

# Stormwater Management Program (SWMP) Plan

March 2020

**CITY OF TACOMA**  
Environmental Services



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# Introduction

## NPDES Municipal Stormwater Permit Overview

On August 1, 2019, the Washington State Department of Ecology (Ecology) issued the 2019-2024 National Pollutant Discharge Elimination System (NPDES) Stormwater Permit for Phase I Municipalities (Permit) to all Phase I Municipalities including the City of Tacoma, City of Seattle, Pierce County, King County, Snohomish County and Clark County. The permit is available to view online at Ecology's website: <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Stormwater-general-permits/Municipal-stormwater-general-permits/Municipal-Stormwater-Phase-I-Permit>

The Permit regulates the discharge of stormwater to surface waters and groundwaters of the state from Tacoma's Municipal Separate Storm Sewer System (MS4). The Permit is designed to protect and improve the water quality of our receiving waters by requiring the City of Tacoma (City) to implement a variety of stormwater management activities.

In 2019, the City was operating under two different versions of the Permit, the 2013 Permit, which expired on July 31, 2019, and the 2019 permit, which became effective on August 1, 2019. The two versions of the permits are similar in many regards but also have some differences. The Annual Report to be submitted by March 31, 2020 has a reporting period of January 1, 2019 to December 31, 2019.

The 2019-2024 Permit includes the following significant changes from the previous Permit:

- Begin to collect size and material for all known MS4 outfalls during normal course of business and complete mapping of all known connections from the MS4 to a privately-owned stormwater system (S5.C.2.b.i,ii.);
- Update the City Stormwater Management Manual (SWMM), requirements and technical standards to include requirements equivalent to the 2019 Ecology SWMM for Western Washington (S5.C.5.b.) and the 2019 Permit;
- Implement a Stormwater Planning program to inform and assist in the development of policies and strategies as water quality management tools to protect receiving waters (S5.C.6). The requirements of this new section will include convening an interdisciplinary team, coordination with long-range plan updates and continued requirements for low impact development codes (S6.C.6.a,b.);
- Achieve 300 SSC Program Points for completing actions and activities that address impacts that are not adequately controlled by the other required actions of the SWMP. SSC Program Points are calculated as prescribed in the Permit Appendix 12. (S5.C.7);
- Provide data for all illicit discharges, spills and illicit connections to include all the information specified in Appendix 14 of the Permit (S5.C.9.g.); and
- Update Stormwater Pollution Prevention Plans for City facilities to include more detailed and site specific information. Updates are required to be completed by December 31, 2022. (S5.C.10.g)
- Follow social marketing practices and methods to develop a behavior change campaign that is tailored to the Permittee's community (S5.C.11.a.ii).

To comply with the Permit and document updates to the City's SWMP, the SWMP Plan has been revised. The SWMP Plan included a public participation process and internal review to provide valuable input and oversight to the program. The revised SWMP Plan guides the City's activities during the permit term from August 1, 2019 through July 31, 2024.

The City will continue to provide annual reports to Ecology to document its Stormwater Management Plan. Environmental Services (ES) Environmental Programs Group is responsible for preparing the annual report and ensuring overall NPDES permit compliance.

### Secondary Permittees within the City of Tacoma

Metro Parks Tacoma, Tacoma Community College and Port of Tacoma are Secondary Permittees under the Permit with independent coverage for discharges from small municipal separate storm sewers contained on their property. Secondary Permittees have different requirements under the Permits and are required to provide their own plans including public education and outreach, public involvement and participation, illicit discharge detection and elimination, construction site runoff controls, good housekeeping and source control requirements for operations and maintenance activities. The City will continue to coordinate SWMP activities with Secondary Permittees.

## Stormwater Management Program Components

The City's SWMP contains the eleven components as outlined in the Permit Section S5 and an additional section to document the stormwater monitoring and assessment requirements of Permit Section S8. The SWMP components are summarized here:

1. **Legal:** The City must have the legal authority to control discharges to and from the municipal storm sewers owned by the City. Chapter 12.08 of the Tacoma Municipal Code (TMC) provides this authority.
2. **Mapping:** The City's stormwater system must be mapped. This work was started under the 1995 permit and is continuing. The City's DART map will be updated with new mapping information as it becomes available.
3. **Coordination:** A written internal coordination agreement is required to facilitate internal cooperation between various City departments and divisions. Coordination with adjacent municipal stormwater permittees is also required. The City coordinates our permit activities with adjacent municipal stormwater permittees and other surrounding municipalities that have interconnected systems or which discharge into or are adjacent to the same surface water bodies that Tacoma discharges into.
4. **Public Involvement and Participation:** The City must have a process to provide opportunities for the public to be involved in the development and implementation of the SWMP. Permit submittal information will be posted on the City's website and opportunities for public input will be provided as appropriate.
5. **Controlling Runoff from New Development, Redevelopment and Construction Sites:** This includes the City's program to prevent and control the impacts of runoff from new development, redevelopment and construction activities. It covers private and public development, including right-of-way improvements. The Permit requires compliance with the Minimum Requirements.
6. **Stormwater Planning:** The City shall have a program to inform and assist in the development of policies and strategies as water quality management tools to protect receiving waters.
7. **Structural Stormwater Controls:** The City shall have a program to prevent or reduce impacts to waters of the state caused by stormwater discharges. The program is intended to address impacts that are not adequately controlled by the other required actions of the SWMP. For this permit cycle, a required level of effort must be demonstrated.

8. **Source Control:** Inspections of pollutant generating sources are required for all sites that are potential pollutant sources, including most commercial and industrial properties. Sites owned by the City will also be inspected. The Permit requires compliance with the source control sections of the SWMM.
9. **Illicit Connections and Discharges:** The City will maintain a program to detect, remove and prevent illicit connections and discharges, including spills into the City's separate storm sewer system. All staff who might observe an illicit discharge will be trained.
10. **Operation and Maintenance:** Maintenance standards and inspection programs are required for public and private stormwater facilities. Best Management Practices (BMPs) are also required to be implemented for the maintenance activities on public lands and roadways to reduce stormwater impacts. The City participates in the Regional Road Maintenance Endangered Species Act (ESA) Program. Stormwater Pollution Prevention Plans (SWPPPs) have been developed for heavy equipment maintenance and storage yards and material storage facilities owned by the City.
11. **Education and Outreach:** The City will engage in Education and Outreach Programs to build general awareness, effect behavior change and promote stewardship opportunities. Target audiences include the general public, including school-age children, businesses, engineers, contractors, developers, and land use planners. During this permit cycle, the City will more robustly consider the needs of overburdened communities.
12. **Stormwater Monitoring and Assessment:** The City pays into a collective fund for the Stormwater Action Monitoring (SAM) Small Streams Status and Trends Monitoring. The City conducts a SWMP Effectiveness Study based on continuing stormwater discharge monitoring at seven outfalls in the Thea Foss Waterway.

## Stormwater Management Mission and Priorities

The City considers itself a leader in responding to the issues of water quality related to urban runoff. As early as 1980, the City conducted experimental water quality testing to identify pollutants in stormwater runoff. Today, through the Center for Urban Waters and other cooperative efforts, the City continues its efforts to improve water quality. Tacoma's City Council and surface water utility ratepayers have supported substantial rate increases in recognition of the importance of protecting and enhancing the water quality in Commencement Bay and our fresh water lakes, wetlands and streams in the face of increasing stormwater runoff and pollutant loads from urban development, increased traffic and population increases.

The Environmental Services Department surface water, wastewater and solid waste utilities share a common vision:

"We believe everything we do supports healthy neighborhoods and a thriving Puget Sound, leaving a better Tacoma for all."

Three focus areas help ES to achieve this vision:

- Partner with our community on customer-valued services to meet the diverse needs of our neighborhoods;
- Foster a safe employee culture built on trust, conversation and equity; and
- Operate using best practices and innovation to meet changing environmental and community needs

The City's surface water management priorities were established in 1995 under the first NPDES Municipal Stormwater Permit and remain essential elements of the SWMP today. The City's priorities include the following:

- Manage stormwater to minimize flooding and erosion;
- Manage stormwater to minimize contact with contaminants;
- Mitigate the impacts of increased runoff due to urbanization;
- Manage runoff from developed properties and those being developed;
- Protect the health, safety and welfare of the public;
- Correct or mitigate existing water quality problems; and
- Restore and maintain the chemical, physical and biological integrity of the receiving waters in the City to protect beneficial uses.

## Tacoma's Surface Water Management Utility

The City's SWMP is administered by the Environmental Services Science and Engineering Division but the Permit applies to all departments and divisions of the City. ES coordinates with all departments and divisions throughout the City to ensure that all permit requirements are implemented. Staffing and budget are designed to meet the SWMP goals and objectives. Our current work includes:

- Inspecting business activities and educating businesses about BMPs to reduce stormwater impacts;
- Collecting and evaluating stormwater and sediment quality monitoring data;
- Implementing a source control and illicit discharge screening program throughout the City's nine watersheds;
- Mapping, maintaining and cleaning the City's stormwater system that includes approximately 500 miles of storm pipe, 10,000 manholes, over 18,000 catch basins, four pump stations, and over 200 stormwater treatment and flow control facilities;
- Managing the City's tree canopy cover and open spaces to maximize stormwater benefits;
- Rehabilitating and replacing aging infrastructure and improving the storm system with capital projects to address identified flooding, flow control and water quality issues;
- Providing public education to target audiences ranging from school-age children and homeowners to property managers and builders about the impacts of polluted runoff and practices to reduce those impacts;
- Coordinating our activities regionally through watershed councils, NPDES permit-holder committees and others;
- Permitting and inspecting new and redevelopment construction projects to ensure compliance with stormwater requirements including erosion control, maximizing onsite management, use of LID, stormwater treatment, flow control, wetlands protection and ongoing maintenance; and
- Providing staff training to ensure the City activities and operations minimize impacts to stormwater and receiving waters.

The updated SWMP Plan included as Appendix C will supplement and enhance the City's existing programs.

# SWMP by Permit Component

## S5.C.1. Legal Authority to Control Discharges to and from the MS4

### Summary of Program Component

The City’s legal authority to control discharges to and from our municipal stormwater system is found in state law and the Tacoma Municipal Code (TMC). The state statutes provide the City legal authority to create, and then regulate and manage its municipal stormwater system.<sup>1</sup> The City also has legal authority to regulate and enforce the stormwater management-related requirements found in Chapter 12.08 of the TMC attached as Appendix A.

### Permit Compliance Measures

The following references to the TMC and Revised Code of Washington (RCW) identify the specific citations providing the authority for the City to conduct the permit compliance activities listed below:

#### Permit Deadlines and Responsible Parties

Legal authority to control discharges to and from MS4	Ongoing	<ul style="list-style-type: none"> <li>• City Attorney’s Office</li> <li>• ES/Environmental Programs Group</li> </ul>
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### ***Authority to Control Industrial Discharges, Prohibit Illicit Discharges, and Control Spills or Disposal of Materials other than Stormwater into the MS4 (S5.C.1.b.i, ii, iii.)***

#### Control Industrial Discharges

- TMC 12.08.007 H.* Authorizes the City’s stormwater management staff to review land use permits and impose BMPs to manage stormwater impacts. See also TMC 12.08.090.
- TMC 12.08.007 J.* Authorizes the City to regulate all direct and indirect discharges to the MS4.
- TMC 12.08.070* Prohibits the discharge of any substances directly to a manhole or other opening other than through an approved sewer connection.
- TMC 12.08.080* Prohibits illicit discharges to the MS4.
- TMC 12.08.080 A.* Prohibits the discharge of substances enumerated in TMC 12.08.020 and 12.08.040 other than stormwater to the MS4.
- TMC 12.08.090 C.* Requires commercial and industrial facilities that cause or contribute to an illicit discharge to implement and maintain operational BMPs.

#### Prohibit Illicit Discharges

- TMC 12.08.080 D.* Authorizes the City to regulate illicit discharges.

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<sup>1</sup> See, RCW 35.67.020(1), RCW 35.21.210, and RCW 35.92.020(1).

Control Spills or Disposal of Materials Other than Stormwater

- TMC 12.08.090 C.3* Authorizes the City to enforce spill prevention requirements. See also, TMC 12.08.090 C.2.
- TMC 12.08.090 F.* Requires responsible parties to notify the City when a spill, release, or illicit discharge occurs that contributes, or is likely to contribute pollutants to the City's MS4.
- TMC 12.08.200* Authorizes the City to pursue an enforcement response against any person who violates Chapter 12.08 of the TMC. Persons who "spill" regulated substances into the MS4 are subject to enforcement for violating TMC 12.08.080 A., which prohibits the discharge of polluted matter into the MS4.
- TMC 12.08.200* Authorizes the City to pursue an enforcement response against any person "who shall at any time cause or contribute to the contamination or recontamination of any waterway and/or its remediated sediments."

***Ability to Control Inter-System Discharges Under Agreements with Other Permittees (S5.C.1.b.iv.)***

- RCW 35.67.300* Authorizes the City to enter into joint agreements with other cities, towns or water districts to connect to and be served by the MS4. These agreements require compliance with Chapter 12.08 of the TMC stormwater-related requirements.
- RCW 35.67.310* Authorizes the City to allow persons outside the city limits to connect to and be served by the MS4. Authorizations for connections require compliance with Chapter 12.08 of the TMC stormwater-related requirements.
- TMC 12.08.620* Authorizes the City to enter joint agreements with other cities, towns or water districts to connect to and be served by the MS4. These agreements require compliance with Chapter 12.08 of the TMC stormwater-related requirements.

***Require Compliance with City Regulations and Conduct Enforcement Actions (S5.C.1.b.v, vi.)***

- TMC 12.08.007 C.* Authorizes the City to conduct compliance inspections.
- TMC 12.08.007 D.* Provides right-of-entry authority.
- TMC 12.08.007 E.* Authorizes the City to issue "stop work" orders if construction work is being conducted contrary to Chapter 12.08 of the TMC, or contrary to the plans and specifications for such work, which will include a plan for managing stormwater.
- TMC 12.08.007 F.* Authorizes the City to enforce violations of Chapter 12.08 of the TMC.
- TMC 12.08.007 J.* Authorizes the City to regulate direct and indirect discharges to receiving waters and the MS4.
- TMC 12.08.090* Authorizes the City to implement a comprehensive SWMP to control and regulate discharges to its MS4 and receiving waters.
- TMC 12.08.200* Establishes enforcement procedures for Chapter 12.08 of the TMC.
- TMC 12.08.200 E.* Authorizes the City to issue corrective action orders.

