

Attachment 1 - Stormwater Management Program 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). Since the City of Federal Way (City) operates a small municipal separate storm sewer system (MS4) that serves less than 100,000 people, it is designated as a “Phase II” community and must comply with Ecology’s NPDES Western Washington Phase II Municipal Stormwater Permit (Permit). The first Permit was issued to the City in 2007, and the current, updated Permit was re-issued in July 2019 and became effective as of August 1, 2019.

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). These required practices, specified in the Permit, are outlined in and implemented through the City’s Stormwater Management Plan (SWMP). 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)

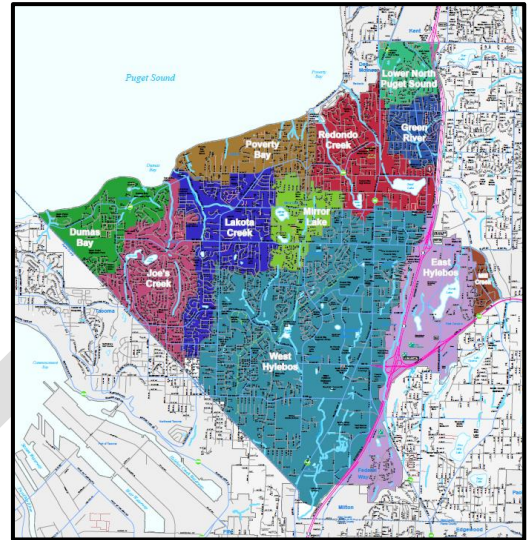
The goal of the SWMP is to apply all known and reasonable technologies (AKART) to reduce the discharge of pollutants into area receiving waters, protect surface waters from water quality degradation, and conserve aquatic ecosystems.

Stormwater Planning

The Surface Water Management (SWM) Division began preparing for the new Stormwater Planning Program Permit requirements by including the applicable milestones and deadlines in the SWM Comprehensive Plan update, completed by Herrera Environmental Consultants (Herrera) in 2019. SWM looks forward to expanding its stormwater planning efforts to better address high priority sub-basins in Federal Way and develop actionable steps for improving watershed health in the community.

S5.C.1.a: Convene an Inter-disciplinary Team for the Stormwater Planning Program

Development of an inter-disciplinary team was required as part of the Low Impact Development (LID) code review and revision process for the 2013-2019 Permit. This inter-disciplinary team also provided feedback during the Surface Water Management (SWM) Comprehensive Plan kickoff meeting in 2018. In 2020, SWM staff will review the inter-disciplinary team membership and revise if necessary to best meet the needs for future Stormwater Planning Program efforts. The revised team will convene prior to the August 1, 2020 deadline to discuss stormwater planning Permit requirements and draft a plan of action.



S5.C.1.b: Coordinate with Long-Range Plan Updates to Address Water Quality

A summary of coordination with long-range planning efforts has not been prepared in the past by the City, due to the lack of this requirement in the 2013-2019 Permit. In 2020, SWM staff will begin an analysis of past efforts to address stormwater impacts on water quality within long-range planning processes at the City, to be submitted by the March 31, 2021 deadline.

S5.C.1.c: Continue Requiring LID Principles and BMPs When Updating City Codes & Standards

Per the 2013-2019 Permit requirement, the following documents and code were reviewed for the initial LID code review in 2016:



- Federal Way Revised Code (FWRC)
- King County Stormwater Design Manual (KCSWDM)
- Federal Way Addendum to KCSWDM
- Table 1 Development Standards (2015 Development Standards Manual)
- King County Stormwater Pollution Prevention Manual
- LID Manual Puget Sound

The City's Development Services Division continues to review and revise Development Standards in accordance with LID principles, and in 2020 is working to revise the standards for municipal roadway cross-sections to align with LID standards.

S5.C.1.d.i: Document and Assess Receiving Waters and Create a Watershed Inventory

In 2019, Herrera prepared a Basin Characterization Technical Memorandum as part of the SWM Comprehensive Plan update. This Memorandum will be reviewed and revised as needed in 2020 and 2021 to meet the watershed inventory reporting requirement due in early 2022.

