Brown AND Caldwell

City of Mount Vernon

2017 Stormwater Management Program

City of MOUNT VERNON

Puget Sound Starts Here

March 2017

City of Mount Vernon 2017 Stormwater Management Program

Prepared for

City of Mount Vernon, Washington

March 2017

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Prepared for

City of Mount Vernon, Washington

March 2017

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List of Abbreviations

2005 Ecology Manual	Stormwater Management Manual for Western Washington (2005)
2012 Ecology Manual	Stormwater Management Manual for Western Washington (2012)
BMP	best management practice
CAO	City Attorney's Office
DS	Development Services (Department)
City	City of Mount Vernon
CSO	combined sewer overflow
CWA	Clean Water Act
E&O	education and outreach
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
IDDE	illicit discharge detection and elimination
IPM	Integrated Pest Management Plan
IS	Information Services
LA	load allocation
LID	low-impact development
MEP	maximum extent practicable
MS4	municipal separate storm sewer system
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
O&M	operation and maintenance
PCHB	Pollution Control Hearings Board
Phase II Permit	Western Washington Phase II Municipal Stormwater Permit
PSSH	Puget Sound Starts Here
QAPP	Quality Assurance Project Plan
Road Map	Roads Operations and Maintenance Regional Coordination Program
RSMP	Regional Stormwater Monitoring Program
SCD	Skagit Conservation District
SIDIR	Source Identification Information Repository
SOG	Stormwater Outreach Group
SOP	standard operating procedure
STORM	Stormwater Outreach for Regional Municipalities
SWMP	Stormwater Management Program
SWMP Plan	written documentation of the SWMP
SWPPP	stormwater pollution prevention plan
TMDL	total maximum daily load
WLA	waste load allocation
WWCPA	Washington Wastewater Collection Personnel Association

Section 1

Introduction

This document presents the City of Mount Vernon's Stormwater Management Program (SWMP). Preparation and maintenance of this SWMP Plan is required by the Washington State Department of Ecology (Ecology) as a condition of the Western Washington Phase II Municipal Stormwater Permit (Phase II Permit). The Phase II Permit covers discharges from regulated small municipal separate storm sewer systems (MS4s). Based on criteria outlined in the Phase II Permit, Ecology considers the City of Mount Vernon (City) to be an operator of a small MS4, and the City is therefore required to comply with the Permit.

The Phase II Permit is a requirement of the federal Clean Water Act (CWA), which is intended to protect water quality and restore waters for "fishable, swimmable" uses. The federal Environmental Protection Agency (EPA) has delegated permit authority to Ecology and the Permit has the force of both state and federal law.

Each municipality's permit for discharging stormwater is designed to reduce the discharge of pollutants, protect water quality, and meet the requirements of the CWA. Phase II Permit requirements include making programmatic updates over time and this SWMP Plan has been revised accordingly.

Appendix A includes abbreviations and definitions from the Permit to help the reader understand the City's SWMP.

1.1 The Stormwater Problem

Stormwater is an identified problem for receiving water quality. The following section from the Ecology's Fact Sheet for the Phase II Permit describes some of the relevant issues.

> Stormwater runoff is the leading pollution threat to lakes, rivers, streams, and marine water bodies in urbanized areas of Washington State. The large impervious surfaces in urban areas increase the quantity and peak flows of runoff, which in turn cause hydrologic impacts such as scoured streambed channels, in-stream sedimentation, and loss of habitat. Impacts from stormwater are highly site-specific and vary geographically due to differences in local land use conditions, hydrologic conditions, and the type of receiving water.
>
> The following is a list of typical impacts caused by stormwater discharges:
>
> - **Human health**: In general, untreated stormwater is unsafe. It contains toxic metals, organic compounds, and bacteria. Untreated stormwater is not safe for people to drink, and is not recommended for swimming.
> - **Drinking water**: In some areas of Washington, notably Spokane County and parts of Pierce and Clark counties, gravelly soils allow rapid infiltration of stormwater. Untreated stormwater discharging to the ground could contaminate aquifers that are used for drinking water.
> - **Salmon habitat**: Urban stormwater degrades salmon habitat in streams through effects on hydrologic flows and toxicity. Paved surfaces cause greater winter stormwater flows that erode stream channels, destroying spawning beds. Also, because stormwater does not infiltrate during the wet season, streams can lose summertime base flows, drying out habitat needed for salmon rearing. Toxic chemicals in stormwater harm the immature fish and the adults returning to spawn. The following two studies have identified concerns:

  - Ecology and Pierce County recently conducted in situ trout toxicity testing studies. Pierce County found no significant toxicity in four urban streams in 2008.[1] However, Ecology identified the following chemical stressors that were capable of causing adverse effects that were detected on the native trout embryos and pre-swim-up fry: copper, lead, nickel, zinc, polycyclic aromatic hydrocarbons, and the agricultural fungicide Captan.[2]
  - During the past decade, surveys of spawning adult Coho salmon in Seattle found that very high percentages of adult females (up to 90 percent) were dying before they could spawn. Although the precise causes of these acute die-offs are not yet known, stormwater pollution is likely involved. The problem appears to be widespread throughout urban streams in Puget Sound and is under active scientific investigation.[3]
- **Shellfish industry**: Washington State's multimillion-dollar shellfish industry is increasingly threatened by closures due to stormwater contamination.
- **Degraded water bodies:** In urban and urbanizing areas across Washington State, residential, commercial, and industrial land development has changed land cover and drastically altered stream channels. The impacts of urban land development have severely degraded, and will in many cases permanently destroy, fish resources and other beneficial uses of Washington's waters.

—Ecology, "*Fact Sheet for the Western Washington Phase II Municipal Stormwater Permit*," 2011

The City manages a number of complex systems potentially affecting stormwater. The City is involved in efforts that go beyond the scope of many larger municipalities including, but not limited to, river flood control operations, managing the City storm drain system, and operating sewage treatment facilities. While the City has long had a commitment to clean water and, as a result, is currently in compliance with state and federal requirements, it must now look toward meeting the demands of the new Phase II Permit, described in detail in Section 1.2 below.

1.2 Regulatory Background

The National Pollutant Discharge Elimination System (NPDES) permit program is a requirement of the federal Clean Water Act, which is intended to protect and restore waters for "fishable, swimmable" uses. The EPA has delegated permit authority to state environmental agencies, and these agencies can set permit conditions in accordance with and in addition to the minimum federal requirements. In Washington, Ecology is the NPDES-delegated permit authority.

Municipalities with populations of more than 100,000 (as of the 1990 census) have been designated as Phase I communities and must comply with Ecology's Phase I NPDES Municipal Stormwater Permit. With Mount Vernon's population below the 100,000 threshold, the City must comply with the Phase II Municipal Stormwater Permit. About 100 other municipalities in Washington must also now comply with the Phase II Permit. Ecology's Phase II Permit is available on Ecology's Web site at http://www.ecy.wa.gov/programs/wq/stormwater/municipal/index.html.

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[1] Nautilus Environmental, 2009. Pierce County Public Works and Utilities: Countywide Water Quality Monitoring Plan. *Pilot Test: Rainbow Trout Early Life Stages In-situ Bioassay*, Final Report submitted to Brown and Caldwell.

[2] Randall Marshall and Brandee Era-Miller. 2011, in preparation. *Integrated Ambient Monitoring Pilot Report, Potential Causes for the Impairment of Rainbow Trout Early Lifestages Exposed in Indian Creek for 34 Days and Loss of Diversity in the Instream Benthic Communities*, Washington State Department of Ecology.

[3] McCarthy, Sarah G, John P. Incardona, and Nathaniel L. Scholz. 2008, *Coastal Storms, Toxic Runoff, and the Sustainable Conservation of Fish and Fisheries*, American Fisheries Society Symposium 64:000-000.

