) Approve the renewal application with monitoring and reporting conditions;
 - (b) Request additional information to support the renewal application;
 - (c) Request changes that are required to comply with District and Federal laws;
 - (d) Notify the permittee that renewal is not necessary, if pollutants are no longer detected in the discharge; or
 - (e) Disapprove the renewal application.
- 1609.11 If the permittee files a complete application for renewal according to § 1609.9, the Department may, after determining that the application is complete, administratively extend the expired approval for six (6) month periods until the Department approves or denies approval of the renewal application.
- 1609.12 If the District's SWQS or the EPA-issued MS4 permit to the District change, the Department may modify the Groundwater Discharge-to-MS4 permit to comply with the specific updates in the regulations or permit.
- 1610 ENFORCEMENT**
- 1610.1 The Department may issue an order requiring compliance with a Groundwater Discharge-to-MS4 individual permit, this chapter, or elimination of any violation.
- 1610.2 The Department may order a permittee to cease discharge under the permit if the Department determines that:
- (a) The discharge poses a hazard to public health and safety or the environment; or
 - (b) The discharge does not comply with the standards of the permit.
- 1610.3 The District may pursue a criminal prosecution if a person violates a provision of this chapter, to the extent authorized by section 17 of the Act.
- 1610.4 The Attorney General for 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 and other appropriate relief pursuant to sections 19 of the Act.

- 1610.5 As an alternative to a civil penalty, the Department may impose an administrative fine, penalty, or fee pursuant to the 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.*).
- 1610.6 Except when otherwise provided by statute, an administrative fine shall be calculated according to the schedules in chapters 32 (Civil Infractions: Schedule of Fines) and 40 (Department of the Environment Infractions) of Title 16 (Consumers, Commercial Practices, and Civil Infractions) of the District of Columbia Municipal Regulations.
- 1610.7 The imposition of a civil fine or penalty does not preclude the Department from issuing an administrative order or the Attorney General from bringing a civil action seeking injunctive relief, damages, or costs, except that a person shall not, for the same violation of this chapter, be assessed both a judicial civil fine and an administrative fine.

1611 APPEALS TO THE DEPARTMENT

- 1611.1 If the Department disapproves an application, request for modification, or renewal application, or terminates a Groundwater Discharge-to-MS4 individual permit, the applicant or permittee may appeal in accordance with this section.
- 1611.2 Before requesting a hearing under § 1611, the applicant or permittee may make an informal appeal in the manner and by the date stated in the notice of disapproval or termination by providing orally or in writing any information or material that would support a change in or withdrawal of the Department's action.
- 1611.3 If an applicant or permittee who made an informal appeal under § 1611.2 is notified that the appeal was denied, the applicant or permittee may, within 10 business days of receiving that notification, appeal to the Deputy Director of the Department's Natural Resources Administration.
- 1611.4 If the applicant or permittee who made an appeal to the Deputy Director pursuant to § 1611.3 is notified that the appeal was denied, the applicant or permittee may, within 10 business days of receiving that notification, appeal the Deputy Director's decision to the Director of the Department.
- 1611.5 Appeals under §§ 1611.3 and 1611.4 must be in writing and present all information and material that the applicant or permittee wishes to present for consideration on appeal.
- 1611.6 When considering an appeal, the Deputy Director or the Director may stay the effect of a decision or action being appealed pending determination of the appeal.

1611.7 Unless stayed by the Deputy Director or the Director, the original decision or action remains in effect during pendency of the appeal.

1612 APPEALS TO THE OFFICE OF ADMINISTRATIVE HEARINGS

1612.1 If the Department disapproves an application, request for modification, or renewal application, or terminates coverage, or if an applicant or permittee is adversely affected or aggrieved by a decision of the Director under the informal appeals process described in § 1611, the applicant or permittee may appeal in accordance with this section.

1612.2 To appeal the decision, the applicant or permittee shall file an administrative appeal with, and request a hearing before, the District of Columbia Office of Administrative Hearings (OAH).

1612.3 The applicant or permittee shall file a written appeal with OAH within fifteen (15) calendar days of service of the decision or no later than twenty (20) days after the date of service of the decision if served by mail.

