**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 Western Washington Phase II NPDES Municipal Stormwater Permit (Permit). The first Permit was issued to the City in 2007 and the current Permit was re-issued in 2012. A new Permit was to be issued July 2018, however, Ecology extended the terms of the current Permit and it will continue to stay in effect through July 2019.

The Permit allows municipalities to discharge stormwater runoff from the MS4 into the State’s water bodies (i.e., 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. These required practices, specified in the Permit, are implemented through the City’s Stormwater Management Plan (SWMP). Permit section S5.2.A 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:

* Public Education and Outreach (S5.C.1)
* Public Involvement and Participation (S5.C.2)
* Illicit Discharge Detection and Elimination (S5.C.3)
* Control of Runoff from New Development, Redevelopment, and Construction Sites (S5.C.4)
* Pollution Prevention and Municipal Operations and Maintenance (S5.C.5)
* Monitoring (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.

# 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. 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.1.a.i and ii Targeted Stormwater Outreach**

A summary of educational activities scheduled for 2019 is provided as follows:

* Continue to make improvements to the Storming the Sound with Salmon (SSS) Program. In 2016, we determined the culminating release event was not providing a learning opportunity for high school aged students. In 2016, 2017, and 2018, we worked with the Federal Way Public School District to implement various options for the final phase of the SSS program at the High School level. Evaluation of these options provided insight and direction for planning a more relevant experience for High School students in the 2018/2019 school year. In 2019 we will work on developing a meaningful, age-appropriate experience for them that will include a capstone project within Environmental Sciences courses. This will connect them to career opportunities in the environmental field and involve students in an authentic research experience. The capstone project will include water quality sampling, monitoring, and testing in a waterway local to their school and proposing an action project based on the data they collect.
* 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 staff and several volunteer environmental organizations. Past events spanned four days and were open to classes in grades K-6. This year the event will span five days, and will become a grade level experience for all fourth graders.
* Develop an Interlocal Agreement with the City of Federal Way Public School District 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. In previous years, ECOSS was funded by a regional grant to provide this outreach effort to twenty area businesses, particularly to businesses that had multi-lingual employees. Although grant funding is no longer available, we intend to continue this program, targeting outreach to businesses with activities that are prone to spills, such as restaurants and automotive support services.
* 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 us 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 the substantive increase in participation, SWM will continue to partner with Solid Waste to sponsor free classes to the public on topics such as green cleaning, natural lawn care, water conservation, rain gardens, and the use of rain barrels.
* As a result of local organizations increasing their use of charity car wish ticket programs run through the Pacific Northwest Car Wash Association and Brown Bear Car Wash, the City reduced 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, only 6 kits were checked out in 2018—less than in previous years. In 2019, SWM will continue to encourage the use of charity car wash ticket programs and will reduce the number of car wash kits available for check out to two.
* 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.
* Continue to run the Scoop the Poop Campaign. In 2018 the City focused on audience and behavior research, identification of motivators and barriers to picking up pet waste, and the adoption of specific strategies to address the identified motivators/barriers using focus groups, door-to-door surveys, and a pre-survey mailer to the targeted area, tabling at community events, and a “Scoop the Poop Pledge.” In 2019 staff will focus on outreach to enlist the help of local pet-related businesses to disseminate the message. Outreach will also include a press release, social media posts, and a pet waste specific page on the Surface Water website. Water quality staff will also conduct monthly fecal testing within the watershed to determine trends in water quality data.
* Continue to partner with Solid Waste staff to initiate Social Media Marketing efforts in 2019, 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 our residents, and to advertise events, promote programs, and post related news and events from other sources to increase awareness of stormwater issues.
* In 2018 SWM staff planned to begin transcreating the most frequently used education and outreach materials, as well as BMP fact sheets most frequently used for water quality correction notices for area businesses. Staff worked with volunteers to adapt the general SWM informational brochure into Korean, and procured large restaurant BMP posters in Spanish. In 2019, staff will continue to expand the number of education and outreach materials offered in languages besides English. SWM participated in a regional outreach campaign which created a set of three PSA’s focused on pet waste pickup, fixing car leaks, and natural yard care. The ads aired in English on multiple networks throughout the Puget Sound region, including Federal Way, and copies of the ads were made available to municipalities in English, Spanish, Korean, and Vietnamese. In 2019 copies of the ads in all languages will be posted on the City’s YouTube page, shared through social media, including Constant Contact and Facebook, and the Korean language ads will be shared at a Korean quarterly meeting.