- TMC 12.08.610* Authorizes Property Owner Liability for Supplemental Charges in response to discharge violations.
- TMC 12.08.670* Authorizes the City Prosecutor to file “gross misdemeanor” criminal charges when the City Prosecutor determines that a specific incidence of noncompliance with Chapter 12.08 of the TMC constitutes a criminal act.
- TMC 12.08.675* Authorizes the City to issue Notice of Violations and civil penalties to persons who violate Chapter 12.08 of the TMC.

Actions required for permit compliance are listed in the 2020 Work Plan (Appendix C).

## S5.C.2. MS4 Mapping and Documentation

### Summary of Program Component

The overall objective of this requirement is to maintain an ongoing program to map and document the existing stormwater system and ensure that future connections and other system changes are documented and mapped.

Mapping and documentation of the stormwater system is vital to managing the resources of the City. By identifying connections to the stormwater system and understanding their relationship to overlaying drainage basins, analyses can be performed on the entire system. This information will also assist in providing service to underserved areas and development of solutions to capacity problems. The City is using the information that is currently available in a variety of ways, including tracking sources of contamination, planning for future upgrades and modeling system capacity.

### Permit Compliance Measures

***Ongoing Mapping of Known Outfalls and Discharge Points, Receiving Waters Other than Groundwater, City-owned Structural Stormwater Treatment and Flow Control BMPs, Geographic Areas Served by the Municipal Separate Storm Sewer System (MS4) that do not Discharge to Surface Water, and Connection Points between the City’s MS4 and Other Municipal Systems (S5.C.2.a.i,ii,iii,iv,vi.)***

The Environmental Programs Group and Asset Management Group of ES have an existing mapping and documentation program to meet this requirement.

#### Permit Deadlines and Responsible Parties

Map all known MS4 outfalls, discharge points and receiving waters, and stormwater treatment and flow control BMPs owned or operated by the City	Known data is mapped with ongoing updates	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• ES/Asset Management Group</li> <li>• PDS, Site Development Group</li> <li>• ES/Operations and Maintenance Division</li> </ul>
Map geographic areas served by the City’s MS4 that do not discharge stormwater to surface water	Known data is mapped with ongoing updates	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• ES/Asset Management Group</li> <li>• PDS, Site Development Group</li> </ul>
Map connection points between the City’s MS4 and other municipalities and public entities	Known data is mapped with ongoing updates	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• ES/Asset Management Group</li> </ul>

#### Mapping Public Assets

This work is ongoing. As new stormwater assets are identified, they are mapped. All of the information is currently publically available on the City’s DART Map, or available upon request. Existing flow control and treatment facilities owned or operated by the City are mapped. All known MS4 outfalls to marine and fresh waters have been mapped. All discharge points as defined in the permit are mapped. As the City maps new public treatment and flow control facilities, the inlets and outlets, including emergency overflows will also be mapped.

A process has been developed to add new stormwater system features into our mapping system after they are constructed.

Process for adding newly constructed public storm sewer assets and geographic areas not discharging to surface water into the City’s mapping system:

- ES, Engineering Technician receive approved plans from either PDS, Site Development Group (for private work order permits) or from the City Project Manager (for City Capital Improvement Projects).
- The new assets, including pipes, underground facilities, above ground facilities, and geographic areas not discharging to surface water (facilities designed to infiltrate all stormwater runoff) are input into the City GIS system as “proposed” by the ES Engineering Technician.
- Before final acceptance of pipe assets, an ES/Operations and Maintenance crew receives notification to video inspect the pipe for acceptance. At this point, the ES Engineering Technician will re-label those proposed assets as “active.”
- Upon physical completion of construction of the project, the Construction Inspector will inform the ES Engineering Technician that the stormwater facilities are completed. The ES Engineering Technician will then re-label those proposed assets as “active.”
- It is ultimately the responsibility of the City Project Manager to ensure that the assets related to their project are correctly mapped in the City GIS systems.

Mapping Geographic Areas Served by the City’s MS4 that do not Discharge Stormwater to Surface Water

The scope of this requirement includes mapping areas that drain to public stormwater facilities designed to infiltrate all stormwater discharges.

Mapping Storm Sewer Interconnections between Municipalities

City staff collected GIS storm system data from Fife, Pierce County, Lakewood, University Place, Ruston, Fircrest and Federal Way. All known connection points between the City MS4 and other municipalities have been generated from this data, and as mapping and data collection continues, the new information will be added to the City’s mapping systems.

***Map Tributary Conveyances of all known Outfalls and Discharge Points with a 24-Inch or Greater Nominal Diameter or an Equivalent Cross-Sectional Area for Non-pipe Systems (S5.C.2.a.v.)***

Permit Deadlines and Responsible Parties

<p>Map tributary conveyances (type, material, and size where known); and associated drainage areas and land uses for all outfalls and discharge points with a 24-inch or greater nominal diameter, or an equivalent cross-sectional area for non-pipe systems</p>	<p>Known data is mapped with ongoing updates</p>	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• ES/Asset Management Group</li> <li>• PDS, Site Development Group</li> </ul>
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The known outfalls and discharge points and connections are in the City’s mapping system. Upstream tracing of each outfall and discharge point and determination of each associated contributing basin is complete. Land use is known and conveyance pipe type, material and size are included in the City mapping system, when known.

***Map all Connections authorized or allowed to the MS4 (S5.C.2.a.vii.)***

Permit Deadlines and Responsible Parties

Map all connections to the MS4 authorized or allowed after February 16, 2007	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• ES/Asset Management Group</li> <li>• PDS, Site Development Group</li> </ul>
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The City has already mapped the majority of the known private storm systems connected to the MS4 throughout Tacoma. Newly permitted and constructed private drainage system connections will continue to be added to the mapping system. Additionally, video camera investigations by the Stormwater Rapid Assessment Program (STRAP) are discovering additional smaller private pipes connected directly into the storm lines. The discovered connections are investigated to identify their source. Non-stormwater connections are redirected as appropriate and stormwater connections are mapped.

This work is continually updated as connections are added. PDS Inspectors sign off on all new storm connections through construction permits. For all projects involving connections to the MS4, a storm connection permit is required in order to ensure the connection is inspected.

The process for adding newly constructed private drainage system connections into the City’s mapping system includes:

- Upon final inspection of construction permits, the PDS Engineering Technician will record the private drainage system point of connection to the MS4 and note it on the storm connection permit drawing. The storm connection permit drawing is saved in the City permitting system.
- ES Engineering Technician reviews the City permitting system and will then input the new private connection points into the mapping system as “storm private connection” and include the permit number in the point description to allow for the electronic site plans associated with that permit to be researched, if necessary.
- If the ES Inspector notes are insufficient and there is a need to field-verify the location of the private connection point, the ES Engineering Technician will assign the mapping crew to locate the connection.

The City’s database of privately owned treatment and flow control facilities is being updated to assist with annual inspections of private facilities.

***Map All Known Existing Stormwater Connections with Greater than or Equal to 8-Inch Nominal Diameter (S5.C.2.a.viii.)***

Permit Deadlines and Responsible Parties

Map existing, known connections greater than 8-inch in nominal diameter to tributary conveyances	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• ES/Asset Management Group</li> <li>• PDS, Site Development Group</li> </ul>
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The City has mapped all known existing connections greater than or equal to 8-inch nominal diameter.

**Collect size and material for all known MS4 outfalls during normal course of business (S5.C.2.b.i.)**

Permit Deadlines and Responsible Parties

Collect size and material for all known outfalls if not noted	Start January 1, 2020	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• ES/Asset Management Group</li> <li>• ES/Transmission</li> </ul>
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The City has typically included this information in our mapping attributes. Staff will collect this information as needed if they are visiting an outfall for another reason.

**Complete mapping of all known connections from the MS4 to a privately owned stormwater system (S5.C.2.b.ii.)**

Permit Deadlines and Responsible Parties

Complete mapping of all known connections from the MS4 to a privately owned stormwater system	August 1, 2023	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• ES/Asset Management Group</li> </ul>
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The City has typically included this information in our map. The data points will be reviewed, and if needed additional notes or attributes will be added to clarify these locations.

**Provide Ecology with Mapping Data for all Requirements of S5.C.2.a, and b. above (S5.C.2.d.)**

Permit Deadlines and Responsible Parties

Provide Ecology with mapping data upon request	Upon request	<ul style="list-style-type: none"> <li>• ES/Asset Management Group</li> </ul>
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The City will provide fully described mapping standards similar to those described on Ecology’s website <https://ecology.wa.gov/Research-Data/Data-resources/Geographic-Information-Systems-GIS/Standards> and the currently available mapping information shall be provided to Ecology upon request.

**Provide Mapping Information to Federally Recognized Indian Tribes, Municipalities and Other Permittees (S5.C.2.e.)**

Permit Deadlines and Responsible Parties

Provide mapping information to federally recognized Indian Tribes, municipalities and other permittees upon request	Upon Request	<ul style="list-style-type: none"> <li>• ES/Asset Management Group</li> <li>• City Attorney’s Office</li> </ul>
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Required stormwater mapping information is available on the publicly accessible City of Tacoma DART map. Tribes, municipalities and other permittees currently have access to system information. If individual requests for information are made from one of these parties, the City will work with them to provide the needed information in an agreed upon format.

Actions required for Permit compliance are listed in the 2020 Work Plan (Appendix C).

### S5.C.3. Coordination

#### Summary of Program Component

Permit section S5.C.3 addresses coordination mechanisms among departments within the City as well as those mechanisms between the City and interconnected MS4s of neighboring jurisdictions covered by a NPDES permit and sharing a watershed or receiving waterbody.

The activities outlined in this section are critical to remove barriers, promote understanding of the NPDES permit, and facilitate permit compliance within the departments of the City.

With respect to inter-governmental coordination, this section of the permit addresses coordination mechanisms between the City and jurisdictions connected to the City’s storm sewers specifically to address pollution control. The actions noted in this section will also facilitate a coordinated approach to stormwater policies, programs and projects for shared water bodies or within a given watershed. At its best, coordination between jurisdictions should facilitate information sharing, eliminate duplicate efforts and promote regional solutions in a manner to most efficiently use the City’s valuable and limited resources to improve stormwater quality.

#### Permit Compliance Measures

##### *Implement Executive Directive to Facilitate Permit Compliance (S5.C.3.a.)*

##### Permit Deadlines and Responsible Parties

Intra-governmental executive directive to facilitate permit compliance	March 31, 2020	• ES/Environmental Programs Group
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The City Manager and Tacoma Public Utilities Director issued a joint memorandum in the first quarter of 2020 to all City Department Directors informing them of the Permit and the need for all affected staff’s cooperation and input. The internal coordination memorandum is included as Appendix B.

ES/Environmental Programs Group staff has compiled a list of department contacts and coordinates with them to identify SWMP areas needing participation, recordkeeping and staff training. ES/Environmental Programs Group acts as the City’s Stormwater Permit Coordinator and Administrator. Specific tasks for intra-governmental coordination include the following:

- Identifying which permit requirements apply to each specific department and work group;
- Integrating compliance activities into each department’s programs and operations;
- Providing training and technical assistance if required;
- Recordkeeping as required in the Permit; and
- Facilitating submittal of information to the City’s Permit Coordinator for inclusion in the Annual Report.

These coordination efforts ensure completion and submittal of the NPDES Annual Report by March 31<sup>st</sup> each year.

**Implement Coordination Mechanisms with Other Permittees for Control of Pollutants between Interconnected MS4s and Stormwater Management Activities for Shared Waterbodies (S5.C.3.b.)**

Permit Deadlines and Responsible Parties

Inter-governmental coordination	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• ES/Environmental Compliance Section</li> </ul>
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This element of the permit has two specific coordination elements:

1. Coordination between the City and the physically interconnected surrounding municipal stormwater permittees (Pierce County, Lakewood, University Place, Fircrest, Federal Way, and Fife) and secondary permittees (Port of Tacoma, Tacoma Community College and Metro Parks Tacoma) for the control of pollutants; and
2. Coordination of activities for shared water bodies among Phase I and II Permittees to avoid conflicting plans, policies and regulations.

City staff coordinates with surrounding and Secondary Permittees as appropriate when investigating concerns about the conveyance system; upgrading the stormwater system when it affects others, source tracing stormwater pollutants; and coordinating and communicating watershed issues. The City similarly coordinates with the Puyallup Tribe for stormwater related issues areas adjacent to their properties held in trust. Coordination between all of these entities has provided an effective network of contacts, productive relationships and more efficient stormwater management.

The SEPA process can also aid in coordination for specific development projects that may impact neighboring jurisdictions. Through SEPA, neighboring jurisdictions have the opportunity to review proposals and provide comments and input.

The City’s Stormwater Management Manual (SWMM) Volume 1, Chapter 3.3.7 (Watershed Specific Requirements) requires that projects that discharge to a neighboring jurisdiction’s stormwater system comply with the more stringent of the two jurisdiction’s stormwater requirements.

City development review staff also coordinate with the Tacoma-Pierce County Health Department (TPCHD) regarding development in the South Tacoma Groundwater Protection District (STGPD) as codified in Chapter 13.09 of the TMC. All requests for infiltration of runoff from pollution-generating impervious surfaces are discussed and coordinated with TPCHD. The South Tacoma Groundwater Protection District Infiltration Policy outlines specific requirements for infiltration of pollution generating surfaces within the STGPD and procedures for staff coordination.

On a watershed level, the City currently participates in several regional coordination efforts. The City participates in the Phase I Permittees Group and assists with facilitation of the South Sound Phase II Coordinator’s Group. These groups hold regular meetings to discuss issues related to NPDES permit implementation and share information on BMPs, Permit compliance and policies and programs. City staff also attend the Puyallup River Watershed Council, the Chambers Clover Watershed Council and WRIA 10/12 Lead Entity meetings. The City is also participating in the local integrating organizations for the South Central Puget Sound Action Area (including Puyallup/White WRIA 10) and South Puget Sound Action Area (including portions of Chambers/Clover WRIA 12) supporting the Puget Sound Partnership efforts.

The City participates in the regional stormwater monitoring work group, and Stormwater Action Monitoring (SAM). Environmental Services Environmental Compliance Inspectors have a list of

contacts in various jurisdictions, regulatory programs, and organizations including the railroads, neighboring cities, Pierce County, state and federal government, TPCHD, Metro Parks Tacoma, Tacoma Public Schools, Tacoma Police Department, Port of Tacoma, Puget Sound Clean Air Agency, and others. These individuals are informed of spills and complaints when they cross jurisdictional boundaries.

Actions required for permit compliance are listed in the 2020 Work Plan (Appendix C).

## S5.C.4. Public Involvement and Participation

### Summary of Program Component

Public involvement is useful for identifying areas where the City may: tailor its SWMP and other programs to local needs and priorities; identify additional tools to meet permit requirements; or identify areas where it is desirable to go beyond permit requirements.

