

**CITY OF DUVALL PHASE II NPDES
STORMWATER MANAGEMENT
PROGRAM REPORT FOR 2016**



Revised March 31, 2017

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INTRODUCTION

The City of Duvall (City) Stormwater Management Plan (SWMP) was prepared to guide the City in planning, funding, and implementing a comprehensive program for addressing current and future regulatory and policy requirements for managing stormwater runoff, water quality, and flooding problems.

The Public Works Department is responsible for Surface Water Management and the National Pollutant Discharge Elimination System (NPDES) Permit implementation. Other City departments are involved in program implementation including the Planning Department, Building Department, and City Administration along with consultant and citizen comment and feedback.

PURPOSE

The NPDES Permit Program is intended to protect and restore surface water quality. The City was designated by the Environmental Protection Agency (EPA) as a municipal separate storm sewer system (MS4) for inclusion in the Phase II NPDES Permit Program.

Coverage under the Phase II NPDES Permit (Permit) authorizes discharge of stormwater to waters of the State of Washington in accordance with the Federal Clean Water Act. Discharges covered under this Permit must effectively prohibit non-stormwater discharges into storm sewers that discharge to surface waters and must apply controls to reduce the discharge of pollutants. The Washington State Department of Ecology (DOE) is administering the Permit for the EPA.

The purpose of the Stormwater Management Plan is to develop and present the City's approach for addressing the many different but related regulations, adopted plans and programs, and policies that affect urban stormwater, flooding, and associated water-dependent resources. An overall stormwater plan is needed to address the interrelationships of the programs and provide efficient approaches because many of these requirements have different origins but affect the same activities. The plan must also be consistent with long-term goals, objectives and policies as outlined in the City of Duvall Comprehensive Plan, Comprehensive Stormwater Plan, and NPDES Phase II Permit requirements.

The development and annual maintenance of the SWMP is required as part of Permit compliance and annual reporting requirements of this SWMP Report (SWMPR). The City's SWMPR has been organized to reflect the structure of the August 1, 2012 Permit, modified on January 16, 2014, and addendums provided by the DOE. The SWMPR summarizes compliance for requirements within sections of the Permit including:

- Authorized Discharges (Permit section S2).
- Responsibilities of Permittees (S3).
- Compliance with Standards (S4).
- Development and implementation of a SWMP to reduce discharge of pollutants (S5.A and S5.B).
- Public Education and Outreach (S5.C.1).
- Public Involvement and Participation (S5.C.2).
- Illicit Discharge Detection and Elimination (S5.C.3).
- Controlling Runoff from New Development, Redevelopment and Construction Sites (S5.C.4).
- Municipal Operations and Maintenance (S5.C.5).
- Stormwater Management Program for Secondary Permittees (S6).
- Compliance with Total Maximum Daily Load Requirements (S7).
- Monitoring and Assessment (S8).
- Reporting Requirements (S9).
- The Annual Report Form from the previous year (Appendix 3).

Various requirements are phased into effect throughout the five-year permit period that expires on July 31, 2018. The City is currently in compliance with the current permit and plans to comply with all requirements. The Permit requires the City to report on progress and submit related documentation on March 31st of each year during the Permit period. The annual reporting requirements include:

- Preparation of this SWMPR to demonstrate how the City has met the annual requirements and how the City plans to address future Permit requirements.
- Posting of this SWMPR on the City website.
- Submittal of an annual report documenting Permit compliance for the previous reporting year along with supporting documentation as required.

Additional Permit information, including the Western Washington Phase II Municipal Stormwater Permit Special and General Conditions, Annual Report Form for Cities, Towns, and Counties, Acronyms and Definitions from the Permit and Guidelines for City and County Annual reports are located on Ecology's website: <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseIIww/wwphiipermit.html>.

S2: AUTHORIZED DISCHARGES

The Permit authorizes the discharge of stormwater to surface waters and ground waters of the State from the MS4 owned or operated by the City as covered by the Permit and as summarized in this SWMPR. In accordance with Section S2 of the Permit, the City shall allow authorized and permitted discharge into the stormwater system. The Permit does not relieve entities from responsibility or liability associated with oil spills or other hazardous substance spills.

Discharge to groundwater and non-stormwater flows are restricted in accordance with Section S2 of the Permit as follows: Discharges to groundwater regulated under the Underground Injection Control Program (WAC Chapter 173-218) and other the State Water Pollution Control Act (RCW Chapter 90.48) are not covered under the permit. The permit authorizes discharge of non-stormwater flows to surface waters if:

- The discharge is authorized by a separate NPDES permit or a State Waste Discharge permit.
- The discharge is from emergency fire-fighting activities.
- The discharge is from another source that is managed by the permittee that is:
 - a. Relatively small or natural per S5.C.3.b (i.e. footing drains, flow from wetlands).
 - b. Relatively small or natural for secondary permittees per S6.D.3.b (i.e. footing drains, flow from wetlands).

S3: RESPONSIBILITIES OF PERMITTEES

In accordance with Section S3 of the Permit, the City shall be responsible for compliance with the terms of the Permit as summarized in this SWMPR.

S4: COMPLIANCE WITH STANDARDS

In accordance with Section S4 of the Permit, the City is responsible for compliance with the following standards as summarized within this SWMPR:

- The discharge of toxicants to waters of the State of Washington (State) which would violate water quality standards is prohibited.
- The Phase II NPDES Permit does not authorize violation of the State water quality standards.
- The permittee shall reduce the discharge of pollutants to the Maximum Extent Possible (MEP).
- The permittee shall use All Known and Reasonable methods of prevention, control and Treatment (AKART) to prevent and control pollution to waters of the State.
- The permittee shall comply with all of the applicable requirements of the Permit.

- The permittee remains in compliance with S4 despite any prohibited discharges (S4.A or S4.B) provided the permittee undertakes the long-term water quality improvement improvements required by S4.F.
- DOE may modify or revoke the Permit if DOE becomes aware of additional control measures, management practices, or other actions beyond what is required in the current Permit.

S5: STORMWATER MANAGEMENT PROGRAM

S5.A: Develop & Implement a Stormwater Management Program

In accordance with Section S5.A of the Permit, each permittee shall develop and implement a SWMP. This SWMP is a set of actions and activities comprising the components listed in S5.B and S5.C.1 through S5.C.5. This SWMP is designed to reduce the discharge of pollutants from the City to the maximum extent practicable and to protect water quality.

This SWMPR serves as written documentation of the SWMP and is organized in accordance with the Permit and the program components in S5.C. This SWMPR shall be updated at least annually for submittal along with the annual report to the DOE. This SWMP includes ongoing programs for gathering, tracking, maintaining and using information to evaluate SWMP development, implementation, permit compliance, and to set priorities.

- The City has implemented cost tracking for development and implementation of each component of the SWMP using the City's SpringBrook financial software system. This information will be provided upon DOE's request.
- The City has implemented tracking of the number of inspections, official enforcement actions, training, and public outreach activities as stipulated in the individual program components.
- The Program includes internal coordination mechanisms among City Departments to eliminate barriers to compliance as required by S5.A.5.b. The coordination mechanisms apply to City fieldwork, project review, and management staff including representatives from the Public Works, Engineering, Building, Project Management, and Planning Departments. Coordination mechanisms include in-house training, coordinated inspection and response, CESCL certification for field staff, and coordinated review and comment of the SWMP and SWMPR.

S5.B: All Known Available & Reasonable Methods of Treatment

In accordance with Section S5.B of the Permit, this SWMP is designed to reduce the discharge of pollutants to the maximum extent practicable (MEP), meet State All Known Available and Reasonable Methods of Treatment requirements (AKART), and protect water quality. Water quality protection activities will not be reduced in response to the Permit and SWMP requirements currently being completed in the City. Compliance activities already in effect will be continued regardless of the timeline contained with the Permit.

S5.C.1: Public Education and Outreach

General Requirements

In accordance with Section S5.C.1 of the Permit, this SWMP includes a public education and outreach program aimed at residents, businesses, industries, elected officials, policy makers and employees of the City. The goal of the education program is to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts.

The City's program includes education and outreach that is designed to achieve measurable improvements in the specified audience's understanding of stormwater issues and how they can improve stormwater quality. The resulting measurements are used to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behaviors.

Education and Outreach Audiences

The City's public education and outreach program prioritizes and targets activities to specified audiences to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. Education and outreach efforts are prioritized to target the following target audiences, subject areas, and BMPs:

General public including school age children

- General impacts of stormwater flows into surface waters.
- Impacts from impervious surfaces.
- Source control BMPs and environmental stewardship actions and opportunities in the areas of pet waste, vehicle maintenance, landscaping and buffers.

General public, businesses, including home-based and mobile businesses

- BMPs for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials.
- Impacts of illicit discharges and how to report them.

Residents, landscapers, and property managers

- Yard care techniques protective of water quality.
- BMPs for use and storage of pesticides and fertilizers.
- BMPs for carpet cleaning and auto repair and maintenance.
- Low Impact Development (LID) techniques, including site design, on-site stormwater management and retention of forests and mature trees.
- Stormwater facility maintenance.

Engineers, contractors, developers, review staff and land use planners

- Technical standards for stormwater site and erosion control plans.
- LID techniques, including site design, on-site stormwater management and retention of forests and mature trees.
- Stormwater treatment and flow control BMPs and facilities.

Stewardship

SWMP stewardship opportunities have been created to encourage participation in surface water protection and active incorporation of SWMP principle and goals. General residential stewardship activities such as volunteer plantings are emphasized during public venues such as Public Works Day, Earth / Arbor Day, and other public educational events. A partnership between the City and the Riverview School District has developed to complete stormwater educational activities for elementary school children. Stewardship is also encouraged through interaction and volunteer planting/maintenance parties and storm drain marking with the Boy Scouts of America, Riverview School District students, and groups and individuals that are requesting or required to complete volunteer service hours.

Understanding and Adoption of Targeted Behaviors

In August of 2012, the City of Duvall and six other Puget Sound cities participated in a regional study to assess understanding and adoption of targeted stormwater behaviors. The report is available here: <http://www.duvallwa.gov/DocumentCenter/Home/View/339>. The study was completed by Hebert Research, Inc. to measure Duvall-specific and regional public stormwater knowledge and practices. The 2012 study was based on a similar study in Duvall completed by Hebert Research, Inc., in 2009. Comparing the results of the two studies provides a statistical basis for measuring the understanding and adoption of the targeted behaviors. These results are used by the City to select target behaviors, measure change in targeted behaviors, and revise and direct education and outreach resources to best improve the targeted behaviors. An additional study is planned in 2017 or 2018 to continue the long-term evaluation of targeted behaviors.

Education and Outreach Activities

The City tracks and maintains records of public education and outreach activities. Specific activities are summarized in Appendix F of the SWMP. General Public Education and Outreach activities, along with target audiences and status, are presented in Table 1.

Table 1: S5.C.1 Public Education and Outreach Activities

Activity	Target Audience	Status	Schedule Notes
Educational activities for children and adults at Earth Day / Arbor Day and Public Works Open House Events	General Public / Students	On-going	
Presentations to local elementary school classes	Students	On-going	
Ongoing utility bill inserts to reach all households within the City. Various topics including the following information: <ul style="list-style-type: none"> • Landscaping and Yard Care including design, plant selection, mulch, fertilizers, pesticides, herbicides and compost/disposal • Car washing and proper disposal of Household Waste including recycling, storm drain awareness and proper disposal for specific pollutants such as paint, hydrocarbons, and antifreeze 	General Public / Businesses	On-going	
Education and outreach information and links on the City’s NPDES web page and City Facebook page	General Public / Businesses / Engineers / Contractors	On-going	
Annual City-sponsored recycling event including used motor oil and household hazardous waste recycling	General Public	On-going	
Collaboration with the Stormwater Outreach for Regional Municipalities (STORM) campaign		On-going	
Developing and promote natural yard care education programs through utility billing inserts, City NPDES web pages, and City Facebook page	General Public / Businesses	On-going	
Continued installation of “Puget Sound Starts Here” storm drain buttons	General Public	On-going	
Participation in the 2013 Preparedness Calendar that included a month dedicated to Stormwater education. The calendar was mailed to approximately 7,900 households within Duvall and the Snoqualmie Valley	General Public / Businesses	Completed in 2013	
Updating and summarizing public education and outreach activities in the annual SWMPR, Appendix F	General Public	On-Going	
Review and implementation of recommendations from the 2009 and 2012 Stormwater Community Outreach Report (Hebert Research) that measured the public’s knowledge and practices regarding stormwater		Completed in 2009 & 2012	Update in 2017 or 2018

Activity	Target Audience	Status	Schedule Notes
Developing an Illegal Dumping and Littering program including additional awareness, signage, and trash receptacles	General Public	Future	Under consideration
Providing additional used motor oil and hazardous waste recycling events	General Public	Future	Under consideration
Measurement of audiences understanding of, and improvement with respect to, stormwater and how they can improve stormwater as summarized in the 2012 Stormwater Community Outreach Report (Hebert Research)	General Public	Completed in 2012	Update in 2017 or 2018
Updating the education and outreach program and the annual report	General Public / students	On-going	
Developing additional elementary school education programs or events	Students	On-going	
Additional updates of the Stormwater Community Survey Program in conjunction with other NPDES municipalities to be conducted by Hebert Research.	General Public / Staff	Future	Update in 2017 or 2018
Developing a LID education and outreach program. LID measures commonly utilized in Duvall are presented in Appendix B, "Low Impact Development (LID)"	General Public / students	Future	2017 or 2018
Developing theme-based education events (i.e. Clean Water Awareness Month)	General Public / students	On-going	
Continued collaboration with other NPDES municipalities to develop program elements and evaluation techniques	Staff	On-going	
Continued collaboration with other programs and citizen groups to provide community activities, outreach and volunteer activities	General Public	On-going	
Developing a Business-oriented spill education program including on-site visits and spill kit distribution	Businesses	Future	2017 or 2018

S5.C.2: Public Involvement and Participation

General Requirements

In accordance with Section S5.C.2 of the Permit, this SWMP provides ongoing opportunities for public involvement through advisory councils, public hearings, participation in developing rate structures, stewardship programs, environmental activities and other similar activities. Section S5.C.2 requires the City to:

- Create opportunities for the public to participate in the decision making process involving the development, implementation and update of the City's entire SWMP.
- Make the SWMP, the annual Permit report, and the all other submittals available to the public. The City posts the latest annual report and the SWMPR submitted with the latest annual report on the City's NPDES web page.

