



CITY OF PORTLAND ENVIRONMENTAL SERVICES



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2025 Stormwater Management Manual

Summary of changes: March 1, 2025

The 2025 Stormwater Management Manual (SWMM) goes into effect on March 1, 2025. This document provides an overview of the changes between the 2020 SWMM and the 2025 SWMM.

The SWMM enables the City of Portland to comply with regulatory requirements and protect both watershed resources and infrastructure investments with every development or improvement to achieve important citywide goals.

The SWMM applies to development activities that construct or alter impervious area or that impact drainageways. It applies to some paving projects in the right-of-way and any parcel-based development on properties.

The primary goals of this update are to:

- Improve user navigation of the document.
- Adjust requirements to apply to fewer projects.
- Increase infiltration in areas that drain to streams to improve watershed health.
- Continue to comply with regulations.

SWMM Version Applicability:

- Land use reviews will be conducted under the manual in place at the time of application submittal, provided the application is complete when first submitted or within 180 days of submittal.
- Building permits will be reviewed based on the permit “in date.”
- Public works permit projects will be reviewed based on the date the concept development submittal is accepted for review.
- City Capital and inter-agency projects will be reviewed based on 60% plan submittal date.

Acronyms

BES	City of Portland Bureau of Environmental Services
DEQ	State of Oregon Department of Environmental Quality
PAC	Presumptive Approach Calculator
PBOT	Portland Bureau of Environmental Services
MS4	Municipal Separate Storm Sewer System
O&M	Operations and Maintenance
SIM	Simplified Design Approach
SRSC	Staff Review Special Circumstances
SWMM	Stormwater Management Manual
TMDL	Total Maximum Daily Load
UIC	Underground Injection Control

Document Structure

The SWMM has a new organizational structure with more chapters. The new structure includes a single chapter for the Simplified Approach, and three chapters to cover the presumptive and performance approach. Additionally, forms, details and operations and maintenance plans are separated into their own sections instead of being incorporated into the design chapters. The new table of contents is:

- Chapter 1. Requirements and Policies
- Chapter 2. Site Evaluation and Planning
- Chapter 3. Simplified Approach - Facility Design Requirements
- Chapter 4. Presumptive and Performance Approaches - Project Performance Standards
- Chapter 5. Presumptive and Performance Approaches - Private Facilities
- Chapter 6. Presumptive and Performance Approaches - Public Facilities
- Chapter 7. Drainageway and Drainage Reserve Requirements and Policies
- Chapter 8. Vendors
- Chapter 9. Forms
- Chapter 10. Operations and Maintenance Plans
- Facility Details - Simplified Approach
- Facility Details - Private Facility Presumptive and Performance Approach
- Facility Details - Public Facilities
- Definitions
- Appendix A. Stormwater Design Methods
- Appendix B. Recommended Guidance for Water Crossing Structures and Outfalls

Chapter 1: Requirements and Policies

Chapter 1 contains the requirements and policies for the SWMM. The topics covered in Chapter 1 have not changed substantially between the 2020 SWMM and this version. Other changes to this chapter are described below.

1.2 Applicability

What: Removed the landscape nonconforming upgrade trigger for SWMM applicability.

Why: Very few projects were able to provide stormwater improvements through this trigger.

Who this will impact: Projects doing nonconforming parking lot upgrades will no longer need to evaluate feasibility of doing stormwater retrofits.

1.2.1 Development Related Activities

What: Increased the SWMM applicability threshold from 500 to 1000 square feet of new or redeveloped impervious area. Clarified that a project includes all undeveloped lots in a subdivision, batch permit, site development permit, middle housing land division project, or any group of lots that are being developed as part of a single development project.

Why: Past building permit data analysis showed that 18% of permits were for projects that are less than 1000 square feet of impervious area but that these projects represented only 1.8% of the impervious area managed through the SWMM.

What: Updated pavement exemptions in the right-of-way.

Why: To improve clarity.

