



City of Mount Vernon 2009 Stormwater Management Program



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**BROWN AND
CALDWELL**

Environmental Engineers & Consultants

CITY OF MOUNT VERNON
2009 STORMWATER
MANAGEMENT PROGRAM

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CITY OF MOUNT VERNON 2009 STORMWATER MANAGEMENT PROGRAM

1. INTRODUCTION

1.1 Overview

This document presents the City of Mount Vernon's Stormwater Management Program (SWMP). Preparation and maintenance of this SWMP is required by the Washington State Department of Ecology (Ecology) as a condition of the Western Washington Phase II Municipal Stormwater Permit (the 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 to be an operator of a small MS4, and therefore required to obtain permit coverage.

Each municipality's permit for discharging stormwater is designed to reduce the discharge of pollutants, protect water quality, and meet the requirements of the Federal Clean Water Act.

Appendix A includes acronyms and definitions from the Permit to help the reader understand the City's Stormwater Management Program.

1.2 The Stormwater Problem

Stormwater is the leading contributor to water quality pollution in our urban waterways. As urban areas grow, stormwater is also Washington's fastest growing water quality problem. Pollutants in, or resulting from stormwater can cause a wide range of impacts. Untreated stormwater is not safe for people to drink and is not recommended for swimming because it contains toxic metals, organic compounds and bacteria. Some pollutants such as metals, oil and grease, and organic toxins are toxic to aquatic organisms if concentrations are high enough. Sediments cause tissue abrasion and gill clogging in fish, they reduce light and impair algal growth, they smother fish spawning habitat and are transporters of other pollutants. Nutrients accelerate eutrophication, a process where water bodies receive excess nutrients that stimulate excessive plant growth of lakes and ponds resulting in nuisance algal blooms, reduced clarity, odors and reduced water quality. Temperature sensitive fish and invertebrates cannot survive in overly warm water bodies (Ecology, "NPDES General Permit Fact Sheet," 2006).

In addition, 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. Furthermore, because of the increased volume of runoff discharges, loads of pollutants in stormwater can be significant, causing water quality problems such as disease and mortality in fish and other aquatic organisms, swimming beach and shellfish bed closures and contamination of wells (Ecology, "NPDES General Permit Fact Sheet," 2006).

There are a number of pollution sources that contaminate stormwater, including land use activities, operation and maintenance activities, illicit discharges and spills, atmospheric deposition, and vehicular traffic conditions. Many of these sources are not under the direct control of the permittees that own or operate the storm sewers.

The City of Mount Vernon 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 to city storm drains and 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 Municipal Stormwater Permit, described in detail in Section 1.3 below.

1.3 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 federal Environmental Protection Agency (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, the NPDES-delegated permit authority is the Washington State Department of Ecology (Ecology).

Municipalities with a population of over 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 1990 census falling below the 100,000 threshold, the City must comply with the Phase II Municipal Stormwater Permit. About 100 other municipalities in Washington must now comply with the Phase II Permit, along with Mount Vernon, as operators of small municipal separate storm sewer systems (MS4s). Ecology’s Phase II Municipal Stormwater Permit is available on Ecology’s website at <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/index.html>

The Permit allows municipalities to discharge stormwater runoff from municipal drainage systems into the state’s water bodies (i.e., streams, rivers, lakes, wetlands) as long as municipalities implement programs to protect water quality by reducing the discharge of “non-point 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 Program 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

The Permit issued by Ecology became effective on February 16, 2007 and expires on February 15, 2012. The Permit requires the City to report annually (March 31st of each year) on progress in SWMP implementation for the prior year. The Permit also requires submittal of documentation that describes proposed Program activities for the coming year. Implementation of various Permit conditions is phased throughout the five-year Permit term from February 16, 2007 through February 15, 2012. The Permit will be revised and reissued at the end of this period.

1.4 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 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.

1.5 Total Maximum Daily Load (TMDL) Compliance

Stormwater discharges covered under this Permit are required to implement actions necessary to achieve the pollutant reductions called for in applicable TMDLs. Applicable TMDLs are those that have been approved by the EPA before the issuance date of the Permit or which have been approved by the EPA prior to the date the permittees application is received by Ecology. Information on Ecology's TMDL program is available on Ecology's website at www.ecy.wa.gov/programs/wq/tmdl.