S5.C.1.d.ii: Develop and Implement a Receiving Water Prioritization Method and Process

In 2019, Herrera also began preparing a Receiving Water Prioritization Method and Process as part of the SWM Comprehensive Plan update. Concurrent with the Basin Characterization Technical Memorandum (to be finalized in late 2021), this framework will be updated as needed to meet Permit requirements, and will be submitted prior to the June 2022 deadline.

S5.C.1.d.iii: Develop a Stormwater Management Action Plan (SMAP) for at Least One High Priority Catchment Area

Upon completion of the Basin Characterization Technical Memorandum and Receiving Water Prioritization Framework, the City will identify one high priority catchment area for which a Stormwater Management Action Plan (SMAP) will be developed in 2022, and submitted by the March 2023 deadline.

Public Education and Outreach



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

S5.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

A summary of educational activities that occurred in 2019 and that are scheduled for 2020 is provided as follows:

- Continue to make improvements to the Storming the Sound with Salmon (SSS) Program. In 2018 and 2019 staff worked with Federal Way Public Schools (FWPS) to research the feasibility of developing a meaningful, age-appropriate experience for high school students that could serve as a culminating experience for the SSS program. However, due to shifting priorities and constraints on staff time, FWPS was unable to provide resources in time to meet the City's schedule for project completion. This project is thus on hiatus for the near future. SWM continues to work closely with FWPS and will look for other opportunities to institute a high school level learning experience.
- Continue to sponsor the salmon release event in the spring for the SSS program and make meaningful changes to the program's implementation. Each year, students participate in a daylong field trip to release their Salmon into the West Hylebos Creek and participate in water and ecological related presentations and activities led by City staff and several volunteer environmental organizations. Past release events were open to classes in grades K-6, but thanks to King County WaterWorks grant funding in 2017-19, SWM was able to work with FWPS to develop new program curriculum specifically targeted for 4th grade students. As part of that new curriculum, the release event will now be a grade-level experience for all 4th graders beginning in 2020. This improvement will allow staff to have more control over the educational station content, and make it more age appropriate and better aligned with Next Generation Science Standards. The WaterWorks grant also helped fund the creation of a Town Square Park Field Trip Guide, completed in 2019. The Field Trip Guide is focused on the benefits of low impact development for stormwater and salmon, and will be an optional grade-level experience for 5th graders in 2020.
- Develop an Interlocal Agreement (ILA) with FWPS to standardize SSS implementation for all schools that participate. The ILA will also provide clearly defined areas of responsibility for the City and for the School District and provide a framework for program sustainability.



- Continue to partner with the Environmental Coalition of South Seattle (ECOSS) to provide stormwater education and free spill kits to businesses in the automotive and restaurant industries. ECOSS provides stormwater inspection support, customized spill plans, and spill response training for managers and employees. Until 2018, ECOSS was funded by regional grants to provide this outreach effort to twenty area businesses, particularly to businesses that had multi-lingual employees. Although grant funding is no longer available, SWM intends to continue this program in 2020, targeting outreach to businesses with a high potential for generating stormwater pollutants and are prone to spills, such as restaurants and automotive support service businesses. In 2019, SWM staff also completed the 2013-19 Permit Cycle Spill Analysis that will help to inform which businesses to select for future participation in the ECOSS program based on potential for, or known history of, prohibited discharges and/or spill events.
- Continue to produce newsletters and other publications that address a variety of topics on pollution prevention and general awareness of stormwater related issues. In August 2018, SWM switched to a shared monthly e-newsletter with the City's Solid Waste Division. This has enabled SWM to reach a wider audience, and to provide more time-sensitive information related to upcoming events and Permit-related issues.
- Continue to sponsor stormwater and environmental related workshops. Since 2017 the City has partnered with a locally-owned fresh food marketplace to host the City's Green Living Workshop Program in an effort to increase awareness of this program. Due to declining attendance numbers in 2018 and 2019, and changes to the workshop structure made by the venue, SWM and the City's Solid Waste & Recycling Division have decided to hold Green Living Workshops at the South King County Tool Library in 2020. This venue location is a natural choice as it will allow participants to attend workshops on topics such as green cleaning, natural lawn care, or rain gardens, and then immediately borrow the needed tools from the tool library, thus eliminating a significant barrier to implementing the knowledge they gain from the workshops.
- As a result of local organizations increasing their use of charity car wash ticket programs run through the Pacific Northwest Car Wash Association and Brown Bear Car Wash, the City began reducing the number of fish friendly car wash kits available to the public in 2018. These kits are designed to divert wash water to the sanitary sewer system and are loaned out by the City for charity car washes at no cost. Due to more organizations using external charity car wash ticket programs, kits are being checked out less frequently. In 2020, SWM will continue to encourage the use of charity car wash ticket programs and other alternative fundraising options, but kits are still available to the public if requested.
- Continue to provide educational markers for installation near catch basins that drain to the MS4. The markers inform the public that the drains discharge to local waterways. Additionally, in 2019 SWM began using volunteers to map where curb markers exist within the City and in what condition they are in. SWM will continue to map curb marker locations and conditions in 2020.



