

Attachment 2 - Stormwater Management Program Plan Update

Introduction

The National Pollutant Discharge Elimination System (NPDES) Permit Program is a requirement of the Federal Clean Water Act intended to protect and restore waters for “fishable and swimmable” uses. The Federal Environmental Protection Agency delegated permitting authority to state environmental agencies. In Washington, the NPDES-delegated authority is the Washington State Department of Ecology (Ecology). The City of Federal Way (City) is regulated under the Western Washington Phase II Municipal Stormwater Permit (Permit). The EPA’s 1999 Phase II regulations requires small Municipal Separate Storm Sewer Systems (MS4) in U.S. Census Bureau defined urbanized areas to obtain NPDES permit coverage for their stormwater discharges. The first Permit was issued to the City in 2007, and the current, updated Permit was issued in July 2019 and became effective as of August 1, 2019 and expires July 31, 2024.

The Permit allows municipalities to discharge stormwater runoff from the MS4 into the State’s water bodies (e.g., streams, rivers, lakes, wetlands, Puget Sound, etc.) as long as municipalities implement measures to protect water quality to the “maximum extent practicable” through the application of best management practices (BMPs). As specified in the Permit, these required practices are implemented as outlined in the City’s Stormwater Management Program (SWMP). The SWMP focuses on the use of All Known and Reasonable Technologies (AKART) to reduce the discharge of pollutants into receiving water bodies, protect surface waters from water quality degradation, and conserve aquatic ecosystems.

The Permit Section S5.A.2 requires that the City detail “activities for the upcoming calendar year” in order to meet Permit requirements. These activities are documented within the SWMP, and organized according to the following program components as outlined in the Permit:

- **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, and Construction Sites (S5.C.6)**
- **Operations and Maintenance (S5.C.7)**
- **Source Control Program for Existing Development (S5.C.8)**
- **Monitoring and Assessment (S8)**

Details about each of these activities follow in the rest of this Update.

The City’s Development Services Division continues to review and revise Development Standards in accordance with LID principles. In our 2019 Development Standards Manual we require developers to assess the feasibility LID practices when they submit their stormwater site plans and technical information report. In 2020, we worked to revise the standards for municipal roadway cross- sections to align with LID standards. ES has continued to work with Development Services to update, as needed, stormwater infrastructure design and BMP standards, and in 2021 began a revamp the Federal Way Development Standards, approved a pilot test installation of a Ballasted sidewalk (LID standards). The City code is written where we always adopt the current version the KCSWDM and KCSPPM and the LID standards/requirements therein.

55.C.1.d: Stormwater Management Action Planning (SMAP)

In 2019, ES staff began working on the first process of the Stormwater Management Action Planning, the assessment of receiving waters. The City referenced the Stormwater Management Action Planning Guidance document published by Ecology during this development.

55.C.1.d.i: Document and Assess Receiving Waters and Create a Watershed Inventory

In 2021, Herrera completed the Surface Water Management Comprehensive Plan that includes summary of the watershed in the City. ES staff used that document, the City’s GIS data, and sources referenced the guidance document to develop our watershed inventory and assessment. The watershed inventory and assessment was submitted to Ecology in the 2022 Annual Report.

55.C.1.d.ii: Develop and Implement a Receiving Water Prioritization Method and Process

In 2021-2022, ES staff developed a prioritization method based on comparable information gather during the watershed assessment phase. The variables are quantitative and used to determine a prioritization index score (PIS). The PIS is calculated based on 5 equally weighted variables that consist of the impairment score, jurisdictional area score, rehabilitation score, sediment deposition score, and demographic score. Each of these scores were calculated based on applicable variables. An in-depth explanation of our prioritization method and process is documented in City’s 2022 *SMAP: Stormwater Basin Assessment and Prioritization* document. Table below summarizes the results of our prioritization process.

Table 1-2 Basin Prioritization Rankings		
Rank	Basin	PIS
1	West Hylebos	80.12
2	Lakota Creek	62.43
3	East Hylebos	58.03
4	Joe’s Creek	55.42
5	Central Puget Redondo Creek	37.20
6	Central Puget Cold Creek	36.81

55.C.1.d.iii: Develop a Stormwater Management Action Plan (SMAP) for at Least One High Priority Catchment Area

In 2021-2023, ES staff began developing a SMAP for the West Hylebos as our watershed of priority. The West Hylebos SMAP consist of short and long rang plans of stormwater retrofits, land management/development strategies, augmented stormwater management actions related to section S5 of the permit, and a process to review the plan annually to ensure it reflects our efforts accurately. The West Hylebos SMAP will be a living document.

Public Education and Outreach



The Environmental Services Division (ES) provides ongoing public education and outreach designed to reduce and eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. ES staff utilize a variety of approaches to inform targeted audiences about stormwater issues and provide specific actions people can follow to minimize stormwater pollution.

SS.C.2.a.i-ii: Implement an Education and Outreach Program to Build General Awareness and Affect Behavior Change for the Area Served by the City’s MS4

The City of Federal Way was able to meet the permit requirements for public education and outreach.