Public Involvement and Participation Activities

The City tracks and maintains records of Public Involvement and Participation activities. General Public Involvement and Participation activities, along with target audiences and status, are presented in Table 2.

Table 2: S5.C.2 Public Involvement and Participation Activities

Activity	Target Audience	Status	Schedule Notes
Implementation of a public hotline comment and reporting phone number and email address posted at City Hall and the City's NPDES web page to provide for and document public involvement and participation	General Public	On-going	
Soliciting public involvement and participation using newsletter articles	General Public	On-going	
Completing public notices, City Council presentations and other public presentations to collect, document and implement public feedback	General Public	On-going	
Public notice and hearing requesting review and comment of the draft annual report and SWMPR and posting of the documents on the City website with copies available at City Hall	General Public	Yearly In March	
Posting of the latest annual report and the SWMPR submitted with the latest annual report on the City's NPDES web page following public review and submittal to the DOE	General Public	Yearly By March 31	
Summarizing public involvement and participation activities in the annual report	General Public	Yearly By March 31	
Making the SWMPR, the annual Permit report and the all other submittals available to the public on the City's NPDES web page	General Public	Yearly By March 31	
Continue support of the "Adopt-a-Road" program to promote this anti-litter and litter cleanup program	General Public	On-going	
Maintain a public comment section with dedicated email link within the City's NPDES web page to provide an on-line avenue for public involvement and participation	General Public	On-going	
On-going volunteer installation of "Puget Sound Starts Here" storm drain buttons	General Public	On-going	
Updating the Stormwater Community Survey Program with other NPDES municipalities conducted by Hebert Research	General Public	Completed in 2009 & 2012	Update in 2017 or 2018
Develop a Neighborhood or Home Owner Association Volunteer monitoring program	General Public	Future	Under consideration
Developing an "Adopt a Stormwater Facility" volunteer program	General Public	Future	Under consideration

S5.C.3: Illicit Discharge Detection and Elimination

General Requirements

In accordance with Section S5.C.3 of the Permit, this SWMP includes an ongoing illicit discharge detection and elimination (IDDE) program to detect and remove illicit discharge, illicit connections, illicit discharges, and improper disposal, including any spills into the municipal separate storm sewer system owned or operated by the City. In accordance with the Definitions and Acronyms section of the Permit, an illicit connection means any man-made conveyance that is connected to a municipal separate storm sewer without a permit (examples include sanitary sewer, floor drain, or other non-stormwater sources or conveyances) excluding roof drains and other similar type connections. In accordance with the Definitions and Acronyms section of the Permit, an illicit discharge means any discharge to the municipal storm sewer system that is not composed entirely of stormwater except discharges pursuant to another NPDES Permit or firefighting activities. The City's ongoing IDDE program is summarized in Appendix C of this Report. Section S5.C.3 requires the City to:

- a. Develop a storm sewer map. The City has developed a storm sewer map in a Geographic Information System (GIS) base. The storm sewer map is periodically updated and includes the following information:
 - i. Known MS4 outfalls and known MS4 discharge points.
 - ii. Receiving waters, other than ground water.
 - iii. The location of all known storm sewer outfalls, receiving waters and structural storm water BMP's/Facilities owned, operated, or maintained by the City.
 - iv. All storm sewer outfalls with a 24-inch nominal diameter or equivalent cross-sectional area are mapped to include tributary conveyance (type, material, and size), associated drainage areas and land use.
 - v. All authorized or allowed connections to the separate storm sewer system after February 16, 2007.
 - vi. Connections between the City of Duvall MS4 and any other municipalities or public entities (none known).
 - vii. Geographic areas served by the City that do not discharge stormwater to surface waters.
 - viii. The MS4 map will be made available to Ecology upon request.
 - ix. The MS4 map will be made available to federally-recognized Indian Tribes, municipalities, and other Permittees upon request.
- b. Implement an ordinance prohibiting non-stormwater, illegal discharges, and/or dumping into the storm sewer system to the maximum extent allowable under State and Federal law. The City adopted Stormwater Ordinance No. 1090 on August 13, 2009 and updated Stormwater regulations and restrictions in Ordinance No. 1214 on February 21, 2017. The ordinance will be updated to comply with newer permit requirements prior to the February 2, 2018 deadline.
- c. Develop and implement an on-going illicit discharge detection program. The City's on-going illicit discharge and detection program includes:
 - i. On-going investigations of Duvall's MS4, including field screening and methods for identifying potential sources. The City will complete screening of 40 percent of the MS4 by the December 31, 2017 compliance date and 12 percent of the MS4 each year after the compliance date. The City has completed annual dry weather outfall screening at three locations since 2011 and added additional screening to the annual catch basin cleaning program in 2015. The field screening is completed in general accordance with the document titled "Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments" (Center for Watershed Protection, October 2004). Dry weather outfall screening complies with the Outfall Reconnaissance Inventory approach outlined in Table 20 and Table 21 of the Guidance Manual. Visual inspection during catch basin cleaning was identified as a methodology of comparable and improved effectiveness because it provides City-wide information, is cost-effective and efficient, and augments the existing catch basin cleaning program. Catch basin inspection and investigation is completed in general accordance with Table 20 of the Guidance Manual and the following:
 - a. Step 1: Catch basin GIS/GPS information, including a unique identifier and other attributes, was collected for all City catch basins as part of the on-going improvements to the MS4 map.

- b. Step 2: Visual Inspection and/or cleaning is completed during dry weather. Staff inspect for physical IDDE indicators such as odor, color, turbidity, and floatables in general accordance with Figure 32 of the Guidance Manual and catch basin/outfall damage, deposits/stains, abnormal vegetation/algae growth, poor catch basin pool quality, or benthic growth in general accordance with Figure 37 of the Guidance Manual.
- c. Step 3: Additional test measurements (Temperature, pH, Chlorine Residual, Turbidity, and other as required) at locations with physical IDDE indicators.
- d. Step 4: Identification/removal of illicit discharge source and/or development of a monitoring strategy at locations with suspect illicit discharge.
 - ii. Publicly listed and publicized hotline including a City public telephone hotline and email hotline.
 - iii. An on-going training program for all municipal staff who, as part of their normal duties, might come into contact with or observe an illicit discharge or illicit connection to the MS4.
 - iv. Informing public employees, businesses, and the general public of hazards associated with illicit discharge and improper disposal of waste.
- d. Develop and implement an on-going program to address, eliminate, and report illicit discharges.
- e. Develop and implement an ongoing training program for IDDE response staff and document and maintain records of the training provided and staff trained.
- f. Tracking and record keeping for the IDDE activities.

Illicit Discharge Detection and Elimination Activities

General Illicit Discharge Detection and Elimination activities, along with target audiences and status, are presented in Table 3.

Table 3: S5.C.3 Illicit Discharge and Elimination Activities

Activity	Target Audience	Status	Schedule Notes
Updating the GIS storm sewer map based on existing in-house information and field mapping as required	Staff, other	On-going	
Update IDDE Ordinance	General Public	Future	Prior to February 2, 2018 deadline
Maintain an IDDE public hotline posted at City Hall and the City's NPDES web page	General Public	On-going	
Maintain a non-emergency email reporting link within the City's NPDES web page	General Public	On-going	
Implementation of an "Illicit Discharge Detection and Elimination Program" summarized in Appendix C of this Report	Staff	On-going	
Complete on-going investigations and field screening	Staff	On-going	Complete at least 40% prior to 2017 deadline
Additional IDDE public outreach	General Public	On-going	

S5.C.4: Controlling Runoff from New Development, Redevelopment, and Construction Sites

General Requirements

In accordance with Section S5.C.4 of the Permit, this SWMP includes a program to control runoff from new development, redevelopment and construction sites. The program applies to private and public development, including roads and includes the “Technical Thresholds” in Appendix 1 of the Phase II NPDES Permit. The City program to control runoff is summarized in Appendix D of this Report. Section S5.C.4 requires the City to:

- a. Implement an ordinance or other enforceable mechanism or program that addresses runoff from new development, redevelopment and construction sites. The City adopted Stormwater Ordinance No. 1090 on August 13, 2009 and updated and adopted Stormwater Ordinance 1214 on February 21, 2017 to address this requirement. Ordinance 1214 was adopted after the December 31, 2016 deadline as summarized in the G20 Non-Compliance Notification sent to the Department of Ecology on December 29, 2016.
- b. Implement a permitting process with plan review, inspections and enforcement capabilities in accordance with the Permit, including the minimum requirements in Appendix 1 of the Permit.
- c. Implement a program to verify adequate long-term operation and maintenance of post-construction storm water facilities and BMP’s.
- d. The program shall make available as applicable copies of “Notice of Intent for Construction Activity” and copies of “Notice of Intent for Industrial Activity” to representatives of proposed new development and redevelopment. The City makes available copies of the “Notice of Intent for Construction Activity” and the “Notice of Intent for Industrial Activity” upon request.
- e. Ensure that all staff responsible for implementation of the program to control runoff from new development, redevelopment and construction are trained to complete these activities.
- f. Low impact development code-related requirements include:
 - i. No later than December 31, 2016 Permittees shall review, revise and make effective their local development-related codes, rules, standards, or other enforceable documents to incorporate and require LID principles and LID BMPs. The City adopted Stormwater Ordinance 1214 on February 21, 2017 to address this requirement. Ordinance 1214 was adopted after the December 31, 2016 deadline as summarized in the G20 Non-Compliance Notification sent to the Department of Ecology on December 29, 2016.
 - ii. Each Permittee shall submit a summary of the results of the review and revision process in (i) above with the annual report due no later than March 31, 2017. The City submitted the summary as required (see Appendix A).
- g. Each Permittee that has all or part of its coverage area under this Permit in a watershed selected by a Phase I county for watershed-scale stormwater planning under condition S5.C.4.c of the Phase I Municipal Stormwater General Permit shall participate with the watershed-scale stormwater planning process led by the Phase I county. This requirement is not applicable to Duvall per note 25 (Page 31 of 74) of the Permit. However, the City of Duvall completed a Watershed Plan for Duvall Urban Growth Area and adjacent drainage area (Adopted on September 15, 2015). The City is also completing a watershed-based Storm and Surface Water Plan update in 2017.

Table 4: S5.C.4 Controlling Run-off Activities

Activity	Target Audience	Status	Schedule Notes
Standards and Code requirements that address runoff from new development, redevelopment and construction sites	Development and Construction	Completed	
An existing permitting program that includes review of stormwater runoff from new development, redevelopment and construction sites. Elements of the review program are based on the 2016 King County Surface Water Design Manual (KCSWDM, as updated) and NPDES requirements	Development and Construction	On-going	
An existing program to verify adequate long-term operation and maintenance of post-construction stormwater facilities	Development and Construction	On-going	
Maintaining a spreadsheet-based record keeping system in conjunction with the storm sewer map from Permit Section S5.C.3	Staff	On-going	
Availability of the "Notice of Intent for Construction Activity" and the "Notice of Intent for Industrial Activity" on the City's NPDES web page and as requested by the applicant during the permitting process	Development and Construction	On-going	
Summarizing activities to control runoff from new development, redevelopment and construction sites in the annual report	Staff	On-going	
Updated and provided training for field staff yearly	Staff	On-going	
Update Low Impact Development Code	Development and Construction	Completed, On-Going	
Developing a GIS and spreadsheet based record keeping system in conjunction with the storm sewer map from Permit Section S5.C.3	Staff	On-going	

S5.C.5: Municipal Operations and Maintenance

General Requirements

Each Permittee shall implement an operations and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. This SWMP includes a pollution prevention and operation and maintenance program for municipal operations program. This City program includes a training component with the ultimate goal of preventing or reducing runoff from municipal operations. The City program to control runoff is summarized in Appendix D of this Report.