The City’s Environmental Services Commission provides an ongoing source of public input on components of the SWMP. Other opportunities for public input on SWMP updates will be scheduled as appropriate.

### Permit Compliance Measures

#### ***Public Participation Opportunities for SWMP Development and Implementation (S5.C.4.a.)***

#### Permit Deadlines and Responsible Parties

Create opportunities for public participation in decision-making processes involving SWMP	Ongoing	• ES/Environmental Programs Group
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The City’s SWMP Plan is updated and posted online annually. Opportunities for public input on specific proposals and projects are also provided during implementation and updates of the SWMP Plan.

The City’s Environmental Services Commission meets regularly throughout the year and provides public input on a variety of issues affecting the Environmental Services Department’s three utilities; surface water, wastewater and solid waste, including implementation of the SWMP. Commissioners represent a cross-section of Tacoma’s residential, business and regulatory communities and are selected by the City Manager to serve five-year terms.

The Environmental Services Commission reviews, advises and makes recommendations to City staff and the City Council regarding:

- Residential and commercial programs and services;
- Short-term and long-range planning;
- Rates, rate structures and rate assistance programs;
- Capital Investment Program financing structures;
- Revisions to or new contracts for City-provided wholesale and retail services; and
- City policies directly related to utility functions.

An online survey tool was used to gather input on education and outreach priorities (S5.C.11) and options for the structural stormwater program (S5.C.7). Input from the survey will be used in program development as appropriate.

Public involvement to implement the SWMP is also included in the education and outreach actions described in SWMP Section S5.C.11.

#### 2019 Community Survey

The City of Tacoma conducted a community survey between November 6<sup>th</sup> and December 31<sup>st</sup>, 2019. A total of 750 randomly sampled households – 150 from each Council District – across Tacoma had the opportunity to identify which services they feel are important, which service areas have improved over time, and which service areas could improve in the future. Results

are weighted by age, gender and district based on 2010 Census profiles for the area. Respondents represented a variety of age, gender, and racial groups.

The community survey was delivered in English and in Tacoma’s five primarily used languages other than English – which are Spanish, Russian, Vietnamese, Korean and Khmer. Findings from the community survey will help define the community’s current priorities and aid the City’s ongoing planning and improvement processes.

***Make SWMP Plan and Annual Report Available on the City Website (S5.C.4.b.)***

Permit Deadlines and Responsible Parties

Make the SWMP Plan and NPDES Annual Report available on City website	May 31, 2020 and Annually	• ES/Environmental Programs Group
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NPDES permit submittals to Ecology are currently posted on and continue to be updated at the Surface Water Management home page located on the City website:

[cityoftacoma.org/stormwater](http://cityoftacoma.org/stormwater)

Actions required for permit compliance are listed in the 2020 Work Plan (Appendix C).

## S5.C.5. Controlling Runoff from New Development, Redevelopment, and Construction Sites

### Summary of Program Component

The City has an established permitting program for new development and redevelopment projects ranging from construction of single-family homes to mixed-use developments, commercial, and industrial sites. Proposed land use actions are reviewed and conditioned as appropriate to achieve compliance with stormwater requirements. Construction projects are issued permits after appropriate review for compliance with the City of Tacoma Stormwater Management Manual. Permitted project sites are inspected for erosion and sediment control during construction and the installation of permanent stormwater management facilities.

During this permit cycle, the City will update its SWMM to be equivalent to Ecology’s 2019 Stormwater Management Manual for Western Washington (SWMMWW).

### Permit Compliance Measures

#### ***Ongoing Program to Control Stormwater Impacts from Development, Redevelopment, and Construction (S5.C.5.a.)***

The City addresses stormwater management from development, redevelopment, and construction of private and public development including roads through regulations contained in the TMC and the SWMM.

Planning and Development Services (PDS) and ES are the primary work groups responsible for implementing the stormwater development and redevelopment regulations. These groups provide permit submittal review and approval as well as inspection services for private development. Publicly funded Capital Improvement Projects (CIPs) developed and managed by City staff must also meet the Minimum Requirements of the SWMM, where applicable. CIP construction inspections are performed by Public Works Department inspectors (for street improvements), ES inspectors (for wastewater and stormwater systems), and the Tacoma Public Utilities inspectors (for drinking water services and transmission lines, power transmission, and Click! cable). Private Development construction inspections are conducted by PDS.

#### ***Adopt Stormwater and Erosion Control Standards Equivalent to Ecology’s 2019 SWMM for Western Washington (S5.C.5.a.i. to iii.)***

#### Permit Deadlines and Responsible Parties

Submit draft SWMM standards and ordinances to Ecology	July 1, 2020	• ES/Environmental Programs Group
Adopt and implement equivalent manual and requirements, limitations and criteria of Ecology’s 2019 SWMM	July 1, 2021	• ES/Environmental Programs Group

During this Permit cycle, the City’s SWMM will be updated to include equivalent technical requirements to Ecology’s 2019 SWMM for Western Washington by the ES/Environmental Programs Group.

**Legal Authority to Inspect and Enforce Maintenance Standards for Private Stormwater Facilities Approved by the City (S5.C.5.b.v.)**

Permit Deadlines and Responsible Parties

Authority to enforce maintenance requirements	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• City Attorney’s Office</li> </ul>
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Since the initial NPDES Phase I Municipal Stormwater Permit was issued in 1995, the City has had the necessary legal authority to establish standards, and inspect and enforce standards for private stormwater facility maintenance. TMC 12.08.007 C. provides inspection authority; TMC 12.08.007 D. provides right-of-entry authority, and TMC 12.08.090 D.10 requires an operation and maintenance plan for permitted private drainage facilities.

**Permitting, Plan Review, Inspection, and Enforcement of Standards Equivalent to Ecology’s 2019 SWMM for Western Washington (S5.C.5.b. vi.)**

Permit Deadlines and Responsible Parties

a) Review all stormwater site plans for proposed development that meet the permit thresholds	Ongoing	<ul style="list-style-type: none"> <li>• PDS, Site Development Group</li> <li>• Public Works Department, Engineering</li> <li>• ES/Capital Delivery Group</li> <li>• ES/Environmental Programs Group</li> <li>• Tacoma Public Utilities, Engineering</li> </ul>
b) Pre-clearing inspection for all sites meeting the development thresholds to identify areas of high erosion and sediment transport potential	Ongoing	<ul style="list-style-type: none"> <li>• PDS, Site Development Group</li> <li>• Public Works Department, Engineering</li> <li>• ES/Capital Delivery Group</li> <li>• Tacoma Public Utilities, Engineering</li> </ul>
c) Inspect all permitted development sites that meet development thresholds during construction to verify proper installation and maintenance of temporary erosion and sediment control BMPs	Ongoing	<ul style="list-style-type: none"> <li>• PDS, Site Development Group</li> <li>• Public Works Department, Engineering</li> <li>• ES/Capital Delivery Group</li> <li>• ES/Environmental Compliance</li> <li>• Tacoma Public Utilities, Engineering</li> </ul>
d) Inspect all permanent stormwater treatment and flow control BMPs/facilities and catch basins every six months in new residential developments until 90% of the lots are constructed or the site is fully stabilized	Ongoing	<ul style="list-style-type: none"> <li>• PDS, Site Development Group</li> <li>• ES/Environmental Compliance</li> <li>• ES/Environmental Programs Group</li> </ul>

e) Post-construction inspection to ensure proper installation of permanent stormwater treatment and flow control BMPs. Verify that a maintenance plan is completed and responsibility for maintenance is assigned	Ongoing	<ul style="list-style-type: none"> <li>• PDS, Site Development Group</li> <li>• Public Works Department, Engineering</li> <li>• ES/Capital Delivery Group</li> <li>• Tacoma Public Utilities, Engineering</li> </ul>
f) Establish an inspection program to ensure all required inspections occur	Ongoing	<ul style="list-style-type: none"> <li>• PDS, Site Development Group</li> <li>• Public Works Department, Engineering</li> <li>• ES/Capital Delivery Group</li> <li>• Tacoma Public Utilities, Engineering</li> <li>• ES/Environmental Programs Group</li> </ul>
g) Record-keeping procedures in place for inspection and enforcement actions including maintenance inspections and maintenance activities	Ongoing	<ul style="list-style-type: none"> <li>• PDS, Site Development Group</li> <li>• Public Works Department, Engineering</li> <li>• ES/Capital Delivery Group</li> <li>• Tacoma Public Utilities, Engineering</li> </ul>
h) Enforcement strategy for non-compliance response	Ongoing	<ul style="list-style-type: none"> <li>• Planning and Development Services</li> <li>• Neighborhood and Community Services</li> <li>• ES/Environmental Compliance Section</li> </ul>

**a) System to Review all Plan Submittals Meeting Thresholds**

The current program provides plan review for all projects involving land disturbing activities that meet the development thresholds specified in the Permit, which are also in the SWMM, including both private and public project sites.

**b) Pre-Clearing Inspection for Sites having High Sediment Damage Potential**

Pre-clearing inspections of private development sites are accomplished by the Planning and Development Services Site Development Inspectors and Plan Reviewers to meet the erosion and sediment control standards outlined in the SWMM. ES and Public Works Project Engineers complete the site inspections for the public project sites. The City complies with this section by inspecting all sites prior to the start of construction.

**c) Inspect all permitted development sites that meet development thresholds during construction to verify proper installation and maintenance of temporary erosion and sediment control BMPs**

Inspections for installation and on-going maintenance of erosion and sediment control measures are currently completed by Planning and Development Services (PDS), Public Works Department, Engineering, ES Capital Delivery Group and Tacoma Public Utilities Inspectors. Appropriate enforcement actions are taken, when required, in accordance with the Stormwater Compliance Policy and Chapter 12.08 of the TMC.

**d) *Inspect all permanent stormwater treatment and flow control BMPs/facilities and catch basins every six months in new residential developments***

The City has a program to inspect all development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities. Before final sign-off, inspectors verify that maintenance responsibility of the facility is assigned and that the operation and maintenance manual is available.

**e) *Post-Construction Inspection for Permanent Stormwater Facilities***

Operation and Maintenance (O&M) Manuals are required to be reviewed and approved for compliance with the requirements of the SWMM prior to permit approval. A copy of the O&M Manual is required to be kept onsite, and a copy is kept on file by PDS Site Development Group for use during stormwater source control inspections. Responsibility for private facility maintenance falls to the property owner. Facilities that will be part of the MS4 are typically the responsibility of the City. Maintenance procedures for all public flow control and treatment facilities are contained in the Stormwater Detention and Treatment Facilities Operation and Maintenance Manual.

**f) *Compliance with Inspection Requirements***

The City has an established program to inspect all sites involving land disturbing activities. The program goal is to achieve a minimum of 80 percent of scheduled inspections annually.

**g) *Recordkeeping Procedures in Place***

The City currently has several databases to track all S5.C.10 required inspections and enforcement actions.

**h) *Enforcement Strategy for Non-Compliance Response***

Environmental Compliance Inspectors currently implement a Stormwater Compliance Policy that includes enforcement strategies including Notices of Violation and civil penalties. The inspectors focus on owner education, coaching and voluntary compliance. Environmental Compliance Inspectors also refer cases to Ecology for follow-up and enforcement when cases directly impact waters of the state.

Building Inspectors, Code Compliance Inspectors, and Environmental Compliance Inspectors have enforcement procedures for non-compliance with permitting conditions per TMC 2.02.130 and Chapter 12.08 of the TMC. Enforcement measures include stop work orders, Notices of Violation, fines, and Certificates of Complaint attached to the title of the property. Environmental Compliance Inspectors and Public Works Department Inspectors may refer cases to Neighborhood and Community Services Code Compliance to pursue further enforcement actions.

City capital construction projects are required to comply with construction contracts that enforce local, state and federal regulations including all Permit requirements.

**Notice of Intent (NOI) Forms for Construction and Industrial Stormwater General Permits (S5.C.5.b.vii.)**

Permit Deadlines and Responsible Parties

NOI forms available to public	Ongoing	<ul style="list-style-type: none"> <li>• Planning and Development Services</li> </ul>
Enforce local ordinances controlling runoff from sites that are covered by other stormwater permits issued by Ecology	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> <li>• Planning and Development Services</li> </ul>

The Permit requires the City to provide permit applicants for new and redevelopment sites with information describing Ecology’s NPDES Construction General Permit and NPDES Industrial Stormwater General Permit, if applicable to their projects. Information on these permits is provided, as applicable, to applicants at various times throughout the project review including pre-application meetings and permit submittal review. The City website, [tacomapermits.org](http://tacomapermits.org), provides links to Ecology’s website where information about obtaining coverage under the NPDES Construction General Permit and NPDES Industrial General Stormwater Permit are posted. The City’s electronic permitting system includes prompts referring applicants to Ecology’s website when certain permit triggers are met.

The City works with other regulatory agencies including Ecology to enforce permit requirements that control runoff from sites that discharge stormwater to the City’s MS4 including those sites covered by other stormwater permits issued by Ecology.

**Training for Development Permitting, Plan Review, Construction Inspection and Enforcement Personnel (S5.C.5.b.viii.)**

Permit Deadlines and Responsible Parties

Training program and documentation	Ongoing	<ul style="list-style-type: none"> <li>• Planning and Development Services</li> <li>• Public Works</li> <li>• Neighborhood and Community Services Code Compliance</li> <li>• ES/Environmental Programs Group</li> </ul>
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ES, PW and PDS staff provide training to plan review, inspection, and enforcement personnel in the City concerning erosion and sediment control measures and private drainage system operation and maintenance. Relevant training opportunities have been developed for plan review, inspection and enforcement personnel and records of certain trainings are recorded in SAP, the City’s Information Management System database. Other trainings are tracked through training sign-in sheets that are kept on file. Staff training also occurs through review of daily work activities and feedback from this review.

Actions required for permit compliance are listed in the 2020 Work Plan (Appendix C).

### S5.C.6 Stormwater Planning

This is a new Permit section added to the Permit in August 2019. The City is developing the policies and procedures needed for compliance with this section.

#### Summary of Program Component and Permit Compliance Measures

The permit requires the City to implement a Stormwater Planning Program to inform and assist in the development of policies and strategies as water quality management tools to protect receiving waters.

#### ***Inter-Disciplinary Team (S6.C.6.a)***

##### Permit Deadlines and Responsible Parties

Convene an inter-disciplinary team to inform and assist in the development, progress, and influence of the Stormwater Planning Program	August 1, 2020	ES/Environmental Programs Group
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The inter-disciplinary team will include staff from many City departments and divisions and will be led by Environmental Programs Group Staff. Conversations and planning for this effort has begun. The inter-disciplinary team will be commenced prior to August 2020.

