DPD
SPU

Joint Ruling
DPD Director's Rule 13-2010
SPU Director's Rule 2010-005

Applicant:

CITY OF SEATTLE
Department of Planning and Development
Seattle Public Utilities

Page
1 of 8

Supersedes:
DPD DR 3-2004
SPU DR 02-04

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Subject:

Groundwater / Dewatering

Code and Section Reference:

SMC Chapter 22.800 - 22.808
SMC Chapter 21.16

Type of Rule:

Code Interpretation

Ordinance Authority:

SMC 3.06.040, SMC 3.32.020
SMC 21.16.350, SMC 22.800.080

Approved **Date**

(Signature on file) 9/8/2011
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Index:

Stormwater Code

Approved **Date**

(Signature on file) 9/22/2011
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Table of Contents

Purpose

Seattle Public Utilities (SPU) and Seattle Department of Planning and Development (DPD) produced this document as a joint Directors' Rule (DR) to interpret the provisions of the Minimum Requirements for Discharge Point, Minimum Requirements for Construction Site Stormwater Pollution Prevention Control, and Ensure Sufficient Capacity that are described in the Seattle Municipal Code (SMC) Section 22.805.020 Minimum Requirements for All Projects. The public drainage system and public combined sewer are designed with capacity to convey only stormwater, and stormwater combined with wastewater, respectively; neither was designed with capacity to convey perched, static, tidally influenced or hydraulically connected groundwater. In this regard, the City has determined the public drainage system to be capacity constrained when groundwater is discharged. Projects which propose to discharge groundwater shall comply with Minimum Requirements for Discharges to a Capacity-constrained System, SMC Section 22.805.050{A}6 and SMC Section 22.805.060{A}6.

Background

SMC Section 21.16.350 authorizes SPU and DPD to make rules and regulations and amend and/or clarify these rules and regulations in order to carry out the provisions of SMC Section 21.16, Side Sewers. SMC Section 22.800.080 authorizes SPU and DPD to make rules and regulations and amend and/or clarify these rules and regulations in order to carry out the provisions of SMC Section 22.800, Stormwater Code.

The Side Sewer Code, SMC Section 21.16, and the Stormwater Code, SMC Sections 22.800 - 22.808, allow the City to regulate groundwater discharges, including the requirement to ensure sufficient capacity of public infrastructure and to protect water quality.

Standards

The relevant Codes and Director's Rules:

Section	Title
SMC 21.16.110	Permit for Temporary Connection
SMC 21.16.340	Right of Entry for Inspection
SMC 21.16.350	Authority to make Rules and Regulations.
SMC 22.801.010 – 22.801.240	Definitions
SMC 22.802.030B	Permissible Discharges to Sanitary Sewer
SMC 22.802.030C	Permissible Discharges to Combined Sewer
SMC 22.802.030	Permissible Discharges
SMC 22.802.040	Testing for Prohibited Discharges
SMC 22.803	Minimum Requirements for All Projects and All Real Property

SMC 22.800.040	Exemptions, Adjustments and Exceptions
SMC 22.805.020D	Minimum Requirements for Construction Site Stormwater Pollution Prevention Control
SMC 22.805	Minimum Requirements for All Projects
SMC 22.807.020B.1.b	Construction Stormwater Control Plan
SMC 25.09	Regulations for Environmentally Critical Areas
DPD DR 2-2006/ SPU DR 01-06	Requirements for Design and Construction of Side Sewers
DPD DR 2-2006/SPU DR 01-06 Section III	Definitions
DPD DR 15-2009/ SPU DR 2009-003	Volume 1: Source Control Technical Requirements Manual
DPD DR 16-2009/ SPU DR 2009-004	Volume 2: Construction Stormwater Control Technical Requirements Manual
DPD DR 17-2009/ SPU DR 2009-005	Volume 3: Stormwater Flow Control and Water Quality
DPD DR 18-2009/ SPU 2009-006	Volume 4: Stormwater Code Enforcement Manual
WAC 173-200	Water Quality Standards for Ground Waters of the State of Washington
WAC 173-201A	Water Quality Standards for Surface Waters of the State of Washington
WAC 173-204	Sediment Management Standards

Definitions

Words and phrases used in this Rule, unless contrary to or inconsistent with the context, shall be given the same meaning as in SMC Section 21.16 and SMC Section 22.801, or as defined below. Unless otherwise defined, all technical and material terminology used in this Rule is to be given meaning as commonly accepted in the sewer and drainage trade.