During the pandemic, the City focused its outreach efforts on building relationships in the community, planning and refining existing programs, and creating virtual activities. These efforts required the City to be nimble and adopt new techniques, many of which proved to be very successful. The successful COVID-adapted activities were continued and improved on. Some in-person activities resumed as described below.

A summary of educational activities that occurred in 2022 and that are scheduled for 2023 is provided as follows:

- Continue to plan and co-host the salmon release event in the spring for the Storming the Sound with Salmon (SSS) program and make meaningful changes to the program's implementation.
- Tank cleanings were performed by ES staff in summer 2022 at each school to ensure tanks and equipment were properly maintained and stored during the program's hiatus. The 2022 SSS release events were virtual due to the COVID-19 pandemic. It had synchronous and asynchronous components, which allowed not only 4th graders but all Federal Way grades to participate.
- Approximately 2,200-2,500 students were able to participate in one or both of two types of live events. Each event occurred three times over the course of three days. The first event was a live storytelling of Little Silver Salmon by Puyallup Tribal Language Department and the second was the salmon release into the West Hylebos Creek. In the lead up to the events teachers had access to an online portal with classroom activities such as a video tour of local wetland plants with a naturalist, a senses-based scavenger hunt, and a macroinvertebrate tag game.
- The 2023 event will be an in-person event over four days in April. Virtual engagement will continue to be offered so that students in other grades can participate.



- In 2022, ES staff targeted outreach to businesses with a high potential for generating stormwater pollutants. Such as restaurants and auto repair and paint shops. The Environmental Coalition of South Seattle (ECOSS) also provided training in multiple languages to employees for whom English is a learned language to better implement spill kit awareness. In 2022 ECOSS:
 - Provided up to 2 new businesses with spill kits and spill response training
 - Provided 20 follow up outreach visits with post-service surveys from previous site visits.
 - Produced three spill response training videos in Russian for businesses with limited English proficiency.
- In 2023, ES staff will continue to partner with ECOSS to provide stormwater education and free spill kits to businesses in the automotive and restaurant industries. ES will also continue utilizing the annual Spill Analysis to inform which businesses to select for future participation in the ECOSS program based on the potential for, or known history of, prohibited discharges and spill events.
- Outreach staff sent out 11 e-newsletters in 2022 that reached 1,598 unique contacts with 13,219 sends. The e-newsletters highlighted stormwater best management practices such as natural yard care, rain barrels, and gardening as a way to create permeable surfaces. Staff will continue to produce e-newsletters that address various topics on pollution prevention and general awareness of stormwater-related issues.
- Continue to sponsor stormwater and environmental-related workshops. In 2022, ES hosted 13 Green Living Workshops on topics such as natural yard care, green cleaning, and edible gardening. Workshops remained virtual in keeping with pandemic protocols. Virtual workshops have had much higher participation rates than the traditional in-person workshops which became impossible to host during the pandemic. Recordings of many workshops are now posted on YouTube and continue to gain views. The City plans to continue holding Green Living Workshops virtually in 2023, but we also plan to add several in-person workshops for workshops with more interactive topics.
- Outreach staff educated residents about stormwater at three community events; two farmers' market and a Fourth of July celebration. Staff engaged attendees with a game where if people could identify the surface water contamination in a selected scene in a stormwater model they won either a durable cup/straw or hazardous waste reusable bag. Other giveaways were drain snakes and dog poop bags. Also distributed were pamphlets on storm water topics ranging from native plants that can benefit water quality, to correct chemical usage.
- In 2022, staff promoted the Scoop the Poop message online through social media and newsletters. In 2023, ES will continue promoting the campaign message online and through regional partnerships.
- Continue to coordinate with City and department-wide efforts to strengthen social media marketing efforts in 2023. In 2022 staff increased posts on the City's Facebook page to average multiple posts per week and began posting on the City's Instagram account. ES used the posts to reach a broader segment of the City's residents, advertise events, promote programs, and post related news and events from other sources to increase awareness of stormwater-related issues. In 2023 staff will continue posting and strategically boost posts to reach a larger, locally-targeted audience.



- Continue to expand the number of education and outreach materials offered in languages besides English. The SWMP public input meeting was advertised in both English and Spanish and interpreters in 250+ languages are available upon request. In 2023, the City website will advertise for the SWMP public comment period in English, Arabic, Russian, Somali, Spanish, Ukrainian, Vietnamese, and Korean. Verbal translations of the SWMP document is available upon request.
- Staff shared the "Don't Drip and Drive" campaign through e-newsletter and social media. In 2023 ESS staff will continue to share the message on digital platforms and explore hosting in-person car leak checks at locations such as recycling events and multi-family complexes.

