



**City of Aberdeen**  
**Stormwater Management Program (SWMP)**  
**Calendar Year 2019**

**Prepared pursuant to the Western Washington Phase II Municipal Stormwater Permit**

City of Aberdeen Phase II Permit # WAR04-5026

**By**

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# **Introduction**

## **Purpose**

This document constitutes the City of Aberdeen 2019 Stormwater Management Program (SWMP) as required under condition S5 of the Western Washington Phase II Municipal Stormwater Permit (Permit). The Permit requires the creation and implementation of a SWMP to address five required program elements (S5.C.1 - S5.C.5), Monitoring and Assessment (S8), and Total Maximum Daily Load (TMDL)(Appendix 2) requirements. This SWMP will be attached to the 2018 Annual Compliance Report, which is due to Ecology on March 31, 2019.

The goal of the SWMP is to reduce the discharge of pollutants from the City's municipal separate storm sewer system (MS4) to the maximum extent practicable and to protect the water quality of local streams and rivers, which receive stormwater runoff from the MS4.

## **Background**

In 1972, the United States Congress passed the Clean Water Act (CWA), which established water quality goals for the surface waters of the United States. Congress amended the CWA in 1987 to address stormwater, which resulted in the creation of the National Pollutant Discharge Elimination System (NPDES) permit program, administered by the Environmental Protection Agency. The agency delegated responsibility to administer the NPDES permit program to most states, including Washington State via the Department of Ecology.

The NPDES was created with the goal of restoring water quality in surface waters (rivers, lakes, streams, bays, etc.). Permits and compliance codes were created to regulate stormwater discharges into surface waters by private and governmental entities. Failure to comply with these regulations may result in fines and other penalties.

The Department of Ecology established a two-phase permit program. Phase I focused on large and medium-sized municipalities and counties, construction sites greater than or equal to five acres, and major industrial sources. Phase II, finalized in 2000, applied to "small" municipalities (jurisdictions with population less than 100,000) located within, or partially within, an urbanized area that operate a MS4 which discharges to waters of the state.

## **The Western Washington Phase II Municipal Stormwater Permit**

Aberdeen has a population of less than 100,000, is in Western Washington, and is an operator of a regulated small MS4. Thus, its Stormwater program must comply with the conditions in the Western Washington Phase II Municipal Stormwater Permit. The current Permit was issued on August 1, 2012 with an effective date of August 1, 2013. Originally, the Permit was scheduled to remain in effect until July 31, 2018. However, in 2017, Ecology announced an extension of the current Permit to remain in effect until July 31, 2019. The Department of Ecology is planning to reissue the 2019-2024 Permit on July 1, 2019, and become effective on August 1, 2019. The 2019-2024 Permit will likely have new and updated conditions that the City will need to meet in order to stay compliant with the Permit.

When adhered to, the Permit, allows the Permittee (City of Aberdeen) to discharge stormwater from the municipal separate storm sewer system (MS4) into "waters of the state" such as rivers, lakes, and streams. The Permittee is required to implement programs and activities that reduce pollutants in stormwater to the maximum extent practicable (MEP), using all known, available, and reasonable methods of prevention, control and treatment (AKART). Requirements are established in the following program areas:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination

- Controlling Runoff from New Development, Redevelopment and Construction Sites
- Municipal Operations and Maintenance
- Monitoring and Assessment
- Total Maximum Daily Load (TMDL) Requirements

The SWMP must be prepared to inform the public of the planned SWMP activities for the upcoming calendar year. In addition, the Permit requires the City to submit an Annual Compliance Report by March 31 of each year that details actions taken in the previous year to achieve compliance. The full text for the Phase II Permit, the latest SWMP, and the latest Annual Compliance Report is available at: <http://www.aberdeenwa.gov>

These documents can also be viewed upon request by contacting the City of Aberdeen at 360-537-3215.

### **The Storm and Surface Water Management Utility – Other Activities**

This SWMP details activities that are planned and that fall under the purview of the Permit. The annual stormwater management program plan is one part of the City’s overall storm and surface water management strategy. The City established the Storm and Surface Water Utility in 2010 for the purpose of planning, design, construction, maintenance, administration, and operation of all city storm and surface water facilities and for overseeing the design, construction, and maintenance of improvements on private property where these may affect storm and surface water management. The utility contains programs that reduce flooding and protect and improve water quality. Although not directly required, flood reduction efforts can often further stormwater management goals. For further detail on Storm and Surface Water Utility activities, contact the Phase II Permit Manager at 360-537-3215.

### **Stormwater Management Administration**

The City will annually update the SWMP Plan for submittal to Ecology by March 31 of the upcoming calendar year. The purpose of a SWMP is to reduce the discharge of pollutants from the MS4 to the maximum extent practicable, meet state AKART requirements, and protect water quality. The program shall include the actions and activities described in Sections 2 through 7 of this SWMP Plan.

The City will submit annual compliance reports to Ecology by March 31, detailing the activities and compliance actions for the previous year. The reports are to summarize SWMP implementation status and present information from assessment and evaluation activities conducted during the reporting period. The Phase II Permit Manager coordinates among departments within the City and other jurisdictions to eliminate barriers to compliance of the Permit.

The City currently implements activities and programs that meet the performance measure requirements of the Permit. The City will continue to implement the programs and activities established for the 2013-2019 Permit. Actions recommended for continued compliance with stormwater management administration include:

- Tracking and reporting of citywide NPDES expenses for implementing the 2013-19 Permit.
- Developing a database for citywide compliance reporting and documentation under the Permit.
- Summarizing SWMP administration activities and programs for Compliance Report submittals.