1612.4 The hearing and prehearing practice shall be conducted in accordance with the 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 *et seq.*), and the regulations set forth at Title 1 Chapter 28 of the District of Columbia Municipal Regulations.

1612.5 The final OAH decision on an administrative appeal under this section shall constitute the final action of the Department and shall be subject to the applicable statutes and rules of judicial review for OAH final orders.

1613 GROUNDWATER DISCHARGE-TO-MS4 PERMIT FEES

1613.1 This section establishes a schedule of fees associated with this chapter.

1613.2 Any person or facility applying for a Groundwater Discharge-to-MS4 individual permit defined in this chapter shall pay the fees described in Table 1. Review Fees shall be paid with the submittal of an application, and Permit Fees shall be paid after the Department has reviewed and deliberated on the application but prior to the issuance of the permit.

Table 1: Schedule of Fees for Groundwater Discharge-to-MS4 Permit

		Fee Schedule	
		No Treatment Required	Treatment Required

		Residential Sites > 2 Unit, < 10 units	All Other Sites	Residential Sites > 2 Unit, < 10 units	All Other Sites
Construction	Review Fee*	\$200	\$2,000	\$200	\$2,000
	Permit Fee	\$100	\$2,000	\$4,000	\$15,000
	Renewal Fee	\$150	\$1,125	\$1,500	\$6,000
Non-Construction	Review Fee*	\$100	\$2,000	\$100	\$2,000
	Permit Fee	\$100	\$2,000	\$2,000	\$10,000
	Renewal Fee	\$150	\$1,125	\$1,500	\$3,000
One- or Two-Family Residential	Review Fee*	N/A	None	N/A	N/A
	Permit Fee	N/A	None	N/A	N/A
	Renewal Fee	N/A	None	N/A	N/A
Supplemental Review		\$1,500	\$1,500	\$1,500	\$1,500
Permit Modification		\$1,000	\$1,000	\$1,000	\$1,000
Permit Transfer		\$1,000	\$1,000	\$1,000	\$1,000
Permit Renewal		\$4,500	\$4,500	\$4,500	\$4,500

*Review Fee includes up to two submittal reviews. Any additional submittals require a supplemental review fee, which includes reviewing changes associated with treating the groundwater prior discharge into the MS4.

1613.3 Any permittee requesting a change in monitoring or treatment in accordance with §§ 1605.4 through 1605.7, or a transfer of ownership in accordance with § 1609.2, shall pay a fee of \$500.