55.C.2.a.iii: Provide and Advertise Stewardship Opportunities

- In 2019, ES staff implemented a new Stream Team program where volunteers receive training and test local water quality throughout the year. No volunteers were trained in 2022 but one volunteer remained active testing local waterways. In 2023 staff will offer a field training to rebuild the volunteer group and brainstorm ideas to bring in additional volunteers.
- The storm drain marking program continued and was updated in 2022. ES hosted a storm drain marking event in partnership with African Young Dreamers Empowerment Program. Staff identified a neighborhood which lacked markers near storm drains. The twenty-five volunteers spent three hours marking drains, and distributed educational doorhangers to area residents.
- In 2019, the City partnered with the Lake Observations by Citizen Scientists & Satellites (LOCSS) program, run by the University of Washington, University of North Carolina Chapel Hill, and NASA, to install two lake level gauges in Federal Way to monitor Steel Lake and North Lake. The program's goal is to encourage citizen scientists to better understand how and why lake levels change over time. In 2022 citizen scientists reported lake level data 93 times between the two sites (77 North Lake; 16 Steel Lake). In 2023 the gauges will remain in place, and data will continue to be collected.



Public Involvement & Participation

The City encourages the public and interested parties to participate in the decision-making process involving the development and implementation of NPDES Permit related activities and programs.

55.C.3.a: Create Opportunities for the Public to Participate in the Development, Implementation, and Update of the City's SMAP and SWMP

Opportunities for public participation in the development of the SWMP update include the following:

- Feb. 1 – Feb. 28, 2023: Public comment period on the City's Storm Water Management Program Plan advertised through the City's website and e-newsletters;
- March 6, 2023: Land Use and Transportation Committee meeting;
- March 21, 2023: City Council meeting. The Council reviews the programmatic and policy changes proposed under the SWMP and allows public comment.

Opportunities for public participation in the development of the SMAP will be considered and planned by the inter-disciplinary team.

55.C.3.b: Post the SWMP, SMAP and Annual Report on the City's Website

The City's Surface Water Management webpage will display the updated SWMP, SMAP, and the Annual Report once they have been approved by City council.

MS4 Mapping and Documentation

The City of Federal Way works to maintain the most up-to-date and accurate maps possible for the City, the MS4, and private connections (commercial and residential) into the MS4. These maps assist with stormwater system operations and maintenance, private and public stormwater system inspections, IDDE source tracing and identification, and mitigating potential downstream impacts of stormwater pollution.



S5.C.4.a: Maintain Ongoing Mapping Data

In 2022, ES performed routine updates to the MS4 mapping based on the City's Video Inspection Program findings, new development or redevelopment as-builts, and field verifications from utility locates. These efforts will continue in 2023.

S5.C.4.b: Update Outfall Mapping & Complete Mapping of All Known Connections from the MS4 to Privately Owned Stormwater Systems

Outfall inspections updating classifications (primary/secondary) and improving map accuracy are completed annually. Once inspections are completed, the results are forwarded to GIS staff to update the database. Missing information on outfall size and material composition are collected during the inspection process and are added to GIS to ensure comprehensive infrastructure mapping.



The City GIS-mapped all known connection points between the MS4 and privately-owned stormwater systems. New private stormwater infrastructure is updated on an ongoing basis. Mapping updates are relayed when undocumented infrastructure is found through source control, IDDE, and private commercial site inspections.

Additionally, any new development or construction that connects a private system to the public MS4 is mapped when as-builts are submitted via Development Services Division.

S5.C.4.c: Utilize Electronic Format for Mapping

The City has utilized GIS data and mapping since 1997. The City uses ESRI ArcGIS (Enterprise 10.9.1, Desktop 10.6.1, Pro 2.9.5) and AutoDesk AutoCAD (2022, Civil 3D 2022) for electronic mapping.

S5.C.4.d-e: Provide Mapping Information, Upon Request, to Ecology, Indian Tribes, Municipalities, and Other Permittees

Mapping requests from the public, Ecology, Indian Tribes, Municipalities, and Other Permittees are fulfilled on an ongoing basis through our public records request system.

Illicit Discharge Detection & Elimination

Federal Way maintains a robust Illicit Discharge Detection & Elimination (IDDE) Program designed to prevent, detect, characterize, trace, and eliminate illicit connections and illicit discharges into the MS4.

55.C.5.a: Include Procedures for Identifying, Reporting, Correcting, and Removing Illicit Discharges and Illicit Connections in the IDDE Program

In late 2018, the *IDDE Field Procedures and Response Plan (IDDE Plan)* was updated to include more consistent and timely enforcement measures to facilitate compliance and correct illicit discharges and corrections. In March of 2020, the ES Water Quality staff began to use NPDESPro Software to record IDDE investigations and updated the *IDDE Plan* to reflect current procedures. In 2022, ES Water Quality staff continued to update, as needed, the City's *IDDE Plan* that outlines procedures for identifying, reporting, correcting, and removing illicit discharges and illicit connections. The IDDE Plan's enforcement sections was updated to include an abatement policy for sites that require immediate corrective action or are continually non-compliant. Also, in 2022 ES integrated illicit discharge procedures and development code violations for failed erosion control measures into one action. In 2023, ES staff will work on updating the City's IDDE Plan to include updated procedures and the enhanced source control program also known as the Pollution Prevention Inspection Program.



