



**CITY OF PORTLAND**  
**Department of Public Works**

# **PUBLIC WORKS DEPARTMENT**

## **DEWATERING PROGRAM**

**FINAL DRAFT**

**11/15/2020**

## 8. DEWATERING PROGRAM

### 8.1 Authority

- (a) As allowed in Chapter 24 - Section 47 of the City's Sewer Ordinance and Chapter 32 - Section 18 of the City's Storm Water Ordinance, the following rules address the City's Dewatering Program.
- (b) City staff have the right of entry at all times for inspections and sampling for discharges to City infrastructure as allowed by Chapter 24 - Section 52 and Chapter 32 - Section 38 of the City's Code of Ordinances.

### 8.2 Purpose

- (a) The intent of this policy is to establish regulatory guidelines for dewatering discharges to City infrastructure and natural resources. The City's goal with this program is to monitor discharges in order to prevent the introduction of excessive sediment and pollutants to City infrastructure (e.g., sewer pipes, storm drains, catch basins, ditches) and natural resources (e.g., wetlands, streams, rivers, and bays).
- (b) Dewatering discharges have the potential to create a public hazard, contribute to sewer overflow events, impact the treatment processes, adversely impact Federal and/or State regulated natural resources, and could result in fines and increased maintenance cost for the City.
- (c) This program establishes an application and approval process for the management of dewatering discharges; establishes water quality testing requirements for discharge to City infrastructure; and establishes a fee structure for discharges to City infrastructure.

### 8.3 Definitions

**Best Management Practices (BMPs):** A pollution control and treatment technique used to minimize the discharge of pollutants to the environment. BMPs are commonly used by engineering and construction professionals for erosion and sediment control, minimizing tracking of debris onto roadways, and minimizing fugitive dust emissions.

**Construction (Excavation) Dewatering:** The removal of water from trenches, foundations, elevator pits, coffer dams, ponds, and other areas within a construction area that retains water after excavation. The collected water removed from a ponded area(s) may be rainfall collected in the excavation or groundwater associated with the water table or a seasonal perched water table. In many cases ponded water in excavations does not infiltrate or evaporate quickly enough and hinders correct and safe construction practices, and therefore must be removed for construction to proceed.

**Dewatering Plan:** A written plan detailing the operating procedures, equipment and devices to be used for removing sediment, and if required, petroleum or hazardous substances, from approved discharges. A basic written plan for any construction work is required and must be approved by the City prior to start of construction. The plan should be submitted as part of the Construction Management Plan when applicable.

**Environmental Professional:** An Environmental Professional shall meet the requirement of 40 CFR § 312.10, which defines the educational and experience requirement for an individual who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases of petroleum or hazardous substances on, at, in, or to a property.

**Environmental Site Assessments:** For the purposes of this regulation, environmental site assessments include, Phase I and II Environmental Site Assessments, and any variation thereof, including limited subsurface investigations, record search risk assessments, and geotechnical investigations.

Sampling and Analysis Plan (SAP): A plan documenting the procedural and analytical requirements for one-time, or time-limited, projects involving the collection of water, soil, sediment, or other samples taken to characterize areas of potential environmental contamination.

MEDEP: Maine Department of Environmental Protection

Non-Stormwater Discharges: A discharge that is not composed entirely of stormwater. Chapter 32 (Section 18) of the City's Code of Ordinances includes a complete list of prohibited and allowable non-stormwater discharges.

Wet Weather Event: Any precipitation event above a tenth of an inch or event that creates stormwater runoff.