All TMDLs approved by EPA before February 15, 2006, were reviewed by Ecology to determine whether stormwater including municipal stormwater sources were identified in the TMDL. When most of these TMDLs were developed, municipal stormwater was considered a subset of non-point 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 February 15, 2006. While the City of Mount Vernon has not been listed in Appendix 2, there are water quality impairments (303(d) listings) within the City that may trigger TMDLs for the next Permit cycle (2012-2017).

1.6 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 (CED) 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 for implementing the Education and Outreach Components of the Permit. Table 1-1 summarizes participant responsibilities for assuring future Permit compliance. Sections 2 through 8 will highlight the planned efforts of these departments and entities in more detail.

Table 1-1. SWMP Implementation Responsibilities		
Program Component	City Departments	Outside Entities
Stormwater Management Program	Public Works Finance Information Services (IS) City Attorney's Office (CAO)	
Public Education and Outreach	Public Works	Skagit Conservation District (SCD)
Public Involvement	Public Works	
Illicit Discharge Detection and Elimination	Public Works Community and Economic Development (CED) Fire Department	

Table 1-1. SWMP Implementation Responsibilities		
Program Component	City Departments	Outside Entities
Runoff Controls	Public Works Community and Economic Development (CED)	
Pollution Prevention and Municipal Operation and Maintenance	Public Works Community and Economic Development (CED)	
Water Quality Monitoring	Public Works	Skagit Conservation District (SCD)

1.7 Document Organization

The contents of this document are based upon Permit requirements and Ecology’s “Draft Guidance for City and County Annual Reports for Western Washington, Phase II Municipal Stormwater Permits.” The remainder of this SWMP is organized similarly to the Permit:

- **Section 2.0** addresses Permit requirements for administering the City’s Stormwater Management Program for 2009.
- **Section 3.0** addresses Permit requirements for public education and outreach for 2009.
- **Section 4.0** addresses Permit requirements for public involvement and participation for 2009.
- **Section 5.0** addresses Permit requirements for illicit discharge detection and elimination for 2009.
- **Section 6.0** addresses Permit requirements for controlling runoff from new development, redevelopment, and construction sites for 2009.
- **Section 7.0** addresses Permit requirements for pollution prevention and O&M for municipal operations for 2009.
- **Section 8.0** addresses Permit requirements for the water quality monitoring section of the Permit for 2009.
- **Appendix A** - Acronyms and Definitions from the Permit.

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

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2. STORMWATER MANAGEMENT PROGRAM ADMINISTRATION

This section of the SWMP describes Permit requirements related to overall Stormwater Management Program administration, including descriptions of the City's current and planned compliance activities for 2009.

2.1 Permit Requirements

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

- Develop and implement a Stormwater Management Program and prepare written documentation (Program document) for submittal to Ecology on March 31, 2009, and update the Program annually thereafter. The purpose of the Program is to reduce the discharge of pollutants from the municipal stormwater system to the maximum extent practicable and thereby protect water quality.
- Submit annual compliance reports (for the previous calendar year) to Ecology on March 31, beginning in 2008 that summarize the status of implementation and provide information from assessment and evaluation procedures collected during the reporting period.
- Coordinate with other permittees on stormwater related policies programs, and projects within adjacent or shared areas.

2.2 Current Compliance Activities

The City currently has activities and programs that meet many of the Permit requirements. The current compliance activities associated with the Permit include:

- The City has defined roles and responsibilities and developed standard operating procedures (SOP) for completing updates to future SWMP documents and the Annual Compliance Report annually.
- The City is finalizing a cost accounting strategy for tracking annual Permit costs, beginning January 1, 2009.
- The City is on track to comply with Ecology's requirements for submittal of the second Annual Compliance Report by March 31, 2009.
- The City has set up a mechanism to coordinate with external entities such as Skagit Conservation District and Skagit County.

