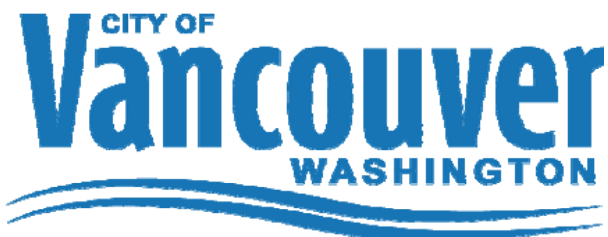




2020 Stormwater Management Plan

City of Vancouver | March 2020



Surface Water Management

PO Box 1995

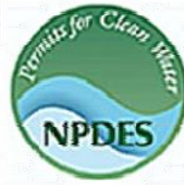
Vancouver, WA 98668-1995

www.cityofvancouver.us/WaterAllAround



Surface Water Management | Public Works

www.cityofvancouver.us/WaterAllAround



The purpose of this Stormwater Management Program (SWMP) document is to detail activities that the City of Vancouver intends to undertake between January 1 and December 31 of 2020 to maintain compliance with the Western Washington Phase II NPDES Municipal Stormwater Permit.



This 2020 SWMP will be published on the City of Vancouver website by May 31, 2020.



Regulatory Background

The National Pollutant Discharge Elimination System (NPDES) is the program created under the Federal Clean Water Act for administering stormwater discharge permits and establishing pretreatment requirements for discharges to surface waters of the state. These permits are referred to as NPDES permits and are administered by the Washington State Department of Ecology for Washington State.

The Western Washington Phase II Municipal Stormwater Permit was first issued by the Washington State Department of Ecology in 2007, renewed in August 2013 and again in August 2019 to be effective until July 31, 2024. Under this permit, the City of Vancouver is a Regulated Small Municipal Separate Storm Sewer System (MS4). The geographic area of coverage is the entire incorporated area of the city and includes all annexed areas.

This Permit authorizes the discharge of stormwater to surface waters and to ground waters of the state from MS4s. "Waters of the State" includes those waters as defined as "waters of the United States" in 40 CFR Subpart 122.2 within the geographic boundaries of Washington State and "waters of the state" as defined in Chapter 90.48.020 RCW which includes lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and water courses within the jurisdiction of the State of Washington. Discharges are subject to the following limitations:

- Discharges to ground waters of the state through facilities regulated under the Underground Injection Control (UIC) program, Chapter 173-218 WAC, are not covered under this Permit.
- Discharges to ground waters not subject to regulation under the federal Clean Water Act are covered in this permit only under state authorities, Chapter 90.48 RCW, the Water Pollution Control Act.

This Permit authorizes discharges of non-stormwater flows to surface waters and to ground waters of the state only under the following conditions:

- The discharge is authorized by a separate National Pollutant Discharge Elimination System (NPDES) or State Waste Discharge permit.
- The discharge is from emergency firefighting activities.
- The discharge is from another non-stormwater discharge that is managed by the City as provided in S5.C.5 or S6.D3.

This Permit does not relieve entities that cause illicit discharges, including spills, of oil or hazardous substances, from responsibilities and liabilities under state and federal laws and regulations pertaining to those discharges. In accordance with RCW 90.48.520, the discharge of toxicants to waters of the state of Washington which would violate any water quality standard, including toxicant standards, sediment criteria, and dilution zone criteria is prohibited.

This Permit does not authorize a violation of Washington State Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Quality Standards (Chapter 173-200 WAC), Sediment Management Standards (chapter 173-204 WAC), or human health-based criteria in the national Toxics Rule (Federal Register, Vol. 57, NO. 246, Dec. 22, 1992, pages 60848-60923).

The City of Vancouver is responsible for compliance with the terms of this permit and must:

- Reduce the discharge of pollutants to the maximum extent practicable (MEP), and
- Use all known, available, and reasonable methods of prevention, control and treatment (AKART) to prevent and control pollution of water of the state of Washington.

S5 Stormwater Management Program Administration

Stormwater Management Program

The Stormwater Management Program (SWMP) is a set of actions and activities designed to reduce the discharge of pollutants and to protect water quality. The purpose of the SWMP is to detail current and planned actions that the City of Vancouver may implement to meet the requirements of the Permit. This document is arranged as required to coincide with the Permit's program components:

- ☐ Stormwater Planning (S5.C.1)
- ☐ Public Education and Outreach (S5.C.2)
- ☐ Public Involvement and Participation (S5.C.3)
- ☐ MS4 Mapping and Documentation (S5.C.4)
- ☐ Illicit Discharge Detection and Elimination (S5.C.5)
- ☐ Controlling Runoff From New Development, Redevelopment & Construction Sites (S5.C.6)
- ☐ Operations & Maintenance (S5.C.7)
- ☐ Source Control Program for Existing Development (S5.C.8)
- ☐ Monitoring & Assessment (S8)

This SWMP, and subsequent revisions to it, will be posted on the City's website with the required Annual Report by May 31st of each year as required by the permit. Public review and comment is encouraged. Contact information is available on the City's website at <https://www.cityofvancouver.us/publicworks/page/stormwater-management-plan>.