The Permit allows municipalities to discharge stormwater runoff from municipal drainage systems into the state's water bodies (i.e., streams, rivers, lakes, and wetlands) as long as municipalities implement programs to protect water quality by reducing the discharge of "nonpoint source" pollutants to the "maximum extent practicable" (MEP) through application of Permit-specified "best management practices" (BMPs). The BMPs specified in the Permit are collectively referred to as the Stormwater Management Program (SWMP) and grouped under the following SWMP components:

- Public Education and Outreach (E&O)
- Public Involvement
- Illicit Discharge Detection and Elimination (IDDE)
- Controlling Runoff from New Development, Redevelopment, and Construction Sites
- Pollution Prevention and Municipal Operation and Maintenance (O&M)
- Monitoring and Assessment

The original Phase II Permit issued by Ecology became effective on February 16, 2007, with an expiration date of February 15, 2012. On June 17, 2009, Ecology released a modified version of the 2007 Permit, which changed some of the requirement deadlines. In 2011 the Washington State Legislature passed and the governor signed ESHB 1478, authorizing Ecology to issue a new Permit, unchanged from the existing permit with effective dates from August 2012 to August 2013. Despite a gap between the Permit effective dates, the Permittees were required to continue to meet all requirements of the 2007 Permit through August 2013. An updated Permit was issued in August 2012 effective from August 2013 to August 2018; it was subsequently modified in January 2015 to reflect the outcomes of appeals made to the Pollution Control Hearings Board (PCHB). The 2017 SWMP incorporates updated requirements under the latest Permit.

A summary schedule of requirements and deadlines contained in the 2013–18 Permit was developed by the Cities of Covington and SeaTac for use by other cities and is included as a reference in Appendix B to this SWMP Plan. The Permit requires the City to report annually (March 31 of each year) on progress in SWMP implementation for the prior year. The Permit also requires submittal of documentation that describes proposed SWMP activities for the coming year. Implementation of various Permit conditions is phased in over the 5-year Permit cycle.

Ecology has published an updated 2012 Stormwater Management Manual for Western Washington (2012 Ecology Manual) to correspond with new requirements in the Permit. The Ecology Manual was further updated in 2014. In December 2016, the City adopted the 2012 Ecology Manual, which will remain in effect until the City elects or is required to adopt an updated manual.

1.3 City of Mount Vernon Regulated Area

The Phase II Permit applies to operators of regulated small MS4s that discharge stormwater to waters of Washington State located west of the crest of the Cascade Range (west of the eastern boundaries of Whatcom, Skagit, Snohomish, King, Pierce, Lewis, and Skamania Counties). For cities, the Permit requirements extend only to those areas of each city that drain to MS4s. In Mount Vernon, much of the downtown area drains to a combined sewer overflow (CSO) system, which sends runoff to the wastewater treatment plant before entering the Skagit River. The CSO discharge area is covered under a permit separate from the Phase II Permit.

1.4 Total Maximum Daily Load Compliance

For stormwater discharges covered under this Permit, Permittees are required to implement actions necessary to achieve the pollutant reductions called for in applicable total maximum daily loads (TMDLs). A TMDL is based on calculations of the maximum amount of a pollutant a water body can receive and still

meet water quality standards. Applicable TMDLs are those that have been approved by the EPA before the issuance date of the Permit or have been approved by the EPA prior to the date the Permittee's application is received by Ecology. Information on Ecology's TMDL program is available on Ecology's Web site at www.ecy.wa.gov/programs/wq/tmdl.

Ecology reviewed all TMDLs approved by EPA prior to Permit issuance, to determine whether municipal stormwater sources were identified in the TMDL. When most of these TMDLs were developed, municipal stormwater was considered a subset of nonpoint discharges, rather than a permitted discharge. As a result, very few TMDLs statewide contain requirements for municipal stormwater sources. Few TMDLs completed to date have established load allocations (LAs) or waste load allocations (WLAs) for municipal stormwater discharges covered under this Permit.

Appendix 2 of the Permit lists the cities and counties affected by TMDLs that were approved by EPA prior to Permit issuance. While the City of Mount Vernon has not been listed in Appendix 2, there are water quality impairments (CWA section 303[d] "listings") within the City that could potentially trigger TMDLs within a future Permit cycle.

1.5 SWMP Implementation Responsibilities

The Public Works Department will be coordinating the overall administration of efforts to comply with Permit requirements. The Community and Economic Development (DS) Department will play a large role in the implementation of Permit program activities such as inspections, Permit review, code revisions, etc. The City has contracted with the Skagit Conservation District (SCD) to implement the Public Education and Outreach requirements of the Permit. The Skagit County Public Health Department conducts septic system inspections and a local source control program that help to educate citizens and businesses about stormwater pollution. Table 1-1 summarizes participant responsibilities for ensuring future Permit compliance. Sections 2 through 8 highlight the planned efforts of these departments and entities in more detail.

Table 1-1. SWMP Implementation Responsibilities

Program component	City departments	Outside entities [a]
Stormwater Management Program	• Public Works • Finance • Information Services (IS) • City Attorney's Office (CAO)	
Public education and outreach	• Public Works • IS	SCD Skagit County Public Health Department
Public involvement	• Public Works • IS	SCD
Illicit discharge detection and elimination	• Public Works • DS • Fire Department • IS • Police • Parks & Recreation	

Table 1-1. SWMP Implementation Responsibilities		
Program component	**City departments**	**Outside entities [a]**
Runoff controls	• Public Works • DS • CAO	
Pollution prevention and municipal operation and maintenance	• Public Works • DS • CAO • Parks and Recreation • Facilities	
Water quality monitoring	• Public Works • DS	SCD

[a] *The Stormwater Outreach for Regional Municipalities (STORM) and Stormwater Work Group are outside entities that the City participates in and are resources for compliance assistance.*

1.6 Document Organization

The contents of this document are based upon Permit requirements and Ecology's "Guidance for City and County Annual Reports for Western Washington, Phase II Municipal Stormwater Permits." The organization of the remainder of this SWMP is modeled after that of the Permit:

- Section 2 addresses Permit requirements for administering the City's SWMP for 2017.
- Section 3 addresses Permit requirements for public E&O for 2017.
- Section 4 addresses Permit requirements for public involvement and participation for 2017.
- Section 5 addresses Permit requirements for IDDE for 2017.
- Section 6 addresses Permit requirements for controlling runoff from new development, redevelopment, and construction sites for 2017.
- Section 7 addresses Permit requirements for municipal O&M for 2017.
- Section 8 addresses Permit requirements for water quality monitoring and assessment for 2017.
- Section 9 summarizes the City's compliance activities.
- Appendix A provides abbreviations and definitions from the Permit.
- Appendix B provides a preliminary 2013–18 Western Washington Phase II Municipal Stormwater Permit Implementation Schedule (courtesy of cities of Covington and SeaTac)
- Appendix C provides the current City stormwater system map.

Each section includes a summary of the relevant Permit requirements and a description of current and planned compliance activities.

Section 2

Stormwater Management Program Administration

This section of the SWMP provides a description of Permit requirements related to overall SWMP administration, including descriptions of the City's current and planned compliance activities for 2017.

2.1 Permit Requirements

The Permit (Section S5.A) requires the City to perform the following tasks:

- Implement a SWMP and prepare written documentation (SWMP Plan) for submittal to Ecology on March 31 of each year, including annual updates to the SWMP. The purpose of the SWMP is to reduce pollutant discharge from the municipal stormwater system to the maximum extent practicable and thereby protect water quality.
- Submit the SWMP Plan for the new calendar year with annual compliance reports for the previous calendar year to Ecology by March 31, summarizing implementation status and providing information from assessment and evaluation procedures collected during the reporting period. Annual compliance reporting commenced in March 2015 (for the 2014 reporting year). The SWMP Plan for 2017 will be submitted to Ecology by March 31, 2017.
- Coordinate with other Permittees on stormwater-related policies, programs, and projects within adjacent or shared areas, and internal coordination among departments of each jurisdiction.