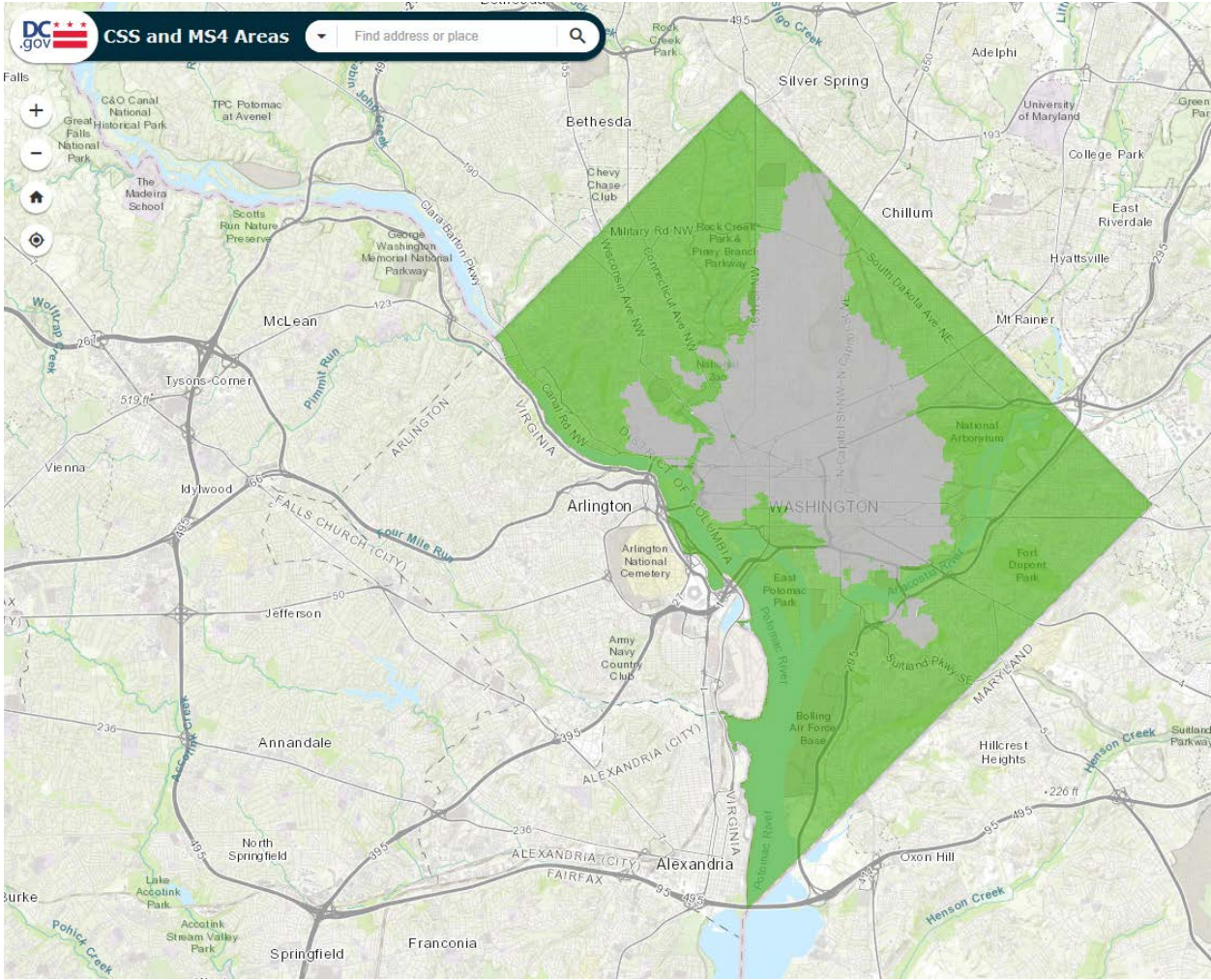
1613.4 The Department shall adjust the fees in Table 1 for inflation annually using the Urban Consumer Price Index published by the United States Bureau of Labor Statistics. To perform this adjustment, the Department shall increase each fee by the percentage, if any, by which the Consumer Price Index for June of the calendar year exceeds the Consumer Price Index for June of the previous year. Each inflation adjustment shall be posted to the Department’s website.

1613.5 If a permittee chooses to pay a fee in this chapter through an online payment platform, the Department shall increase the fee by 2.36%.

1698 APPENDICES

APPENDIX 1 – MAP OF MUNICIPAL STORMWATER SEWER SYSTEM (MS4) IN THE DISTRICT OF COLUMBIA. The green shaded area represents the

stormwater sewer system area and the grey shaded area represents the combined sewer area.



Applicants for a Groundwater Discharge-to-MS4 permit can determine whether a site is in the combined sewer area or the separate sewer area using the Identify Your Watershed and Sewer System tool located at:

<https://dcgis.maps.arcgis.com/apps/InformationLookup/index.html?appid=a60a0086b47c4e35a638b7a8abe5954f>

APPENDIX 2 – REASONABLE POTENTIAL ANALYSIS

The following is a description of the Reasonable Potential Analysis calculation required to determine whether a discharge containing iron, manganese, nickel, or zinc may cause or contribute to an exceedance of the water quality standards for that metal in a receiving water body. The method of calculation is based on EPA's 1991 Technical Support Document for Water Quality-Based Toxics Control. The Department will not accept a Reasonable Potential Analysis as described in § 1606.11.

Step 1. Identify pollutants of concern. Use data from the initial discharge characterization reports, discharge monitoring reports, and permit application to determine which metals (iron, manganese, nickel, or zinc) qualify for a Reasonable Potential Analysis.