1) **"City"** means the City of Seattle.
2) **"Construction Stormwater Control Plan"** means "Construction Stormwater Control Plan" as defined in SMC Section 22.801.040.
3) **"Dewatering"** means the removal and appropriate discharge and release of groundwater.
4) **"DPD"** means the Department of Planning and Development.
5) **"Drainage Water"** means "Drainage Water" as defined in SMC Section 22.801.050.
6) **"Dry Season"** shall mean that period of time beginning April 1 and ending October 31 of each year.
7) **"Environmentally Critical Area"** means an area designated in SMC Section 25.09.020.
8) **"Groundwater"** means water in a saturated zone or stratum beneath the surface of land or a surface waterbody, permanently, seasonally, or as the result of the tides.

9) **"Permanent"** means no discontinuation timeline for dewatering is defined.
10) **"Permissible Discharge"** means "Permissible Discharge" as described in SMC Section 22.802.030.
11) **"Prohibited Discharge"** means "Prohibited Discharge" as described in SMC Section 22.802.020.
12) **"Public combined sewer"** means "Public combined sewer" as defined in SMC Section 22.801.170.
13) **"Public drainage system"** means "Public drainage system" as defined in SMC Section 22.801.170.
14) **"Public sanitary sewer"** means "Public sanitary sewer" as defined in SMC Section 22.801.170.
15) **"Public sewer system"** means "Public sewer system" as defined in SMC Section 21.16.030.
16) **"SDOT"** means the Seattle Department of Transportation.
17) **"SPU"** means Seattle Public Utilities.
18) **"Side Sewer Permit for Temporary Discharge"** and **"SSPTD"** means a permit that allows temporary discharge to an approved point of discharge, as defined in SMC Section 21.16.110.
19) **"Stormwater"** means "Stormwater" as defined in SMC Section 22.801.200.
20) **"Surface Water"** means water originating from rainfall and other precipitation as defined in SMC Section 22.801.200
21) **"Temporary"** means for a limited time.
22) **"Washington State Department of Ecology"** means the state's principal environmental management agency. Their mission is to protect, preserve and enhance Washington's environment, and promote the wise management of the state's air, land and water. Their goals are to prevent pollution, clean up pollution and support sustainable communities and natural resources.
23) **"Wet Season"** shall mean that period of time beginning upon November 1 and ending on March 31 of each year.

General Groundwater Withdrawal and Discharge

There are many concerns surrounding groundwater withdrawal and discharge to public conveyance systems. These concerns include:

- The potential environmental harm caused by groundwater withdrawal.
- Potential damage to real property or impacts to the ROW due to ground subsidence.
- Increased risk of Combined Sewer Overflow events.
- Increased capacity concerns for public pipes that were not designed with capacity to convey groundwater.
- Risk of untreated contamination discharged to water bodies of the State.

- Risk of discharge that may cause or contribute to a prohibited discharge, a known or likely violation of state water quality standards in the receiving water, or a known or likely violation of the City's municipal NPDES permit.

Due to these concerns, the City encourages construction practices that eliminate groundwater discharge to the public conveyance system.

Permanent Groundwater Discharge

The public drainage system and public combined sewer are designed with capacity to convey only stormwater, and stormwater combined with wastewater, respectively; neither was designed with capacity to convey perched, static, tidally influenced or hydraulically connected groundwater. In this regard, the City has determined the public drainage system to be capacity constrained when groundwater is discharged. Projects which propose to permanently discharge groundwater shall comply with Minimum Requirements for Flow Control – Peak Flow Control Standard, SMC Section 22.805.080{B}4.