Section S5.C.5 requires the City to:

- a. Implement maintenance standards that are as, or more, protective of facility function than those specified in Chapter 4 of Volume V of the 2012 Stormwater Management Manual for Western Washington. For facilities which do not have maintenance standards, the Permittee shall develop a maintenance standard no later than December 31, 2016. The City adopted Stormwater Ordinance 1214 on February 21, 2017 to address this requirement. Ordinance 1214 was adopted after the December 31, 2016 deadline as summarized in the G20 Non-Compliance Notification sent to the Department of Ecology on December 29, 2016.

- b. Complete annual inspection and maintenance (if required) of permanent stormwater treatment or flow control facilities other than catch basins. The annual inspection requirement may be reduced based on inspection records.
- c. Complete spot checks and maintenance (if required) of potentially damaged stormwater treatment or flow control facilities after major storm events (greater than 24-hour, 10-year recurrence interval rainfall).
- d. Inspect all catch basins and inlets and cleaning (if required) at least once before 2017 and every two years thereafter.
- e. Comply with above inspection requirements to achieve inspection of 95 percent of all sites.
- f. Implement policies and procedures to reduce stormwater impacts from all lands owned or maintained by the City.
- g. Implement an on-going training program for maintenance staff with job functions that may impact stormwater quality.
- h. Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) for heavy equipment maintenance or storage yards and material storage facilities owned or operated by the City.
- i. Maintain records of inspections and maintenance or repair activities conducted by the Permittee.

Table 5: S5.C.5 Municipal Operations and Maintenance Activities

Activity	Status	Schedule Notes
Compliance with the King County Surface Water Design Manual	On-going	
Update Maintenance Standards as required	Completed, On-Going	
Annual inspections of stormwater treatment and flow control facilities	On-going	
Spot check inspection of stormwater treatment or flow control facilities following major storm events	On-going, as needed	
Annual catch basin cleaning program	On-going	
Operations, maintenance and BMP training for the field crew	On-going	
Updating the SWPPP for heavy equipment maintenance or storage yards and material storage facilities owned or operated by the City	On-going	
Implementing an on-going training program for maintenance staff with job functions that may impact stormwater quality	On-going, yearly	
Baseline evaluations and yearly inspection and maintenance (unless reduced frequency is determined and documented by the City) of all permanent stormwater treatment or flow control facilities other than catch basins. Evaluations, inspections and maintenance is documented using spreadsheets	On-going, yearly	

Activity	Status	Schedule Notes
Inspection and documentation program for spot checks and maintenance (if required) of potentially damaged stormwater treatment or flow control facilities after major storm events. The spot check inspections and maintenance (if required) is documented using log books and/or spreadsheets	On-going	
Catch basin inspection, mapping and cleaning program. The catch basin inspection, mapping and cleaning program is documented using log books, spreadsheets and/or the GIS based record keeping system	On-going	Inspect all prior to 2017 deadline, then every 2 years thereafter
Implementing and documenting practices to reduce stormwater impacts associated with runoff from streets, parking lots and roads owned or maintained by the City along with road maintenance activities completed by the City	On-going	
Implementing and documenting policies and procedures to reduce pollutants in discharge from property owned or maintained by the City	On-going	
Recording inspections and maintenance or repair activities using the GIS based record keeping system in conjunction with the storm sewer map from Permit Section S5.C.3.	Developing & on-going	

S6: STORMWATER MANAGEMENT PROGRAM FOR SECONDARY PERMITTEES

Requirements from Section S6 of the Permit do not apply to the City because the City is not a secondary permittee to a primary permittee. There are no secondary permittees to the City.

S7: COMPLIANCE WITH TMDL REQUIREMENTS

Total Maximum Daily Load (TMDL) requirements from Section S7 of the Permit do not apply to the City because there are no TMDL's listed for the City within Appendix 2 of the Permit.

S8: MONITORING AND ASSESSMENT

General Requirements

In accordance with Section S8 of the Permit, each permittee is responsible for compliance with the following monitoring requirements:

- A. Permittees are required to provide a description of any stormwater monitoring or stormwater related studies conducted during the reporting period in the Annual Report. The annual report shall include a description of any completed monitoring or studies and an assessment of the appropriateness of the BMP's identified for each component of the SWMP. No City of Duvall independent stormwater studies were completed in 2016. The City of Duvall completed a Watershed Plan for Duvall Urban Growth Area and adjacent drainage area (Adopted on September 15, 2015). The City is also completing a watershed-based Storm and Surface Water Plan update in 2017.
- B. By December 1, 2013 Permittees shall notify Ecology in writing which status and trends monitoring option chosen to carry out during the permit term. Duvall selected to participate in the Regional Stormwater Monitoring Program (RSMP) to satisfy this requirement and notified Ecology prior to the deadline.

- C. By December 1, 2013 Permittees shall notify Ecology in writing which Stormwater Management Effectiveness option chosen to carry out during permit term. Duvall selected to participate in the RSMP to satisfy this requirement and notified Ecology prior to the deadline.
- D. Source Identification and Diagnostic Monitoring: Duvall selected to participate in the RSMP to satisfy this requirement.

Table 6: S8 Monitoring and Assessment Activities

Activity	Status	Schedule Notes
Summarizing monitoring activities in the annual report. Currently, no stormwater sampling or monitoring activities are being completed by the City.	On-going	Required annually
Completing SWMP status and trends monitoring, effectiveness monitoring, and source identification and diagnostic monitoring as part of the Regional Stormwater Monitoring Program		Starting 2014
Stormwater Related Studies	Completed	Watershed Plan adopted in 2015.
Watershed-based Storm and Surface Water Plan Update	On-Going	2016-2017
Summarizing monitoring activities in the annual report	On-going	

S9: REPORTING REQUIREMENTS

The City is complying with the following reporting requirements in accordance with Section S9 of the Permit:

- A. The City shall submit an annual report no later than March 31st of each year beginning March 31, 2008.
- B. Records related to the Permit and SWMP shall be retained for at least five years.
- C. Records related to the Permit and SWMP shall be made available to the public at the Public Works Office during business hours along with electronic and printed copy of the SWMPR
- D. Each annual report shall include a copy of the updated SWMPR, Submittal of the Annual Report Form, associated attachments and required documents, and notification of any annexations, incorporations, or jurisdictional boundary changes.

**APPENDIX A: ANNUAL REPORT FORM QUESTIONS
(DOE APPENDIX 3)**

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CATEGORY	#	QUESTION	ANSWER	ATTACHMENT
General Obligations	1	Attach updated annual Stormwater Management Program Plan (SWMP Plan). (S5.A.2)	Yes. The updated Annual SWMP Plan is attached.	
General Obligations	2	Attach a copy of any annexations, incorporations or boundary changes resulting in an increase or decrease in the Permittee's geographic area of permit coverage during the reporting period per S9.D.5.	There were no annexations or boundary changes in 2016.	see attachment 02_Annexations
General Obligations	3	Implemented an ongoing program to gather, track, and maintain information per S5.A.3, including costs or estimated costs of implementing the SWMP.	Yes. Financial tracking was implemented in the City's Springbrook accounting software program. Program element tracking such as training, public outreach, and IDDE / Spill response is tracked using spreadsheets.	
General Obligations	4	Coordinated among departments within the jurisdiction to eliminate barriers to permit compliance. (S5.A.5.b)	Yes. The Program includes internal coordination mechanisms among City Departments to eliminate barriers to compliance as required by S5.A.5.B. The coordination mechanisms apply to City field work. Project review and management staff include representatives from the Public Works, Engineering, Building, and Planning Departments. Coordination mechanisms include in-house training, coordinated inspection and response, CESCL certification for field staff, and coordinated review and comment of the SWMP and WSMR.	
Public Outreach	5	Attach description of public education and outreach efforts conducted per S5.C.1.a.i and ii.	The City's program includes education and outreach that is designed to achieve measurable improvements in the specified audience's understanding of stormwater issues and how they can improve stormwater quality. The resulting measurements are used to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behaviors. The program prioritizes and targets education and outreach activities to specified audiences to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. Education and outreach efforts are prioritized to target the general public, businesses, and homeowners. General Public Education and Outreach activities are presented in the attached table.	see attachment 05_Public Education Tracking
Public Outreach	6	Created stewardship opportunities (or partnered with others) to encourage resident participation in activities such as those described in S5.C.1.b.	Yes. SWMP stewardship opportunities have been created to encourage participation in surface water protection and active incorporation of SWMP principles and goals. General residential stewardship activities such as volunteer plantings are emphasized during public events such as Public Works Day, Earth Day, and other public educational events. A partnership between the City and the Riverview School District has developed to complete stormwater educational activities for elementary school children. Stewardship is also encouraged through interaction and volunteer planting / maintenance parties and storm drain marking with the Boy Scouts of America, Riverview School District students, and citizens that are required to complete volunteer service hours.	
Public Outreach	7	Used results of measuring the understanding and adoption of targeted behaviors among at least one audience in at least one subject area to direct education and outreach resources and evaluate changes in adoption of targeted behaviors. (Required no later than February 2, 2016, S5.C.1.b)	In August of 2012, the City of Duvall and six other Puget Sound cities participated in a regional study to assess understanding and adoption of targeted stormwater behaviors. The study was completed by Hebert Research, Inc. to measure the Duvall-specific and regional public stormwater knowledge and practices. The 2012 study was based on a similar study in Duvall completed by Hebert Research, Inc., in 2009. Comparing the results of the two studies provides a statistical basis for measuring the understanding and adoption of the targeted behaviors. These results are currently used by Duvall to select target behaviors, measure change in targeted behaviors, and revise and direct education and outreach resources to best improve the targeted behaviors. An additional study is planned in 2017 or 2018 to continue the long-term evaluation of targeted behaviors. Hebert Survey Report available online:	http://www.duvalwa.gov/DocumentCenter/Home/View/339
Public Outreach	7b	Attach description of how this requirement was met.	The results of the Hebert Research, Inc., studies are currently used by Duvall to select target behaviors, measure change in targeted behaviors, and revise and direct education and outreach resources to best improve the targeted behaviors. Hebert Survey Report available online	http://www.duvalwa.gov/DocumentCenter/Home/View/339