***S5.C.1.b Creating Stewardship Opportunities***

* In 2018, SWM staff researched best practices and methodologies for building a Stream Team or Stream Stewards Program. In 2019 SWM Staff will develop a plan for re-implementation of a Stream Team program and research the viability of an Adopt-a-Drain program.
* Continue to host volunteer events that encourage public participation in stewardship activities. Activities may include storm drain marking, removing invasive plants species, planting native vegetation, and removing garbage and debris from local waterbodies.

***S5.C.1.c Measuring Outreach Effectiveness***

* In 2019 SWM will continue to support the regional efforts of the Don’t Drip and Drive campaign by promoting the campaign on social media, recruiting automotive businesses to participate, and serving on the Don’t Drip and Drive Steering Committee.

# 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.

***S5.C.2.a and S5.C.2.b Involving the Public in the SWMP***

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

* January 16,2019: Public Input Meeting on the City’s Storm Water Management Program (SWMP) Plan and SWM Comprehensive Plan Update;
* March 4, 2019: Land Use and Transportation Committee meeting;
* March 19, 2019: City Council meeting. The Council reviews the programmatic and policy changes proposed under the SWMP and allows public comment on all agenda items.
* 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.

**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.3.a Municipal Stormwater Drainage System Map**



In 2018, SWM performed routine updates to the MS4 mapping and also concentrated on an update to the identification and mapping of the City’s outfalls within the MS4. In 2019, SWM Staff will continue routine updates that result from: the City’s Video Inspection Program, completed new development or redevelopment as-builts, and field verifications from utility locates. Additionally, SWM Staff will evaluate sub-watershed basin boundaries for possible adjustment and mapping updates.

##### **S5.C.3.b Water Pollution Prevention Ordinance**

City Ordinance 09-619 prohibits non-stormwater discharges into the City’s MS4. Examples of illicit discharges include trash, food wastes, construction materials, petroleum products, paint, pesticides, fertilizers, soap, and wash water. The SWM Water Quality Section implements escalating enforcement procedures and actions pursuant to those outlined in the Federal Way Revised Code (FWRC) 1.15. In 2018, enforcement procedures were reviewed and updated to achieve more efficient compliance and legally enforce monetary penalties for those violators that continually fail to comply. In 2019, SWM staff will incorporate the updated IDDE Field Procedures and Response Plan into its ongoing IDDE program.

##### **S5.C.3.c Ongoing IDDE Program to Detect Non-stormwater Discharges and Illicit Connections & S5.C.3.d Implement an Ongoing Program Designed to Address Illicit Discharges**

The City met the Permit requirement for screening 40% 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 2019 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 will be placing a special emphasis on source control best practices. 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.
* Analyze data collected during the 2013-2018 Commercial Site Inspection program to prioritize sites for future inspection. The data includes land use, compliance history, and pollution risks associated with each site.
* Continue to utilize the IDDE database created in 2017 for staff use. The database increases efficiencies in reporting and recording spills and respective response actions. The database was created in 2017 and was updated in 2018 to allow for geographic and trend assessments. A spill analysis of the 2013-2018 Permit cycle was conducted to evaluate hot spots in the City for illicit discharges, further broken down by type of discharge, drainage basin, and year. The results of this analysis will be used in 2019 to assist staff in identifying seasonal and/or geographic trends in repeated water quality violations. SWM Staff will utilize this analysis to target outreach and technical assistance in an effort to reduce common illicit discharges.
* Utilize the updated IDDE Field Procedures and Response Plan for all incoming employees to provide an introduction to the program and orient them with City procedures for investigating, identifying, enforcing, and eliminating illicit discharges and illicit connections.

***S5.C.3.e 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.

***S5.C.3.e Program Recordkeeping***

In addition to the IDDE database created in 2017, SWM staff utilize 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 are tracked through a Microsoft Excel spreadsheet and active construction sites are tracked through the City’s permitting system. In 2019, Public Works Inspectors will initiate tracking of interim TESC inspections of active construction sites within VUEWorks.

# Controlling Runoff from 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.4.a Apply Stormwater Management Standards to 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, includes minimum requirements for stormwater design and construction for the protection of water quality and the reduction of pollutant discharge.

***S5.C.4.b Review and Inspect Development/Redevelopment Projects***

In 2019, Public Works Development Services 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 from new development, redevelopment, and construction site activities.

In 2019, the City will be updating the Development Standards, which will include 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.