Contaminated groundwater, which is a prohibited discharge, shall not be discharged to Receiving Waters, either directly or indirectly via the public drainage system.

Temporary Groundwater Withdrawal and Discharge

Whenever groundwater withdrawal is proposed, the plan for groundwater management shall be documented and meet all applicable City standards. For construction projects, all projects that are required to submit a Construction Stormwater Control Plan must address the temporary groundwater withdrawal and discharge for the project with the submittal requirements below. This Plan and plan narrative must adequately represent groundwater management for the project described in Element 12, Control Dewatering in the Stormwater Manual Volume 2 Construction Stormwater Control Technical Requirements (DR 2009-004). Construction related temporary discharges may be required to obtain a Side Sewer Permit for Temporary Discharges through DPD. For non-construction projects proposing temporary groundwater withdrawal and connection to the public sewer system, such as groundwater remediation projects, the submittal requirements should be included in the application for a Side Sewer Permit for Temporary Discharge.

Submittal Requirements

All projects requesting temporary groundwater discharge shall submit:

a) Contact information for the preparation and implementation of the Plan;
b) Geotechnical Report prepared by a licensed geotechnical engineer stating expected seasonal groundwater discharge rates for the project;
c) Background and information available on the existing site conditions, existing public sewer system, and point of discharge;
d) Timeframe of proposed discharge (or construction activities);
e) Statement of Minimum Risk;

f) Alternatives Report prepared by a licensed engineer showing that partial or total discharge of groundwater to the public sewer system is the only feasible option available;
g) Water Quality report stating expected contaminants in groundwater, (if applicable);
h) Capacity Analysis of the receiving public infrastructure;
i) Evidence that a Construction Stormwater General Permit was obtained from Washington State Department of Ecology (if applicable);
j) Monitoring plan for water quality (if applicable) and discharge volume;
k) Water quality treatment system design and operation (if applicable);
l) Phase I and/or II Environmental Site Assessment (if available)

Statement of Minimum Risk: The applicant shall submit a report by a licensed geotechnical engineer determining the impacts and risks associated with the proposed groundwater withdrawal and discharge on the surrounding area, including but not limited to risk of landslides and risks of foundational failure or damage to properties and infrastructure in the area. Refer to DPD DR 33-2006 General Duties and Responsibilities of Geotechnical Engineers.

Special Considerations for Temporary Discharge to a Receiving Water

Discharge Rate: Groundwater discharge to systems tributary to state surface waters must not cause erosion or flooding.

Water Quality: All dewatering discharges directly or indirectly to state surface waters must be permissible discharges as discussed in the City of Seattle Stormwater Code 22.802.030. Prohibited Discharges, as provided for in SMC Section 22.802.020, shall not be discharged to state receiving waters, either directly or indirectly via the public drainage system. Contaminated groundwater is a prohibited discharge; however, it may become a permissible discharge if metals and other pollutants are mitigated to meet concentration thresholds in state water quality standards. If no such water quality standards exist for a pollutant, discharge limits shall be based on other appropriate and relevant water quality criteria (e.g., MTCA Method A, U.S. EPA national recommended water quality criteria).

Special Considerations for Temporary Discharge to the Public Sanitary or Combined Sewer

Groundwater discharge to the public sanitary sewer or public combined sewer must receive prior DPD, SPU, and King County approval. All reasonable discharge alternatives must be exhausted before this will be considered. In addition to being required to obtain an SSPTD through DPD , all construction related discharges to the public sanitary or combined sewer are subject to permitting administered through King County Industrial Waste Program.

Discharge Rate: During the wet season, release rates will be restricted to a maximum of 25,000 gpd. For temporary construction discharges, volume restrictions shall meet conditions required by King County Public Rule Discharge of Construction Dewatering to the Sanitary Sewer, as may be hereafter amended.

Water Quality: All temporary discharges to the sewer system shall meet King County local discharge limits.