#### ***Coordination with long-range plan updates (S6.C.6.b.i.(a), (b))***

##### Permit Deadlines and Responsible Parties

Respond to Stormwater Planning Annual Report questions	March 31, 2021	ES/Environmental Programs Group
Submit a report responding to the questions in S6.C.6.b.i.a, describing how water quality is being addressed	March 31, 2022	ES/Environmental Programs Group

Comprehensive Plans and other locally initiated or state mandated long-range land use plans that are used to accommodate growth or transportation shall be reviewed as required by the Permit. For these type of planning documents that are initiated or in process after August 1, 2019, the Environmental Programs Group will review and be involved throughout the development of the plans to ensure that, if appropriate, stormwater considerations are included in the plans. Environmental Programs Group is coordinating with departments throughout the City to ensure input is provided as appropriate.

#### ***Low impact development code-related requirements (S6.C.6.c)***

Assess and document newly identified administrative or regulatory barriers to implementation of LID Principles or LID BMPs	Annually	ES/Environmental Programs Group
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All development codes and related regulatory requirements will be reviewed and evaluated to comply with this section. New development codes and regulatory requirements that are initiated during the current Permit term will be reviewed during development to ensure that no new barriers to low impact development are created or that the barriers are addressed to ensure that low impact development the Permit intent of making low impact development the preferred and commonly-used approach to site development within Tacoma.

### S5.C.7. Structural Stormwater Controls

#### Summary of Program Component and Permit Compliance Measures

The Permit requires the City to implement a Structure Stormwater Control (SSC) Program to prevent or reduce impacts to waters of the State caused by discharges from the MS4. The Program is intended to consider impacts caused by stormwater discharges from areas of existing development and areas of new development where impacts are anticipated to occur.

Per the Permit, the goal of Section S5.C.7 is to:

- Prevent or reduce impacts to waters of the State caused by discharges from the MS4.

The program shall address impacts that are not adequately controlled by the other required actions of the SWMP. The required metric for permit compliance is to obtain 300 SSC Program Points by December 31, 2022.

The Environmental Programs Group coordinates with other City departments and groups including Public Works, Asset Management, Watershed Planning, Open Space and ES Capital Delivery to help prioritize projects that will be utilized for the SSC Program. The City will ensure projects types in S5.C.a.i. are considered for use in the program and will also use project types in S5.C.a.ii. to achieve the required SSC Program Points.

As required by the Permit, the City will provide a list of planned, individual projects scheduled for implementation during the Permit term with each Annual Report.

#### Permit Deadlines and Responsible Parties

Report list of planned projects scheduled for implementation during the permit term	March 31, 2020 and annually	• ES/Environmental Programs Group
Achieve 300 SSC Program Points	December 31, 2022	• ES/Environmental Programs Group

Actions required for permit compliance are listed in the 2020 Work Plan (Appendix C).

## **S5.C.8. Source Control Program for Existing Development**

### **Summary of Program Component**

The Source Control Program (SCP) includes the following elements outlined in Permit Section S5.C.8.a.

#### ***Implementation of Operational and Structural Source Control BMPs and Treatment BMPs on Existing Sites (S5.C.8.a.i.)***

ES/Environmental Compliance staff notifies industries and businesses of BMP requirements during standard business inspections of targeted industrial users and activities, when responding to spill complaints, and at sites discovered during the City's illicit discharge screening process. The SCP references the SWMM for operational BMP standards. The SCP includes inspection, education and enforcement procedures. For new industries that involve construction of facilities, during the permitting approval process, the SDG reviews site activities and ensures that appropriate controls will be installed and utilized on the sites.

The SWMM, Volume 4 provides source control BMP guidance for all new and existing businesses and government agency activities within Tacoma.

#### ***Inspection of Pollutant Generating Sources (S5.C.8.a.ii.)***

The source control program includes inspection of pollutant generating sources at commercial, industrial and any properties suspected of being potential pollutant generating sources based on field observations or complaints. Environmental Compliance Inspectors enforce the implementation of required BMPs to control pollution discharging into municipal separate storm sewers owned or operated by the City.

The City began conducting stormwater business inspections prior to 1984 as part of its delegated responsibility to implement Ecology's NPDES sanitary sewer pretreatment program.

#### ***Application and Enforcement of Local Ordinances at Sites Including Sites that are covered by Other NPDES Permits Issued by Ecology (S5.C.8.a.iii.)***

Chapter 12.08 of the TMC outlines surface water management regulations and provides a mechanism to take enforcement actions for any code violations. Enforcement actions are based on a process outlined in the City's Stormwater Compliance Policy that was codified in 2012. Environmental Compliance Inspectors respond to all spills and complaints including sites covered by Ecology's stormwater permits. The City has the authority to apply local ordinances to sites covered by Ecology's NPDES Construction General Permit and NPDES Industrial Stormwater General Permit through TMC 12.08.007 A., which states that Chapter 12.08 applies to all direct and indirect users of the municipal sewer system and all dischargers into receiving waters within the city.

In cases where Ecology has direct authority, such as at NPDES-permitted industrial facilities, underground injection control (infiltration) systems, or sites requiring a waste discharge permit, the City consults with Ecology to determine the most effective level of enforcement.

#### ***Practices to Reduce Pollutants Associated with Pesticides, Herbicides and Fertilizers (S5.C.8.a.iv.)***

Education about reduction of pesticide, herbicide and fertilizer use is provided by the City Media and Communications Office, through the City's EnviroChallenger outreach, at the City's EnviroHouse green building demonstration site, and through communication tools such as the EnviroTalk newsletter and utility bill inserts (see Section S5.C.11 Education and Outreach

Program). The City ensures that all City staff responsible for the use of pesticides, herbicides and fertilizers are adequately trained and licensed as appropriate.

**Permit Compliance Measures**

***Enforce Ordinances Requiring Source Control BMPs for Existing Land Uses and Activities (S5.C.8.b.i.)***

Permit Deadlines and Responsible Parties

Update and adopt source control related ordinances and enforceable documents	August 1, 2021	ES/Environmental Compliance Section City Attorney's Office
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The City's ordinances and enforcement documents are adequate to enforce the permit requirements and no changes are needed to meet the August 1, 2021 deadline.

The City has an established Source Control Program implemented by ES/Environmental Compliance Section to meet this requirement. Business owners and operators are informed of operational source control BMPs during regular business inspections and responses to spill complaints. The City provides informational source control materials as necessary. Additionally, all City-owned facilities and properties that have been identified as potential pollutant generating sites are being comprehensively inspected and if necessary issued compliance letters to address deficiencies in surface water and wastewater BMPs. This effort is ongoing and will require continued coordination among City departments.

***Maintain an Inventory of Potential Pollutant Generating Sites (S5.C.8.b.ii.)***

Permit Deadline and Responsible Parties

Maintain a list of potential pollutant generating sites including transient mobile or home-based businesses	Ongoing	• ES/Environmental Compliance Section
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As of 2019, the inventory list of potential stormwater pollutant generating sites is 1,795 potential stormwater pollutant generating sites. City Inspectors regularly review new businesses to verify if they should be added to the list. Additionally, Tacoma's annual business license renewal forms and tax and license applications are reviewed to identify potential pollutant generating sites.

Potential pollutant generating sites include:

- Commercial, industrial and governmental sites with specific business practices that may impact stormwater quality;
- Mobile or home-based businesses with specific business practices that may impact stormwater quality; and
- Any site or facility identified through field observations or complaints as a potential pollutant generating source.

In addition to the planned source control inspections, all pollution complaint responses (inspections, spill response, complaints, sanitary sewer overflows) are investigated promptly, coordinating with other agencies as appropriate. These complaints are documented in the Environmental Compliance Section database. The database information is reviewed prior to conducting an inspection. ES/Environmental Compliance Section staff also review all new and

renewed home occupational business licenses. ES/Environmental Compliance Section Inspectors survey their entire assigned areas on a regular basis to identify new potential pollutant generating sources or unusual activity that might require a source control response.

***Inspect Businesses for Compliance with Source Control Requirements (S5.C.8.b.iii.)***

Permit Deadlines and Responsible Parties

Provide source control BMP information to all businesses in inventory list from S5.C.8.b.ii.	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> <li>• City Media and Communications Office</li> </ul>
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The ES/Environmental Compliance Section provides information on BMPs and program literature directly to businesses during site visits. Environmental Compliance Inspectors educate the general public and businesses on BMPs and City environmental programs. The City Media and Communications Office provides relevant citywide education programs. Direct mailings may be used to target specific business practices.

Permit Deadlines and Responsible Parties

Inspect 20 percent per year of businesses in inventory list from S5.C.8.b.iii.	Ongoing	• ES/Environmental Compliance Section
Inspect 100 percent of all sites identified through credible complaints S5.C8.b.iii.(c)	Ongoing	• ES/Environmental Compliance Section

Investigation and enforcement occurs in response to all credible water quality complaints. ES/Environmental Compliance Section has adopted an inspection strategy that prioritizes sites with higher potential for sources of stormwater pollution. The inspectors inspect a minimum of 20 percent of these sites annually (including follow-up compliance inspections) to ensure BMP effectiveness and compliance with source control requirements.

The ES/Environmental Compliance Section uses a custom database for tracking spills, complaints, business inspections and flooding claims. Regular updates and refinements have been made to facilitate data management for tracking inspections.

***Implement Progressive Enforcement Policy and Documentation (S5.C.8.b.iv.)***

Permit Deadlines and Responsible Parties

Implement inspection follow-up actions as needed	Ongoing	• ES/Environmental Compliance Section
Implement enforcement response policy as established through authority in TMC	Ongoing	• ES/Environmental Compliance Section
Maintain tracking system for inspections and enforcement actions	Ongoing	• ES/Environmental Compliance Section

Refer non-emergency violations to Ecology after documented effort of progressive enforcement	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> </ul>
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Chapter 12.08 of the TMC provides the legal mechanism for inspection of all properties served by the stormwater system. The ES/Environmental Compliance Section uses incremental enforcement as defined in the ES Stormwater Compliance Policy and Chapter 12.08 of the TMC to achieve compliance with stormwater requirements. Enforcement procedures may include field inspection reports, phone calls, letters, follow-up inspections, warning letters, Notices of Violation, and civil penalties.

The Environmental Compliance Inspectors contact Ecology as standard operating procedure for all source control violations that present a threat to human health or the environment. In addition, ES/Environmental Compliance Section requests assistance from Ecology with non-responsive enforcement cases to facilitate prompt compliance. ES/Environmental Compliance Section refers violations in the South Tacoma Groundwater Protection District to the TPCHD for follow up.

The City documents all inspection and enforcement activities in the ES/Environmental Compliance Section inspection database and business inspection files.

***Training Program for Source Control Staff (S5.C.8.b.v.)***

Permit Deadlines and Responsible Parties

Provide and document ongoing training	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> <li>• ES/Environmental Programs Group</li> </ul>
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ES/Environmental Compliance Section has developed a training program for all of their inspectors that include regularly scheduled follow-up training. The training will facilitate uniform enforcement of the applicable source control requirements listed in Chapter 12.08 of the TMC and the SWMM. Training topics include legal authority, proper use and application of source control BMPs, lessons learned and typical cases, inspection procedures and the enforcement process. The training program will be documented through training sign in sheets.

Actions required for permit compliance are listed in the 2020 Work Plan (Appendix C).

### S5.C.9. Illicit Connection and Discharge Detection and Elimination (IDDE)

#### Summary of Program Component

ES operates a robust Illicit Connection and Discharge Detection and Elimination (IDDE) program through field screening, stormwater monitoring, source control inspections, spills and complaint response, and construction inspections. This program also addresses prohibited discharges and associated source control BMPs for non-stormwater discharges as outlined in the Permit.

#### Permit Compliance Measures

***Include procedures for reporting and correcting or removing illicit connections, spills, and other illicit discharges (S5.C.9.a.)***

##### Permit Deadlines and Responsible Parties

Identification of IDDE through field screening, inspections, complaints/reports, construction, maintenance, and source control inspections, and/or monitoring	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> <li>• ES/Environmental Programs Group</li> </ul>
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The City has a database to report and track illicit connections, spills and other illicit discharges. The database ensures that reports are adequately investigated and removed as appropriate.

***Continue to implement enforcement ordinances and regulations to prohibit IDDE (S5.C.9.b.)***

##### Permit Deadlines and Responsible Parties

Continued implementation of ordinances and regulatory mechanisms as necessary to prohibit non-stormwater discharges	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> <li>• ES/Environmental Programs Group</li> <li>• City Attorney’s Office</li> </ul>
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Chapter 12.08 of the TMC provides enforcement authority to prevent illicit connections and discharges to City storm and sanitary sewers. The TMC is available to view online at [cityoftacoma.org/municode](http://cityoftacoma.org/municode). See Section S5.C.1 of this document for specific code citations.

***Program for detecting and identifying illicit connections and non-stormwater discharges to the MS4 (S5.C.9.c.i, ii, iii.)***

##### Permit Deadlines and Responsible Parties

IDDE field screening program	Ongoing	<ul style="list-style-type: none"> <li>• ES/Operation and Maintenance</li> <li>• ES/Environmental Programs Group</li> <li>• ES/Asset Management Group</li> </ul>
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Maintain water quality complaint hotline	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• Customer Support Center</li> </ul>
Training program for City municipal field staff	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> <li>• ES/Environmental Programs Group</li> <li>• Tacoma Public Utilities</li> <li>• City Human Resources Training and Development Section</li> </ul>

***IDDE Field Screening Program***

The City IDDE Field Screening Program consists of several components:

- Video inspection, through STRAP, of the storm sewer pipes over 10 inches in diameter;
- Smoke-testing and/or dye testing of the sanitary and stormwater systems; and
- Base flow sampling.

Stormwater Rapid Assessment Program (STRAP) is an ongoing program that provides video inspection of the stormwater conveyance system. This program has been underway since 2011 and is used to assess pipe condition and to identify illegal connections to the stormwater system. Suspect connections identified as a part of this program are further investigated by smoke and/or dye testing and removed as appropriate.

The City also has an ongoing Sanitary Inflow and Infiltration Program. Under this program, field crews investigate sanitary connections by smoke-testing the sanitary sewer. If properties appear not to be connected to the sanitary system (i.e., property does not smoke), the stormwater system is then smoked to determine if there is an illicit connection from the sanitary side sewer to the stormwater system. If smoke-testing cannot confirm a connection to the sanitary or storm systems, field crews then conduct dye testing to verify connections. All misdirected connections are then required to be remedied.

Both the STRAP and the smoke-testing field screening data are collected and stored on the City’s GIS system.

