



Pierce County
Planning & Public Works

2022

Stormwater Management Program Plan



Prepared in compliance with the 2019 Phase I Municipal Stormwater National Pollutant Discharge Elimination System and State Discharge General Permit for discharges from Large and Medium Municipal Separate Storm Sewer Systems (effective August 1, 2019)

Permit #WAR044002

Contents

INTRODUCTION: 2022 SWMP PLAN (S.1)	2
1.0 Background	2
1.1 County Coordination and Responsibilities	2
1.2 SWMP Plan Components	3
2.0 LEGAL AUTHORITY (S5.C.1)	4
2.1 Summary of Permit Requirements	4
2.2 Permit Compliance Actions and Activities	4
3.0 MS4 MAPPING AND DOCUMENTATION (S5.C.2)	6
3.1 Summary of Permit Requirements	6
3.2 Permit Compliance Actions and Activities	6
4.0 COORDINATION (S5.C.3)	8
4.1 Summary of Permit Requirements	8
4.2 Permit Compliance Actions and Activities	8
5.0 PUBLIC INVOLVEMENT AND PARTICIPATION (S5.C.4)	10
5.1 Summary of Permit Requirements	10
5.2 Permit Compliance Actions and Activities	10
6.0 CONTROLLING RUNOFF FROM NEW DEVELOPMENT, REDEVELOPMENT, AND CONSTRUCTION SITES (S5.C.5)	11
6.1 Summary of Permit Requirements	11
6.2 Permit Compliance Actions and Activities	12
7.0 STORMWATER PLANNING (S5.C.6)	16
7.1 Summary of Permit Requirements	16
8.0 STRUCTURAL STORMWATER CONTROLS (S5.C.7)	17
8.1 Summary of Permit Requirements	17
8.2 Permit Compliance Actions and Activities	17
9.0 SOURCE CONTROL PROGRAM FOR EXISTING DEVELOPMENT (S5.C.8)	19
9.1 Summary of Permit Requirements	19
9.2 Permit Compliance Actions and Activities	20
10.0 ILLICIT CONNECTIONS AND ILLICIT DISCHARGE DETECTION AND ELIMINATION (S5.C.9)	23
10.1 Summary of Permit Requirements	23
10.2 Permit Compliance Actions and Activities	23
11.0 OPERATIONS AND MAINTENANCE PROGRAM (S5.C.10)	27
11.1 Summary of Permit Requirements	27
11.2 Permit Compliance Actions and Activities	27
12.0 EDUCATION AND OUTREACH PROGRAM (S5.C.11)	32
12.1 Summary of Permit Requirements	32
12.2 Permit Compliance Actions and Activities	33
13.0 COMPLIANCE WITH TOTAL MAXIMUM DAILY LOAD REQUIREMENTS (S7)	35
13.1 Summary of Permit Requirements	35
13.2 Permit Compliance Actions and Activities	35
14.0 MONITORING AND ASSESSMENT (S8)	37
14.1 Summary of Permit Requirements	37
14.2 Permit Compliance Actions and Activities	37

INTRODUCTION: 2022 SWMP PLAN (S.1)

Pierce County's 2022 Stormwater Management Program Plan (2022 SWMP Plan) complies with the 2019 Phase I Municipal Stormwater National Pollutant Discharge Elimination System (NPDES) and State Discharge General Permit (Permit) Pierce County permit #WAR044002. The permit became effective on August 1, 2019.

The 2022 SWMP Plan describes Pierce County's programs that support compliance with our Permit and planned Permit activities for the current calendar year. These efforts protect water quality and satisfy the applicable requirements of the Clean Water Act and State Water Pollution Control Act. This document also provides a brief description of Permit-required efforts undertaken in 2021.

1.0 Background

NPDES (*Section 402 of the federal Clean Water Act*) is a federal program that requires the issuance of permits for the discharge of pollutants into the nation's water ways. USEPA delegates the administration of this permit to the Washington Department of Ecology (Ecology). Additionally, under Washington State Water Pollution Control Act (Chapter 90.48 RCW), Ecology has authority to issue "State Waste Discharge Permits." Ecology combines both federal NPDES and State Waste Discharge requirements into a single permit. The State Permit covers discharges from municipal separate storm sewer systems (MS4) that Pierce County owns and operates. It also requires the use of stormwater best management practices (BMPs) to reduce the discharge of pollutants to the maximum extent practicable. The Phase I MS4 permit (Permit) is a General Permit that Ecology issues to jurisdictions including Pierce County Snohomish, King and Clark counties, and the cities of Tacoma and Seattle. The Permit has an effective date of August 1, 2019.

1.1 County Coordination and Responsibilities

Pierce County has the following responsibilities under the Permit:

1. As the local land use authority for the unincorporated area, the County must have appropriate codes, regulations, enforcement, and education capacity to reduce water-polluting practices and to increase and promote practices that protect water quality.
2. As a landowner and property manager, the County must ensure that its own practices meet regulatory standards.
3. As a regional government, the County coordinates between various departments within the County, and other permittees, to achieve compliance with permit requirements.
4. On an annual basis, the County may pay into a statewide monitoring program, or elect to conduct monitoring within its jurisdictional boundaries.

Pierce County's Planning and Public Works (PPW) Department, Surface Water Management Division (SWM) coordinates the annual development of this SWMP Plan as well as annual reporting required by the permit. SWM works with other departments to implement permit compliance activities including maintenance and source control inspections, structural stormwater control, response to illicit discharges monitoring, training and public education elements of the Permit.

Departments and Divisions in the County that own property, store materials or vehicles, conduct pollution generating activities or are in a position in the field to observe any of these activities have responsibilities under the Permit.

Development Services Division is responsible for the proper application of stormwater requirements for new development and re-development through site design, permitting, and inspections. Requirements can be found in the Stormwater Management and Site Development Manual and related County codes.

Other Pierce County departments and divisions also have a significant role in the implementation of the SWMP Plan through managing properties, facilities, and programs covered under the Permit. These departments and divisions include: Operations and Maintenance, Sewers Division, Office of the County Engineer (OCE) Facilities Management Department, Parks and Recreation Department, and Sustainable Resources Division (solid waste services). The Permit requires County-owned facility Stormwater Pollution Prevention Plans to be prepared where necessary.

During 2022, SWM staff will continue to coordinate with these departments to ensure their staff are aware of requirements under the permit and identify staff responsible for implementing requirements of the permit. SWM will continue to work with our communications team on the Department's website to make it easier for citizens to comment on the SWMP and get help for stormwater and water quality concerns.

1.2 SWMP Plan Components

Organization of the SWMP Plan follows the established format of the NPDES Phase I MS4 Permit:

- Legal Authority (S5.C.1)
- MS4 Mapping and Documentation (S5.C.2)
- Coordination (S5.C.3)
- Public Involvement and Participation (S5.C.4)
- Control of Runoff from New Development, Redevelopment and Construction Sites (S5.C.5)
- Stormwater Planning (S5.C.6)
- Structural Stormwater Controls (S5.C.7)
- Source Control Program for Existing Development (S5.C.8)
- Illicit Connections and Illicit Discharges Detection and Elimination (S5.C.9)
- Operation and Maintenance Program (S5.C.10)
- Education and Outreach Program (S5.C.11)
- Compliance with Total Maximum Daily Load Requirements (S7)
- Monitoring and Assessment (S8)

2.0 LEGAL AUTHORITY (S5.C.1)

2.1 Summary of Permit Requirements

Minimum performance measures to demonstrate control of discharges into and out of the MS4 include a combination of codes, regulations, statutes, ordinances, permits, contracts, orders, inter-agency agreements, or similar means. These measures authorize or enable the County, at a minimum, to authorize the following:

- Prohibit through ordinance, order, or similar means, illicit discharges to the MS4 owned or operated by the permittee.
- Control through ordinance, order, or similar means, the discharge of spills and disposal of materials other than stormwater into the MS4 owned or operated by the permittee.
- Control through inter-agency agreements among co-applicants, the contribution of pollutants from one portion of the MS4 to another portion of the MS4
- Require compliance with conditions in ordinances, permits, contracts, or orders; and, within the limitations of state law, carry out all inspection, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with permit conditions, including the prohibition on illicit discharges to the MS4 and compliance with local ordinances.

2.2 Permit Compliance Actions and Activities

Pierce County has established the following to comply with the Legal Authority section of the Permit:

√ Codes and regulations to control discharges into and out of the MS4 (S5.C.1.a. and b.)