CATEGORY	#	QUESTION	ANSWER	ATTACHMENT
Public Outreach	8	Describe the opportunities created for the public to participate in the decision making processes involving the development, implementation and updates of the Permittee's SWMP. (S5.C.2.a)	The City provide opportunities for public involvement through public hearings, stewardship programs, and environmental activities.	
Public Outreach	9	Posted the updated SWMP Plan and latest annual report on your website no later than May 31. (S5.C.2.b)	Yes the annual SWMP is posted to the city's website no later than May 31 and is also available for review at City Hall and the Permit Center.	
Public Outreach	9b	List the website address.	http://www.duvalwa.gov/159/Stormwater-System-Information	
IDDE	10	Maintained a map of the MS4 including the requirements listed in S5.C.3.a.i-vi.	Yes a storm drainage map of the City is being maintained as part of the GIS based mapping program. Updating the map continues as needed.	
IDDE	11	Implemented a compliance strategy, including informal compliance actions as well as enforcement provisions of the regulatory mechanism described in S5.C.3.b. (S5.C.3.b.v)	Yes. Ordinance 1090 was adopted August 13, 2009. The ordinance will be revised and adopted to meet the February 2, 2018 deadline.	
IDDE	12	Updated, if necessary, the regulatory mechanism to effectively prohibit illicit discharges into the MS4 per S5.C.3.b.vi. (Required no later than February 2, 2018)	The ordinance will be revised and adopted to meet updated permit requirements no later than the February 2, 2018.	
IDDE	12b	Cite the Prohibited Discharges code reference	DMC 9.06.035 - Illicit discharge detection and elimination.	
IDDE	13	Implemented procedures for conducting illicit discharge investigations in accordance with S5.C.3.c.i.	Yes. Illicit discharge investigating and field screening will be completed in accordance with the document titled "Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments" (Center for Watershed Protection, October 2004) or another methodology of comparable or improved effectiveness.	
IDDE	13b	Cite methodology	Illicit discharge investigating and field screening will be completed in accordance with the document titled "Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments" (Center for Watershed Protection, October 2004) or another methodology of comparable or improved effectiveness. The City will complete screening of 40 percent of the MS4 by the December 31, 2017 compliance date and 12 percent of the MS4 each year after the compliance date.	
IDDE	14	Percentage of MS4 coverage area screened in reporting year per S5.C.3.c.i. (Required to screen 40% of MS4 no later than December 31, 2017 (except no later than June 30, 2018 for the City of Aberdeen) and 12% on average each year thereafter. (S5.C.3)	Approximately 57% based on inspections completed as part of the annual catch basin inspection and cleaning program. The City is tracking the coverage area to insure that at a minimum 40% is screened by 12/31/17.	Percent needs to be updated with 2016 number
IDDE	15	List the hotline telephone number for public reporting of spills and other illicit discharges. (S5.C.3.c.ii)	425.939.8042, 425.419.3748 (after hours, Emergency Only). Non-emergency information may also be sent to stormwater@duvallwa.gov.	
IDDE	15b	Number of hotline calls received.	1	
IDDE	16	Implemented an ongoing illicit discharge training program for all municipal field staff per S5.C.3.c.iii.	Yes. All public works maintenance staff are trained yearly on illicit discharges and response methods.	
IDDE	17	Informed public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste. (S5.C.3.c.iv)	Yes	
IDDE	17b	Describe the information sharing actions. (S5.C.3.c.iv)	The public is educated through articles in the city's monthly newsletter and postings on the city NPDES web page. In addition, all public works staff are trained yearly on illicit discharges and response methods.	
IDDE	18	Implemented an ongoing program to characterize, trace, and eliminate illicit discharges into the MS4 per S5.C.3.d.	Yes. Included in "Illicit Discharge Detection and Elimination Program" summarized in Appendix D of SWMPR.	
IDDE	19	Number of illicit discharges, including illicit connections, eliminated during the reporting year. (S5.C.3.d.iv)	6 spills, no illicit connections.	
IDDE	20	Attach a summary of actions taken to characterize, trace and eliminate each illicit discharge found by or reported to the permittee. For each illicit discharge, include a description of actions according to required timeline per S5.C.3.d.iv		See 20_IDDE_Summary of Actions, Appendix C of this Report
IDDE	21	Municipal illicit discharge detection staff are trained to conduct illicit discharge detection and elimination activities as described in S5.C.3.e.	Yes. All public works maintenance staff are trained yearly on illicit discharges and response methods.	
Runoff Controls	22	Implemented an ordinance or other enforceable mechanism to address runoff from new development, redevelopment and construction sites per the requirements of S5.C.4.a.	Yes. Ordinance 1090 was adopted August 13, 2009. The ordinance will be revised and adopted to meet updated permit requirements no later than the December 31, 2016 deadline.	
Runoff Controls	23	Revised ordinance or other enforceable mechanism to effectively address runoff from new development, redevelopment and construction sites per the requirements of S5.C.4.a.i-iii. (Required no later than December 31, 2016, except no later than June 30, 2017 for Permittees in Lewis and Cowlitz counties, and no later than June 30, 2018 for the City of Aberdeen)	Ordinance No. 1214 (February 21, 2017) titled "An ordinance of the City of Duvall, Washington, Repealing and Reinstating Chapter 9.06 of the Duvall Municipal Code, "Storm Drainage Utility;" Providing for Severability; and Establishing an Effective Date"	

CATEGORY	#	QUESTION	ANSWER	ATTACHMENT
Runoff Controls	23b	Cite code reference for revised ordinance or other enforceable mechanism to address runoff from new development, redevelopment and construction sites.	Duvall Municipal Code 9.06	
Runoff Controls	24	Number of exceptions granted to the minimum requirements in Appendix 1. (S5.C.4.a.i., and Section 6 of Appendix 1)	0. No exceptions were granted.	
Runoff Controls	25	Number of variances granted to the minimum requirements in Appendix 1. (S5.C.4.a.i., and Section 6 of Appendix 1)	0. No variances were granted.	
Runoff Controls	26	Reviewed Stormwater Site Plans for all proposed development activities that meet the thresholds adopted pursuant to S5.C.4.a.i. (S5.C.4.b.i)	Yes. Site plan review is a part of the existing process.	
Runoff Controls	26b	Number of site plans reviewed during the reporting period.	Approximately 42 (North Hill, Bowe Court, Hower Hill, Allen Street Village, Cherry Valley Village, Willow Ridge Lot 21, Main Street Project, Big Rock Ballfield Project, 34 building permits)	
Runoff Controls	27	Inspected, prior to clearing and construction, permitted development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 Determining Construction Site Sediment Damage Potential, or alternatively, inspected all construction sites meeting the minimum thresholds adopted pursuant to S5.C.4.a.i. (S5.C.4.b.ii)	Yes. Inspections required during construction at all development sites as part of existing permitting and construction process.	
Runoff Controls	27b	Number of construction sites inspected per S5.C.4.b.ii.	Approximately 41 (North Hill, Bowe Court, Hower Hill, Allen Street Village, Cherry Valley Village, Willow Ridge Lot 21, Main Street Project, 34 building permits)	
Runoff Controls	28	Inspected permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. (S5.C.4.b.iii)	Yes. Inspections required during construction at all development sites as part of existing permitting and construction process.	
Runoff Controls	28b	Number of construction sites inspected per S5.C.4.b.iii.	Approximately 41 (North Hill, Bowe Court, Hower Hill, Allen Street Village, Cherry Valley Village, Willow Ridge Lot 21, Main Street Project, 34 building permits)	
Runoff Controls	29	Number of enforcement actions taken during the reporting period (based on construction phase inspections at new development and redevelopment projects). (S5.C.4.b.ii, iii and v)	0	
Runoff Controls	30	Inspected all permitted development sites that meet the thresholds in S5.C.4.a.i upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities. (S5.C.4.b.iv)	Yes. Final inspection required at all development sites prior to final approval as part of existing permitting and construction process. approximately 35 (Hower Hill, 34 building permits)	
Runoff Controls	31	Achieved at least 80% of scheduled construction-related inspections. (S5.C.4.b.ii-iv)	Yes	
Runoff Controls	32	Verified a maintenance plan is completed and responsibility for maintenance is assigned for projects. (S5.C.4.b.iv)	Yes. Maintenance plan required at all development sites prior to final approval as part of existing permitting and construction process.	
Runoff Controls	33	Implemented provisions to verify adequate long-term operation and maintenance (O&M) of stormwater treatment and flow control BMPs/facilities that are permitted and constructed pursuant to S5.C.4. a and b. (S5.C.4.c)	Yes. Included in "Program to Control Runoff from New Development, Re-Development and Construction Sites" summarized in Appendix E of SWMPR.	
Runoff Controls	34	Updated provisions to verify long-term operation and maintenance of stormwater treatment and flow control BMPs/facilities that are permitted pursuant to S5.C.4.a and b. (Required no later than December 31, 2016, except no later than June 30, 2017 for Permittees in Lewis and Cowlitz counties, and no later than June 30 2018 for the City of Aberdeen, S5.C.4.c.i and ii	Yes, as presented in Duvall Municipal Code 9.06 as adopted in Ordinance No. 1214 (February 21, 2017), titled "An ordinance of the City of Duvall, Washington, Repealing and Reinstating Chapter 9.06 of the Duvall Municipal Code, "Storm Drainage Utility," Providing for Severability; and Establishing an Effective Date"	
Runoff Controls	35	Annually inspected stormwater treatment and flow control BMPs/facilities per S5.C.4.c.iii.	Yes	
Runoff Controls	35b	If using reduced inspection frequency for the first time during this permit cycle, attach documentation per S5.C.4.c.iii	No reduced inspection frequency at this time.	
Runoff Controls	36	Inspected new residential stormwater treatment and flow control BMPs/facilities and catch basins every 6 months per S5.C.4.c.iv to identify maintenance needs and enforce compliance with maintenance standards.	Yes. Final inspection required at all development sites prior to final approval and as part of performance and maintenance bond inspections as part of existing permitting and construction process. Approximately 40 (North Hill, Bowe Court, Hower Hill, Allen Street Village, Cherry Valley Village, Willow Ridge Lot 21, 34 building permits)	
Runoff Controls	37	Achieved at least 80% of scheduled inspections to verify adequate long-term O&M. (S5.C.4.c.v)	Yes	
Runoff Controls	38	Verified that maintenance was performed per the schedule in S5.C.4.c.vi when an inspection identified an exceedance of the maintenance standard.	Yes. Annual maintenance completed at all facilities as needed to meet maintenance standards.	
Runoff Controls	38b	Attach documentation of any maintenance delays. (S5.C.4.c.vi)	Not applicable. No delays.	See attachment 38b_Maintenance Delays
Runoff Controls	39	Provided copies of the Notice of Intent for Construction Activity and Notice of Intent for Industrial Activity to representatives of proposed new development and redevelopment. (S5.C.4.d)	Yes. Link to NOI provided on city's NPDES webpage and provided, if requested, during the permitting process.	

CATEGORY	#	QUESTION	ANSWER	ATTACHMENT
Runoff Controls	40	All staff responsible for implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement are trained to conduct these activities. (S5.C.4.e)	Yes. IDDE and TESC Training (8), CESCL Erosion & Sediment Control & Inspection (2)	
Runoff Controls	41	Reviewed, revised and made effective the low impact development-related enforceable documents per S5.C.4.f.i. (Required by December 31, 2016, except by June 30, 2017 for Permittees in Lewis and Cowlitz counties, and by June 30, 2018 for the City of Aberdeen)	Yes, as presented in Duvall Municipal Code 9.06 as adopted in Ordinance No. 1214 (February 21, 2017), titled "An ordinance of the City of Duvall, Washington, Repealing and Reinstating Chapter 9.06 of the Duvall Municipal Code, "Storm Drainage Utility;" Providing for Severability; and Establishing an Effective Date"	
Runoff Controls	41b	Attach a summary of the LID review and revision process that includes the requirements listed in S5.C.4.f.ii. (Required with annual report due no later than March 31, 2017, except no later than March 31, 2018 for Permittees in Lewis and Cowlitz counties, and with the Fifth Year annual report for the City of Aberdeen)	Yes, see attached summary letter.	Pending- LAG
Runoff Controls	42	Participated and cooperated with the watershed-scale stormwater planning process led by a Phase I county. (S5.C.4.g)	Not applicable to Duvall per note 25 (Page 31 of 74) of the Permit. However, the City of Duvall completed a Watershed Plan for Duvall Urban Growth Area and adjacent drainage area (Adopted on September 15, 2015). The City is also completing a watershed-based Storm and Surface Water Plan update in 2017.	
O & M	43	Updated and implemented maintenance standards as protective, or more protective, of facility function as those specified in Chapter 4 of Volume V of the Stormwater Management Manual for Western Washington (as amended 2014). (Required no later than December 31, 2016, except no later than June 30, 2017 for Permittees in Lewis and Cowlitz counties, and no later than June 30, 2018 for the City of Aberdeen, S5.C.5.a).	Yes. Adopted 2016 KCSWDM, associated maintenance standards, and Technical Appendix 1 of the NPDES Phase II Permit for Western Washington as presented in Duvall Municipal Code 9.06 as adopted in Ordinance No. 1214 (February 21, 2017), titled "An ordinance of the City of Duvall, Washington, Repealing and Reinstating Chapter 9.06 of the Duvall Municipal Code, "Storm Drainage Utility;" Providing for Severability; and Establishing an Effective Date"	
O & M	44	Applied a maintenance standard that is not specified in the Stormwater Management Manual for Western Washington.	No. No non-specified maintenance standards were used.	
O & M	44b	Please note what kinds of facilities are covered by this alternative maintenance standard. (S5.C.5.a)	No. No non-specified maintenance standards were used.	
O & M	45	Performed timely maintenance per S5.C.5.a.ii.	Yes. Inspections completed at all facilities at this time.	
O & M	46	Annually inspected all municipally owned or operated permanent stormwater treatment and flow control BMPs/facilities. (S5.C.5.b)	Yes. Inspections completed at all facilities at this time.	
O & M	46b	Number of known municipally owned or operated stormwater treatment and flow control BMPs/facilities. (S5.C.5.b)	125	
O & M	46c	Number of facilities inspected during the reporting period. (S5.C.5.b)	121	
O & M	46d	Number of facilities for which maintenance was performed during the reporting period. (S5.C.5.b)	38	
O & M	47	If using reduced inspection frequency for the first time during this permit cycle, attach documentation per S5.C.5.b.	No reduced inspection frequency at this time.	
O & M	48	Conducted spot checks and inspections (if necessary) of potentially damaged stormwater facilities after major storms as per S5.C.5.c.	Yes. Spot checks and inspections were conducted as needed and as outlined in the "Operations and Maintenance Program to Prevent or Reduce Runoff from Municipal Operations" summarized in Appendix E of SWMPR.	
O & M	49	Inspected all municipally owned or operated catch basins and inlets as per S5.C.5.d, or used an alternative approach. (Required once no later than August 1, 2017 and every two years thereafter, except once no later than June 30, 2018 and every two years thereafter for the City of Aberdeen)	Yes. Catch basins are inspected on schedule and according to the "Operations and Maintenance Program to Prevent or Reduce Runoff from Municipal Operations" summarized in Appendix E of SWMPR.	
O & M	49b	Number of known catch basins.	1890	
O & M	49c	Number of catch basins inspected during the reporting period.		
O & M	49d	Number of catch basins cleaned during the reporting period.		
O & M	50	Attach documentation of alternative catch basin cleaning approach, if used. (S5.C.5.d.i or ii)	Not Applicable. No alternative catch basin cleaning approach was used.	See attachment 50_Alternative CB Cleaning
O & M	51	Implemented practices, policies and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance activities under the functional control of the Permittee. (S5.C.5.f)	Yes. Stormwater runoff impacts are managed as outlined in "Operations and Maintenance Program to Prevent or Reduce Runoff from Municipal Operations" summarized in Appendix E of SWMPR.	