1.2.2 New Connections and Routes of Conveyance

What: Condensed and clarified SWMM applicability for new connections and routes of conveyance. Clarified that constructing new storm conveyance systems including building curbs where none have existed before counts at a new route of conveyance.

Why: To ensure areas newly routed to a storm system meet the relevant system and regulatory requirements.

1.2.4 Port of Portland

What: Updated descriptions of applicability for SWMM vs. Port of Portland stormwater design requirements. Port properties will no longer need to record O&M documents with the county.

1.2.5 Applicability to City Projects

What: Clarified that City projects that meet applicability criteria in the SWMM are expected to meet SWMM requirements. City retrofit projects have more flexibility but must comply with regulatory requirements.

Why: To better clarify which requirements the City can make project-specific determinations about, and which are not flexible.

Who this will impact: City capital projects that are installing stormwater management facilities or meet applicability thresholds in the SWMM.

1.3 Stormwater Management Requirements

1.3.4 Infiltration and Discharge Hierarchy

What: Removed discussion of TMDL and 303(d) requirements in the SWMM.

Why: The SWMM helps the city meet TMDL goals for mitigating water quality impacts to listed streams but there are not any additional, specific stormwater facility design criteria to address TMDL requirements.

1.3.4.2 Level 2: Separate Storm System Requirements.

Level 2a: Discharge to large surface water bodies

What: Change flow control requirements for sites that discharge to storm pipes. Only require flow control for sites that discharge to pipes that are less than 12 inches in diameter and ultimately discharge to the Willamette River, Columbia River, Columbia Slough or tributaries to the Columbia Slough.

Why: To establish a clear standard for when flow control will be required in the piped separated storm system.

Level 2b: Discharge to other surface water bodies

Sites that discharge to other surface water bodies not included in Level 2a, including Tryon, Fanno, and Johnson Creeks.

What: Established new performance standards for this hierarchy level. Require sites to either infiltrate the water quality event, or treat the water quality event and provide flow control for hydromodification. Require sites to also meet flow control requirements for storm system capacity.

Why: To improve water quality, mitigate hydromodification impacts in stream channels and control higher flows. Provide sites different options for meeting these requirements.

Who this will impact: This requirement primarily applies in Southwest Portland and the eastern buttes that drain to Johnson Creek.

1.4 Receiving System Requirements

1.4.1 Discharge to Groundwater with a UIC: Regulations and Registration

What: Consolidated UIC regulation and registration information to this one section including information that used to be housed in the hierarchy.

1.4.2 Offsite Receiving System Requirements

What: Added language about discharge to existing stormwater facilities for additional scenarios and provided more specific guidance on what documentation is required to demonstrate if existing facilities have adequate capacity.

Why: Provide specific guidance for projects developing in catchments that drain to existing facilities.

1.4.3 Discharge to Onsite Dispersion

What: Added a brief section acknowledging that onsite dispersion can be an acceptable discharge point.

1.5 Operations and Maintenance Requirements

1.5.2 Property-Based Facility Requirements

What: Shifting document recording responsibilities for operations and maintenance plans (O&Ms) for most permits from the applicant to BES and charging a recording fee to cover county recording fees.

Why: To reduce the number permit review checksheets associated with reviewing and recording O&Ms.

Who this will impact: Generally, BES will record O&Ms for projects in Multnomah County and may require applicants to record O&Ms for projects in other counties.

1.7 Special Circumstances Offsite Management Fee

1.7.1 Staff Review Special Circumstances

What: Expanded the types of projects eligible to pay the Staff Review Special Circumstances fee (SRSC) to include:

- Shoulder widening
- Public works permit projects that:
 - Have a frontage that is less than 120 ft on one block face or
 - Are located in the combined sewer system.
- City capital projects in the combined system that cannot infiltrate, and no local pipe capacity issues exist.

Why: To focus SWMM requirements in the right-of-way on the largest projects in the parts of the City with the greatest system needs.

Who this will impact: Sites meeting the SRSC criteria will now be able to pay the offsite fee instead of designing and building green street or other stormwater facilities.