2.3 Planned 2009 Compliance Activities

The City has positioned itself well to maintain compliance as Ecology phases in the future Permit deadlines. Actions recommended for continued compliance are included in Table 2-1 which presents the work plan for the 2009 SWMP administration activities.

Table 2-1. 2009 Stormwater Management Program Administration Work Plan				
Task ID	Task Description	Lead	Support	Compliance Timeframe
SWMP-1	Implement NPDES SWMP cost accounting strategy & tracking system. Train staff on new system.	Public Works, Finance		New cost tracking processes/procedures must be in place by 1/1/2009.
SWMP-2	Implement NPDES training management structure & tracking system.	Public Works, IS	All	First training to be completed by 8/19/2009. Tracking systems should be in place prior to training.
SWMP-3	Define and implement strategy/system for managing SOPs that are used among multiple departments.	Public Works, Finance	CAO	SOPs and responsibilities should be established prior to 3/31/2009 Permit submittals.
SWMP-4	Summarize annual activities for "Stormwater Management Program" component of Annual Report; identify any updates to Program document.	Public Works, Finance	All	The SWMP and Annual Compliance Report submittal is due on or before March 31 st of each year.

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3. PUBLIC EDUCATION AND OUTREACH

This section describes the Permit requirements related to public education and outreach, including descriptions of the City's current and planned compliance activities for 2009.

3.1 Permit Requirements

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

- Prioritize and target education and outreach activities to specified audiences, including general public, businesses, residents/homeowners, landscapers, property managers, engineers, contractors, developers, review staff and land use planners, and other City employees to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts.
- Have an outreach program that is designed to achieve measurable improvements in the target audience's understanding of the problem and what they can do to solve it.
- 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. The SCD's current activities and programs meet many of the Permit requirements. These programs address the general public, residents/homeowners, developers, contractors, engineers, and school children. The current compliance activities associated with the Permit include:

- Storm drain stenciling
- Watershed Masters Volunteer Training Program
- Volunteer Water Quality Monitoring Program
- Backyard Conservation Stewardship Program
- Resource Materials & Education for Schools
- Living on the Land: Short Course for Small Acreage Landowners
- Storm Water Educational Brochures and/or Fact Sheets
- Low Impact Development (LID) Technical Seminars
- Stormwater Poster Competition
- Skagit Valley Watershed Letterboxing Quest

SCD tracks all its E&O efforts and attendees to workshops in Excel databases and Word documents. These documents are submitted to the City annually.

The City is participating in the STORM (Stormwater Outreach for Regional Municipalities) Group to help identify appropriate program evaluation techniques to measurable improvements in stormwater quality from E&O efforts..

3.3 Planned 2009 Compliance Activities

The City has an existing stormwater public education and outreach program, and will be updating the program to maintain compliance as Ecology phases in the Permit requirements. Actions recommended for continued compliance are included in Table 3-1 which presents the work plan for the 2009 public education and outreach activities.

Table 3-1. 2009 Public Education and Outreach Work Plan				
Task ID	Task Description	Lead	Support	Compliance Timeframe
EDUC-1	Coordinate with SCD, APWA, and other regional efforts to implement E&O Plan.	Public Works	SCD	Refinements to existing public education and outreach activities to be in place by 2/16/2009.
EDUC-2	Continue collaboration with other NPDES municipalities to identify appropriate program evaluation techniques.	Public Works	SCD	Continue through 2009.
EDUC-3	Implement E&O strategy to supplement existing activities.	Public Works	SCD	Continue through 2009.
EDUC-4	Continue developing process to evaluate understanding and adoption of target behaviors.	Public Works	SCD	Complete by 2/16/2009.
EDUC-5	Summarize annual activities for "Public Education and Outreach" component of Annual Report; identify any updates to Program document.	Public Works	SCD	The SWMP and Annual Compliance Report submittal is due on or before March 31 st of each year.

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4. PUBLIC INVOLVEMENT

This section describes the Permit requirements related to public involvement, including descriptions of the City's current and planned compliance activities for 2009.