- In 2019, staff worked to enlist the help of local pet-related businesses to disseminate the Scoop the Poop message. Outreach consisted of a direct letter to local pet-related businesses, social media posts, and a pet waste specific page on the Surface Water website. Water quality staff planned on conducting monthly fecal testing within the watershed to determine trends in water quality data; however, due to the difficulty of positively connecting the presence of fecal coliform to a specific animal, coupled with the prohibitive cost of DNA sampling, staff decided not to pursue this in 2019. At this point in time, resources are too constrained to continue a robust pet waste program, but SWM will continue promoting the Scoop the Poop message online and at community events in 2020, and will continue to look for opportunities to expand the program.
- Continue to partner with Solid Waste & Recycling Division staff to initiate Social Media Marketing efforts in 2020, which consists of a Public Works Facebook page and a monthly Constant Contact e-newsletter. SWM will use the page to reach a broader segment of the City's residents, and to advertise events, promote programs, and post related news and events from other sources to increase awareness of stormwater related issues.
- In 2019, staff continued to expand the number of education and outreach materials offered in languages besides English. SWM worked with a consultant to create two new interpretive signs for two different City parks that are in both English and Spanish. In 2020, SWM will advertise for the SWMP public input meeting in both English and Spanish for the first time, and make interpreters available upon request.
- In 2020, SWM staff will be launching Phase I of the Storm Drain ArtWalk Project. The goal of the project is to use public art to increase education and awareness about the role of storm drains in our community. This initial phase of the project will involve recruiting local artists to paint stormwater-themed murals on 4-6 storm drains within the "downtown core" of Federal Way.

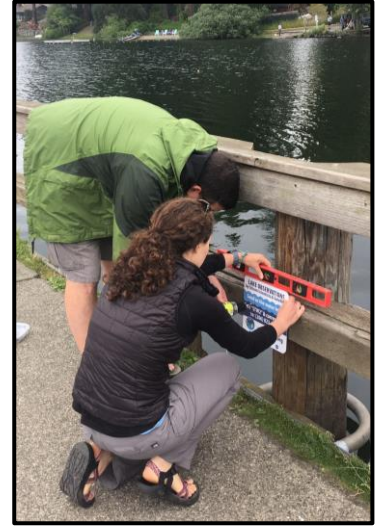


S5.C.2.a.iii: Provide and Advertise Stewardship Opportunities

- In 2019 SWM staff implemented a new Stream Team program. Two volunteer trainings were held during the fall, and volunteers began regular water quality monitoring in October. Volunteers will continue monitoring in 2020, and trainings for new volunteers will be held again in fall 2020.



- 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. The gauges were installed at Steel Lake and North Lake. The goal of the program is to use citizen scientists to better understand how and why lake levels change over time. In 2019 citizen scientists reported lake level data a total of 156 times between the two sites. In 2020 the gauges will remain in place and data will continue to be collected.
- Continue to host volunteer events that encourage public participation in stewardship activities. Activities may include storm drain marking, storm drain marker mapping, removing invasive plants species, planting native vegetation, and removing garbage and debris from local waterbodies.



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 include the following:

- January 29, 2020: Public Input Meeting on the City's Storm Water Management Program (SWMP) Plan;
- March 2, 2020: Land Use and Transportation Committee meeting;
- March 24, 2020: City Council meeting. The Council reviews the programmatic and policy changes proposed under the SWMP and allows public comment on all agenda items.

