



FEDERAL CLEAN WATER ACT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
WESTERN WASHINGTON PHASE II MUNICIPAL STORMWATER PERMIT

2011 NPDES STORMWATER MANAGEMENT PROGRAM

March 2011



CITY OF BELLEVUE, WASHINGTON

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CITY OF BELLEVUE 2011 STORMWATER MANAGEMENT PROGRAM

1. INTRODUCTION

1.1 Overview and 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. 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 Bellevue’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 Bellevue, as operators of small municipal separate storm sewer systems (MS4s).

The Permit authorizes the discharge of stormwater runoff from municipal drainage systems into the State’s surface waters (i.e., streams, rivers, lakes, wetlands, etc.) and ground waters as long as municipalities implement Permit-specified “best management practices” (BMPs) to reduce the discharge of “non-point source” pollutants to the “maximum extent practicable” (MEP), meet state AKART (all known, available, and reasonable methods of prevention, control and treatment) requirements, and protect water quality. 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
- Public Involvement
- Illicit Discharge Detection and Elimination (IDDE)
- Runoff Controls
- Pollution Prevention and Municipal Operations and Maintenance
- Monitoring

The Permit requires the City to report annually (March 31st of each year) on progress in Program 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.

As of March 31st, 2011 the City meets the Permit requirements. This report is the City’s 2011 Stormwater Management Program compliance document. The remainder of this 2011 SWMP document describes actions Bellevue will take to maintain compliance over the fifth year of the Permit term (i.e., February 2011 through February 2012).

1.2 Phased Implementation of Permit Requirements

Ecology began work on the Phase II Municipal Stormwater Permit for Western Washington in the fall of 2004 and posted a preliminary draft for public comment on May 16, 2005. Ecology released a formal draft of the Permit in February 2006 and issued the final Permit on January 17, 2007. The Permit issued by Ecology became effective on February 16, 2007 and expires on February 15, 2012. Ecology modified the permit on June 17, 2009 in response to rulings by the Washington State Pollution Control Hearings Board on several permit appeals.

Ecology is phasing in many of the Permit requirements over the five-year Permit term. On March 31 of each year, beginning in 2008, the City must:

1. Submit its Stormwater Management Program (SWMP) document to Ecology describing compliance activities planned for the coming year.
2. Post the SWMP document on the web.
3. Submit an annual report documenting Permit compliance activities for the previous calendar year.

This document includes the following attachments:

- Appendix A- Western Washington Phase II Municipal Stormwater Permit Special and General Conditions
- Appendix B- Acronyms and Definitions from the Permit.
- Appendix C- Ecology's Guidance for City and County Annual Reports for Western Washington Phase II Municipal Stormwater General Permits.
- Appendix D- City of Bellevue 2010 Annual Compliance Report.

Additional Permit information is located on Ecology's website:

<http://www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseIIww/wwwphiipermit.html>.

1.3 Department Responsibilities

The Permit requirements affect departments across the City organization. One difficulty in assigning lead departments to address Permit sections is that those sections do not divide cleanly along department divisional lines. To encourage collaboration and efficient use of resources the City has chartered implementation teams for each Permit component. These teams consist of members from affected departments. Those departments include Utilities, Development Services (DSD), Information Technology (IT), Civic Services, Fire, Planning and Community Development (PCD), City Attorney's Office (CAO) including Risk Management (Risk), Finance, Parks and Community Services (Parks), Transportation (Trans.), Human Resources (HR), Police, City Clerk's Office, and the City Manager's Office (CMO).

1.4 Document Organization

The content in this document is based upon Permit requirements and Ecology's Guidance for City and County Annual Reports for Western Washington Phase II Municipal Stormwater Permits. The remainder of the Stormwater Management Program document is organized similarly to the Permit:

- **Section 2.0** addresses Permit requirements for administration of the City's Stormwater Management Program for 2011.
- **Section 3.0** addresses Permit requirements for Public Education and Outreach for 2011.
- **Section 4.0** addresses Permit requirements for Public Involvement and Participation for 2011.

- **Section 5.0** addresses Permit requirements for Illicit Discharge Detection and Elimination for 2011.
- **Section 6.0** addresses Permit requirements for Controlling Runoff from New Development, Redevelopment and Construction Sites for 2011.
- **Section 7.0** addresses Permit requirements for Pollution Prevention and Operation and Maintenance for Municipal Operations for 2011.
- **Section 8.0** addresses Permit requirements for the Water Quality Monitoring section of the Permit for 2011.

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

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CITY OF BELLEVUE 2011 STORMWATER MANAGEMENT PROGRAM

2. STORMWATER MANAGEMENT PROGRAM ADMINISTRATION

This Section describes Permit requirements related to overall Stormwater Management Program administration, including current and planned compliance activities.

2.1 Permit Requirements

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

- Develop and implement a Stormwater Management Program and prepare written documentation (SWMP document) for submittal to Ecology on March 31, 2008; 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 (MEP), meet state AKART (all known, available, reasonable methods of prevention, control and treatment) requirements, and protect water quality. The Program is to include the actions and activities described in Sections 3 through 8 of this SWMP document.
- Submit annual compliance reports beginning in 2008 to Ecology by March 31st (for the previous calendar year). These reports are to summarize SWMP implementation status and present information from assessment and evaluation activities conducted during the reporting period.

2.2 Current Activities

The City currently has in place activities and programs that meet the Permit requirements. Current activities associated with the above Permit requirements include:

- The City has created a NPDES implementation group and organizational management structure. They have defined roles and responsibilities and developed processes and procedures for completing updates to future SWMP documents and the Annual Compliance Report annually.
- The City implemented an overall strategy for code updates required by individual Permit components and adjusted it as needed in response to Pollution Control Hearings Board decisions.
- The City developed training materials and completed several of the Program requirements for staff training.
- The City developed an Annual Compliance Report database to streamline documentation by staff of city-wide compliance activities.
- The City continues to refine its NPDES cost accounting strategy and tracking system.
- The City continues to refine its NPDES training program, including development of a city-wide database for tracking implementation of citywide training requirements.
- The City is on track to comply with Ecology's requirements for submittal of the fourth Annual Compliance Report by March 31, 2011.

2.3 Planned Activities

Bellevue is currently compliant with the Permit. The City has positioned itself to maintain compliance as Ecology phases in the future Permit deadlines. Actions recommended for continued compliance include:

- Supporting and coordinating Permit implementation citywide.
- Adaptively managing NPDES processes and procedures.

Table 2-1 is the work plan for 2011 SWMP Administration activities. These tasks were developed through an iterative process of interviews and workshops with staff from affected City departments. City department references used in the "lead" and "support" columns are defined in Appendix B.

Table 2-1. 2011 Stormwater Management Program Administration Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
SWMP-1	Support and coordinate Permit implementation citywide.	Utilities	All	On-going
SWMP-2	Adaptively manage the NPDES processes and procedures.	Utilities + Legal	All	On-going
SWMP-3	Summarize annual activities for "Stormwater Management Program" component of Annual Compliance Report; identify any updates to Program document.	Utilities	All	The SWMP and Annual Compliance Report submittal is due on or before March 31 st of each year.

CITY OF BELLEVUE 2011 STORMWATER MANAGEMENT PROGRAM

3. PUBLIC EDUCATION AND OUTREACH

The Section describes the Permit requirements related to Public Education and Outreach, including current and planned compliance activities.

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.
- Measure the understanding and adoption of the targeted behaviors for at least one targeted audience in at least one subject area to use in directing education and outreach sources more effectively, as well as to evaluate changes in adoption of the targeted behaviors.
- Track and maintain records of public education and outreach activities.

3.2 Current Activities

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

- The City currently conducts numerous education and outreach activities that address stormwater management. These programs directly address general public, residents/homeowners, businesses, developers, contractors, engineers and some industries and include but are not limited to:
 - Car wash kits and related outreach and education
 - Storm drain stenciling/marketing of public storm drains, with expansion to private storm drains
 - Natural yard care neighborhood program
 - Puget Sound Starts Here campaign, including a variety of programs and educational activities, such as rain garden workshops
 - Commercial surface water pollution prevention technical assistance and financial incentives
 - General outreach and communication, including theater advertisements
 - Used motor oil and hazardous waste recycling program
 - Elementary school assemblies and workshops program
 - Powerful Choices for the Environment targeting middle school students
 - Advanced placement environmental science presentation and support for high school students
 - Natural Resources Week, promoting protection of surface water to elementary school students
 - Stream team workshops

- Stormwater maintenance and best management practices technical outreach through the municipal stormwater operations and maintenance and private drainage inspection programs.
- Public outreach and education on hazards associated with illicit discharges and improper disposal of waste including a Stormwater Pollution Communications Plan.
- Development services one-stop resource center provides information and consultations with staff from across the city on development regulations and permit requirements.
- The City conducted surveys and focus groups measuring attitudes about stormwater pollution and car wash behavior to create an awareness baseline from which to measure future improvements. The City is tracking behavior improvements through the Carwash Research project.
- The City continues to participate in the Puget Sound Starts Here campaign, which is a regional effort to educate the public while finding effective ways to track measurable improvements.
- The City tracks its education and outreach efforts.
- The City continues to work extensively with the STORM (Stormwater Outreach for Regional Municipalities) Group to help identify appropriate program evaluation techniques.

3.3 Planned Activities

Bellevue has a public education and outreach program, but will need to update the program to maintain compliance as Ecology phases in the Permit requirements. Actions recommended for continued compliance include:

- Distributing appropriate information to target audiences of hazards associated with illicit discharges and improper disposal of waste.
- Receiving feedback from illicit discharge detection and elimination (IDDE) public education efforts.
- Preparing and attaching a report on IDDE public education efforts.
- Summarizing annual activities for the "Public Education and Outreach" components of the Annual Compliance Report; identifying updates to the Program document.

Table 3-1 is the work plan for 2011 SWMP public education and outreach activities. These tasks were developed through an iterative process of interviews and workshops with staff from affected City departments. City department references used in the "lead" and "support" columns are defined in Appendix B.

Table 3-1. 2011 Public Education and Outreach Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
EDUC-1	Distribute appropriate information to target audiences of hazards associated with illicit discharges and improper disposal of waste.	Utilities + DSD	All	Complete by August 19, 2011.
EDUC-2	Receive feedback from IDDE public education efforts.	Utilities + DSD	All	Complete by August 19, 2011.
EDUC-3	Prepare and attach a report on IDDE public education efforts.	Utilities + DSD	All	Complete by August 19, 2011.
EDUC-4	Summarize annual activities for "Public Education and Outreach" component of Annual Compliance Report; identify any updates to Program document.	Utilities + DSD	All	The SWMP and Annual Compliance Report submittal is due on or before March 31 st of each year.

CITY OF BELLEVUE 2011 STORMWATER MANAGEMENT PROGRAM

4. PUBLIC INVOLVEMENT

This Section describes the Permit requirements related to Public Involvement, including current and planned compliance activities.

4.1 Permit Requirements

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

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

4.2 Current Activities

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

- The City has defined a series of activities intended to meet the Permit requirements for public involvement in development of the 2011 Stormwater Management Program, including the citywide 2011-2012 budget process, a public meeting on the 2011 Stormwater Management Program, briefings and presentations to Commissions and City Council on the Program and/or Program elements.
- The City makes the current SWMP document and Annual Compliance Report available to the public on the City website.

4.3 Planned Activities

Bellevue has a history of including the public in decision making on environmental issues. Actions recommended for continued compliance include:

- Providing public involvement opportunities for annual SWMP update process.
- Making new SWMP document and Annual Compliance Report available to public by posting on the City website.
- Summarizing annual activities for the "Public Involvement and Participation" component of the Annual Report; including updates to the SWMP.

Table 4-1 is the work plan for 2011 SWMP public involvement activities. These tasks were developed through an iterative process of interviews and workshops with staff from affected City departments. City department references used in the "lead" and "support" columns are defined in Appendix B.

Table 4-1. 2011 Public Involvement Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
PI-1	Implement public involvement opportunities for annual Program update.	Utilities	All	Complete by March 31, 2011.
PI-2	Make new SWMP document and Annual Compliance Report available to public by posting on the City website.	Utilities	IT	Complete by March 31, 2011.
PI-3	Summarize annual activities for "Public Involvement and Participation" component of Annual Compliance Report; identify any updates to Program document.	Utilities	All	The SWMP and Annual Compliance Report submittal is due on or before March 31 st of each year.

CITY OF BELLEVUE 2011 STORMWATER MANAGEMENT PROGRAM

5. ILLICIT DISCHARGE DETECTION AND ELIMINATION

This Section describes the Permit requirements related to Illicit Discharge Detection and Elimination (IDDE), including current and planned compliance activities.

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 through close-out illicit discharge reports and actions taken in response, including enforcement actions.
- Train Program staff on proper IDDE response procedures and processes and train 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; including updates to the SWMP document.