2.2 Current Compliance Activities

The City currently has activities and programs that address the Permit requirements. The current compliance activities associated with the Permit include the following:

- The City has defined roles and responsibilities and developed standard operating procedures (SOPs) for completing updates to future SWMP documents and the Annual Compliance Report annually.
- The City maintains a cost accounting database for tracking annual Permit costs.
- The City maintains a training database for tracking and documenting compliance with all NPDES-related training.
- The City continues to coordinate with external entities such as the SCD, Sedro-Woolley, Burlington, Anacortes, and Skagit County.
- The City meets quarterly with The North Sound NPDES Municipal Stormwater Permit Phase I/II Forum to discuss stormwater policies and projects in the area.
- The City participates in the regional forums under Stormwater Outreach for Regional Municipalities (STORM), NPDES Permit coordinators, and Operations and Maintenance Regional Coordination Program (Road Map).

2.3 Planned 2017 Compliance Activities

The City has positioned itself well to maintain compliance as Ecology phases in the future Permit requirements. Actions recommended for continued compliance are included in Table 2-1, which presents the work plan for the 2017 SWMP administration activities.

Table 2-1. 2017 Stormwater Management Program Administration Work Plan

Task ID	Task description	Lead	Support	Compliance time frame
SWMP-1	Continue development of existing NPDES SWMP cost accounting strategy and tracking system. Train staff on new system.	Public Works, Finance		City maintains cost-tracking database.
SWMP-2	Continue use of NPDES training management structure and tracking system.	Public Works, IS	All	City maintains NPDES training database.
SWMP-3	Define and implement strategy/system for managing SOPs that are used among multiple departments.	Public Works, Finance	CAO	Ongoing.
SWMP-4	Summarize annual activities for "Stormwater Management Program" component of Annual Report; identify any updates to SWMP document.	Public Works, Finance	All	The SWMP and Annual Compliance Report submittal for the previous year is due on or before March 31 of each year.
SWMP-5	Coordinate with other Permittees on stormwater-related policies, programs, and projects within adjacent or shared areas.	Public Works	All	Local jurisdictions meet quarterly to discuss stormwater-related policies and programs. Continue to follow STORM, APWA NPDES Permit coordinators, and Road Map forums. Monitor the State Stormwater Work Group.

Section 3

Public Education and Outreach

This section provides a description of the Permit requirements related to public education and outreach (E&O), including descriptions of the City's current and planned compliance activities for 2017.

3.1 Permit Requirements

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

- Implement an E&O program designed to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. The program shall be designed to educate target audiences (e.g., the general public, businesses, homeowners, students, developers, City employees, etc.) about the stormwater problem and 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. 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.

3.2 Current Compliance Activities

The City currently contracts with the SCD to conduct numerous E&O activities that address stormwater management. Skagit County also assists the City with stormwater education and outreach through its "On Site Sewage Program" that informs citizens and businesses on septic system operation and maintenance. Skagit County and SCD's current activities and programs address the Permit requirements. These programs address the general public, residents/homeowners, developers, City staff, contractors, businesses, engineers, and schoolchildren. The City has also been using the City cable TV channel to broadcast information about stormwater.

SCD tracks all of its E&O efforts and attendees to workshops in Excel databases and Word documents. Skagit County also documents all inspections and businesses visited in spreadsheets. These documents are submitted to the City annually.

The City Information Services Department tracks the number of times videos and commercials are played relating to stormwater.

The City is participating in the STORM group to help identify appropriate program evaluation techniques to measure improvements in stormwater quality from E&O efforts.

3.3 Planned 2017 Compliance Activities

The City has an existing stormwater public E&O program that meets the requirements of the Permit. The City will continue to partner with SCD in 2017 to carry on similar activities as those listed in Section 3.2. Actions recommended for continued compliance are included in Table 3-1, which presents the work plan for the 2017 public education and outreach activities.

Table 3-1. 2017 Public Education and Outreach Work Plan

Task ID	Task description	Lead	Support	Compliance time frame
EDUC-1	Coordinate with SCD, APWA, STORM, and other regional efforts to implement the E&O Plan.	Public Works	SCD	Ongoing.
EDUC-2	Continue collaboration with other NPDES municipalities and the STORM group to identify appropriate program evaluation techniques.	Public Works	SCD and STORM	Ongoing.
EDUC-3	Continue to implement E&O strategy with SCD to supplement existing activities.	Public Works	SCD IS	Ongoing.
EDUC-4	Continue developing the process to evaluate understanding and adoption of target behaviors.	Public Works	SCD and STORM	Ongoing.
EDUC-5	Summarize annual activities for "Public Education and Outreach" component of Annual Report; identify any updates to SWMP document.	Public Works	SCD	The SWMP and Annual Compliance Report submittal is due on or before March 31 of each year.
EDUC-6	Create stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities such as stream teams, storm drain marking, volunteer monitoring, riparian plantings, and education activities.	Public Works	SCD and STORM	Ongoing.
EDUC-7	Measure the understanding and adoption of the targeted behaviors for at least one targeted audience in at least one subject area. This requirement can be met individually or as a member of a regional group.	Public Works	SCD and STORM	Evaluation of understanding and adoption of targeted behaviors for one targeted audience was completed prior to the end of 2015 to meet EDUC-8 requirements.
EDUC-8	Use the measurements resulting from EDUC-7 to direct E&O resources no later than February 2, 2016.	Public Works	SCD	Was completed prior to February 2, 2016.

Section 4

Public Involvement

This section provides a description of the Permit requirements related to public involvement, including descriptions of the City's current and planned compliance activities for 2017.

4.1 Permit Requirements

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

- Provide ongoing opportunities for public involvement through advisory boards or commissions, public hearings, watershed committees, and public participation in developing rate structures and budgets, or other similar activities. The public must be able to participate in the decision-making processes, including development, implementation, and updates of the SWMP.
- Make the SWMP and Annual Compliance Report available to the public, including posting it on the City's Web site by May 31 of each year. Make any other documents required by the Permit to be submitted to Ecology available to the public.

4.2 Current Compliance Activities

The City currently has activities and programs that address the Permit requirements. The current compliance activities associated with the Permit include the following:

- The City has defined a series of public involvement activities intended to meet the Permit requirements for public involvement in development of the 2017 SWMP Plan. This process involves a presentation of the proposed SWMP elements at a public meeting before the City Council Public Works Committee.
- The City posted the Draft SWMP Plan on the City's Web site, made announcements on the City cable TV channel (TV10), and sent announcements to the Skagit Valley Herald for public comments prior to the public hearing.
- The City will make the 2017 Final SWMP Plan available to the public on the City's Web site, at the public library, and in the Public Works Department main office building.

4.3 Planned 2017 Compliance Activities

The City has an existing stormwater public involvement program that meets the Permit requirements. Actions recommended for continued compliance are included in Table 4-1, which presents the work plan for the 2017 public involvement activities.

Table 4-1. 2017 Public Involvement Work Plan

Task ID	Task description	Lead	Support	Compliance time frame
PI-1	Implement public involvement opportunities for annual SWMP update and reporting process.	Public Works		Prior to finalizing SWMP.
PI-2	Make SWMP and Annual Compliance Report available to the public by posting it on the City Web site, public library, and in the Public Works Department building. Post announcements on Web site and in newspaper.	Public Works	IS	The SWMP and Annual Compliance Report public posting is due on or before May 31 of each year.
PI-3	Summarize annual activities for the "Public Involvement and Participation" component of the Annual Report; identify any updates to the SWMP document.	Public Works	SCD	Due on or before March 31 of each year.