The City also conducts base flow sampling at selected outfalls to aid in identifying illicit connections and discharges in the MS4.

The permit requires 12 percent on average of the MS4 to be screened each calendar year.

The City’s existing IDDE program follows standard procedures based on the guidance document: Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual prepared by Herrera Environmental Consultants, May 7, 2013 ([wastormwatercenter.org/illicit-connection-illicit-discharge/](http://wastormwatercenter.org/illicit-connection-illicit-discharge/)).

**Maintain Publicly Listed Water Quality Complaint Hotline**

In 2018, the City began using its own TacomaFIRST 311 as our water quality complaint line for spills and illicit discharges. TacomaFIRST 311 is used as a platform for anyone within the City to call. Residents can call 311 within the City or (253) 591-5000 from anywhere else. TacomaFIRST 311 is included in directories throughout the City, on watershed signs along major arterials, and on 311 and stormwater promotional materials. TacomaFirst 311 can be accessed via telephone call, electronically on the City’s website at [www.cityoftacoma.org/surfacewater](http://www.cityoftacoma.org/surfacewater), [www.cityoftacoma.org/tacomafirst311](http://www.cityoftacoma.org/tacomafirst311), and is available as an application for mobile devices.

Training Program for Citywide Field Staff to Identify and Report Illicit Discharges and Connections

City field staff that may discover illicit discharges while performing their job responsibilities have been identified and are provided training on how to identify and report illicit discharges. The appropriate response and referral options for reporting the discharges are the focus of an uPerform training software tool that is accessible online through the City’s internal website. This training is now part of the City’s onboarding process for new hires that may encounter illicit discharges while in the field. Additional reminders such as key chain tags and fleet vehicle windshield clings listing an internal-use only phone number for City staff to report illicit discharges have also been distributed. The uPerform training is documented in SAP, the City’s Information Management System database, and the City will identify needs for follow-up training.

***Response to Illicit Connections and Illicit Discharges including Spills (S5.C.9.d.)***

The Permit requires the City to implement an ongoing program designed to address illicit discharges, including spills and illicit connections, into the Permittees MS4. The program shall include procedures for characterizing, tracing and eliminating illicit discharges.

Permit Deadlines and Responsible Parties

Characterize, trace and eliminate illicit discharges	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance</li> <li>• ES/Collection System Support</li> <li>• ES/Technical Service Section</li> </ul>
Immediate response and referral to Ecology if severe threat to environment or health exists due to an illicit discharge or spill	Immediately	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance</li> <li>• ES/Technical Services Section</li> </ul>
Investigate complaints or monitoring information indicating a potential illicit discharge	Within 7 days	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance</li> <li>• ES/Technical Services Section</li> </ul>
Initiate investigation following discovery of illicit connection	Within 21 days	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance</li> <li>• ES/Technical Services Section</li> </ul>
Upon confirmation, use enforcement authority to attempt to terminate illicit connections	Within 6 months	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance</li> <li>• ES/Technical Services Section</li> </ul>

The City Collection System Support and Source Control Inspection Programs work together to promote investigation and termination of illicit connections per the timelines listed above. The ES/Environmental Compliance Section spills and complaints database is used to track the complete process of screening, investigation, referral to responsible agencies (if other than the City), and enforcement. Environmental Compliance coordinates responses to terminate illicit connections. Often, City departments such as Neighborhood and Community Services Code Compliance Office; ES/Science and Engineering Division; Street Operations; ES/Operations and Maintenance Division; Tacoma Water; and other agencies such as TPCHD and Ecology are involved in both the investigation and termination of illicit connections.

In cases when an illicit connection may cause a severe threat to the environment or human health or when businesses are permitted under Ecology NPDES permits, the City may refer the case to Ecology to follow-up. If a business does not respond after ES/Environmental

Compliance Section staff makes a good faith and documented effort of progressive enforcement to terminate a violation, the City may partner with Ecology for enforcement.

**Training Program for IDDE Staff (S5.C.9.e.)**

Permit Deadlines and Responsible Parties

Training program for IDDE staff	Ongoing	• ES/Science and Engineering Division
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Annual training is provided to field staff responsible for identification, investigation, termination, cleanup and reporting of illicit discharges including: documentation and reporting process once illicit discharges are found; environmental sampling for enforcement; and BMP training

**Develop and Implement Procedures to Investigate and Respond to Spills or Improper Disposal into the MS4 (S5.C.9.f.)**

Potential illicit discharges are discovered and investigated by the same ES personnel who work on the IDDE program and perform the source control business inspections. ES staff investigate potential illicit discharges based on complaints, business inspection reports and stormwater monitoring information, and respond to potential and confirmed illicit discharges using the same procedures applied to potential illicit connections. Tacoma Public Utilities, Environmental Compliance Office has an active spill response program to respond to and clean up transformer oil leaks at facilities owned and operated by Tacoma Public Utilities. Ecology is notified of all major spills.

ES/Environmental Compliance Section staffs a 24-hour on-call Source Control Representative to respond to emergency spills and complaints. The direct call line for City staff has been included in City training for staff that may come into contact with an illicit discharge. Environmental Compliance Section responds to spill complaints to ensure appropriate actions are taken to mitigate damage, document events, and complete any necessary reporting. The Source Control Representative also responds to citizen water pollution reports from the water pollution hotline.

ES/Environmental Compliance Section provides spill response training to the City’s contracted towing company and its affiliates. Tow truck operators are encouraged to report all spills to ES/Environmental Compliance Section. Ecology is also notified of all major spills.

Permit Deadlines and Responsible Parties

Program to respond to spills and improper disposal into the MS4	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> <li>• ES/Solid Waste Management Division</li> <li>• Street Operations Division</li> <li>• ES/Operations and Maintenance Division</li> <li>• Road Use Compliance Office</li> <li>• Tacoma Public Utilities, Environmental Compliance Office</li> </ul>
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The City has existing procedures for responding to spills and improper disposal to the storm system. Some departments also participate in regional emergency response programs.

Major spill response is referred to Ecology. Smaller spills such as automotive fluids on roadways are investigated and responded to by one or more of the following groups:

- ES/Environmental Compliance Section
- ES/Solid Waste Management Division
- Street Operations Division
- ES/Operations and Maintenance Division
- Road Use Compliance Office
- Tacoma Public Utilities, Environmental Compliance Office

***IDDE Inspection, Response and Enforcement Record Keeping (S5.C.9.g.)***

Permit Deadlines and Responsible Parties

Track and maintain records of illicit discharge detection and elimination and spill complaint inspection, response and enforcement	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> <li>• ES/Collection System Support</li> </ul>
Submit data for all illicit connections found by, reported to, or investigated for the previous calendar year	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> <li>• ES/Collection System Support</li> </ul>
Utilize the WQWebIDDE form or develop the required IDDE report form and tracking system to record IDDE incident and investigation data	March 31, 2021	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> <li>• ES/Collection System Support</li> <li>• ES/Asset Management Group</li> </ul>

The ES/Environmental Compliance Section staff uses a database (ES/Environmental Compliance Section spills and complaints database) to track IDDE, spill complaints, and source control inspection activities. The database is being updated to meet the requirements stated in Appendix 14.

The City IDDE program uses the City’s asset management system to manage field screening and any follow-up investigation. The referral information and final enforcement outcome for each potential illicit discharge or connection is tracked in the ES/Environmental Compliance Section spills and complaints database.

Actions required for permit compliance are listed in the 2020 Work Plan (Appendix C).

## S5.C.10. Maintenance and Operations Program

### Summary of Program Component

This section of the SWMP contains requirements to regulate and conduct public and private operation and maintenance activities to prevent and reduce stormwater impacts.

Each City division is responsible for performing those tasks discussed under the compliance measures below that are applicable and necessary to be in compliance with the Permit. These include:

- Implementing and enforcing maintenance standards for stormwater facilities
- Ensuring proper and timely maintenance of public and private stormwater facilities, including catch basins;
- Establishing Best Management Practices (BMPs) for reducing stormwater impacts associated with runoff from City property, parking lots, streets and highways owned or operated by the City;
- Implementing a training program for employees who have primary construction, operations, or maintenance job functions that may impact stormwater quality;
- Establishing BMPs for reducing stormwater impacts from heavy equipment maintenance or storage yards and material storage facilities owned or operated by the City; and
- Maintaining records of these activities.

### Permit Compliance Measures

#### *Adopting Maintenance Standards Equivalent to the 2019 Ecology Manual (S5.C.10.a.)*

#### Permit Deadlines and Responsible Parties

Adopt Maintenance Standards Equivalent to Ecology’s 2019 SWMM for Western Washington and perform required maintenance on a regular basis	July 1, 2021	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• ES/Operations and Maintenance Division</li> </ul>
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The City currently has maintenance standards that are adopted by TMC 12.08.090 D.10 and are equivalent to the maintenance standards of the 2012 SWMMWW. The City Stormwater Detention and Treatment Facilities Operation and Maintenance Manual describes maintenance activities for public facilities and references the City standards.

When maintenance is required according to the standards, the City will schedule typical maintenance to be performed within one year for all treatment and flow control facilities; within six months for all catch basins; and within two years for maintenance requiring capital construction of less than \$25,000.

#### Adopt Maintenance Standards Equivalent to Ecology’s 2019 SWMM for Western Washington

TMC 12.08.090 references the requirement for an operation and maintenance manual including maintenance standards for proposed stormwater facilities as described in the SWMM (equivalent to Ecology’s 2019 SWMM for Western Washington standards.). Chapter 12.08 of the TMC also provides City personnel authority to enter upon private property to inspect and regulate the operation and maintenance of private facilities. The City requires owners of private stormwater facilities to submit an operation and maintenance manual to the City as part of the permit approval process to ensure that all current and future owners of the private stormwater

facilities have operation and maintenance guidelines for regular inspection and maintenance of their permanent stormwater treatment and flow control facilities. Currently the City is required to and is equivalent to the 2012 SWMMWW but will be required to be equivalent to the 2019 SWMMWW by July 31, 2021.

***Maintenance of Private Stormwater Facilities Regulated by the City (S5.C.10.b.)***

Permit Deadlines and Responsible Parties

Inspect private treatment and flow control BMPs/facilities	Ongoing	• ES/Environmental Compliance Section
Inspection program shall achieve inspection of 80 percent of all sites requiring inspection	Ongoing	• ES/Environmental Compliance Section
Catch basin cleaning required where identified by inspection	Ongoing	• ES/Environmental Compliance Section

Inspect Private Treatment and Flow Control BMPs/Facilities

The City requires applicants installing private stormwater facilities to enter into a Covenant and Easement agreement. The Covenant and Easement agreement between the property owner and the City is recorded to the title of the associated property prior to final permit approval. The agreement affirms a commitment on the part of the property owner to perform inspection and maintenance of the private drainage system and allow City staff access to the facilities for confirmatory inspections.

The City has an established inspection program for private storm drainage facilities. The ES/Environmental Compliance Section Inspectors provide education and training to owners of private stormwater facilities on operations and maintenance needs for their treatment and flow control devices. Inspection and enforcement records are tracked in the ES/Environmental Compliance Section spills and complaints database. The City will provide inspection of each identified private treatment and flow control device regulated by the City. The City has analyzed the data from annual facility inspections over 6 years. Based on that analysis, a two year inspection frequency is appropriate for the majority of private facilities. This analysis and frequency determination is allowed per Permit section S5.C.10.b.ii.

Inspection Program Shall Achieve Inspection of 80 Percent of all Sites Requiring Inspection

The City has an established inspection program designed to inspect and require maintenance of private stormwater facilities regulated by the City. The City also has an established spills and complaints database for tracking purposes. The City will meet the inspection requirements described above in Section S5.C.10.b.ii., by achieving inspection of 80 percent of all known facilities requiring inspection.

Catch Basin Cleaning Required where Identified by Inspection

The City has an established inspection program with the authority to inspect and require maintenance of private stormwater facilities, including catch basins, regulated by the City. TMC 12.08.090 requires that all privately owned drainage facilities including catch basins must be regularly inspected and maintained by the owner and provides authority to the City to access private property to inspect catch basins connected to the municipal storm drainage system. City inspectors enforce required maintenance standards for cleaning private catch basins. The Maintenance standards identify conditions requiring catch basin maintenance including

sediment depth, vegetation and debris accumulation, structural integrity, and safety concerns. City inspectors also require catch basin cleaning where structures have been contaminated by pollutants from accidental spills or illicit discharges.

***Maintenance of Stormwater Facilities Owned or Operated by the City (S5.C.10.c.)***

Permit Deadlines and Responsible Parties

Annually inspect public stormwater treatment and flow control facilities owned or operated by the City	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> </ul>
Perform spot checks of City-owned treatment and flow control facilities after large storm events	Ongoing	<ul style="list-style-type: none"> <li>• ES/Operations and Maintenance Division</li> <li>• ES/Environmental Compliance Section</li> <li>• ES/Environmental Programs Group</li> <li>• ES/Collections Systems</li> </ul>

Inspection Schedule Established for Public Stormwater Facilities Owned or Operated by the City

ES has a program to annually inspect all City owned or operated stormwater treatment and flow control facilities and to provide necessary maintenance of these facilities. The inspection program's goal is to achieve at least 95 percent of required inspections. The list of City-owned facilities and associated maintenance procedures are documented in the SWMM, the City Stormwater Detention and Treatment Facilities Operation and Maintenance Manual and in the Environmental Compliance database. The Stormwater Detention and Treatment Facilities Operation and Maintenance Manual is updated periodically.

Perform Spot Checks of Treatment and Flow Control Facilities after Major Storm Events

ES implements a flooding emergency response plan to inspect public stormwater facilities and potential flooding locations during major storm events, also called a “code red” event. The plan identifies potential flooding areas and assigns ES personnel to designated drainage basins within the City. These personnel are responsible for inspecting the public storm system and calling the ES/Operations and Maintenance Division to perform emergency maintenance if necessary to alleviate flooding. The flooding emergency response plan includes additional spot check inspections of potentially damaged treatment or flow control facilities during a “code red” flood response, which is triggered by a major storm event for Tacoma’s storm system. For the purpose of this section, a major storm event is defined as the 24-hour storm with a 10-year or greater recurrence interval. After the event occurs, additional spot checks of potentially damaged facilities will be conducted. If spot checks show widespread damage or maintenance needs, additional stormwater treatment and flow control facilities that may have been affected will be inspected. The flooding emergency response plan also documents the process for communicating inspection results to the ES/Operations and Maintenance Division or ES/Science and Engineering Division for follow-up with recommended maintenance or repair activities. The plan is updated as necessary.