5.2 Current Activities

The City currently implements activities and programs that meet the Permit requirements. The current compliance activities associated with the above Permit requirements include:

- The City maintains an up-to date storm sewer map in multiple electronic formats and has standard operating procedures (SOPs) for keeping the municipal separate storm sewer system map and inventory up-to-date. The map is updated with new facilities or corrected for inconsistencies based on field verification.
- The City reviewed and modified its IDDE program to ensure consistent citywide implementation of the Permit requirements.
- The City amended city codes, standard operating procedures, and construction standards to implement the Permit’s illicit discharge and escalating enforcement requirements. See Section 6 Current Activities for link to amended codes and standards.
- The City developed a Stormwater Pollution Communications Plan and additional outreach materials to increase awareness of stormwater pollution impacts and empower citizens to adopt new behaviors that prevent pollutants from entering the storm drainage system and downstream waters.

- The City developed submittal materials for the new Construction Stormwater Pollution Prevention Plan requirements that address illicit discharges from construction sites.
- The City initiated the stormwater outfall illicit discharge screening program by performing a storm drainage outfall reconnaissance inventory and prioritizing receiving waters for inspection.
- The City modified existing databases to better track and document reported illicit discharges and their resolution.
- The City developed illicit discharge awareness and response training materials and implemented a training program for citywide staff.
- The City has a 24-hour emergency response line for public reporting of spills and other illicit discharges (425-452-7840).

5.3 Planned Activities

Bellevue has an illicit discharge detection and elimination program but will need to update current efforts in order to maintain compliance as Ecology phases in Permit requirements. Actions recommended for continued compliance include:

- Updating the storm system map to address data gaps and Permit conditions.
- Implementing the stormwater outfall discharge screening and source control program.
- Refining citywide IDDE program procedures as needed to ensure consistent application, implementation, and documentation of Permit requirements.
- Supporting public education and outreach efforts (to inform businesses and the general public of hazards associated with illicit discharges and improper disposal of waste) through IDDE program implementation.
- Continuing illicit discharge training for all municipal field staff.
- Summarizing annual activities for the "Illicit Discharge Detection and Elimination" component of the Annual Compliance Report; including updates to the SWMP document.

Table 5-1 is the work plan for 2011 SWMP illicit discharge detection and elimination activities. These tasks were developed through an iterative process of interviews and workshops with staff from affected City departments. City department references used in the "lead" and "support" columns are defined in Appendix B.

Table 5-1 2011 Illicit Discharge Detection and Elimination Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
IDDE-1	Update of storm system map to address data gaps and Permit conditions.	Utilities	IT	Complete by February 16, 2011. On-going.
IDDE-2	Implement the stormwater outfall discharge screening and source control program.	Utilities		Complete by August 19, 2011. On-going.
IDDE-3	Refine citywide IDDE program procedures as needed to ensure consistent application, implementation, and documentation of Permit requirements.	Utilities	All	Complete by August 19, 2011. On-going.
IDDE-4	Support public education and outreach efforts through IDDE program implementation.	Utilities	DSD	Complete by August 19, 2011. On-going.
IDDE-5	Continue illicit discharge training for all municipal field staff.	Utilities	All	On-going.
IDDE-6	Summarize annual activities for "Illicit Discharge Detection and Elimination" component of Annual Compliance Report; identify any updates to Program document.	Utilities	All	The SWMP and Annual Compliance Report submittal is due on or before March 31 st of each year.

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CITY OF BELLEVUE 2011 STORMWATER MANAGEMENT PROGRAM

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 current and planned compliance activities. Ecology issued a modified Permit in June 2009 which changed the compliance deadline for these Permit requirements from August 16, 2009 to February 16, 2010. Bellevue completed the actions necessary to meet these Permit requirements by the end of 2009, as noted in Section 6.2.

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 processes and procedures necessary to implement the program in accordance with Permit conditions, including the minimum technical requirements in Appendix 1 of the Permit (i.e., 2005 Ecology Stormwater Management Manual for Western Washington, equivalent Phase I Manual or one of the Manual options with a Bellevue-specific basin-planning overlay).
- Provide provisions and processes and procedures (plan review, inspection, and enforcement) to allow non-structural preventive actions and source reduction approaches such as Low Impact Development techniques (LID), 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 (i.e., private drainage system inspections) 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 training to staff on the new codes, standards, processes and procedures and create public outreach and education materials.
- Develop and define a process to record and maintain all inspections and enforcement actions by staff for inclusion in the Annual Compliance Report.
- Develop a report on low impact development (LID) barriers and practices. (Condition added in June 17, 2009 Permit modification).
- Summarize annual activities for the “Controlling Runoff” component of the Annual Compliance Report; identify any update to Program document.

6.2 Current Activities

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

- The City amended city codes and revised standards to meet Permit requirements for development, redevelopment, construction and post-construction stormwater management, including escalating enforcement provisions for illicit discharges originating from construction sites. The development related code amendments became effective January 1, 2010. The amended codes and revised standards are located online at www.bellevuewa.gov/doc_library.htm and include:
 1. Ordinance 5905, Bellevue City Code Chapter 24.06, Storm and Surface Water Utility Code
 2. Utilities 2010 Surface Water Engineering Standards
 3. Ordinance 5906, Bellevue City Code Chapter 23.76, Clearing and Grading Code
 4. 2010 Clearing and Grading Development Standards
 5. Ordinance 5907, Bellevue City Code Chapter 1.18.075, Civil Violations Code
- The City adopted the 2005 Ecology Stormwater Manual as the citywide stormwater standard for development, redevelopment, and construction projects as part of the code amendments.
- The City modified its plan review, inspection, enforcement and documentation procedures to address the new regulations.
- The City modified its development services information management system to document development plan review, inspection and enforcement actions per Permit requirements.
- The City provided training to staff on the new regulations and processes and procedures.
- The City modified its post-construction inspection program for private stormwater facilities (i.e., the Private Drainage Inspection Program) to meet Permit requirements for inspection and documentation.
- The City revised its maintenance standards for private and public storm and surface water systems to meet Permit requirements. The revised standards are located online at www.bellevuewa.gov/doc_library.htm.
- The City continues to make information about and copies of Ecology's application forms for Construction NPDES and Industrial NPDES permits available to the public.
- The City began developing a summary of LID barriers and a report on LID practices.

6.3 Planned Activities

Bellevue modified citywide programs that help reduce pollutants in stormwater runoff from new development and construction sites to meet Permit requirements in 2009 (prior to the new February 16, 2010 compliance deadline). Actions that are recommended for continued compliance include:

- Continuing to refine citywide Controlling Runoff programs, processes and procedures and information management systems as needed to ensure consistent application, implementation and documentation of Permit requirements.
- Submitting a report on LID barriers and practices with March 31, 2011 Annual Compliance Report.
- Completing and summarizing annual activities for the "Controlling Runoff from New Development, Redevelopment, and Construction Sites" component of the Annual Compliance Report (including the post-construction private drainage system inspection and maintenance requirements); including updates to the SWMP document.

Table 6-1 is the work plan for 2011 SWMP activities related to control of runoff from new development, redevelopment and construction sites. These tasks were developed through an iterative process of interviews

and workshops with staff from affected City departments. City department references used in the "lead" and "support" columns are defined in Appendix B.

Table 6-1. 2011 Controlling Runoff From New Development, Redevelopment, and Construction Sites Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
CTRL-1	Continue to refine citywide Controlling Runoff programs, processes and procedures and information management systems as needed to ensure consistent application, implementation and documentation of Permit requirements.	Utilities + DSD	CAO	On-going.
CTRL-2	Develop and submit report on LID barriers and practices per Permit condition S9.E4b.	Utilities + DSD	CAO, PCD	Submit information and report with the March 31, 2011 Annual Compliance Report to Ecology.
CTRL-3	Summarize annual activities for "Controlling Runoff from New Development, Redevelopment, and Construction Sites" component of Annual Compliance Report; identify any updates to Program document.	Utilities + DSD + IT	Parks + Trans.	The SWMP and Annual Compliance Report submittal is due on or before March 31 st of each year.

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CITY OF BELLEVUE 2011 STORMWATER MANAGEMENT PROGRAM

7. POLLUTION PREVENTION AND OPERATION AND MAINTENANCE FOR MUNICIPAL OPERATIONS

This Section describes the Permit requirements related to Pollution Prevention and Operation and Maintenance for Municipal Operations, including current and planned compliance activities.

7.1 Permit Requirements

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

- Develop and implement an operations and maintenance (O&M) program with the ultimate goal of preventing or reducing pollutant runoff from municipal separate stormwater system and municipal operations and maintenance 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 processes and procedures in place to reduce stormwater impacts associated with runoff from municipal operation and maintenance 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 processes and procedures and document that training.
- Prepare Stormwater Pollution Prevention Plans (SWPPP) for all heavy equipment maintenance or storage 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; including any updates to the SWMP document.

7.2 Current Activities

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

- The City currently is on track to comply with required municipal storm inspection frequencies.
- The City implemented inspection, operation and maintenance processes and procedures for Bellevue-owned or operated stormwater catch-basins and flow control and treatment facilities to meet Permit requirements.
- The City revised storm drainage maintenance standards for public and private drainage systems to comply with Permit requirements.
- The City updated its operations and maintenance (O&M) program and implemented procedures to reduce stormwater impacts from the operation and maintenance of storm and surface water systems, streets, parking lots, roads and lands owned or maintained by the City.

- The City created and implemented Stormwater Pollution Prevention Plans (SWPPP) for six City facilities.
- The City implemented a program for annual inspection of City-owned flow control and runoff treatment facilities, once-per-permit-term inspection of municipal catchbasins, and for performing identified maintenance within prescribed Permit timelines.
- The City modified and implemented the operations and maintenance training program to provide on-going city-wide pollution prevention training for municipal field staff based on the updated and/or new standard operating procedures developed to reduce stormwater runoff from construction, operation and maintenance of municipal facilities and lands.

7.3 Planned Actions

Bellevue performs many activities to limit stormwater pollution potential related to its municipal operations and maintenance program. However, updates will be necessary to maintain compliance as Ecology phases in Permit requirements. Actions recommended for continued compliance include:

- Completing inspection of 95% of City-owned and maintained catchbasins by August 19, 2011.
- Summarizing annual activities for the "Pollution Prevention and Operation and Maintenance" component of the Annual Compliance Report; including updates to the SWMP document.

Table 7-1 is the work plan for 2011 SWMP activities related to pollution prevention and operations and maintenance activities. These tasks were developed through an iterative process of interviews and workshops with staff from affected City departments. City department references used in the "lead" and "support" columns are defined in Appendix B.

Table 7-1. 2011 Pollution Prevention and Operations and Maintenance Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
PPOM-1	Perform annual inspection frequency for all municipal storm flow control and runoff treatment facilities, once-per-permit-term inspection of City-owned and maintained catch basins, and perform identified maintenance within prescribed Permit timelines.	Utilities	IT	On-going. Complete inspections of 95% of City-owned and maintained catchbasins by August 19, 2011.
PPOM-2	Summarize annual activities for "Pollution Prevention and Operation and Maintenance" component of Annual Compliance Report; identify any updates to Program document.	Utilities	All	The SWMP and Annual Compliance Report submittal is due on or before March 31 st of each year.

CITY OF BELLEVUE 2011 STORMWATER MANAGEMENT PROGRAM

8. MONITORING

This Section describes the Permit requirements related to water quality monitoring, including current and planned compliance activities.

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:

- Water quality monitoring required in a water quality clean-up plan issued by Ecology. Ecology has not issued any water quality clean up plans for waterbodies in Bellevue.
- Sampling or testing required for characterizing illicit discharges pursuant to the Program's Illicit Discharge Detection and Elimination conditions.
- Preparation for future, comprehensive, long-term water quality monitoring program consistent with current Phase I monitoring requirements, including general stormwater quality monitoring and targeted Stormwater Management Program effectiveness monitoring as noted.
- For general stormwater monitoring preparation, identify three outfalls (representing commercial, high-density residential and industrial land uses) where permanent stormwater sampling stations can be installed and operated for future monitoring. Submit a report documenting why sites were selected, possible site constraints for installation and access to monitoring equipment, a brief description of the contributing drainage basin, and any water quality concerns in the receiving water of each selected outfall.
- For Stormwater Management Program effectiveness monitoring, identify two Program questions and sites where monitoring can be conducted. The questions shall be designed to answer (1) how effective is a targeted action or narrow suite of actions and (2) is the SWMP achieving a targeted environmental outcome. Develop a monitoring plan for each question.
- Notification to Ecology within 30 days of identifying potential surface water quality violations from water quality monitoring conducted by or for the municipality (per Compliance with Standards condition S4F).

In addition, the City is required to provide the following monitoring and/or assessment data in Annual Compliance Reports:

- A description of 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 Compliance Report.
- An assessment of the appropriateness of the best management practices identified by the City for components of the Stormwater Management Program; and changes made, or anticipated to be made, to the practices that were previously selected to implement the Program and why those changes are desirable.