Legal authority enabling the County to control discharges to and from the MS4 is established by the following:

- [Pierce County Code: Illicit Stormwater Discharges \(PCC 11.05\)](#)
 - Provides minimum requirements for reducing and controlling the discharge of pollutants to stormwater conveyance systems owned and maintained by Pierce County.
- [Pierce County Stormwater Management and Site Development Manual” \(PCSWMSDM\), \(Ordinance No. 2015-48s\).](#)
 - Coordinate, track, and report specific Permit actions.
 - Protect surface and groundwater resources by reducing polluted runoff from County drainage systems, facilities, and properties.
 - Provides requirements on how to control the quantity and quality of stormwater runoff.
- [Executive Order Concerning Effective Stormwater Management, Pierce, County Washington \(EO 2017-01\)](#)
 - Directs County Departments to fully implement all applicable provisions of the

Permit. The County will continue to use these documents during 2022 to manage and

control discharges to and from the MS-4. Pierce County reviews and updates the documents listed above as needed in accordance with Permit requirements.

Page Intentionally Left Blank

3.0 MS4 MAPPING AND DOCUMENTATION (S5.C.2)

3.1 Summary of Permit Requirements

The MS4 Mapping and Documentation section of the Permit helps Pierce County trace stormwater pollution sources, manage resources, and with planning. The minimum performance measures of this program include:

ONGOING MAPPING DATA FOR FEATURES SUCH AS:

- Known MS4 outfalls and discharge points
- Receiving waters, other than ground water
- Stormwater treatment and flow control BMPs/facilities owned or operated by the County
- Geographic areas served by the County's MS4 that do not discharge stormwater to surface water
- Tributary conveyances to all known outfalls and discharge points with a 24-inch nominal diameter or larger.
- Connections between the MS4 owned or operated by the Permittee and other municipalities or other public entities
- Existing, known connections greater than or equal to 8 inches in nominal diameter to tributary conveyances
- Mapping shall be in an electronic format with fully described mapping standards
- The County shall make available, to the extent appropriate and consistent with national security laws and directives, available maps depicting information to Ecology, federally recognized Indian Tribes, municipalities and other permittees

NEW MAPPING DATA FOR FEATURES INCLUDING:

- Collect size and material for all known MS4 outfalls and update records (begin no later than January 1, 2020)
- Complete mapping of all known connections from the MS-4 to privately-owned stormwater systems (by August 1, 2023)
- Complete mapping tributary conveyances for 50% of the areas outside the previously mapped urban/higher density rural sub-basins

3.2 Permit Compliance Actions and Activities

Pierce County has established the following components in compliance with the MS4 Mapping and Documentation section of the Permit:

√ Ongoing and new efforts to map required features (S5.C.2 a and b)

The County continues to implement a comprehensive program to map the MS4, including newly found or constructed MS4 features.

Drainage features are collected in the field by trained staff using Geographic Positioning System (GPS) collections system, which includes a drainage dictionary to ensure consistency. The drainage dictionary

was updated during the previous permit cycle to match definitions in the permit.

Pierce County collected size and material for all known MS4 outfalls during 2019, 2020, and 2021. This information will continue to be collected in 2022 and these records are being updated in GIS.

Pierce County staff continue to collect data and map all known connections from the MS4 to privately owned stormwater systems during routine field screenings and inspections. This information will be submitted to Ecology no later than August 1, 2023.

Pierce County GIS data is available publicly via the Internet through the following link:

<https://gisdata-piercecowa.opendata.arcgis.com/>

Page Intentionally Left Blank

4.0 COORDINATION (S5.C.3)

4.1 Summary of Permit Requirements

In order to eliminate barriers to compliance with the terms of this Permit, the County is required to implement internal coordination of municipal stormwater activities among County departments, and external coordination with outside agencies. Minimum performance measures include:

- Update or implement a written intra-governmental (internal) coordination agreement or Executive Directive to facilitate compliance with the terms of the permit.
- Coordination mechanisms among entities covered under an MS-4 NPDES permit to encourage coordinated stormwater-related policies, programs and projects within adjoining or shared areas including:
 - » Clarifying roles and responsibilities for the control of pollutants between physically interconnected MS4s covered by a municipal stormwater permit.
 - » Coordinating stormwater management activities for shared water bodies, or watersheds among permittees to avoid conflicting plans, policies, and regulations.

4.2 Permit Compliance Actions and Activities

Pierce County has established the following components to comply with the Coordination section of the Permit:

√ Implementing a written intra-governmental (internal) coordination agreement (S5.C.3.a)

[Executive Order 2017-01](#) clarifies SWM as the policy and administrative lead for implementation of the Permit. This order directs all Departments to understand and comply with permit requirements. SWM staff provide technical assistance to County Departments and staff requesting compliance assistance. This order was issued under our current Executive does not need to be updated at this time.

√ Coordination of mechanisms and clarification of roles and responsibilities for the control of pollutants between physically interconnected MS4s (S5.C.3.b.i and ii)

The County has established relationships with other Phase I and II Permittees to clarify roles and responsibilities. Pierce County implements coordination with jurisdictions having physically interconnected MS4s. Coordination work occurs through the County's participation in many different regional forums including:

- Phase I Permit Group meetings
- South Sound Phase II NPDES Stormwater Permit Coordinators' Committee
- Stormwater Outreach for Regional Municipalities (STORM)
- Regional Operations and Maintenance Program
- Stormwater Action Monitoring Stormwater Work Group (SAM)
- Puget Sound Ecosystem Monitoring Program Freshwater Workgroup

(4.2 Continued)

Additionally, the County coordinates pollution control activities with other entities (including Ecology, Tacoma-Pierce County Health Department, Pierce Conservation District, and City of Tacoma) as needed.

√ Coordination of stormwater management activities for shared water bodies (S5.C.3.b.ii)

In an effort to coordinate stormwater management activities within shared water bodies, the County provides support to the following watershed councils:

- Puyallup River Watershed Council
- Chambers-Clover Watershed Council
- Key Peninsula /Gig Harbor/Islands (KGI) Watershed Council

Pierce County will also continue to provide staff support to participate on the following groups:

- Ecosystem Coordination Board of the Puget Sound Partnership
- Puyallup – White River Local Integrating Organization
- West Sound Partners for Ecosystem Recovery
- Puget Sound Salmon Recovery Council
- Puget Sound Ecosystem Monitoring Program
- Stormwater Action Monitoring (SAM)
- American Public Works Association (APWA) Stormwater Management Committee
- Alliance for a Healthy South Sound
- WRIA 10/12 Salmon Recovery Lead Entity
- Shellfish Districts (Burley, Filucy, Minter, Rocky, and Vaughn)
- East Tacoma/Swan Creek group

5.0 PUBLIC INVOLVEMENT AND PARTICIPATION (S5.C.4)

5.1 Summary of Permit Requirements

The Permit Public Involvement section requires the County to provide ongoing opportunities for public involvement and participation in development of the SWMP including the following components:

- Creation of opportunities for the public, including overburdened communities, to participate in the decision-making processes involving the development, implementation and update of the County's SWMP and Stormwater Management Action Plan (SMAP).
- Post the SWMP Plan and the MS4 Permit Annual Report on the County's website no later than May 31, each year.

Pierce County staff respond to citizen inquiries and conduct inspections at a variety of businesses and residential communities that may be a source of, or impacted by, stormwater pollution. County staff provide information to citizens to encourage them to engage in the protection of stormwater and surface waters. The County also participates in multi-agency programs that support salmon recovery and have direct involvement with overburdened communities.

5.2 Permit Compliance Actions and Activities

Pierce County has established the following components to comply with the Public Involvement section of the permit:

√ **Creating opportunities for public involvement (S5.C.4.a)**

The goal is to increase public understanding and involvement in water quality improvement programs and understand their ability to influence priorities in their watersheds. A current version of the SWMP Plan is available on the County's webpage for public review and comment. County staff at all levels share information with the public in a variety of settings. County staff are encouraged to engage with the public and to provide information about stormwater management.

To provide additional information to the public on protecting stormwater, SWM staff will work with County Communications staff to create an ArcGIS story map during 2022. This will be available to the public online and will be a visual representation of the SWMP.

√ **Posting of SWMP Plan and Annual Report (S5.C.4.b)**

The 2021 SWMP and 2020 Annual Report were posted at the following link on SWM's website by May 31, 2021:

<https://www.piercecountywa.org/1855/Managing-Stormwater-Runoff>

The 2022 SWMP Plan and 2021 Annual Report will be posted on the County's SWM website following submittal to Ecology and no later than May 31, 2022.