**Maintenance of Catch Basins Owned or Operated by the City (S5.C.10.d.)**

Permit Deadlines and Responsible Parties

Inspect City-owned catch basins on a circuit basis	Ongoing	<ul style="list-style-type: none"> <li>• ES/Operations and Maintenance Division</li> <li>• ES/Environmental Programs Group</li> <li>• ES/Environmental Compliance Section</li> </ul>
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The ES/Operations and Maintenance Division inspects and maintains catch basins owned and operated by the City on a circuit basis per Permit section S5.C.10.d.i.(b). A dedicated catch basin cleaning crew is assigned to inspect and clean a minimum of 25 percent of catch basins within each stormwater asset subbasin in each watershed per year as a sample. The data from the inspections is analyzed and additional inspection and cleaning within the subbasin is conducted as needed. Additional catch basin inspections will be conducted by Environmental Services staff in conjunction with other field activities. Catch basin inspections can be easily entered by City staff using the City’s asset management system. The asset management system then schedules any follow up cleaning or other maintenance if needed per the inspection.

If the inspected basins are at least 60 percent full of sediment or when debris is within six inches of the bottom of the outlet pipe, cleaning will be scheduled within six months, however, ES/Operations and Maintenance Division typically cleans the catch basin directly after the inspection occurs.

The City owns and operates approved and permitted decant facilities. Disposal of decant materials from catch basin maintenance activities is in accordance with the street waste disposal procedures described in the Permit, Appendix 6.

Individual maintenance plans for more frequent inspection and cleaning have been developed for some catchments with especially heavy loads of sediment and individual problem catch basins. These maintenance plans include specific guidelines for the type of maintenance and frequency needed, and are developed as a result of observations during regular maintenance visits by staff.

**Reduce Stormwater Impacts from Lands Owned and Maintained by the City and Road Maintenance Activities (S5.C.10.e.)**

Permit Deadlines and Responsible Parties

Implement practices to reduce stormwater impacts from public lands and facilities and road maintenance activities	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> <li>• Public Works Department/Street Operations</li> <li>• ES/Operations and Maintenance Division</li> <li>• ES/Solid Waste Management Division</li> <li>• Public Works Department/Facilities Maintenance</li> </ul>
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		<ul style="list-style-type: none"> <li>• Public Works Department/Real Property Services</li> <li>• Tacoma Water</li> <li>• Tacoma Power</li> <li>• Click!</li> <li>• Tacoma Rail</li> </ul>
<p>Document the practices, policies, and procedures implemented to reduce stormwater impacts associated with runoff</p>	<p>December 31, 2022</p>	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• ES/Environmental Compliance Section</li> <li>• Public Works Department/Street Operations</li> <li>• ES/Operations and Maintenance Division</li> <li>• ES/Solid Waste Management Division</li> <li>• Public Works Department/Facilities Maintenance</li> <li>• Public Works Department/Real Property Services</li> <li>• Tacoma Water</li> <li>• Tacoma Power</li> <li>• Click!</li> <li>• Tacoma Rail</li> </ul>

Practices, Policies and Procedures

ES/Operations and Maintenance Division crews maintaining City-owned treatment and flow control facilities, pipes and catch basins may reference the SWMM for guidelines for operation and maintenance of all City-owned stormwater facilities.

Crews performing street, utility, and grounds maintenance activities follow the guidelines in the City of Tacoma Utility BMP Manual, City of Tacoma SWMM and RRMP ESA Guidelines. This includes maintenance of parking lots, streets and highways that are owned or operated by the City, as well as for the maintenance activities listed in the Permit Section S5.C.10.e. including pipe cleaning, cleaning of culverts, ditch maintenance, street cleaning, road repair and resurfacing, snow and ice control, utility installation, vegetation management, dust control, pavement striping maintenance, application of fertilizers, pesticides and herbicides, sediment and erosion control, landscape maintenance, vegetation disposal, trash and pet waste management, and building exterior cleaning and maintenance.

Supervisors are verifying proper practices by using a City developed tablet app. Data from this app is maintained in a database and is analyzed regularly to help determine if additional training is required.

The Public Works Department, Street Operations and Tacoma Public Utilities - Grounds Maintenance Section collaborated with the Tacoma Public Schools and Metro Parks Tacoma to write the 2011 Management Guidelines for Public Landscapes Including Integrated Pest

Management. This document outlines strategies and methods for pest control used by the guideline partners.

The City sponsors two to three Ecology Washington Conservation Corps (WCC) crews. These crews maintain and restore the City’s mitigation and habitat restoration projects near shorelines, streams and wetlands. All WCC crews are trained in proper operations to ensure their work does not create impacts to stormwater or receiving water bodies.

Additional Practices

The City’s street sweeping program removes sediment and associated contaminants from the street surfaces before they enter the MS4. The street sweeping program is one of the BMPs the City uses to reduce stormwater impacts from roadways. The program provides street sweeping services on a scheduled rotation for major arterials, 12 business districts, and residential areas that are divided into five sweeping districts. Street sweeping services are also provided as needed in response to emergency calls, special events, and customer requests. More information is available on the City website at [cityoftacoma.org/street\\_sweeping](http://cityoftacoma.org/street_sweeping).

The ES/Operations and Maintenance Division provides storm pipe cleaning services throughout the City prioritized based on pipe inspections, receiving water, spill response or other source control observations in the stormwater collection system. The allocation of maintenance resources within the surface water utility is prioritized by the asset management program, which includes impacts to receiving waters as key criteria. Special pipe cleaning projects are prioritized in specific subbasins each year.

***Ongoing Training Program for Employees with Primary Construction, Operations or Maintenance Job Functions (S5.C.10.f.)***

Permit Deadlines and Responsible Parties

Develop and implement a program to train Construction, Operation and Maintenance personnel	Ongoing	<ul style="list-style-type: none"> <li>• Public Works Department/Street Operations</li> <li>• ES/Operations and Maintenance Division</li> <li>• ES/Solid Waste Management Division</li> <li>• Public Works Department/Facilities Maintenance</li> <li>• Public Works Department/Fleet Services</li> <li>• Tacoma Public Utilities</li> </ul>
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ES/Environmental Programs Group coordinates a training program for City staff with primary construction, operations, and maintenance job functions that may impact stormwater quality. The training includes BMPs, policies and procedures for the maintenance activities listed in the Permit Section S5.C.10 (outlined above). The City developed a module based training program that specifies appropriate BMPs based upon the activities being conducted. These modules are presented at staff meetings. As part of the module based training a City of Tacoma Utility BMP Manual was created that provides a more detailed overview of the BMPs mentioned in the training.

The training program will include regularly scheduled follow-up training and a list of trained staff will be documented in SAP, the City’s Information Management System database.

**Implement SWPPPs for City Heavy Equipment Maintenance or Storage Yards and Material Storage Facilities (S5.C.10.g.)**

Permit Deadlines and Responsible Parties

Update SWPPPs for City maintenance and storage facilities	December 31, 2022	<ul style="list-style-type: none"> <li>• ES/Environmental Compliance Section</li> <li>• ES/Environmental Programs Group</li> <li>• ES/Operations and Maintenance Division</li> <li>• Public Works Department/Street Operations</li> <li>• Public Works Department/Facilities Maintenance</li> <li>• Tacoma Water</li> <li>• Tacoma Power</li> <li>• Tacoma Rail</li> </ul>
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SWPPPs have been developed by the Tacoma Public Utilities, ES/Environmental Compliance Section and ES/Environmental Programs Group staff for the list of City-owned heavy equipment maintenance or storage yard and material storage facilities that meet the following criteria:

1. Not required to have coverage under the General NPDES Permit for Stormwater Discharges Associated with Industrial Activities or another NPDES permit that covers stormwater discharges associated with the activity; and
2. Include heavy equipment maintenance and storage areas and/or material storage areas.

The list of facilities includes the following locations:

- Sewer Transmission and Maintenance Dock Street Yard (201 Puyallup Avenue)
- Sewer Transmission Cleveland Way Decant Facility (2101 Cleveland Way)
- TAGRO Business Operations (1423 Puyallup Avenue)
- Tacoma Fire Vehicle Maintenance Shop (3401 B South Orchard Street)
- Tacoma Power Southwest Substation Training Facility and Pole Yard (4102 South 74th Street)
- Tacoma Power Utility Center (3628 South 35th Street)
- Tacoma Water Distribution Operations Center (3506 South 35th Street)
- Tacoma Rail (2601 SR 509 North Frontage Road)
- Traffic Signal and Street Lighting Shop (3401 A South Orchard Street)
- Street Operations Upper Yard (2335 Jefferson Avenue)
- Northeast Tacoma Storage Yard (100 Block Norpoint Way NE)
- Fleet Operations Maintenance Facility (3639 South Pine Street)

SWPPPs for these facilities have been developed and implemented to cover operational BMPs and a visual inspection program to evaluate BMP effectiveness. Annual business inspections by Environmental Compliance Inspectors identify issues that are out of compliance with the SWPPP. SWPPP training will also be provided on an annual basis to employees staffing these facilities.

The SWPPPS will be updated by December 1, 2022, to ensure all components required in the Permit are included in the individual SWPPPs.

***Inspection and Maintenance Records (S5.C.10.h.)***

Permit Deadlines and Responsible Parties:

Provide updated inspection and maintenance records	Ongoing	<ul style="list-style-type: none"> <li>• ES/Operations and Maintenance Division</li> <li>• ES/Environmental Programs Group</li> </ul>
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The City keeps records of all maintenance activities of City-owned and operated storm drainage facilities. Record-keeping processes and maintenance checklists are regularly evaluated and updated.

Environmental Compliance Inspectors keep a database of all business inspections, which includes private stormwater facility inspections, maintenance, enforcement, and spill complaint information.

Maintenance activities for public facilities are kept in SAP, the City’s Information Management System database.

Actions required for permit compliance are listed in the 2020 Work Plan (Appendix C).

## S5.C.11. Education and Outreach Program

### Summary of Program Components

Public education and outreach is a vital component of the SWMP. Stormwater pollution is the result of ongoing activities of residents and businesses. Therefore, focusing public education efforts on activities and practices that residents and businesses can do to help reduce stormwater impacts to surface water quality are important. As people learn how their activities affect surface water quality, some will quickly change their behavior. Others will benefit from continuous educational opportunities and incentives.

The City has recently started an increased focus on more equitable education and outreach programming to serve a more diverse audience. The City translated educational materials into Tacoma's five primarily used languages other than English – which are Spanish, Russian, Vietnamese, Korean and Khmer. The City is continually updating its education and outreach programs to better serve its diverse population.

The City has various active environmental education and outreach programs and activities described in the following sections. Most of the City's surface water and stormwater education efforts are implemented by the following groups:

#### ES/Environmental Programs Group

Environmental Programs Group staff is responsible to coordinate all permit-mandated education and outreach. Staff coordinates with departments and divisions throughout the City. Staff develop messages, create outreach materials, and train other staff regarding outreach messages, plan events, and conduct outreach opportunities.

#### ES/Environmental Compliance Section

Environmental Compliance Inspectors provide education about BMPs to businesses during regular business inspections, stormwater facility maintenance inspections, and spills and complaints responses. Outreach audiences include commercial and industrial businesses, home-based and mobile businesses, landscapers, and property managers, among others.

#### ES/Solid Waste Management Division

Staff assists with education related to the storage and disposal of hazardous waste, education related to natural yard care, yard waste disposal and dumpster practices and maintenance, and hosts the EnviroHouse, located at the Tacoma Recovery and Transfer Center, which demonstrates sustainable building and natural landscape techniques.

#### City Media and Communications Office

Staff provides strategic marketing and communications support to all ES utilities (surface water, wastewater, and solid waste). Staff advises and supports the ES/Environmental Programs Group and ES/Environmental Compliance Section on public relations and media relations opportunities. Staff creates educational and promotional materials to support utility programs and messages, and manages relevant social media outreach efforts and other duties as assigned.

#### Office of Environmental Policy and Sustainability (OEPS)

The EnviroChallenger environmental education program delivers free lessons to elementary and middle schools, home school groups and represents ES at community events. Lessons and

event activities include stormwater, wastewater, and solid waste topics. OEPS and Environmental Programs Group partner on activities and initiatives where messaging overlaps.

ES Communications

Creates content for and manages the EnviroTalk newsletter, TV Tacoma, bi-monthly utility bill inserts, and utility websites. This also includes the Recycle Coach App, using social media including Twitter, Instagram, and Facebook to reach our City of Tacoma audience

**Permit Compliance Measures**

***Implement a Public Education and Outreach Program (S5.C.11.a.i-vii.)***

Permit Deadlines and Responsible Parties

Build general awareness about methods to address and reduce stormwater impacts	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• ES/Environmental Compliance Section</li> <li>• ES/Solid Waste Management Division</li> <li>• City Media and Communications Office</li> <li>• EnviroChallenger Program</li> <li>• ES/Communications</li> </ul>
Determine if an additional evaluation of the behavior change program previously evaluated will have value to future efforts and if so, complete the evaluation	July 1, 2020	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> </ul>
Develop a campaign for the City's 2019 permit required behavior change program	February 1, 2021	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> </ul>
Begin implementing the 2019 permit required behavior change strategy	April 1, 2021	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> </ul>
Evaluate and report on the 2019 permit required behavior change program	March 31, 2024	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> </ul>
Continue to improve and implement the 2019 permit required behavior change program	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> </ul>

The City's public education and outreach methods are designed for a variety of target audiences and messages as required by the Permit. Per the 2019 Permit, the City's education and outreach program shall be informed by local water quality information and target high priority audiences, subject areas, and/or BMPs. The City will consider delivering its selected messages in language(s) other than English, as appropriate for the target audience.

Permit mandated target audiences	Permit mandated messages for the specific audience
General Public (including school age children and overburdened communities), and businesses (including home-based and mobile business)	<ul style="list-style-type: none"> <li>• General impacts of stormwater on surface waters, including impacts from impervious surfaces and of the hazards associated with illicit discharges and improper disposal of waste.</li> <li>• LID principles and LID BMPs.</li> </ul>
Engineers, contractors, developers, and land use planners	<ul style="list-style-type: none"> <li>• Technical standards for stormwater site and erosion control plans.</li> <li>• LID principles and LID BMPs.</li> <li>• Stormwater treatment and flow control BMPs/facilities</li> </ul>

The City also has several other campaigns that are helpful for our specific system such as the separated stormwater and wastewater systems campaign. The City provides education for businesses and the development community focused on stormwater BMPs for both ongoing maintenance of water quality and flow control facilities and implementation of operational BMPs.