Chapter 2: Site Evaluation

Chapter 2 describes site evaluation requirements, including determining offsite connection availability, whether infiltration is feasible on the site and, if feasible, the native soil infiltration rate. This chapter retains the site evaluation, site design material, and guidance for selecting a design approach in the 2020 SWMM Chapter 2. Guidance on using the design approaches have moved to other chapters. The Simplified Approach is now in Chapter 3 and the Presumptive and Performance Approach are in Chapter 4.

2.2. Site Evaluation

2.2.2 Infiltration Feasibility

2.2.2.1 Infiltration Requirements

What: Added a list of areas where infiltration is generally prohibited and infiltration testing is not required.

Why: To better clarify when infiltration testing is not required.

2.2.3 Stormwater Receiving Systems

What: Added a more thorough description of how to select the stormwater receiving system.

Why: To better clarify what stormwater receiving system to which to connect.

2.2.4. Setbacks

What: Changed definition of steep slopes (for SWMM setback purposes) to be a 25% slope instead of a 20% slope and changed the setback distance to be 5 times the slope height up to 100 ft instead of 100 ft.

Why: To adjust setback requirements to better align with understanding of impacts of infiltration to slopes and to allow more sites to infiltrate stormwater runoff.

Chapter 3: Simplified Approach – Facility Design Requirements

Chapter 3 describes the design requirements for facilities designed under the Simplified Approach. This combines information from Chapter 2 and Chapter 3 in the 2020 SWMM.

3. Simplified Approach (SIM Approach) – Facility Design Requirements

What: The new SIM Approach chapter brings together most of the information applicants need to plan and implement projects under the SIM Approach.

Why: For implementation ease and efficiency.

Who this will impact: Projects that can use the SIM Approach will have an easier time navigating the SWMM.

3.1 Stormwater Facility Conceptual Design

3.1.1 Stormwater Facility Selection

What: Provided new guidance on which facility types meet the requirements of each stormwater hierarchy level.

Why: To simplify selection of appropriate facilities under the Simplified Approach.

3.2 Stormwater Facility Design and Construction

3.2.1 Basins

What: Removed the underdrain from basins and require only an overflow standpipe.

Why: To maximize onsite infiltration while still providing a safe overflow for high flows. Since all SIM Approach basins are unlined and can only be constructed where there is 2 inches/hour of infiltration an underdrain is not needed.

Typical detail: SW-100.

3.2.4 Drywells

What: Revised table of pretreatment requirements for UICs (drywells and soakage trenches).

Why: Update the table to align with DEQ requirements and standard practices in Portland.

3.2.6 Filter Strips

What: Removed property line setback requirements.

Why: Filter strips do not have concentrated flow, and this allows more flexibility for filter strip placement.

3.2.8 Planters

What: Changed the design of underdrains– the underdrain system is smaller, and the materials are less expensive. Removed the underdrain from unlined planters and require only an overflow standpipe for unlined planters.

Why: For construction ease and consistency with the other design approaches.

Typical details: SW-109, and SW-110.

3.2.9 Rain Gardens

What: Updated foundation setback requirements to align them with other infiltration approaches.

Why: For consistency.

3.2.10 Sand Filters

What: Changed the design of underdrains– the underdrain system is smaller, and the materials are less expensive. Removed the underdrain from unlined sand filters and require only an overflow standpipe for unlined sand filters.

Why: For construction ease and consistency with the other design approaches.

Standard details: SW-113, and SW-114.

3.2.11 Soakage Trenches

What: Revised table of pretreatment requirements for UICs (drywells and soakage trenches).

Why: Update the table to align with DEQ requirements and standard practices in Portland.

3.4 Operations & Maintenance (O&M) Requirements and Submittals

What: Updated O&M submittal process to remove the requirement for a notary, reduce the amount of information in the O&M submittal, and to allow the City to record the forms on behalf of the applicant. (Signature by the applicant is still required.)

Why: Overall, these changes simplify and streamline O&M submittal and review processes. In most cases BES will take responsibility for recording the O&M form with the appropriate county.