8.2 Current Activities

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

- The City identified three outfalls (representing commercial, high-density residential and industrial land uses) where permanent stormwater sampling stations can be installed and operated for future monitoring.
- The City identified two SWMP effectiveness questions and sites where monitoring can be conducted.
- The City is participating in a variety of regional and state monitoring forums to develop feasible and effective future monitoring requirements as an alternative to those proposed in the current Permit. The stormwater monitoring plan developed under this permit term for future monitoring in the next permit term will likely require modifications. Regional monitoring forums are developing new monitoring strategy recommendations for Ecology to consider in preparing requirements for the next permit.
- The City conducts sampling or testing required for characterizing illicit discharges pursuant to the Permit's Illicit Discharge Detection and Elimination program conditions.
- The City reviews water quality monitoring data and/or reports conducted by or for the City to determine if potential water quality violations are identified.
- The City reports potential water quality violations to Ecology within 30 days of becoming aware of the potential violations per the Permit's Compliance with Standards condition S4F.

8.3 Planned Activities

Bellevue has a water quality monitoring program that will need to be expanded in order to maintain compliance with future Permit monitoring conditions. Actions recommended for continued compliance with this Permit's monitoring conditions include:

- Continuing participation in a variety of regional and state monitoring forums to develop feasible and effective future monitoring requirements for the next NPDES Permit.
- The City is developing two monitoring reports for the future that will be submitted with March 31, 2011 Annual Compliance Report. The first is a report documenting why the three outfall sites were selected, possible site constraints for installation and access to monitoring equipment, a brief description of the contributing drainage basin, and any water quality concerns in the receiving water of each selected outfall. The second is a report with monitoring plans for the two SWMP effectiveness questions.
- Summarizing annual monitoring activities for the annual compliance report and identifying any updates to the Program document.

Table 8-1 is the work plan for 2011 SWMP monitoring activities. These tasks were developed through an iterative process of interviews and workshops with staff from affected City departments. City department references used in the "lead" and "support" columns are defined in Appendix B.

Table 8-1. 2011 Monitoring Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
MNTR -1	Participate in regional and state monitoring forums and future legislative actions in order to influence development of feasible and effective alternative future monitoring requirements for the next NPDES permit.	Utilities	N/A	Ongoing.
MNTR-2	Develop monitoring plans required by current Permit.	Utilities	N/A	Submit by March 31, 2011.
MNTR -3	Summarize annual monitoring activities for the Annual Compliance Report; identify any updates to the Program document.	Utilities	All	The SWMP and Annual Compliance Report submittal is due on or before March 31 st of each year.

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APPENDIX A

- **Western Washington Phase II Municipal Stormwater Permit Special and General Conditions (Issued January 17, 2007, Modified June 17, 2009)**

The special and general conditions along with appendices for the Western Washington Phase II Municipal Stormwater Permit are available at:

<http://www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseIIww/wwphiipermi.html>

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Issuance Date: January 17, 2007
Effective Date: February 16, 2007
Expiration Date: February 15, 2012
Modification Date: June 17, 2009

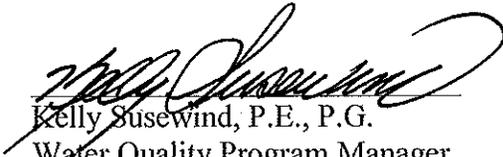
WESTERN WASHINGTON PHASE II MUNICIPAL STORMWATER PERMIT

National Pollutant Discharge Elimination System and
State Waste Discharge General Permit for Discharges
from Small Municipal Separate Storm Sewers
in Western Washington

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
OLYMPIA, WASHINGTON 98504-7600

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

Until this permit expires, is modified, or revoked, permittees that have properly obtained coverage under this permit are authorized to discharge to waters of the state in accordance with the special and general conditions which follow.


Kelly Susewind, P.E., P.G.
Water Quality Program Manager
Department of Ecology

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SPECIAL CONDITIONS

Notice: If legislation related to this Permit is passed into law, Ecology will, as necessary, modify, revoke and re-issue or terminate this Permit to carry out legislative requirements. Any such modification will be in accordance with G14 *General Permit Modification and Revocation* and the provisions of WAC 173-226-230.

S1. PERMIT COVERAGE AREA AND PERMITTEES

A. Geographic Area of Permit Coverage

This Permit is applicable to owners or operators of regulated small municipal separate storm sewer systems (MS4s) located west of the eastern boundaries of the following counties: Whatcom, Skagit, Snohomish, King, Pierce, Lewis and Skamania.

1. For all cities required to obtain coverage under this permit, the geographic area of coverage is the entire incorporated area of the city.
2. For all counties required to have coverage under this Permit, the geographic area of coverage is the urbanized areas and urban growth areas associated with cities under the jurisdictional control of the county. The geographic area of coverage also includes any urban growth area contiguous to urbanized areas under the jurisdictional control of the county.
3. For secondary permittees required to obtain coverage under this permit, the minimum geographic area of coverage is all areas identified under S1.A.1. and S1.A.2. At the time of permit coverage, Ecology may establish a geographic area of coverage specific to an individual secondary permittee.
4. All regulated small MS4s owned or operated by the permittees named in S1.D.2.a. and located in another city or county area requiring coverage under either the Phase I *Municipal Stormwater Permit* or the *Eastern Washington Phase II Municipal Stormwater Permit* are also covered under this permit.

B. Regulated Small Municipal Separate Storm Sewer Systems (MS4s)

All operators of regulated small municipal separate storm sewer systems (MS4s) are required to apply for and obtain coverage under this Permit or be permitted under a separate individual permit, unless waived or exempted in accordance with condition S1.C.

1. **A regulated small MS4:**
 - a. Is a “Small MS4” as defined in the *Definitions and Acronyms* section at the end of this Permit; and
 - b. Is located within, or partially located within, an urbanized area as defined by the latest decennial census conducted by the U.S. Bureau of Census, or designated by the Department pursuant to 40 CFR 123.35(b) or 40 CFR 122.26(f); and
 - c. Discharges stormwater from the MS4 to a surface water of Washington State; and

- d. Is not eligible for a waiver or exemption under S1.C. below.
 2. All other operators of MS4s, including special purpose districts, which meet the criteria for a regulated small MS4 shall obtain coverage under this Permit. Other operators of municipal separate storm sewers may include, but are not limited to: flood control, or diking and drainage districts, schools including universities, and correctional facilities that own or operate a small MS4 serving non-agricultural land uses.
 3. Any other operators of small MS4s may be required by the Department to obtain coverage under this permit or an alternative NPDES permit if the Department determines the small MS4 is a significant source of pollution to surface waters of the state. Notification of the Department's determination that permit coverage is required will be through the issuance of an Administrative Order issued in accordance with RCW 90.48.
 4. The owner or operator of a regulated small MS4 may obtain coverage under this Permit as a permittee, co-permittee, or secondary permittee as defined in S1.D.1. below.
 5. Pursuant to 40 CFR 122.26(f), any person or organization may petition Ecology to require that additional municipal separate storm sewers obtain coverage under this permit. The process for petitioning Ecology is:
 - a. The person or organization shall submit a complete petition in writing to Ecology. A complete petition shall address each of the relevant factors for petitions outlined on Ecology's website.
 - b. In making its determination on the petition, Ecology may request additional information from either the petitioner or the jurisdiction.
 - c. Ecology will make a final determination on a complete petition within 180 days of receipt of the petition and inform both the petitioner and the municipal separate storm sewer of the decision, in writing.
 - d. If Ecology's final determination is that the candidate municipal separate storm sewer will be regulated, Ecology will issue an order to the municipal separate storm sewer requiring them to obtain coverage under this Permit. The order will specify:
 - i. The geographic area of permit coverage for the municipal separate storm sewer system;
 - ii. Any modified dates or deadlines for developing and implementing the Stormwater Management Program in S5. or S6., as appropriate to the municipal separate storm sewer system, and for submitting their first annual report; and
 - iii. A deadline for the operator of the municipal separate storm sewer system to submit a complete Notice of Intent (see Appendix 5) to Ecology.
- C. Owners and operators of an otherwise regulated small MS4 are not required to obtain coverage under this Permit if:

Western Washington Phase II Municipal Stormwater Permit

1. The small MS4 is operated by:
 - a. The federal government on military bases or other federal lands; or by the United States Military, the Bureau of Land Management, the United States Park Service or other federal agencies;
 - b. Federally recognized Indian Tribes located within Indian Country Lands; or
 - c. The Washington State Department of Transportation.or:
 2. The portions of the small MS4 located within the census defined urban area(s) serve a total population of less than 1000 people and a, b, and c, below all apply:
 - a. The small MS4 is not contributing substantially to the pollutant loadings of a physically interconnected MS4 that is regulated by the NPDES stormwater program.
 - b. The discharge of pollutants from the small MS4 have not been identified as a cause of impairment of any water body to which the MS4 discharges.
 - c. In areas where an EPA approved TMDL has been completed, stormwater controls on the MS4 have not been identified as being necessary.

In determining the total population served both resident and commuter populations shall be included. For example:

- For publicly operated school complexes including universities and colleges the total population served would include the sum of the average annual student enrollment plus staff.
- For flood control, diking, and drainage districts the total population served would include residential population and any non-residents regularly employed in the areas served by the small MS4.

D. Obtaining coverage under this Permit

All operators of **regulated small MS4s** are required to apply for and obtain coverage in accordance with this section, unless waived or exempted in accordance with section S1.C.

1. Permittees: unless otherwise noted, the term “Permittee” shall include Permittee, Co-Permittee, and Secondary Permittee, as defined below:
 - a. “Permittee” is a city, town, or county owning or operating a regulated small MS4 applying and receiving a permit as a single entity.
 - b. “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.

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- c. A “Secondary Permittee” is an operator of regulated small MS4 that is not a city, town or county. Secondary Permittees include special purpose districts and other MS4s that meet the criteria for a regulated small MS4 in S1.B. above.
2. Operators of **regulated small MS4s** shall submit either an individual application to the Department or a Notice of Intent (NOI). Applications submitted after January 17, 2007 must be made using the NOI provided in Appendix 5. The NOI is also available on Ecology’s website.
 - a. All cities, towns and counties listed in i and ii below and operating regulated small MS4s shall apply as either a Permittee or Co-Permittee.
 - i. Cities of: Aberdeen, Algona, Anacortes, Arlington, Auburn, Bainbridge Island, Battle Ground, Bellevue, Bellingham, Black Diamond, Bonney Lake, Bothell, Bremerton, Brier, Buckley, Burien, Burlington, Camas, Centralia, Clyde Hill, Covington, Des Moines, DuPont, Duvall, Edgewood, Edmonds, Enumclaw, Everett, Federal Way, Ferndale, Fife, Fircrest, Gig Harbor, Granite Falls, Issaquah, Kelso, Kenmore, Kent, Kirkland, Lacey, Lake Forest Park, Lake Stevens, Lakewood, Longview, Lynnwood, Maple Valley, Marysville, Medina, Mercer Island, Mill Creek, Milton, Monroe, Mountlake Terrace, Mount Vernon, Mukilteo, Newcastle, Normandy Park, Oak Harbor, Olympia, Orting, Pacific, Port Orchard, Port Angeles, Poulsbo, Puyallup, Redmond, Renton, Sammamish, SeaTac, Sedro-Woolley, Shoreline, Snohomish, Steilacoom, Sumner, Tukwila, Tumwater, University Place, Vancouver, Washougal, Woodinville, and Yarrow Point.
 - ii. Counties: Cowlitz, Kitsap, Thurston, Skagit, and Whatcom.
 - b. All other **regulated small MS4s** shall apply as a Secondary Permittee or as a Co-Permittee.
 - c. The following cities, towns and counties submitted either an application or a NOI for coverage to Ecology prior to January 17, 2007:
 - i. Cities and towns: Aberdeen, Algona, Arlington, Auburn, Bainbridge Island, Battle Ground, Bellevue, Bellingham, Black Diamond, Bonney Lake, Bothell, Bremerton, Brier, Buckley, Burien, Burlington, Camas, Centralia, Clyde Hill, Covington, Des Moines, DuPont, Duvall, Edgewood, Edmonds, Enumclaw, Everett, Federal Way, Ferndale Fife, Fircrest, Gig Harbor, Granite Falls, Issaquah, Kelso, Kenmore, Kent, Kirkland, Lacey, Lake Forest Park, Lake Stevens, Lakewood, Longview, Lynnwood, Maple Valley, Marysville, Medina, Mercer Island, Mill Creek, Milton, Monroe, Mountlake Terrace, Mount Vernon, Mukilteo, Newcastle, Normandy Park, Oak Harbor, Olympia, Orting, Pacific, Port Orchard, Poulsbo, Puyallup, Redmond, Renton, Sammamish, SeaTac, Sedro-Woolley, Shoreline, Snohomish, Steilacoom, Sumner, Tukwila, Tumwater, University Place, Vancouver, Washougal, Woodinville, and Yarrow Point
 - ii. Counties: Cowlitz, Kitsap, Thurston, Skagit, and Whatcom.