### **The Permit as Document Map**

The remainder of this document details the required elements of the SWMP in the Permit, and notes current and planned compliance activities. The Permit requirement sections are noted with parentheses in the corresponding sections of this document.

## **Section 1 - Public Education and Outreach**

This section describes Permit requirements related to Public Education and Outreach (E&O), lists the continuing and/or current programs and activities that meet Permit requirements, and identifies the planned activities recommended for continued compliance with the current 2013-19 Permit.

### **1.1 Permit Requirements**

The Permit (Section S5.C.1) requires the City to:

- Implement an E&O program designed to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts and encourage the public to participate in stewardship activities. The program shall be designed to educate target audiences (e.g., the general public, businesses, homeowners, students, developers, engineers, contractors, etc.) about important stormwater topics and provide specific actions they can take to minimize the problem.
- Create stewardship opportunities to encourage participation in activities such as stream teams, storm drain marking, volunteer monitoring, riparian plantings, and education activities.
- Measure the understanding and adoption of the targeted behaviors for at least one targeted audience in at least one subject area to use in directing E&O sources more effectively, as well as to evaluate changes in adoption of the targeted behaviors. Use the resulting measurements to direct E&O resources no later than February 2, 2016. This requirement can be met individually or as a member of a regional group.
- Track and maintain records of Public E&O activities.

The Permit (Appendix 2 Total Maximum Daily Load Requirements) requires the City to:

- Develop a public education and outreach involvement plan that targets the reduction of fecal coliform pollution by increasing public awareness and effecting behavior change. The plan includes stated goals, target audiences, messages, possible formats as well as distribution and evaluation methods. The plan shall be implemented prior to the expiration of the permit and include the following elements:
  - Targeting of the residents of the three high priority water bodies identified in the 2007-2012 NPDES permit.
  - Use mailings, door hangers or similar outreach tools.
  - Reach 4<sup>th</sup> through 6<sup>th</sup> grade students.
- Conduct two public education surveys gauging resident's knowledge of the sources of bacteria and prevention of bacteria pollution. One survey should measure the knowledge prior to outreach and the other their knowledge after outreach.

### **1.2 Current Activities**

The City currently implements activities and programs that meet the Permit requirements. The City will continue to implement these programs and activities to remain in compliance with the 2013-19 Permit. The current compliance activities associated with the above Permit requirements include:

- The City conducts numerous education and outreach activities that address stormwater management and directly target the general public, residents/homeowners, businesses, developers, contractors, engineers, and industries. These activities include but are not limited to:
  - Car wash kits for fundraiser carwashes and related outreach and education.
  - Storm drain marking of public storm drains.
  - Construction surface water pollution prevention plan technical assistance.
  - Education and outreach at public festivals.
  - Administration of the City of Aberdeen Stream Team.

- Stormwater maintenance and BMPs technical outreach through the municipal stormwater operations and maintenance.
- Public E&O on hazards associated with illicit discharges.
- Conduct a stormwater education program at Elementary schools focusing on 6<sup>th</sup> grade students.

### 1.3 Planned Activities

The City has an education and outreach program which maintains compliance with the performance measures of the Permit (2013-2019). Actions recommended for continued compliance heading into 2019 include:

- Collaborating with other NPDES municipalities to identify appropriate program evaluation techniques.
- Update the target audience for building awareness to engineers, contractors, and developers (previous target audience was 6<sup>th</sup> grade students).
- Refine the current process to evaluate understanding and adoption of target behaviors and use the measurements to direct future E&O efforts.
- Refine the E&O program as needed to address Permit elements more effectively.
- Website based education for City of Aberdeen citizens.

Table 1-1 is the work plan for the 2019 SWMP Public E&O activities.

<b>Table 1-1. 2019 Education and Outreach Work Plan</b>			
Task ID #	Task Description	Target Date	Notes
EDUC-1	Schedule, advertise, and conduct public hearing for the 2019 SWMP	February 2019	Coordinate with regularly scheduled February City Council Meeting
EDUC-2	Update Stormwater page of the City website	March 2019	Upload the 2019 SWMP, 2018 Annual Report, and stormwater education material
EDUC-3	Provide education opportunities for local engineers, contractors and developers	September 2019	Topics may include Erosion Control, Low Impact Development (LID), and Stormwater Treatment and Flow Control BMPs
EDUC-4	Community Outreach – SPLASH Festival, and Aberdeen Art Walk	July 2019	Illicit Discharge, Pet Waste, Source Control BMPs
EDUC-5	Educational Utility Bill Inserts	Quarterly	Fecal Coliform/Illicit Discharge, Landscaping Waste, Erosion Control/Source Control BMPs, Low Impact Development
EDUC-6	Community Outreach – Chehalis Watershed Festival	October 2019	Illicit discharge, Pet Waste, LID, Source Control BMPs

## **Section 2 - Public Involvement and Participation**

This section describes Permit requirements related to Public Involvement and Participation, lists the continuing and/or current programs and activities that meet Permit requirements, and identifies the planned activities recommended for continued compliance with the current 2013-19 Permit.

### **2.1 Permit Requirements**

The Permit (Section S5.C.2) requires the City to:

- Provide ongoing opportunities for Public Involvement and Participation through advisory boards and commissions, public hearings, and watershed committees; participation in developing rate structures and budgets; or other similar activities. The public must be able to participate in the decision-making processes involving the development, implementation, and update of the SWMP.
- Make the SWMP Plan and Annual Compliance Report available to the public, including posting on the City's Web site. Make other documents required to be submitted to Ecology in response to permit conditions available to the public.

The Permit (Appendix 2 Total Maximum Daily Load Requirements) requires the City to:

- Design and implement a Stream Team program where two citizen stream teams are formed to participate in stewardship activities.