CATEGORY	#	QUESTION	ANSWER	ATTACHMENT
O & M	52	Implemented an ongoing training program for Permittee employees whose primary construction, operations or maintenance job functions may impact stormwater quality. (S5.C.5.g.)	Yes. Training program implemented for all employees involved with construction, operations and maintenance functions. 8 employees attended training for IDDE/TESC and 2 employees attended CESCL Erosion and Sediment Control and Inspection training and certification	
O & M	53	Implemented a Stormwater Pollution Prevention Plan for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit that are not required to have coverage under an NPDES permit that covers stormwater discharges associated with the activity. (S5.C.5.h)	Yes. Implemented as summarized in the "City of Duvall Stormwater Pollution Prevention Plan, Heavy Equipment Maintenance, Storage Yards, and Material Storage Facilities".	http://www.duvalwa.gov/DocumentCenter/Home/View/343
TMDL	54	Complied with the Total Maximum Daily Load (TMDL)-specific requirements identified in Appendix 2. (S7.A)	Not applicable. There are no TMDLs listed in Appendix 2 of the Permit.	
TMDL	55	For TMDLs listed in Appendix 2: Attach a summary of relevant SWMP and Appendix 2 activities to address the applicable TMDL parameter(s). (S7.A)	Not applicable. There are no TMDLs listed in Appendix 2 of the Permit.	See attachment 55_Summary TMDL
Monitoring	56	Attach a description of any stormwater monitoring or stormwater-related studies as described in S8.A.	No City of Duvall independent stormwater studies were completed in 2016. However, the City of Duvall completed a Watershed Plan for Duvall Urban Growth Area and adjacent drainage area (Adopted on September 15, 2015). The City is also completing a watershed-based Storm and Surface Water Plan update in 2017.	See attachment 56_Stormwater Monitoring
Monitoring	57	Participated in cost-sharing for the regional stormwater monitoring program (RSMP) for status and trends monitoring. (S8.B.1)	Yes	
Monitoring	57b	If choosing to conduct individual status and trends monitoring, attach an annual stormwater monitoring report in accordance with S8.B.2. (Required to submit reports beginning March 31, 2016)	NA. No City of Duvall individual status and trends monitoring was completed in 2016.	See attachment 57b_Individual Status and Trends Monitoring
Monitoring	58	Participated in cost-sharing for the regional stormwater monitoring program (RSMP) for effectiveness studies. (S8.C.1) (Required to begin no later than August 15, 2014)	Yes	
Monitoring	58b	If choosing to conduct discharge monitoring, attach an annual stormwater monitoring report in accordance with S8.C.2 and Appendix 9. (Required to submit reports beginning March 31, 2016)	NA. The City of Duvall did not choose to conduct discharge monitoring in 2016.	See attachment 58b_Discharge Monitoring
Monitoring	59	Contributed to the RSMP for source identification and diagnostic monitoring information repository in accordance with S8.D.1. (Required to begin no later than August 15, 2014)	Yes	
Monitoring	60	Notified Ecology in accordance with G3 of any discharge into or from the Permittees MS4 which could constitute a threat to human health, welfare or the environment. (G3)	No information to report.	
General Obligations 2	61	Number of G3 notifications provided to Ecology.	No information to report.	
General Obligations 2	62	Took appropriate action to correct or minimize the threat to human health, welfare, and/or the environment per G3.A.	No action required.	
General Obligations 2	63	Notified Ecology within 30 days of becoming aware that a discharge from the Permittee's MS4 caused or contributed to a known or likely violation of water quality standards in the receiving water. (S4.F.1)	No information to report.	
General Obligations 2	64	If requested, submitted an Adaptive Management Response report in accordance with S4.F.3.a.	No report required.	
General Obligations 2	65	Attach a summary of the status of implementation of any actions taken pursuant to S4.F.3 and the status of any monitoring, assessment, or evaluation efforts conducted during the reporting period. (S4.F.3.d)	No information to report.	See attachment 65_Summary of Monitoring
General Obligations 2	66	Notified Ecology of the failure to comply with the permit terms and conditions within 30 days of becoming aware of the non-compliance. (G20)	See attachment _December 29, 2016 G20 Non-Compliance Notification. City became compliant as adopted in Ordinance No. 1214 (February 21, 2017), titled "An ordinance of the City of Duvall, Washington, Repealing and Reinstating Chapter 9.06 of the Duvall Municipal Code, "Storm Drainage Utility;" Providing for Severability; and Establishing an Effective Date"	See attachment _December 29, 2016 G20 Non-Compliance Notification
General Obligations 2	67	Number of non-compliance notifications (G20) provided in reporting year.	One	
General Obligations 2	67b	List the permit conditions described in non-compliance notification(s).	NPDES Permit Sections C.4.a-f and C.5.a. City became compliant as adopted in Ordinance No. 1214 (February 21, 2017), titled "An ordinance of the City of Duvall, Washington, Repealing and Reinstating Chapter 9.06 of the Duvall Municipal Code, "Storm Drainage Utility;" Providing for Severability; and Establishing an Effective Date"	

2. Attach a copy of any annexations, incorporations or boundary changes resulting in an increase or decrease in the Permittee's geographic area of permit coverage during the reporting period per S9.D.5.

There were no annexations or boundary changes in 2016.

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DATE	DESCRIPTION	COMMENTS
2/1/2016	Local Household Battery Recycling article in City Newsletter	
2/25/2016	Public Notice regarding SWMP Annual Report Public Hearing	
2/25/2016	Draft SWMP Annual Report posted to website, one copy at City Hall and one copy at Public Works	
3/1/2016	Public Hearing for Annual Stormwater Report	no comments received
3/3/2016	Dog Bone Dispensers to Public Works - 10	
3/22/2016	Cherry Valley Elementary 1st Grade Storm education	Reach approx 75 students, 4 teachers
4/23/2016	Earth Day and Arbor Day Festival	165 registered in drawing, approx 250 attendees.
4/26/2016	PSSH Coffee Sleeves delivered to CCs Espresso	
5/1/2016	PSSH Game Night Notice in City Newsletter, Kiosk, website and FB	
5/25/2016	4th grade Storm and Science Education	approx 90 students, 4 teachers
6/1/2016	4th Grade Storm education field trip	approx 25 students, 2 teachers, 4 volunteers
6/30/2016	Dog Bone Dispensers to City Hall - 30	
7/1/2016	Dog Bone Dispensers to Public Works - 15	
7/23/2016	Special Recycle Collection Event	
8/6/2016	Public Works at National Night Out Against Crime, stormwater information / education provided	
8/6/2016	48 Chinook Book cards distributed	
9/9/2016	Chinook Book / Stormwater Survey posted to FB	
9/13/2016	12 Chinook Book Cards distributed for completion of Survey	
9/15/2016	~100 Chinook Book cards distributed to RVSD Teachers	
9/18/2016	Chinook Book / Stormwater Survey posted to FB	
9/26/2016	Salmon returning info posted on FB	
10/1/2016	Hazardous Waste Event Notice in City Newsletter	
10/7/2016	stormwater information video posted to FB	
12/22/2016	Fee Auto Leaks workshops info posted on FB	
1/1/16-5/16/16	Healthy Water Healthy Soil, WS Dynamics Enviroscape Classes at Cherry Valley Elementary	192 2nd graders

Illicit Discharge Summary

Date	Discharge Incident Address / Location	Discharge Incident Description and Response to Trace and Eliminate Discharge	Characterize Discharge				Compliance with Timeline per SS.C.3.d.iv				Hotline? 425-649-7000
			IDDE/IC	Type of Spill	Emergency / Hazmat Spill	Non-Emergency Discharge	Notification to DOE within 24 hours	Investigated within 7 Days	Investigated IC within 21 Days	Eliminated IC within 6 Months	
1/25/2016	14525 Main Street NE	Approximately 10 gallons of unleaded gasoline was spilled during fuel tank filling at the Public Works Facility at approximately 10:30 am. Fueling was being completed by private fueling company and spill was almost entirely contained within the spill containment pad. Fuel was immediately cleaned up by the contractor using absorbant pads and then area sprayed with Microblaze. No fuel reached the storm system. Absorbant pads were removed for disposal by the private contractor.	IDDE	Fuel Spill	NA	X	NA	NA	NA	NA	N
3/17/2016	16011 Main Street NE	Approximately 5 to 10 gallons of milky white water accumulation was observed by Public Works Staff within the Park-and-Ride parking lot immediately south of the property at 16011 Main Street NE. BEB responded and observed that the water appeared to have originated from a 1.5-inch to 2-inch diameter PVC pipe at the property line that appeared to originate at a catch basin/pressure wash station on the subject property. Contacted property owner and discussed options to remove any off-site discharge. Property owner is working to install a water-recycling system (closed system, no discharge) for pressure washer. City to follow up.	IDDE	Discharge of turbid water	NA	X	NA	NA	NA	NA	N
4/1/2016	North Hill Development	Complaint of construction sediment/impacts from property owner north of Cherry Valley Road (see emails at: \\file01\publicworksrepository\$\DATA\Public Works\Residential\PPA13-001 North Hill\Engineering\DOE Complaint). BEB visited site and observed that no construction has occurred since site was stabilized in 2014. Sent photo of stabilized site to DOE. No action from City of Duvall required at this time.	IDDE	Construction Sediment/impact	X	NA	ERTS 663998				Y
4/15/2016	14328 278th Ave NE	14:30, Jim Bobin (425-420-1703 desk) North Sound Route Manager from WM called to report spill. Spill measure approx 4' x 6' and was cleaned up immediately by WM. BEB visited the site and observed slight remaining staining of pavement. PW crew responded with MicroBlaze to provide additional cleanup.	IDDE	Waste management truck: hydraulic hoze failure	NA	X	NA	NA	NA	NA	N

Date	Discharge Incident Address / Location	Discharge Incident Description and Response to Trace and Eliminate Discharge	Characterize Discharge				Compliance with Timeline per S5.C.3.d.iv				Hotline? 425-649-7000
			IDDE/IC	Type of Spill	Emergency / Hazmat Spill	Non-Emergency Discharge	Notification to DOE within 24 hours	Investigated within 7 Days	Investigated IC within 21 Days	Eliminated IC within 6 Months	
5/20/2016	SR-203 at Virginia	A spill on SR-203 was reported today just after 2pm. The spill appears to be diesel fuel, and is a 1' to 2' wide continuous spill. The spill appears to have originated near the River Road/Woodinville-Duvall Road intersection within Unincorporated King County, extended east on Woodinville-Duvall Road to SR-203 within City Limits, and then extended north on SR-203 outside of City limits. Staff responded immediately following our spill prevention protocol: Staff responded immediately following our spill prevention protocol: City Hall notified PW superintendent, PW supervisor, and Police Department; City Hall notified WSDOT, WSDOT notified State Patrol. It is our understanding that WSDOT notified the Department of Ecology. Staff followed up with King County Roads; PW crew mobilized immediately and commenced to place absorbant and Micro-Blaze (Microbial spill control) with traffic control provided by Police Department. Micro-Blaze remediates petroleum products, absorbant absorbs petroleum products and provided traction control; PW superintendent and City Engineer followed up with WSDOT maintenance. WSDOT plans to respond; PW Crew will continue to clean/treat spill within City Limits to address safety/environmental impacts.	IDDE	Fuel Spill	WSDOT Reported	X	NA	NA	NA	NA	NA
12/2/2016	SR-203 at NE 145th St	PW staff present during trench excavation for installation of new 18" storm pipe, contractor hit and broke the 8" sewer main that runs down NE 145th St. to the WWTP. Excavation was stopped and flow was diverted from the trench to the westside of SR-203 SSMH using one 2" pump and one 4" pump. Excavation resumed to investigate sewer main and remove debris from the pipe. Once the concrete sewer pipe was exposed and debris were removed flow resumed to the down stream MH. City staff provided the 10" steel repair sleeve, and the contractor cut the bell joint section out and installed the 10" steel sleeve. The repair holds with not leaks. ~1.5 hour response time. Discharge was not considered an immediate threat, but will be reported to DOE once the city engineer is notified.	IDDE	Sewer Main	NA	X	NA	NA	NA	NA	N

38b.

Attach documentation of any maintenance delays. (S5.C.4.c.vi)

Not Applicable. No delays.

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S5.C.5.b

If using reduced inspection frequency for the first time during this permit cycle, attach documentation per S5.C.5.b.

[Not Applicable. No reduced inspection frequency at this time.](#)

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S5.C.5.d.i-ii

Attach documentation of alternative catch basin cleaning approach, if used.
(S5.C.5.d.i or ii)

Not Applicable. No alternative catch basin cleaning approach was used.

