

City of Federal Way

Stormwater Management Program (SWMP) Plan

September 2023

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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.

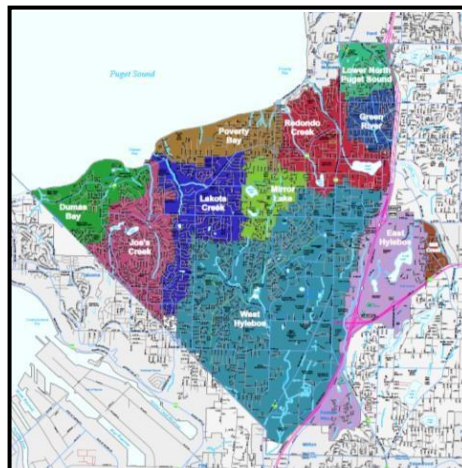
The Permit Section S5.A.2 requires that the City detail “activities for the upcoming calendar year” in order to meet Permit requirements. These activities are documented within the SWMP, and organized according to the following program components as outlined in the Permit:

- **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.

Stormwater Planning

The Environmental Services (ES) Division began preparing for the new Stormwater Planning Program Permit requirements by including the applicable milestones and deadlines in the Surface Water Management Comprehensive Plan update, completed by Herrera Environmental Consultants in 2021. ES 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. The next Surface Water Management Comprehensive Plan Update is slated for 2024-2025 to prepare us for the new permit cycle.



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

In 2020, ES staff reviewed the inter-disciplinary team membership and convened the first team meeting to discuss Stormwater Planning Program efforts. This team included staff from Capital Projects division, Planning division, Development Services Division, along with ES staff, and any additional staff as needed. The team meeting prepared us to answer Stormwater Planning Annual Report questions required by March 31, 2021

In 2022, ES staff collaborated with the inter-disciplinary team in order to discuss the West Hylebos SMAP and how anticipated stormwater impacts on water quality were being addressed as a City. This was reflected in the questions answered for Stormwater Planning Comprehensive Plan updated submitted to Ecology on December, 2022.

ES staff will coordinate another team meeting in October to review the West Hylebos SMAP regarding its enhanced operations and maintenance plan, its revised 2023 SWMP, and discuss general stormwater planning regarding potential strategies to improve local receiving water health.

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

In 2022, ES staff reviewed the City's long-range planning efforts and updated it to include any additional efforts or changes for the current permit form. These updates and changes are reflected in the comprehensive plan update submitted to Ecology before the January 1, 2023 deadline.

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

Per the 2019-2024 Permit requirement, the City reviewed the following documents and code for LID requirements and incentives annually:



- Federal Way Revised Code (FWRC)
- King County Stormwater Design Manual (KCSWDM)
- Federal Way Addendum to KCSWDM
- 2019 Development Standards Manual
- King County Stormwater Pollution Prevention Manual (KCSPPM)
- LID Manual Puget Sound

The City's Development Services Division continues to review and revise Development Standards in accordance with LID principles. We will plan to evaluate and assess our LID principals and BMPs in December of 2023. 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. The City code is written where we always adopt the current, (2021), version the KCSWDM and KCSPPM and the LID standards/requirements therein. The Development Standards Manual is in the works to be updated in 2024.

S5.C.1.d: Stormwater Management Action Planning (SMAP) and West Hylebos SMAP

We began planning for the SMAP back in 2019. Following the SMAP guidance document provided by Ecology we completed the inventory, assessment, and prioritization of our local watersheds in 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

In 2022-2023, ES staff developed 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 during our inter-disciplinary team meeting to ensure it reflects our efforts accurately. In 2023, the inter-disciplinary team will meet review and revise the West Hylebos SMAP as necessary and ES staff ensure we are implementing the plan as stated.

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.