Who this will impact: Having the City record the O&M form on behalf of the applicant should reduce the number of review cycles (checksheets) for permits.

Chapter 4: Presumptive and Performance Approaches – Project Performance Standards

Chapter 4 describes how to meet the project performance standards when designing facilities under the Presumptive or Performance Approach. This covers material from Chapter 2 in the 2020 SWMM.

4.1 Stormwater Facility Conceptual Design

4.1.1. Infiltration and Discharge Hierarchy

What: Provided a table of the performance standards.

Why: To show the specific requirements of each performance standard.

What: Provided a flow chart of the Infiltration and Discharge.

Why: To provide another way of viewing the Infiltration and Discharge Hierarchy.

4.1.1.2 Level 2. Separate Storm Sewer System Requirements

What: Specified that flow control is not required (unless system capacity is a concern) when discharging to tributaries and channels of the Columbia Slough. Specified that flow control for storm sewer system capacity is only required for sites that discharge to a City storm-only sewer that is less than 12 inches in diameter or to a non-City system without adequate capacity as determined by the system owner.

Why: To clarify and streamline the process of determining when flow control is not required for storm sewer system capacity.

4.1.2. Design Storm Events

What: Changed the hyetograph for the water quality storm from 24 to 36 hours.

Why: To better match the peak rates of the volume-based water quality storm with the water quality rainfall intensities.

4.1.3. Selecting a Facility

What:

- Added a description of water quality infiltration facilities.
- Modified Figure 4-2. Lined and Unlined (Infiltration) Facilities to include an upturned elbow on the underdrain for partial infiltration facilities.

Why: Water quality infiltration is a new performance standard and upturned elbows are now standard.

4.2 Presumptive Approach

4.2.1 Infiltration and Discharge Hierarchy

What: Provided additional detail in the chapter for using the PAC.

Why: To clarify how to select the hierarchy level for the PAC.

Who this will impact: PAC users.

4.2.2. Selecting a Facility

4.2.2.2 Facility Configuration

What: Removed facility Configuration F (which was the same as Configuration C, but with an upturned elbow). Configuration C is now divided into two configurations: Configuration C_e for an upturned elbow on the underdrain and Configuration C_i for one with a level underdrain (i.e., no upturned elbow on the underdrain).

Why: To encourage the use of upturned elbows and provide clarity. All of the configurations with different main letters now have different elements (previously Configuration C and F contained the same elements).

4.3 Performance Approach

4.3.2.2 Flow Control

What: Situations where flow control would normally be required, but is impractical, are listed as exemptions to the flow control performance standards, instead of being written into the flow control performance standards.

Why: To clarify that these are exemptions to the performance standards due to impracticability.

Chapter 5: Presumptive and Performance Approaches – Private Facilities

Chapter 5 includes facility design guidance and requirements for facilities on property designed using the Presumptive or Performance Approach. All the material in the chapter is from Chapter 3 in the 2020 SWMM.

5.2 Stormwater Facility Design Requirements and Guidance

5.2.1. Ecoroofs and Permeable Pavement

5.2.1.1. Ecoroofs

What: Updated guidance on how ecoroofs meet specific performance standards (e.g., water quality performance standard).

Why: To provide clear guidance to designers for how to demonstrate compliance with treatment and flow control performance standards.

5.2.1.2. Permeable Pavement

What: Updated guidance about permeable pavement.

Why: Reflect lessons-learned concerning construction on sloped surfaces and use of geotextiles.

5.2.2. Bioretention Facilities

5.2.2.1 General Design Requirements

What: Provided new specification for underdrain pipe material to allow HDPE drainpipe.

Why: For ease of procurement, lower cost.

What: Elevated the discharge pipe in infiltrating systems with an underdrain.

Why: Increase the capture and infiltration of water in systems with underdrains.

Typical details: SW204, SW-207, SW-213, and SW-216.

What: Added a new typical detail for underdrain systems embedded (recessed) in the floor of the facility.