55.C.5.b: Inform Public Employees, Businesses, and the General Public about the Hazards Associated with Illicit Discharges and Improper Disposal of Waste

In 2022, ES staff continued education and outreach efforts to multiple stakeholders regarding the various hazards associated with illicit discharges and improper waste disposal. In 2023, ES staff will continue to review and revise these efforts, which include:

- Utilizing the updated *IDDE Field Procedures and Response Plan* for all incoming public employees to introduce them to the program and orient them with City procedures for investigating, identifying, enforcing, and eliminating illicit discharges and illicit connections;
- Increasing the volume of technical assistance letters issued due to IDDE and source control investigations where the potential for prohibited discharges exists. These letters contain information about City Code regarding prohibited discharges, City enforcement policies and procedures if prohibited discharges do occur, and information regarding operational and structural BMPs that can assist with prohibited discharge prevention;
- Placing educational stickers on dumpsters during routine source control site inspections that remind businesses and multi-family housing establishments to close their dumpster lids to avoid leachate and other prohibited discharges;



- Emphasizing the harmful effects of stormwater pollution when presenting to the general public at booths and other local tabling events resumed in summer 2022, as well as providing educational materials to citizens about residential BMPs, such as vehicle washing and proper pet waste disposal, and notifying them about City and County programs, such as the City's King County's hazardous waste disposal resources.
- During inspections, ES staff attempts to talk to business staff or property management if they are on site to educate them on issues identified, response procedures, and preventative measures.
- Educating participants in the City's Stream Team Program about the hazards of illicit discharges during the initial classroom training for inclusion in the program that occurs annually.
- Conducting education and outreach about illicit discharges through the Environmental Coalition of South Seattle (ECOSS) program that assists private businesses in the City with implementing and maintaining spill prevention and elimination procedures and spill kits.
- In 2022, the City held a curb marking event to educate the public regarding proper catch basin functionality.
- In 2023, the City is planning a program focusing on the impacts of trees and native plants on water quality.
- In late 2022 and early 2023, the City sent out introduction letters to existing businesses regarding the new Pollution Prevention Inspection Program. The letter includes technical information and tips on how to prepare for inspections.

The public can use SeeClickFix also known as Eyes on Federal Way, a mobile app, to easily report issues (including spills or other water quality issues) directly from their phone. Citizens can track what they report and see other water quality issues that are reported through the software.

5.5.C.5.c: Implement an Ordinance or Other Enforceable Mechanism to Prohibit Illicit Discharges into the City's MS4



City Ordinance 09-619 prohibits non-stormwater discharges into the City's MS4, and Federal Way Revised Code (FWRC) Chapter 16.50 lists prohibited, allowable, and conditional discharges into Federal Way waters and storm drainage systems. Examples of illicit discharges include trash, food wastes, construction materials, petroleum products, sewage, paint, pesticides, fertilizers, soap, and sediment. The ES Water Quality Section implements escalating enforcement procedures and actions pursuant to those outlined in FWRC Chapter 1.15. In 2021, ES continued implementing the updated 2018 enforcement procedures to achieve more efficient compliance. These measures include enforcing monetary penalties for violators who continually fail to comply. In 2020, ES staff drafted an abatement procedure into the enforcement section of its IDDE program to further assist with compliance and will work on getting it finalized and approved by the end of 2022. In 2021, ES

staff began the process of incorporating language into the City's code to make BMPs enforceable as required by the Permit.

S5.C.5.d-e: Implement an Ongoing Program to Detect, Identify, and Address Illicit Discharges, Including Spills and Illicit Connections, into the City's MS4

In 2022, the City met the Permit requirement to screen at least 40 percent of the City's stormwater system for illicit connections through recurring source control, video, and stormwater facility inspections. This program is ongoing, and in 2023 ES staff will:

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- Continue to inspect private commercial stormwater systems that discharge into the City's MS4 to ensure maintenance complies with standards outlined in the Permit. ES Staff incorporates an education and outreach program into the commercial site inspection program. This component provides advance notice and site-specific information of stormwater systems to property owners and their representatives. In addition, the outreach program provides information on BMPs targeted at each site's commercial activities and land use. In 2022, ES staff continued to emphasize source control best practices, operational and structural, to help commercial property owners better understand how to prevent prohibited discharges on a short and long-term basis. This year, staff will comply with new permit requirements to work to incorporate more structural and operational BMPs, more feedback mechanisms from property owners and managers to ensure outreach methods and materials are accessible and effective, and will use the collected data to update outreach efforts for commercial sites.
- Continue to collect and analyze data on commercial site inspection results, enforcement actions, water quality violations, and compliance timelines to better inform commercial site and source control inspections. In 2018, data was collected and analyzed for the 2013-18 Permit Cycle to prioritize sites for future inspection. The data includes land use, compliance history, and pollution risks associated with each site known as the Spill Analysis and IDDE Enforcement Analysis. These analyses will be updated annually.
- Continue to utilize this annual data analysis to evaluate hot spots in the City for illicit discharges, as the analysis is broken down by type of discharge, drainage basin, and year. The results of this analysis will continue to be used in 2023 to assist staff in identifying seasonal and geographic trends in repeated water quality violations. This analysis, coupled with the evaluation of enforcement actions and compliance timelines, will allow ES Staff to better target outreach and technical assistance efforts to reduce common illicit discharges.
- Continue to use NPDESPro, a web-based data management platform, to report illicit discharges and connections, track staff response logs, and document enforcement actions. In 2022, ES and Surface Water Management (SWM) inspectors staff returned to using Excel for recordkeeping and report tracking regarding source control, and private site inspections. NPDESPro will only be utilized for IDDE recordkeeping and tracking.
- In 2022, there was a sewage spill into Steel Lake from private sewer line that was under maintenance. Property owner was made aware and had to clean out impacted structures. Grab sample was collected and the lake was closed with sign posted in public area. Lake was reopened once samples came back below recreational criteria and this event was covered by local news outlet the Federal Way Mirror.
- Through our SeeClickFix software the public is able to report on any issues or concerns within the City, including spills, dumping, track-out, etc.