- d. All operators of regulated small MS4s located in jurisdictions listed in S1.D.2.a. shall submit to Ecology a NOI or individual permit application before the effective date of this permit, with the following exceptions:
 - i. Operators of regulated small MS4s located in the Cities of Aberdeen, Anacortes, Centralia, Oak Harbor, and Port Angeles shall submit a NOI or application to Ecology no later than 30 days after the effective date of this permit.
 - ii. Operators of regulated small MS4s listed in S1.D.2.c. do not need to submit a new application to be covered under this permit.
 - e. For operators of regulated small MS4s listed in S1.D.2.c., coverage under this permit is automatic and begins on the effective date of this permit, unless:
 - i. The operator chooses to reapply before the effective date of this permit; or
 - ii. The operator will be relying on another entity to satisfy one or more of their permit obligations in accordance with S1.D.2.g. and S1.D.3.d. below; or
 - iii. The operator chooses to be a Co-Permittee in accordance with S1.D.2.f. and S1.D.3.c. below; or
 - iv. The operator chooses to opt out of this General Permit. Any operator of a regulated small MS4 that is opting out of this permit shall submit an application for an individual MS4 permit in accordance with 40 CFR 122.33(b)(2)(ii) no later than the effective date of this permit.
 - f. Operators of regulated small MS4s which want to be covered under this permit as Co-Permittees shall submit to Ecology a joint NOI.
 - g. Operators of regulated small MS4s which are relying on another entity to satisfy one or more of their permit obligations shall submit a NOI to Ecology.
 - h. Operators of small MS4s designated by Ecology pursuant to S1.B.3. of this permit shall submit a NOI to Ecology within 120 days of receiving notification from Ecology that permit coverage is required.
3. Application Requirements
- a. NOIs shall be submitted to:
 - Department of Ecology
 - Water Quality Program
 - Municipal Stormwater Permits
 - P.O. Box 47696
 - Olympia, WA 98504-7696
 - b. For NOIs submitted after January 17, 2007, the permit applicant shall provide public notice of the application in accordance with WAC 173-226-130(5). The applicant or co-applicant shall include a certification that the public notification requirements of WAC 173-226-130(5) have been satisfied. Unless Ecology responds in writing, coverage under this Permit will be effective 60 days after

receipt of a complete NOI. A complete NOI shall include the certification of public notice.

- c. Permittees applying as co-applicants shall submit a joint NOI. The joint NOI shall clearly identify the areas of the MS4 for which each of the co-applicants are responsible.
- d. Permittees relying on another entity or entities to satisfy one or more of their permit obligations shall notify Ecology in writing. The notification shall include a summary of the permit obligations that will be carried out by another entity. The summary shall identify the other entity or entities and shall be signed by the other entity or entities. During the term of the permit, permittees may terminate or amend shared responsibility arrangements by notifying Ecology, provided this does not alter implementation deadlines.
- e. Secondary permittees required to have coverage under this Permit, and the NPDES and State Waste Discharge Permit for Discharges from Small Municipal Separate Storm Sewers in Eastern Washington or the NPDES and State Waste Discharge Permit for Discharges from Large and Medium Municipal *Separate Storm Sewers*, may obtain coverage by submitting a single NOI.

S2. AUTHORIZED DISCHARGES

- A. This Permit authorizes the discharge of stormwater to surface waters and to ground waters of the state from municipal separate storm sewer systems owned or operated by each Permittee covered under this permit, in the geographic area covered pursuant to S1.A. These discharges are subject to the following limitations:
 1. Discharges to ground waters of the state through facilities regulated under the Underground Injection Control (UIC) program, Chapter 173-218 WAC, are not covered under this Permit.
 2. Discharges to ground waters not subject to regulation under the federal Clean Water Act are covered in this permit only under state authorities, Chapter 90.48 RCW, the Water Pollution Control Act.
- B. This Permit authorizes discharges of non-stormwater flows to surface waters and to ground waters of the state from municipal separate storm sewer systems owned or operated by each Permittee covered under this permit, in the geographic area covered pursuant to S1.A, only under the following conditions:
 1. The discharge is authorized by a separate National Pollutant Discharge Elimination System (NPDES) or State Waste Discharge permit.
 2. The discharge is from emergency fire fighting activities.
 3. The discharge is from another illicit or non-stormwater discharge that is managed by the Permittee as provided in Special Condition S5.C.3.b. or S6.C.3.b.

These discharges are also subject to the limitations in S2.A.1. and S.2.A.2. above.

- C. This Permit does not relieve entities that cause illicit discharges, including spills, of oil or hazardous substances, from responsibilities and liabilities under state and federal laws and regulations pertaining to those discharges.
- D. Discharges from municipal separate storm sewers constructed after the effective date of this permit shall receive all applicable state and local permits and use authorizations, including compliance with Chapter 43.21C RCW (the State Environmental Policy Act).
- E. This Permit does not authorize discharges of stormwater to waters within Indian Reservations except where authority has been specifically delegated to Ecology by the U.S. Environmental Protection Agency. The exclusion of such discharges from this Permit does not waive any rights the State may have with respect to the regulation of the discharges.

S3. RESPONSIBILITIES OF PERMITTEES

- A. Each Permittee covered under this Permit is responsible for compliance with the terms of this Permit for the regulated small MS4s that they own or operate. Compliance with (1) or (2) below is required as applicable to each permittee, whether the permittee has applied for coverage as a permittee, co-permittee, or secondary permittee.
 - 1. All city, town and county permittees are required to comply with all conditions of this Permit, including any appendices referenced therein, except for Special Condition S6 *Stormwater Management Program for Secondary Permittees*.
 - 2. All secondary permittees are required to comply with all conditions of this Permit, including any appendices referenced therein, except for Special Conditions S8.C. *Monitoring* and S5 *Stormwater Management Program for Cities, Towns and Counties*.
- B. Permittees may rely on another entity to satisfy one or more of the requirements of this Permit. Permittees that are relying on another entity to satisfy one or more of their permit obligations remain responsible for permit compliance if the other entity fails to implement permit conditions. Permittees may rely on another entity provided all the requirements of 40 CFR 122.35(a) are satisfied, including but not limited to:
 - 1. The other entity, in fact, implements the Permit requirements.
 - 2. The other entity agrees to take on responsibility for implementation of the Permit requirement(s) as indicated on the NOI.

S4. COMPLIANCE WITH STANDARDS

- A. In accordance with RCW 90.48.520, the discharge of toxicants to waters of the state of Washington which would violate any water quality standard, including toxicant standards, sediment criteria, and dilution zone criteria is prohibited. The required response to such discharges is defined in section S4.F., below.
- B. This Permit does not authorize a discharge which would be a violation of Washington State Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Quality Standards (Chapter 173-200 WAC), Sediment Management Standards (Chapter 173-204 WAC), or human health-based criteria in the national Toxics Rule (Federal Register, Vol.

57, NO. 246, Dec. 22, 1992, pages 60848-60923). The required response to such discharges is defined in section S4.F., below.

- C. The Permittee shall reduce the discharge of pollutants to the maximum extent practicable (MEP).
- D. The Permittee shall use all known, available, and reasonable methods of prevention, control and treatment (AKART) to prevent and control pollution of waters of the state of Washington.
- E. In order to meet the goals of the Clean Water Act, and comply with S4.A., S4.B., S4.C., and S4.D. each Permittee shall comply with all of the applicable requirements of this Permit as identified in S3 Responsibilities of Permittees.
- F. A Permittee remains in compliance with S4. despite any discharges prohibited by S4.A. or S4.B., when the Permittee undertakes the following response toward long-term water quality improvement:
 - 1. A Permittee shall notify Ecology in writing within 30 days of becoming aware, based on credible site-specific information, that a discharge from the municipal separate storm sewer owned or operated by the Permittee is causing or contributing to a known or likely violation of Water Quality Standards in the receiving water. Written notification provided under this subsection shall, at a minimum, identify the source of the site-specific information, describe the nature and extent of the known or likely violation in the receiving water, and explain the reasons why the MS4 discharge is believed to be causing or contributing to the problem. For ongoing or continuing violations, a single written notification to Ecology will fulfill this requirement.
 - 2. In the event that Ecology determines, based on a notification provided under S4.F.1. or through any other means, that a discharge from a municipal separate storm sewer owned or operated by the Permittee is causing or contributing to a violation of Water Quality Standards in a receiving water, Ecology will notify the Permittee in writing that an adaptive management response outlined in S4.F.3. below is required, unless Ecology also determines that (a) the violation of Water Quality Standards is already being addressed by a Total Maximum Daily Load or other enforceable water quality cleanup plan; or (b) Ecology concludes the violation will be eliminated through implementation of other permit requirements.
 - 3. Adaptive Management Response
 - a. Within 60 days of receiving a notification under S4.F.2., or by an alternative date established by Ecology, the Permittee shall review its Stormwater Management Program and submit a report to Ecology. The report shall include:
 - i. A description of the operational and/or structural BMPs that are currently being implemented to prevent or reduce any pollutants that are causing or contributing to the violation of Water Quality Standards, including a qualitative assessment of the effectiveness of each BMP.

- ii. A description of potential additional operational and/or structural BMPs that will or may be implemented in order to apply AKART on a site-specific basis to prevent or reduce any pollutants that are causing or contributing to the violation of Water Quality Standards.
 - iii. A description of the potential monitoring or other assessment and evaluation efforts that will or may be implemented to monitor, assess, or evaluate the effectiveness of the additional BMPs.
 - iv. A schedule for implementing the additional BMPs including, as appropriate: funding, training, purchasing, construction, monitoring, and other assessment and evaluation components of implementation.
- b. Ecology will, in writing, acknowledge receipt of the report within a reasonable time and notify the Permittee when it expects to complete its review of the report. Ecology will either approve the additional BMPs and implementation schedule or require the Permittee to modify the report as needed to meet AKART on a site-specific basis. If modifications are required, Ecology will specify a reasonable time frame in which the Permittee shall submit and Ecology will review the revised report.
 - c. The Permittee shall implement the additional BMPs, pursuant to the schedule approved by Ecology, beginning immediately upon receipt of written notification of approval.
 - d. The Permittee shall include with each subsequent annual report a summary of the status of implementation and the results of any monitoring, assessment or evaluation efforts conducted during the reporting period. If, based on the information provided under this subsection, Ecology determines that modification of the BMPs or implementation schedule is necessary to meet AKART on a site-specific basis, the Permittee shall make such modifications as Ecology directs. In the event there are ongoing violations of water quality standards despite the implementation of the BMP approach of this section, the Permittee may be subject to compliance schedules to eliminate the violation under WAC 173-201A-510(4) and WAC 173-226-180 or other enforcement orders as Ecology deems appropriate during the term of this permit.
 - e. Provided the Permittee is implementing the approved adaptive management response under this section, the Permittee remains in compliance with Condition S4., despite any on-going violations of Water Quality Standards identified under S4.F.A or B above.
 - f. The adaptive management process provided under Section S.4.F is not intended to create a shield for the Permittee from any liability it may face under 42 U.S.C. 9601 *et seq.* or RCW 70.105D.
- G. Ecology may modify or revoke and reissue this General Permit in accordance with G14 *General Permit Modification and Revocation*, if Ecology becomes aware of additional control measures, management practices or other actions beyond what is required in this Permit that are necessary to:

1. Reduce the discharge of pollutants to the MEP,
2. Comply with the state AKART requirements, or
3. Control the discharge of toxicants to waters of the State of Washington.

S5. STORMWATER MANAGEMENT PROGRAM FOR CITIES, TOWNS AND COUNTIES

- A. Each Permittee shall develop and implement a Stormwater Management Program (SWMP). A SWMP is a set of actions and activities comprising the components listed in S5.B. and S5.C.1. through S5.C.5., and any additional actions necessary to meet the requirements of applicable TMDLs (see S7). The SWMP shall be designed to reduce the discharge of pollutants from the regulated small MS4 to the maximum extent practicable and to protect water quality. This section applies to all cities, towns and counties covered under this Permit, including cities, towns and counties that are co-permittees. Where the term "Permittee" is used in this section the requirements apply to all cities, towns and counties covered under this Permit.
1. The SWMP shall be developed and implemented in accordance with the schedules contained in this section and shall be fully developed and implemented no later than 180 days prior to the expiration date of this Permit. At a minimum the Permittee's SWMP shall be implemented throughout the geographic area subject to this Permit as described in S1.A.
 2. Each Permittee shall prepare written documentation of the SWMP. The SWMP documentation shall be organized according to the program components in S5.C. and shall be updated at least annually for submittal with the Permittee's annual reports to Ecology (see *S9 Reporting and Record Keeping*). The SWMP documentation shall include:
 - a. A description of each of the program components included in S5.C., and
 - b. Any additional actions implemented by the Permittee pursuant to S5.C., and
 - c. Any additional actions necessary to meet the requirements of applicable TMDLs pursuant to *S7 Compliance with Total Maximum Daily Load Requirements*.
 3. The SWMP shall include an ongoing program for gathering, tracking, maintaining, and using information to evaluate SWMP development, implementation and permit compliance and to set priorities.
 - a. Beginning no later than January 1, 2009, each Permittee shall track the cost or estimated cost of development and implementation of each component of the SWMP. This information shall be provided to Ecology upon request.
 - b. Each Permittee shall track the number of inspections, official enforcement actions and types of public education activities as stipulated by the respective program component. This information shall be included in the annual report.