Section 5

Illicit Discharge Detection and Elimination

This section provides a description of the Permit requirements related to IDDE, including descriptions of the City's current and planned compliance activities for 2017.

5.1 Permit Requirements

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

- Implement an ongoing program to prevent, detect, characterize, trace, and eliminate illicit connections and discharges into the MS4. Maintain a storm sewer system map that includes stormwater system information identified in the Permit (e.g., outfalls, receiving waters, etc.).
- Implement ordinances that prohibit illicit discharges, and a compliance strategy that ensures maintenance standards necessary to detect and address illicit discharges. The ordinance or other regulatory mechanism shall be revised (if needed to meet Permit requirements) no later than February 2, 2018.
- Maintain an ongoing program to detect and identify non-stormwater discharges and illicit connections and to address illicit discharges to the MS4.
- Develop procedures for and complete field screening of at least 40 percent of the MS4 no later than December 31, 2017, and on average 12 percent each year thereafter, and document field screening methodology in Annual Compliance Report.
- Publicly list and publicize a hotline or other local telephone number for public reporting of spills and other illicit discharges. Track through closeout any illicit discharge reports and actions taken in response, including enforcement actions.
- Maintain an ongoing training program for City staff that may come into contact with or respond to illicit connections or discharges. Train field staff on proper IDDE response procedures and processes and municipal field staff to recognize and report illicit discharges.
- Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.
- Summarize all illicit discharges and connections reported to the City and response actions taken (including enforcement actions) in the Annual Compliance Report; identify any IDDE updates to the SWMP.

5.2 Current Compliance Activities

The City currently has activities and programs that address the Permit requirements. The current compliance activities associated with the Permit include the following:

- The City maintains much of its storm sewer information system in an electronic format and has produced a storm sewer system map that is updated as new data become available. See Appendix C for a recent version of the City storm sewer system map. The City is continuing to field-verify the City stormwater system in order to validate the City's GIS network model.
- The City's Web site lists the public hotline to report illicit discharges and/or spills.
- The City records all phone calls received to the Public Works Department. The calls reporting illicit discharges are then distributed to the appropriate response authority. Follow-up actions are recorded in the same database.
- City has self-administered IDDE training for new employees.
- Regular online refresher trainings are conducted for City departments.
- The City conducted inspections of portions of the storm sewer system, including screening for illicit discharges and connections.
- The City conducted dry weather visual inspection of outfalls from the Britt Slough drainage area.
- The City responded to reports of illicit discharges and took appropriate actions to eliminate discharges, including following proper reporting procedures.
- The City maintains a database to track all staff training to ensure that all City staff have the appropriate training.
- The City summarizes all illicit discharges and connections, response actions taken, and enforcement actions in its Annual Compliance Reports.

5.3 Planned 2017 Compliance Activities

The City has an existing IDDE program, but will need to update the program to maintain compliance as Ecology phases in additional Permit requirements. Actions recommended for continued compliance are included in Table 5-1, which presents the work plan for the 2017 IDDE activities.

Table 5-1. 2017 Illicit Discharge Detection and Elimination Work Plan

Task ID	Task description	Lead	Support	Compliance time frame
IDDE-1	Maintain IDDE response process including a standard, citywide IDDE response and enforcement SOPs, enhanced by 2016 asset management system upgrade.	Public Works	DS	Ongoing.
IDDE-2	Continue to implement citywide IDDE Program.	Public Works		Ongoing.
IDDE-3	Continue updating storm system map to address data gaps and Permit conditions.	Public Works		Ongoing.
IDDE-4	Implement SOPs for minimizing pollutant releases from permitted non-stormwater discharges (e.g., fire hydrant system flushing, water line flushing, and dechlorinated swimming pools).	Public Works	DS Fire Department	Ongoing.
IDDE-5	Continue to use issue-tracking and resolution system that includes enforcement actions, enhanced by 2016 asset management system upgrade. Capture feedback from public E&O efforts.	Public Works	IS	Ongoing.
IDDE-6	Refresh self-administered intranet IDDE awareness training for all municipal staff in the field.	Public Works	IS	City maintains self-administered training available for new employees

Table 5-1. 2017 Illicit Discharge Detection and Elimination Work Plan				
Task ID	Task description	Lead	Support	Compliance time frame
				and to periodically refresh previously trained employees.
IDDE-7	Publicize hotline for public reporting of spills and other illicit discharges. Create record-keeping system for all calls received and actions taken to report in annual report each year.	Public Works	DS	Ongoing.
IDDE-8	Tracked the number of illicit connection inspections.	Public Works	DS	Ongoing, City planning to continue conducting TV sewer inspections of storm sewers for condition and illicit connection assessment.
IDDE-9	Maintain map that shows the location of all known municipal separate storm sewer outfalls, receiving waters, and structural stormwater BMPs.	Public Works	DS	Ongoing.
IDDE-10	Perform visual inspection of prioritized receiving water bodies. Nookachamps Creek outfalls are targeted for 2017.	Public Works		Complete in 2017.
IDDE-11	Summarize annual activities for "Illicit Discharge Detection and Elimination" component of Annual Report; identify any updates to SWMP.	Public Works		The SWMP and Annual Compliance Report submittal is due on or before March 31 of each year.
IDDE-12	Perform field screening (outfalls) of 40 percent of the MS4 no later than December 31, 2017, and on average 12 percent each year thereafter, and document field screening methodology in Annual Compliance Report.	Public Works		Complete by December 31, 2017.

Section 6

Controlling Runoff from New Development, Redevelopment, and Construction Sites

This section provides a description of the Permit requirements related to controlling runoff from new development, redevelopment, and construction sites, including descriptions of the City's current and planned compliance activities for 2017.

6.1 Permit Requirements

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

- Implement and enforce an updated program to reduce pollutants in stormwater runoff (i.e., illicit discharges) to the MS4 from new development, redevelopment, and construction site activities no later than December 31, 2016. The program must apply to both private and public projects, including roads, and address all construction/development-associated pollutant sources.
- Adopt regulations (codes and standards) and implement plan review, inspection, and escalating enforcement capability necessary to implement the program in accordance with Permit conditions, including the minimum technical requirements in Appendix 1 of the Permit.
- Review, revise, and make local development-related codes, rules, standards, or other enforceable documents effective to incorporate and require low-impact development (LID) principles and BMPs, and consider the range of issues outlined in Integrating LID into Local Codes: A Guidebook for Local Governments (Puget Sound Partnership, 2012) no later than December 31, 2016. The summary of results of the review and revision process must be included in the annual compliance report no later than March 31, 2017.
- Adopt regulations (codes and standards) and provide provisions to verify adequate long-term operations and maintenance of new post-construction permanent stormwater facilities and BMPs in accordance with Permit conditions, including an annual inspection frequency and/or approved alternative inspection frequency and maintenance standards for private drainage systems as protective as those in Chapter 4 of Volume V of the 2012 Ecology Stormwater Management Manual for Western Washington (2012 Ecology Manual).
- Perform annual inspections of all permanent stormwater treatment and flow control BMPs/facilities discharging to the MS4 that were constructed in accordance with the Permit requirements adopted pursuant to the 2007-2012 permit. Inclusion of LID practices with the 2013-2018 permit will result in the majority of new development and redevelopment projects having to construct new types of onsite stormwater LID facilities. Those facilities, both public and private, will have to be inspected and maintained in perpetuity. This inspection includes facilities on private property, including those associated with single family residences.
- Provide copies of the Notice of Intent (NOI) for construction or industrial activities to representatives of the proposed new development and redevelopment.