4.1 Permit Requirements

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

- Provide ongoing opportunities for public involvement through advisory boards or commissions and watershed committees, and public participation in developing rate structures and budgets, stewardship programs, environmental actions, or other similar activities. The public must be able to participate in the decision-making processes, including development, implementation, and update of the Program.
- Make the SWMP and Annual Compliance Report available to the public, including posting on the City's website and newspaper. Make any other documents required to be submitted to Ecology in response to Permit conditions available to the public.

4.2 Current Compliance Activities

The City currently has activities and programs that meet many of the Permit requirements. The current compliance activities associated with the Permit include:

- The City has already defined a series of public involvement activities intended to meet the Permit requirements for public involvement in development of the 2008 and 2009 SWMP documents. This process involves a presentation of the proposed SWMP elements at a public hearing before the Public Works Committee meeting.
- The City posted the Draft Stormwater Management Program document on the City's website and sent announcements in the newspaper and City's website for public comments prior to the public hearing.
- The City plans to make the 2009 Final Stormwater Management Program document and Annual Compliance Report available to the public on the City's website, public library, and in the Public Works Department main office building.

4.3 Planned 2009 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 2009 public involvement activities.

Table 4-1. 2009 Public Involvement Work Plan				
Task ID	Task Description	Lead	Support	Compliance Timeframe
PI-1	Implement public involvement opportunities for annual Program update and reporting process.	Public Works		Complete by 3/31/2009.
PI-2	Make SWMP and Annual Compliance Report available to public by posting on website, library, and in Public Works department building. Have announcements posted on website and in newspaper.	Public Works	IS	Complete by 3/31/2009.
PI-3	Summarize annual activities for "Public Involvement and Participation" component of Annual Report; identify any updates to Program document.	Public Works		The SWMP and Annual Compliance Report submittal is due on or before March 31 st of each year.

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5. ILLICIT DISCHARGE DETECTION AND ELIMINATION

This section describes the Permit requirements related to illicit discharge detection and elimination, including descriptions of the City's current and planned compliance activities for 2009.

5.1 Permit Requirements

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

- Implement an ongoing program to detect and remove illicit discharges, connections, and improper disposal, including any spills into the municipal separate storm sewers owned or operated by the City. An illicit discharge means “any discharge to a municipal storm system that is not composed entirely of stormwater...” and illicit connection means “any man-made conveyance that is connected to a municipal storm system without a permit (excluding roof drains and other similar type connections) such as sanitary sewer connections, floor drains, etc.”
- Develop a storm sewer system map, have ordinances that prohibit illicit discharges, and create a program to detect and address illicit discharges.
- Publicly list and publicize a hotline or other local telephone number for public reporting of spills and other illicit discharges. Track illicit discharge reports and actions taken in response through close-out, including enforcement actions.
- Train Program staff on proper IDDE response procedures and processes and municipal field staff to recognize and report illicit discharges.
- Summarize all illicit discharges and connections reported to the City and response actions taken, including enforcement actions, in the Annual Compliance Report; identify any updates to the SWMP.

5.2 Current Compliance Activities

The City currently has activities and programs that meet many of the Permit requirements. The current compliance activities associated with the Permit include:

- The City maintains much of its storm sewer information system in an electronic format and has produced a draft storm sewer system map.
- City codes and standards have sections that address illicit discharges and civil infractions.
- City's website 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.
- Many City employees have received IDDE awareness training.
- The City summarizes all illicit discharges and connections, response actions taken, and enforcement actions in its Annual Compliance Reports.

5.3 Planned 2009 Compliance Activities

The City has an existing illicit discharge and elimination program, but will need to update the program to maintain compliance as Ecology phases in the Permit requirements. Actions recommended for continued compliance are included in Table 5-1 which presents the work plan for the 2009 illicit discharge and elimination activities.