55.C.5.f: Provide IDDE Staff Training

ES staff will continue to provide annual training to all field-based City of Federal Way staff and police personnel to identify illicit discharges and ensure they are reported to appropriate authorities. Additionally, all maintenance personnel, ES Water Quality staff, and SWM Inspectors are trained annually in spill response and first responder hazard awareness. ES staff will continue to review field procedures for identifying, tracing, reporting, and documenting all reported illicit discharges. In 2023, ES staff will continue to update the training material for City staff and will include training on BMPs to prevent or reduce stormwater impacts when perform maintenance activities

55.C.5.g: Track and Maintain Records of IDDE Program Activities

NPDESPro tracks all reported water quality violations. Associated documents, including photographs, site maps, correspondence, legal actions, and final resolutions are stored in the Surface Water Management network drive. In 2022, ES staff continued utilizing NPDESPro for all recordkeeping activities associated with IDDE investigations.

Commercial site inspections and source control inspections are tracked in Excel, and active construction sites are tracked through the City's permitting system, AMANDA. Private commercial site inspections and source control inspections are recorded in Excel. In 2023, ES staff will continue using NPDESPro for IDDE records and Excel for private site inspections and source control records.

Controlling Runoff from New Development, Redevelopment, & Construction Sites



Construction site runoff is a major contributor to water quality degradation in the greater Puget Sound region. To address this issue, the City adopted the current King County Stormwater Design Manual and the City of Federal Way Addendum in 2021 as mentioned below. Changes were made to development-related standards in 2016 to make Low Impact Development (LID) the preferred and commonly used approach in site development.

S5.C.6.a-b: Implement an Ordinance or Other Enforceable Mechanism to Address Runoff from New Development, Redevelopment, and Construction Sites

Federal Way Public Works Development Standards (codified under FWRC 19.135.130), and the King County Stormwater Design Manual (as amended and adopted under City Ordinance 21-922), include minimum requirements for stormwater design and construction for the protection of water quality and the reduction of pollutant discharge.

S5.C.6.c: Apply a Permitting Process with Site Plan Review, Inspection, and Enforcement Capability for New Development, Redevelopment, and Construction Sites

In 2023, the Public Works Development Services Division will continue implementing the City's permitting process, including civil/site plan review and approval for compliance with City of Federal Way standards. Public projects in the right-of-way that trigger local permits will also continue to be reviewed by internal stormwater engineers. During construction, Public Works staff will continue to conduct weekly site inspections to ensure the implementation of proper temporary erosion and sediment control (TESC) BMPs. City inspectors have the authority to enforce TESC standards for both private and public projects to reduce pollutants in stormwater runoff to the MS4 and surface waters that originate from new development, redevelopment, and construction site activities. ES staff will also continue reviewing and approving Spill Prevention Plans (SPPs) for sites requiring them and ensure future adherence to these SPPs during subsequent inspections.

In 2019, Development Services staff updated the City's Development Standards, including a review of planned LID criteria. This review is part of the City's effort to require LID principles and LID BMPs to make it the preferred and commonly used approach to site development. In 2023, City staff completed a revision of the Development Standards to improve clarity and update LID criteria (for example, aligning municipal roadway cross-sections with LID standards).



The City has an ongoing program to verify that long-term operation and maintenance (O&M) of post-construction stormwater facilities and BMPs are implemented. The City requirements for maintenance standards are identified under the 2021 King County Stormwater Design Manual Appendix A, *Maintenance Requirements for Flow Control, Conveyance, and Water Quality Facilities*. In 2023, Public Works staff will

continue post-construction inspections prior to the release of warranty bonds and will review post-construction inspection procedures in conjunction with the Development Standards update. Furthermore, Public Works staff will work on implementing increased site assessment procedures that align with the updated Department of Ecology standards for new development, redevelopment, and construction activities on plats, single-family, and commercial sites.