55.C.2.a.i: General Awareness Events and Programs

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 general awareness activities that occurred in 2022 and planned for 2023 are provided below:

Storming the Sound with Salmon Program

Storming the Sound with Salmon (SSS) is a program carried out by the City in partnership with the Federal Way Public School (FWPS) District. The program began in earnest during the 2012-2013 school year and has continued to be carried out ever since. The program purpose is to educate students about salmon, stormwater, and how they are connected. There are several components to this program which includes, implementation of stormwater/salmon curriculum in the classrooms, schools have the option to voluntarily raise salmon in tanks with all supplies paid for by the City, and culminates with a multi-day Salmon Release Event where students get to release the salmon they raised. The Release Event has multiple components such as presenter led activities, nature walks through the nearby wetlands, when possible an activity led by local Puyallup Native American Tribe. Below are details on for 2021-2022 school year and our plans for the 2022-2023 school year.



2021-2022 School Year

- During this time schools were still working on getting students physically back in the classrooms. We were still able to get 30 schools to raise salmon in their schools for this program. Due to uncertainty on carrying out a physical Release Event we decided to do a virtual Release Event over 3 different days in March. 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. Some activities such as the Salmon Release and Storytelling by the Puyallup tribe language department were streamed live. Approximately 2,200-2,500 students were able to participate.
- We sent out a feedback survey for comments and suggestions on how to improve this program after the virtual Release Event. Tank cleaning were performed by ES staff in Summer of 2022 at each school that participated to ensure tanks and equipment were properly maintained and stored for the following year

2022-2023 School Year

- Based on feedback from our survey and the fact that schools will be back to 100% in classroom we will plan for a physical Release Event over 4 days for May, 2023. We will begin our SSS kick-off meeting in July where we will take inventory of supplies, figure out what we need to order based estimate of participating schools, and put together salmon tank maintenance kits once all items have arrived.
- In September after school has started we will have another planning meeting to plan out logistics for the program. Around October schools should have their tanks set up and running. ES staff will troubleshoot and perform maintenance as necessary to prepare for salmon egg deliveries.
- Depending on the year salmon egg pickup and delivery will occur late November or early December.
- From October to May, ES and Federal Way Public School staff will respond to various tank maintenance issues and concerns.
- ES staff will begin procuring presenters and lunch sponsors for the Release Event in January. We will also have our Release Event planning meeting with FWPS in January.
- In February, ES staff will coordinate with various City departments to get park permit, and staff required to carry out the Release Event.
- In March, ES staff will begin updating, creating, and gathering materials needed for the Release Event.
- Release Event will be held on 4 separate days in late April or early May at the Brooklake Community Center.
- After the Release Event, ES staff will send out a feedback survey to all staff that participated in the Release Event. FWPS staff will send a feedback survey to their participating schools. Then we will have a meeting in late May or early June to go over feedback responses and how to improve the program for the following school year.

General Outreach Newsletters**2022:**

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. ES staff also promoted the regional Scoop the Poop and Don't Drip and Drive campaign messages through the newsletter.

2023:

Staff will continue to produce e-newsletters that address various topics on pollution prevention, Scoop the Poop campaign, Don't Drip and Drive campaign and general awareness of stormwater-related issues. We will plan to .

**Social Media****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 this includes correct car washing procedures with specifics focus on its effect on stormwater and posts noting why auto leaks should be repaired, both in partnership with Puget Sound Starts Here organization. The regional Scoop the Poop and Don't Drip and Drive campaigns were also shared on social media.

2023:

Staff will continue posting and strategically boost posts to reach a larger, locally-targeted audience. Continue to coordinate with City and department-wide efforts to strengthen social media marketing efforts in 2023. ES staff will continue advertise the Don't Drip and Drive, the Scoop the Poop campaign, and other campaigns with the Puget Sound Starts Here organization.

Green Living Workshops**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.

2023:

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. Examples include rain barrel classes during the winter, rain garden classes and shade tolerance to decrease need for fertilizers in the Spring.

Community Events**2022:**

Outreach staff educated residents about stormwater at three community events; two farmers' market during the summer 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.