6.0 CONTROLLING RUNOFF FROM NEW DEVELOPMENT, REDEVELOPMENT, AND CONSTRUCTION SITES (S5.C.5)

6.1 Summary of Permit Requirements

This section of the Permit requires implementation of specific programs to prevent and control the impacts of stormwater runoff. Minimum performance measures include the following:

- For applications submitted prior to July 1, 2021, which have not started construction by July 1, 2026, and applications submitted prior to December 5, 2015, which have not started construction by July 1, 2021, the County will continue to implement the following programs approved under the 2013 Phase I Municipal Stormwater Permit until July 1, 2021:
 - » Pierce County Code Title 17A, as effective on December 5, 2015
 - » Pierce County Code Title 17B, as effective on December 5, 2015
 - » Pierce County Stormwater Management Manual and Site Development Manual, as effective December 5, 2015
 - » Pierce County Memorandum “Policy to Buy into Regional Stormwater Ponds,” as effective October 27, 2015

Site and Subdivision Scale Requirements:

- Minimum requirements, thresholds, and definitions in *Appendix 1* of the Permit for new development, redevelopment, and construction sites shall be included in ordinances or other enforceable documents adopted by the local government.
- Local requirements shall include the following requirements, limitations, and criteria: Site planning requirements, BMP selection criteria, BMP design criteria, BMP in-feasibility criteria, LID competing needs criteria and BMP limitations.

Submit draft enforceable requirements, technical standards and manuals that correspond to updates identified in (*Appendix 10, Part 2*) of this Permit to Ecology (*no later than July 1, 2020*).

Adopt and make effective a local program that meets the requirements listed in S5.C.5.b.i through ii. (*No later than July 1, 2021*)

Include legal authority to inspect private stormwater facilities and enforce maintenance standards for all new development and redevelopment approved under the provisions of this section of the permit.

Include permitting process with site plan review, inspection, and enforcement capability to meet permit conditions for both private and public projects.

Make Ecology’s electronic Notice of Intent (NOI) documents for construction and industrial activities available, as applicable to project proponents.

Ensure training of staff whose primary job duties are implementing the program to control runoff from new development, redevelopment and construction sites, and document the training.

6.2 Permit Compliance Actions and Activities

Pierce County Planning and Public Works Department, Development Engineering, leads the development, administration, and enforcement of development standards. The following describes permit-required actions and activities that meet the minimum requirements of the "Controlling Runoff from New Development, Redevelopment and Construction Sites," section of the Permit:

√ **Adopt and make effective a local program with ordinances or other enforceable documents (S5.C.5.b.i, ii, iii and iv)**

The authority to regulate development is created by the adoption of ordinances and other enforceable policies, procedures, and guidance documents. Runoff control occurs through implementation of permit requirements and achieving equivalency with Department of Ecology's Stormwater Management Manual for Western Washington (SWMMWW). The following regulations and rules have been adopted for development within Pierce County:

- [Pierce County Code Title 11.05, Illicit Stormwater Discharges.](#)
- [Pierce County Code Title 17A, Construction and Infrastructure Regulations – Site Development and Stormwater Drainage](#)
- [Executive Order Concerning Effective Stormwater Management, Pierce County Washington \(EO 2017-01\)](#)
- [Pierce County Stormwater Management and Site Development Manual \(July 1, 2021\)](#)

√ **Legal authority to inspect private stormwater facilities and enforce maintenance standards for all new development and redevelopment approved by the local program (S5.C.5.b.v.)**

During 2020 and 2021, Pierce County Development Engineering led the update process for the Pierce County Stormwater Management and Site Development Manual ([PCSMDSM](#)). Following discussions and review by Ecology for equivalency to the Western Washington Stormwater Manual, the PCSMDSM was considered equivalent and approved for use by Pierce County Council starting July 1, 2021. (Ordinance No. 2015-48s)

- [Pierce County Code Title 17A, Construction and Infrastructure Regulations](#) – Site Development and Stormwater Drainage. The regulations are equivalent to SWMMWW in mitigating stormwater impacts from development. They make low impact development principles and low impact development best management practices the preferred and commonly used approach.
- [Pierce County Code Title 17B, Construction and Infrastructure Regulations](#) – Road and Bridge Design and Construction Standards. This code contains uniform technical requirements for the design and construction of roads, bridges, shared accesses, alleys, driveway approaches, gates, and associated appurtenances. They establish minimum infrastructure construction requirements, including adequate access to facilities to allow maintenance.

√ **A process of permits, site plan review, inspections, and enforcement capability to meet permit conditions during and post construction for public and private new development and redevelopment. (S5.C.5.b.vi.)**

Pierce County's formal program to prevent and control the impacts of runoff from new development, redevelopment and construction activities has several metrics that we are required to report on.

Pierce County will continue to review stormwater plans, inspect construction sites during pre-construction and construction, and impose enforcement as needed during 2022. During 2022, the County is managing maintenance activities to inspect all permanent stormwater treatment and flow control BMPs/facilities, and catch basins, in new residential developments every six months, until 90% of the lots are constructed (or when construction has stopped and the site is fully stabilized). The purpose of these inspections to identify maintenance needs and enforce compliance with maintenance standards as needed.

Process for Permitting

Pierce County has incorporated a system of codes and permits addressing construction and development activities (residential, commercial, industrial, subdivisions, roadways, utilities, etc.). Permit Technicians and/or Development Engineering staff review permit applications and related scopes of work (reference Title 17A Construction and Infrastructure Regulations – Site Development and Stormwater Drainage, sections 17A.10.050 Exemptions, 17A.10.070.B Site Development Permit Required, and 17A.10.070.C Site Development Permit Not Required).

Pierce County's permit process links permits/applications for a project site together in the PALS+ permit tracking database. The link benefits the project proponent by allowing progress tracking. It also benefits the regulatory process. Reviewers can more easily understand the scope of the project and apply access, implementation of low impact development BMPs for controlling stormwater runoff and stormwater quality, grading, underground injection controls, and permanent stabilization of a site. Site development permits may not be issued until after approval of other permits or applications – including wetland review, landslide hazard review and/or State Environmental Policy Act (SEPA).

Fees cover the Planning and Land Services Department's costs (*Title 2, Section 2.05 Planning and Land Services and Assessor-Treasurer Development Review, Inspection and Application/Processing Fees*), including site plan review, inspection, and performance monitoring for larger projects.

Process for Site Plan Review

The Stormwater Site Plan Review process occurs during the review of a site development permit. This process begins when complete plans are submitted. The plans must include site development drawings, the construction SWPPP narrative, a maintenance and source control manual, and a drainage report. An incomplete submittal will not be accepted. Plans that do not provide sufficient stormwater control and maintenance require revision before approval.

Site development submittals are reviewed for conformance with Title 17A, the Stormwater Management

and Site Development Manual, Title 17B Construction and Infrastructure Regulations – Road and Bridge Design and Construction Standards and Title 18E Development Regulations – Critical Areas).

At a minimum, the review determines the following:

- Applicable Minimum Requirements
- Plan level (Abbreviated, Advanced Abbreviated, or Drainage Control)
- Proper selection of BMPs
- Integration of the BMPs in the proposed project grading, access, parking, road building, and storm facility construction as reflected in the site development drawings.
- Integration of the selected BMPs in the SWPPP, and implementation of selected BMPs into the maintenance covenant and maintenance and source control manual.
- Underground injection control registration

Site disturbance may not occur before permit approvals are final. A complete permit for development includes development drawings, drainage reports, plan documents, financial guarantees and easements.

Recordkeeping

PALS+ is the permitting database used by Pierce County Planning department. The database tracks permit documents including: site development submittals, reviews, inspections, enforcement actions, easements and bonding information.

Inspection/Enforcement

Pierce County Planning and Public Works Department, Development Engineering, has developed a General Site Development Construction Inspection Process Policies and Procedures Manual describing inspection authority, maintenance of files, inspection process, inspection criteria, pre-acceptance review, re-inspection, enforcement, and project approval processing.