Table 5-1. 2009 Illicit Discharge Detection and Elimination Work Plan				
Task ID	Task Description	Lead	Support	Compliance Timeframe
IDDE-1	Revise current IDDE response process into a standard, City-wide IDDE response and enforcement SOPs.	Public Works	CED	Ordinance & code updates and enforcement strategies to be adopted by 8/16/2009.
IDDE-2	Implement City-wide IDDE Program.	Public Works		Continue through 2009.
IDDE-3	Continue updating storm system map to address data gaps and Permit conditions.	Public Works		On-going.
IDDE-4	Review and update codes as needed to address IDDE Permit requirements.	Public Works		Ordinance and code updates to be complete and adopted by 8/16/2009.
IDDE-5	Develop SOPs for minimizing pollutant releases from permitted non-stormwater discharges (e.g., fire hydrant system flushing, water line flushing, dechlorinated swimming pools).	Public Works	CED	Ordinance and code updates to be complete and adopted by 8/16/2009.
IDDE-6	Expand issue tracking and resolution system to include enforcement actions and feedback from public E&O efforts.	Public Works	IS	Implement tracking system by 2/16/2009.
IDDE-7	Develop and implement field IDDE training. Coordinate with regional efforts.	Public Works		Training program, including training tracking, must be developed by 8/16/2009.
IDDE-8	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	CED	Hotline in place by 2/16/2009.
IDDE-9	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 st of each year.

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6. 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, including descriptions of the City's current and planned compliance activities for 2009.

6.1 Permit Requirements

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

- Develop, implement, and enforce a program to reduce pollutants in stormwater runoff (i.e., illicit discharges) to the municipal separate storm sewer system from new development, redevelopment, and construction site activities. 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 SOPs necessary to implement the program in accordance with Permit conditions, including the minimum technical requirements in Appendix 1 of the Permit.
- Provide provisions (plan review, inspection, and enforcement) and SOPs to allow non-structural preventive actions and source reduction approaches such as Low Impact Development (LID) techniques, measures to minimize the creation of impervious surfaces, and measures to minimize the disturbance of native soils and vegetation.
- Adopt regulations (codes and standards) and provide provisions to verify adequate long-term operations and maintenance of new post-construction permanent stormwater facilities and best management practices 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 IV of the 2005 Ecology Stormwater Management Manual for Western Washington.
- 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 the new codes, standards, and standard operating procedures, 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 meet many of the Permit requirements. The current compliance activities associated with the Permit include:

- 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 many of the minimum requirements, technical thresholds, and definitions requirements of the Permit.
- 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.
- While the City does use the 2005 Ecology Manual for water quality requirements, the City will update codes, standards, and Comprehensive Plan to adopt the 2005 Ecology Manual for flow quantity and construction requirements.
- The City code has provisions to allow for LID in the Critical Areas Ordinance.
- The City completes most of the required inspections, including all development sites prior to construction, all future City infrastructure sites during construction, and all future City infrastructure sites post-construction.
- The City records and maintains most inspections results in log books.
- The City inspects all new flow control and water quality treatment facilities at the required times and frequency.
- Notices of Intent (NOI) forms are available at the customer service desk.
- The City will summarize all associated runoff control activities in its first Annual Compliance Report on March 31, 2009. Subsequent Annual Compliance Reports will also include SWMP updates.

6.3 Planned 2009 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 2009 SWMP activities related to runoff control for new development, redevelopment, and construction sites.

Table 6-1. 2009 Controlling Runoff From New Development, Redevelopment, and Construction Sites Work Plan				
Task ID	Task Description	Lead	Support	Compliance Timeframe
CTRL-1	Select new Stormwater Manual and implement new Stormwater Manual, codes, standards, and SOPs.	Public Works	CED	Adopt new manual and update codes and standards by 8/16/2009.
CTRL-2	Create SOPs defining the City's stormwater permitting, plan review, inspection, enforcement and record keeping processes.	Public Works, CED	CAO	Manual process, procedures, code updates, and training to be complete and/or adopted by 8/16/2009.
CTRL-3	Implement stormwater permitting, plan review, inspection, and enforcement SOPs (including enhanced inspection/enforcement documentation in Permits Plus).	CED	Public Works	Tracking of inspections and enforcement actions by 8/16/09.
CTRL-4	Conduct staff training and public E&O on implementing new Stormwater Manual and new Permit requirements.	Public Works	SCD	Training completed by 8/16/2009.
CTRL-5	Create and implement SOP for long-term stormwater system operation and maintenance verification.	Public Works	CED	In place by 8/2009

Table 6-1. 2009 Controlling Runoff From New Development, Redevelopment, and Construction Sites Work Plan				
Task ID	Task Description	Lead	Support	Compliance Timeframe
CTRL-6	Summarize annual activities for "Controlling Runoff from New Development, Redevelopment, and Construction Sites" component of Annual Report; identify any updates to SWMP.	Public Works	CED	The SWMP and Annual Compliance Report submittal is due on or before March 31 of each year.