2023:

ES will table at Town Hall event to educate citizens about stormwater as a utility in March. We will plan to attend FWPS's STEM night in April, where we will share information about pollutants, their effect on stormwater, and live demonstration how they affect various parameters using our sonde. ES staff will plan to table at multiple Federal Way's Farmer's Market at the Commons Mall, the 4th of July event at Celebration Park, and Kid's Day at Steel Lake Park during the summer. ES Staff have stormwater education and outreach tabling events planned for Camelot Elementary Kids Night, Sikh food & Culture Festival (Vaisakhi Nagar Kirta), and Hooked on Fishing. These tabled events include stormwater pollution prevention handouts, scoop the poop dog bags, and other giveaways. Also, staff choose interactive activities to teach community about keeping all kinds of pollution out of our storm drains. The City will utilize an interactive EnviroScape model at many of these events to demonstrate pollution transport during precipitation events and proper BMP effectiveness. ES staff will also explore hosting an in-person car leak checks at various locations such as recycling events and multi-family complexes.

55.C.2.a.ii: Behavior Change Program, Spill Kit Outreach Program

The City has contracted with Environmental Coalition of South Seattle (ECOSS) to implement our Spill Kit Outreach Program since 2013. This involves them visiting businesses with a high risk of spillage and polluting our stormwater system. The visits consist of an initial visit and follow up visits. Additional follow up visits may be conducted as needed.

Initial visits consist of a pre-service survey to develop a baseline level of awareness on the part of the business owner or staff and helps paint a picture of what each business's beliefs were regarding responsibility and liability. After the survey, ECOSS staff would provide a brief primer on stormwater and its effect on receiving waters. A spill kit is provided free of charge to incentivize responsibility to address spills as they occur and participate in the program. ECOSS staff then provide training on how to use the kit and proper disposal of kit materials and provide instructional posters on how to clean up spills and how to respond. ECOSS also help them develop a customized spill plan based on materials stored and used.

During a follow-up visit, usually done at least a year after the initial visit, ECOSS performs a post-service survey to assess the increase in awareness retained of polluted stormwater runoff and changes in behavior in response to receiving spill training since the initial visit. An increase in awareness, spill response training, and responsibility should lead to better best management practices regarding spill prevention and illicit discharges.

2022:

ES staff targeted outreach to businesses with a high potential for generating stormwater pollutants. Such as restaurants and auto repair and paint shops. ECOSS also provided training in multiple languages to employees for whom English is a learned language to better implement spill kit awareness.

- 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.

2023:

In 2022, ECOSS reached out to the City and informed us they would be discontinuing their spill kit outreach program. For 2023, the City plans to take the processes and rapport established by ECOSS and continue implementing the program as intended throughout Federal Way. ES staff will continue to provide stormwater education and free spill kits to businesses in the automotive, restaurants, and industries producing hazardous waste. ES staff will also continue utilizing spill data collected from IDDE/Source Control to inform which businesses to select for future participation in the program based on the potential for, or known history of, prohibited discharges and spill events. We will plan to reach out to at least 15 new businesses and perform 10 follow up visits.

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

The City has various volunteer stewardship opportunities which includes Stream Team, participating the Lake Observation by Citizen Scientist & Satellites (LOCSS) program, curb marking, and litter pick up.

Stream Team

The City brought relaunched Stream Team in 2019 and has been ongoing since. Recruitment has been scarce due to the timing of the pandemic. Stream Team involves volunteers of all ages going out to monitor the receiving waters of Federal Way. The City requires new volunteers to go through 2 trainings, an in-classroom type training where they learn about the common stormwater parameters, stormwater, and the equipment they will be using. Then they will attend the in-field training where they use the kit in the field with City staff providing guidance. Once they complete both training they will get assigned to a monitoring site based on their survey. As ask them to monitor at least once a month. All materials are provided by the City.

2022:

No volunteers were trained in 2022, due to turnover other prioritized duties. One volunteer remained active testing local waterways.

2023:

Staff will offer trainings to rebuild the volunteer group and brainstorm ideas to bring in additional volunteers. We will plan to advertise for recruitment in first week of October and begin trainings in late October and early November.