### **2.2 Current Activities**

The City provides ongoing opportunities for public involvement and participation and takes comments and suggestions relating to the development and implementation of the SWMP. The City will continue to provide these opportunities to remain in compliance with the 2013-19 Permit. The following is a partial list of public involvement and participation opportunities that have been provided:

- Numerous presentations have been made to the City council about a variety of stormwater issues. Aberdeen is unique in that the City Council consists of 12 members who are elected from 6 wards throughout the City. Due to size and geographic distribution of our City council it is a much broader representation of the citizens of our community than would be found in a typical city. Also at each council meeting there are representatives from two local radio stations and the local newspaper, as a result whatever is reported to the council is often repeated through the news media to the general population.
- The City advertises and conducts a public hearing to give citizens an opportunity to comment on the 2019 Stormwater Management Plan.
- The City of Aberdeen will submit the updated 2019 SWMP and 2018 Annual Report to Ecology prior to the March 31, 2019 deadline and post both on the Stormwater page of the City of Aberdeen website prior to May 31, 2019. The public is encouraged to comment in person at a public hearing or through email on the stormwater page.
- The City of Aberdeen has created the Aberdeen Stream Team and participates in 2-3 organized stream cleaning stewardship opportunities per year where the City supports volunteers with labor, equipment, supplies, trash disposal, and organization.
- The City partners with the Grays Harbor Stream Team and CleanStreamsandMemos to provide assistance with debris haul off and equipment needs when requested.
- City Sponsored Watershed Cleanups
  - Fry Creek
  - Alder Creek



## 2.3 Planned Activities

Public involvement can promote awareness of and foster a sense of responsibility for the health of the affected watersheds. The City of Aberdeen 2019 SWMP includes ongoing opportunities for public involvement and participation. Actions recommended for continued compliance heading into 2019 include:

- Continue to provide the opportunity for public comment on the SWMP through public hearing.
- Post the 2019 SWMP and 2018 Annual Report on the City website after it has been submitted to the Washington State Department of Ecology.
- Encourage input on the SWMP and stormwater outreach program through public hearing, online advertisement and participation in the Aberdeen Stream Team.
- Solicit general stormwater comments, concerns, and suggestions at all scheduled community outreach events and activities.
- Continued participation in the Aberdeen Stream Team with stewardship events in 2019.

Table 2-1 is the work plan for the 2019 SWMP Public Involvement and Participation Work Plan.

<b>Table 2-1. 2019 Public Involvement and Participation Work Plan</b>			
<b>Task ID #</b>	<b>Task Description</b>	<b>Target Date</b>	<b>Notes</b>
PIP-1	Schedule, advertise, and conduct public hearing for the 2019 SWMP	February 2019	Coordinate with regularly scheduled February City Council Meeting
PIP-2	Fry Creek Cleanup Event	March 2019	City sponsored community creek cleanup. (Spring)
PIP-3	Alder Creek Cleanup Event	October 2019	City sponsored community creek cleanup. (Fall)
PIP-4	Continued partnering with GH Stream Team, CleanStreamsandMemes, and other organization to foster public involvement	Ongoing	Provide refuse disposal, partnership, equipment, technical guidance, etc...

## **Section 3 - Illicit Discharge Detection and Elimination**

This section describes the Permit requirements for illicit discharge detection and elimination (IDDE), lists the continuing and/or current programs and activities that meet Permit requirements, and identifies the planned activities recommended for continued compliance with the current 2013-19 Permit.

### **3.1 Permit Requirements**

The Permit (Section S5.C.3) requires the City to:

- Maintain a storm sewer system map that includes stormwater system information identified in the Permit (e.g., MS4, outfalls, receiving waters, etc.).
- Implement an ordinance or other regulatory mechanism to prohibit non-stormwater, illicit discharges into the MS4. The ordinance or other regulatory mechanism shall be in effect no later than February 2, 2018.
- Implement a compliance strategy that includes compliance actions and enforcements provisions necessary to help detect and address illicit discharges.
- Implement and maintain an ongoing program to detect and identify non-stormwater discharges and illicit connections, and address illicit discharges to the MS4 (IDDE Program).
- Develop procedures for and complete field screenings of at least 40 percent of the MS4 no later than June 30, 2018, and on average 12 percent each year thereafter.
- Publicly list and publicize a hotline or other local telephone number for public reporting of spills and other illicit discharges. Track illicit discharge reports, actions taken, and enforcement actions.
- Maintain an ongoing training program for City staff that may come into contact with or respond to illicit connections or discharges. Train staff on proper IDDE response procedures and processes and train municipal field staff to recognize and report illicit discharges.
- Inform public employees, businesses, and general public of hazards associated with illegal discharges and improper disposal of waste.
- Summarize all illicit discharges and connections reported to the City and include a description of the response actions taken for each illicit discharge and connection according to the Permit – specified timeline, including enforcement actions, in the Compliance Report.

The Permit (Appendix 2 Total Maximum Daily Load Requirements) requires the City to:

- Design and implement a program which notifies residents, in a timely manner, when bacteria pollution, that poses a public health concern, reaches the MS4.
- Install and maintain pet waste dispenser units and explanatory signage in public areas with dog use.
- Designate areas within the MS4 that discharge to points 501, 510 & 514 as high priority areas for illicit discharge detection and elimination efforts.

### **3.2 Current Activities**

The City currently implements activities and programs that meet the Permit requirements. The City will continue to implement these programs and activities to remain in compliance with the 2013-19 Permit. The current compliance activities associated with the above Permit requirements include:

- The City maintains a map of the MS4 in ArcGIS (a geographic information system software) that meets the requirements of section S5.C.3 of the Phase II Permit. The map is updated with new facilities or corrected for inconsistencies based on field verification.
- The City reviews and updates the IDDE program annually to ensure consistent citywide implementation of the Permit requirements.