A series of additional policies has also been developed regarding inspections and enforcement:

- [PALS DE Performance Monitoring Inspection Process DE POL 5100](#) – Describes the Performance Monitoring Inspection Process applicable to all permitted site development projects of sufficient scale to require any form of Maintenance Guarantee. The policy describes the process and procedures for scheduling, completing, tracking, and administering all inspections required throughout the Maintenance Bonding period.
- [PALS DE Enforcement Strategy for Permitted Projects, DE POL 5200](#) – Describes the enforcement strategies and mechanisms used with respect to any permitted site development project found to be in non-compliance with the terms and conditions of the project permit(s), their parent regulations, or the approved plans associated with the project.
- [PALS DE Residential Site Development Inspection Process DE POL 5301](#) – Specifies the requirement for a separate Site Development Permit for each single-family residential building site unless exempt per section PCC 17A.10.050.

- [PALS General Site Development Construction Inspection Process](#) – Prescribes inspection procedures except for those permitted as single family residential.
- √ **Make Ecology’s Notice of Intent (NOI) documents for construction and industrial activities available, as applicable to project proponents (S5.C.5.b.vii)**

Information concerning NPDES Construction and Industrial General Stormwater Permits, including a link to the NOI, is provided during the applications process.

- √ **Ensure training of staff whose primary job duties are implementing the program to control runoff from new development, redevelopment and construction sites, and document the training. (S5.C.5.b.viii.)**

All Development Engineering review engineers are trained and experienced with the requirements mandated under the current stormwater management manual. Likewise, our site development inspectors maintain current CESCL certifications. All inspectors hired since 1998 have been required to complete the Development Engineering Inspector Training Program and all are qualified and experienced inspectors. Ongoing Stormwater Manual and NPDES training is provided to Development Engineering Technical Staff as opportunities arise.

Page Intentionally Left Blank

7.0 STORMWATER PLANNING (S5.C.6)

7.1 Summary of Permit Requirements

The *Stormwater Planning* section of the Permit requires the County to implement and document a program to inform and assist in the development of policies and strategies as water quality management tools to protect and improve receiving waters.

- Coordination with Long Range Plan Updates
- Low Impact Development code-related requirements
- Stormwater Management Action Planning

√ Coordination with Long Range Plan Updates

Pierce County is currently updating the comprehensive plan to better coordinate and integrate stormwater planning with long-range land use planning. This is a multi-year process. Updates will include: background information for context and understanding within the Comprehensive plan; information on the types of soils with regard to stormwater infiltration and development; several new policies under the Environment, Utilities, and Land Use Elements; and clean-up of existing reference materials that have been superseded by more recent adopted plans.

Efforts to identify suitable land were focused in the Clover Creek watershed, primarily for stream enhancement projects which would directly benefit water quality within the stream.

Clarks Creek TMDL resulted in higher priorities for WQ retrofits in that area. In addition, we have identified a potential WQ retrofit for the Clover Creek watershed as part of the Clover Creek TMDL Alternative planning effort (ongoing).

√ Low Impact Development Code-Related Requirements

Pierce County continues to design and implement codes, rules and ordinances which make LID the preferred and commonly-used approach to site development.

√ Stormwater Management Action Planning

SMAP planning is currently underway, but a plan document has not yet been prepared. The County secured a contract with Brown and Caldwell in October 2021 to support in this effort, and fully expects to have a completed plan before the December 2022 deadline. The SMAP is being prepared for a subarea of Spanaway Creek. Selection of an alternate watershed is not proposed.

8.0 STRUCTURAL STORMWATER CONTROLS (S5.C.7)

8.1 Summary of Permit Requirements

The County is required to implement a Structural Stormwater Control program to prevent or reduce impacts to waters of the state caused by discharges from the MS4. These impacts include disturbances to watershed hydrology and stormwater pollutant discharges.

The program shall consider impacts caused by stormwater discharges from areas of existing development; including runoff from highways, streets and roads owned or operated by the County; and areas of new development, where impacts are anticipated as development occurs. This permit term a minimum level of effort defined with a point metrics has been introduced.

Minimum performance measures include:

A program to control stormwater impacts not adequately controlled by other required actions of the SWMP including new flow control facilities, new water quality treatment facilities, new LID BMPs, retrofits of existing facilities, property acquisition to provide water quality or flow control benefits, and maintenance with capital construction costs >\$25,000.

A description of Structural Stormwater Control Program goals in the SWMP Plan that include: geographic scale of the planning process, issues and regulations addressed, steps in the planning process, types of characterization information considered, budgets, the public involvement process, and a description of the prioritization process, procedures and criteria used to select the Structural Stormwater Control projects.

The preparation of a list of planned individual structural stormwater control projects scheduled for implementation during the term of the Permit and submitted with each Annual Report

Achieve 300 SSC Program points, calculated as follows (no later than December 31, 2022):

- 225 design-stage retrofit incentive points
- 75 complete or maintenance stage incentive points

8.2 Permit Compliance Actions and Activities

Pierce County implements a Structural Stormwater Controls Program addressing the prevention and reduction of impacts to waters of the state caused by discharges from the County's MS4. Project prioritization relies on assessments regarding receiving water body conditions, anticipated benefits of the project, and regulatory compliance needs.

Pierce County Ordinance No. 2006-115s directed the SWM Utility to produce an annual six-year Surface Water Improvement Plan (SWIP). The SWIP serves to inform the County Council, their staff members, other departments, and the public about the scope, cost, funding and status of surface water improvement projects. This includes proposed SWM structural stormwater control projects. The project ranking criteria considers flooding, water quality, habitat, and other factors.

The SWIP outlines Pierce County's 2021-2025 capital project accomplishments and a plan for these projects, including information detailing funding sources. The annually updated SWIP is the primary budget work plan for surface water improvement capital projects in Pierce County.

Information regarding Surface Water Management (SWM) project plans and may be found at this link:

<https://www.co.pierce.wa.us/1827/Our-Projects>

SWM capital projects have three local funding sources that are significantly augmented with grant funding. Internal funds come from SWM Utility Service fee, Pierce County Real Estate Excise Tax, and the Flood Control Zone District. Projects identify funding during planning. Project descriptions include proposed funding sources. Projects identified for grant funding will not move into final stages, or construction, if the County's grant applications are unsuccessful. The project will remain on the list and be proposed for additional grants in subsequent years. Larger projects may be phased to allow funding to be spread over several budget years.

The County maintains a list of Permit-related structural stormwater control projects. The project tracking system includes the technical information outlined in Appendix 12 of the NPDES permit. Updates to Appendix 12 and final data submittals to Ecology occur as part of the County's Annual Report.

The following Structural Stormwater Control Projects have been completed during the current permit term. More details may be found here: [2021-2025 Project List](#)

- **1. Brookdale Road/Clover Creek Outfall Retrofit, (Project #D442)**
This \$530,000 project involves a new treatment facility (retrofit installation of Contech Cartridge Filter Vaults at two outfall locations) of an older stormwater system without water quality treatment that discharges directly to the North Fork of Clover Creek. This project was completed in 2021.
- **2. Diru Creek Water Quality Retrofit at 67th Ave. Ct. E., (Project #D810)**
This \$172,000 project includes the installation of a water quality vault on 67th Ave. E. between 104th St. E. and Pipeline Road. Engineered plans meet Basic Treatment Menu Standards. Project was constructed in 2019.
- **3. Diru Creek Water Quality Retrofit at 64th Ave Ct. E., (Project #D811)**
This project involves the installation of a water quality vault on 64th Ave E between 104th St. E. and Pipeline Road. The project cost is estimated to be \$119,000. Engineered plans meet Basic Treatment Menu Standards. Project was constructed in 2019.
- **4. Woodland Creek 104th St. E. Stormwater Treatment System, (Project #D411)**
This project will involve construction of an additional detention facility to reduce flooding on Woodland Creek and adjacent roads and property. Location is along Woodland Ave at the intersection of 104th St. E. This project was constructed in 2020.

9.0 SOURCE CONTROL PROGRAM FOR EXISTING DEVELOPMENT (S5.C.8)

9.1 Summary of Permit Requirements

The Source Control Program for Existing Development section of the Permit requires the County to implement an ongoing program to reduce pollutants from areas of existing development in areas that discharge to the MS4. Permit requirements for this section include:

- Enforcement of ordinances, or other enforceable documents (*updated and made effective no later than August 1, 2021*), require applicable operational source control BMPs for pollutant generating sources associated with existing land uses and activities. This subsection requires the use of source control BMPs in Volume IV of the Stormwater Management Manual for Western Washington, or a functionally equivalent manual approved by Ecology.
- Identification of publicly and privately owned institutional, commercial and industrial sites which have the potential to generate pollutants to the MS4. A generated source control inventory of businesses and/or sites identified based on the presence of pollutant-generating activities (*refer Appendix 8 in the Permit*). The list also includes additional sites identified by complaint response (including home-based businesses and multi-family sites). This inventory shall be updated at least once every 5 years.
- The implementation of an inspection program for sites listed on the inventory and provide information (*by mail, telephone, electronic communication or in person*) about activities that may generate pollutants and the source control requirements applicable to those activities.
- Annually, complete inspections of 20% of the inventoried sites. Follow-up compliance inspections may count toward this requirement. Sites identified by legitimate complaints must also undergo inspections.
- Implement a progressive enforcement policy requiring sites to be compliant with stormwater requirements within a reasonable time period.
- Staff responsible for implementing the source control program shall receive training to conduct these activities. This ongoing training shall cover legal authority, source control BMPs and their proper application, inspection protocols, lessons learned, typical cases and enforcement procedures.
- The County will document and maintain records of the training provided and staff trained.