This SWMP details activities that are planned and that fall under the purview of the Permit. The City, Public Works, Surface Water Management and Stormwater

Operations conduct programs and activities that reduce flooding, protect and improve water quality, protect groundwater, and protect and restore aquatic habitat in the city's streams and lakes. For details on the city's Surface Water Management programs and activities not addressed in this SWMP see the city website.

Permit Requirements (S5)

Implement a Stormwater Management Program (SWMP) [S5 A1].

Include coordination mechanisms among entities and departments within each jurisdiction to eliminate barriers to compliance with the terms of this permit.

- ☐ Coordination mechanisms shall clarify roles and responsibilities for the control of pollutants between physically interconnected MS4s permittees covered by a municipal stormwater permit.
- ☐ Coordination mechanisms shall coordinate stormwater management activities for shared water bodies among permittees to avoid conflicting plans, policies and regulations.
- ☐ Include a written description of internal coordination mechanism in the Annual Report due no later than March 31, 2021 [S5 C5 a/b].

S5 Stormwater Management Program Administration

Include with the Annual Report notification of any annexations, incorporations or jurisdictional boundary changes resulting in an increase or decrease in the City's geographic area of permit coverage during the reporting period [S9 D6].

Track the number of inspections, follow up actions as a result of inspection, official enforcement actions and types of public education activities as stipulated by program components. This information shall be included in the Annual Report [S5 A3b].

Track the cost or estimated cost of development and implementation of each component of the SWMP. This information shall be provided to Ecology upon request [S5 A3a].

Current Activities (S5)

The City of Vancouver has in place many activities and programs that contribute to meeting the Permit requirements. Current activities associated with the above Permit requirements include:

To improve water quality and reduce pollutants the City collaborates with other agencies throughout the region including the Port of Vancouver, Clark County and various state and federal agencies working together to integrate regional water quality protection efforts.

Several City departments participate in activities to reduce, minimize or eliminate pollutant releases to waters of the state facilitated through regular staff meetings regarding alignment of programs, activities and documentation of compliance activities. Public Works fulfills the majority of NPDES requirements with programs and activities in Surface Water Management, Operations & Maintenance, Construction Services, Water Resources Education and Urban Forestry. Other departments, such as Community & Economic Development, fulfill key components of the Permit as well.

Activity and cost tracking systems and processes continue to be refined across numerous city departments. New and updated software has been recently installed. However, tracking systems, software programs and data entries are set up to meet the demands of each department. This complicates the effort to prepare comprehensive reports on finances and activities that meet the Permit. Vancouver continues the implementation and integration of multi- department database system and upgrading GIS mapping applications.

Planned Activities (S5)

Participate in the implementation of the integrated multi-department database system and GIS mapping upgrades and continue to refine roles, responsibilities and coordination mechanisms to enhance Permit compliance efficiency and effectiveness.

Continue to evaluate inspection and enforcement procedures and identify computer hardware and software that can be interfaced with the new database and mapping systems that can be utilized in the field by inspectors to record on-site data more accurately and efficiently.

Provide updates on annexation activities to submit with the Annual Report.



S5 C1 Stormwater Planning – New Permit Section

Permit Requirements (S5 C1)

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 C1]

Convene an inter-disciplinary team to inform and assist in the development, progress, and influence of this program. [S5 C1 a]

Coordinate with long-range plan updates to inform planning update processes and influencing policies & strategies. [S5 C1 b]

Continue to require LID Principles and LID BMPs. Making LID the preferred and commonly-used approach to site development, minimizing impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations, where feasible. [S5 C1 c]

Conduct a process and consider the range of issues outlined in the *Stormwater Management Action Planning Guidance* (Ecology, 2019; Publication 19-10-010). [S5 C1 d]

Stormwater Management Action Planning (SMAP) shall include:

- ☐ Receiving Water Assessment. [S5 C1 di]
Submit a watershed inventory and include a brief description of the relative conditions of the receiving waters and the contributing areas.
- ☐ Receiving Water Prioritization. [S5 C1 dii]
Document the prioritized and ranked list of receiving waters.

- ☐ A SMAP for at least one high priority catchment area. [S5 C1 diii]
 - Describe the stormwater facility retrofits needed for the area.
 - Identify land management or development strategies for water quality management.

Track the cost or estimated cost of development and implementation of this component of the SWMP. This information shall be provided to Ecology upon request [S5 A3a].