Step 2. Analyze the variability of discharge data by calculating the coefficient of variation. Using all available discharge characterization and monitoring data, identify the number of effluent samples (n), maximum effluent flow (Q_e), and maximum effluent concentration (C_{max}). Calculate the arithmetic mean and the arithmetic standard deviation of the concentration dataset. Calculate the coefficient of variation (CV) for the dataset by dividing the standard deviation by the mean of the dataset. If there are less than 10 samples in the dataset, assume a CV of 0.6.

Step 3. Identify the reasonable potential multiplying factor (RPMF). Using tables 3-1 and 3-2 of the EPA's 1991 Technical Support Document for Water Quality-Based Toxics Control, identify the RPMF that corresponds to the number of samples (n) and the CV.

Step 4. Calculate the maximum adjusted effluent concentration (AEC_{max}). Multiply the maximum concentration in the effluent or discharge (C_{max}) by the RPMF.

Step 5. Determine the maximum receiving water concentration (MRWC). First, identify the upstream or background concentration in the receiving water (C_s) using Appendix 3. Second, identify the critical low flow in the receiving water (Q_s) using Appendix 4. If the pollutant of concern has a chronic or criterion continuous concentration (CCC), use 7Q10 flows; if the pollutant of concern has an acute or criterion maximum concentration (CMC), use the 1Q10 (lowest mean daily flow during the most recent 10-year period); and if the pollutant of concern has human health criterion, use the mean flow. Third, calculate the MRWC, assuming complete mixing, using the mass balance equation:

$$MRWC = (AEC_{max}Q_e + C_sQ_s)/(Q_e + Q_s)$$

Step 6. Determine reasonable potential for excursions. Compare the MRWC to the DC water quality criterion for the pollutant of concern in Appendix 3. If the MRWC does not exceed the water quality criterion (i.e., less than 1), then there is no reasonable potential for the discharge to cause or contribute to an exceedance of the criterion in the receiving water body. If the MRWC exceeds the water quality criterion (i.e., that is greater than 1), there is a reasonable potential for the discharge to cause an exceedance in the receiving water body, and the groundwater cannot be discharged into the MS4 without additional treatment.

Below is an example of the Reasonable Potential Analysis calculation.

	Instructions:				
	(1) Enter or calculate effluent characteristics data in orange shaded cells.				
	(2) Calculated/computed values are in yellow shaded cells.				
	(3) Enter data determined from tables in the 1991 EPA TSD in green shaded cells.				
	(4) Enter data provided in Appendix 3 and 4 in purple shaded cells.				
	(5) Enter District of Columbia Surface Water Quality Criteria in blue shaded cells.				
	<u>Notes:</u>				
	* Before entering any value in a cell, check to verify that the cell has no formula.				
	* 1 million gallons per day = 1.85814 cubic feet per second (cfs)				
	* Enter concentration data in micrograms per liter ($\mu\text{g/L}$) and flow data in cfs.				
STEP 1:	Identify All Pollutants of Concern				
	Use effluent chemical concentrations from discharge characterization report. Include each eligible metal with reported quantifiable values at or above the Surface Water Quality Standard.				
	Enter pollutant name:		Metal name		
STEP 2:	Calculate Coefficient of Variation (CV)				
	Analyze variability of effluent characterization data		Effluent Data		
	* Enter the number of effluent samples, n				
	* Enter the maximum effluent flow, Q_e (cfs)				
	* Enter the maximum effluent concentration, C_{max} ($\mu\text{g/L}$)				
	* Enter the arithmetic mean of effluent concentration data				

	* Enter arithmetic standard deviation (SD) of effluent concentration data				
	* Calculate coefficient of variation (CV) = SD/mean if n >10; enter CV = 0.6 if n < 10.				
	* Using TSD, determine appropriate confidence level: DOEE requires 99th Confidence Interval Level.				
STEP 3:	Identify the reasonable potential multiplying factor (RPMF)				
	Read RPMF from TSD Page 54 (Table 3-1/3-2) using CV and n.				
STEP 4:	Calculate the maximum Adjusted Effluent Concentration (AEC_{max})				
	* Calculate $AEC_{max} = C_{max} \times RPMF$ in $\mu g/L$				
STEP 5:	Determine Maximum Receiving Water Concentrations (MRWC)				
	Calculate MRWC for chronic, acute, and human health criteria under critical low flows	Chronic, CCC = 7Q10	H = Mean	Acute, CMC = 1Q10	
	* Enter upstream or background concentration (C _s) in $\mu g/L$.				
	* Enter critical/low upstream flows (Q _s) in cfs for each criteria. See Appendix 4.				
	* Assume complete mixing and factoring in dilution, the receiving water concentration is:				
	* $MRWC = (AEC_{max}Q_e + C_sQ_s)/(Q_e + Q_s)$				
	.				
	* Enter DC Surface Water Quality Criteria				