4. The SWMP described herein supersedes SWMP descriptions provided by permit applicants in individual applications submitted to the Department prior to the effective date of this permit.

Notwithstanding the schedules for implementation of SWMP components contained in this permit, Permittees that are already implementing some or all of the SWMP components in this section shall continue implementation of those components of their SWMP. Permittees shall not repeal existing local requirements to control stormwater that go beyond the requirements of this permit for new development and redevelopment sites.

5. Coordination among permittees

- a. Coordination among entities covered under municipal stormwater NPDES permits may be necessary to comply with certain conditions of the SWMP. The SWMP should include, when needed, coordination mechanisms among entities covered under a municipal stormwater NPDES permit to encourage coordinated stormwater-related policies, programs and projects within adjoining or shared areas.
 - i. Coordination mechanisms shall clarify roles and responsibilities for the control of pollutants between physically interconnected MS4s permittees covered by a municipal stormwater permit.
 - ii. Coordination mechanisms shall coordinate stormwater management activities for shared water bodies among permittees to avoid conflicting plans, policies and regulations.
 - b. The SWMP should include coordination mechanisms among departments within each jurisdiction to eliminate barriers to compliance with the terms of this permit.
- B. The SWMP shall be designed to reduce the discharge of pollutants from regulated small MS4s to the maximum extent practicable (MEP), meet state AKART requirements, and protect water quality. Notwithstanding the schedules for implementation of SWMP components contained in this Permit, permittees who are implementing some or all of the SWMP components in this section shall continue implementation of those components of their SWMP.
- C. The SWMP shall include the components listed below. To the extent allowable under state or federal law, all components are mandatory for city, town or county permittees covered under this Permit. In accordance with 40 CFR 122.35(a) and Special Condition S3, a city, town or county may rely on another entity to implement one or more of the components in this section.
1. Public Education and Outreach

The SWMP shall include an education program aimed at residents, businesses, industries, elected officials, policy makers, planning staff and other employees of the Permittee. The goal of the education program is to reduce or eliminate behaviors and

practices that cause or contribute to adverse stormwater impacts. An education program may be developed locally or regionally.

The minimum measures are:

- a. No later than two years after the effective date of this Permit, the Permittee shall provide an education and outreach program for the area served by the MS4. The outreach program shall be designed to achieve measurable improvements in the target audience's understanding of the problem and what they can do to solve it.

Education and outreach efforts shall be prioritized to target the following audiences and subject areas:

- i. General public
 - General impacts of stormwater flows into surface waters.
 - Impacts from impervious surfaces.
 - Source control BMPs and environmental stewardship actions and opportunities in the areas of pet waste, vehicle maintenance, landscaping and buffers.
- ii. General public, businesses, including home-based and mobile businesses
 - BMPs for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials.
 - Impacts of illicit discharges and how to report them.
- iii. Homeowners, landscapers and property managers
 - Yard care techniques protective of water quality.
 - BMPs for use and storage of pesticides and fertilizers.
 - BMPs for carpet cleaning and auto repair and maintenance.
 - Low Impact Development techniques, including site design, pervious paving, retention of forests and mature trees.
 - Stormwater pond maintenance.
- iv. Engineers, contractors, developers, review staff and land use planners
 - Technical standards for stormwater site and erosion control plans.
 - Low Impact Development techniques, including site design, pervious paving, retention of forests and mature trees.
 - Stormwater treatment and flow control BMPs.
- b. Each Permittee shall measure the understanding and adoption of the targeted behaviors for at least one targeted audience in at least one subject area. The resulting measurements shall be used to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behaviors.
- c. Each Permittee shall track and maintain records of public education and outreach activities.

2. Public Involvement and Participation

The SWMP shall include ongoing opportunities for public involvement through advisory councils, watershed committees, participation in developing rate-structures, stewardship programs, environmental activities or other similar activities. Each Permittee shall comply with applicable State and local public notice requirements when developing their SWMP.

The minimum performance measures are:

- a. No later than one year from the effective date of this Permit, all permittees shall create opportunities for the public to participate in the decision-making processes involving the development, implementation and update of the Permittee's entire SWMP. Each Permittee shall develop and implement a process for consideration of public comments on their SWMP.
- b. Each Permittee shall make their SWMP, the annual report required under S9.A and all other submittals required by this Permit, available to the public. The annual report, and SWMP that was submitted with the latest annual report, shall be posted on the permittee's website. To comply with the posting requirement, a permittee that does not maintain a website may submit the updated SWMP in electronic format to the Department for posting on the Department's website.

3. Illicit Discharge Detection and Elimination

The SWMP shall include an ongoing program to detect and remove illicit connections and discharges as defined in 40 CFR 122.26(b)(2), including any spills not under the purview of another responding authority, into the municipal separate storm sewers owned or operated by the Permittee. Permittees shall fully implement an ongoing illicit discharge detection and elimination program no later than 180 days prior to the expiration date of this Permit.

The minimum performance measures are:

- a. A municipal storm sewer system map shall be developed no later than four years from the effective date of this permit. Municipal storm sewer system maps shall be periodically updated and shall include the following information:
 - i. The location of all known municipal separate storm sewer outfalls and receiving waters and structural stormwater BMPs owned, operated, or maintained by the Permittee. Each Permittee shall map the attributes listed below for all storm sewer outfalls with a 24 inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems:
 - Tributary conveyances (indicate type, material, and size where known).
 - Associated drainage areas.
 - Land use.
 - ii. Each Permittee shall initiate a program to develop and maintain a map of all connections to the municipal separate storm sewer authorized or allowed by the Permittee after the effective date of this Permit.

- iii. Geographic areas served by the Permittee's MS4 that do not discharge stormwater to surface waters.
 - iv. Each Permittee shall make available to Ecology, upon request, municipal storm sewer system map(s) depicting the information required in S5.C.3.a.i. through iii above. The preferred format of submission will be an electronic format with fully described mapping standards. An example description is provided on Ecology WebPages under Core Services, GIS Data.
 - v. Upon request, and to the extent appropriate, permittees shall provide mapping information to co-permittees and secondary permittees.
- b. Each Permittee shall develop and implement an ordinance or other regulatory mechanism to effectively prohibit non-stormwater, illicit discharges into the Permittee's municipal separate storm sewer system to the maximum extent allowable under State and Federal law. The ordinance or other regulatory mechanism shall be adopted no later than 30 months from the effective date of this Permit.
- i. The regulatory mechanism does not need to prohibit the following categories of non-stormwater discharges:
 - Diverted stream flows.
 - Rising ground waters.
 - Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)).
 - Uncontaminated pumped ground water.
 - Foundation drains.
 - Air conditioning condensation.
 - Irrigation water from agricultural sources that is commingled with urban stormwater.
 - Springs.
 - Water from crawl space pumps.
 - Footing drains.
 - Flows from riparian habitats and wetlands.
 - Non-stormwater discharges covered by another NPDES permit.
 - Discharges from emergency fire fighting activities in accordance with *S2 Authorized Discharges*.
 - ii. The regulatory mechanism shall prohibit the following categories of non-stormwater discharges unless the stated conditions are met:
 - Discharges from potable water sources, including water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be de-chlorinated to a concentration of 0.1 ppm or less, pH-adjusted, if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4.

- Discharges from lawn watering and other irrigation runoff. These shall be minimized through, at a minimum, public education activities (see section S5.C.1) and water conservation efforts.
 - Dechlorinated swimming pool discharges. The discharges shall be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted and reoxygenized if necessary, volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.
 - Street and sidewalk wash water, water used to control dust, and routine external building wash down that does not use detergents. The Permittee shall reduce these discharges through, at a minimum, public education activities (see section S5.C.1.) and/or water conservation efforts. To avoid washing pollutants into the MS4, Permittees must minimize the amount of street wash and dust control water used. At active construction sites, street sweeping must be performed prior to washing the street.
 - Other non-stormwater discharges. The discharges shall be in compliance with the requirements of a stormwater pollution prevention plan reviewed by the Permittee, which addresses control of such discharges.
- iii. The Permittee's SWMP shall, at a minimum, address each category in ii above in accordance with the conditions stated therein.
- iv. The SWMP shall further address any category of discharges in i or ii above if the discharges are identified as significant sources of pollutants to waters of the State.
- v. The ordinance or other regulatory mechanism shall include escalating enforcement procedures and actions.
- vi. The Permittee shall develop an enforcement strategy and implement the enforcement provisions of the ordinance or other regulatory mechanism.
- c. Each Permittee shall develop and implement an ongoing program to detect and address non-stormwater discharges, including spills, and illicit connections into the Permittee's municipal separate storm sewer system. The program shall be fully implemented no later than 180 days prior to the expiration date of this Permit and shall include:
- i. Procedures for locating priority areas likely to have illicit discharges, including at a minimum: evaluating land uses and associated business/industrial activities present; areas where complaints have been registered in the past; and areas with storage of large quantities of materials that could result in spills.

- ii. Field assessment activities, including visual inspection of priority outfalls identified in i, above, during dry weather and for the purposes of verifying outfall locations, identifying previously unknown outfalls, and detecting illicit discharges.
 - Receiving waters shall be prioritized for visual inspection no later than three years from the effective date of this Permit, with field assessments of three high priority water bodies made no later than four years from the effective date of this Permit. Field assessments on at least one high priority water body shall be made each year thereafter.
 - Screening for illicit connections shall be conducted using: Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, October 2004, or another methodology of comparable effectiveness.

- iii. Procedures for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported to the Permittee. Procedures shall include detailed instructions for evaluating whether the discharge must be immediately contained and steps to be taken for containment of the discharge.

Compliance with this provision shall be achieved by investigating (or referring to the appropriate agency) within 7 days, on average, any complaints, reports or monitoring information that indicates a potential illicit discharge, including spills; and immediately investigating (or referring) problems and violations determined to be emergencies or otherwise judged to be urgent or severe.

- iv. Procedures for tracing the source of an illicit discharge; including visual inspections, and when necessary, opening manholes, using mobile cameras, collecting and analyzing water samples, and/or other detailed inspection procedures.
- v. Procedures for removing the source of the discharge; including notification of appropriate authorities; notification of the property owner; technical assistance for eliminating the discharge; follow-up inspections; and escalating enforcement and legal actions if the discharge is not eliminated.

Compliance with this provision shall be achieved by initiating an investigation within 21 days of a report or discovery of a suspected illicit connection to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection. Upon confirmation of the illicit nature of a storm drain connection, Permittees shall use their enforcement authority in a documented effort to eliminate the illicit connection within 6 months.

- d. Permittees shall inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

- i. No later than 180 days prior to the expiration date of this Permit, distribute appropriate information to target audiences identified pursuant to S5.C.1.
 - ii. No later than two years from the effective date of this Permit, publicly list and publicize a hotline or other local telephone number for public reporting of spills and other illicit discharges. Keep a record of calls received and follow-up actions taken in accordance with S5.C.3.c.ii. through v. above; include a summary in the annual report (see section S9 Reporting and Record Keeping Requirements).
- e. Permittees shall adopt and implement procedures for program evaluation and assessment, including tracking the number and type of illicit discharges, including spills, identified; inspections made; and any feedback received from public education efforts. A summary of this information shall be included in the Permittee's annual report (see section S9 Reporting and Recordkeeping Requirements).
- f. Each Permittee will provide appropriate training for municipal field staff on the identification and reporting of illicit discharges into MS4s.
 - i. No later than thirty months after the effective date of this Permit, each Permittee shall ensure that all municipal field staff who are responsible for identification, investigation, termination, cleanup, and reporting illicit discharges, including spills, and illicit connections are trained to conduct these activities. Follow-up training shall be provided as needed to address changes in procedures, techniques or requirements. Permittees shall document and maintain records of the training provided and the staff trained.
 - ii. No later than three years after the effective date of this Permit, an ongoing training program shall be developed and implemented for all municipal field staff, which, as part of their normal job responsibilities, might come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system shall be trained on the identification of an illicit discharge/connection, and on the proper procedures for reporting and responding to the illicit discharge/connection. Follow-up training shall be provided as needed to address changes in procedures, techniques or requirements. Permittees shall document and maintain records of the training provided and the staff trained.

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

Each Permittee shall develop, implement, and enforce a program to reduce pollutants in stormwater runoff to a regulated small MS4 from new development, redevelopment and construction site activities. This program shall be applied to all sites that disturb a land area 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale. The program shall apply to private and public development, including roads. The "Technical Thresholds" in Appendix 1 shall be applied to all sites 1 acre or greater, including

projects less than one acre that are part of a larger common plan of the development or sale.