- The City amends city codes, SOPs, and construction standards as needed in order to implement the Permit's illicit discharge and enforcement requirements.
- The City continues the stormwater outfall illicit discharge screening and source control program requirements. This includes performing a 100% storm drainage outfall reconnaissance inventory annually.
- The City prioritizes receiving waters for inspection, and implementing field screening and source control activities for prioritized receiving waters.
- The City continues with illicit discharge awareness and response training program for City staff.
- The City maintains a spill control supply shed for quick access by all City departments.
- The City has a 24-hour illicit discharge response line for public reporting of spills and other illicit discharges (360-537-3393).

### 3.3 Planned Activities

The City has an IDDE program which maintains compliance with the performance measures of the Permit (2013-2019). Actions recommended for continued compliance heading into 2019 include:

- Continually update the MS4 map in GIS to address missing information, inaccurate data, and new infrastructure constructed throughout the year.
- Review and update the IDDE program annually.
- Update IDDE training for all municipal field staff.
- Summarizing IDDE activities and programs for the Compliance Report submittals

Table 3-1 is the work plan for the 2019 SWMP IDDE activities.

<b>Table 3-1. 2019 Illicit Discharge Detection &amp; Elimination Work Plan</b>			
<b>Task ID #</b>	<b>Task Description</b>	<b>Target Date</b>	<b>Schedule Notes</b>
IDDE-1	Update MS4 Mapping	Ongoing	Private connections, Outfalls, Stormwater Facilities
IDDE-2	Update Illicit Discharge Reporting Procedures	November 2019	Move to Online Reporting
IDDE-3	Municipal field staff training on IDDE and Erosion and Sediment Control	Annually May	Coordinate with start of construction season
IDDE-4	Annual IDDE Field Screening of MS4 Outfalls	August 2019	100% Outfall Inspection & Screening
IDDE-5	Review and update City IDDE Program	December 2019	Completed Annually at the end of the year
IDDE-6	Utility Bill Insert (Fecal Coliform/Illicit Discharge)	Early Spring 2019	1 <sup>st</sup> Quarterly Utility Bill Insert
IDDE-7	Utility Bill Insert (Landscape Waste)	Late Spring 2019	2 <sup>nd</sup> Quarterly Utility Bill Insert

## **Section 4 - Controlling Runoff from New Development, Redevelopment, and Construction Sites**

This section describes the Permit requirements related to Controlling Runoff from New Development, Redevelopment, and Construction Sites, lists the continuing and/or current programs and activities that meet Permit requirements, and identifies the planned activities recommended for continued compliance with the current 2013-19 Permit.

### **4.1 Permit Requirements**

The Permit (Section S5.C.4) requires the City to:

- Implement and enforce a program (Stormwater Quality Program) to reduce pollutants in stormwater runoff to the MS4 from new development, redevelopment, and construction site activities no later than June 30, 2018. The program must apply to both private and public projects, including roads, and address all construction and development-associated pollutant sources.
- Implement an ordinance or other regulatory mechanism by June 30, 2018 that addresses runoff from new development, redevelopment, and construction site projects. The ordinance shall either include requirements that will protect water quality, reduce the discharge of pollutants to the MEP, and satisfy State requirement under chapter 90.48 RCW, or, adopt the requirements, limitations, and criteria provided in the adopted Stormwater Management Manual for Western Washington (SWMMWW), created by the Department of Ecology.
- The program shall include a permitting process with site plan review, inspection and enforcement capability for both private and public projects, using qualified personnel.
- The program shall include provisions to verify adequate long-term operations and maintenance of stormwater treatment and flow control facilities that are permitted and constructed pursuant to the Public Works permitting process. The program shall include an annual inspection process and establish maintenance standards that are as protective or more protective of facility function than those specified in Chapter 4 of the SWMMWW.
- Provide copies of the “Notice of Intent for Construction Activities” and copies of the “Notice of Intent for Industrial Activity” to representatives of proposed new development and redevelopment.
- Provide training to staff whose primary job duties are implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement.
- Review and revise the local development-related policies, codes, and standards or other enforceable documents to incorporate and require LID principles and LID BMPs by June 30, 2018. The range of issues outlined in *Integrating LID into Local Codes: A Guidebook for Local Governments* (Puget Sound Partnership, 2012) is to be considered. A summary of the review and revision process results must be submitted with the fifth year Annual Report and shall include at a minimum, a list of participants, the codes, rules, standards, and other enforceable documents reviewed, and the revisions made to those documents which incorporate and require LID principles and LID BMPs. The summary shall include existing requirements for LID principles and LID BMPs in development related codes.

### **4.2 Current Activities**

The City currently implements activities and programs that meet the Permit requirements. The City will continue to implement these programs and activities to remain in compliance with the 2013-19 Permit. The current compliance activities associated with the above Permit requirements include:

- The City implemented an ordinance in 2010 that addresses runoff from new development, redevelopment, and construction site activities.

- The City implemented a Stormwater Quality Program to reduce pollutants in stormwater runoff to the MS4 from new development, redevelopment, and construction site activities. The City applies the program through the Public Works permitting process and uses the Aberdeen municipal code to enforce the requirements.
- The City adopted the most current version of the SWMMWW as the citywide stormwater standard for development, redevelopment, and construction projects.
- The City reviews and amends city codes and standards as needed to meet the Permit requirements for development, redevelopment, construction stormwater management.
- The City regularly reviews the Public Works permitting process (plan review, inspection, enforcement, and documentation procedures) to check where changes can be made to better address the Permit requirements.
- The City provides ongoing training to staff on new regulations, processes and procedures for the permitting process, inspection and enforcement.
- The City provides a link on the Stormwater page of the City website that directs representatives of proposed new development and redevelopment to Ecology’s webpage which contains the “Notice of Intent for Construction Activities” and the “Notice of Intent for Industrial Activity”.