- Provide training to staff on updated codes, standards, and SOPs, and create public E&O materials. Develop and define a process to record and maintain all inspections and enforcement actions by staff for inclusion in the Annual Compliance Report.
- Summarize annual activities for the "Controlling Runoff" component of the Annual Compliance Report; identify any updates to the SWMP.

6.2 Current Compliance Activities

The City currently has activities and programs that address the Permit requirements. The current compliance activities associated with the Permit include the following:

- The City has developed and implemented SOPs to reduce pollutants in stormwater runoff from new development, redevelopment, and construction site activities. The City enforces this program through the Municipal Code. The City currently addresses the minimum requirements, technical thresholds, and definitions requirements of the Permit and has adopted a new code that became effective in February 2010.
- The City has existing programs, codes, standards, SOPs, and data management systems (City View and Dockstar) addressing many of the Permit requirements. The plan review, inspection, and enforcement SOPs will be refined and updated.
- The City adopted the 2005 Ecology Manual effective February of 2010.
- The City Code has provisions to allow for LID in the Critical Areas Ordinance. The City also encourages the use of LID at the pre-permit application meeting.
- The City completes the required inspections, including development sites prior to construction, future City infrastructure sites during construction, and future City infrastructure sites post-construction.
- The City completes the required inspections for private infrastructure.
- The City records and maintains inspections results in log books.
- The City inspects new flow control and water quality treatment facilities at the required times and frequency.
- NOI forms are available at the customer service desk and are also mentioned in the Pre-permit application meetings for applicable developments.

6.3 Planned 2017 Compliance Activities

The City has a program to help reduce stormwater runoff from new development and construction sites, but updates will be necessary to maintain compliance as Ecology phases in Permit requirements. Table 6-1 presents the work plan for 2017 SWMP activities related to runoff control for new development, redevelopment, and construction sites.

Table 6-1. 2017 Controlling Runoff from New Development, Redevelopment, and Construction Sites Work Plan

Task ID	Task description	Lead	Support	Compliance time frame
CTRL-1	Continue to implement adopted codes, standards, SOPs, and the 2012 Ecology Manual.	Public Works	DS	Ongoing.
CTRL-2	Apply technical thresholds in Appendix 1 to all sites 1 acre or greater.	Public Works	DS	Ongoing.
CTRL-3	Continue evaluating and implementing the City's stormwater permitting, plan review, inspection, enforcement, and record-keeping processes.	Public Works, DS	CAO	Ongoing.
CTRL-4	Track number of inspections, plan reviews, and enforcement.	Public Works	DS	Ongoing.

Table 6-1. 2017 Controlling Runoff from New Development, Redevelopment, and Construction Sites Work Plan				
Task ID	Task description	Lead	Support	Compliance time frame
CRTL-5	Establish program to annually inspect all stormwater treatment flow control facilities (other than catch basins) permitted by the Permittee.	Public Works		Ongoing.
CTRL-6	Conduct staff training and public E&O on implementing Stormwater Manual and Permit requirements.	Public Works	SCD	Ongoing.
CTRL-7	Continue implementing long-term stormwater system operation and maintenance plans for stormwater facilities.	Public Works	DS	Ongoing.
CTRL-8	Summarize annual activities for "Controlling Runoff from New Development, Redevelopment, and Construction Sites" component of Annual Report; identify any updates to SWMP.	Public Works	DS	The SWMP Plan and Annual Compliance Report submittal is due on or before March 31 of each year.
CTRL-9	Adopt the 2012 Ecology Manual and complete review and revision of policies, codes and standards in compliance with LID requirements.	Public Works / DS	All	Revisions to policies, codes and standards were completed in December 2016.
CTRL-10	Submit summary of review and revision process for LID-related codes, policies, and standards.	Public Works/DS		Due March 31, 2017

Section 7

Municipal Operations and Maintenance

This section provides a description of the Permit requirements related to municipal operations and maintenance, including descriptions of the City's current and planned compliance activities for 2017.

7.1 Permit Requirements

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

- Implement an O&M program, with the ultimate goal of preventing or reducing pollutant runoff from MS4 and municipal O&M activities.
- Implement maintenance standards for the MS4 that are at least as protective as those specified in the 2012 Stormwater Management Manual for Western Washington, no later than December 31, 2016.
- Perform inspections of stormwater flow control and treatment facilities and catch basins in accordance with Permit requirements, unless previous inspection data show that a reduced frequency is justified. Have processes in place to reduce stormwater impacts associated with runoff from all lands owned or maintained by the City, and from municipal O&M activities, including but not limited to those involving streets, parking lots, roads, or highways owned or maintained by the City. Perform inspection of all catch basins and inlets owned and operated by the Permittee at least once no later than August 1, 2017, and every 2 years thereafter in accordance with the Permit.
- Train staff to implement updated processes and document that training.
- Maintain stormwater pollution prevention plans (SWPPPs) for all heavy equipment maintenance or storage yards identified for year-round facilities or yards, and material storage facilities owned or operated by the City.
- Summarize annual activities for the "Municipal Operations and Maintenance" component of the Annual Compliance Report; identify any updates to the SWMP.

7.2 Current Compliance Activities

The City currently has activities and programs that address the Permit requirements. The current compliance activities associated with the above Permit requirements include the following:

- The City operates an O&M program, with the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- The City is currently on track to comply with required municipal stormwater facility inspection frequencies. The City also conducts spot checks of potentially damaged treatment and control facilities. All inspections are recorded in inspection logs.
- The City conducts numerous activities to reduce stormwater impacts associated with runoff from municipal O&M activities, including but not limited to streets, parking lots, and roads owned or maintained by the City. Some of the activities include street sweeping, ditch maintenance, dust control, and pond maintenance.

- Sewer and drainage crews receive training from the Washington Wastewater Collection Personnel Association (WWCPA) biennially.
- The City has developed a SWPPP for the maintenance yard.
- The City conducts regular refresher trainings for City staff.
- The City conducted trainings for all maintenance yard staff in 2010.
- City staff from the Public Works Department, Roads Department, and Parks Department has received training on pollution prevention.
- The City has adopted administrative operating policies and procedures in the form of an Integrated Pest Management Plan (IPM) and a Property and Facility Management Plan for Pollution Reduction in accordance with Section S5.C.5.f of the Permit.
- The City summarizes all associated activities in its Annual Compliance Report, due on March 31 of each year.

7.3 Planned 2017 Compliance Activities

The City conducts many of the Permit-required activities to limit stormwater pollution potential related to its O&M program. However, updates will be necessary to maintain compliance as Ecology phases in additional Permit requirements. Table 7-1 presents the work plan for 2017 SWMP activities related to pollution prevention and O&M activities.

Table 7-1. 2017 Pollution Prevention and Operations Maintenance Work Plan

Task ID	Task description	Lead	Support	Compliance time frame
PPOM-1	Maintain records of inspections and maintenance or repair activities conducted, incorporating 2016 asset management system upgrade.	Public Works		Ongoing.
PPOM-2	Continue to implement City maintenance standards in accordance with Ecology 2005 Manual, and the Ecology 2012 Manual, when adopted, for City-performed maintenance activities.	CAO	Public Works	Ongoing.
PPOM-3	Maintain inspection program for City-owned or operated stormwater catch basins and for public and private flow control, runoff treatment, and low impact development facilities, where required by and consistent with the schedules identified in the Permit.	Public Works		Ongoing.
PPOM-4	Continue implementing policies and procedures for O&M activities to reduce pollutants in stormwater discharges from lands owned or maintained by the City.	Public Works	Parks and Recreation, Facilities, DS	Ongoing.
PPOM-5	Summarize annual activities for "Municipal Operations and Maintenance" component of Annual Report; identify any updates to SWPPP.	Public Works		The SWMP Plan and Annual Compliance Report submittal is due on or before March 31 of each year.
PPOM-6	Inspect all catch basins and inlets owned or operated by the City at least once by August 1, 2017, and every two years thereafter.	Public Works		Complete all inspections by August 1, 2017

Section 8

Monitoring and Assessment

This section provides a description of the Permit requirements related to water quality monitoring, including descriptions of the City's current and planned compliance activities for 2017.