55.C.6.d: Provide Notice of Intent (NOI) for Proposed New Development and Redevelopment

The City includes notification of the requirement to meet NOI in the pre-application comments, during the review for land use, and during plan review for building permit phases depending on the project. The development services project manager makes periodic inquiries to the online permit to verify compliance.

55.C.6.e: Ensure Staff Training for Implementation of Runoff Control Program



Plan reviewers are managed by a licensed professional engineer, and all City staff responsible for approval and inspection of new development, redevelopment, or construction are certified in Construction Erosion and Sediment Control Lead (CESCL). City inspectors also complete the Washington Department of Transportation Local Technical Assistance Program (LTAP) for construction inspection and documentation training, and the American Public Works Association (APWA) Construction Inspection Training. In 2023, management will also continue researching training opportunities for inspectors regarding soil classification and analysis. In 2022, the City began using Headlight inspection software for ROW and Sound Transit inspections to standardize reports and allow cross training and support.

Operations & Maintenance

SWM has an ongoing program to reduce stormwater impacts associated with the maintenance and operations of City streets, facilities, and properties. The program applies to drainage infrastructure, which includes catch basins, pipes, open channels, residential and regional retention/detention ponds and facilities, filter vaults, coalescing plates, dams, vortexes, snouts, and tanks.



55.C.7.g: Implement Maintenance Standards

- In 2023, SWM maintenance personnel will continue to implement maintenance standards as outlined in the amended and adopted 2021 King County Stormwater Design Manual, which includes Appendix A: *Maintenance Requirements for Flow Control, Conveyance, and Water Quality Facilities*. All inspection forms utilized in routine stormwater system inspections are created using Appendix A as a guide.
- In 2020, SWM added inspections of Modular Wetlands, a new feature of the City's stormwater infrastructure. Maintenance standards for the Modular Wetlands are based on vendor guidelines.

55.C.7.b: Maintain Stormwater Facilities Regulated by the Permittee

- In 2023, SWM will continue to inspect stormwater treatment and flow control facilities regulated by the City, as required by the Permit. Facilities permitted by the City that discharge to the City's MS4 are inspected and maintained annually to verify long-term maintenance if the City was designated as the maintenance provider following construction completion. Any required repairs are recorded and scheduled in the City's asset tracking system, VUEWorks, as well as in the Surface Water Management Division's Operations & Maintenance network folder.

55.C.7.c: Maintain Stormwater Facilities Owned or Operated by the Permittee

- In 2023, SWM will continue to inspect known municipally owned and operated stormwater treatment and flow control facilities as required by the Permit. Control structures, retention/detention ponds, and bioswales are inspected and maintained annually. Any required repairs are recorded and scheduled in VUEWorks, the City's asset data management system.
- SWM uses tablets to allow for more efficient and effective electronic recording, filing, and scheduling of inspections and inspection results. It also supports more accurate measuring and tracking of catch basin sediment levels during the annual catch basin inspections. In 2020 and 2021, SWM staff worked with the City's GIS staff to update these online inspection forms on ArcCollector to better manage catch basin inspection data. In conjunction with the City's Asset Management Coordinator, SWM staff are working to identify additional features that can be added for inspection documentation within GIS ArcCollector. In 2023, SWM staff will continue using GIS ArcCollector for inspections and inputting required maintenance into VueWorks.

- In 2023, SWM Inspectors will continue to use the Video Inspection Program as a tool to proactively manage the stormwater system to prevent flooding, drainage problems, and other water quality concerns. The program also supports several NPDES-related activities, including ongoing comprehensive mapping of the system, evaluation of management practices, and the improvement of the ability to trace spills and identify illicit connections to the MS4. In 2023, SWM Inspectors will continue to assess and identify stormwater system maintenance needs based on the structural scoring system utilized through the program. In 2023, SWM will continue with an implemented recurring schedule for video inspections to ensure infrastructure maintenance needs are fully supported.
- SWM Staff will continue to inspect facilities vulnerable to surface water related problems before, during, and after major storm events to ensure the systems are functioning properly, and to determine/conduct any maintenance or repair needs.
- SWM will continue to inspect and clean (when necessary) catch basins owned by the City. In 2018, SWM incorporated an annual assessment into the City's catch basin inspection program. Annual assessments include a review of the City's circuit schedules, actual inspection results, cleaning and maintenance records, new development or redevelopment schedules, changes in commercial use, and an evaluation of the previous year's snow and ice operations. SWM will use this assessment to adjust the City's circuits to comply with the requirements of an alternate inspection schedule under this Permit cycle.
- Upon reviewing historical inspection program data in 2019, SWM staff concluded that Permit requirements could be better met with a new inspection program that separates the City into Northern and Southern circuits, each containing approximately half of the City's total number of arterial and non-arterial catch basins. North Circuit Inspections fall on odd numbered years, while South Circuit Inspections all on even numbered years. In 2020, SWM inspected all catch basins within the Southern Circuit. In 2021, SWM inspected all catch basins within the Northern Circuit and cleaned all catch basins identified as exceeding the maintenance standards within the Permit required 6-month timeframe. In 2022, SWM inspected catch basins in the Southern Circuit and cleaned all catch basins identified as exceeding the maintenance standards. In 2023, SWM will continue inspecting all catch basins in the North Circuit.
- In 2020, SWM inspected and cleaned all arterial catch basins within the Southern Circuit of the City that exceeded the maintenance standard. In 2021, SWM inspected and cleaned all arterial catch basins within the Northern Circuit of the City that exceeded the maintenance standard. Under the new catch basin inspection program first implemented in 2020, SWM inspected, cleaned, and maintained arterial catch basins within the city's northern half in 2021 and the South Circuit in 2022. In 2023, SWM will continue to inspect, clean, and maintain the arterial catch basins within the respective circuits of the City (including the border streets), as noted in the map to the right.
- In 2021-2022, SWM contracted CCTV Inspection Services with AIMS Companies (Pipeline Video Inspection, LLC) to inspect public storm drainage facilities within the City Right of Way. Inspections were designated to three separate schedules which targeted drainage pipes on local and collector roadways.
- In 2022, the City of Federal Way contracted with Road Construction Northwest for the repair of sixteen drainage pipes throughout the City.