Current Activities (S5 C1)

Stormwater Planning is a new section of the permit. Current activities are limited to continuing to require LID Principles and LID BMPs, and making LID the preferred approach. [S5 C1 c]

Planned Activities (S5 C1)

Vancouver will conduct activities and develop programs to meet the new Stormwater Planning requirements in the permit. For 2020, the city shall convene an inter-disciplinary team to inform and assist in the development, progress, and influence of this program. [S5 C1 a] Annually, the city shall assess and document any newly identified administrative or regulatory barriers to implementation of LID Principles or LID BMPs. [S5 C1 c.i.a]

S5 C2 Public Education and Outreach

Permit Requirements (S5 C2)

Provide an education and outreach program for the area served by the MS4. The outreach program shall be designed to:

- Build general awareness about methods to address and reduce impacts from stormwater runoff.
- Effect behavior change to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts.
- Create stewardship opportunities that encourages community engagement in addressing the impacts from stormwater runoff.

Minimum performance measures are:

- Implement an education and outreach program for the area served by the MS4. [S5 C2a]

☐ General Awareness. [S5 C2ai]

The city shall annually select at a minimum one target audience and one subject area from the General Public or Engineers, Contractors, Developers, or Land Use Planners.

☐ Behavior Change. [S5 C2aii]

The city shall select at a minimum, on target audience and one BMP, per S5C2aii(a). By July 1, 2020 the city shall conduct a new evaluation of the effectiveness of an ongoing behavior change campaign.

☐ Stewardship. [S5 C2aiii]

The city shall provide and advertise stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities.

Track the cost or estimated cost of development and implementation of this component of the SWMP. This information shall be provided to Ecology upon request [S5 A3a].



S5 C2 Public Education and Outreach

Current Activities (S5 C2)

Public education and outreach has long been a vital component of the City of Vancouver's ongoing efforts to protect and enhance water resources and aquatic habitat. Central to these efforts is the Water Resources Education Center, funded and operated directly by the City of Vancouver.



The City actively engages in community education and outreach about surface and storm water through a variety of communication vehicles, including local media advertisements and articles, and internet information as well as partnering with many other agencies to reach out to the community including the Urban Forestry Commission, Watersheds Alliance of Southwest Washington, and Columbia Springs Environmental Education Center.

The City revised several municipal code sections to incorporate low impact development and continues to update related engineering standards and technical design requirements. These standards are used by local engineers and designers for development plans.



The public participates in formulating updates through City Council workshops, stakeholder meetings and technical workgroups.

Vancouver provides technical assistance and outreach to local businesses and industries along with technical training for municipal operations crews. Since 2003, the Water Resources Protection program has been visiting and inspecting commercial operations offering guidance and assistance on practices which help protect both surface and groundwater resources.

The Urban Forestry program provides technical advice to landscapers and related businesses which lend support to the City's water quality efforts.

Planned Activities (S5 C2)

Vancouver shall annually select a target audience and a subject area, to build general awareness. By July 1, 2020 the city shall conduct a new evaluation of the effectiveness of an ongoing behavior change campaign.

Education and outreach will continue to be provided through Water Center and Urban Forestry activities, open public City Council workshops, hearings, stakeholder meetings, neighborhood presentations, and technical assistance to local businesses and industries.



S5 C3 Public Involvement and Participation

Permit Requirements (S5 C3)

Provide ongoing opportunities for public involvement and participation through advisory councils, public hearings and watershed committees. The City shall comply with applicable state and local public notice requirements when developing their SWMP [S5 C3].

Create opportunities for the public, including overburdened communities, to participate in the decision-making processes involving the development, implementation and update of the City's entire SWMP [S5 C3].

Post to the website the City's SWMP and the annual report required under S9.A no later than May 31 each year. All other submittals required by this Permit shall be available to the public upon request [S5 C3b].

Track the cost or estimated cost of implementation of this component of the SWMP. This information shall be provided to Ecology upon request [S5 A3a]. Track the number and types of public activities as stipulated by the respective program component [S5 A3b].

Current Activities (S5 C3)

The City of Vancouver transmits information about opportunities for public involvement and participation in decision-making processes through a variety of communication vehicles, including newspaper advertisements and the internet.

The City posts website invitations to the public providing opportunities to contribute comments for the SWMP and ordinance revisions.



Over 140 Volunteers Planted
3,000 native shrubs along
Burnt Bridge Creek.
Thank you!



Special Thanks to Kaiser Permanente and Costco for your donations which made this event possible!

S5 C3 Public Involvement and Participation

Planned Activities (S5 C3)

The City will continue to coordinate with City departments and partners on public involvement and will work to refine methods of tracking events.

To keep the public informed about permit-related activities, the City will post the SWMP and Annual Reports to the website by May 31 each year.

The City will seek out and create further opportunities for the public to become involved with and participate in programs and activities that promote environmental health in the community.



S5 C4 MS4 Mapping and Documentation – New Permit Section

Permit Requirements (S5 C4)

Implement an ongoing program for mapping and documenting the MS4.

Maintain mapping data for these features:

- Known MS4 outfalls and discharge points
- providing effective notifications to Ecology
- categorizing types of spills
- clearly identifying illicit discharges
- fully evaluating, correcting and documenting cases of illicit connections

City departments and partners will:

Continue to collaborate with other agencies to enhance efficiency, effectiveness and achieve Permit compliance.