### 4.3 Planned Activities

The City has a Stormwater Quality program which maintains compliance with the performance measures of the Permit (2013-19). Actions recommended for continued compliance heading into 2019 include:

- Review and revise the Stormwater Quality Program to address Permit requirements if needed.
- Continue to review and revise City land use and development-related regulations to incorporate low impact development (LID) principles and BMPs.
- Summarize annual activities for the “Controlling Runoff from New Development, Redevelopment, and Construction Sites” component of the Annual Report.

Table 4-1 is the work plan for the 2019 SWMP activities related to Controlling Runoff from New Development, Redevelopment, and Construction Sites.

<b>Table 4-1. 2019 Controlling Run-off from New Development, Redevelopment, and Construction Sites Work Plan</b>			
<b>Task ID #</b>	<b>Task Description</b>	<b>Target Date</b>	<b>Schedule Notes</b>
CTRL-1	Review and revise the Stormwater Quality Program	December 2019	Updated requirements of the new 2019 Permit
CTRL-2	Review process and procedures of stormwater treatment and flow control BMP/facility inspections	May 2019	Permit S5.C.4.c
CTRL-3	Review training program for staff whose primary duties are controlling run-off through permitting, plan review, inspection, etc.	June 2019	Permit S5.C.4.e
CTRL-4	Continually review and revise City land use and development-related regulations to incorporate LID principles and BMPs	September 2019	Permit S5.C.4.f
CTRL-5	Utility Bill Insert (Erosion Control/Source Control BMPs)	Summer 2019	3 <sup>rd</sup> Quarterly Utility Bill Insert
CTRL-6	Utility Bill Insert (Low Impact Development)	Fall 2019	4 <sup>th</sup> Quarterly Utility Bill Insert

## **Section 5 Municipal Operations and Maintenance**

This section describes the Permit requirements related to Municipal Operations and Maintenance (O&M), lists the continuing and/or current programs and activities that meet Permit requirements, and identifies the planned activities recommended for continued compliance with the current 2013-19 Permit.

### **5.1 Permit Requirements**

The Permit (Section S5.C.5) requires the City to:

- Implement an O&M program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- Implement maintenance standards that are as protective, or more protective, of facility function than those specified in Chapter 4 of Volume V of the Stormwater Management Manual for Western Washington (SWMMWW), no later than June 30, 2018.
- Perform annual inspections of all municipally owned or operated permanent stormwater treatment and flow control BMPs/facilities, and take appropriate maintenance actions in accordance with the adopted maintenance standards.
- Perform spot checks of potentially damaged permanent stormwater treatment and flow control BMPs/facilities after major storm events (24-hour storm event with a 10 year or greater recurrence interval).
- Perform inspection of all catch basins and inlets owned or operated by the Permittee at least once, no later than June 30, 2018 and every two years thereafter.
- Implement 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.
- Implement an ongoing training program for employees of the Permittee whose primary construction, operations or maintenance job functions may impact stormwater quality.
- Implement a Stormwater Pollution Prevention Plan (SWPPP) 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 the General NPDES Permit for Stormwater Discharges Associated with Industrial Activities or another NPDES permit that authorizes stormwater discharges associated with the activity.

### **5.2 Current Activities**

The City currently implements activities and programs that meet the Permit requirements. The City will continue to implement these programs and activities to remain in compliance with the 2013-19 Permit. The current compliance activities associated with the above Permit requirements include:

- The City has implemented a Municipal Operations and Maintenance (O&M) Program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- The City has adopted and utilizes the maintenance standards specified in Chapter 4 of Volume V of the SWMMWW.
- The City will continue to perform the required inspections of all municipally owned or operated permanent stormwater treatment and flow control BMPs/facilities.
- The City performed inspection of all catch basins and inlets owned or operated by the Permittee in 2015, and has been regularly performing inspections of high priority sections of the MS4.
- The City reviews and updates the City crew field manual (Pollution Prevention and Operation and Maintenance for Municipal Field Operations), which was created to implement practices, policies

and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the City, and road maintenance activities under the functional control of the City.

- The City reviews and updates the municipal facility SWPPP for City owned facilities as needed.
- Continue the training program to provide ongoing citywide pollution prevention training for municipal field staff based on the updated and/or new SOPs developed to reduce stormwater runoff from construction, operation, and maintenance of municipal facilities and lands.

### 5.3 Planned Actions

The City has a Municipal Operations and Maintenance (O&M) program which maintains compliance with the performance measures of the Permit (2013-19). Actions recommended for continued compliance heading into 2019 include:

- Review and revise the Municipal O&M program as needed
- Review and revise inspection processes and procedures for municipally owned facilities as needed.
- Continue required annual inspections of municipally owned facilities.
- Review and revise the municipal facility SWPPP as needed.

Table 5-1 is the work plan for the 2019 SWMP O&M for Municipal Operations activities.