8.1 Permit Requirements

The Permit (Section S8) requires municipalities to conduct water quality sampling and program assessments during this Permit cycle, or to participate in State-conducted programs to meet these requirements:

- Regarding status and trends monitoring in Puget Sound, the City selected Option 1, requiring the City to pay into a collective fund to implement a Regional Stormwater Monitoring Program (RSMP) for small streams and marine nearshore status trends; annual payments to Ecology began August 15, 2014.
- Regarding effectiveness studies, the City selected Option 1, requiring the City to pay into a collective fund to implement RSMP effectiveness studies; annual payments to Ecology began August 15, 2014.
- Pay into a collective fund to implement the RSMP Source Identification Information Repository (SIDIR); annual payments to Ecology began August 15, 2014.

8.2 Current Compliance Activities

The City selected Option 1 for status and trends monitoring and Option 1 for effectiveness studies, and notified Ecology of its selections prior to December 1, 2013.

8.3 Planned 2016 Compliance Activities

The City created a Water Quality Monitoring Program to maintain compliance as Ecology phases in current and future Permit requirements. Table 8-1 presents the work plan for 2017 SWMP monitoring activities.

Table 8-1. 2017 Monitoring Work Plan

Task ID	Task description	Lead	Support	Compliance time frame
MNTR-1	Notify Ecology of selected options for status and trends monitoring and for SWMP effectiveness studies for this Permit cycle.	Public Works		December 1, 2013. Complete.
MNTR-2	Summarize annual monitoring activities for the Annual Report.	Public Works		The SWMP and Annual Compliance Report submittal is due on or before March 31 of each year.
MNTR-3	Continue annual payment into RSMP for small streams and marine nearshore status trends.	Public Works		Annual payments of $7,574 to Ecology began August 15, 2014.
MNTR-4	Continue annual payment into RSMP for effectiveness studies.	Public Works		Annual payments of $12,620 to Ecology began August 15, 2014.
MNTR-5	Continue annual payment into RSMP for Source Identification Information Repository.	Public Works		Annual payments of $1,170 to Ecology began August 15, 2014.

Section 9

Summary

The City of Mount Vernon is currently in compliance with the Phase II Permit and has planned activities for 2017 to ensure continued compliance. There are multiple tasks that the City has completed and several tasks that the City is planning to ensure continuing compliance with the Permit requirements.

On August 1, 2013, a new 5-year Permit cycle began for August 1, 2013, to July 31, 2018. New LID and monitoring requirements represent the most significant changes in the current Permit; the City was required to implement LID in City codes, policies, programs and standards during the Permit term. Ecology has also published an updated 2012 Stormwater Management Manual for Western Washington (subsequently updated in 2014); the City was required to adopt the updated Manual or an equivalent during the Permit term.

The City administers its SWMP through a SWMP Plan updated annually, and reports progress to Ecology in an Annual Report.

The Public Education and Outreach Program has been implemented through the City's contract with the Skagit Conservation District (SCD), which has reached out with useful information and offered participatory activities to the general public, school districts, business owners, commercial property owners, the agricultural community, and the industrial community. In addition, the City works with the Northern Stormwater Outreach Group (SOG) and the Skagit County Public Health Department through the source control inspection program.

Mount Vernon has developed a system for notifying the public, provides opportunities for the public to comment on the SWMP document, and each year presents the document to the City Council. These opportunities allow the public to be involved in developing the City's SWMP.

The City has an ongoing IDDE Program, which includes a spill hotline. Each year the hotline receives calls from educated citizens who are interested in protecting stormwater quality. City staff have been trained to identify and respond to illicit discharges and connections, and the City tracks inspections and field responses and conducts appropriate reporting for IDDE activities. Mount Vernon works with the SCD to distribute additional educational materials directed at IDDE.

The City has adopted and is currently implementing the 2012 Ecology Manual for controlling runoff from new development, redevelopment, and construction sites. To comply with the Permit, LID codes and standards were updated by December 31, 2016; the City now requires the use of LID techniques where feasible for new development and redevelopment, in order to mimic natural runoff patterns.

The City operates and maintains the MS4 to comply with Phase II Permit requirements, including required O&M practices (e.g., inspection, cleaning, and other maintenance).

The City participates in state-wide monitoring activities by making annual payments to the RSMP collective fund.

Additional information on the City's NPDES program can be found online at http://www.mountvernonwa.gov/index.aspx?NID=426.

Appendix A:

Abbreviations and Definitions from Permit

Appendix A

Abbreviations and Definitions from Permit

The following definitions and abbreviations are taken directly from the Phase II Permit 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 federal government.

AKART means all known, available, and reasonable methods of prevention, control and treatment. See also State Water Pollution Control Act, chapter 90.48.010 RCW and chapter 90.48.520 RCW.

All known, available and reasonable methods of prevention, control and treatment refers to the State Water Pollution Control Act, chapter 90.48.010 RCW and chapter 90.48.520 RCW.

Applicable TMDL means a TMDL which 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, which 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.

Best Management Practices are the schedules of activities, prohibitions of practices, maintenance procedures, and structural and/or managerial practices approved by Ecology that, when used singly or in combination, prevent or reduce the release of pollutants and other adverse impacts to waters of Washington State.

BMP means Best Management Practice.

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

Census defined urban area means Urbanized Area.

Circuit means a portion of a MS4 discharging to a single point or serving a discrete area determined by traffic volumes, land use, topography or the configuration of the MS4.

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.

Conveyance system means that portion of the municipal separate storm sewer system designed or used for conveying stormwater.

Co-Permittee means an owner or operator of an MS4 which is in a cooperative agreement with at least one other applicant for coverage under this permit. A Co-Permittee is an owner or operator of a regulated MS4 located within or in proximity to another regulated MS4. A Co-Permittee is only responsible for permit

conditions relating to discharges from the MS4 the Co-Permittee owns or operates. See also 40 CFR 122.26(b)(1).

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.).

Director means the Director of the Washington State Department of Ecology, or an authorized representative.

Discharge Point means the location where a discharge leaves the Permittee's MS4 through the Permittee's MS4 facilities/BMPs designed to infiltrate.

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

EPA means the U.S. Environmental Protection Agency.

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

Ground water means water in a saturated zone or stratum beneath the surface of the land or below a surface water body. Refer to chapter 173-200 WAC.

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.

Hydraulically near means runoff from the site discharges to the sensitive feature without significant natural attenuation of flows that allows for suspended solids removal. See Appendix 7 Determining Construction Site Sediment Damage Potential for a more detailed definition.

Hyperchlorinated means water that contains more than 10 mg/Liter chlorine.

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 a 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 nonvegetated surface area which 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, roof tops, walkways, patios, driveways, parking lots or stormwater areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which 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.

LID means Low Impact Development. **LID BMP** means low impact development best management practices.

LID Principles means land use management strategies that emphasize conservation, use of onsite natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff.

Low Impact Development 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 on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design.

Low impact development best management practices 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, bioretention, rain gardens, permeable pavements, roof downspout controls, dispersion, soil quality and depth, vegetated roofs, minimum excavation foundations, and water re-use.

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 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.

MS4 means municipal separate storm sewer system.