Why: Provide an option for a simpler less costly construction approach.

Typical details: SW-214, and SW-216.

5.2.3 Dispersion Facilities

5.2.3.1 Filter Strips

What: Removed property line setback requirements.

Why: Filter strips do not have concentrated flow, and this allows more flexibility for filter strip placement.

5.2.3.2 Trench Dispersion

What: Moved “trench dispersion” from the appendix to the chapter and updated design requirements. This new facility type can serve as a discharge point.

Why: For ease of design and permitting at sites where other options are limited.

5.2.4. Subsurface infiltration Systems (UICs)

What: Revised table of pretreatment requirements for UICs (drywells and soakage trenches).

Why: Update the table to align with DEQ requirements and standard practices in Portland.

5.2.4.3 Soakage Trenches

What: Added a soakage trench design with an overflow connection for sites which drain to streams where infiltration is allowed and full onsite infiltration is not provided.

Why: Provide more infiltration options where runoff causes stream erosion.

Who this will impact: Primarily properties in southwest Portland with an overflow connection, soils which drain adequately, and where there are no constraints to infiltration such as steep slopes and landslide risks.

Typical detail: SW-211.

5.3 Operations & Maintenance Requirements & Submittals

5.3.3 Operations & Maintenance Submittal and Recording Process

What: Updated O&M submittal process to remove the requirement for a notary, reduce the amount of information in the O&M submittal, and to allow the City to record the forms on behalf of the applicant. (Signature by the applicant is still required.)

Why: Overall, these changes simplify and streamline O&M submittal and review processes. In most cases BES will take responsibility for recording the O&M form with the appropriate county.

Who this will impact: Having the City record the O&M form on behalf of the applicant should reduce the number of review cycles (checksheets) for permits.

Chapter 6: Presumptive and Performance Approaches – Public Facilities

Chapter 6 includes facility design guidance and requirements for public facilities designed using the Presumptive or Performance Approach. This chapter is a new title for Chapter 4 in the 2020 SWMM.

6.2 Facility Design Requirements and Guidance

6.2.1 Bioretention in the Right-of-Way

6.2.1.4. Stormwater Design Requirements

What: Made small notched forebays standard for curb extensions.

Why: To improve the ease and efficiency of sediment removal.

Standard drawing: P-306.

What: Updated the details and drawings for green streets with liners.

Why: To ensure liners are watertight, and to increase the ease of construction.

Who this will impact: Designers and construction contractors.

Details/Drawings: SW-306, SW-307, and P-308.

What: Added a modified (deepened) curb and gutter detail for curb extensions.

Why: Ensure attachment is below soil surface; reduce UV damage to liners over time.

Who this will impact: Construction crews and BES O&M staff.

Standard drawing: P-308.

What: Added a typical detail for a CG-3 catch basin installed as the overflow structure in green streets facilities.

Why: As a space-saving alternative to a beehive overflow grate.

Typical details: SW-316, and SW-317.

What: Elevated discharge pipe in infiltrating green streets facilities which have an underdrain.

Why: Increase the capture and infiltration of water in systems with underdrains.

Typical details: SW-315, and SW-317.

What: Updated the green streets designer directions on the location of sidewalk notches.

Why: Avoid having sidewalk notches influence (increase) the depth of facilities.

Standard drawing: P-307, Note 5

6.2.1.6 Planting and Maintenance Requirements

What: Public works permit projects that construct green streets or other vegetated stormwater facilities are required to plant and provide vegetation maintenance during the 2-year warranty period. Currently public works permit project permittees have the option to enter into a voluntary agreement with BES to perform the work. BES is working to establish a fee for this service and change the voluntary arrangement into a requirement. BES will require a fee for this service once a fee is adopted by City Council in the future.

Why: Switching to a fee for planting and 2-years of vegetation maintenance will improve outcomes for green streets; reduce permittees' maintenance responsibilities during the 2-year warranty period; provide permittees certainty about the costs associated with green street inspection, planting, and establishment; and improve predictability of timelines for completing public works projects. However, to implement this, City Council needs to adopt a fee. The 2025 SWMM will reflect requirements prior to and after the adoption of a fee.