<b>Table 5-1. 2019 Municipal Operations &amp; Maintenance Work Plan</b>			
<b>Task ID #</b>	<b>Task Description</b>	<b>Target Date</b>	<b>Schedule Notes</b>
O&M-1	Review and revise the Municipal O&M program as needed	Annually December	Permit S.5.C.5
O&M-2	Inspection of municipally owned or operated permanent stormwater treatment and flow control facilities	Annually	Permit S.5.C.5.b
O&M-3	Spot checks of permanent stormwater treatment and flow control facilities after major storm events	After 24-hr storm with >10 year recurrence	Permit S.5.C.5.c
O&M-4	Continued inspection of catch basins and inlets owned or operated by the City	December 2019	Permit S.5.C.5.d
O&M-5	Schedule training for employees of the City whose primary construction, operations or maintenance job functions may impact stormwater quality.	Annually May	Permit S.5.C.5.g
O&M-6	Review and revise the SWPPP for heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the City	Annually December	Permit S.5.C.5.h

## **SECTION 6 MONITORING AND ASSESSMENT**

This section describes the Permit requirements related to water quality Monitoring and Assessment, lists the continuing and/or current programs and activities that meet Permit requirements, and identifies the planned activities recommended for continued compliance with the current 2013-19 Permit.

### **6.1 Permit Requirements**

The Permit (Section S8) requires the City to:

- Either, conduct and provide stormwater monitoring, studies, and analysis in the Annual Report, or, take part in the Stormwater Action Monitoring (SAM), previously known as Regional Stormwater Monitoring Program (RSMP).
- Pay into a collective fund to implement the SAM effectiveness study due to Ecology annually beginning August 15, 2014. (Aberdeen cost per Ecology: \$6693)
- Pay into a collective fund to implement the SAM Source Identification Information Repository (SIDIR) due to Ecology annually beginning August 15, 2014. (Aberdeen cost per Ecology: \$621)

The Permit (Appendix 2 Total Maximum Daily Load Requirements) requires the City to:

- Design and implement a program which notifies residents, in a timely manner, when bacteria pollution that poses a public health concern reaches the MS4.
- Designate areas within the MS4 that discharge to points 501, 510 & 514 as high priority areas for illicit discharge detection and elimination efforts.
- Complete field screening prior to December 31, 2014, investigations must include activities for both the dry season (May through October) and the wet season (November through April)
- Conduct twice monthly wet weather sampling of the discharge points 501, 510 & 514 to determine if specific discharges from Aberdeen MS4 exceed the water quality criteria for fecal coliform bacteria.

### **6.2 Current Activities**

The City currently implements activities and programs that meet the Permit requirements. The City will continue to implement these programs and activities to remain in compliance with the 2013-19 Permit. The current compliance activities associated with the above Permit requirements include:

- The City annually pays into a collective fund to comply with monitoring requirements of the Permit.
- Review QAPP for the sampling and testing component of the permit.
- The City conducts twice monthly wet weather sampling at the pre-determined discharge points.
- The City conducts sampling or testing required for characterizing illicit discharges pursuant to the Permit's IDDE program conditions.
- The City reviews water quality monitoring data and/or reports conducted by or for the City to determine if potential water quality violations are identified.
- The City reports potential water quality violations to Ecology within 30 days of becoming aware of the potential violations per the Permit's Compliance with Standards condition S4.F.

### **6.3 Planned Activities**

The City has a Monitoring and Assessment program which maintains compliance with the performance measures of the Permit (2013-19). Actions recommended for continued compliance heading into 2019 include:



- Review the regional status and trends monitoring options offered by the upcoming 2019-2024 Phase II Permit and select the option that best fits the City’s interests.
- Continue to conduct sampling and testing required for characterizing illicit discharges pursuant to the Permit’s IDDE program conditions.
- Continue to conduct twice monthly wet weather sampling at the pre-determined discharge points for two wet seasons in accordance with the QAPP.
- Submit collected data for the Compliance Report submittals.

Table 6-1 is the work plan for the 2019 SWMP Monitoring and Assessment activities.

<b>Table 6-1. 2019 Monitoring and Assessment Work Plan</b>			
<b>Task ID #</b>	<b>Task Description</b>	<b>Target Date</b>	<b>Schedule Notes</b>
M&A-1	Review the regional status and trends monitoring options offered by the upcoming 2019-2024 Phase II Permit and select the option that best fits the City’s interests.	June 2019	2019-2024 Phase II Permit Reissued in August, 2019
M&A-2	Conduct sampling and testing required by the IDDE program and QAPP	Ongoing	Permit S9.C.1.C

## Abbreviations and Definitions

The following definitions and abbreviations are taken directly from the Phase II Permit or from this SWMP Plan and are reproduced here for the reader's convenience.

**40 CFR** means Title 40 of the Code of Federal Regulations, which is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the U.S. federal government.

**AKART** means all known, available, and reasonable methods of prevention, control, and treatment. See also State Water Pollution Control Act, Revised Code of Washington (RCW) Chapters 90.48.010 and 90.48.520.

**Applicable TMDL** means a total maximum daily load (TMDL) that has been approved by EPA on or before the issuance date of this Permit, or prior to the date that Ecology issues coverage under this Permit, whichever is later.

**Beneficial uses** means uses of waters of the state that include but are not limited to use for domestic, stock watering, industrial, commercial, agricultural, irrigation, mining, fish and wildlife maintenance and enhancement, recreation, generation of electric power and preservation of environmental and aesthetic values, and all other uses compatible with the enjoyment of the public waters of the state.

**BMP** means best management practice.

**Bypass** means the diversion of stormwater from any portion of a stormwater treatment facility.

**Component or Program Component** means an element of the Stormwater Management Program listed in S5 Stormwater Management Program for Cities, Towns, and Counties or S6 Stormwater Management Program for Secondary Permittees, S7 Compliance with Total Maximum Daily Load Requirements, or S8 Monitoring of this Permit.

**CWA** means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. (6-483 and Pub. L. 97-117, 33 U.S.C. 1251 et seq.).

**Ecology** means the Washington State Department of Ecology.

**Entity** means a governmental body, or a public or private organization.

**E&O** means education and outreach.

**EPA** means the U.S. Environmental Protection Agency.

**General Permit** means a permit that covers multiple dischargers of a point source category within a designated geographical area, in lieu of individual permits being issued to each discharger.