Continue outfall screening and mapping, and identify geographic areas that do not discharge stormwater to surface water.

Develop new and refine existing standard operating procedures.

Continue to research, review and develop technical assistance tools to minimize accidental pollutant releases to waters of the state.

Continue training City staff in Illicit Discharge Detection and Elimination (IDDE).

Continue implementing components of the IDDE inspection program incorporating field screening methods and commercial/residential inspections to identify and investigate illicit discharge threats.

Refine methods for tracking illicit discharges, including:

- responding to calls on the spill Hotline
- providing effective notifications to Ecology
- categorizing types of spills
- clearly identifying illicit discharges
- fully evaluating, correcting and documenting cases of illicit connections

Spill kits provided by Ecology will continue to be distributed to commercial and industrial operations throughout the city.

Current Activities (S5 C4)

Vancouver has dedicated GIS staff and an ongoing program for mapping and documenting the MS4.

Planned Activities (S5 C4)

The city shall maintain mapping data and begin to collect size and material for all known Ms4 outfalls during normal course of business and update records.

S5 C5 Illicit Discharge Detection and Elimination

Permit Requirements (S5 C5)

Vancouver shall include an ongoing program designed to prevent, detect, characterize, trace, and eliminate illicit connections and illicit discharges into the MS4. [S5 C5]

The city shall include procedures for reporting and correcting or removing illicit connections, spills and other illicit discharges when they are suspected or identified.

Notify Ecology, document activity and summarize for the annual report discharges from the MS4 which cause or contribute to violations of the Water Quality Standards [S4 F, G3, G20]. Document Upsets [G21].

Vancouver shall inform public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste.

The city shall implement an ordinance or other regulatory mechanism to effectively prohibit non-stormwater, illicit discharges into the Permittee's MS4 to MEP.

Regulatory mechanisms do not need to prohibit allowable discharges, they may allow conditionally allowable discharges, they shall address significant sources of pollutants to waters of the State. Regulatory mechanisms shall include escalating enforcement procedures and actions.

Implement an ongoing program to detect and identify non-Stormwater discharges and illicit connections [S5 C5d].

- Implement a field screening methodology appropriate to the characteristics of the MS4 and water quality concerns and complete field screening of at least 40% of the MS4 and on average 12% each year thereafter.
- Publicize a hotline for reporting spills and illicit discharges.

Implement an ongoing program to address non-stormwater discharges and connections including spills and illegal dumping into the City's MS4 [S5 C5e]. Include:

- Procedures for characterizing the nature of and environmental threat of any illicit discharge reported;
- Procedures for tracing and eliminating the source of an illicit discharge including notification of appropriate authorities and property owners.

Ensure that all municipal field staff responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges and connections are trained to conduct these activities [S5 C5].

Track activities, trainings and costs [S5 A3].

S5 C5 Illicit Discharge Detection and Elimination

Current Activities (S5 C5)

The following activities and programs contribute to meeting Permit IDDE requirements:

The City's Water Resources Protection Ordinance (VMC 14.26) incorporates provisions from the Permit relating to allowable and prohibited discharges. It mandates practices and measures that can help prevent illicit discharges to the storm system.

The City works with local, state and federal agencies and departments to locate, assess, characterize, trace and remove sources of illicit discharges.

The Program develops and distributes information and technical guidelines on proper handling and disposal of potentially harmful materials.

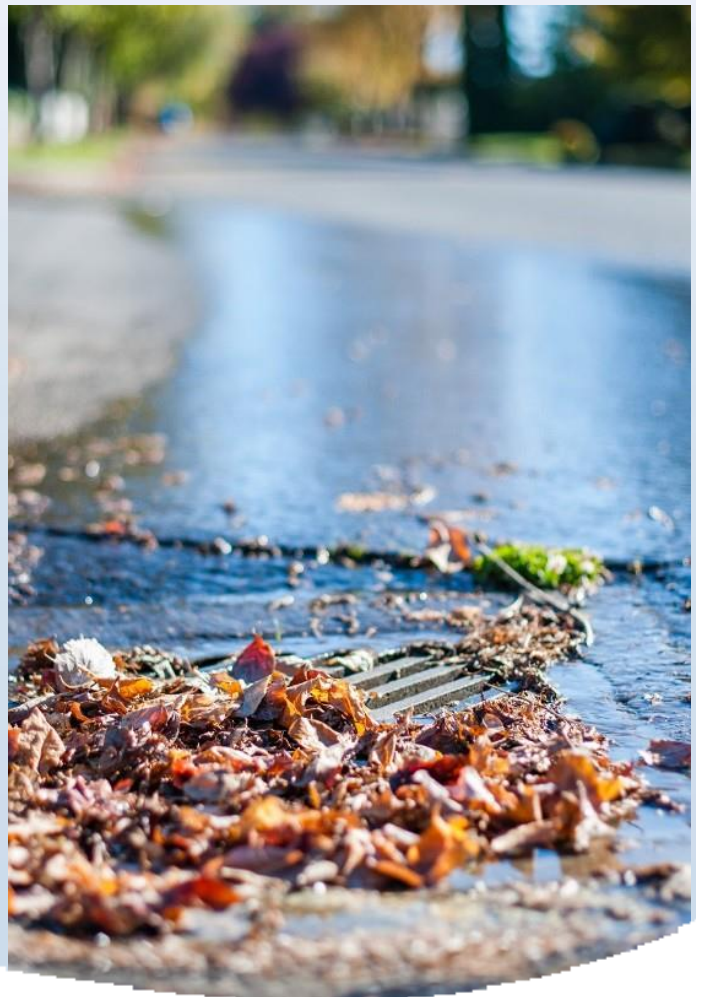
The City maintains a storm sewer system map that is updated and corrected as needed. A related GIS Site Atlas, which allows users to graphically display Water Protection Program IDDE information, is also maintained.