The minimum performance measures are:

- a. The program shall include an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects. Pursuant to S5.A.4., in adopting this ordinance or other regulatory mechanism, existing local requirements to apply stormwater controls at smaller sites, or at lower thresholds than required pursuant to S5.C.4., shall be retained. The ordinance or other enforceable mechanism shall be adopted and effective no later than February 16, 2010. The ordinance or other enforceable mechanism shall include, at a minimum:
 - i. The Minimum Requirements, technical thresholds, and definitions in Appendix 1 or an equivalent approved by Ecology under the NPDES Phase I Municipal Stormwater Permit, for new development, redevelopment, and construction sites. Adjustment and variance criteria equivalent to those in Appendix 1 shall be included. More stringent requirements may be used, and/or certain requirements may be tailored to local circumstances through the use of basin plans or other similar water quality and quantity planning efforts. Such local requirements shall provide equal protection of receiving waters and equal levels of pollutant control to those provided in Appendix 1.
 - ii. A site planning process and BMP selection and design criteria that, when used to implement the minimum requirements in Appendix 1 (or equivalent approved by Ecology under the Phase I Permit) will protect water quality, reduce the discharge of pollutants to the maximum extent practicable and satisfy the State requirement under Chapter 90.48 RCW to apply all known, available and reasonable methods of prevention, control and treatment (AKART) prior to discharge. Permittees shall document how the criteria and requirements will protect water quality, reduce the discharge of pollutants to the maximum extent practicable, and satisfy State AKART requirements.

Permittees who choose to use the site planning process and BMP selection and design criteria in the 2005 *Stormwater Management Manual for Western Washington*, or an equivalent manual approved by the Department under the Phase I Permit, may cite this choice as their sole documentation to meet this requirement.
 - iii. The legal authority, through the approval process for new development, to inspect private stormwater facilities that discharge to the Permittee's MS4.
 - iv. Provisions to allow non-structural preventive actions and source reduction approaches such as Low Impact Development Techniques (LID), measures to minimize the creation of impervious surfaces and measures to minimize the disturbance of native soils and vegetation. Provisions for LID should take into account site conditions, access and long term maintenance.

- v. If the Permittee chooses to allow construction sites to apply the “Erosivity Waiver” in Appendix 1, Minimum Requirement #2, the ordinance or regulatory mechanism shall include appropriate, escalating enforcement sanctions for construction sites that provide notice to the Permittee of their intention to apply the waiver but do not meet the requirements (including timeframe restrictions, limits on activities that result in non-stormwater discharges, and implementation of appropriate BMPs to prevent violations of water quality standards) to qualify for the waiver.
- b. The program shall include a permitting process with plan review, inspection and enforcement capability to meet the standards listed in (i) through (iv) below, for both private and public projects, using qualified personnel (as defined in *Definitions and Acronyms*). At a minimum, this program shall be applied to all sites that disturb a land area 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale. The process shall be in place no later than February 16, 2010.
 - i. Except as provided in S5.C.4.b.vii. below, review of all stormwater site plans for proposed development activities.
 - ii. Except as provided in S5.C.4.b.vii. below, inspect, prior to clearing and construction, all known development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 Determining Construction Site Sediment Damage Potential.
 - iii. Except as provided in S5.C.4.b.vii. below, inspect all known permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforce as necessary based on the inspection.
 - iv. Inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater controls such as stormwater facilities and structural BMPs. Also, verify a maintenance plan is completed and responsibility for maintenance is assigned. Enforce as necessary based on the inspection.
 - v. Compliance with the inspection requirements in (ii), (iii) and (iv) above shall be determined by the presence and records of an established inspection program designed to inspect all sites. Compliance during this permit term shall be determined by achieving at least 80% of scheduled inspections.
 - vi. An enforcement strategy shall be developed and implemented to respond to issues of non-compliance.
 - vii. If the Permittee chooses to allow construction sites to apply the “Erosivity Waiver” in Appendix 1, Minimum Requirement #2, the Permittee is not required to review the construction stormwater pollution prevention plans as part of the site plan review in (i) above, and is not required to perform

the construction phase inspections identified in (ii) and (iii) above related to construction sites which are eligible for the erosivity waiver.

- c. The program shall include provisions to verify adequate long-term operation and maintenance (O&M) of post-construction stormwater facilities and BMPs that are permitted and constructed pursuant to (b) above. These provisions shall be in place no later than February 16, 2010 and shall include:

i. Adoption of an ordinance or other enforceable mechanism that clearly identifies the party responsible for maintenance, requires inspection of facilities in accordance with the requirements in (ii) through (iv) below, and establishes enforcement procedures.

ii. Each Permittee shall establish maintenance standards that are as protective or more protective of facility function than those specified in Chapter 4 of Volume V of the 2005 *Stormwater Management Manual for Western Washington*. For facilities which do not have maintenance standards, the Permittee shall develop a maintenance standard.

(1) The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facilities required condition at all times between inspections. Exceeding the maintenance standard between the period of inspections is not a permit violation.

(2) Unless there are circumstances beyond the Permittee's control, when an inspection identifies an exceedence of the maintenance standard, maintenance shall be performed:

- Within 1 year for typical maintenance of facilities, except catch basins.
- Within 6 months for catch basins.
- Within 2 years for maintenance that requires capital construction of less than \$25,000.

Circumstances beyond the Permittee's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedence of the required timeframe, the Permittee must document the circumstances and how they were beyond their control.

iii. Annual inspections of all stormwater treatment and flow control facilities (other than catch basins) permitted by the Permittee according to S5.C.4.b. unless there are maintenance records to justify a different frequency. The Permittee shall take appropriate maintenance actions in accordance with the adopted maintenance standards.

Reducing the inspection frequency shall be based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written

statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with *G19 Certification and Signature*.

- iv. Inspections of all new flow control and water quality treatment facilities, including catch basins, for new residential developments that are a part of a larger common plan of development or sale, every 6 months during the period of heaviest house construction (i.e., 1 to 2 years following subdivision approval) to identify maintenance needs and enforce compliance with maintenance standards as needed.
 - d. The program shall include a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records. Records of maintenance inspections and maintenance activities shall be maintained. Permittees shall keep records of all projects disturbing more than one acre, and all projects of any size that are part of a common plan of development or sale that is greater than one acre that are approved after the effective date of this Permit.
 - e. The program shall make available copies of the "Notice of Intent for Construction Activity" and copies of the "Notice of Intent for Industrial Activity" to representatives of proposed new development and redevelopment. Permittees will continue to enforce local ordinances controlling runoff from sites that are also covered by stormwater permits issued by Ecology.
 - f. No later than February 16, 2010, each Permittee shall verify that all staff responsible for implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities. Follow-up training shall be provided as needed to address changes in procedures, techniques or staffing. Permittees shall document and maintain records of the training provided and the staff trained.
5. Pollution Prevention and Operation and Maintenance for Municipal Operations

Within three years of the effective date of this Permit, each Permittee shall develop and implement an operations and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

The minimum performance measures are:

- a. Each Permittee shall establish maintenance standards that are as protective, or more protective, of facility function than those specified in Chapter 4 of Volume V of the 2005 *Stormwater Management Manual for Western Washington*. For facilities which do not have maintenance standards, the Permittee shall develop a maintenance standard.
 - i. The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facilities

required condition at all times between inspections. Exceeding the maintenance standard between inspections and/or maintenance is not a permit violation.

- ii. Unless there are circumstances beyond the Permittees control, when an inspection identifies an exceedence of the maintenance standard, maintenance shall be performed:
 - Within 1 year for typical maintenance of facilities, except catch basins.
 - Within 6 months for catch basins.
 - Within 2 years for maintenance that requires capital construction of less than \$25,000.

Circumstances beyond the Permittee's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedence of the required timeframe, the Permittee shall document the circumstances and how they were beyond their control.

- b. Annual inspection of all municipally owned or operated permanent stormwater treatment and flow control facilities, other than catch basins, and taking appropriate maintenance actions in accordance with the adopted maintenance standards. The annual inspection requirement may be reduced based on inspection records.

Reducing the inspection frequency shall be based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with *G19 Certification and Signature*.

- c. Spot checks of potentially damaged permanent treatment and flow control facilities (other than catch basins) after major (greater than 24-hour-10-year recurrence interval rainfall) storm events. If spot checks indicate widespread damage/maintenance needs, inspect all stormwater treatment and flow control facilities that may be affected. Conduct repairs or take appropriate maintenance action in accordance with maintenance standards established above, based on the results of the inspections.
- d. Inspection of all catch basins and inlets owned or operated by the Permittee at least once before the end of the permit term. Clean catch basins if the inspection indicates cleaning is needed to comply with maintenance standards established in the *2005 Stormwater Management Manual for Western Washington*. Decant water shall be disposed of in accordance with Appendix 6 *Street Waste Disposal*.

Inspections may be conducted on a "circuit basis" whereby a sampling of catch basins and inlets within each circuit is inspected to identify maintenance needs. Include in the sampling an inspection of the catch basin immediately upstream of any system outfall. Clean all catch basins within a given circuit for which the

inspection indicates cleaning is needed to comply with maintenance standards established under S5.C.4.c., above.

As an alternative to inspecting catch basins on a “circuit basis,” the Permittee may inspect all catch basins, and clean only catch basins where cleaning is needed to comply with maintenance standards.

- e. Compliance with the inspection requirements in b, c and d above shall be determined by the presence of an established inspection program designed to inspect all sites. Compliance during this permit term shall be determined by achieving an annual rate of at least 95% of inspections no later than 180 days prior to the expiration date of this permit.
- f. Establishment and implementation of practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads or highways owned or maintained by the Permittee, and road maintenance activities conducted by the Permittee. The following activities shall be addressed:
 - Pipe cleaning
 - Cleaning of culverts that convey stormwater in ditch systems
 - Ditch maintenance
 - Street cleaning
 - Road repair and resurfacing, including pavement grinding
 - Snow and ice control
 - Utility installation
 - Pavement striping maintenance
 - Maintaining roadside areas, including vegetation management
 - Dust control
- g. Establishment and implementation of policies and procedures to reduce pollutants in discharges from all lands owned or maintained by the Permittee and subject to this Permit, including but not limited to: parks, open space, road right-of-way, maintenance yards, and stormwater treatment and flow control facilities. These policies and procedures shall address, but are not limited to:
 - Application of fertilizer, pesticides, and herbicides including the development of nutrient management and integrated pest management plans.
 - Sediment and erosion control.
 - Landscape maintenance and vegetation disposal.
 - Trash management.
 - Building exterior cleaning and maintenance.
- h. Develop and implement an on-going training program for employees of the Permittee whose construction, operations or maintenance job functions may impact stormwater quality. The training program shall address the importance of protecting water quality, the requirements of this Permit, operation and maintenance standards, inspection procedures, selecting appropriate BMPs, ways to perform their job activities to prevent or minimize impacts to water quality, and procedures for reporting water quality concerns, including potential illicit

discharges. Follow-up training shall be provided as needed to address changes in procedures, techniques or requirements. Permittees shall document and maintain records of training provided.

- i. Development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit that are not required to have coverage under the *General NPDES Permit for Stormwater Discharges Associated with Industrial Activities* or another NPDES permit that covers stormwater discharges associated with the activity. Implementation of non-structural BMPs shall begin immediately after the pollution prevention plan is developed. A schedule for implementation of structural BMPs shall be included in the SWPPP. Generic SWPPPs that can be applied at multiple sites may be used to comply with this requirement. The SWPPP shall include periodic visual observation of discharges from the facility to evaluate the effectiveness of the BMP.
- j. Records of inspections and maintenance or repair activities conducted by the Permittee shall be maintained in accordance with *S9 Reporting Requirements*.

S6. STORMWATER MANAGEMENT PROGRAM FOR SECONDARY PERMITTEES

- A. This section applies to all secondary permittees, whether coverage under this Permit is obtained individually or as a co-permittee with a city, town or county or another secondary permittee.
 1. To the extent allowable under state, federal or local law, all components are mandatory for each Secondary Permittee covered under this Permit, whether covered as an individual permittee or as a co-permittee.
 2. Each Secondary Permittee shall develop and implement a stormwater management program (SWMP). The SWMP shall be designed to reduce the discharge of pollutants from regulated small MS4s to the maximum extent practicable and protect water quality.
 3. Unless an alternate implementation schedule is established by Ecology as a condition of permit coverage, the SWMP shall be developed and implemented in accordance with the schedules contained in this section and shall be fully developed and implemented no later than 180 days before the expiration date of this Permit. Notwithstanding the schedules in this Permit, secondary permittees that are already implementing some or all of the required SWMP components shall continue implementation of those components.
 4. Secondary permittees may implement parts of their SWMP in accordance with the schedule for cities, towns and counties in S5, provided they have signed a memorandum of understanding or other agreement to jointly implement the activity or activities with one or more jurisdictions listed in S1.D.2.a., and submitted a copy of the agreement to Ecology.

5. Each Secondary Permittee shall prepare written documentation of the SWMP. The SWMP documentation shall be organized according to the program components in S6.D below and shall be updated at least annually for submittal with the Permittee's annual reports to Ecology (see *S9 Reporting Requirements*). The SWMP documentation shall include:
 - a. A description of each of the program components included in S6.D.1. through S6.D.6., and
 - b. Any additional actions necessary to meet the requirements of applicable TMDLs pursuant to *S7 Compliance with Total Maximum Daily Load Requirements*.

B. Coordination

The SWMP shall include mechanisms to encourage coordinated stormwater-related policies, programs and projects within a watershed and interconnected MS4s. Where relevant and appropriate, the SWMP shall also include coordination among departments of the Secondary Permittee to ensure compliance with the terms of this Permit.