- In 2022, SWM purchased a Vactor Truck to assist with cleaning and maintenance of stormwater infrastructure within the City's MS4.

55.C.7.d: Implement Practices, Policies, and Procedures to Reduce Stormwater Impacts Associated with Runoff from All City Owned or Maintained Lands, and City-Controlled Road Maintenance Activities

- In 2018, SWM Staff implemented new procedures and practices for managing the stormwater infrastructure maintenance program. Included in the updated program were changes in scheduling, tracking, and recording of maintenance activities.
- In 2020 SWM began updating the maintenance Standard Operating Procedures (SOPs) that together form the City's Maintenance Manual.
- In 2020, SWM reviewed and updated Streets and Parks O&M SOPs for adherence to permit requirements to reduce stormwater impacts associated with maintenance activities.
- In 2021 the City adopted the King County O&M Manual and SOPs with City supplements.
- In 2022, the City adopted the 2021 King County Site Management Plan (KC SiMPla) to reduce stormwater impacts associated maintenance of all lands owned and maintained by the City. In 2023, training on utilization of the KC SiMPla will be included in the annual IDDE and SWPPP training.

55.C.7.e: Ensure Staff Training for Operations and Maintenance Personnel

- City field staff are trained annually in IDDE and spill response procedures. In 2021, field staff responsible for construction operations, street maintenance, parks, and facilities maintenance received updated training in construction BMPs, spill response, and review of Stormwater Pollution Prevention Plan (SWPPP) and TESC requirements. Maintenance crew leads also attended a Best Management Practices (BMPs) training that they shared with their crews. Licensed maintenance personnel are trained annually for pesticide/herbicide application, and this program will continue in 2023. In 2023, personnel will also be trained on how, when, and where to utilize the KC SiMPla to reduce stormwater impact during maintenance operations.

55.C.7.f: Implement a Stormwater Pollution Prevention Plan for All Heavy Equipment, Maintenance, or Storage Yards, and Material Storage Facilities Owned or Operated by the Permittee

- In 2019, SWM staff reviewed and updated the Stormwater Pollution Prevention Plan (SWPPP) appendices for the Public Works/Parks Maintenance Yard Annex located at 31130 28th Avenue South. These appendices include a drainage map of the Yard, a map of material storage locations in the Yard, and Excel worksheets that document staff responsibilities, inspection results, spill events, material storage locations, associated BMPs, and staff training. In 2022, ES staff updated the SWPPP and will now update it annually.

- In 2021, ES staff worked with the Parks Department to identify additional City-owned storage yards or facilities that may require SWPPPs, and will develop SWPPPs for these sites if necessary in accordance with Permit Section S5.C.7.f to update SWPPPs by the end of 2022. In 2022, ES staff updated SWPPP for Celebration Park, created SWPPP for City Hall, and created a SWPPP for Steel Lake Park. In 2023, ES staff will create a SWPPP for the Federal Way Community Center. All of these SWPPPs will be updated annually.
- In 2021, SWM staff continued to review policies and procedures to ensure proper pollution management practices are consistently being implemented and documented, and will update the training materials provided to staff for the annual SWPPP training. In 2021, there was also an increased emphasis on regularly scheduled housekeeping at the Maintenance Yard. In 2023, ES staff will perform quarterly inspections of all sites with SWPPPs and update the annual SWPPP training to include sites with new SWPPPs.

S5.C.7.g: Maintain Records of Operations and Maintenance Program Activities

In 2020, a review of records retention and data collection was continued as part of the updated procedures and practices for operation, maintenance, and repair. In 2023, SWM will continue refining the implementation plan for digitizing all O&M and repair records and standardizing maintenance records procedures.

Source Control Program for Existing Development



In recent years, ES staff identified a growing need to include more preventative, rather than reactive, measures within the stormwater management program overall. One of the primary actions identified was to reinstate a source control inspection program within the Water Quality Section beginning in 2017. This program allows ES staff to better engage business owners in conversations about stormwater pollution, provide business-specific BMPs to prevent illicit discharges, and enforce illicit discharges if found during routine inspections.