For the behavior change portion of the Permit, the City will select one of the target audiences and one behavior change Best Management Practices (BMPs) and create a behavior change program to address that audience and that BMP. The Permit contains a list of possible audiences and BMPs for the City to select from. During 2020, the City will evaluate its existing behavior change programs and determine the selection of audience and BMP for a behavior change strategy to focus on. The Permit requires that the City begin implementation of the new behavior change strategy incorporating the selected audience and BMP by April 1, 2021.

The new behavior change strategy will be developed using social marketing practices and methods, be tailored to the community, and include the development of a program evaluation plan.

***Programs***

The City’s public education and outreach programs to meet the Permit requirements are summarized below:

Make a Splash Grant Program

ES dedicates \$50,000 each year to small stormwater-related grants for projects promoting surface water education, protection and restoration. Grant applications are accepted during the month of May to coincide with Puget Sound Starts Here month and are awarded in July of each year. Grants are designed for projects that have a strong stormwater pollution prevention message or provide a stormwater benefit. Submitted projects must meet at least one of the program goals of education, surface water protection, or habitat restoration and tree planting. Over 70 projects have been funded since 2013.

### EnviroChallenger

The City's [EnviroChallenger](#) environmental education program continues to serve public, private, and home school communities within Tacoma. Environmental educators visit Tacoma classrooms to promote stormwater, wastewater, garbage and recycling messages to children each year. The EnviroChallengers also attend many community events throughout the year and help to communicate stormwater messages to adults as well. Last year the EnviroChallengers started a partnership with Washington Green Schools and Orcas Love Raingardens, to promote awareness about the importance of clean stormwater and increase stormwater based curriculum in Tacoma schools.

### Business Source Control Outreach

Information is presented to business owners and property managers during source control site visits required by Permit Section S5.C.8. The intent is to make business owners and property managers more aware of the importance of regularly maintaining their onsite stormwater facilities and BMPs to help protect local waterways and reduce stormwater pollution. Informational handouts for businesses including mobile painters, pressure washers, and carpet cleaners on how to properly dispose of their wastewater have been developed and are delivered when needed. Businesses can also request to participate in the Catch Basin Marking Program and the City of Tacoma will supply resources. Specific messaging and outreach has been translated into five languages to increase accessibility by business owners and operators.

### Pet Waste Program

In 2015, ES piloted a neighborhood pet waste station sponsorship program. Participants apply to sponsor a pet waste station, and ES provides the station and initial bag supplies. The sponsors monitor station use and replace bags as needed. In response to initial feedback about the cost to purchase replacement bags and after the City of Tacoma initiated the shopping bag ban, EPG now offers free replacement bag rolls to sponsors. The stations are available to residential neighborhoods as well as multi-family housing units.

Information on proper management and disposal of pet waste is available on the City's website and is included in the City's publications and programming including social media, utility bill inserts, the EnviroTalk newsletter and environmental lessons by the EnviroChallengers. The Dog mascot, "Scoopy Doo" and a "Poo Toss" game are also commonly seen at ES-sponsored community and family fun events.

In 2019, five pet waste stations were provided to residents all over Tacoma that expressed concern about neighborhood problems and park associated pet waste pickup. Residents have expressed positive feedback and are grateful for the program to help curb pet waste problems.

### Household Hazardous Waste Disposal Program

The ES/Solid Waste Management collects and properly disposes of large amounts of [household hazardous waste](#) from Tacoma residents at the Tacoma Recovery and Transfer Center. This service is free of charge for residents in order to prevent hazardous materials from entering the stormwater system, surface waters, groundwater, or general garbage stream. Solid Waste Management works to educate the public about the need for proper disposal and where hazardous wastes can be disposed of through ES publications and other communication tools including the Recycle Coach app. Special assistance is also offered to businesses through the business technical assistance program.

### Puget Sound Starts Here Media Campaign

The City is participating with neighboring cities and counties, Ecology and Puget Sound Partnership, in a regional stormwater education campaign called Puget Sound Starts Here (PSSH). This campaign began in 2009, and has included a television advertising campaign, website and social media efforts. The campaign's purpose is to educate residents about how their daily actions affect surface water quality, and empower them to make good choices throughout their day in order to keep pollution out of our local surface waters. Puget Sound Starts Here is a regionally relevant, broadly distributed high impact awareness program that supports local efforts to elevate the region's understanding of stormwater pollution impacts. Where appropriate, the City co-brands its surface water BMP messages with the campaign to enhance its impact.

Beginning in 2012, May was regionally designated "Puget Sound Starts Here Month." The City of Tacoma and other partners participate in PSSH promotions. The City also coordinates with May Bike Month events as a way to encourage more active transportation options that promote personal and Puget Sound health. The City has co-branded PSSH promotion with Bike Month using the tagline, "Bike everywhere – because – Puget Sound Starts Here."

In 2018, the City of Tacoma partnered with multiple jurisdictions to develop and air a series of commercials with "Certain Things Don't Mix" messaging. The campaign goal was to engage the public to address storm water pollution that affects our lakes, streams and Puget Sound. The commercials were promoted through Xfinity ON-DEMAND and various connected TV streaming devices and mobile platforms. The commercials demonstrated ways to keep pollutants out of Puget Sound using various BMPs. The commercials ran 252,826 times across the Puget Sound Basin with 1,982,751 impressions delivered. TV Tacoma continues to air the commercials strengthening the PSSH brand across the Tacoma region.

In 2019, ES participated in the regional #OrcaHeros campaign which highlights clean water and good habitat are essential to orca recovery. The City of Tacoma nominated residents within Tacoma that made a positive impact on stormwater, by installing rain gardens and sponsoring neighborhood pet waste stations, by posting them on our Facebook page with #PSSH and #OrcaHeros.

PSSH co-branding is also seen at our outreach events where we encourage behavior change with event specific promotional materials and giveaways.

### Car Wash Coupons

The City is now focusing on distributing free car wash coupons and encouraging charities to sell car wash coupons for fundraising rather than hosting charity car washes. The City provides technical assistance and recommendations on how to fundraise while avoiding discharges to the stormwater system.

### Don't Drip and Drive

The City partners with the regional campaign to help bring awareness throughout the Puget Sound region on the impacts of car leaks (oils, coolant and other toxins) to surface water. Under the program, Ecology has teamed up with other state, local and non-profit organizations to offer free Fix That Leak! Workshops.

A website ([fixcarleaks.org](http://fixcarleaks.org)) was also developed which contains information on how to diagnose car leaks, tips on what to expect from your mechanic, schedule and registration details for upcoming auto leak workshops, and a list of participating inspection and repair shops throughout the region.

In the past, leak testing events have been held at the Tacoma Landfill, Cheney Stadium, Center for Urban Waters and the Annual Sustainability Expo to provide free leak tests and 10% discount at participating repair shops.

Plans are in place to partner with local technical colleges to provide an automotive education program to residents of Tacoma to raise awareness and empower vehicle owners to check for and fix car leaks. By offering auto leaks inspection workshops, collaborating with the Automotive Service Association Northwest, regional advertising, and providing leak testing events in public places, the program aims to increase the number of vehicle leaks repairs and reduce stormwater pollution that wash into our local streams and ultimately Puget Sound.

#### Private Stormwater Facility Maintenance

This program assures property owners have access to their drawings and operation and maintenance instructions for privately owned stormwater facilities and provides technical assistance to homeowners and business owners, as requested.

#### Dumpster Maintenance

This program is modeled after the regionally developed dumpster behavior change program that was piloted by the City of Bothell. A dumpster sticker is installed on each dumpster to cue users to keep the lid closed and don't overfill the dumpster. An information card is provided to dumpster customers (and/or property managers) with information to contact Tacoma Solid Waste Management to replace their leaking dumpsters for free. The stickers and accompanying information also discuss "right sizing" dumpsters to ensure that all garbage will fit inside the dumpster until the next pick up date.

#### Rain Garden Technical Assistance

ES evaluated the 2014 pilot Residential Rain Garden Rebate program and pilot Adopt a Rain Garden program, based on the results of the evaluation, ES will develop permanent programs to offer opportunities for Tacoma residents and businesses. ES has developed technical resources for the construction of rain gardens and partners with the PCD to provide residents with technical assistance. The Adopt a Rain Garden program is in process of transitioning into a permanent program.

#### Low Impact Development Rate Reduction

The City has implemented a Low Impact Development Surface Water Rate Reduction program. Property owners may qualify for a surface water rate reduction if they choose to utilize permanent LID BMPs beyond what is required per the SWMM for development, redevelopment or as a retrofit for stormwater management. Tacoma Municipal Code (TMC) 12.08.560 outlines the program requirements. In order to qualify for the LID surface water rate reduction, all BMPs must be permanent LID BMPs per the SWMM, Volume 3, or Volume 6, as approved by the ES Department.

#### Open Space Management Program

The Open Space Management Program promotes activities to protect existing green spaces and increase Tacoma's tree cover. The City sponsors a [Tree Coupon Program](#) in partnership with local nurseries, helps sponsor an annual Green Tacoma Day/Arbor Day celebration, and supports various other related educational opportunities to successfully plant and care for trees in their yards.

### Tacoma Green Stormwater Infrastructure Projects

Tacoma continues to grow the green stormwater infrastructure within City limits by installing permeable road and bioretention where feasible. In 2019, ES completed work with Tacoma Public Schools to install and monitor permeable pavement projects that drain to rain gardens at the IDEA School in South Tacoma, bioretention swales at the Tacoma Recovery & Transfer Center, and a Green Roads Corridor Project to incorporate GSI and LID stormwater features into local street improvements. Each of these projects included an education and outreach component:

- ES partnered with Washington State University and Tacoma Public Schools to complete the Permeable Pavement Standards Based on Lessons Learned Project at the School of Industrial Design, Engineering and Art (IDEA). The project field tested new permeable pavement mix designs and material testing procedures to further improve pavement durability, enhance permeable pavement standards, and increase confidence in permeable pavements.
- The employee parking lot adjacent to the Tacoma Recovery & Transfer Center is built on top of a portion of the City's decommissioned landfill. Due to ground settling over time, the parking lot required regrading and resurfacing. A stormwater bioretention swale was installed near the parking lot, which allowed for safer redirects of traffic flow and reduced stormwater pollution concerns. An educational sign was placed near the bioretention facility. The public waiting to access the refuse drop off site can see the signage.
- As part of the City's effort to incorporate LID and GSI stormwater features into local street improvements as public demonstration projects, the City has been designing certain street improvements to include LID and GSI features. An associated series of "Green Road Corridor" handouts and informational signage outline the benefits and special operation and maintenance considerations of these projects to neighboring residents. The City of Tacoma's East 40th Street Green Infrastructure Project has received several awards for GSI/ LID features and Greenroads® Silver Certification.

### **Local Community Events**

Stormwater messages are promoted at a variety of community events. Both the EnviroChallengers and Environmental Programs Group staff are present at these events. Environmental Programs group staff typically participate in four to six local community outreach events each year. Three of the major events are highlighted here:

#### Puget Sound Orca Recovery Day

Continuing from our Orca Recovery Day 2018 partnership, the City of Tacoma hosted its own event in 2019.

Conservation Districts and partner organizations across Washington and from British Columbia to Northern California collaborated for Orca Recovery Day on Saturday, October 19, 2019. With 65-events throughout the Pacific Northwest, thousands of people came out to help recover habitat and reduce pollution to restore critically endangered Southern Resident Killer Whales.

During Puget Sound Recovery Day ES collaborated with Automotive Service Association Northwest and The LeMay Car Museum to put on a Don't Drip and Drive event. This event utilized a drip test to see if cars were leaking fluids and checked other important vehicle components like windshield wipers and car lights.

This was in coordination with the combined efforts seen across the region. Regionally for Orca Recovery Day there were:

- 65-events
- 109 organizations
- 2,352 attendees/1,635 volunteers
- 5,540 volunteer hours
- 16,791 native plants installed
- ~33 acres restored
- 5,737 pounds of trash picked up

### South Sound Sustainability Expo

This free event connects Tacoma area residents and businesses with services, products, companies, and agencies that address sustainability needs. ES staff host an informational table focused on educating the visiting public on the City's separated stormwater and wastewater systems as well as the impacts of contaminated stormwater on our area's receiving waters.

### T-Town City Services Expo

The City of Tacoma sponsors a biannual free "T-Town: Play, Explore, Learn City Services Expo" featuring demonstrations and activities for the entire family designed to raise awareness about the many City services available, while also gathering ideas and feedback about how residents would like to utilize City resources. The Stormwater sponsored display includes interactive displays promote key messages. A model home is planned in 2020 and will allow participants to walk through parts of their home that are connected to each utility and get valuable information from different departments, including stormwater messaging. This is an opportunity for residents to sign up as sponsor for the Neighborhood Pet Waste Station program. Nearly 3,000 attendees participated in the 2018 T-Town.

## **Tools**

### Surface Water Website

This website ([cityoftacoma.org/surfacewater](http://cityoftacoma.org/surfacewater)) includes information about Surface Water services and rates, the Permit, the City's Annual Report, SWMM, permitting requirements, general BMPs to prevent stormwater pollution, Green Stormwater Infrastructure projects, and more around the City.

### Social Media (Facebook, Twitter, Instagram, YouTube)

The City's Facebook, Twitter, Instagram and YouTube accounts include social media posts related to surface water messages. The City actively promotes surface water messages and "re-tweets" or "likes" of PSSH posts. The City initiated the ES targeted Facebook page in December 2017, this Facebook page actively promotes stormwater messaging.

In 2019 activity across the different media platforms included:

- Puget Sound Starts Here Month, Orca Hero nominations, Make a Splash Grants, Orca Recovery Day and Catch Basin Marking.
- Facebook - 7,626 people reached with 249 engagements.
- Twitter - 7,509 impressions and 19 engagements.
- YouTube - 170 views with 4 likes.

#### Tacoma EnviroNews Listserv

“Tacoma EnviroNews” is an automated electronic listserv that anyone can subscribe to and post messages related to environmental issues, events, and job or volunteer opportunities.

#### EnviroTalk Publication

ES sends out the EnviroTalk magazine three times per year to approximately 54,000 single-family and duplex home residents throughout the City to educate them about surface water, wastewater and solid waste messages, activities and upcoming events in the community.

#### Utility Bill Inserts

Surface water messages are included throughout the year in the utility bill inserts sent to approximately 125,000 customers in the City.

#### TV Tacoma

TV Tacoma is an avenue to provide local viewing audiences with information including stormwater-related public service announcements, PSSH campaign advertisements, and more.