The City established a hotline that allows citizens to report illicit discharges or dumping. Calls are directed to the appropriate response authority.

The Water Protection Program actively inspects and monitors industrial facilities, commercial operations and residences for water quality compliance and best management practices. The program is designed to provide technical assistance and initiate enforcement procedures to bring a site into compliance when necessary.

Field assessments and outfall inspections take place throughout the year with targeted screening during the dry weather months to locate and accurately map storm system features and look for indicators of illicit discharges.

All inspections, investigations, illicit discharges and spill-related activities are currently tracked in detail by Water Protection in the program's database.



S5 C5 Illicit Discharge Detection and Elimination

Planned Activities (S5 C5)

City departments and partners will:

Continue to collaborate with other agencies to enhance efficiency, effectiveness and achieve Permit compliance.

Continue outfall screening and mapping, and identify geographic areas that do not discharge stormwater to surface water.

Develop new and refine existing standard operating procedures.

Continue to research, review and develop technical assistance tools to minimize accidental pollutant releases to waters of the state.

Continue training City staff in Illicit Discharge Detection and Elimination (IDDE).

Continue implementing components of the IDDE inspection program incorporating field screening methods and commercial/residential inspections to identify and investigate illicit discharge threats.

Refine methods for tracking illicit discharges, including:

- responding to calls on the spill Hotline
- providing effective notifications to Ecology
- categorizing types of spills
- clearly identifying illicit discharges
- fully evaluating, correcting and documenting cases of illicit connections

Spill kits provided by Ecology will continue to be distributed to commercial and industrial operations throughout the city.



S5 C6 Controlling Runoff from Development and Construction

Permit Requirements (S5 C6)

The City shall implement and enforce a program to reduce pollutants in stormwater runoff to the City's stormwater system from new development, redevelopment and construction site activities. The program shall apply to private & public development, including roads. [S5 C6]

The program shall include an ordinance that addresses runoff from new development, redevelopment, and construction site projects [S5 C6a,b&c] including:

- The Minimum Requirements, technical thresholds, and definitions in Appendix 1:
 - 1—Preparation of Stormwater Site Plans
 - 2—Construction SWPPP
 - 3—Source Control of Pollution
 - 4—Preservation of Natural Drainage
 - 5—On-site Stormwater Management
 - 6—Runoff Treatment
 - 7—Flow Control
 - 8—Wetlands Protection
 - 9—Operations and Maintenance
- Local requirements shall include the following requirements, limitations and criteria to protect water quality, reduce discharge of pollutants to the MEP and satisfy the State requirement to apply AKART:
 - a—Site planning requirements
 - b—BMP selection criteria
 - c—BMP design criteria
 - d—BMP infeasibility criteria
 - e—LID competing needs criteria
 - f—BMP limitations
- Legal authority to inspect and enforce maintenance standards for private stormwater facilities that discharge to the MS4.

The program shall include a permitting process with site plan review, inspection and enforcement capability for both private and public projects using qualified personnel [S5 C6c] including:

- Review of all stormwater site plans.
- Inspect, prior to clearing and construction, all permitted development sites that have a high potential for sediment transport as determined in Appendix 7.
- Inspect all permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls.
- Manage maintenance activities to inspect all stormwater facilities in new residential developments every six months, until 90% of the lots are constructed.
- Inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater controls and verify that a maintenance plan is completed and responsibility for maintenance is assigned.
- Compliance shall be determined by presence and records of an established program and achieving at least 80% of scheduled inspections.
- An enforcement strategy shall be implemented to respond to issues of non-compliance.

Ensure that all staff responsible for to conduct the activities for controlling runoff from development and construction sites. [S5 C6].

Track activities, trainings and costs.