6.2.2. Sumps

What: Added design guidance for sumps in MS4 areas which are designed to infiltrate the water quality event. An overflow pipe connection to a separated stormwater sewer is required.

Why: To expand options for designers in MS4 areas where infiltration rates are adequate for managing the water quality event but not the 10-yr storm.

What: Updated the guidance for designers about when BES allows additional runoff to drain to an existing sump.

Why: In some cases, BES will require the designer to assess the capacity of the existing sump.

6.2.3 Manufactured Stormwater Treatment Technologies (MSTTs)

What: Require grated inlet for catch basin units.

Why: To minimize inlet clogging.

6.2.8 Large Bioretention Facilities

What: Added guidance for bioretention systems which are larger than green streets facilities and typically located in easements outside the right-of-way.

Why: Large bioretention systems require special consideration for design elements such as forebays, flow-spreaders, and underdrain systems.

6.2.9 Ponds

What: Added guidance about pond discharge elevations.

Why: To avoid draining groundwater or resuspending sediments.

Chapter 7: Drainageway and Drainage Reserve Requirements and Policies

Chapter 7 covers requirements for drainageway and drainage reserve protections. This Chapter was previously Chapter 5 in the 2020 SWMM.

7. Drainageway and Drainage Reserve Requirements and Policies

What: Primary changes include rearranging the chapter for clarity and to simplify language.

Who this will impact: Updates to this Chapter apply to properties and projects that temporarily or permanently disturb an area within 50 ft of a drainageway. Overall, updates to the Chapter are minor.

7.2 Applicability

What: Clarified that drainage reserves are not applied in the right-of-way or when a drainageway drains only the property on which it is located and was constructed to provide storm drainage.

7.3 Identifying Drainageways on Properties

7.3.1 Drainageway Types

What: A new section was added specific to drainageway types.

Why: To better define the difference between natural and artificial channels.

7.4 Applying Drainage Reserves

What: Updated a section that was previously titled “Placement of Drainage Reserves” to include application of a wider drainage reserve when there is a top of bank and the width between banks is more than five feet.

Why: To increase protection for wider channels and provide clarity for when that is required.

7.5 Encroachments

What: The following clarifications were made to the encroachment requirements in this chapter: Minor encroachments were previously titled “Allowable Encroachments.” Tree removal encroachments that are permitted through Title 11 and Title 33 are now considered minor encroachments.

7.5.2 Channel and Buffer Encroachment Categories

What: Clarified channel and buffer encroachment areas to align with Portland City Code Section 24.50.050, Flood Hazard Area and Flood Protection Elevations (requirements for unidentified watercourse flood zones). Additional engineering analysis for encroachments in the 15-foot channel area would apply when both regulations are triggered. The width of the channel encroachment area is reduced to 7.5 feet from the center of the channel on either side (15 feet total). The overall typical drainage reserve width of 30 feet is maintained.

Why: The purpose of this change is to help streamline permit requirements when regulations from multiple bureaus are required for development.

7.6 Encroachment Requirements

7.6.5 Mitigation and Planting Requirements

What: Mitigation requirements and ratios are now more prominent in the chapter.

Why: Previously, mitigation information was difficult to find.

What: Updated planting densities and combined channel and buffer planting requirements into one table.

Why: To simplify applying these requirements at the implementation stage and to better align with other existing requirements that may apply through Title 33.

7.7 Drainage Reserve Submittal Requirements & 7.8 Notice of Drainage Reserve and Operations and Maintenance (O&M)

What: O&M plans are now located in Chapter 10. Forms are now located in Chapter 9. Removed requirement for a notarized signature on the form.

Why: O&M plans and drainage reserve recording forms are now consolidated into individual chapters along with other O&M plans and forms. This consolidation should make the plans and forms easier to find. No longer requiring a notary will reduce the time it takes to process a final permit.