**Groundwater** means water in a saturated zone or stratum beneath the surface of the land or below a surface water body. Refer to Washington Administrative Code (WAC) Chapter 173-200.

**Hazardous substance** means any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical, or biological properties described in WAC 173-303-090 or WAC 173-303-100.

**Heavy equipment maintenance or storage yard** means an uncovered area where any heavy equipment, such as mowing equipment, excavators, dump trucks, backhoes, or bulldozers are washed or maintained, or where at least five pieces of heavy equipment are stored on a long-term basis.

**Highway** means a main public road connecting towns and cities.

**Hyperchlorinated** means water that contains more than 10 milligrams/liter chlorine.

**IDDE** means Illicit Discharge Detection and Elimination.

**Illicit connection** means any infrastructure connection to the MS4 that is not intended, permitted, or used for collecting and conveying stormwater or non-stormwater discharges allowed as specified in this Permit

(S5.C.3 and S6.D.3). Examples include sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to the MS4.

**Illicit discharge** means any discharge to an MS4 that is not composed entirely of stormwater or of non-stormwater discharges allowed as specified in this Permit (S5.C.3 and S6.D.3).

**Impervious surface** means a non-vegetated surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A non-vegetated surface area that causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or stormwater areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces that similarly impede the natural infiltration of stormwater.

**Land-disturbing activity** means any activity that results in a change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil topography. Land-disturbing activities include, but are not limited to, clearing, grading, filling, and excavation. Compaction that is associated with stabilization of structures and road construction shall also be considered land-disturbing activity. Vegetation maintenance practices, including landscape maintenance and gardening, are not considered land-disturbing activity. Stormwater facility maintenance is not considered land-disturbing activity if conducted according to established standards and procedures.

**Low-impact development (LID)** means a stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation, and transpiration by emphasizing conservation, use of onsite natural features, site planning, and distributed stormwater management practices that are integrated into a project design.

**Low-impact development best management practices (LID BMP)** means distributed stormwater management practices, integrated into a project design, that emphasize pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation, and transpiration. LID BMPs include, but are not limited to, bio-retention/rain gardens, permeable pavements, roof downspout controls, dispersion, soil quality and depth, vegetated roofs, minimum excavation foundations, and water reuse.

**Material storage facilities** means an uncovered area where bulk materials (liquid, solid, granular, etc.) are stored in piles, barrels, tanks, bins, crates, or other means.

**Maximum extent practicable (MEP)** refers to paragraph 402(p)(3)(B)(iii) of the federal Clean Water Act, which reads as follows: Permits for discharges from municipal storm sewers shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques, and system, design, and engineering methods, and other such provisions as the Administrator or the State determines appropriate for the control of such pollutants.

**MEP** means maximum extent practicable.

**Municipal separate storm sewer system (MS4)** means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

- I. Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of Washington State.
- II. Designed or used for collecting or conveying stormwater.
- III. Which is not a combined sewer;
- IV. Which is not part of a publicly owned treatment works (POTW) as defined at 40 CFR 122.2.; and

- V. Which is defined as “large” or “medium” or “small” or otherwise designated by Ecology pursuant to 40 CFR 122.26.

**National Pollutant Discharge Elimination System (NPDES)** means the national program for issuing, modifying, revoking, and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the federal Clean Water Act, for the discharge of pollutants to surface waters of the state from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington Department of Ecology.

**Native vegetation** means vegetation comprising plant species, other than noxious weeds, that are indigenous to the coastal region of the Pacific Northwest and that reasonably could have been expected to naturally occur on the site. Examples include trees such as Douglas Fir, western hemlock, western red cedar, alder, big-leaf maple; shrubs such as willow, elderberry, salmonberry, and salal; and herbaceous plants such as sword fern, foam flower, and fireweed.

**New development** means land-disturbing activities, including Class IV General Forest Practices that are conversions from timber land to other uses; structural development, including construction or installation of a building or other structure; creation of hard surfaces; and subdivision, short subdivision, and binding site plans, as defined and applied in Chapter 58.17 RCW. Projects meeting the definition of redevelopment shall not be considered new development. Refer to Appendix 1 of the Permit for a definition of hard surfaces.

**New Permittee** means a city, town, or county that is subject to the Western Washington Municipal Stormwater General Permit and was not subject to the Permit prior to August 1, 2013.

**New Secondary Permittee** means a Secondary Permittee that is covered under, a municipal stormwater general permit and was not covered by the Permit prior to August 1, 2013.

**Notice of Intent (NOI)** means the application for, or a request for coverage under a General Permit pursuant to WAC 173-226-200.

**Notice of Intent for Construction Activity** means the application form for coverage under the Construction Stormwater General Permit.

**Notice of Intent for Industrial Activity** means the application form for coverage under the General Permit for Stormwater Discharges Associated with Industrial Activities.

**O&M** means operations and maintenance.

**Outfall** means point source as defined by 40 CFR 122.2 at the point where a discharge leaves the MS4 and discharges to waters of the State. Outfall does not include pipes, tunnels, or other conveyances that connect segments of the same stream or other surface waters and are used to convey primarily surface waters (i.e., culverts).

**Permittee** unless otherwise noted, the term “Permittee” includes city, town, or county Permittee, Co-Permittee, New Permittee, Secondary Permittee, and New Secondary Permittee.

**Physically interconnected** means that one MS4 is connected to another storm sewer system in such a way that it allows for direct discharges to the second system. For example, the roads with drainage systems and municipal streets of one entity are physically connected directly to a storm sewer system belonging to another entity.