Page Intentionally Left Blank

9.2 Permit Compliance Actions and Activities

Pierce County has established the following components to comply with the Source Control Program for Existing Development section of the Permit:

√ Enforcement of local ordinances (S5.C.8.b.i.)

The enforcement of ordinances, or other enforceable documents enabling the County to implement a source control program for existing development, is established by the following:

- [Pierce County Code, Illicit Stormwater Discharges \(PCC 11.05\)](#)
- [Executive Order Concerning Effective Stormwater Management, Pierce County Washington \(EO 2017-01\)](#)
- [Revised Manual Titled "Pierce County Stormwater Management and Site Development Manual \(PCSMSDM\)](#), for equivalency with Ecology's SWMMMWW and adopted use on July 1, 2021

The County will continue to use these documents during 2022 to enforce the source control program. Staff in the Inspections and IDDE sections will continue working together to update and streamline the enforcement program during 2022. This includes reviewing current policies, drafting additional enforcement language and revising policies to add consistency across the enforcement program. During 2021, staff met with other permittees to share information on enforcement policies and began revising policies and procedures. This work will continue during 2022 with the hiring of a compliance program manager.

√ Implement program and develop/maintain inventory of inspection sites (S5.C.8.b.ii.)

The County continues to implement its program to identify commercial and industrial sites which have the potential to generate pollutants to the MS4 and groundwater. Under this program SWM maintains a source control inventory of businesses and/or properties identified as conducting activities that are pollutant generating and may impact the MS4 or groundwater through Underground Injection Control (UIC). The inventory includes home based and multi-family sites, county owned and or operated facilities, other public entities such as schools and parks, as well as sites identified through field observations or complaints as potential pollutant generating.

Pierce County located sites via windshield surveys and used The Standard Industrial Codes (SIC) and North American Industry Classification System (NAICS) in Appendix 8 of the Permit (along with County Assessor assigned Land Use Codes) to generate the original source control inventory.

The inventory includes sites that discharge to the County's MS4 as well as directly to ground via UIC structures or other means such as infiltration ponds. The inventory currently includes over 1,600 sites. The inventory undergoes review and update from bond releases and inspector reports on a routine and continuous basis. Potential pollution generating sites identified through complaint calls are added to the source control inspection inventory in EAM.

√ Implementation of inspection program (S5.C.8.b.iii.)

Residential, commercial and industrial sites identified by Pierce County Source Control Program, that also have stormwater control BMPs, undergo inspections of operational BMPs and onsite drainage facilities. This

process ensures the proper implementation and maintenance of operational and structural source control BMPs.

SWM updated the Inspector's Manual into a digital format during 2021 as a way to make it more accessible and easier to use. Standard operating procedures for source control inspection are described in the Water Quality Inspector's Manual and [SWM Source Control Policy, POL-2011-03](#).

The presence of insufficient BMPs or maintenance requirements trigger written notices. These notices provide details regarding goals of compliance, including implementation of source control measures described in the PCSMSDM to reduce pollutants in runoff from areas that discharge to the MS4.

In 2021, Pierce County conducted source control inspections at approximately 890 sites listed in the source control inventory. This figure includes all sites identified through legitimate complaints.

During 2022, the County expects to inspect approximately the same number of source control sites and will use the EAM database to track compliance status and follow-up actions of the inspection sites.

During 2021, SWM staff coordinated with EAM staff to improve functionality of the database. Part of this functionality includes adding information into the IDDE Survey123 to add new sites directly to EAM. This will make the process of updating EAM more efficient. The final upgrade is expected to be completed during 2022.

√ **Implementation of a progressive enforcement policy (S5.C.8.b.iv.)**

Per SWM [Water Quality Inspection Response Procedures Flow Chart, November 23, 2020](#), each inspector uses prescribed criteria to rate the status of compliance at pollutant-generating sites. These procedures provide a mechanism for compliance that includes education and technical assistance before moving to enforcement. These procedures establish Pierce County's progressive enforcement procedures. The ordinance supporting this program is PCC11.05, EO 2017-01, and Ordinance No. 2015-48s.

PCSMSDM Volume IV (*Source Control*) and Volume V (*Runoff Treatment BMPs*) provide compliance guidance for the program. EAM allows tracking, documentation, and maintenance of all source control inspection and enforcement efforts.

Sites inspected during 2021 that were not adequately implementing required BMPs received technical assistance letters as well as follow up information when needed. Follow-up may include: phonecalls, reminder letters, additional inspections, warning letters and Notices of Violations. Inspection reports, site visit findings, warning letters, notices of violation and other site information is tracked in the EAM database.

During 2020, the County began evaluating the current enforcement program for process improvements. This process continued during 2021. During 2021, the WQ team continued to move this process forward by reviewing current documentation, updating policies and procedures, and designating a compliance program manager position. During 2022, the goal is to finalize documents, meet with the County's Directions Team to share their findings and, if required, propose changes to our current stormwater code. The goal is to have an updated compliance program in effect by the end of 2022.

√ **Training program for inspection staff (S5.C.8.b.v.)**

Pierce County Staff implementing the source control program receive on the job training through written procedures and field visits with experienced staff. Supplemental source control training is provided as needed during staff meetings and occasional field visits. Topics include permit applicability, inspection procedures, legal authority, PCSMSDM, and review of pertinent case studies. See SWM [Procedures for Documenting and Tracking NPDES Stormwater Training, POL-2013-01](#).

10.0 ILLICIT CONNECTIONS AND ILLICIT DISCHARGE DETECTION AND ELIMINATION (S5.C.9)

10.1 Summary of Permit Requirements

The Illicit Connections and Illicit Discharge Detection and Elimination (IDDE) section of the Permit requires the County to continue implementing an ongoing program designed to prevent, detect, characterize, trace, and eliminate illicit connections and illicit discharges into the MS4. The minimum performance measures include:

- Procedures for reporting and correcting or removing illicit connections, spills and other illicit discharges when suspected or identified, including pollutants entering the MS4 from an interconnected, adjoining MS4.
- Continue to evaluate, and update if necessary, existing ordinance or other regulatory mechanism to effectively prohibit non-stormwater illicit discharges into the County's MS4.
- Implement procedures for conducting investigations of the Permittees MS4 including field screening and methods for identifying potential sources. Field screening methodology applies to the characteristics of the MS4 and water quality concerns. Conduct field screening of, on average, 12% of the known conveyance systems each calendar year. Track the total percentage of the MS4 screened annually beginning on August 1, 2019.
- Properly train staff who are responsible for identification, investigation, termination, cleanup and reporting of illicit discharges, including spills and illicit connections, to conduct these activities.
- Participate in a regional emergency response program or develop and implement procedures to investigate and respond to spills and improper disposal into the MS4 owned or operated by the County.
- Track and maintain records of the IDDE activities conducted to meet the requirements of the Permit.

10.2 Permit Compliance Actions and Activities

Pierce County has established the following compliance components to comply with the Illicit Connections and Illicit Discharge Detection and Elimination (IDDE) section of the Permit:

- Procedures for reporting and correcting or removing illicit connections, spills and other illicit discharges when suspected or identified (S5.C.9.a.)
- Program for detecting and identifying illicit connections and non-stormwater discharges to the MS4 (S5.C.9.c.i, ii, iii.)
- Response to illicit connections and illicit discharges including spills (S5.C.9.d.)
- Program to investigate and respond to spills or improper disposal into the MS4 (S5.C.9.f.)

SWM Staff respond to Illicit stormwater discharge reports received via field screening e-mail, internal County staff communication, after-hours reports, in-person communication, personal observation,

inspection program referrals, and through the IDDE Hotline (253) 798-4274. During 2021, Pierce County implemented [SeeClickFix](#). This application allows users to submit reports real time using ArcGIS technology. IDDE staff are receiving reports through this application as well.