**Storm Drain Curb Marking Events**

ES staff host volunteer storm drain curb marking events to bring awareness to stormwater and to prevent pollution. This involves ES staff scouting Federal Way to identify a safe area with a need for storm drain markers. During the event we debrief volunteers on how they are assisting with pollution prevention. We show them how to install the storm drain markers and plan routes with multiple locations where volunteers need to mark drains. The City plans to reach out to local schools to raise interest and volunteers for future curb marking and litter pick up events.

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 over 84 drains, and distributed educational doorhangers to area residents.

2023:

ES staff will plan to host a curb marking event during the summer. We will plan to work with the African Young Dreamers Empowerment Program staff again and plan to reach out to The Chief of Communications and Strategy at the FWPS (Federal Way Public Schools) to enlist volunteers and interest in curb marking and litter pick up events in and around the local public schools with the aim of getting youth excited in protecting our water resources.

**Lake Observations by Citizen Scientist & Satellites (LOCSS) program**

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.

2022:

Citizen scientists reported lake level data 93 times between the two sites (77 North Lake; 16 Steel Lake).

2023:

This program will continue for as long as the LOCSS program active. Citizens scientist will continue to report lake level data. Data and information regarding trend will be reported by LOCSS.

**Litter Pick-Up Events**

In conjunction with local community development programs and FWPS, the City plans to continue the litter pickup events. ES staff host litter volunteers pick up event near receiving waters to prevent trash from entering our storm drain system and our receiving waters.

2022:

ES staff created Community Litter Cleaning Kits that could be checked out by the public. This kit provides residents with safety vest, gloves, litter pickers, and trash bags. In 2022, ES staff checked out the litter cleaning kit 7 times to multiple groups for weekend litter pick-up efforts.

2023:

ES staff will continue to offer Community Litter Cleaning Kits to be checked out by the public. In 2023, ES Staff will also be working with selected Federal Way Schools to host Litter Pick-Up Events. These events provided students and residents the opportunity to learn about how litter effects our local stormwater system, as well as a way to clean up litter on and around school grounds.

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.

SS.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.

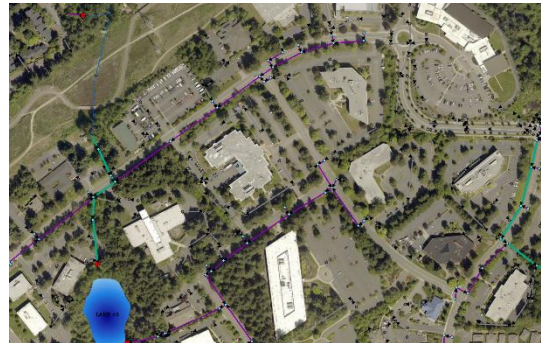
Opportunities for public participation in the development of the SMAP will be considered and planned by the inter-disciplinary team. In 2023, the City website will advertise for the SWMP public comment period in English, Arabic, Russian, Somali, Spanish, Ukrainian, Vietnamese, and Korean. Verbal translations of the SWMP document is available upon request.

SS.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

The City maintains its stormwater assets mapping data through ArcGIS. The City performs 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. During inspections or field work if we discover any discrepancies between observations and our GIS maps we will make notes and update accordingly.

S5.C.4.b.i: Collect size and material data for all known MS4 Outfalls

Outfall inspections updating classifications (primary/secondary) and improving map accuracy are completed annually. Outfall inspections are generally done during the summer during the dry weather. During outfall inspections we collect the following information: material, size, condition, and if there is flow. If the outfall is inaccessible such as when it is overgrown with vegetation, on steep cliff, or submerged, etc., staff will inspect the outfall from the storm structure directly upstream. Once inspections are completed, the results are forwarded to GIS staff to update the database.

In 2022, we staff were able to update missing information of 57 public outfalls. As of 2023, we have collected material and size data on 119 of 229 known primary public outfalls. For 2023, we will prioritize inspections of outfalls with missing material and size information and expect to have all outfall accounted for by the end of 2023.