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7. POLLUTION PREVENTION AND OPERATION AND MAINTENANCE FOR MUNICIPAL OPERATIONS

This section describes the Permit requirements related to pollution prevention and O&M for municipal operations, including descriptions of the City's current and planned compliance activities for 2009.

7.1 Permit Requirements

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

- Develop and implement an O&M program, with the ultimate goal of preventing or reducing pollutant runoff from municipal separate stormwater system and municipal O&M activities.
- Establish maintenance standards for the municipal separate stormwater system that are at least as protective as those specified in the 2005 *Stormwater Management Manual for Western Washington*.
- Perform required inspection frequency of stormwater flow control and treatment facilities and catch basins, unless previous inspection data show that a reduced frequency is justified.
- Have SOPs in place to reduce stormwater impacts associated with runoff from municipal O&M activities, including but not limited to streets, parking lots, roads, or highways owned or maintained by the City, and to reduce pollutants in discharges from all lands owned or maintained by the City.
- Train staff to implement the modified SOPs and document that training.
- Prepare 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 "Pollution Prevention and Operations and Maintenance for Municipal Operations" 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 meet many of the Permit requirements. The current compliance activities associated with the above Permit requirements include:

- 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 performs spot checks of potentially damaged treatment and control facilities. Most inspections are recorded in inspections logs.
- The City performs 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 (WWCBA) biennially.

- The City has developed a SWPPP for the maintenance yard.
- City staff from the Public Works Department, Roads Department, and Parks Department has received training on pollution prevention.
- The City will summarize all associated activities in its second Annual Compliance Report on March 31st, 2009. All subsequent Annual Compliance Reports will also include SWMP updates.

7.3 Planned 2009 Compliance Activities

The City performs 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 2009 SWMP activities related to pollution prevention and O&M activities.

Table 7-1. 2009 Pollution Prevention and Operations Maintenance Work Plan				
Task ID	Task Description	Lead	Support	Compliance Timeframe
PPOM-1	Maintain records of inspections and maintenance or repair activities conducted. Designate responsibilities for maintaining records.	Public Works		Continue through 2009.
PPOM-2	Adopt Ecology 2005 maintenance standards for City-performed maintenance activities.	CAO	Public Works	Begin in 2009 to be implementing SOPs by 2/16/2010.
PPOM-3	Establish annual inspection program for City-owned or operated stormwater catch basins and flow control and runoff treatment facilities	Public Works		Begin in 2009 to be implementing SOPs by 2/16/2010.
PPOM-4	Develop and establish 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	Begin in 2009 to be implementing SOPs by 2/16/2010.
PPOM-5	Summarize annual activities for "Pollution Prevention and Operation and Maintenance" component of Annual Report; identify any updates to SWPPP.	Public Works		The SWMP and Annual Compliance Report submittal is due on or before March 31 st of each year.

CITY OF MOUNT VERNON 2009 STORMWATER MANAGEMENT PROGRAM

8. MONITORING

This section describes the Permit requirements related to water quality monitoring, including descriptions of the City's current and planned compliance activities for 2009.