#### 8.4 General Requirements

- a. All construction sites must have a Dewatering Plan. BMPs for onsite infiltration or onsite reuse of detained rainfall or groundwater from excavations should be considered as a priority for all dewatering activities. However, a contingency plan for off-site discharge must be established for all sites prior to construction. A copy of the Dewatering Plan shall be submitted to the City prior to the pre-construction meeting for review and approval during the building permit application process or prior to advanced site work. Dewatering Plans must be included with Construction Management Plans. Construction sites that do not implement dewatering activities in accordance with the plan submitted to the City, or are not adequately maintaining the dewatering wastewater discharge control or treatment measures shall be notified in writing of any noncompliance (for example: punctured geotextile filter bag, overflowing storage tanks, no inlet protection). Continued noncompliance may cause the City to revoke dewatering approval.
- b. For sites suspected of containing contaminated groundwater, the city of Portland will require an applicant to demonstrate that the discharge meets the City of Portland's Sewer Use Ordinance local limits. For a copy of the local limits, see the city of Portland's Rules and Regulations for Use of the Sewer System on the City's website ([www.portlandmaine.gov](http://www.portlandmaine.gov)). Additional limits may be imposed based upon water quality characterization of the discharge through a Sampling and Analysis Plan. If the applicant does not meet the City of Portland's Sewer Use Ordinance local limits, pretreatment maybe required prior to approval of discharge. Otherwise alternative means of disposal will have to be obtained by the applicant. This may require hauling the wastewater off site for disposal at a licensed facility for treatment
- c. Regular inspection and maintenance of dewatering equipment and treatment measures is required to ensure adequate operation, and that no bypass of treatment occurs.
- d. Unattended pumping and gravity drainage of BMPs is not allowed without prior authorization from the City.
- e. Dewatering discharges to public travel ways must not pose a risk to public safety (e.g. slip, trip, fall, icing hazard), or create a hazard for pedestrians and vehicles.
- f. All construction dewatering activities shall be subject to review, evaluation, and inspection by the City at all times.
- g. Dewatering activities that cause or allow excessive sediment to accumulate in the City's collection system may be held liable for costs related to line blockages, line cleanings, and line and pump repairs, etc., including all labor, material, and equipment.
- h. An industrial pretreatment permit will not be required for dewatering discharges to the City's sewer or combined sewer system provided that the construction area is managed in accordance with the Dewatering Plan approved by the City.

- i. Temporary dewatering discharges to the City's storm sewer system in compliance with an approved Dewatering Plan will be considered by the City as an allowable non-stormwater discharge.
- j. Waste materials, such as residuals from water pre-treatment systems, including spent filtration media or bag filters, sediment retained by BMPs, etc., shall be disposed on-site or off-site in accordance with state and federal regulations.
- k. The total volume of water discharged off-site shall be measured with a flow meter or equivalent method (e.g. tank liquid level gauge, estimation based on area/depth of water), unless otherwise authorized by the City. Use of a calibrated flow meter may be required for certain discharges.

## 8.5 Compliance

- a. The point or area of discharge (catchbasin, manhole, stormwater/sewer pipe connection, wooded buffer, wetland, etc.) shall have erosion and sediment control measures to prevent off-site discharge of pollutant and excessive sediment, and prevent unreasonable channel erosion downstream of the discharge point.
- b. Inlet protection shall be provided for all storm and sewer drains used in association with dewatering discharges.
- c. Daily records of dewatering activities shall be maintained on-site at all times for periodic review by City personnel. The records shall include a date, description of dewatering activities, name of individual monitoring activities, and daily volume discharged.
- d. A Sampling and Analysis Plan (SAP) may be required as part of the Dewatering Plan submitted to the City. The need for a SAP will be determined by the City based upon the project location and scope, historical uses in the site vicinity, and soil or groundwater testing results. When required, the SAP shall include the following:
  1. Sampling methodology (grab, composite), analytical method(s), analyte list, and analytical laboratory. Analyses shall be performed by a Maine-certified laboratory.
  2. The analyte list required by the City for discharge to the City's sewer or combined sewer system shall be analyzed for the following:
    - i. pH & specific conductance by portable field meters
    - ii. Total Petroleum Hydrocarbon (TPH) by EPA 1664 HEM
    - iii. Total RCRA 8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) by EPA 200.8 or 6020 (mercury by 7471A)
    - iv. The City reserves the right to require additional analysis, or to approve a project based upon alternative analytical methods.
    - v. Discharge limits are listed in Section 9.
  3. Discharges to storm drains or off-site discharge to buffer areas shall be analyzed for the following analyte list:
    - i. pH and specific conductance by portable field meters
    - ii. Extractable Petroleum Hydrocarbon fractions and targets (MA-DEP)
    - iii. Volatile Petroleum Hydrocarbon fractions and targets (MA-DEP)
    - iv. Volatile Organic Compounds by EPA 8260
    - v. Semi-volatile Organic Compounds by EPA 8270
    - vi. Total RCRA metals + copper, iron, and zinc by EPA 200.8 or 6020 (mercury by 7471A)