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

The City GIS-mapped all known connection points between the MS4 and privately-owned stormwater systems. We differentiate between public vs private system when we input the data in ArcGIS. New private stormwater infrastructure is updated on an ongoing basis. 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. The City manages its Public Records Request through GovQA. Records can be found and request through our website on this page:

<https://www.cityoffederalway.com/page/public-records>

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. We utilize NPDESPro to manage our IDDE records according to Ecology's reporting schema.

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

Federal Way's IDDE Field Procedures and Response Plan (IDDE Plan, see Appendix A) was updated last updated in 2019 to include more consistent and timely enforcement measures to facilitate compliance and correct illicit discharges and corrections. The City utilizes the *Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual, May 2020 Revision*, prepared by Herrera Environmental Consultants and Aspect Consulting (see Appendix B) to supplement the City's IDDE Plan. In March of 2020, the ES Water Quality staff began to use NPDESPro software to record IDDE investigations.



Throughout 2023, ES staff will plan on updating the City's IDDE Plan for all the changes that have occurred since 2019. This includes, but not limited to monetary penalties procedures, source control enforcement, use of NPDESPro, flowchart updates, and abatements. We plan to have the revised IDDE plan finalized sometime before mid-year of 2024.

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

ES staff education and outreach efforts to multiple stakeholders regarding the various hazards associated with illicit discharges and improper waste disposal through various methods. This includes:

- When we receive complaints regarding alleged illicit discharges we always send a technical assistance letter or talk a person on site regarding proper best management practices even if they are not in violation. Additionally, all IDDE and Source Control cases that result from enforcement include BMPs catered to the specific business or activity.
- At community events we mentioned in the Public Education and Outreach section, we provide 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. Additionally, we always include an interactive activity such as our Scoop the Poop game, watershed pollution demonstration, and a spin the wheel questionnaire.
- Dumpster stickers for commercial dumpsters when we observe that they are open during our inspections.
- 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
- 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.
- Businesses are education on Spill Preparation, response, and stormwater when visited through our Spill Kit Outreach Program.

In 2023, ES staff will continue education the residents of Federal Way with the programs and activities list above. Many of the activities listed above are planned in the Public Education and Outreach section and other

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.

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. The ES Water Quality Section implements escalating enforcement procedures and actions pursuant to those outlined in FWRC Chapter 1.15. In general, when doing through enforcement we generally start with a warning letter which has a deadline and that can escalate into an order to correct. Based on the situation we may skip the warning letter and issue the order to correct. As an incentive to complete the corrective action, we have monetary penalties that accrue daily after the deadline stated in the order to correct.

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



Field screening procedures and methods are outline in our IDDE Plan and the *Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual, May 2020 Revision*, prepared by Herrera Environmental Consultants and Aspect Consulting. In 2022, the City met the Permit requirement to screen at least 44 percent of the City's stormwater system for illicit connections through recurring source control, video, and stormwater facility inspections.

The City has a spill hotline on the Federal Way, Surface Water Management page which includes a phone number and a link to Eye's on Federal Way where citizens can make any type of report and it will be directed to the appropriate personnel and they can track the progress in real time.

Annually, ES staff require field staff from all divisions and the Police Department to take our IDDE training which is sent out every Spring. We track the progress through a survey that they must complete at the end of the training presentation or if it is in-person through a sign-in sheet. Staff who work on facilities that require a SWPPP are also required to take our SWPPP training and those who do maintenance that follow the King County Site Management Plan (SiMPla) must take the SiMPla training as well. These trainings are updated annually between January and February.

This program is ongoing, and in 2023 ES 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. 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. ES staff will continue 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.
- 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.
- 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. NPDESPro is only utilized for IDDE recordkeeping and tracking.

S5.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. All spill response staff will be trained in Source Control through the Washington Stormwater Center and received CESCL training as needed to stay certified.

S5.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.

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. ES staff will explore utilization ArcSurvey 123 to record source control inspections.

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 code is phrased to always adopted the current King County Stormwater Design Manual, City of Federal Way Addendum to the King County Stormwater Design Manual, and the latest edition of LID Technical Guidance Manual for Puget Sound.

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 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.