55.C.8.a: Implement a Program to Prevent and Reduce Pollutants in Stormwater Runoff

In 2017, ES staff completed a site inventory used to conduct weekly source control inspections. In 2018, 2019, 2020 and 2021, updates were made to the inventory to include all businesses with a high potential for generating stormwater pollution. In 2022, ES staff updated the source control list with additional sites and removed sites as needed. In 2023, ES staff will continue to assess and update the program to more effectively educate business owners and managers on the causes and harmful effects of stormwater pollution, what constitutes a water quality violation, and how the City enforces such violations and operational and structural BMPs tailored to their business activities that can assist with stormwater pollution prevention. Additionally, in 2023, ES staff will administer an updated Source Control Programs that includes new NPDES permit requirements to enforce the implementation of structural and operational BMPs.

55.C.8.b.i: Adopt an Ordinance or Other Enforceable Documents Requiring Source Control BMPs

The Federal Way Revised Code (FWRC) 16.55 Best Management Practices allows the City to enforce the requirement of operational and structural BMPs for existing facilities and activities, and for new development activities.

55.C.8.b.ii: Establish an Inventory of Public and Private Sites with Potential to Pollute MS4

The inventory includes information on the business name, business location, potential pollution sources, inspection history (dates and results), and enforcement measures taken, if any. In 2019, this inventory was updated to include all automotive-related businesses, gas stations, fast food restaurants, and sheet flow sites within the City. In 2020, ES staff continued to evaluate and revise the inventory as necessary to account for changes in land use and development or business closures. SIC codes for each business will be added to the inventory in 2021, as outlined in Permit Appendix 8. In 2021, ES staff retrieved a list of businesses from the Department of Revenue and filtered through the list to add the additional high potential for pollution businesses. For 2023, ES staff updated the source control inventory list to include all existing commercial sites.

55.C.8.b.iii: Implement an Inspection Program for Pollutant-Generating Sites

In late 2017, ES staff began conducting regular source control site inspections throughout the City, using the inventory for scheduling and as a recordkeeping document for inspections. In 2023, ES staff will continue conducting regular source control site inspections and will begin scheduling and documenting inspections in Excel. In 2022, 61% of businesses (245) were inspected within the inventory list.

55.C.8.b.iv: Implement a Progressive Enforcement Policy for Stormwater Compliance

Following a source control inspection in which a potential water quality violation is observed, ES staff will issue a technical assistance letter to the business informing them about the potential violation, harmful effects of stormwater pollution, and BMPs they can implement to prevent illicit discharges from occurring. When an illicit discharge is found during a source control inspection, ES staff will issue a formal Notice of Water Quality Violation that contains similar information to the technical assistance letter, but also outlines required corrective actions that comply with the NPDES Permit to eliminate the discharge. Notice of Water Quality Violations also include a deadline by which to complete these actions. All of these enforcement actions are recorded in the Source Control Inspection Inventory, and if at the level of a water quality violation, are recorded in NPDESPro. All of the source control inspection results are recorded in Excel and enforcement data are tracked in NPDESPro. In 2023, ES staff will continue tracking all source control and enforcement data on NPDESPro.

55.C.8.b.v: Ensure Staff Training for Source Control Program

ES Water Quality staff in charge of source control inspections are trained annually in the source control inspection program, emphasizing inspection procedures, recordkeeping, and commercial-related BMP resources. Staff members involved with the source control program must also participate in the annual Illicit Discharge Detection and Elimination training to ensure proper identification and notification of illicit discharges if found during source control inspections.

Monitoring

A collaborative monitoring program is paid for by Western Washington NPDES Permittees, administered by Ecology, and designed to monitor and evaluate the effectiveness of the best management practices specified in the Permit. The goal of the monitoring program is to provide an unbiased assessment of whether stormwater management actions are resulting in genuine progress towards regional water quality targets. In 2023, the City will continue to pay into the collective fund and support the implementation of the three components of the Regional Stormwater Monitoring Program:

- Status and trend monitoring studies to measure whether the health of lowland streams and shorelines in Puget Sound is improving or declining;
- Stormwater effectiveness studies to provide widely applicable information about what best management practices work, or don't work, and how to improve stormwater management; and
- Source Identification Information Repository designed to share information about source identification and elimination methods and identify opportunities for regional solutions to common illicit discharges and pollution problems.

Conclusion

Links to the 2023 Annual Report and SWMP update are posted under “News and Updates” on the City’s Surface Water Management Division website at: <http://www.cityoffederalway.com/surfacewater>.

If at any time the City is unable to comply with the terms and conditions of the Permit, staff must notify Ecology within 30 days of becoming aware that non-compliance has occurred. Written notification must include a description of the non-compliance issue and steps planned or taken to achieve compliance. The City remains in compliance with the Permit and is using all known, available, and reasonable methods of prevention, control, and treatment to prevent pollution into the surface waters of Washington State.

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