Municipal Separate Storm Sewer System 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 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 State Department of Ecology.

Native vegetation means vegetation comprised of plant species, other than noxious weeds, that are indigenous to the coastal region of the Pacific Northwest and which 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 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.

NOI means Notice of Intent.

Notice of Intent 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*.

NPDES means National Pollutant Discharge Elimination System.

Outfall means a point source as defined by 40 CFR 122.2 at the point where a discharge leaves the Permittee's MS4 and enters a surface receiving water body or surface receiving waters. Outfall does not include pipes, tunnels, or other conveyances which 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 right-of-ways subject to land disturbing activities, new hard surfaces, or replaced hard surfaces. Refer to Appendix 1 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 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 water body or receiving waters means naturally and/or reconstructed naturally occurring surface water bodies, such as creeks, streams, rivers, lakes, wetlands, estuaries, and marine waters, or ground water, to which a MS4 discharges.

Redevelopment means, on a site that is already substantially developed (i.e., has 35% 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 for a definition of hard surfaces.

Regional Stormwater Monitoring Program 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, stormwater management program 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 which 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 which is not a city, town or county. Secondary Permittees include special purpose districts and other public entities that meet the criteria in S1.B.

Sediment/Erosion-Sensitive Feature means an area subject to significant degradation due to the effect of construction runoff, or areas requiring special protection to prevent erosion. See Appendix 7 Determining Construction Site Sediment Transport Potential for a more detailed definition.

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) & (7) or designated under 40 CFR 122.26 (a)(1)(v).

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 *SWMMWW* 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 *SWMMWW* (2012) 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 which 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 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, bioretention, vegetated roofs, and permeable pavements that help meet Appendix 1 Minimum Requirements #6 (treatment), #7 (flow control), or both.

SWMMWW or Stormwater Management Manual for Western Washington means *Stormwater Management Manual for Western Washington (as amended in 2014).*

SWMP means Stormwater Management Program.

TMDL means Total Maximum Daily Load.

Total Maximum Daily Load 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 seasonable 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.

Urban Growth Area means those areas designated by a county pursuant to RCW 36.70A.110.

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 includes 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.

Waters of the United States refers to the definition in 40 CFR 122.2.

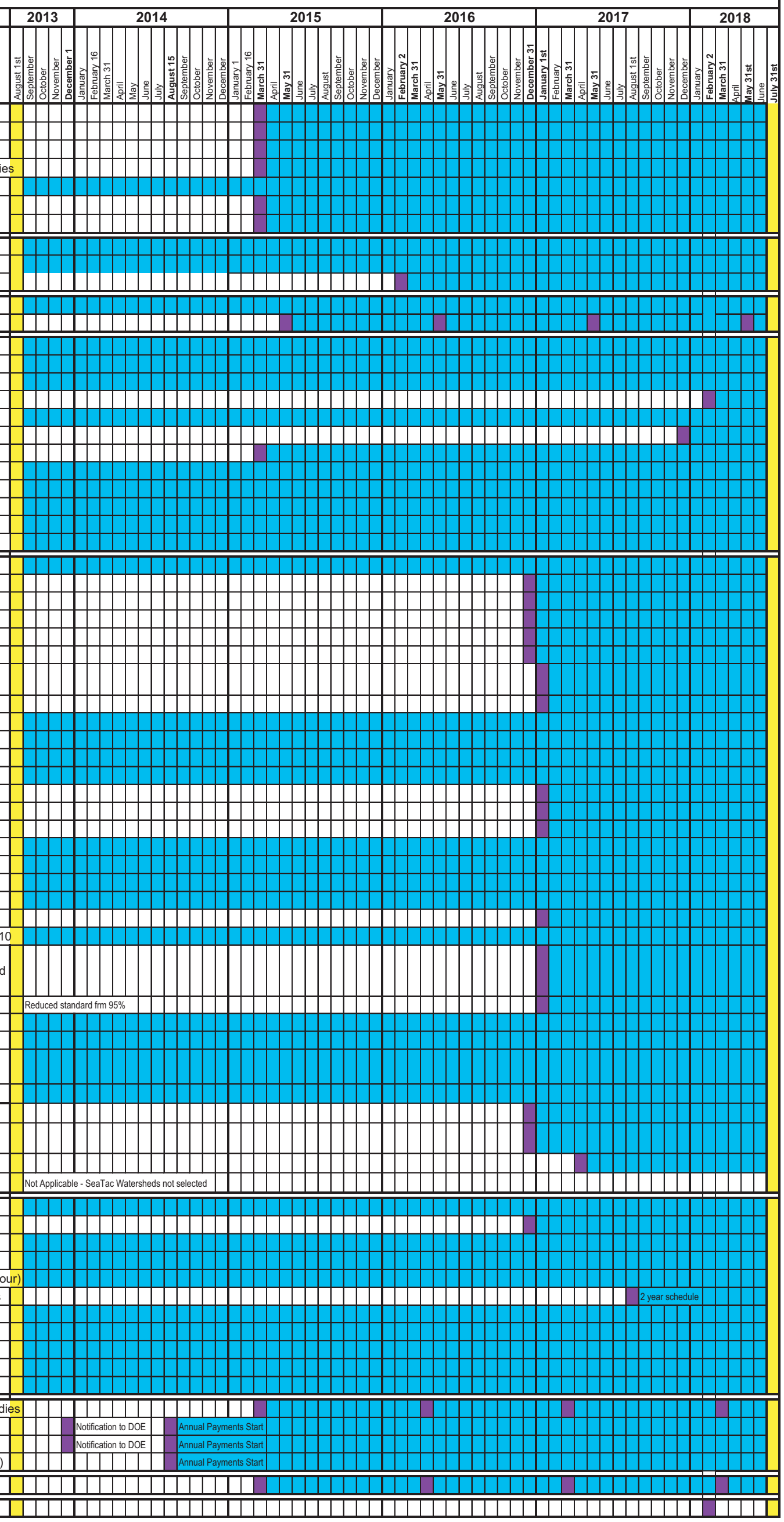
Appendix B:

2013-2018 Western Washington Phase II Municipal Stormwater Permit Implementation Schedule (Draft)

(Courtesy Cities of Covington and SeaTac)