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55. S7.A

For TMDLs listed in Appendix 2: Attach a summary of relevant SWMP and Appendix 2 activities to address the applicable TMDL parameter(s). (S7.A)

Not applicable. There are no TMDLs listed in Appendix 2 of the Permit.

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56.

Attach a description of any stormwater monitoring or stormwater-related studies as described in S8.A.

No City of Duvall independent stormwater studies were completed in 2016. The City of Duvall is undertaking a Watershed Plan for Duvall Urban Growth Area and adjacent drainage area with an **expected winter 2015/2016 adoption date**. The Watershed Plan includes an LID analysis.

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57b.

If choosing to conduct individual status and trends monitoring, attach an annual stormwater monitoring report in accordance with S8.B.2. (Required to submit reports beginning March 31, 2016)

No City of Duvall individual status and trends monitoring was completed in 2016.

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58b.

If choosing to conduct discharge monitoring, attach an annual stormwater monitoring report in accordance with S8.C.2 and Appendix 9. (Required to submit reports beginning March 31, 2016)

No City of Duvall discharge monitoring was completed in 2016.

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65.

Attach a summary of the status of implementation of any actions taken pursuant to S4.F.3 and the status of any monitoring, assessment, or evaluation efforts conducted during the reporting period. (S4.F.3.d)

No information to report.

DRAFT



Small Town. Real Life.

December 29, 2016

Rachel McCrea, Municipal Stormwater Specialist
Department of Ecology NWRO
rmcc461@ECY.WA.GOV

RE: City of Duvall, G20 Non-Compliance Notification

The City of Duvall has an active Stormwater Management Program (SWMP) and strives to comply with all requirements of the Western Washington Phase II NPDES Permit. Unfortunately, the City was unable to comply with the following requirements by the December 31, 2016 deadline due to extended outside agency review time:

1. NPDES Permit Section C.4.a-f: Implement an Ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects. Staff was unable to complete the requirement because of extended outside agency review time as summarized below:
 - a. 2014 to present: Staff required compliance with this requirement in accordance with existing language in Duvall Municipal Code (DMC) Section 9.06.
 - b. August/September/October 2016: Staff prepared and processed DMC updates to specifically address this requirement with the intent to adopt prior to the 2016 deadline (see attached draft DMC 9.06 revisions).
 - c. October/November 2016: Staff was informed that the DMC revisions were to be considered “development regulations” and that revision were to be reviewed by the Washington State Department of Commerce (Commerce). Staff submitted the language to Commerce with completion of Commerce review anticipated by the end of January 2017.
 - d. Staff anticipates adoption of the DMC updates to fully address this requirement by March 2017.

2. NPDES Permit Section C.5.a: Revise Operation and Maintenance standards to comply with revised manual/ code standards. Staff was unable to complete the requirement because of extended outside agency review time as summarized below:
 - a. 2014 to present: Staff required compliance with this requirement in accordance with existing language in Duvall Municipal Code (DMC) Section 9.06 and existing SWMP requirements.

- b. August/September/October 2016: Staff prepared and processed DMC updates to specifically address this requirement with the intent to adopt prior to the 2016 deadline.
- c. October/November 2016: Staff was informed that the DMC revisions were to be considered “development regulations” and that revision were to be reviewed by the Washington State Department of Commerce (Commerce). Staff submitted the language to Commerce with completion of Commerce review anticipated by the end of January 2017.
- d. Staff anticipates adoption of the DMC updates to fully address this requirement by March 2017.

We look forward to fully complying with the stated requirements summarized above. Please call me at (425) 939-8042 if you have any questions.

Sincerely,

Boyd E. Benson, PE, LEG
City Engineer/Interim Public Works Director

cc: File

APPENDIX B: LOW IMPACT DEVELOPMENT (LID)

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LOW IMPACT DEVELOPMENT (LID)

Introduction

In accordance with Section S5.C.4 of the Permit, each permittee is responsible for evaluating the use of Low Impact Development (LID) measures. LID is a planning and engineering stormwater management approach applied at the parcel and subdivision scale that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic pre-development hydrologic functions. The City will comply with the S5.C.4.f LID code-related updates including:

- i. No later than December 31, 2016 Permittees shall review, revise and make effective their local development-related codes, rules, standards, or other enforceable documents to incorporate and require LID principles and LID BMPs. The City adopted Stormwater Ordinance 1214 on February 21, 2017 to address this requirement. Ordinance 1214 was adopted after the December 31, 2016 deadline as summarized in the G20 Non-Compliance Notification sent to the Department of Ecology on December 29, 2016.
- ii. Each Permittee shall submit a summary of the results of the review and revision process in (i) above with the annual report due no later than March 31, 2017. The City will submit the summary prior to the March 31, 2017 deadline. The City submitted the summary as required [\(see Appendix A\)](#).

The City of Duvall (City) supports the use of LID measures and requires evaluation and incorporation of the Low Impact Development Performance Standards contained in Section 4.5 of Permit Appendix 1, Minimum Technical Requirements for New Development and Redevelopment. The City uses the 2016 King County Surface Water Design Manual (KCSWDM, or as updated) to evaluate required stormwater improvements for development activities on the parcel and subdivision scale. The KCSWDM requires matching developed stormwater run-off to particular pre-development flow conditions. The KCSWDM also encourages LID practices by awarding design credits that allow for the downsizing of flow control facilities required under King County's Core Requirement #3, Flow Control. The credits allow the designer to assume conditions that produce less runoff, thereby requiring smaller facilities. The City also requires compliance with LID requirements within Appendix 1 of the NPDES Permit.

The City's goal is to promote the use of LID measures for all development projects. This goal is being pursued by identifying, promoting and measuring LID use during the development design and permitting process. However, because of financial, physical and geotechnical constraints, there is no plan to require implementation of non-structural and LID techniques on a broader scale in the future beyond what is required in the KCSWDM or by Section 4.5 of Permit Appendix 1.

LID Practices that are currently available

All LID practices identified in Section 4.5 of Permit Appendix 1 and the KCSWDM are currently available for use within the City. Such development practices include:

- Soil Quality and Depth.
- Full dispersion.
- Full infiltration.
- Limited infiltration.
- Basic dispersion.
- Bioretention.
- Rain gardens.
- Permeable pavement (non-grassed).
- Grassed modular grid pavement.
- Rainwater harvesting.
- Vegetated roofs.

- Wheel strip driveways.
- Minimum disturbance foundation.
- Open grid decking over pervious area.
- Native growth retention.
- Perforated pipe connections.
- Others as identified.

The City has also identified potential non-structural actions and LID techniques to reduce stormwater impacts. These actions include:

- Revising the Duvall Municipal Code Section 9.06.125 (Service Charges) in 2011 to provide a stormwater fee discount for non-residential sites utilizing pervious surfacing and on-site stormwater management practices.
- Prioritization of resources for cleaning streets and catch basins.
- Use of check dams and vegetation within open stormwater conveyances.

Possible Future Incentives to Promote LID Practices

The City supports the use of LID practices and has considered potential incentives to promote LID implementation. The City plans to evaluate possible future incentives that could include:

- Providing maximum credits and flexibility for storm water systems as allowed within Section 4.5 of Permit Appendix 1, the KCSWDM, and City codes, standards and requirements.
- Priority permit processing for projects that include LID approaches.
- Adjustments to required landscape components to provide additional area for LID implementation.

Identified Barriers to the use of LID

The City of Duvall identified barriers to the use of LID and provides measures to address each barrier. Several of the more frequently used LID measures are not generally feasible within the City because of local geologic, topographic and hydrologic constraints. The City has identified the following barriers and methods to address each barrier in the following table:

Table B-1: LID Measures, Barriers and Methods

LID Measure	Potential Barrier	Method to Address
Infiltration	- Relatively impermeable till soils	Continue to recommend that developers consider infiltration if suitable soils are present.
Dispersion	- Steep slopes - Lack of vegetated flow path	Continue to recommend that developers consider dispersion if adverse impacts from steep slopes are minimized and vegetated flow paths can be maintained.
Permeable Pavement	- Relatively impermeable till soils - Lack of longevity when compared with standard treatments - Higher maintenance and replacement costs	Continue to recommend that developers consider use of permeable pavements in low impact areas such as parking lots, trails or internal pathways.

**APPENDIX C: ILLICIT DISCHARGE DETECTION AND ELIMINATION
PROGRAM (NPDES PHASE II PERMIT SECTION
S5.C.3)**

DRAFT

Illicit Discharge Detection and Elimination Program (NPDES Phase II Permit Section S5.C.3)

Summary

This section summarizes the City of Duvall Illicit Discharge Detection and Elimination Program as required by Section S5.C.3 of the NPDES Phase II Permit (Permit).

Program Requirements and Compliance

The City of Duvall Storm Water Management Plan (SWMP) includes an ongoing program to detect and remove illicit connections and discharges as defined in 40 CFR 122.26(b)(2), including any spills not under the purview of another responding authority, into the municipal separate storm sewers owned or operated by the City of Duvall. The following sections summarize the minimum performance measures for the City of Duvall Illicit Discharge Detection and Elimination Program.

Section S5.C.3.a: Development of a Municipal Storm Sewer System Map

A municipal storm sewer system map was developed using the City's Geographic Information System (GIS) database and complies with all of the requirements of Section S5.C.3.a of the NPDES Permit. The map is periodically updated and improved over time.

Section S5.C.3.b: Illicit Discharge Detection and Elimination Ordinance

A City of Duvall Illicit Discharge Detection and Elimination (IDDE) Ordinance was developed and adopted into the Duvall Municipal Code (Section 9.06.35) on August 13, 2009 (Ordinance 1090). The City of Duvall IDDE ordinance effectively prohibits non-stormwater, illicit discharges into the City's municipal separate storm sewer system to the maximum extent allowable under State and Federal law. The Illicit Discharge Detection and Elimination Ordinance complies with all of the requirements of Section S5.C.3.b of the NPDES Permit and will be updated to reflect Permit changes and revisions prior to the February 2, 2018 deadline.

Section S5.C.3.c: Detecting and Addressing Illicit Discharges

The City of Duvall has developed and implemented an ongoing program to detect and address non-stormwater discharges, including spills, and illicit connections into the City's municipal separate storm sewer system. Specific activities are described below.

- S5.C.3.c.i: Procedures for conducting investigations of the MS4 including field screening and methods for identifying potential illicit discharge sources. The City will complete field screening of at least 40% of the MS4 no later than December 31, 2017 as required by the permit.
- S5.C.3.c.ii: The City maintains an IDDE public hotline posted at City Hall and the City's NPDES web page.
- S5.C.3.c.iii: The City implements an on-going IDDE training program as described in Section S5.C.3.e.
- S5.C.3.c.iv: The City of Duvall informs public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste. Appropriate information is distributed to target audiences identified pursuant to S5.C.1 as part of the City's public outreach and education effort. In addition, a publicly listed and publicized hotline telephone number for public reporting of spills and other illicit discharges has been posted at City Hall, distributed in the City's utility bill newsletter and is posted at the City's website. A record of calls received and follow-up actions taken is documented by the City in accordance with S5.C.3.c.ii and reported in the City's annual report as required by S9 Reporting and Record Keeping Requirements.

Section S5.C.3.d: IDDE Program

The City of Duvall has implemented an ongoing program designed to address illicit discharges including spills and illicit connections. The program includes:

- S5.C.3.d.i: Procedures for characterizing the nature of, and potential public and environmental threat posed by, an illicit discharge.

- S5.C.3.d.ii: Procedures for tracing the source of an illicit discharge.
- S5.C.3.d.iii: Procedures for eliminating the illicit discharge.
- S5.C.3.d.iv: Compliance with this provision is achieved by investigating (or referring to the appropriate agency) within 7 days, on average, any complaints, reports or monitoring information that indicates a potential illicit discharge, including spills; and immediately investigating (or referring) problems and violations determined to be emergencies or otherwise judged to be urgent or severe. The investigation procedure includes:
 - Evaluation whether the discharge must be immediately contained and steps to be taken to contain and control the discharge. Notify the Department of Ecology Emergency Spill Response hotline **(1-425-649-7000)** and emergency response if required (fire or police, dial **911**).
 - Implement corrective steps to contain and control the discharge.
 - Documentation of the reported or found illicit discharge including: the location and nature of the illicit discharge; complainant or reporting staff; investigatory staff; time, date, weather; description of illicit discharge, description of storm system; storm system map including spill location and impacts; and photographs of the site.
 - Identify source of discharge and contact responsible party. Assist in identifying measures to remove the risk of future illicit discharge and enforce corrective action in accordance with DMC 9.06.35.