8.1 Permit Requirements

The Permit (Section S8) does not require municipalities to conduct water quality sampling or other testing during this permit term, with the following exceptions:

- Sampling or testing required for characterizing illicit discharges pursuant to Program's Illicit Discharge Detection and Elimination (IDDE) conditions.
- Water quality monitoring required for compliance with Total Maximum Daily Load (TMDL) conditions (water quality clean up plans). Mount Vernon is currently not required to conduct TMDL monitoring as part of this permit because Ecology has not yet developed TMDLs for those water bodies within the City of Mount Vernon limits.
- Preparing future comprehensive, long-term water quality monitoring plan including two components: 1) stormwater monitoring and 2) targeted Stormwater Management Program effectiveness monitoring.
- By the 4th Annual Compliance Report (March 31, 2011), Mount Vernon is required to identify two outfalls where permanent stormwater sampling stations can be installed and operated for future monitoring. The City is also required to develop plans to monitor stormwater, sediment, and receiving water for physical, chemical, and/or biological characteristics. One outfall must represent high-density residential land use, and the other commercial land use.
- To monitor Program effectiveness, the City will need to identify two suitable Program questions and sites where targeted Program effectiveness monitoring can be conducted and develop a monitoring plan for these questions and sites. The proposed effectiveness monitoring is required to answer the following types of questions:
 - How effective is a specific targeted action or a narrow suite of actions?
 - Is the Stormwater Management Program achieving a targeted environmental outcome?

In addition, the City is required to provide the following monitoring and/or assessment data in each annual report:

- A description of any stormwater monitoring or studies conducted by the City during the reporting period. If stormwater monitoring was conducted on behalf of the City, or if studies or investigations conducted by other entities were reported to the City, a brief description of the type of information gathered or received shall be included in the annual report.
- An assessment of the appropriateness of the best management practices identified by the City for each component of the Stormwater Management Program; and any changes made, or anticipated to be made, to the BMPs that were previously selected to implement the SWMP and why.

8.2 Current Compliance Activities

The City currently does not conduct any water quality monitoring intended to facilitate stormwater management decisions, evaluate or assist in pollutant spill response or to otherwise investigate stormwater quality. The Skagit Conservation District conducts monthly water quality sampling on Kulshan and Trumpeter Creeks as part of its Citizen Volunteer Water Quality Monitoring Program.

The City developed a map of the significant municipal stormwater outfalls, but has not yet developed a comprehensive water quality monitoring plan to implement future Permit water quality monitoring requirements.

8.3 Planned 2009 Compliance Activities

The City will need to create a Water Quality Monitoring Program to maintain compliance as Ecology phases in current and future Permit requirements. The requirements for monitoring do not come into effect until 2010 but the City will begin planning for these requirements in 2009. Table 8-1 presents the work plan for 2009 SWMP monitoring activities.

Table 8-1. 2009 Monitoring Work Plan				
Task ID	Task Description	Lead	Support	Compliance Timeframe
MNTR-1	Report potential violations of water quality standards per S4F requirements. Educate department staff on obligations under S4F of permit's Compliance with Standards section.	Public Works		Ongoing.
MNTR-2	Participate in regional and state monitoring forums and future legislative actions in order to influence development of feasible and effective alternative future monitoring requirements.	Public Works		Continue through 2009.
MNTR-3	Summarize annual monitoring activities for the Annual Report conducted by any other entities; identify SWMP updates.	Public Works		The SWMP and Annual Compliance Report submittal is due on or before March 31 st of each year.

Acronyms and Definitions from Permit

The following definitions and acronyms are taken directly from the Phase II Permit and are reproduced here for the reader's convenience.

AKART means all known, available, and reasonable methods of prevention, control and treatment. **All known, available and reasonable methods of prevention, control and treatment** refers to the State Water Pollution Control Act, Chapter 90.48.010 and 90.48.520 RCW.

Basin Plan is a surface water management process consisting of three parts: a scientific study of the basin's drainage features and their quality; developing actions and recommendations for resolving any deficiencies discovered during the study; and implementing the recommendations, followed by monitoring.

Best Management Practices ("BMPs") are the schedules of activities, prohibitions of practices, maintenance procedures, and structural and/or managerial practices approved by the Department 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.

CFR means Congressional Federal Register.

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 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.

Discharge for the purpose of this permit means, unless indicated otherwise, any discharge from a MS4 owned or operated by the permittee.

Ecology's Western Washington Phase I Municipal Stormwater Permit regulates discharges from municipal separate storm sewers owned or operated by Clark, King, Pierce and Snohomish Counties, and the cities of Seattle and Tacoma.