Urban Green is a TV Tacoma program to showcase the environmental and sustainable efforts around the City of Tacoma. The program is available on TV Tacoma and online at [www.cityoftacoma.org/UrbanGreen](http://www.cityoftacoma.org/UrbanGreen). A new episode of Urban Green will air on TV Tacoma and the City’s website every two months and feature topics such as:

- Interviews with regional and national experts on issues pertinent to our region;
- EnviroChallenger tips for passing on environmental ethics to the next generation;
- Local efforts and regional opportunities for environmental stewardship;
- Upcoming chances to learn more and/or get involved; and
- Make a Splash grant recipients and their stormwater focused projects.

Tacoma Report is a TV Tacoma news program that airs every two weeks and features information about City services and programs including surface water management topics.

#### ES Sponsorship of Tacoma Rainiers Baseball Games

ES is a corporate sponsor for the Tacoma Rainiers. ES Sponsorship includes an ad in each issue of “The Dirt” program and a radio spot on every broadcast for home and away games. Three title sponsorships for home games at Cheney Stadium each season include additional advertising in “The Dirt,” PA announcements, scoreboard public service announcements and a staffed information table on the concourse. In 2018 PSSH messaging was utilized to help spread the water pollution prevention messages at several games that included K-9 innings, where dog owners can bring their pets to the game and for PSSH month in May.

Watershed Signs

Watershed signs featuring a leaping salmon graphic and the message “Entering \_\_\_\_\_ Watershed, Yours to Protect,” and the Water Pollution hotline number were installed at the borders of all nine watersheds along major arterial streets in 2012. The graphics are similar to the curb markers seen around the City, and stakeholder input indicates that the watershed signs and curb markers are visible and effective reminders to keep pollution out of the storm drains. In 2018, the watershed signs were updated to reflect the City’s new pollution call in number 311, which allows residents to call in water pollution sightings around the City.

Stormwater Manual listserv

This technical listserv informs interested parties about the City’s Stormwater Management Manual, updates to stormwater related policies and technical trainings. Subscription is open to anyone and includes the general public, engineers, developers, City development staff and others. The City’s stormwater page has a sign up for the listserv.

**Partnerships**

EnviroHouse

ES partners with other City departments to run the EnviroHouse, a hands-on showcase of sustainable building and natural landscape ideas, materials and techniques for a healthy home and planet. The EnviroHouse demonstrates rain barrels, native plants, rain gardens, pervious pavement, natural yard care techniques, “pin” foundations, and other surface water-related best management practices in action. Interpretive signage and educational materials are available regarding LID and natural yard care strategies. Free workshops about a variety of messages are offered on a weekly basis throughout the year.

City departments, coordinated through the Office of Environmental Policy and Sustainability, collaborate with various environmental organizations to provide a focused neighborhood outreach effort called “Healthy Homes, Healthy Neighborhoods” with door-to-door targeted messaging to promote a variety of city initiatives including water pollution prevention behaviors and other sustainable living choices.

***Provide and advertise stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities or events planned and organized within the community. (S5.C.11.b.)***

Permit Deadlines and Responsible Parties

Provide and advertise stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities or events planned and organized within the community	Ongoing	<ul style="list-style-type: none"> <li>• ES/Environmental Programs Group</li> <li>• Office of Environmental Policy and Sustainability</li> </ul>
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The City currently administers several programs to encourage stewardship activities including the Make a Splash grants and catch basin marking program, as described above. Additionally, the following stewardship opportunities available to volunteers throughout the City of Tacoma:

Open Space Stewardship

The City owns and stewards approximately 500 acres of open space properties for goals of healthy tree canopy, ecosystem function, and biodiversity. The City holds a lead role in the Green Tacoma Partnership that collaborates with EarthCorps, Metro Parks Tacoma, PCD and

others to educate the public while encouraging and recruiting stewards on volunteer appropriate open space properties. There are active volunteer stewardship groups at these City-owned properties: Julia's Gulch, Wapato Hills, Fern Hill, and Mason Gulch. Priority restoration activities include invasive vegetation removal and replanting with native vegetation.

#### Stream Team

The PCD coordinates urban stream monitoring at streams throughout the City with the Stream Team. Stream Team monitoring volunteers collect a variety of water quality parameters on a monthly or quarterly basis including pH, dissolved oxygen, nitrate, temperature, and turbidity as well as qualitative observations regarding the surrounding area and wildlife. A report of the observations is published by PCD.

#### Depave

ES also works with PCD to coordinate depave events in public locations throughout Tacoma to promote reduction in impervious surfaces and increased green spaces.

#### Chip-in!

In upland open space areas within the City, Metro Parks Tacoma's Chip-In! program helps run volunteer activities such as site stewards and volunteer work parties to remove invasive species, garbage, improve public access (trails, entrances, fencing, signage) and plant native vegetation.

#### Catch Basin Marking Program

The City continues to partner with Citizens for a Healthy Bay (CHB) to work with volunteers to label catch basins throughout the City. The catch basin labels have a friendly reminder that stormwater goes directly into the nearest creek, stream or Commencement Bay and no pollutants should be disposed of in the stormwater system. The City provides marking supplies and helps with program promotion. CHB coordinates the volunteers and leads the marking events. Locations of the curb markers are mapped and input into the City's GIS system. The program goal is to have every catch basin in Tacoma marked.

2020 will see a roll out of a new catch basin marking app to help reduce paper and create greater access to community groups wanting to partner with the City of Tacoma and CHB. This stormwater catch basin marking app will allow the public to identify catch basins that need to be marked anywhere in the City of Tacoma. Residents will also be able to identify which catch basins need a new marker.

Actions required for permit compliance are listed in the 2020 Work Plan (Appendix C).

## S8. Monitoring and Assessment

### Summary of Program Components

The stormwater monitoring program consists of Regional Status and Trends Monitoring and Stormwater Management Program Effectiveness and Source Identification Studies. The Permit allows Permittees to either pay into these collective funds or to conduct studies relevant to these topics. The City has elected to pay into the Regional Status and Trends Monitoring fund and conduct a Stormwater Management Program Effectiveness and Source Identification Study. This is a continuation of the City’s elections from the 2013 permit cycle.

### Regional Status and Trends Monitoring (S8.A)

#### Permit Compliance Measures

##### *Regular payment to Ecology funds for status and trends stream monitoring (S8.A)*

##### Permit Deadlines and Responsible Parties

Provide annual payments	Ongoing Payments due August 15 <sup>th</sup>	• ES/Environmental Programs Group
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Surface water management rates will be used to pay into the collective funds managed by Ecology to implement regional status and trends monitoring. The City notified Ecology of the choice to pay into the collective fund for the regional stream status and trends monitoring prior to the December 1, 2019 deadline. Payments into this collective fund are due on August 15<sup>th</sup> of each year.

##### *Provide SWMP Effectiveness and Source Identification Studies (S8.B and C)*

##### Permit Deadlines and Responsible Parties

Submit Quality Assurance Project Plan (QAPP) to Ecology for review	February 1, 2020	• ES/Environmental Programs Group
Start water quality monitoring	October 1, 2020	• ES/Environmental Programs Group
Submit annual monitoring results	Yearly by March 31 <sup>st</sup>	• ES/Environmental Programs Group
Submit Final report for 2013-2019 permit	June 30, 2020	• ES/Environmental Programs Group

The City has elected to meet this requirement by continuing to monitor stormwater discharges at seven outfalls to the Thea Foss Waterway. The City notified Ecology of the choice to monitor the Thea Foss Waterway outfalls prior to the December 1, 2019 deadline. The Quality Assurance Program Plan for the outfall monitoring was provided for Ecology review prior to the February 1, 2020 deadline, and stormwater sampling will begin on October 1, 2020 for the 2019 to 2024 permit cycle. Monitoring results will be reported annually with the NPDES Annual Report due on March 31<sup>st</sup> of each year.

Actions required for permit compliance are listed in the 2020 Work Plan (Appendix C).

# LIST OF ABBREVIATIONS

BMP	Best Management Practices
CIP	Capital Improvement Projects
City	The City of Tacoma
CHB	Citizens for a Healthy Bay
DART	Development Assistance and Review Team
ESA	Endangered Species Act
EPG	Environmental Programs Group
ES	Environmental Services
GIS	Geographical Information Systems
IDDE	Illicit Connection and Discharge Detection and Elimination
LID	Low Impact Development
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
OEPS	Office of Environmental Policy and Sustainability
O&M	Operation and maintenance
PCD	Pierce Conservation District
PDS	Planning and Development Services
PSSH	Puget Sound Starts Here
RCW	Revised Code of Washington
RRMP	Regional Road Maintenance Program
SAP	The City's Information Management System database
SEPA	The Washington State Environmental Policy Act
SCP	Source Control Program
SIDIR	Source Identification Information Repository
STGPD	South Tacoma Groundwater Protection District
SAM	Stormwater Action Monitoring
SWMM	Stormwater Management Manual
SWMP	Stormwater Management Program
SWPPP	Stormwater Pollution Prevention Plans
STRAP	Stormwater Rapid Assessment Program
SSC	Structural Stormwater Controls
TMC	Tacoma Municipal Code
TPCHD	Tacoma-Pierce County Health Department

TESC	Temporary Erosion and Sediment Control
Ecology	Washington State Department of Ecology
QAPP	Quality Assurance Project Plan
WCC	Washington Conservation Corps
WRIA	Water Resource Inventory Area

# **Appendix A**

## **Chapter 12.08 of the Tacoma Municipal Code**

For the most current version of Chapter 12.08 of the Tacoma Municipal Code go to: <http://www.cityoftacoma.org/municode>

# **Appendix B**

## **NPDES Internal Coordination Memorandum**



City of Tacoma



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**TO:** General Government Department Directors  
TPU Superintendents

**FROM:** Elizabeth A. Pauli, City Manager *edp*  
Jackie Flowers, Tacoma Public Utilities Director *JF*

**SUBJECT:** City of Tacoma Compliance with Ecology Phase I Municipal Stormwater Permit

**DATE:** February 12, 2020

On August 1, 2019, the new Washington State Department of Ecology Phase I Municipal Stormwater Permit (Permit) under the National Pollutant Discharge Elimination System (NPDES) became effective. This permit covers stormwater discharges from large municipal storm sewers, including the City of Tacoma, covering all City departments for stormwater discharged into Waters of the State such as creeks, rivers, and Puget Sound.

Environmental Services, Science and Engineering Division - Environmental Programs Group (EPG) administers and interprets the Permit. The Permit provisions apply to all properties, easements and right-of-ways that are owned or operated by the City of Tacoma and that are located within permit coverage areas.

Permit requirements and general responsibilities are outlined in the Stormwater Management Program Plan available at [www.cityoftacoma.org/stormwater](http://www.cityoftacoma.org/stormwater). EPG can assist other departments with training and technical assistance as needed or requested.

This memorandum documents the coordination efforts expected from all General Government and Tacoma Public Utilities staff to meet the provisions of Section S5.C.3.A of the Permit.

Virtually every City department has an important contribution to improve and maintain the quality and reduce the quantity of stormwater runoff discharge to our surrounding waterways. All of our efforts together play an important role in protecting Tacoma's wetlands, streams, rivers, lakes, and Puget Sound.

Environmental Programs Group requests your support in meeting our Permit requirements. Thank you in advance for your support and assistance with this important program!

# **Appendix C**

## **2020 SWMP Work Plan**

## 2020 SWMP WORK PLAN

The following for 2020 NPDES permit compliance will be implemented throughout 2020

S5.C.1. – Legal Authority to Control Discharges to and from the MS4	<ul style="list-style-type: none"> <li>• No Actions required for permit compliance as current regulatory mechanisms are in place.</li> <li>• Continue compliance with Section S5.C.1.</li> </ul>
S5.C.2. – MS4 Mapping and Documentation	<ul style="list-style-type: none"> <li>• Continue mapping all required components.</li> <li>• Start collecting information on outfall size and material if not already noted.</li> <li>• Continue compliance with Section S5.C.2.</li> </ul>
S5.C.3. – Coordination	<ul style="list-style-type: none"> <li>• Complete and submit the intra-governmental coordination memorandum by March 30, 2020.</li> <li>• Continue compliance with Section S5.C.3.</li> </ul>
S5.C.4. – Public Involvement and Participation	<ul style="list-style-type: none"> <li>• Post the 2020 draft SWMP Plan online and advertise for public comment late February to mid-March 2020. Address comments and post the final 2020 SWMP Plan by May 31, 2020.</li> <li>• Continue compliance with Section S5.C.4.</li> </ul>
S5.C.5. – Controlling Runoff from New Development, Redevelopment, and Construction Sites	<ul style="list-style-type: none"> <li>• Submit draft SWMM standards and ordinances to Ecology for review by July 1, 2020.</li> <li>• Continue compliance with Section S5.C.5.</li> </ul>
S5.C.6. – Stormwater Planning	<ul style="list-style-type: none"> <li>• Convene an inter-disciplinary team for the Stormwater Planning Program by August 1, 2020.</li> <li>• Finalize strategy for overall compliance with this new Permit requirement.</li> </ul>
S5.C.7. – Structural Stormwater Controls	<ul style="list-style-type: none"> <li>• Continue compliance with Section S5.C.7.</li> </ul>
S5.C.8. – Source Control Program for Existing Development	<ul style="list-style-type: none"> <li>• Continue compliance with Section S5.C.8.</li> </ul>
S5.C.9. – Illicit Connection and Discharge Detection and Elimination (IDDE)	<ul style="list-style-type: none"> <li>• Continue development and training for the new IDDE database per Appendix 14 of the Permit.</li> <li>• Continue compliance with Section S5.C.9.</li> </ul>
S5.C.10. – Maintenance and Operations Program	<ul style="list-style-type: none"> <li>• Continue compliance with Section S5.C.10.</li> </ul>
S5.C.11. – Education and Outreach Program	<ul style="list-style-type: none"> <li>• Continue planning for more equitable education and outreach programming to serve more diverse audiences.</li> </ul>

	<ul style="list-style-type: none"> <li>• In 2020, determine behavior change program audience and messaging to be implemented in the current Permit cycle.</li> <li>• In 2020, develop behavior change program to be implemented in the current Permit cycle.</li> <li>• Continue compliance with Section S5.C.11.</li> </ul>
<p>S8. – Monitoring and Inspection</p>	<ul style="list-style-type: none"> <li>• Continue paying into a collective fund for Regional Status and Trends Monitoring in the Puget Sound. Payments into the collective fund are due to Ecology annually on August 15<sup>th</sup>.</li> <li>• A draft QAPP was submitted to Ecology prior to the Feb 1, 2020 deadline. The City will respond to comments and submit the finalized QAPP by August 15, 2020.</li> <li>• Continue the SWMP effectiveness study using stormwater discharge monitoring at seven locations in accordance with the updated Quality Assurance Project Plan. Annual sampling will occur and a yearly report will be submitted.</li> <li>• Continue compliance with Section S8.</li> </ul>