Section S5.C.3.e: IDDE Training

The City of Duvall provides appropriate training for municipal field staff on the identification and reporting of illicit discharges. The annual training includes a video presentation describing IDDE identification and response, discussion of illicit discharge and spills identified during the previous 12 months, question and answer session, and lessons learned summary. The City trains all municipal field staff who are responsible for identification of, or might come into contact with or otherwise observe, an illicit discharge. Staff is trained in identification, investigation, termination, cleanup, and reporting illicit discharges including spills and illicit connections. Staff trained includes Public Works Field Staff, Planning Field Staff and Building Department Field Staff. Follow-up training is provided as needed to address changes in procedures, techniques or requirements. The City documents and maintains records of the training provided and the staff trained.

Section S5.C.3.f: Recordkeeping

The City maintains a spreadsheet tracking and recordkeeping system to track all activities conducted to meet the IDDE requirements.

**APPENDIX D: PROGRAM TO CONTROL RUNOFF FROM NEW
DEVELOPMENT, REDEVELOPMENT, AND
CONSTRUCTION SITES (NPDES PHASE II PERMIT
SECTION S5.C.4)**

DRAFT

Program to Control Runoff from New Development, Redevelopment, and Construction Sites (NPDES Phase II Permit Section S5.C.4)

Summary

This section summarizes the City of Duvall Program to Control Runoff from New Development, Redevelopment and Construction Sites as required by Section S5.C.4 of the NPDES Phase II Permit.

Program Requirements and Compliance

The City of Duvall Program to Control Runoff from New Development, Redevelopment, and Construction Sites is modeled to comply with the requirements of Section S5.C.4 of the NPDES Phase II Permit. The program applies to private and public development, including roads, and includes the “Technical Thresholds” in Appendix 1 of the Phase II NPDES Permit.

The following sections summarize the minimum performance measures for the City of Duvall Program to Control Runoff from New Development, Redevelopment, and Construction Sites.

Section S5.C.4.a: Runoff from New Development, Redevelopment & Construction

The Duvall Municipal Code (DMC) Section 9.06 (Stormwater Utility) addresses runoff from new development, redevelopment and construction site projects. Specific requirements and activities are described below.

- S5.C.4.a.i Requirement: The Minimum Requirements, technical thresholds, and definitions in Appendix 1 or an equivalent approved by Ecology under the NPDES Phase I Municipal Stormwater Permit, for new development, redevelopment and construction sites.
- S5.C.4.a.i Compliance: The City has adopted the 2016 King County Surface Water Design Manual (KCSWDM) to meet this requirement along with the Low Impact Development Performance Standards contained in Section 4.5 of Permit Appendix 1, Minimum Technical Requirements for New Development and Redevelopment.
- S5.C.4.a.ii Requirement: A site planning process and BMP selection and design criteria that, when used to implement the minimum requirements in Appendix 1 of the Permit will protect water quality, reduce the discharge of pollutants to the maximum extent practicable and satisfy the State requirement under Chapter 90.48 RCW to apply all known, available and reasonable methods of prevention, control and treatment (AKART) prior to discharge.
- S5.C.4.a.ii Compliance: The City has adopted the 2016 KCSWDM to meet this requirement along with the Low Impact Development Performance Standards contained in Section 4.5 of Permit Appendix 1, Minimum Technical Requirements for New Development and Redevelopment.
- S5.C.4.a.iii Requirement: The legal authority, through the approval process for new development, to inspect private stormwater facilities that discharge to the Permittee’s MS4.
- S5.C.4.a.iii Compliance: The City requires the right to access, inspect, and approve private stormwater facilities as part of the permitting approval process and for maintenance as described in DMC 9.06.080 (Stormwater Utility, Inspections).

Section S5.C.4.b: Permitting Process

The City of Duvall Stormwater program includes a permitting process with plan review, inspection and enforcement capability to meet the standards listed in (i) through (vi) below, for both private and public projects, using qualified personnel (as defined in *Definitions and Acronyms* in the Phase II NPDES permit). The program applies to private and public development, including roads and includes the “Technical Thresholds” in Appendix 1 of the Phase II NPDES Permit.

Specific requirements and compliance activities are described below.

- S5.C.4.b.i Requirement: Review of all stormwater site plans for proposed development activities.

- S5.C.4.b.i Compliance: The City reviews all stormwater site plans for proposed development activities as part of the permitting process and as required in DMC 9.06, the 2016 KCSWDM, and the Public Works Development Design Standards.
- S5.C.4.b.ii Requirement: Inspect, prior to clearing and construction, all known development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 Determining Construction Site Sediment Damage Potential.
- S5.C.4.b.ii Compliance: The City inspects all permitted development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 Determining Construction Site Sediment Damage Potential. Pre-clearing inspection and documentation is completed by the Public Works Inspector for all permitted development sites.
- S5.C.4.b.iii Requirement: Inspect all known permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforce as necessary based on the inspection.
- S5.C.4.b.iii Compliance: The City inspects all permitted development sites to verify proper installation and maintenance of required erosion and sediment controls in accordance with DMC 9.06.060 (Stormwater Utility, Operation and maintenance requirements). Erosion and sediment control inspection, documentation, and enforcement is completed by the Public Works Inspector for all permitted development sites.
- S5.C.4.b.iv Requirement: Inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater controls such as stormwater facilities and structural BMPs. Also, verify a maintenance plan is completed and responsibility for maintenance is assigned. Enforce as necessary based on the inspection.
- S5.C.4.b.iv Compliance: The City inspects all permitted development sites upon completion of construction or prior to final approval or occupancy to ensure proper installation of permanent stormwater controls such as stormwater facilities and structural BMPs. The City also verifies that a maintenance plan is completed and responsibility for maintenance is assigned. The final inspection and approval is completed and documented by the Public Works Inspector and City Engineer.
- S5.C.4.b.v Requirement: Compliance with the inspection requirements in (ii), (iii) and (iv) above shall be determined by the presence and records of an established inspection program designed to inspect all sites. Compliance during this permit term shall be determined by achieving at least 80% of scheduled inspections.
- S5.C.4.b.v Compliance: The City inspects all sites and documents inspections and any required and/or completed maintenance. The City will achieve at least 80% of scheduled inspections during the permit term.
- S5.C.4.b.vi Requirement: An enforcement strategy shall be developed and implemented to respond to issues of non-compliance.
- S5.C.4.b.vi Compliance: The City's stormwater facility non-compliance enforcement strategy is summarized in DMC 9.06.130 (Stormwater Utility Enforcement).

Section S5.C.4.c: Permitting Process

The program includes a provisions to verify adequate long-term operation and maintenance (O&M) of post-construction stormwater facilities and BMPs that are permitted and constructed pursuant to (b) above. Specific requirements and compliance activities are described below.

- S5.C.4.c.i Requirement: Adoption of an ordinance or other enforceable mechanism that clearly identifies the party responsible for maintenance, requires inspection of facilities in accordance with the requirements in (ii) through (iv) below, and establishes enforcement procedures.
- S5.C.4.c.i Compliance: The City identifies the responsible party and requires maintenance of and inspection of facilities in accordance with DMC 9.06.060 (Stormwater Utility, Operation and maintenance requirements).

- S5.C.4.c.ii Requirement: Each Permittee shall establish maintenance standards that are protective as or more protective of facility function than those specified in Chapter 4 of Volume V of the 2012 Stormwater Management Manual for Western Washington.
- S5.C.4.c.ii Compliance: The City utilizes existing facility maintenance plans for facilities with O&M plans. Otherwise, maintenance is completed in accordance with 2016 King County Surface Water Design Standards.
- S5.C.4.c.iii Requirement: Annual inspections of all stormwater treatment and flow control facilities (other than catch basins) permitted by the Permittee.
- S5.C.4.c.iii Compliance: The City completes inspections and annual maintenance on all stormwater treatment and flow control facilities (other than catch basins).
- S5.C.4.c.iv Requirement: Inspections of all new flow control and water quality treatment facilities, including catch basins, for new residential developments that are a part of a larger common plan of development or sale, every 6 months until 90 percent of the lots are constructed (or when construction is stopped and the site is fully stabilized) to identify maintenance needs and enforce compliance with maintenance standards as needed.
- S5.C.4.c.iv Compliance: Public Works Inspector(s) inspects all new flow control and water quality treatment facilities, including catch basins, for new residential developments that are a part of a larger common plan of development or sale, at least every 6 months until the site is fully constructed or stabilized to identify maintenance needs and enforce compliance with maintenance standards as needed. In addition, the City Engineer and Public Works Inspector complete performance and maintenance bond inspections prior to release of performance bond (at or after final plat) and maintenance bond (two years or more after final plat). The City enforces compliance with maintenance standards as needed based on the results of the inspections.
- S5.C.4.c.v Requirement: Compliance of (iii) and (iv) shall be determined by achieving at least 80% of the scheduled inspections.
- S5.C.4.c.v Compliance: The City target is to complete 100% of inspections and actual inspection exceeds the 80% threshold.
- S5.C.4.c.vi Requirement: Unless there are circumstances beyond the City's control, when an inspection identifies an exceedance of the maintenance standard, maintenance shall be performed:
 - Within 1 year for typical maintenance of facilities, except catch basins.
 - Within 6 months for catch basins.
 - Within 2 years for maintenance that requires capital construction of less than \$25,000.
 - If circumstances beyond the Permittee's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work, maintenance shall be completed as soon as possible. For each exceedance of the required timeframe, the Permittee must document the circumstances and how they were beyond their control.
- S5.C.4.c.vi Compliance: The City complies with the S5.C.4.c.vi requirement as stated.
- S5.C.4.c.vii Requirement: The program includes a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records. Records of maintenance inspections and maintenance activities shall be maintained.
- S5.C.4.c.vii Compliance: The City keeps records of all projects that are approved after the effective date of this Permit.

Section S5.C.4.d: Notice of Intent

The program makes available copies of the "Notice of Intent for Construction Activity" and copies of the "Notice of Intent for Industrial Activity" to representatives of proposed new development and redevelopment at City Hall, the

Public Works Department, and the City Website. The City will continue to enforce local ordinances controlling runoff from sites that are also covered by stormwater permits issued by Ecology.

Section S5.C.4.e: Training

Staff responsible for implementing the program to control stormwater runoff from new development, redevelopment and construction sites, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities. Follow-up training is provided as needed to address changes in procedures, techniques or staffing. The City documents and maintains records of the training provided and the staff trained.

Section S5.C.4.f: Low Impact Development Code Related Requirements

The program includes the current Low Impact Development requirements based on Section 4.5 of Permit Appendix 1, and the KCSWDM. The City adopted Stormwater Ordinance 1214 on February 21, 2017 to specifically address this requirement. Ordinance 1214 was adopted after the December 31, 2016 deadline as summarized in the G20 Non-Compliance Notification sent to the Department of Ecology on December 29, 2016.

Section S5.C.4.g: Watershed-Scale Stormwater Planning

The permit requires jurisdiction participation, if selected, in any watershed-scale planning process led by a Phase 1 county. This requirement is not applicable to Duvall per note 25 (Page 31 of 74) of the Permit and the City knows of no other current plans for this type of county-led effort but will participate as required in possible future efforts. However, the City of Duvall completed a Watershed Plan for Duvall Urban Growth Area and adjacent drainage area (Adopted on September 15, 2015). The City is also completing a watershed-based Storm and Surface Water Plan update in 2017.

**APPENDIX E: OPERATIONS AND MAINTENANCE PROGRAM TO
PREVENT OR REDUCE POLLUTANT RUNOFF FROM
MUNICIPAL OPERATIONS (NPDES PHASE II
PERMIT SECTION S5.C.5)**

DRAFT

Operations and Maintenance Program to Prevent or Reduce Pollutant Runoff from Municipal Operations (NPDES Phase II Permit Section S5.C.5)

Summary

This section summarizes the City of Duvall Program for the Operations and Maintenance Program to Prevent or Reduce Pollutant Runoff from Municipal Operations as required by Section S5.C.5 of the NPDES Phase II Permit.

Program Requirements and Compliance

The City developed and implemented a Pollution Prevention and Operation and Maintenance for Municipal Operations (O&M) program that includes a training component that has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The following sections summarize the minimum performance measures for the City of Duvall Pollution Prevention and Operation and Maintenance for Municipal Operations program.

S5.C.5 a. Operations and Maintenance Standards for Stormwater Facilities

The City utilizes maintenance standards contained within the adopted King County Surface Water Design Manual (KCSWDM). Inspections are completed annually at all stormwater facilities and following significant storm events. Maintenance is performed within the following time periods:

- Within one year for typical maintenance of facilities, except catch basins.
- Within six months for catch basins.
- Within two years for maintenance that requires capital construction of less than \$25,000.
- If maintenance cannot be completed within the above time frame then the City completes the maintenance activities as soon as possible and documents the circumstances and how they were beyond their control.

S5.C.5 b. Annual Inspections for Stormwater Facilities

The City completes annual inspection of all municipally owned or operated permanent stormwater treatment and flow control facilities other than catch basins. On average, the City inspects catch basins every-other year or more frequently. Appropriate maintenance actions are completed in accordance with the City and KCSWDM requirements.