STEP 6:	Determine Reasonable Potential (RP) for Excursions					
	* Calculate $RP = MRWC/SWQS$					
	If $RP > 1$, there is RP for excursions; if $RP < 1$, there is no RP for excursion.					

**APPENDIX 3 – WATER QUALITY STANDARDS FOR METALS AND METAL
BACKGROUND CONCENTRATIONS IN RECEIVING WATER BODIES**

Metal ¹	Water Quality Standards			Background Concentration ³		
	Aquatic Life Criteria		Human Health Criteria	Anacostia River	Potomac River	Rock Creek
	CCC	CMC				
-----ug/L-----						
Iron	1,000	-	-	190	48	48 ⁴
Manganese	-	-	100	190	11	11 ⁴
Nickel ²	52.0	468.2	4,600	3.7	9.4	9.4 ⁴
Zinc ²	118.1	117.2	26,000	5.2	16.5	30.5

¹ All metals are in the dissolved fraction.

² Nickel and zinc are hardness dependent metals. To calculate both the CCC (chronic) and CMC (acute) for these metals, a hardness of 100 mg/L in the receiving water body was assumed.

³ The background metal concentrations for each receiving water body were calculated as the 75th percentile of the best available data for that receiving water body.

⁴ No metal data were available for Rock Creek; therefore, for the purposes of this chapter, Rock Creek concentrations were assumed similar to the Potomac River, as Rock Creek is a tributary to the Potomac River.

APPENDIX 4 – CRITICAL LOW FLOW CONDITIONS IN THE RECEIVING WATER BODIES

Critical Flow Conditions	Anacostia River	Potomac River	Rock Creek
	-----cfs-----		
Lowest mean daily flow during the most recent 10-year period (1Q10)	14	1,890*	6
7 day 10-year low flow condition (7Q10)	14	1,150	5
Mean flow	139	11,880	65

*Lowest daily mean flow is for 2014 through 2017 water years. This was the available data on the U.S. Geological Survey’s National Water Information System. Station ID: USGS 01646502 Potomac River (Adjusted) Near Wash, DC. Available at: https://waterdata.usgs.gov/md/nwis/dv?referred_module=sw&cb_00060=on&begin_date=1936-10-01&site_no=01646502

1699 DEFINITIONS

1699.1 When used in this chapter, the following words shall have the meanings ascribed:

Act – the Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Law 5-188; D.C. Official Code § 8-103.01 et seq. (2012 Repl. & 2015 Supp.))

Department - the District of Columbia Department of Energy and Environment.

Dewatering - removing water from an excavated area, natural depression, constructed pond, sump, or groundwater well by pumping or any other approved technology or method of water transport. Dewatering also includes the removal of groundwater and diverted stormwater from the sump pit of a permanent structure, sometimes referred to as “post-construction dewatering.”

Dewatering well - a well that is used to lower groundwater levels for construction such as for footings, sewer lines, building foundations, elevator shafts, parking garages, or other structures.

Discharge - the spilling, leaking, releasing, pumping, pouring, emitting, emptying, or dumping of any pollutant or hazardous substance, including a discharge from a storm sewer, into District of Columbia waters.

District of Columbia 303d List - list of impaired water bodies included in the most recent District of Columbia Water Quality Assessment Integrated

Report to the U.S. Environmental Protection Agency and Congress pursuant to Sections 303(d) and 305(b) of the Clean Water Act, which is available on the Department's website.

District's Surface Water Quality Standards (SWQS) – the standards established in 21 DCMR § 1104.