S5 C6 Controlling Runoff from Development and Construction

Current Activities (S5 C6)

The City revised several municipal code sections to incorporate low impact development in 2016 and continues to update related engineering standards and technical design requirements. These standards are used by local engineers and designers for development plans.

Citywide processes have been established for controlling runoff from construction sites. The City's Community and Economic Development department coordinates the overall site planning process while Surface Water Management reviews proposals for stormwater systems in new development and redevelopment and provides technical support on implementation.

The "Notice of Intent for Construction Activity" and "Notice of Intent for Industrial Activity" are made available for representatives of proposed new development and redevelopment.

Standard operating procedures for the private stormwater facility program continue to be developed and integrated into the City's GIS and information tracking system. Grant funds were awarded to expand the City's private stormwater facility inspection program and a new full-time inspector was hired.

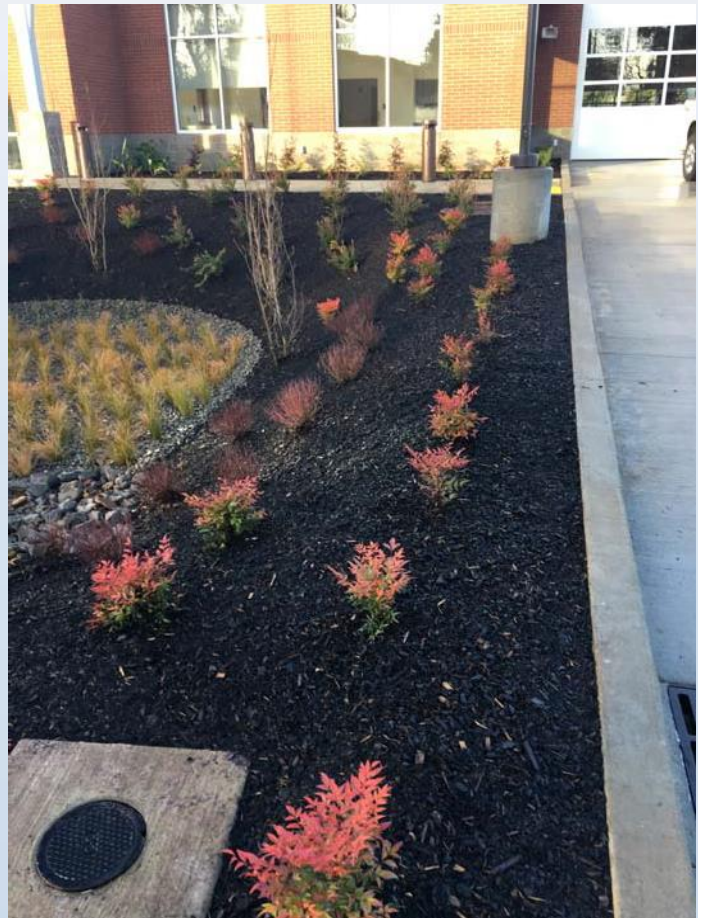
The City continues the implementation of the integrated multi-department database system and GIS mapping upgrades and continues to refine roles, responsibilities and coordination mechanisms.

Continue to evaluate and refine inspection, enforcement and tracking procedures.

Planned Activities (S5 C6)

Private facility inspections and procedures will continue to be implemented for annual inspections, enforcement, and site data collection/storage.

The City has been awarded grant funds for stormwater retrofit projects which will install treatment and infiltration for stormwater runoff in residential and commercial areas throughout the City of Vancouver.



S5.C.7 Operations & Maintenance

Permit Requirements (S5.C.7)

The City shall implement an operations and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

The City shall implement maintenance standards that are as protective, or more protective, of facility function than those specified in the Stormwater Management Manual for Western Washington (SWMMWW). The City shall update current maintenance standards for compliance with this section by June 30, 2022.

The program shall include provisions regarding stormwater facilities regulated by (not owned or operated by) the City to verify adequate long-term O&M of stormwater treatment and flow control BMPs/facilities that are permitted and constructed pursuant to S5.C.6.c and shall be maintained in accordance with S5.C.7.a. These provisions include:

- Annual inspections of all stormwater treatment and flow control BMPs/facilities that discharge to the MS4 and were permitted by the Permittee according to S5.C.6.c, including those permitted in accordance with requirements adopted pursuant to the 2007-2019 Ecology municipal stormwater permits, unless there are maintenance records to justify a different frequency [S5.C.7bi].
- Compliance with inspection requirements above shall be determined by the presence and records of an established program designed to inspect all facilities, and achieving at least 80% of required

inspections [S5.C.7bii]

- Develop and document procedures for inspection records and enforcement actions by staff [S5.C.7biii].