S5.C.5 c. Inspections for Stormwater Facilities following Major Storm Events

The City completes spot checks of potentially damaged permanent treatment and flow control facilities (other than catch basins) after 10 year, 24 hour storms (at least 3 inches of rain in a 24-hour period based on DOE Isopluvial maps contained within Volume III of "Stormwater Management in Western Washington") or greater storm events. If spot checks indicate widespread damage/maintenance needs, the City inspects all stormwater treatment and flow control facilities that may be affected. The City conducts repairs or takes appropriate maintenance action in accordance with maintenance standards established above, based on the results of the inspections.

S5.C.5 d. Inspection of Catch Basins and Inlets

The City inspects catch basins every other year or more frequently. This inspection period complies with the Permit requirement to inspect all catch basins and inlets owned or operated by the City at least once before the end of the permit term and every two years thereafter. Catch basins are cleaned if needed to comply with maintenance standards described within the Heavy Equipment Maintenance, Storage Yards, and Material Storage Facilities SWPPP (<http://www.duvallwa.gov/departments/publicworks/021610%20Maintenance%20Yard%20SWPPP.pdf>). Decant water and sediment is disposed of at an appropriate discharge facility.

S5.C.5 e. Compliance with Inspection Requirements

The City inspection program complies with the inspection requirements in b, c, and d above. Compliance is completed and documented by the Public Works Department. Compliance during this permit term shall be completed by the City by achieving an annual rate of at least 95% of inspections.

S5.C.5 f. Implementation of Practices to Reduce Stormwater Impacts

The City has implemented practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads or highways owned or maintained by the City, and road maintenance activities conducted by the City. The City utilizes maintenance requirements and BMPs from the City's Maintenance Yard SWPPP, the KCSWDM, Public Works Standards, and the King County Road Services - Regional Road Maintenance Endangered Species Act (ESA) Program Guidelines for the following activities:

- Pipe cleaning.
- Cleaning of culverts that convey stormwater in ditch systems.
- Ditch maintenance.
- Street cleaning.
- Road repair and resurfacing, including pavement grinding.
- Snow and ice control.
- Utility installation.
- Pavement striping maintenance.
- Maintaining roadside areas, including vegetation management.
- Dust control.
- Minimize environmental impact associated with application of fertilizers, pesticides, and herbicides.
- Sediment and erosion control.
- Landscape maintenance and vegetation disposal.
- Trash and pet waste management.
- Building exterior cleaning and maintenance.

S5.C.5 g. On-Going Training Program for Employees

The City has established and implemented an on-going training program for City employees whose construction, operations or maintenance job functions may impact stormwater quality. The training program addresses the importance of protecting water quality, the requirements of the NPDES Permit, operation and maintenance standards, inspection procedures, selecting appropriate BMPs, ways to perform their job activities to prevent or minimize impacts to water quality, and procedures for reporting water quality concerns, including potential illicit discharges. Follow-up training is provided as needed to address changes in procedures, techniques or requirements. The City documents and maintains records of training provided.

S5.C.5 h. SWPPP for Equipment Maintenance and Storage Yards

The City developed and implemented a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards and material storage facilities owned by the City. The three Public Works facilities requiring a SWPPP, according to NPDES Permit requirements, include the Public Works Maintenance Shop, the Public Works Fuel Station, and the Tech Center Storage Yard. The SWPPP provides information for the Implementation of non-structural BMPs including requirements, descriptions, and implementation schedule. The SWPPP also includes periodic visual observation of discharges from the facility to evaluate the effectiveness of the BMP. The SWPPP document is available at: <http://www.duvallwa.gov/DocumentCenter/Home/View/2111>

S5.C.5 j. Records of Inspection and Maintenance or Repair Activities

The City maintains records of inspections and maintenance or repair activities conducted by the in accordance with NPDES Permit S9 Reporting Requirements. Records are maintained as part of the SWPPP for heavy equipment maintenance or storage yards and material storage facilities. Records are also maintained for training, facility inspections, operation and maintenance, and other associated activities.

**APPENDIX F: PUBLIC EDUCATION PROGRAM AND IDDE
SUMMARY REPORT (NPDES PHASE II PERMIT
SECTION S5.A.3.B, S5.C.3.D, .E)**

DRAFT

Public Education Program and IDDE Summary Report (NPDES Phase II Permit Section S5.A.3.b, S5.C.3.d, .e)

Summary

This report summarizes the City of Duvall Public Education Program as required by Sections S5.A.3.b, S5.C.3.d, and S5.C.3.e of the NPDES Phase II Permit (Permit). The purpose of this section is to summarize the general Public Education Program and Illicit Discharge Detection and Elimination (IDDE) education efforts.

Program Requirements and Compliance

The City of Duvall Storm Water Management Plan (SWMP) includes an ongoing public education program aimed at school aged children, residents, businesses, industries, engineers, contractors, developers, elected officials, policy makers, planning staff and other City employees.

Permit section S5.A.3.b requires tracking of the number of inspection, official enforcement actions and types of public education activities. Permit sections S5.C.3.d and S5.C.3.e further require that public employees, businesses and the general public be informed of the hazards associated with the illegal discharges and improper disposal of waste.

The City documents public education and other activities including IDDE reports and inspections on several spreadsheets. These records are used to report the number of activities as required in the annual report. This report provides additional information about public education activities and IDDE reports and response.

2016 Education Activities

The City of Duvall completed 26 public education activities during 2016. In addition, the City participates in the Stormwater Outreach for Regional Municipalities (STORM) program, a partnership of 57 regional governments dedicated to improving water quality in Puget Sound. STORM activities include regional education and outreach and the Puget Sound Starts Here (PSSH) campaign. Specific City of Duvall activities are summarized in Table F-1.

2016 Spill Reports and Response

The City of Duvall responded to 6 discharge incidents and received 1 hotline or other Spill/IDDE reports in 2016. City response to all of the reports occurred within hours of receipt. In general, the spills included hydraulic fluid leaks and inappropriate discharge of paint and cleaning water to the storm system. The majority of the reporting parties utilized the Hotline report phone number which demonstrates Hotline effectiveness. The 2016 Spill/IDDE reports and responses are summarized in Table F-2.

Table F-1: 2016 Public Education Activities

DATE	DESCRIPTION	COMMENTS
2/1/2016	Local Household Battery Recycling article in City Newsletter	
2/25/2016	Public Notice regarding SWMP Annual Report Public Hearing	
2/25/2016	Draft SWMP Annual Report posted to website, one copy at City Hall and one copy at Public Works	
3/1/2016	Public Hearing for Annual Stormwater Report	no comments received
3/3/2016	Dog Bone Dispensers to Public Works - 10	
3/22/2016	Cherry Valley Elementary 1st Grade Storm education	Reach approx. 75 students, 4 teachers
4/23/2016	Earth Day and Arbor Day Festival	165 registered in drawing, approx. 250 attendees.
4/26/2016	PSSH Coffee Sleeves delivered to CCs Espresso	
5/1/2016	PSSH Game Night Notice in City Newsletter, Kiosk, website and FB	
5/25/2016	4th grade Storm and Science Education	approx. 90 students, 4 teachers
6/1/2016	4th Grade Storm education field trip	approx. 25 students, 2 teachers, 4 volunteers
6/30/2016	Dog Bone Dispensers to City Hall - 30	
7/1/2016	Dog Bone Dispensers to Public Works - 15	
7/23/2016	Special Recycle Collection Event	
8/6/2016	Public Works at National Night Out Against Crime, stormwater information / education provided	
8/6/2016	48 Chinook Book cards distributed	
9/9/2016	Chinook Book / Stormwater Survey posted to FB	
9/13/2016	12 Chinook Book Cards distributed for completion of Survey	
9/15/2016	~100 Chinook Book cards distributed to RVSD Teachers	
9/18/2016	Chinook Book / Stormwater Survey posted to FB	
9/26/2016	Salmon returning info posted on FB	
10/1/2016	Hazardous Waste Event Notice in City Newsletter	
10/7/2016	stormwater information video posted to FB	
12/22/2016	Fee Auto Leaks workshops info posted on FB	
1/1/16-5/16/16	Healthy Water Healthy Soil, WS Dynamics Enviroscene Classes at Cherry Valley Elementary	192 2nd graders

Table F2: Illicit Discharge Summary

Illicit Discharge Summary

Date	Discharge Incident Address / Location	Discharge Incident Description and Response to Trace and Eliminate Discharge	Characterize Discharge				Compliance with Timeline per S5.C.3.d.iv				Hotline? 425-649-7000
			IDDE/IC	Type of Spill	Emergency / Hazmat Spill	Non-Emergency Discharge	Notification to DOE within 24 hours	Investigated within 7 Days	Investigated IC within 21 Days	Eliminated IC within 6 Months	
1/25/2016	14525 Main Street NE	Approximately 10 gallons of unleaded gasoline was spilled during fuel tank filling at the Public Works Facility at approximately 10:30 am. Fueling was being completed by private fueling company and spill was almost entirely contained within the spill containment pad. Fuel was immediately cleaned up by the contractor using absorbant pads and then area sprayed with Microblaze. No fuel reached the storm system. Absorbant pads were removed for disposal by the private contractor.	IDDE	Fuel Spill	NA	X	NA	NA	NA	NA	N
3/17/2016	16011 Main Street NE	Approximately 5 to 10 gallons of milky white water accumulation was observed by Public Works Staff within the Park-and-Ride parking lot immediately south of the property at 16011 Main Street NE. BEB responded and observed that the water appeared to have originated from a 1.5-inch to 2-inch diameter PVC pipe at the property line that appeared to originate at a catch basin/pressure wash station on the subject property. Contacted property owner and discussed options to remove any off-site discharge. Property owner is working to install a water-recycling system (closed system, no discharge) for pressure washer. City to follow up.	IDDE	Discharge of turbid water	NA	X	NA	NA	NA	NA	N
4/1/2016	North Hill Development	Complaint of construction sediment/impacts from property owner north of Cherry Valley Road (see emails at: \\file01\publicworksrepository\DATA\Public Works\Residential\PPA13-001 North Hill\Engineering\DOE Complaint). BEB visited site and observed that no construction has occurred since site was stabilized in 2014. Sent photo of stabilized site to DOE. No action from City of Duvall required at this time.	IDDE	Construction Sediment/impact	X	NA	ERTS 663998				Y
4/15/2016	14328 278th Ave NE	14:30, Jim Bobin (425-420-1703 desk) North Sound Route Manager from WM called to report spill. Spill measure approx 4' x 6' and was cleaned up immediately by WM. BEB visited the site and observed slight remaining staining of pavement. PW crew responded with MicroBlaze to provide additional cleanup.	IDDE	Waste management truck: hydraulic hoze failure	NA	X	NA	NA	NA	NA	N

Date	Discharge Incident Address / Location	Discharge Incident Description and Response to Trace and Eliminate Discharge	Characterize Discharge				Compliance with Timeline per S5.C.3.d.iv				Hotline? 425-649-7000
			IDDE/IC	Type of Spill	Emergency / Hazmat Spill	Non-Emergency Discharge	Notification to DOE within 24 hours	Investigated within 7 Days	Investigated IC within 21 Days	Eliminated IC within 6 Months	
5/20/2016	SR-203 at Virginia	A spill on SR-203 was reported today just after 2pm. The spill appears to be diesel fuel, and is a 1' to 2' wide continuous spill. The spill appears to have originated near the River Road/Woodinville-Duvall Road intersection within Unincorporated King County, extended east on Woodinville-Duvall Road to SR-203 within City Limits, and then extended north on SR-203 outside of City limits. Staff responded immediately following our spill prevention protocol: Staff responded immediately following our spill prevention protocol: City Hall notified PW superintendent, PW supervisor, and Police Department; City Hall notified WSDOT, WSDOT notified State Patrol. It is our understanding that WSDOT notified the Department of Ecology. Staff followed up with King County Roads; PW crew mobilized immediately and commenced to place absorbant and Micro-Blaze (Microbial spill control) with traffic control provided by Police Department. Micro-Blaze remediates petroleum products, absorbant absorbs petroleum products and provided traction control; PW superintendent and City Engineer followed up with WSDOT maintenance. WSDOT plans to respond; PW Crew will continue to clean/treat spill within City Limits to address safety/environmental impacts.	IDDE	Fuel Spill	WSDOT Reported	X	NA	NA	NA	NA	NA
12/2/2016	SR-203 at NE 145th St	PW staff present during trench excavation for installation of new 18" storm pipe, contractor hit and broke the 8" sewer main that runs down NE 145th St. to the WWTP. Excavation was stopped and flow was diverted from the trench to the westside of SR-203 SSMH using one 2" pump and one 4" pump. Excavation resumed to investigate sewer main and remove debris from the pipe. Once the concrete sewer pipe was exposed and debris were removed flow resumed to the down stream MH. City staff provided the 10" steel repair sleeve, and the contractor cut the bell joint section out and installed the 10" steel sleeve. The repair holds with not leaks. ~1.5 hour response time. Discharge was not considered an immediate threat, but will be reported to DOE once the city engineer is notified.	IDDE	Sewer Main	NA	X	NA	NA	NA	NA	N