WESTERN WASHINGTON PHASE II MUNICIPAL STORMWATER PERMIT IMPLEMENTATION SCHEDULE

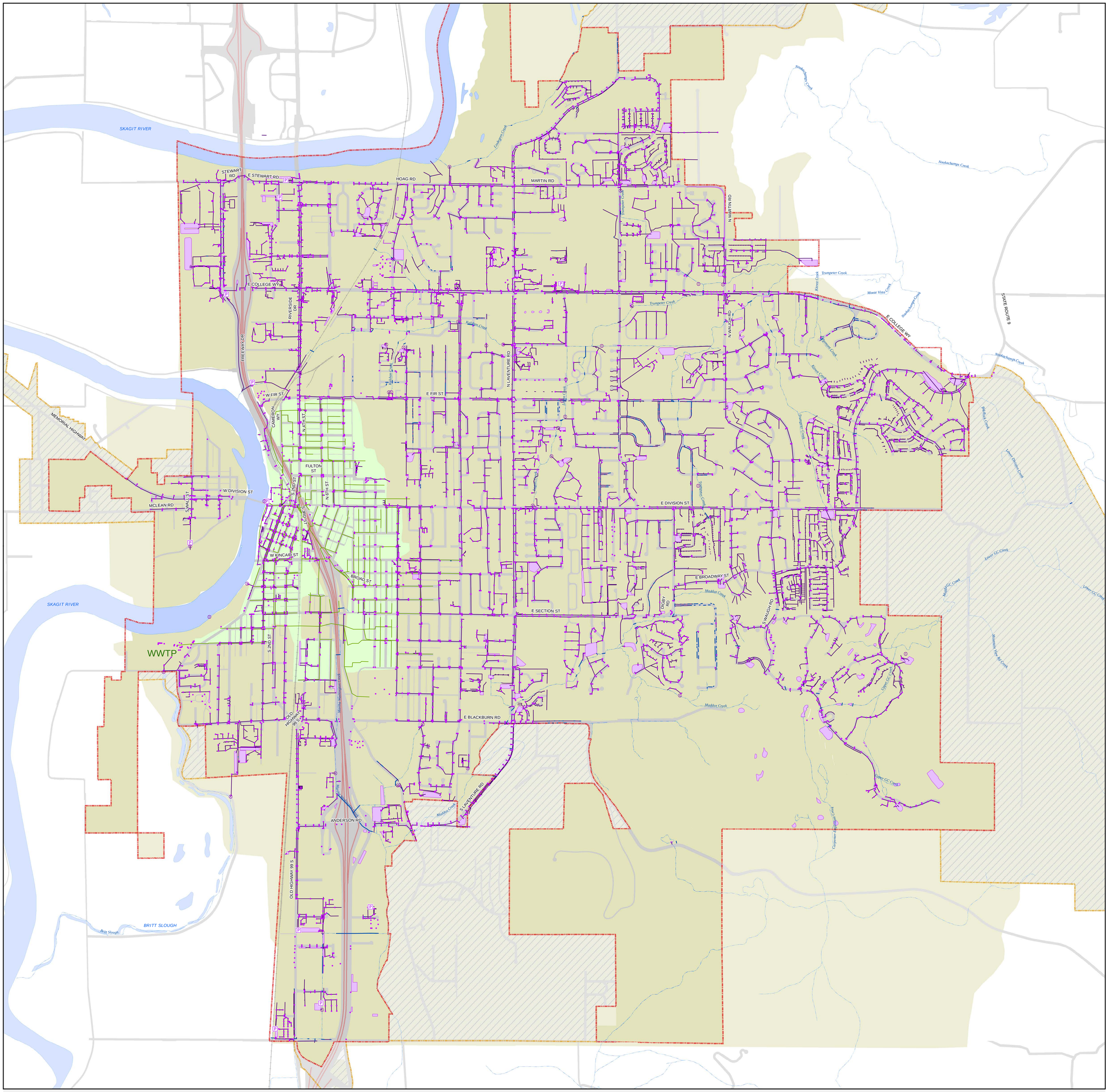
CHAPTER	SECTION	SUB-SECTION	TASKS
S5	A1		SWMP Develop & Implement
	A2		SWMP Plan Annually Updated
	A3	a.	Track Costs or Estimated Costs
		b.	Track Inspections, Enforcements & Public Educ. Activities
	A4		Continue Implementation of Exising Programs
	A5	a.	Include Coord. Mech. wi Other Entities (If Applicable)
		b.	SWMP Includes Internal Coordination Mechanisms
	C1	a.	Public Education & Outreach (Local or Regional)
		b	Create Stewardshp Opportunities
		c	Measure Understanding & Adoption of Behaviors
	C2	a.	Public Involvement & Participation (Create opport.)
		b.	SWMP & Annual Report Website Posting
	C3		Illicit Discharge Detection and Elimination
		a.	Ongoing Stormwater Mapping - periodically update
		a.v	Map All New Connections Since February 16, 2007
		b.	IDDE Ordinance Update
		c.	Illicit Discharge Detection & Elimination Program
		c.i	Field Screen 40% of MS4 12/31/17- 12% yrs thereafter
		c.i	Document Field Screen Methodology in Annual Report
		c.ii	Publically List Phone #'s for Reporting Spills
		c.iii	Ongoing Training all Muni. Field Staff - Lvl B (Tracked)
		c.iv	IDDE Education
		d	
		e.	Ongoing Training IDDE Staff - Lvl A (Tracked)
	C4		Construction Site Runoff Program
		a.	Update Construction Site Runoff Ordinance
		a.i	Adopt Appendix 1 or Approved Phase I Program
		a.i	Adopt Variance Criteria Equiv. to Appendix 1
		a.ii	Site Plan & BMP Select per Append 1 or Approved Ph I
		a.iii	Ord./ Reg. Mech. Giving Legal Authority to Inspect
		b.	Implement Permit Process / Plan Review & Inspect. wi new thresholds
		b.i	Review All Stormwater Site Plans
		b.ii	Pre-Con Site Inspection
		b.iii	Inspect All Sites for Erosion and Sediment Controls
		b.iii	Enforce ESC as Necessary
		b.iv	Final ESC Inspection
		b.iv	Maintenance Plan for New Facilities (Bond Program)
		b.iv	Enforce Maintenance Plan (Bond Program)
		b.v	Minimum 80% Compliance wi Inspect. Requirements
		b.vi	Enforcement Strategy
		c.	O&M for Private Stormwater Facilities & BMPs
			- Long Term Mnt - Treatment & Flow Control BMPS
		c.i	Enforce. Mech. Identifying Responsibilities for O&M
		c.ii	Est. Maint. Standard = to Ch.4 Vol.V of 12' SMMWW
		c.iii	Annual Inspection of Private Facilities Aprvd after 2/15/10
		c.iv	Inspect Bonded Resid. Facilities Every 6 Months until 90% of lots constructed (or when construction stops and sites are fully stabilized)
		c.vi	Compliance = records + 80% scheduled inspections
		c.vi	Perform Timely Maintenance
		c.vii	Track Inspections, Enforcements etc. (All Notices)
		d.	Make NOI for Const. & Industrial Site Avail. & Enforce Local Regs on NPDES Const. Sites
		e.	Train All Applicable Staff on Above Activities (Track)
		f.	Low Impact Development
		f.i.	Incorporate LID into Codes, Rules Stnds & Enf. Docs Making LID Prefered/Commonly Used Approach
		f.ii	Submit Summary of Results of LID Update Process
		g.	Watershed Scale Stormwater Planning wi Phase Is
	C5		O&M Program (for Municipally Owned or Operated)
		a.	Update Maint. Stnds = to Ch.4 Vol.V of 12' SMMWW
		a.ii	Perform Timely Maintenance
		b.	Annually Inspect All Treatment & Flow Cntrl. Facilities
		c	Spot Check Inspections After Major Storms (10 yr 24 Hour)
		d.	Catch Basin Insp. & Mnt. - All by 8/17 - then every 2 yrs
		e.	Ensure 95% compliance for O&M inspections
		f.	Establish & Implem. Practices to Reduce Impacts
		g.	O&M Training Program (Train to Standards)
		i	SWPPPs for All Heavy Equip. Mnt. & Storage Yards
		j	Track Maint. & Repair Activities Identified Above
S8	A		**Monitoring & Assessment** - Submit Stormwatwer Studies
	B1		Status & Trends Monitoring Notification & Contribution
	C1		Effectiveness Monitoring Notification & Contribution
	D		Source Ident. & Diagnostic Monitoring (Info. Repository)
S9	A1		Annual Compliance Report
G18			Apply for permit renewal



LEGEND: Effective & Expiration Dates of Permit | Ongoing Requirement | Permit Deadline

Appendix C:

Mount Vernon Storm Sewer System Map



Map Revised: February, 2017

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City of Mount Vernon Public Works Department

Stormwater Line
Storm Culvert
Combined Sewer Line
Catch Basins
Pumpstation
Outfalls >=12"
Detention/WQ Facility
City Boundary
UGA Boundary
Railroad
Stream
MS4 Area
Combined Sewer Area

City of Mount Vernon Stormwater System

0 0.25 0.5 1 Mile
0 0.225 0.45 0.9 Kilometer

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