C. Legal Authority

To the extent allowable under state law and federal law, each Secondary Permittee shall be able to demonstrate that they can operate pursuant to legal authority which authorizes or enables the Secondary Permittee to control discharges to and from municipal separate storm sewers owned or operated by the Secondary Permittee.

This legal authority may be a combination of statutes, ordinances, permits, contracts, orders, interagency agreements, or similar instruments.

D. Stormwater Management Program for Secondary Permittees

The term "Secondary Permittees" means drainage, diking, flood control, or diking and drainage districts, ports (other than the ports of Seattle and Tacoma), public colleges and universities, and any other owners or operators of municipal separate storm sewers located within the municipalities that are listed as permittees in S1.B.

SWMP components

1. Public Education and Outreach

Each Secondary Permittee shall implement the following stormwater education strategies:

- a. Storm drain inlets owned and operated by the Secondary Permittee that are located in maintenance yards, in parking lots, along sidewalks, and at pedestrian access points shall be clearly and permanently labeled with the message "Dump no waste" and indicating the point of discharge as a river, lake, bay, or groundwater.
 - i. No later than three years from the date of permit coverage, at least 50 percent of these inlets shall be labeled.

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- ii. No later than 180 days prior expiration date of this Permit, or as established as a condition of coverage by Ecology, all of these inlets shall be labeled.
 - iii. As identified during visual inspection and regular maintenance of storm drain inlets per the requirements of S6.D.3.d. and S6.D.6.a.i. below, or as otherwise reported to the Secondary Permittee, any inlet having a label that is no longer clearly visible and/or easily readable shall be re-labeled within 90 days.
- b. Each year beginning no later than three years from the date of permit coverage, public ports, colleges and universities shall distribute educational information to tenants and residents on the impact of stormwater discharges on receiving waters, and steps that can be taken to reduce pollutants in stormwater runoff. Different combinations of topics shall be addressed each year, and, before the expiration date of this Permit, where relevant, tenants and residents shall receive educational information about the following topics:
- i. How stormwater runoff affects local waterbodies
 - ii. Proper use and application of pesticides and fertilizers
 - iii. Benefits of using well-adapted vegetation
 - iv. Alternative equipment washing practices including cars and trucks that minimize pollutants in stormwater
 - v. Benefits of proper vehicle maintenance and alternative transportation choices; proper handling and disposal of vehicle wastes, including the location of hazardous waste collection facilities in the area
 - vi. Hazards associated with illicit connections
 - vii. Benefits of litter control and proper disposal of pet waste

Compliance with this requirement can be achieved through participation in the local jurisdiction's public education and outreach programs.

2. Public Involvement and Participation

No later than 180 days before the expiration date of this Permit, or as established as a condition of coverage by the Ecology, each Secondary Permittee shall:

- a. Publish a public notice in the local newspaper or on the Permittee's website and solicit public review of their SWMP.
- b. Make the latest updated version of the SWMP available to the public. If the Secondary Permittee maintains a website, the SWMP shall be posted on the Secondary Permittee's website.

3. Illicit Discharge Detection and Elimination

Each Secondary Permittee shall:

- a. From the date of permit coverage, comply with all relevant ordinances, rules, and regulations of the local jurisdiction(s) in which the Secondary Permittee is located that govern non-stormwater discharges.
- b. No later than one year from the date of permit coverage, develop and adopt appropriate policies prohibiting illicit discharges, and identify possible enforcement mechanisms for those policies. No later than eighteen months from the date of permit coverage, develop and implement an enforcement plan using these mechanisms to ensure compliance with illicit discharge policies. These policies shall address, at a minimum: illicit connections and non-stormwater discharges, including spills of hazardous materials and improper disposal of pet waste and litter.
 - i. Non-stormwater discharges covered by another NPDES permit and discharges from emergency fire fighting activities are allowed in the MS4 in accordance with S2 *Authorized Discharges*.
 - ii. The policies do not need to prohibit the following categories of non-stormwater discharges:
 - Diverted stream flows
 - Rising ground waters
 - Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20))
 - Uncontaminated pumped ground water
 - Foundation drains
 - Air conditioning condensation
 - Irrigation water from agricultural sources that is commingled with urban stormwater
 - Springs
 - Water from crawl space pumps
 - Footing drains
 - Flows from riparian habitats and wetlands
 - iii. The policies shall prohibit the following categories of non-stormwater discharges unless the stated conditions are met:
 - Discharges from potable water sources, including water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be de-chlorinated to a concentration of 0.1 ppm or less, pH-adjusted if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4.
 - Discharges from lawn watering and other irrigation runoff. These discharges shall be minimized through, at a minimum, public education activities and water conservation efforts conducted by the Secondary Permittee and/or the local jurisdiction.

- Dechlorinated swimming pool discharges. The discharges shall be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted and reoxygenated if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.
 - Street and sidewalk wash water, water used to control dust, and routine external building wash down that does not use detergents. The Secondary Permittee shall reduce these discharges through, at a minimum, public education activities and/or water conservation efforts conducted by the Secondary Permittee and/or the local jurisdiction. To avoid washing pollutants into the MS4, the Secondary Permittee shall minimize the amount of street wash and dust control water used. At active construction sites, street sweeping shall be performed prior to washing the street.
 - Other non-stormwater discharges shall be in compliance with the requirements of a stormwater pollution prevention plan reviewed by the Permittee which addresses control of such discharges.
- iv. The Secondary Permittee's SWMP shall, at a minimum, address each category in iii above in accordance with the conditions stated therein.
- v. The SWMP shall further address any category of discharges in ii or iii above if the discharge is identified as a significant source of pollutants to waters of the State.
- c. No later than 180 days before the expiration date of this Permit, or as established as a condition of coverage by Ecology, develop a storm sewer system map showing the locations of all known storm drain outfalls, labeled receiving waters and delineated areas contributing runoff to each outfall. Make the map (or completed portions of the map) available on request to the Department and/or to other Permittees or Secondary Permittees. The preferred, but not required, format of submission will be an electronic format with fully described mapping standards. An example description is provided on Ecology WebPages.
- d. Conduct field inspections and visually inspect for illicit discharges at all known outfalls that discharge to surface waters. Visually inspect at least one third (on average) of all known outfalls each year beginning no later than two years from the date of permit coverage. Develop and implement procedures to identify and remove any illicit discharges. Keep records of inspections and follow-up activities.
- e. No later than 180 days before the expiration date of this Permit, or as established as a condition of coverage by the Ecology, develop and implement a spill response plan that includes coordination with a qualified spill responder.
- f. No later than two years from permit coverage date, provide staff training or coordinate with existing training efforts to educate relevant staff on proper best

management practices for preventing illicit discharges, including spills. All relevant staff shall be trained.

4. Construction Site Stormwater Runoff Control

From the date of permit coverage, each Secondary Permittee shall:

- a. Comply with all relevant ordinances, rules, and regulations of the local jurisdiction(s) in which the Secondary Permittee is located that govern construction phase stormwater pollution prevention measures.
- b. For all construction projects under the control of the Secondary Permittee which, require a construction stormwater permit, Secondary Permittees shall obtain coverage under the NPDES General Permit for Stormwater Discharges Associated with Construction Activities or an alternative individual NPDES permit prior to discharging construction related stormwater.
- c. Coordinate with the local jurisdiction regarding projects owned and operated by other entities which discharge into the Secondary Permittee's MS4, to assist the local jurisdiction with achieving compliance with all relevant ordinances, rules, and regulations of the local jurisdiction(s).
- d. Provide training or coordinate with existing training efforts to educate relevant staff in erosion and sediment control BMPs and requirements, or hire trained contractors to perform the work.
- e. Coordinate as requested with the Department or the local jurisdiction to provide access for inspection of construction sites or other land disturbances, which are under the control of the Secondary Permittee during the active grading and/or construction period.

5. Post-Construction Stormwater Management for New Development and Redevelopment

From the date of permit coverage, each Secondary Permittee shall:

- a. Comply with all relevant ordinances, rules and regulations of the local jurisdiction(s) in which the Secondary Permittee is located that govern post-construction stormwater pollution prevention measures.
- b. Coordinate with the local jurisdiction regarding projects owned and operated by other entities which discharge into the Secondary Permittee's MS4, to assist the local jurisdiction with achieving compliance with all relevant ordinances, rules, and regulations of the local jurisdiction(s).

6. Pollution Prevention and Good Housekeeping for Municipal Operations

Each Secondary Permittee shall:

- a. No later than three years from the date of permit coverage, develop and implement a municipal operation and maintenance (O&M) plan to minimize stormwater pollution from activities conducted by the Secondary Permittee. The O&M Plan shall include appropriate pollution prevention and good

housekeeping procedures for all of the following operations, activities, and/or types of facilities that are present within the Secondary Permittee's boundaries.

- i. Stormwater collection and conveyance system, including catch basins, stormwater sewer pipes, open channels, culverts, structural stormwater controls, and structural runoff treatment and/or flow control facilities. The O&M Plan shall address, but is not limited to: scheduled inspections and maintenance activities, including cleaning and proper disposal of waste removed from the system. Secondary Permittees shall properly maintain stormwater collection and conveyance systems owned or operated by the Secondary Permittee and regularly inspect and maintain all structural post-construction stormwater BMPs to ensure facility function.

For facilities located in Western Washington, Secondary Permittees shall establish maintenance standards that are as protective or more protective of facility function than those specified in Chapter 4 Volume V of the 2005 Stormwater Management Manual for Western Washington,

For facilities located in Eastern Washington, Secondary Permittees shall establish maintenance standards that are as protective or more protective of facility function than those specified in Chapters 5, 6 and 8 of the Stormwater Management Manual for Eastern Washington (2004),

Secondary Permittees shall conduct spot checks of stormwater treatment and flow control facilities following a 24 hour storm event with a 10-year or greater recurrence interval.

- ii. Roads, highways, and parking lots. The O&M Plan shall address, but is not limited to: deicing, anti-icing, and snow removal practices; snow disposal areas; material (e.g. salt, sand, or other chemical) storage areas; all-season BMPs to reduce road and parking lot debris and other pollutants from entering the MS4.
- iii. Vehicle fleets. The O&M Plan shall address, but is not limited to: storage, washing, and maintenance of Secondary Permittee vehicle fleets; and fueling facilities. Secondary Permittees shall conduct all vehicle and equipment washing and maintenance in a self-contained covered building or in designated wash and/or maintenance areas.
- iv. External building maintenance. The O&M Plan shall address, building exterior cleaning and maintenance including cleaning, washing, painting and other maintenance activities.
- v. Parks and open space. The O&M Plan shall address, but is not limited to: proper application of fertilizer, pesticides, and herbicides; sediment and erosion control; BMPs for landscape maintenance and vegetation disposal; and trash management.
- vi. Material storage areas, heavy equipment storage areas, and maintenance areas. Secondary Permittees shall develop and implement a Stormwater Pollution Prevention Plan to protect water quality at each of these facilities

owned or operated by the Secondary Permittee and not covered under the General NPDES Permit for Stormwater Discharges Associated with Industrial Activities or under another NPDES permit that covers stormwater discharges associated with the activity.

- vii. Other facilities that would reasonably be expected to discharge contaminated runoff. The O&M Plan shall address proper stormwater pollution prevention practices for each facility.
- b. From the date of coverage under this Permit, Secondary Permittees shall also have permit coverage for all facilities operated by the Secondary Permittee that are required to be covered under the General NPDES Permit for Stormwater Discharges Associated with Industrial Activities.
- c. The O&M Plan shall include sufficient documentation and records as necessary to demonstrate compliance with the O&M Plan requirements in S6.D.6.a.i through vii above.
- d. Train all employees whose construction, operations, or maintenance job functions may impact stormwater quality. The training shall address:
 - i. The importance of protecting water quality,
 - ii. The requirements of this Permit,
 - iii. Operation and maintenance requirements,
 - iv. Inspection procedures,
 - v. Ways to perform their job activities to prevent or minimize impacts to water quality, and
 - vi. Procedures for reporting water quality concerns, including potential illicit discharges.

S7. COMPLIANCE WITH TOTAL MAXIMUM DAILY LOAD REQUIREMENTS

The following requirements apply if an applicable Total Maximum Daily Load (TMDL) is approved for stormwater discharges from MS4s owned or operated by the Permittee. Applicable TMDLs are TMDLs which have been approved by EPA on or before the date permit coverage is granted.

- A. For applicable TMDLs listed in Appendix 2, affected permittees shall comply with the specific requirements identified in Appendix 2. Each Permittee shall keep records of all actions required by this Permit that are relevant to applicable TMDLs within their jurisdiction. The status of the TMDL implementation shall be included as part of the annual report submitted to Ecology.

Where monitoring is required in Appendix 2, the Permittee shall conduct the monitoring according to a Quality Assurance Project Plan (QAPP) approved by Ecology.

- B. For applicable TMDLs not listed in Appendix 2, compliance with this Permit shall constitute compliance with those TMDLs.