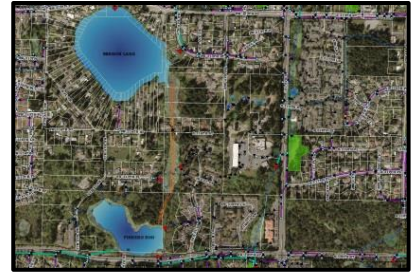
Opportunities for public participation in the development of the SMAP will be considered and planned by the inter-disciplinary team that will be convened by August 1, 2020.

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

- The City's Surface Water Management webpage displays the updated SWMP and the Annual Report. Opportunity for public comment and participation is made possible via e-mail year-round.

MS4 Mapping and Documentation

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



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

In 2019, SWM performed routine updates to the MS4 mapping based on findings from the City's Video Inspection Program, new development or redevelopment as-builts, and field verifications from utility locates. These efforts will be continued in 2020. Additionally, under a consultant contract for the SWM Comprehensive Plan update, sub-watershed basin boundaries will be reviewed for possible adjustment and mapping updates.

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

Outfall inspections aimed at updating classifications (primary/secondary) and improving map accuracy were started in September 2018 and completed in 2019. Results were forwarded to GIS staff for inclusion in mapping updates in 2019, and will be completed in 2020. Any missing information on outfall size and material will be collected during summer of 2020, and will be added to GIS in late 2020 and completed in early 2021.



All known connections from the MS4 to privately owned stormwater systems are updated in GIS on an ongoing basis, ensuring the most complete and up to date map at any given time. Mapping updates are noted for action by SWM staff when connections are found through the source control, IDDE, and private commercial site program inspections. Additionally, any completed new development or construction that connects a private system to the public MS4 are mapped when the as-builts are submitted to SWM staff from the Development Services Division.

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

The City has utilized GIS data and mapping since 1997. The City continues to use ESRI ArcGIS (Enterprise 10.6.1, Desktop 10.6.1, Pro 2.4.3) and AutoDesk AutoCAD (2019, Civil 3D 2019) for electronic mapping.

55.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 met on an ongoing basis.

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.

S5.C.5.a: Include Procedures for Identifying, Reporting, Correcting, and Removing Illicit Discharges and Illicit Connections in the IDDE Program

In 2019, the SWM Water Quality Section continued to update the City's *IDDE Field Procedures and Response Plan (Plan)* that outlines procedures for identifying, reporting, correcting, and removing illicit discharges and illicit connections. In late 2018, the *Plan* was updated to include more consistent and timely enforcement measures to facilitate compliance and correct illicit discharges and corrections. In 2020, updates are being made to the enforcement sections of the *Plan* to include an abatement policy for sites that require immediate corrective action, or are continually noncompliant.



S5.C.5.b: Inform Public Employees, Businesses, and the General Public about the Hazards Associated with Illicit Discharges and Improper Disposal of Waste

In 2019, SWM staff worked to expand education and outreach efforts to multiple stakeholders regarding the various hazards associated with illicit discharges and improper disposal of waste. In 2020, SWM 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 that are issued as a result of IDDE and source control investigations where the potential for prohibited discharges exist. 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 Farmer's Market booths and other local tabling events, and 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 car wash kits and King County's hazardous waste disposal resources;
- 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; and



- 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.

Furthermore, in 2020 an internal Public Works Department Communications team will be working to engage the general public in understanding what work the Public Works Department does in the community and also create more visible and accessible modes for citizens to report issues found within the City, including illicit discharges.

S5.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 SWM Water Quality Section implements escalating enforcement procedures and actions pursuant to those outlined in FWRC Chapter 1.15. In 2019, SWM continued implementing the enforcement procedures that were updated in late 2018 to achieve more efficient compliance. These measures include enforcement of monetary penalties for violators that continually fail to comply. In 2020, SWM staff will incorporate an abatement procedure into the enforcement section of its IDDE program to further assist with compliance.

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 2019, the City met the Permit requirement for screening 40 percent of the City's stormwater system for illicit connections through recurring source control inspections, video inspections, and stormwater facility inspections. This program is ongoing, and in 2020 SWM staff will:

- Continue to inspect private commercial stormwater systems that discharge into the City's MS4 to ensure maintenance complies with standards outlined in the Permit. SWM 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 to each site's commercial activities and land use. In 2019, SWM staff emphasized source control best practices, both operational and structural, to help commercial property owners better understand how to prevent prohibited discharges on both a short- and long-term basis. This year, staff will work to incorporate 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. In 2019, this analysis was updated to include the first half of 2019 to create a complete 2013-19 Permit Cycle evaluation.