Ecology's Western Washington Phase II Municipal Stormwater Permit covers certain "small" municipal separate stormwater sewer systems.

Entity means another governmental body, or public or private organization, such as another permittee, a conservation district, or volunteer organization.

Equivalent document means a technical stormwater management manual developed by a state agency, local government or other entity that includes the Minimum Technical Requirements in Appendix 1 of this Permit. The Department may conditionally approve manuals that do not include the Minimum Technical Requirements in Appendix 1; in general, the Best Management Practices included in those documents may be applied at new development and redevelopment sites, but the Minimum Technical Requirements in Appendix 1 must still be met.

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.

Illicit connection means any man-made conveyance that is connected to a municipal separate storm sewer without a permit, excluding roof drains and other similar type connections. Examples include sanitary sewer

connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to the municipal separate storm sewer system.

Illicit discharge means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.

IDDE means Illicit discharge detection and elimination.

Low Impact Development (LID) means a stormwater management and land development strategy applied at the parcel and subdivision scale that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic pre-development hydrologic functions.

Major Municipal Separate Storm Sewer Outfall means a municipal separate storm sewer outfall from a single pipe with an inside diameter of 36 inches or more, or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive stormwater from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 12 acres or more).

*Note: The Illicit Discharge Detection and Elimination program requires mapping of outfalls that are 24" or greater in diameter.

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.

MS4 – see **Municipal Separate Storm Sewer System**.

MTRs means Minimum Technical Requirements.

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, storm water, 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 the United States.

(ii) designed or used for collecting or conveying stormwater.

(iii) which is not a combined sewer; and (iv) which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

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.

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

Outfall means point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the State and does not include open conveyances connecting two municipal separate storm sewer systems, or pipes, tunnels, or other conveyances which connect segments of the same stream or other waters of the State and are used to convey waters of the State.

O&M means Operations and Maintenance.

Permittee unless otherwise noted, the term “Permittee” includes Permittee, Co-Permittee, and Secondary Permittee, as defined below:

(i) A “Permittee” is a city, town, or county owning or operating a regulated small MS4 applying and receiving a permit as a single entity.

(ii) A “Co-Permittee” is any operator of a regulated small MS4 that is applying jointly with another applicant for coverage under this Permit. Co-Permittees own or operate a regulated small MS4 located within or adjacent to another regulated small MS4.

(iii) A “Secondary Permittee” is an operator of regulated small MS4 that is not a city, town, or county.

Small Municipal Separate Storm Sewer System or Small MS4 is a conveyance or system of conveyances for municipalities having populations of less than 100,000 according to the 1990 US census. Such systems include road drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and/or storm drains that are:

a. Owned or operated by a city, town, county, district, association or other public body created pursuant to State law having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer districts, flood control districts or drainage districts, or similar entity.

b. Designed or used for collecting or conveying stormwater.

c. Not a combined sewer system,

d. Not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

e. 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).

Small MS4s include systems similar to separate storm sewer systems in municipalities such as: universities, large publicly owned hospitals, prison complexes, highways and other thoroughfares. Storm sewer systems in very discrete areas such as individual buildings do not require coverage under this Permit.

Small MS4s do *not* include storm drain systems operated by non-governmental entities such as: individual buildings, private schools, private colleges, private universities, and industrial and commercial entities.

SOPs, or standard operating procedures, are the best practice approach to executing tasks or activities. In this document, they primarily pertain to the activities that will be implemented to protect stormwater quality.

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

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 Manual for Western Washington means the 5-volume technical manual (Publication Nos. 99-11 through 15 for the 2001 version and Publication Nos. 05-10-029-033 for the 2005 version (The 2005 version replaces the 2001 version) prepared by Ecology for use by local governments that contains BMPs to prevent, control, or treat pollution in storm water.

Stormwater Management Program (SWMP) means a set of actions and activities designed to reduce the discharge of pollutants from the regulated small MS4 to the maximum extent practicable and to protect water quality, and comprising the components listed in S5 or S6 of this Permit and any additional actions necessary to meet the requirements of applicable.