The program shall include provisions for operation and maintenance of stormwater facilities owned and operated by the City. These provisions include:

- Annual inspection of all municipally owned or operated permanent stormwater treatment and flow control BMPs/facilities and taking appropriate maintenance actions in accordance with the adopted maintenance standards [S5.C.7ci].
- Spot checks of potentially damaged permanent stormwater treatment and flow control BMPs/facilities after major storm events (24-hour-10-year recurrence interval). If wide-spread damage, inspect all BMPs/facilities that may be affected. Repair in accordance with maintenance standards [S5.C.7cii].
- Inspection of all catch basins and inlets owned or operated by the City every two years with cleaning conducted in accordance with maintenance standards [S5.C.7ciii].
- Compliance with inspection requirements is determined by presence of an established program designed to inspect all sites and achieving 95% of inspections [S5.C.7civ].

Implement practices, policies and procedures to reduce stormwater impacts associated with runoff from **all** lands owned or maintained by the City and road maintenance under the functional control of the City [S5.C.7d].

The following activities shall be addressed:

- Pipe cleaning
- Cleaning of stormwater culverts
- Ditch maintenance
- Street cleaning
- Road repair and resurfacing
- Snow and ice control
- Utility installation
- Pavement striping maintenance
- Maintaining roadside areas
- Dust control
- Application of fertilizer, pesticides, and herbicides
- Sediment and erosion control
- Landscape maintenance and vegetation disposal
- Trash and pet waste management
- Building exterior cleaning and maintenance

Implement an ongoing training program for employees whose job functions may impact stormwater quality. Document and maintain records of training provided and the staff trained [S5.C7e].

Implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the City in areas subject to this Permit that are not required to have coverage under the Industrial Stormwater General Permit. As necessary, update SWPPPs by December 31, 2022 to comply with permit requirements [S5.C.7f].

Maintain records of inspections and maintenance repair activities conducted [S5.C.7g].

Track costs of program implementation [S5 A3].

S5.C.7 Operations & Maintenance

Permit Requirements (S5.C.7) cont.

Records of inspections and maintenance or repair activities conducted by the City shall be maintained in accordance with S9 Reporting Requirements.

The City shall at all times properly operate and maintain all facilities and systems of collection, treatment, and control (and related appurtenances) which are installed or used by the City for pollution control to achieve compliance with the terms and conditions of this Permit [G2].

The intentional bypass of stormwater from all or any portion of a stormwater treatment BMP whenever the design capacity of the treatment BMP is not exceeded is prohibited unless the conditions in G4 are met [G4].

With the exception of decant from street waste vehicles, the City shall not allow collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of stormwater to be resuspended or reintroduced to the storm sewer system or to waters of the state. Decant from street waste vehicles resulting from cleaning stormwater facilities may be reintroduced only when other practical means are not available and only in accordance with the Street Waste Disposal Guidelines in Appendix 6 [G10].



S5.C.7 Operations & Maintenance

Current Activities (S5.C.7)

The City has implemented and integrated a multi-department database system (Hansen/Infor) and GIS mapping applications. These systems are continually monitored and modified to provide the most reliable upgrades will improve activity tracking and inspection information.

City staff have utilized previous GIS and database work to map and develop a program to inspect all regulated (private) stormwater facilities under this Permit. The program is currently being implemented to meet Permit requirements.

A Pollution Prevention Program was developed by City Operations staff to comply with Permit requirements. Representatives from Water Production & Distribution, Stormwater, Wastewater, Grounds & Parks, Greenway/Sensitive Lands, Facilities, Streets, Traffic, Equipment Services and Surface Water Engineering participated and produced a comprehensive SWPPP.

Operations Stormwater maintenance has an ongoing program to clean catch basins, maintain stormwater BMPs/facilities and regularly sweep City streets. Integrated Pest Management practices strive to reduce chemical applications for vegetation management.

Planned Activities (S5.C.7)

City Operations will continue to refine activity tracking with the multi-department database and GIS mapping.

Continue to update the Pollution Prevention Program as needed and required by the new Stormwater Management Manual for Western Washington.

Stormwater maintenance personnel will continue training in Low Impact Development BMPs/facility maintenance and Illicit Discharge Detection & Elimination.



S5.C.8 Source Control for Existing Development

SOURCE CONTROL FOR

Permit Requirements (S5.C.8)

The City shall implement a program to prevent and reduce pollutants in runoff from areas that discharge to the MS4.

This program shall include:

- Application of operational source control BMPs, and if necessary, structural source control BMPs or treatment BMPs/facilities, or both, to pollution generating sources associated with existing land uses and activities [S5.C.8ai] .
 - Inspections of pollutant generating sources at publicly and privately owned institutional, commercial and industrial sites to enforce implementation of required BMPs to control pollution discharging into the MS4 [S5.C.8aii].
 - Application and enforcement of local ordinances at sites, identified pursuant to S5.C.8.b.ii, including sites with discharges authorized by a separate NPDES permit [S5.C.8aiii].
 - Practices to reduce runoff from the application of pesticides, herbicides, and fertilizers [S5.C.8aiv].
- Adopt and make effective an ordinance(s), or other enforceable documents, requiring the application of source control BMPs for pollutant generating sources associated with existing land uses and activities no later than August 1, 2022.
- Establish an inventory that identifies publicly and privately owned institutional, commercial, and industrial sites which have the potential to generate pollutants to the MS4 no later than August 1, 2022. The inventory shall include:
- Businesses and/or sites identified based on the presence of activities that are pollutant generating [S5.C.8.biia].
 - Other pollutant generating sources, based on complaint response, such as: home-based businesses and multi-family sites [S5.C.8.biib].
- The City shall implement an inspection program for sites identified pursuant to S5.C.8.b.ii no later than January 21, 2023 [S5.C.8.b.iii].
- All identified sites with a business address shall be provided information about activities that may generate pollutants and the source control requirements applicable to those activities.
 - The City shall annually complete the number of inspections equal to 20% of the businesses and/or sites listed in their source control inventory to assess BMP effectiveness and compliance with source control requirements.
 - The City shall identify all sites identified through credible complaints.

Implement a progressive enforcement policy that requires sites to comply with stormwater requirements within a reasonable time period as specified below:

- If the City determines, through inspections or otherwise, that a site has failed to adequately implement required BMPs, the City shall take appropriate follow-up action(s), which may include phone calls, reminder letters, emails, or follow-up inspections [S5.C.8.iv.a].
- When the City determines that a site has failed to adequately implement BMPs after a follow-up inspection(s), the City shall take enforcement action as established through authority in municipal codes or ordinances, or through the judicial system [S5.C.8.iv.b].
- The City shall maintain records, including documentation of each site visit, inspection reports, warning letters, notices of violations, and other enforcement records, demonstrating an effort to bring sites into compliance. Each Permittee shall also maintain records of sites that are not inspected because the property owner denies entry [S5.C.8.iv.c].
- At a minimum, the City's enforcement effort shall include documentation of inspections and warning letters or notices of violation [S5.C.8.iv.d].

The City shall train staff who are responsible for implementing the source control program to conduct these activities. The ongoing training program shall cover the legal authority for source control, source control BMPs and their proper application, inspection protocols, lessons learned, typical cases, and enforcement procedures [S5.C.8.v].

Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staff.

The City shall document and maintain records of the training provided and the staff trained.

Current Activities (S5.C.8):

The City is utilizing a multi department GIS database and business license data to create an inventory of businesses that require inspection per section S5.C.8.bii. Staff are preparing a phased approach program for training, inspection, and enforcement for permit compliance.

Planned Activities (S5.C.8):

Upon completion of the business inventory, City staff will develop an inspection schedule for compliance.

The City will implement an ongoing training program to ensure staff are trained to implement the inspection and enforcement program.

City ordinances and Vancouver Municipal Code will be reviewed and amended or new sections created to establish enforcement policies [S5.C.8.iv].

S8 Monitoring and Assessment

MONITORING

Permit Requirements (S8)

Southwest Washington NPDES stormwater permittees developed a regional status and trends monitoring program to meet state receiving water monitoring objectives. All permittees in the Lower Columbia River Basin now pay into a collective fund to implement monitoring on urban streams across Clark and Cowlitz Counties [S8 A].

Payments of \$43,077 are due annually beginning August 2020

Through NPDES Permit fees, which are allocated by population, the City also supports technical studies that evaluate the effectiveness of stormwater management and source identification practices and procedures [S8 B].

Payments of \$53,323 are due annually beginning August 2020.

The City is not required to conduct water sampling or other testing during the effective term of this Permit, with the following exceptions:

1. Any water quality monitoring required for compliance with TMDLs, pursuant to section S7 Compliance with TMDL Requirements and Appendix 2 of this Permit, and
2. Any sampling or testing required for characterizing illicit discharges pursuant to sections S4 F3 and S5 C5 of this Permit.

In each annual report Permittees will provide a description of any stormwater monitoring or stormwater-related studies by or for the Permittee and include the type of information collected and analyzed during the reporting period [G9].



S8 Monitoring

Current Activities (S8)

Ongoing water quality monitoring in the Burnt Bridge Creek watershed is undertaken to maintain consistency with past monitoring efforts, identify stream reaches that show improvement, and provide feedback for adaptive strategies in stormwater management.

NPDES stormwater permittees in Southwest Washington have partnered with other agencies in the Lower Columbia region to fund a regional integrated watershed monitoring program to meet permit requirements in the 2019

-2024 Permit. Monitoring under this permit requirement is anticipated to begin in 2021.

Planned Activities (S8)

City departments and partners will collaborate to enhance efficiency, effectiveness and achieve Permit compliance. Copies of interlocal agreements will be provided for the Annual Report when utilized.

Water quality data will be collected along the main stem and three tributaries of Burnt Bridge Creek. Outfall screening and system mapping will be ongoing.

The City will continue to provide technical support in the development of a TMDL water quality improvement plan for the Burnt Bridge Creek.

City staff will participate in regional and state monitoring forums and future legislative actions in order to influence development of feasible and effective alternative future monitoring requirement.