- In 2019, SWM staff continued to use the VUEWorks data management program to report illicit discharges and connections, track staff response logs, and document enforcement actions. A spill analysis of the 2013-19 Permit cycle was completed in late 2019 to evaluate hot spots in the City for illicit discharges, and was broken down by type of discharge, drainage basin, and year. The results of this analysis will continue to be used in 2020 to assist staff in identifying seasonal and/or geographic trends in repeated water quality violations. This analysis, coupled with the evaluation of enforcement actions and compliance timelines being completed in 2020, will allow SWM Staff to better target outreach and technical assistance efforts to reduce common illicit discharges.
- In late 2019, SWM staff began contract negotiations to purchase NPDESPro after months of researching potential opportunities for an enhanced data management system. NPDESPro is a web-based data management platform designed to create efficiencies and consistency with regards to Permit-required field inspections, recordkeeping, and reporting. In January 2020, staff will finalize contract documents and begin the initial phase of data migration and staff training for the Water Quality Section, Surface Water Inspectors, and Asset Manager. Following this start-up period, SWM staff will be utilizing NPDESPro for recordkeeping and reporting on private commercial site inspections, IDDE inspections, and source control inspections.

S5.C.5.f: Provide IDDE Staff Training

SWM staff will continue to provide annual training to all City of Federal Way field staff and police personnel in the identification of illicit discharges and notification to appropriate authorities. Additionally, all maintenance personnel, SWM Water Quality staff, and SWM Inspectors are trained annually in spill response and first responder hazard awareness. SWM staff will continue to review field procedures for identifying, tracing, reporting, and documenting all reported illicit discharges. In 2019, SWM staff developed a training document and reporting procedure for South King Fire & Rescue (SKFR) staff in regards to illicit discharges resulting from firefighting activities. In 2020, SWM staff will be reviewing and updating the training materials to emphasize proper notification procedures regarding illicit discharges.

S5.C.5.g: Track and Maintain Records of IDDE Program Activities

In 2019, SWM staff continued utilizing a public works maintenance management software system, VUEWorks, to track and record all reported water quality violations and associated documents, including: photographs, site maps, correspondence, legal actions, and final resolution. Commercial site inspections and source control inspections are tracked through respective Microsoft Excel spreadsheets, and active construction sites are tracked through the City's permitting system, AMANDA. In 2019, Public Works Inspectors began tracking interim TESC inspections of active construction sites within VUEWorks. In 2020, SWM staff will begin utilizing NPDESPro for all recordkeeping activities associated with IDDE investigations, private commercial site inspections, and source control inspections.

Controlling Runoff from New Development, Redevelopment, & Construction Sites



Construction site run-off 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 2016. 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 16-828), 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 2020, the Public Works Development Services Division will continue to implement 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 be reviewed by internal stormwater engineers. During construction, Public Works staff will continue to conduct weekly site inspections to ensure 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 in order to reduce pollutants in stormwater runoff to the MS4 and surface waters that originate from new development, redevelopment, and construction site activities.

In 2019, Development Services staff updated the City's Development Standards, which includes 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 2020, City staff will continue the ongoing revision process of the Development Standards to improve clarity and review potential updates to LID criteria, including a requirement that municipal roadway cross-sections align with LID standards. Staff will finalize their revisions in late 2020 in anticipation of releasing the updated Development Standards in early 2021.



The City has an ongoing program to verify that long-term operation and maintenance (O&M) of post construction stormwater facilities and BMPs is implemented. The City requirements for maintenance standards are identified under the 2016 King County Stormwater Design Manual Appendix A, *Maintenance Requirements for Flow Control, Conveyance, and Water Quality Facilities*. In 2020, Public Works staff will continue post construction inspections prior to 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.

S5.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 on-line permit to verify compliance.