***S5.C.4.c Post Construction Operation and Maintenance***

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 2019, Public Works staff will continue post construction inspections prior to release of warranty bonds. In addition, SWM staff will review post construction inspection procedures in conjunction with the Development Standards update.

***S5.C.4.d Notice of Intent (NOI)***

The City includes notification of the requirement to meet NOI in our 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.4.e Staff Training***

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.

***S5.C.4.f Low Impact Development Code-related Requirements***

In 2016, the City completed this requirement to review and where necessary revise enforceable documents to make LID the preferred and commonly used approach to development. The City continues to utilize Public Works Development Standards, which function as the City’s enforceable document related to local development, and was updated in 2016 and again in 2017. In 2019, the Public Works Development Standards will be updated and SWM staff will review and propose any necessary revisions for continued permit compliance.

***S5.C.4.g Watershed-scale Stormwater Planning***

Not applicable. The City of Federal Way does not have coverage area in a watershed selected by a Phase I county for watershed-scale stormwater planning under condition S5.C.5.c of the *Phase I Municipal Stormwater Permit*.

#### Pollution Prevention, 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.

***5.C.5.a Maintenance Standards***

* In 2019, 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*.

***S5.C.5.b Annual Inspection of Flow Control and Runoff Treatment Facilities***

* 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 repairs required are recorded and scheduled in the City’s maintenance management and tracking system, VUEWorks.
* In 2018, SWM implemented mobile technology into its inspection program which allows for electronic recording, filing, and scheduling for inspection results. In 2019, SWM will implement the second phase of this program which will provide real time recording into the City’s maintenance management and tracking program software. This will result in streamlined operations and. Also in 2019, this inspection program will be expanded to include outfalls and control structures.
* 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.

***S5.C.5.c Major Storm Event Inspections***

* SWM Staff will continue to inspect facilities vulnerable to surface water related problems during and after major storm events to ensure the systems are functioning properly, and to determine/conduct any maintenance or repair needs.

***S5.C.5.d Catch Basin Inspection Program***

***& S5.C.5.e Compliance with Inspection requirements***

* SWM will continue to inspect and clean (when necessary) catch basins owned by the City. In 2018, SWM incorporated an annual assessment into our catch basin inspection program. In 2019 we will continue to review the City’s circuit schedules, actual inspection results, cleaning and maintenance records, new development or redevelopment schedules, changes in commercial use, and evaluation of 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.
* To assist with this effort, SWM has implemented a new inspection program using mobile technology that provides more accurate measuring and tracking of catch basin sediment levels. The technology also provides better record keeping, ensuring that maintenance is performed on those catch basins meeting or exceeding the threshold within the six (6) month permit-required timeline.
* SWM will continue to inspect and clean all arterial catch basins within the City.

***S5.C.5.f Practices, Policies, and Procedures to Reduce Impacts of Stormwater Runoff Related to Municipal Operations***

* 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 will review the 2018 program and update the current maintenance Standard Operating Procedures (SOPs) to incorporate changes made to the program.
* Also in 2019, 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.5.g Training Program for Operation and Maintenance Personnel***

* City field staff is trained annually in IDDE and spill response procedures. In 2019, 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 personnel are trained on a rotational basis for pesticide/herbicide application and this program will continue in 2019.

***S5.C.5.h Implement a Stormwater Pollution Prevention Plan for Heavy Equipment, Maintenance, and Storage Yards***

* In 2019, the City will review and update the SWPPP for the Public Works/Parks Maintenance Yard Annex located at 31130 28th Avenue South. In addition, a generic SWPPP for all City-owned sites that have above-ground storage tanks will be developed and disseminated to responsible staff.
* Staff will continue to review policies and procedures to ensure proper pollution management practices are consistently being implemented and documented.

***S5.C.5.i Operation, Maintenance, and Repair Records***

* In 2018, a review of records retention and data collection was done as part of the updated procedures and practices for operation, maintenance, and repair. In 2019 SWM will be completing the implementation plan for digitizing all O&M and repair records as well as standardizing maintenance records procedures.
* Also in 2019, SWM will review recording and tracking procedures for Streets and Parks personnel.

#### 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 2019, the City will continue to pay into the collective fund and support the implementation of the three components of the Regional Stormwater Monitoring Program:

* In-stream monitoring 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;
* 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

The Annual Report and SWMP update is posted on the City of Federal Way website at:

http://www.cityoffederalway.com/sites/default/files/Documents/Department/PW/Surface%20Water/combined%20files.pdf.

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.