- vii. Cyanide
  - vi. Chloride
  - vii. Pesticides
  - viii. Herbicides
  - ix. The City reserves the right to modify the required analyte list based on site-specific information, and to approve the use of alternative analytical methods.
  - x. Discharge limits will be evaluated on a site by site basis.
4. An Environmental Professional shall certify the SAP for sites identified by the MEDEP as an Uncontrolled, Hazardous Waste, Petroleum, or Voluntary Response Action Program site. For any such site, treated and untreated samples shall be collected and analyzed for contaminants of concern. SAP to include rationale for the proposed analyte list based on an Environmental Site Assessment performed for the property.
  5. A minimum of one sampling event must be completed prior to discharge after receiving approval from the City. Additional sampling events may be required.

## **8.6 Fee Structure**

- a. This program establishes a fee structure for dewatering discharges to City-owned infrastructure. The fees collected by the City will allow for the City to recuperate costs associated with the dewatering program and treatment costs.
- b. Current sewer rates will apply for discharges to the sanitary sewer and will be billed upon completion of dewatering operations or at another agreed upon interval based on measured or estimated volume. The current sewer rate can be found in the City of Portland Code of Ordinance Chapter 24 Sewer Section 72: Sanitary Sewer User Charges.

## **8.7 Restrictions and Prohibitions**

- a. Discharge to a sewer or combined sewer during a wet weather event is prohibited unless otherwise authorized by the City and the Portland Water District.
- b. Dewatering discharges to City infrastructure are prohibited without a City-approved Dewatering Plan.
- c. Discharges to storm drains not connected to combined sewer system are prohibited unless otherwise authorized by the City.
- d. Discharge of wash water coming into contact with portions of vehicle and equipment potentially covered with oily substances (e.g. engines) is prohibited.

## **8.8 Construction Site Dewatering Plan**

- a. A Dewatering Plan addressing Section 8.4 and 8.5 requirements shall be provided before the preconstruction meeting. A Plan must be provided even if groundwater was not encountered in test pits or boring previously completed on site. The plan shall include the following information:
  1. Signed Application Form
  2. Project location, scope and duration
  3. Firm and individual responsible for dewatering including emergency contact
  4. Discharge location, storage equipment on-site, dewatering schematic
  5. Anticipated quantity of water to require management. The use of qualitative language is acceptable, for instance: incidental dewatering may be required due to rainfall when the excavation is open.

6. General requirement to include trained staff onsite for all approved discharges and required site log for documentation of all discharges
7. Storage and/or treatment process should include proper settling time and maintain proper use of filtering medium as required
8. Contingency/maintenance plan for all dewatering equipment and treatment devices or BMPs.
9. Location where dewatering residuals (e.g. silt) and/or spent filter media will be disposed.
10. Sampling and Analysis Plan, if required
11. Billing contact information

## **8.9 Utility Project Dewatering Plan**

- a. A Dewatering Plan addressing Section 8.4 and 8.5 requirements shall be provided before the preconstruction meeting. A Plan must be provided even if groundwater was not encountered in test pits or boring previously completed on site. The plan shall include the following information:
  1. Signed Application Form
  2. Project location, scope and duration
  3. Firm and individual responsible for dewatering including emergency contact
  4. Discharge location(s), storage equipment on-site, dewatering schematic
  5. Anticipated quantity of water to require management. The use of qualitative language is acceptable, for instance: incidental dewatering may be required due to rainfall when the excavation is open.
  6. General requirement to include trained staff onsite for all approved discharges and required site log for documentation of all discharges
  7. Storage and/or treatment process should include proper settling time and maintain proper use of filtering medium as required
  8. Contingency/maintenance plan for all dewatering equipment and treatment devices or BMPs.
  9. Location where dewatering residuals (e.g. silt) and/or spent filter media will be disposed.
  10. Sewer bypass plans