S5.C.6.e: Ensure Staff Training for Implementation of Runoff Control Program



Plan reviewers are managed by a professional licensed engineer and all City staff responsible for approval and/or inspection of new development, redevelopment, or construction are certified in Construction Erosion and Sediment Control Lead (CESCL). City inspectors are also sent through the Washington Department of Transportation Local Technical Assistance Program (LTAP) for construction inspection\ and documentation training, and in 2019 were also sent to the American Public Works Association (APWA) Construction Inspection Training. In 2020, the APWA Construction Inspection Training will continue for newly hired construction inspectors. Furthermore, in 2020 management will update and expand training for plan reviewers that includes refresher training for experienced plan reviewers, and will begin planning for training opportunities for incoming plan reviewers in 2021. In 2020, management will also continue researching training opportunities for inspectors regarding soil classification and analysis.

Operations & Maintenance

SWM has an ongoing program to reduce stormwater impacts associated with maintenance and operations of City streets, facilities, and properties. The program applies to drainage infrastructure, which includes catch basins, pipes, open channels, as well as residential and regional retention/detention facilities.



S5.C.7.a: Implement Maintenance Standards

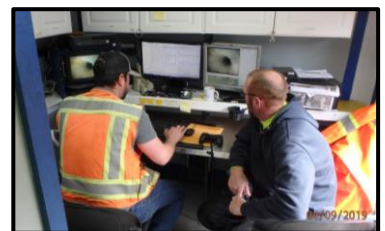
- In 2020, SWM maintenance personnel will continue to implement maintenance standards as outlined in the amended and adopted 2016 King County Stormwater Design Manual, which includes Appendix A: *Maintenance Requirements for Flow Control, Conveyance, and Water Quality Facilities*. All inspection forms utilized in routine stormwater system inspections are downloaded directly from this resource.


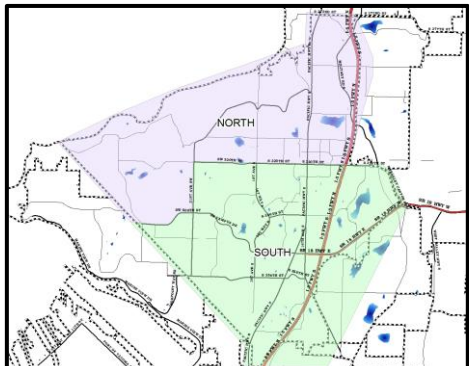
S5.C.7.b: Maintain Stormwater Facilities Regulated by the Permittee

- In 2020, 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 management and tracking system, VUEWorks.

S5.C.7.c: Maintain Stormwater Facilities Owned or Operated by the Permittee

- In 2020, 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.
- In 2018, SWM implemented mobile technology into its inspection program which allows for electronic recording, filing, and scheduling for inspection results. In 2019, SWM implemented the second phase of this program, which provided real time recording into the City's maintenance management and tracking program software, resulting in streamlined operations. In 2019, this inspection program was expanded to include outfalls, control structures, dams, and bridges. In 2020, SWM staff will continue using ArcCollector for inspections and inputting required maintenance into VueWorks. SWM is acquiring two additional tablets for this work.
- In 2020, SWM Inspectors will continue to use the Video Inspection Program (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 2020, SWM Inspectors will continue to assess and identify stormwater system maintenance needs based on the structural scoring system utilized through the Program.



- 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.
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- 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 in order to comply with the requirements of an alternate inspection schedule under the next Permit cycle (2019-2024).
 - SWM will continue to implement an inspection program using mobile technology that provides more accurate measuring and tracking of catch basin sediment levels. In 2020, SWM staff will be working with the City's GIS staff to update these online inspection forms to better track, record, and report catch basin inspection data.
 - In 2019, SWM modified the annual inspections of non-arterial catch basins to include an inspection of 25% of each off-year circuit, in addition to the regularly scheduled circuits requiring 100% inspection. This enables the City to complete an inspection of all catch basins within the two-year Permit requirement and collect data that will be used to analyze the City's circuit schedule and modify plans for future program implementation. Upon review of 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. In 2020, SWM will begin implementing this program by inspecting all catch basins within the Northern Circuit, and will also clean and maintain all catch basins identified as having an exceedance of the maintenance standards within the Permit required 6-month timeframe.
 - In 2019, SWM inspected and cleaned all arterial catch basins within the City. SWM is working on a unit priced contract to leverage the City's ability for timely repair of catch basins. Under a new catch basin inspection program to be implemented in 2020, SWM will inspect, clean, and maintain the arterial catch basins within the southern half of the City, and in 2021, SWM will inspect, clean, and maintain the arterial catch basins within the northern half of the City (including the border streets), as noted in the map to the right.
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S5.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 2019, SWM staff began reviewing the 2018 program and in 2020 SWM plans to hire a consultant to update the maintenance Standard Operating Procedures (SOPs) that together form the City's Maintenance Manual. The updated Manual is scheduled to be finalized in 2021.