7.9 Enforcement

What: Simplified the enforcement section.

Why: To point to existing requirements that are located in other administrative rules and avoid duplication.

Chapter 8: Vendors

Chapter 8 covers requirements for vendor submittals for inclusion of manufactured treatment technologies and blended soil on the City's lists of approved materials. This chapter is a new chapter number for Chapter 6 in the 2020 SWMM.

8.3 Blended Soil for Vegetated Stormwater Systems

What: Updated soil blend specification for BES's standard stormwater blend and a new specification for a second blend.

Why: The new second specification contains more fines (silt and clay) and should support better plant health in facilities with underdrains such as lined facilities.

Chapter 9: Forms

What: Consolidated all forms into a single chapter. Required forms were previously located in several chapters throughout the SWMM.

Why: Consolidating the forms will make them easier to find.

Chapter 10: Operations and Maintenance Plans

What: Consolidated standard O&M plans into a single chapter. O&M plans were previously located in Chapter 3 in the 2020 SWMM.

Why: Consolidating the plans into a single chapter will make them easier to find.

What: Updated pollution prevention language in standard O&Ms.

Why: Limit introduction of pollutants to stormwater and/or facility discharge points.

Details

What: For private facilities, updated performance approach soakage trench detail to address systems with overflows (partial infiltration).

Details: See SW-211

What: For private facilities, updated details for infiltrating basins, planters, and sand filters to eliminate the underdrain or raise the elevation of the discharge pipe (to promote infiltration).

Details: Examples include SW-100, SW-109, SW-113, SW-203, SW-204, SW-206, SW-207, and SW-211.

What: For private facilities, added a detail for a recessed underdrain systems where the perforated underdrain pipe is placed in a rock trench at the bottom of the facility.

Details: See SW-214.

What: For public facilities, added a new detail for partial infiltration facilities with beehive overflow structures and a new detail for a CG-3 overflow as an alternative to the beehive structure.

Details: See SW-316 and SW-317.

Definitions

What: The use of certain terms was analyzed throughout the document. Definitions were removed, added and edited to match how the terms are used in the revised SWMM. Twenty-three terms that are no longer used were removed. Ten terms were added based on new uses throughout the document. A summary of added and removed definitions is listed below.

- New definitions
 - Catchment area
 - Storm Sewer System
 - Curve Number
 - Filtration
 - Head
 - Headwater
 - Ponding Depth
 - Rate-Based Facility
 - Receiving System
 - Two-Year Time of Travel
- Removed definitions
 - Bollard
 - Building
 - Bulkhead
 - City Storm Sewer – replaced with Storm Sewer System (new definition)
 - Collector Sewer
 - Combined Sewage
 - Common Private Sewer System (also called Party Sewer)
 - Critical Depth
 - Critical Flow
 - Department of Environmental Quality
 - Development Footprint
 - Diversion Structure
 - Energy Grade Line
 - Existing Offsite Conditions
 - Gabion
 - Hydraulic Gradient
 - PBOT
 - Pollution Reduction Facility
 - Steep Slope
 - Street Flow
 - Surface Flow
 - Unit Hydrograph
 - Water Quality Limited

Appendix A: Stormwater Design Methodologies

A.2 Water Quality Storm Event

What: Changed the hyetograph for the water quality storm from 24 to 36 hours.

Why: To better match the peak rates of the volume-based water quality storm with the water quality rainfall intensities.

A.5 Presumptive Approach Calculator

What: Updated the description of the Presumptive Approach Calculator (PAC).

Why: The PAC is being updated per the new requirements of the SWMM and the description needed to be updated to reflect these changes.

Who this will impact: PAC users.

Appendix B: Stormwater Design Methodologies

B.3 Outfalls

What: Removed upland dispersion (section B.3.2.4 in the 2020 SWMM) from Appendix B and moved it into Chapter 5 as a discharge point. Updated some design requirements for upland dispersion.

Why: To provide clearer technical guidance for using upland dispersion.

Who this will impact: Sites without access to a discharge point.