Environmental professional - environmental professional as defined in 40 C.F.R. § 312.10 (Subpart B—Definitions and References).

Groundwater - underground water found in the unsaturated zone (immediately below the ground surface) as well as the saturated zone (located below the unsaturated zone).

Groundwater Discharge-to-MS4 Permit – an individual permit to discharge groundwater to the MS4 that is administered under the authorization of this chapter.

Hazardous Substance –

- (a) Any toxic pollutant referenced in or designated in or pursuant to § 307(a) of the Federal Water Pollution Control Act as set forth in 40 C.F.R. § 401.15;
- (b) Any substance designated pursuant to § 311(b)(2)(A) of the Federal Water Pollution Control Act (33 U.S.C. § 1321(b)(2)(A)); and
- (c) Any hazardous waste identified in 20 DCMR § 4261.

Known or suspected contamination - contamination that is either:

- (a) Known, meaning that it is identified by quantitative concentrations in analytical samples exceeding the applicable screening level; or
- (b) Suspected, meaning that it has been qualitatively identified through a recognized environmental condition, documented by other environmental assessments (e.g., Phase I or Phase II, reports), or witnessed via on-site visual inspection.

Municipal Separate Storm Sewer System or MS4 - the system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) operated by the District that is designed or used for collecting or conveying storm water and that is not part of a combined sewer or Publicly Owned Treatment Works (POTW) as defined at 40 C.F.R. § 122.2.

Non-construction discharge – a type of discharge associated with the absence, or recent termination of, land-disturbing activities associated with project construction.

One- or two-family house - an individual house, townhouse, or rowhouse used as a living space with only one or two dwelling units.

Person - any individual, partnership, corporation, including a government corporation, trust association, firm, joint stock company, organization, commission, the District government, federal government (to the extent consistent with federal law), or any other entity.

Pollutant –

- (a) Any substance that may alter or interfere with the restoration or maintenance of the chemical, physical, radiological, and biological integrity of the waters of the District; or
- (b) Any dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemicals, chemical wastes, hazardous wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, oil, gasoline and related petroleum products, and industrial, municipal, and agricultural wastes.

Post-construction discharge – a type of discharge that occurs during the period after all land-disturbing activities associated with project construction, such as the following, are completed, and does not occur during interim periods when such activities have been paused or delayed:

- (a) The clearing, grading, and excavation of land;
- (b) The exterior of the permanent structure and the sump; and
- (c) Site improvements associated with groundwater discharge and plumbing are completed.

Reasonable Potential Analysis - an analysis conducted in accordance with §§ 1606 through 1609 of this chapter using the calculation found in Appendix 2 to determine whether a discharge has the reasonable potential to cause or contribute to an exceedance of water quality standards in the receiving water body.

Soil contamination - the presence or likely presence of any hazardous substances or petroleum products in soils due to an unauthorized release to the environment.

Toxic Equivalency Quotient (TEQ) – a calculated value that provides a relative toxicity of different combinations of various contaminants in the same family, such as dioxin and furan congeners. The method to calculate a dioxin and furan TEQ is available at: <https://www.epa.gov/toxics-release-inventory-tri-program/dioxin-and-dioxin-compounds-toxic-equivalency-information>.

Uncontaminated Pumped Groundwater – groundwater, discharged by an entity through a pump to a connection to the MS4, that contains pollutant levels that are lower than the surface water quality standards established in 21 DCMR § 1104 or any relevant permit limits.

Wastewater - the liquid and water-carried wastes from dwellings, commercial buildings, industrial facilities, institutions, and swimming pools.

Waters of the District or District Waters –

- (a) Means flowing and still bodies of water, whether artificial or natural, whether underground or on land, so long as in the District of Columbia; but
- (b) Excludes:
 - (1) Water on private property prevented from reaching underground or land watercourses; and
 - (2) Water in closed collection or distribution systems.

Well - any test hole, shaft, or soil excavation that is created:

- (a) By any means, including drilling, coring, boring, washing, driving, digging, or jetting;
- (b) For purposes including locating, testing, diverting, artificially recharging, or withdrawing fluids, or for the purpose of underground injection.