S5.C.6.d: Provide Notice of Intent (NOI) for Proposed New Development and Redevelopment

The City has made available electronic links to the Construction Stormwater General Permit and the Industrial Stormwater General Permit NOIs on the City's Development Services at www.cityoffederalway.com/publicworks/development-services.

S5.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.a: 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.

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

SWM staff have implemented a Private Commercial Site Inspection Program to ensure inspections of private storm facilities that discharge into the MS4 are within compliance of the KCSWDM. Before private commercial site inspections, the property owners are sent a preliminary notice letter detailing when we plan to arrive for inspection, what to expect, and how to prepare. During the inspection all stormwater structures are inspected to ensure they're in compliance of the KCSWDM. If no issues are found, property owners are sent a letter that they have passed inspection. If they fail the inspection, then they are sent a 30-day Maintenance Correction letter that details the required corrections, deadline, and includes a waste tracking form to ensure materials are disposed of properly. If corrections are not completed after the deadline, they are sent a 10-day Maintenance Correction letter to remind them that they need to complete corrections and states a deadline. If they do not complete the corrections after the 10-day letter deadline, the case is sent to the Water Quality team to issue a formal Notice and Order to Correct, that gives them 14 days to bring the site into compliance after which monetary penalties will begin to accrue daily. Private Commercial Site inspections are recorded in the City's network drive and tracked on Excel. Follow up inspection are conducted on a case-by-case basis. Generally, submittal of the waste tracking form is sufficient.

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. SWM staff utilize 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. 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 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.
- Under the catch basin inspection program 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).
- In 2021-2023, 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. The contract with AIMS will terminate in Spring of 2023. After which CCTV inspections will be done in-house. SWM will perform CCTV inspection (visual and video) of stormwater infrastructures within the planned 2024 Overlay Project Schedules.
- In 2022, the City of Federal Way contracted with Road Construction Northwest for the repair of sixteen drainage pipes throughout the City. For 2023, there will be no contract for pipe rehabilitation. However, SWM maintenance will continue to perform maintenance and repairs of stormwater infrastructures as needed.
- In 2022, SWM purchased a Vactor truck to assist with cleaning and maintenance of stormwater infrastructure within the City's MS4. For 2023, SWM will utilize the Vactor truck and our contractor, Action Service, to do necessary storm structures maintenance for permit compliance.

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 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.

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

City field staff are trained annually in IDDE and spill response procedures. In January of 2023, personnel will be trained in IDDE and Spill Responses. In the few weeks following the training maintenance personnel will have discussions on utilizations of spill response materials. 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.

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 2022, 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. For 2023, ES staff will update the SWPPP annually
- In 2022, ES staff updated SWPPP for Celebration Park, created SWPPP for City Hall, and created a SWPPP for Steel Lake Park. For 2023, ES staff will create a SWPPP for the Federal Way Community Center. All of these SWPPPs will be updated annually.
- 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. Training updates are usually completed between January to February and trainings are hosted in the Spring.

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

In 2022, 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.

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

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, ES staff will administer an updated Source Control Programs that includes new NPDES permit requirements to enforce the implementation of structural and operational BMPs.

S5.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.

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

For 2023, ES staff will update the source control inventory list to include all existing commercial sites. ES staff will refine the site list based on inspections and business type throughout the year.

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

In 2022, 61% of commercial parcels (245) were inspected within the inventory list. In 2023, ES staff will continue conducting regular source control site inspections and will begin scheduling and documenting inspections in Excel. Introduction letters will be sent to all sites on the list regarding this program.

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, 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 Warning letter 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 the corrective actions. If corrective actions are not completed by the deadline stated then it will escalate to a Notice and Order to Correct which has a deadline as well after which monetary penalties will accrue daily.

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. ES staff will look into utilizing ArcSurvey123 to streamline the inspection process.

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

ES 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. In 2022, ES staff hosted and attended a source control training offered by Washington Stormwater Center and Herrera. The Steel Lake Maintenance Yard was used as an example site. For 2023, ES staff will opportunistically look out for additional source control trainings to attend.

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.