The Pierce County Surface Water Management (SWM) Illicit Discharge Detection and Elimination Field Procedures and Response Plan (IDDE Plan) details the on-going program to address illicit discharges, including spills and illicit connections, into the MS4 and natural drainage systems. The [SWM Water Quality IDDE Response Procedures Flow Chart](#) addresses permit requirements in S5c.9.d of the permit. These procedures continue to be updated during 2022 to increase consistency and effectiveness as part of the County's review.

To meet Permit requirements (S5.C.9.c.i), Pierce County inspects, evaluates, and investigates MS4 drainage basins and targeted watersheds to identify and eliminate potential sources of stormwater pollution using two primary field screening protocols:

- IDDE Field Screening
- Road Operations Stormwater Catch Basin/Inlet Field Screening

The IDDE Field Screening component traces sources of pollution using GIS mapping tools and field-investigation to find pollution sources that are impacting the MS4. When pollution sources are located, they are addressed through educational and/or enforcement efforts aimed at preventing or reducing polluting behaviors and operations. During 2021, IDDE conducted field screening of three TMDL areas listed in Appendix 2 (Alderton, Salmon and Swan). Screening includes a combination of mapping, desk top analysis, and water quality sampling to determine potential sources of bacteria from the MS4 in Pierce County waterbodies listed in Appendix 2 of the Phase 1 Permit. Field staff also screened areas within the Puyallup watershed during 2021.

Planning and Public Works Maintenance & Operations Division has established an annual program for the assessment and cleaning of County-owned or operated catch basins (CB) and inlets in rights-of-way to reduce stormwater impacts. Assessments and cleaning efforts use schedules which meet and exceed minimum maintenance standards that are as protective, or more protective, of facility function than those specified in the PCSMSDM. During CB assessment work crews field screen for the presence of illicit discharges or illicit connections and report any found to the IDDE section.

√ Implement enforcement of ordinances and regulations to prohibit IDDE (S5.C.9.b.)

County staff reference the following documents as enforcement tools in the IDDE program:

- [Pierce County Code, Illicit Stormwater Discharges \(PCC 11.05\)](#)
- [Executive Order Concerning Effective Stormwater Management, Pierce, County Washington \(EO 2017-01\)](#)
- [Pierce County Stormwater Management and Site Development Manual \(PCSMSDM\), \(Ordinance No. 2015-48s\), specifically Volume VI, Source Control.](#)

√ Training program for IDDE Staff (S5.C.9.e.)

IDDE staff receive training in proper investigations, recordkeeping, and notification of IDDE. County staff responsible for IDDE investigations receive training through at least one of the following:

- Pierce County's on-going IDDE training program.
- Certified Erosion and Sediment Control Lead (CESCL) curriculum including a IDDE component.
- Facility SWPPP-based Spill Prevention & Emergency Cleanup Plans (SPECP) documents
- [Surface Water Management Division's Spill Response Policy and Procedures \(POL-2011-002A\)](#)
- [Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual, May 2020](#)
- [IDDE New Employee Orientation Video](#)

Trainings deliver IDDE awareness, assessment, response, notification, and cleanup protocols. Refresher classes are scheduled as needed based on inspection results or when processes/procedures change.

During 2021, IDDE staff worked with Communications and Human Resources staff to create an IDDE training video that will be shown to all employees during New Employee Orientation. The video describes what IDDE is, gives information on how to report, and reminds employees that we are all responsible for reporting potential illicit discharges. The video will be added to New Employee Orientation during the first quarter of 2022. The video will also be posted on the Water Quality website so that citizens may also watch it.

√ Procedures to investigate and respond to spills or improper disposal into the MS4 (S5.C.9.f.)

Pierce County Spill response procedures achieve the following:

- Detail procedural framework for spill responses.
- Define roles and responsibilities (both internal and external).
- Provide mechanisms for the coordination with emergency responders and outside agencies.
- Standardize reporting procedures, investigations, documentation, and follow up procedures, and outline training requirements.

Maintenance and Operations spill response procedures are outlined in [SWM Spills Response Procedure, POL-2011-002A](#).

√ IDDE inspection, response and enforcement recordkeeping (S5.C.9.g.)

The IDDE program recordkeeping utilizes ArcGIS Online (AGO) Survey123 application to track the number and type of identified illicit stormwater discharges, spills, inspections, investigations. The ArcGIS Online(AGO) Survey 123 application was designed to collect IDDE data via web or mobile

devices and replaced the previous system in 2019. Standardized information, consistent with the IDDE information fields necessary to complete annual permit reports, are provided. Additional case-related details imported into AGO may include photo documentation and progress notes. SWM and Maintenance staff will continue to use Survey123 during 2022 to track and report IDDE discharges. Sites verified to be sources of pollution will be added into the EAM database as source control sites.

11.0 OPERATIONS AND MAINTENANCE PROGRAM (S5.C.10)

11.1 Summary of Permit Requirements

The *Operations and Maintenance (O&M)* section of the Permit requires the County to implement and document a program to regulate and conduct maintenance activities by the Permittee to prevent or reduce stormwater impacts. The minimum performance measures include the following components:

- Implementation of maintenance standards that are as protective, or more protective, of facility function than those specified in the Stormwater Management Manual for Western Washington, or a Phase I program approved by Ecology (S5.C.10.a).
- Evaluate and, if necessary, update existing ordinances or other enforceable documents requiring maintenance of all stormwater treatment and flow control BMPs/facilities regulated by the County; implementation of an on-going inspection program to annually inspect all stormwater treatment and flow control BMPs/facilities regulated by the County to enforce compliance with adopted maintenance standards as needed based on inspection; and cleaning of catch basins regulated by the County if they are found to be out of compliance with established maintenance standards (S5.C.10.b).
- Implementation of a program for the maintenance of stormwater facilities own or operated by the County (S5.C.10.c).
- Implementation of a program to perform maintenance of catch basins owned or operated by the County (S5.C.10.d).
- Implementation of practices, policies, and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance activities under the functional control of Pierce County. Document the practices, policies, and procedures by December 31, 2022 (S5.C.10.e).
- Implementation of an ongoing training program for employees of Pierce County who have primary construction, operations, or maintenance job functions that may impact stormwater quality (S5.C.10.f).
- Preparation of Stormwater Pollution Prevention Plans (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by Pierce County in areas subject to this permit that are not required to have coverage under the General NPDES Permit for Stormwater Discharges associated with Industrial Activities or another NPDES permit that authorizes stormwater discharges associated with the activity. As necessary, update SWPPPs no later than December 31, 2022 (S5.C.10.g).
- A process of maintaining records of inspections and maintenance or repair activities conducted by the County (S5.C.9.f).

11.2 Permit Compliance Actions and Activities

Pierce County Compliance has established the following components to comply with the Operations and Maintenance (O&M) section of the Permit:

√ Adopting maintenance standards equivalent to the Washington Department of Ecology's Stormwater Management Manual of Western Washington (SWMMWW) (S5.C.10.a.i.)

The [Pierce County Stormwater Management and Site Development Manual \(PCSMSDM\)](#) provides operations and maintenance standards which are as protective, and in some cases more protective, than those specified in the SWMMWW. Pierce County adopted the PCSMDM and began implementing the updated manual on July 1, 2021. This included working with Ecology to ensure the manual is equivalent to the SWMMWW.

√ Implementing operation and maintenance standards during annual inspections (S5.C.10.a.ii.)

Unless there are circumstances beyond Pierce County's Control, when an inspection identifies an exceedance of the maintenance standard, maintenance shall be performed:

1) Within one year for typical maintenance (except catch basins).

2) Within six months for catch basins.

3) Within two years for maintenance that requires construction of less than \$25,000.

Circumstances beyond Pierce County's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedance of the required timeframe, Pierce County documents the circumstances by describing how they were beyond the Permittee's control.

√ Maintenance of private stormwater facilities regulated by the County (S5.C.10.b)

The requirements of this section involve combined efforts. Stormwater treatment and flow control BMPs/facilities regulated by Pierce County per S5.C.10.b.ii undergo inspections by the SWM Water Quality Inspection Unit. Facilities associated with new residential developments undergo inspections by Planning and Land Services. A series of County policies outline this work:

- [PALS Development Engineering Policy DE POL 5100 Performance Monitoring Inspection Process](#)
- [PALS Development Engineering Policy DE POL 5200 Enforcement Strategy for Permitted Projects](#),
- [Surface Water Management Water Quality Inspection Response Procedures Flow Chart](#)

Pierce County uses EAM exclusively to track inspections and maintenance of stormwater treatment and flow control BMPs and facilities regulated by the County.