**Project site** means that portion of a property, properties, or rights-of-way subject to land-disturbing activities, new hard surfaces, or replaced hard surfaces. Refer to Appendix 1 of the Permit for a definition of hard surfaces.

**QAPP** means Quality Assurance Project Plan.

**Qualified personnel** means someone who has had professional training in the aspects of stormwater management for which they are responsible and are under the functional control of the Permittee. Qualified personnel may be staff members, contractors, or volunteers.

**Quality Assurance Project Plan (QAPP)** means a document that describes the objectives of an environmental study and the procedures to be followed to achieve those objectives.

**RCW** means the Revised Code of Washington State.

**Receiving waters** means bodies of water or surface water systems to which surface runoff is discharged via a point source of stormwater or via sheet flow. Receiving waters may also be groundwater to which surface runoff is directed by infiltration.

**Redevelopment** means, on a site that is already substantially developed (i.e., has 35 percent or more of existing hard surface coverage), the creation or addition of hard surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including construction, installation, or expansion of a building or other structure; replacement of hard surface that is not part of a routine maintenance activity; and land-disturbing activities. Refer to Appendix 1 of the Permit for a definition of hard surfaces.

**Regional Stormwater Monitoring Program (RSMP)** means, for all of western Washington, a stormwater-focused monitoring and assessment program consisting of these components: status and trends monitoring in small streams and marine nearshore areas, SWMP effectiveness studies, and a Source Identification Information Repository (SIDIR). The priorities and scope for the RSMP are set by a formal stakeholder group. For this Permit term, RSMP status and trends monitoring will be conducted in the Puget Sound basin only.

**Regulated small municipal separate storm sewer system** means a municipal separate storm sewer system (MS4) that is automatically designated for inclusion in the Phase II stormwater permitting program by its location within an urbanized area, or by designation by Ecology and is not eligible for a waiver or exemption under S1.C.

**RSMP** means Regional Stormwater Monitoring Program.

**Runoff** is water that travels across the land surface and discharges to water bodies either directly or through a collection and conveyance system. See also “Stormwater.”

**Secondary Permittee** is an operator of a regulated small MS4 that is not a city, town, or county. Secondary Permittees include special purpose districts and other public entities that meet the criteria in S1.B.

**Shared water bodies** means water bodies, including downstream segments, lakes, and estuaries that receive discharges from more than one Permittee.

**SIDIR** means Source Identification Information Repository.

**Significant contributor** means a discharge that contributes a loading of pollutants considered to be sufficient to cause or exacerbate the deterioration of receiving water quality or instream habitat conditions.

**Small municipal separate storm sewer system** means an MS4 that is not defined as “large” or “medium” pursuant to 40 CFR 122.26(b)(4) and (7) or designated under 40 CFR 122.26 (a)(1)(v).

**SOP** means standard operating procedure.

**Source control BMP** means a structure or operation that is intended to prevent pollutants from coming into contact with stormwater through physical separation of areas or careful management of activities that are sources of pollutants. The 2012 Ecology Manual separates source control BMPs into two types. Structural source control BMPs are physical, structural, or mechanical devices, or facilities that are intended to prevent pollutants from entering stormwater. Operational BMPs are non-structural practices that prevent or reduce pollutants from entering stormwater. See Volume IV of the 2012 Ecology Manual for details.

**Stormwater** means runoff during and following precipitation and snowmelt events, including surface runoff, drainage, or interflow.

**Stormwater associated with industrial and construction activity** means the discharge from any conveyance that is used for collecting and conveying stormwater, which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant, or associated with clearing, grading and/or excavation, and is required to have an NPDES permit in accordance with 40 CFR 122.26.

**Stormwater Management Program (SWMP)** means a set of actions and activities designed to reduce the discharge of pollutants from the MS4 to the MEP and to protect water quality, and comprising the

components listed in S5 (for cities, towns and counties) or S6 (for Secondary Permittees) of this Permit and any additional actions necessary to meet the requirements of applicable TMDLs pursuant to S7 Compliance with TMDL Requirements, and S8 Monitoring and Assessment.

**Stormwater treatment and flow control BMPs/facilities** means detention facilities, treatment BMPs/facilities, bio-retention, vegetated roofs, and permeable pavements that help meet Minimum Requirements 6 (treatment), 7 (flow control), or both.

**SWPPP** means Stormwater Pollution Prevention Plan.

**Total maximum daily load (TMDL)** means a water cleanup plan. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The calculation must include a margin of safety to ensure that the water body can be used for the purposes the state has designated. The calculation must also account for reasonable variation in water quality. Water quality standards are set by states, territories, and tribes. They identify the uses for each water body, for example, drinking water supply, contact recreation (swimming), and aquatic life support (fishing), and the scientific criteria to support that use. The Clean Water Act, Section 303, establishes the water quality standards and TMDL programs.

**Tributary conveyance** means pipes, ditches, catch basins, and inlets owned or operated by the Permittee and designed or used for collecting and conveying stormwater.

**UGA** means Urban Growth Area.

**Urbanized area** is a federally designated land area comprising one or more places and the adjacent densely settled surrounding area that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile. Urbanized areas are designated by the U.S. Census Bureau based on the most recent decennial census.

**Vehicle maintenance or storage facility** means an uncovered area where any vehicles are regularly washed or maintained, or where at least 10 vehicles are stored.

**Water Quality Standards** means Surface Water Quality Standards, Chapter 173-201A WAC, Ground Water Quality Standards, Chapter 173-200 WAC, and Sediment Management Standards, Chapter 173-204 WAC.

**Waters of the state** include those waters as defined as "waters of the United States" in 40 CFR Subpart 122.2 within the geographic boundaries of Washington State and "waters of the state" as defined in Chapter 90.48 RCW, which includes lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.