- In 2020, SWM will review Streets and Parks O&M SOPs for adherence to permit requirements for reduction of stormwater impacts associated with maintenance activities.

S5.C.7.e: Ensure Staff Training for Operations and Maintenance Personnel

- City field staff is trained annually in IDDE and spill response procedures. In 2020, field staff responsible for construction operations, street maintenance, parks, and facilities maintenance will also receive 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 on an annual basis for pesticide/herbicide application and this program will continue in 2020.

S5.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 and associated BMPs, and staff training. In 2020, SWM staff will continue to review and revise the SWPPP and its appendices as necessary.
- In 2020, SWM staff will work 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 2020, SWM staff will continue 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.

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

- In 2019, a review of records retention and data collection was continued as part of the updated procedures and practices for operation, maintenance, and repair. In 2020, SWM will be refining the implementation plan for digitizing all O&M and repair records as well as standardizing maintenance records procedures.
- In 2019, SWM staff also reviewed recordkeeping procedures for Streets and Parks personnel.

Source Control Program for Existing Development



In recent years, SWM staff has 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 SWM 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.

S5.C.8.a: Implement a Program to Prevent and Reduce Pollutants in Stormwater Runoff

In 2017, SWM staff identified a need to include more preventative actions within the stormwater management program overall. One of the primary ways identified was to resume a robust source control inspection program within the Water Quality Section. In 2017, SWM staff completed a site inventory that was used to conduct weekly source control inspections. In 2018 and 2019, updates were made to the inventory to better capture businesses within the City that have a high potential for generating stormwater pollution. In 2020, SWM 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.

S5.C.8.b.i: Adopt an Ordinance or Other Enforceable Documents Requiring Source Control BMPs

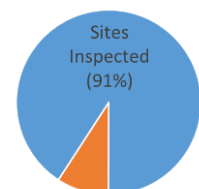
The Federal Way Revised Code (FWRC) currently includes language regarding source control BMPs, but does not require enforcement of those BMPs for existing sites. Enforcement occurs when a lack or failure of BMPs results in a water quality violation. In 2020, SWM staff will begin the initial planning and code review process to determine the most effective method for adopting an Ordinance or other enforceable documents requiring source control BMPs for existing sites, and will create a timeline to ensure adoption of this language prior to the August 2022 deadline.

S5.C.8.b.ii: Establish an Inventory of Public and Private Sites with Potential to Pollute MS4

In late 2017, SWM staff created an inventory of businesses with potential pollution-generating activities. 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, SWM staff will continue to evaluate and revise the inventory as necessary to account for changes in land use and development. SIC codes for each business will also be added to the inventory in 2020, as outlined in Permit Appendix 8.

S5.C.8.b.iii: Implement an Inspection Program for Pollutant-Generating Sites

Beginning in late 2017, SWM staff began conducting regular source control site inspections throughout the City, using the inventory for scheduling and as a recordkeeping document for inspections. In 2020, SWM staff will continue conducting regular source control site inspections and will begin scheduling and documenting inspections in NPDESPro. In 2019, a total of 91% of businesses (230 of 253) were



inspected within the inventory, which exceeds the future Permit requirement (January 2023) of at least 20% of businesses inspected.

S5.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, SWM 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, SWM 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 to eliminate the discharge and 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 VUEWorks, the City's asset data management system. Starting in 2020, all of the source control inspection results and enforcement data will be tracked in NPDESPro.

S5.C.8.b.v: Ensure Staff Training for Source Control Program

SWM Water Quality staff in charge of source control inspections are trained annually in the source control inspection program with an emphasis on inspection procedures, recordkeeping, and commercial-related BMP resources. Staff members involved with the source control program are also required to attend 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 2020, 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 2020 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/node/1468>.

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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