√ Maintenance of stormwater facilities owned or operated by the County (S5.C.10.c.)

Of the 1,150 number of known county owned permanent stormwater treatment and flow control BMPs/facilities, 1,135 were inspected during 2021. Maintenance was completed on 552 of these sites in 2021. Maintenance may include removing sediment from structures and pipes, repairing structure and removing invasive or overgrown plants.

Per [SWM Significant Storm Event Procedure, POL-2015-001A](#) spot checks will be performed to assess potential damage and determine maintenance needs after major storm events during 2022.(per S5.C.10.c.ii).

SWM performs facility Stormwater Needs Assessments of stormwater treatment and flow control BMPs/ facilities on properties managed by various County departments and divisions to determine priorities and timing of maintenance needs (Facilities Management, Parks and Recreation, Sustainable Resources, and Ferries and Airports). Pierce County will continue to ensure that PCSMSDM standards are followed when performing Needs Assessments performed on these sites.

√ **Maintenance of catch basins owned or operated by the County (S5.C.10.d.)**

PPW SWM and Maintenance and Operations (M&O) complete annual inspections of over 24,000 municipally-owned stormwater catch basins. These inspections identify facilities needing maintenance and provide baseline data for drainage features asset management program. Inspections also gather operational and structural condition information of each feature. This information is used to update EAM when needed.

√ **Reduce stormwater impacts from lands owned and maintained by the County and road maintenance activities (S5.C.10.e)**

The requirements of this section are completed through combined efforts implemented by several County departments and divisions to reduce stormwater impacts:

- The County owns and manages approximately 1,000 properties, which support flood risk reduction and storm drainage facilities, as well as buildings and structures. PPW M&O implements practices, policies, and procedures to reduce stormwater impacts associated with runoff from these County-owned permanent stormwater treatment and flow control BMPs/facilities.
- Activities necessary to manage these properties often involve the application of both temporary and permanent erosion and sediment control BMP's outlined in the updated [Pierce County Stormwater Management and Site Development Manual](#) (PCSMDM) and the [Regional Road Maintenance Program Guidelines](#).
- M&O employees who have primary construction, operations or maintenance job functions that may impact stormwater quality adhere to the Regional Road Maintenance ESA Program Guidelines and the PCSMSDM. The guidance describes physical, structural, and managerial best management stormwater pollution prevention practices, and addresses the importance of protecting water quality. Implementation of these practices (either singularly or in combination), cause a reduction to water and habitat impacts.
- Annual Inspections, performed by the SWM Water Quality Inspectors on facilities owned or maintained by the County provide detailed technical assistance information and guidance to those employees conducting maintenance on permanent stormwater treatment and flow control BMPs/facilities. Pierce County maintains Stormwater Pollution Prevention Plans (SWPPP) for affected sites to address these concerns.

√ **Ongoing training program for employees with primary construction, operations or maintenance job functions (S5.C.9.f)**

Pierce County will continue to implement an ongoing training program for all employees who have

primary construction, operations or maintenance job functions that may impact stormwater quality. Pursuant to Executive Order No. 2017-01 (Appendix C), various departments are responsible for coordinating, implementing, tracking, and reporting permit-required training components.

In 2021, approximately 100 employees received training related to NPDES Permits, SWPPPs, Spill Response and Reporting and Illicit Discharge identification and reporting procedures. Additionally, 12 new employees completed an introductory level course covering the identification and reporting of spills and illicit discharges to Pierce County's MS4. After March 2020, onsite trainings were cancelled due to remote work requirements enacted in response to Covid-19. Trainings were done virtually using pre-recorded presentations for the remainder of 2020 and during 2021. Training sessions will focus on NPDES Permits (Municipal, Industrial, and Sand & Gravel), SWPPPs, Site Management Plans, spill procedures, notification, and illicit discharge identification and reporting activities. Additional training and follow-up sessions will be conducted if staff processes or procedures change through-out the year. During the first Quarter of 2022, New Employee training will include a short training video describing illicit discharges and how to report them. This will be part of training for all new employees within Pierce County.

Maintenance & Operations provides ongoing training to all affected personnel. This training includes CESCL recertification courses and quarterly safety meetings that cover Regional Road Maintenance ESA Program Guidelines topics, Stormwater and Site Development Manual BMPs and pollution prevention, including BMPs identified in the SWPPP.

All affected Development Engineering staff receive PALS+ training as necessary in their assigned duties. Training modules cover application review, application processing, site plan review, inspections, enforcement, and record keeping duties. ([Training Outline](#)).

√ Implement SWPPPs for County heavy equipment maintenance or storage yards and material storage facilities (S5.C.10.g)

The Water Quality Section continues to prepare and update Stormwater Pollution Prevention Plans (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the County.

The following Pierce County facilities have SWPPPs:

- Sewer and Traffic Operations (STOP)
- Heritage Recreation Center
- Sprinker Recreation Center
- Spanaway Lake Park Maintenance Facility
- Central Maintenance Facility (CMF)
- East County Maintenance Facility (ECMF)
- West County Maintenance Facility (WCMF)
- Mid-County Maintenance Facility (MCMF)
- Chambers Creek Regional Wastewater Treatment Plant
- Tacoma Narrows Airport
- Orting Quarry Site Management Plan
- Pit Sites Site Management Plan

√ Inspection and maintenance records (S5.C.10.h)

O&M inspection and cleaning efforts associated with stormwater facilities owned or operated by the County capture information recorded within various databases. These data include asset identifications, inspection ratings, inspector names, dates/times of inspection, structure, and damage notes. Maintenance Checklists contained within PCSMSDM Volume I (Minimum Technical Requirements and Site Planning) also contribute to compliance documentation.

PPW M&O uses ArcGIS Online Databases to track inspection and maintenance records.

EAM (Enterprise Asset Management) allows tracking of Permit-required O&M inspections, maintenance compliance, and enforcement efforts. Maintenance and repair activity documentation includes generation of work orders, and additional categorization through the assignment of function codes unique to each type of work. EAM also tracks work order status, date of issuance or closure, inspector information, labor reports, and production information.

12.0 EDUCATION AND OUTREACH PROGRAM (S5.C.11)

12.1 Summary of Permit Requirements

The Education and Outreach section of the Permit requires the County to implement a program designed to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. The program also encourages the public to participate in stewardship activities. Pierce County's education program develops and implements local programs and is involved with regional programs. The minimum performance measures include the following elements:

- Implementation or participation in an education and outreach program that uses a variety of methods to target the audiences and topics listed below. The outreach program helps to educate each target audience about the stormwater problem and provides specific actions they can follow to minimize the problem.
- Build general awareness targeting the following audiences and subject areas: general public (including school age children and overburdened communities), and businesses (including home-based and mobile business); general impacts of stormwater on surface waters; impacts from impervious surfaces; hazards associated with illicit discharges and improper disposal of waste.
- Build general awareness targeting at least one of the following audiences and subject areas: residents, landscapers, property managers/owners, school-age children, and businesses (including home-based and mobile); LID principles and LID BMPs; and stormwater treatment and flow control BMPs/facilities.
- To effect behavior change targeting the following audiences and BMPs for the general public, (which may include school age children), and businesses (including home based and mobile businesses) use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps, and other hazardous materials; equipment maintenance; and prevention of illicit discharges.
- To effect behavior change, select one target audience and one BMP targeting the following audiences and BMPs:
residents, landscapers and property managers/owners, school-age children, and businesses (including home-based and mobile businesses)
BMPs:
yard care techniques protective of water quality; use and storage of pesticides and fertilizers and other household chemicals; carpet cleaning and auto repair and maintenance; vehicle, equipment, and home/building maintenance; pet waste management and disposal; LID principles and LID BMPs; stormwater facility maintenance; and dumpster and trash compactor maintenance.
- Create stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities such as stream teams, storm drain marking, volunteer monitoring, riparian planting and education activities.

12.2 Permit Compliance Actions and Activities

A new position was created for permit compliance and outreach during 2020. The position was hired in March 2021. Communications staff also worked with a consultant to create an [NPDES Communications Strategy](#), which was implemented in 2021.

√ **Implementation or participation in an education and outreach program to build general awareness and effect behavior change (S5.C.11.a.)**

√ **Creation of stewardship opportunities and/or partner with existing organizations to encourage resident participation (S5.C.11.b.)**

Pierce County has an education and outreach program aimed at multiple audiences. The goals of this program are to increase awareness about stormwater impacts, effect behavior change, and encourage resident participation. Outreach and Communications staff coordinate with other regional efforts to improve effectiveness of implemented programs. Please refer to additional education and outreach program details provided in the [Outreach Matrix](#). The following describes 2021 education and outreach programs:

- Promotion of the Puget Sound Starts Here campaign aimed at the impacts of stormwater on surface waters (Building Awareness).
- Environmental education programs for school age children introducing curriculum and community service projects related to stormwater impacts on surface waters, the impacts of impervious surfaces and illicit discharges and low impact development (Building Awareness, Behavior Change).
- Providing free workshops for residents on topics such as edible gardens, sustainable living, and composting (Building Awareness, Behavior Change).
- Maintenance of the Let the Rain Soak In program via webpage and publications to provide information concerning installing simple retrofits and reducing impervious surfaces to limit runoff from residential properties (Building Awareness, Behavior Change).
- Implementation of permit-required illicit discharge detection and elimination program (Building Awareness, Behavior Change).
- Partnership with Pierce Conservation District to identify neighborhoods appropriate for the installation of storm drain markers by volunteers (Building Awareness, Behavior Change, Stewardship).
- Inspection of more than 1,500 private and public stormwater facilities annually (Building Awareness, Behavior Change).
- Promotion of household hazardous waste alternatives through programs implemented by Pierce County Sustainable Resources (Building Awareness, Behavior Change).
- Implementation of the Don't Drip and Drive Program (Building Awareness, Behavior Change, Stewardship).

- Development of Natural Yard Care outreach strategies, technical support, and training with City of Tacoma, Tacoma Public Utilities, and WSU (Building Awareness, Behavior Change, Stewardship).
- Implementation of a neighborhood pet waste station program (Building Awareness, Behavior Change, Stewardship).
- Implementation of a tree workshop and sale program with City of Tacoma and Pierce Conservation District (Building Awareness, Behavior Change, Stewardship).
- Maintenance of a fish-friendly car wash webpage for residents of Pierce County (Building Awareness, Behavior Change).
- Implementation of water quality monitoring program (Building Awareness, Behavior Change).
- Participation in three watershed councils (Puyallup River, Chambers-Clover Creek, Key Peninsula-Gig Harbor-Islands) to provide a public forum for watershed-based issues (Building Awareness, Behavior Change).
- Implementation of a solid waste dumpster maintenance program and a moss removal program to reduce stormwater pollution (Building Awareness, Behavior Change).
- Partnered with local conversation district to hold rain barrel workshops for residents (Building Awareness, Behavior Change).
- Coordination with Parks to table at events to promote behavior changes including proper disposal of pet waste and automobile maintenance. (Building Awareness, Behavior Change)

Page Intentionally Left Blank

13.0 COMPLIANCE WITH TOTAL MAXIMUM DAILY LOAD REQUIREMENTS (S7)

13.1 Summary of Permit Requirements

The Total Maximum Daily Load (TMDL), also known as water quality improvement plans, are incorporated into the Phase I Permit section after EPA approves the TMDLs cleanup plan. For stormwater discharges from the County MS4, the TMDL is approved on or before the issuance date of the Permit (or prior to the date that Ecology issues coverage under the Permit, whichever is later). The minimum performance measures include the following components:

- For applicable TMDLs listed in Appendix 2, Pierce County shall comply with the specific requirements identified in Appendix 2. The County shall keep records of all actions required by the Permit relevant to applicable TMDLs within its jurisdiction. The status of the TMDL implementation includes annual report submittals. Each annual report shall include a summary of relevant SWMP and Appendix 2 activities conducted in the TMDL area to address the applicable TMDL parameter(s).

13.2 Permit Compliance Actions and Activities

√ Compliance with specific requirements for applicable TMDLs listed in Appendix 2. (S7.A)

The 2021 Annual Report provides a summary of Total Maximum Daily Load (TMDL) activities conducted and associated parameters of concern (including those actions required by S7.A, Appendix 2). The required actions included high priority field screening for the following TMDL areas:

- Puyallup River– Swan Creek, Salmon Creek, Alderton Creek
- South Prairie Creek – Tributary 1 upstream of SR162; and upstream of SR162 along Spiketon Road, Mundy Loss Road and Spiketon Ditch Road
- Nisqually River – Ohop Creek and Lynch Creek

√ Provide status of TMDL implementation and summary of relevant SWMP and Appendix 2 (S7.A) activities.

During 2020, WQ staff began desktop analysis for screening of high priority areas listed in Appendix 2. This consisted of creating GIS maps of the areas and creating maps for field use. During 2021, IDDE staff investigated and field screened the following tributaries to the Puyallup River: Salmon Creek, Alderton Creek, and Swan Creek. Investigation and field screening consisted of desktop analysis using GIS, creation of an ArcGIS Online (AGO) collector app, finalizing the project charter and scope of work, locating appropriate sample sites, collecting water quality samples to locate and eliminate sources of bacteria entering the County MS4.

Using the Illicit connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual (IDIC) as guidance, Pierce County Water Quality IDDE staff completed field screening in 100% of the MS4 in the Swan, Alderton and Salmon sub-basins, developed a specific team to preform desktop analysis (GIS mapping), drainage investigations (source control inspections) and created a Survey123 (AGO) application to document field screening inspections, and sample analysis to identify sources of bacteria with in the MS4.

The NPDES Phase I Municipal Stormwater Permit, Appendix 2 designates areas discharging via the Municipal separate storm sewer system (MS4) to identify receiving waters as high priority areas for illicit discharge detection and elimination. By July 31st, 2024, Pierce County will Field Screen 100% of Swan Creek, Salmon Creek, Alderton Creek, Ohop Creek, Lynch Creek, Tributary 1 upstream of SR162, Upstream of SR 165 Spiketon Road, Mundy Loss Road, and Spiketon Ditch, for sources of bacteria and implement the schedules and activities identified in S5.C.9 of the Phase I Permit, in response to any illicit discharges found. The results of all bacterial screening conducted in these sub-basins will be included in the annual reports submitted to Ecology.

The County will also contract with the local health department to implement a maintenance and operations program for septic system located in these areas.

The [credit reporting ledger](#) for Clarks Creek TMDL has been updated through 2021. The following website provides additional information on the Clarks Creek TMDL and Pierce County's detailed implementation plan. <https://www.co.pierce.wa.us/5488/Clarks-Creek-TMDL-Project>

Page Intentionally Left Blank

14.0 MONITORING AND ASSESSMENT (S8)

14.1 Summary of Permit Requirements

Provide, in each annual report, a description of any stormwater monitoring or stormwater-related studies conducted by the County during the reporting period. This requirement does not apply any monitoring, studies, or analyses conducted as part of the Regional Stormwater Monitoring Program (RSMP).

Choose no later than December 31, 2020, one of two options for regional status and trends monitoring that the County decides to carry out during this permit cycle: Option #1, make annual payments into a collective fund to implement RSMP small streams and marine near shore status and trends monitoring in Puget Sound; or (2) conduct stormwater discharge monitoring per requirements in S8.C.

Choose one of three options for effectiveness studies monitoring no later than December 31, 2020, that the County decides to carry out during this permit cycle: (1) pay into a collective fund to implement RSMP effectiveness studies; (2) conduct stormwater discharge effectiveness monitoring in accordance with Appendix 9 and S8.C. or (3) both pay into a collective fund to implement RSMP effectiveness studies and independently conduct an effectiveness study that is not expected to be undertaken as part of the RSMP.

14.2 Permit Compliance Actions and Activities

√ Regional Status and Trends Monitoring (S8.A)

During 2021, Pierce County elected Option 1 under Permit Section S8.A.2 and paid \$66,242 into the collective fund for status and trends monitoring. Pierce County will continue to pay into the collective fund during 2022.

√ Management Program Effectiveness and Source Identification Studies (S8.B)

During 2021, Pierce County elected Option 1 under Permit Section S8.B.1 and paid \$121,059 into the collective fund for status and trends monitoring. Pierce County will continue to pay into the collective fund during 2022.



Pierce County
Planning & Public Works

Thank you!

Prepared in compliance with the 2019 Phase I Municipal Stormwater National Pollutant Discharge Elimination System and State Discharge General Permit for discharges from Large and Medium Municipal Separate Storm Sewer Systems (effective August 1, 2019)