- C. For TMDLs that are approved by EPA after this Permit is issued, Ecology may establish TMDL related permit requirements through future permit modification if Ecology determines implementation of actions, monitoring or reporting necessary to demonstrate reasonable further progress toward achieving TMDL waste load allocations, and other targets, are not occurring and shall be implemented during the term of this Permit or when this Permit is reissued. Permittees are encouraged to participate in development of TMDLs within their jurisdiction and to begin implementation.

S8. MONITORING

- A. Permittees are not required to conduct water sampling or other testing during the effective term of this Permit, with the following exceptions:
 - 1. Any water quality monitoring required for compliance with TMDLs, pursuant to section S7 *Compliance with Total Maximum Daily Load Requirements* and Appendix 2 of this Permit, and
 - 2. Any sampling or testing required for characterizing illicit discharges pursuant to section S5.C.3. or S6.D.3. of this Permit.
- B. The Permittee shall provide the following information in each annual report:
 - 1. A description of any stormwater monitoring or studies conducted by the Permittee during the reporting period. If stormwater monitoring was conducted on behalf of the Permittee, or if studies or investigations conducted by other entities were reported to the Permittee, a brief description of the type of information gathered or received shall be included in the annual report(s) covering the time period(s) the information was received.
 - 2. An assessment of the appropriateness of the BMPs identified by the Permittee for each component of the SWMP; and any changes made, or anticipated to be made, to the BMPs that were previously selected to implement the SWMP, and why.
 - 3. Information required pursuant to S8.C.2. below.
- C. Preparation for future, long-term monitoring

This section does not apply to secondary permittees. However, secondary permittees are required to provide information, maps and access for sampling efforts, as necessary. Secondary permittees are encouraged to participate in the monitoring program.

- 1. All cities, towns and counties shall prepare to participate in the implementation of a comprehensive long-term monitoring program. The monitoring program will include two components: stormwater monitoring and targeted Stormwater Management Program (SWMP) effectiveness monitoring. Stormwater monitoring is intended to characterize stormwater runoff quantity and quality at a limited number of locations in a manner that allows analysis of loadings and changes in conditions over time and generalization across the permittees' jurisdictions. Stormwater program effectiveness monitoring is intended to improve stormwater management efforts by evaluating issues that significantly affect the success of, or confidence in, stormwater controls. The monitoring program can include long-term monitoring

and short-term studies. The results of the monitoring program will be used to support the adaptive management process and lead to refinements of the SWMP.

a. Stormwater monitoring

Cities having a population greater than 10,000 and counties having a population greater than 25,000 shall identify sites for long-term stormwater monitoring. Adequate sites will be those completely mapped as required in S5.C.3.a. and be suitable for permanent installation and operation of flow-weighted composite sampling equipment. No later than December 31, 2010:

- i. Each county having a population greater than 100,000 shall identify three outfalls or conveyances where stormwater sampling could be conducted. One outfall or conveyance shall represent commercial land use, the second shall represent low-density residential land use and the third will represent medium-to-high density residential land use.
- ii. Each city having a population greater than 75,000 shall identify three outfalls or conveyances where stormwater sampling could be conducted. One outfall or conveyance shall represent commercial land use, the second shall represent high-density residential land use and the third will represent industrial land use.
- iii. Each county having a population between 25,000 and 100,000 shall identify two outfalls or conveyances where stormwater sampling could be conducted. One outfall shall represent commercial land use and the second one will represent low-density residential land use.
- iv. Each city having a population between 10,000 and 75,000 shall identify two outfalls or conveyances where stormwater sampling could be conducted. One outfall shall represent commercial land use and the second will represent high-density residential land use.
- v. Permittees shall select outfalls or conveyances based on known water quality problems and/or targeted areas of interest for future monitoring. The Permittee shall document:
 - Why sites were selected;
 - Possible site constraints for installation of and access to monitoring equipment;
 - A brief description of the contributing drainage basin including size in acreage, dominant land use, and other contributing land uses;
 - Any water quality concerns in the receiving water of each selected outfall or conveyance.

b. SWMP effectiveness monitoring

- i. Each city, town and county shall prepare to conduct monitoring to determine the effectiveness of the Permittee's SWMP at controlling stormwater-related problems that are directly addressed by actions in the SWMP. This

component of the monitoring program shall be designed to answer the following types of questions:

- How effective is a targeted action or narrow suite of actions?
 - Is the SWMP achieving a targeted environmental outcome?
- ii. No later than December 31, 2010, each city, town and county shall identify at least two suitable questions and select sites where monitoring will be conducted. This monitoring shall include, at a minimum, plans for stormwater, sediment or receiving water monitoring of physical, chemical and/or biological characteristics. This monitoring may also include data collection and analysis of other measures of program effectiveness, problem identification and characterizing discharges for planning purposes.
- iii. For each question, the Permittee shall develop a monitoring plan containing the following elements:
- A statement of the question, an explanation of how and why the issue is significant to the Permittee, and a discussion of whether and how the results of the monitoring may be significant to other MS4s.
 - A specific hypothesis about the issue or management actions that will be tested.
 - Specific parameters or attributes to be measured.
 - Expected modifications to management actions depending on the outcome of hypothesis testing.
2. Monitoring program reporting requirements
- a. The fourth annual report shall:
- i. Describe the status of identification of sites for stormwater monitoring, if required for the Permittee.
 - ii. Include a summary of proposed questions for the SWMP effectiveness monitoring and describe the status of developing the monitoring plan, including the proposed purpose, design, and methods.
- b. To comply with the requirements of all or part(s) of this section, permittees in a single Urbanized Area or WRIA may choose to submit a collaborative report or reports in lieu of separate reports.

S9. REPORTING REQUIREMENTS

- A. No later than March 31 of each year beginning in 2008, each Permittee shall submit an annual report. The reporting period for the first annual report will be from the effective date of this permit through December 31, 2007. The reporting period for all subsequent annual reports will be the previous calendar year.
- B. Two printed copies and an electronic (PDF) copy of each document shall be submitted to Ecology. All submittals shall be delivered to:

Western Washington Phase II Municipal Stormwater Permit

Department of Ecology
Water Quality Program
Municipal Stormwater Permits
P.O. Box 47696
Olympia, WA 98504-7696

- C. Each Permittee is required to keep all records related to this permit and the SWMP for at least five years. Except for the requirements of the annual reports described in this permit, records shall be submitted to Ecology only upon request,
- D. Each Permittee shall make all records related to this permit and the Permittee's SWMP available to the public at reasonable times during business hours. The Permittee will provide a copy of the most recent annual report to any individual or entity, upon request.
 - 1. A reasonable charge may be assessed by the Permittee for making photocopies of records.
 - 2. The Permittee may require reasonable advance notice of intent to review records related to this Permit.
- E. The annual report for cities, towns, and counties

Each annual report shall include the following:

- 1. A copy of the Permittee's current Stormwater Management Program as required by S5.A.2.
- 2. Submittal of Appendix 3 – *Annual Report Form for Cities, Towns, and Counties*, which is intended to summarize the Permittees compliance with the conditions of this permit, including:
 - a. Status of implementation of each component of the SWMP in section S5 *Stormwater Management Program for Cities, Towns and Counties*.
 - b. An assessment of the Permittee's progress in meeting the minimum performance standards established for each of the minimum control measures of the SWMP.
 - c. A description of activities being implemented to comply with each component of the SWMP, including the number and type of inspections, enforcement actions, public education and involvement activities, and illicit discharges detected and eliminated.
 - d. The Permittee's SWMP implementation schedule and plans for meeting permit deadlines, and the status of SWMP implementation to date. If permit deadlines are not met, or may not be met in the future, include: reasons why, corrective steps taken and proposed, and expected dates that the deadlines will be met.
 - e. A summary of the Permittee's evaluation of their SWMP, according to sections S5.A.4. and S8.B.2.
 - f. If applicable, notice that the MS4 is relying on another governmental entity to satisfy any of the obligations under this permit.

- g. Updated information from the prior annual report plus any new information received during the reporting period, pursuant to S8.B.2. above.
 - h. Certification and signature pursuant to G19.D, and notification of any changes to authorization pursuant to G19.C.
3. Permittees shall include with the annual report, notification of any annexations, incorporations or jurisdictional boundary changes resulting in an increase or decrease in the Permittee's geographic area of permit coverage during the reporting period, and implications for the SWMP.
4. Permittees shall include with the annual report submitted no later than March 31, 2011 information that at a minimum includes:
- a. A summary of identified barriers to the use of low impact development (LID) within the area covered by the permit and measures to address the barriers. Each individual Permittee must complete this summary.
 - b. A report completed by an individual Permittee or in cooperation with multiple Permittees describing, at a minimum:
 - i. LID practices that are currently available and that can reasonably be implemented within this permit term.
 - ii. Potential or planned non-structural actions and LID techniques to prevent stormwater impacts.
 - iii. Goals and metrics to identify, promote, and measure LID use.
 - iv. Potential or planned schedules for the Permittee(s) to require and implement the non-structural and LID techniques on a broader scale in the future.
- F. Annual report for Secondary Permittees

All Secondary Permittees shall complete the *Annual Report Form for Secondary Permittees* (Appendix 4) and submit it along with any supporting documentation to Ecology.

1. The *Annual Report Form for Secondary Permittees* is intended to summarize the Permittees compliance with the conditions of this permit, including:
- a. Status of implementation of each component of the SWMP in section S6 *Stormwater Management Program for Secondary Permittees* of this permit.
 - b. An assessment of the Permittee's progress in meeting the minimum performance standards established for each of the minimum control measures of the SWMP.
 - c. A summary of the Permittee's evaluation of their SWMP, according to section S8.B.2.
 - d. If applicable, notice that the MS4 is relying on another governmental entity to satisfy any of the obligations under this permit.

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- e. Updated information from the prior annual report plus any new information received during the reporting period pursuant to S8.B.1 and S8.B.2.
 - f. Certification and signature pursuant to G19.D, and notification of any changes to authorization pursuant to G19.C.
2. Secondary Permittees shall include with the annual report a notification of any jurisdictional boundary changes resulting in an increase or decrease in the Permittee's geographic area of permit coverage during the reporting period, and implications for the SWMP.

GENERAL CONDITIONS

G1. DISCHARGE VIOLATIONS

All discharges and activities authorized by this Permit shall be consistent with the terms and conditions of this Permit.

G2. PROPER OPERATION AND MAINTENANCE

The Permittee shall at all times properly operate and maintain all facilities and systems of collection, treatment, and control (and related appurtenances) which are installed or used by the Permittee for pollution control to achieve compliance with the terms and conditions of this Permit.

G3. NOTIFICATION OF DISCHARGE, INCLUDING SPILLS

If a Permittee has knowledge of a discharge, including spills, into or from a municipal storm sewer which could constitute a threat to human health, welfare, or the environment, the Permittee shall

- A. Take appropriate action to correct or minimize the threat to human health, welfare and/or the environment, and,
- B. Notify the Ecology regional office and other appropriate spill response authorities immediately but in no case later than within 24 hours of obtaining that knowledge. The Ecology Northwest Regional Office 24-hour number is 425-649-7000 and for the Southwest Regional Office the number is 360-407-6300.
- C. Immediately report discharges, including spills, which might cause bacterial contamination of shellfish, such as might result from broken sewer lines and failing onsite septic systems, to the Ecology regional office and to the Department of Health, Shellfish Program. The Department of Health's shellfish 24-hour number is 360-236-3330.
- D. Immediately report spills or discharges of oils or hazardous materials to the Ecology regional office and to the Washington Emergency Management Division at 1-800-258-5990.

G4. BYPASS PROHIBITED

The intentional bypass of stormwater from all or any portion of a stormwater treatment BMP whenever the design capacity of the treatment BMP is not exceeded, is prohibited unless the following conditions are met:

- A. Bypass is: (1) unavoidable to prevent loss of life, personal injury, or severe property damage; or (2) necessary to perform construction or maintenance-related activities essential to meet the requirements of the Clean Water Act (CWA); and
- B. There are no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated stormwater, or maintenance during normal dry periods.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

G5. RIGHT OF ENTRY

The permittee shall allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law at reasonable times:

- A. To enter upon the Permittee's premises where a discharge is located or where any records must be kept under the terms and conditions of this Permit;
- B. To have access to, and copy at reasonable cost and at reasonable times, any records that must be kept under the terms of the Permit;
- C. To inspect at reasonable times any monitoring equipment or method of monitoring required in the Permit;
- D. To inspect at reasonable times any collection, treatment, pollution management, or discharge facilities; and
- E. To sample at reasonable times any discharge of pollutants.

G6. DUTY TO MITIGATE

The Permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this Permit which has a reasonable likelihood of adversely affecting human health or the environment.

G7. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G8. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in the Permit shall be construed as excusing the Permittee from compliance with any other applicable federal, state, or local statutes, ordinances, or regulations.

G9. MONITORING

A. Representative Sampling:

Samples and measurements taken to meet the requirements of this Permit shall be representative of the volume and nature of the monitored discharge, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

B. Records Retention:

The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original recordings for continuous monitoring

instrumentation, copies of all reports required by this Permit, and records of all data used to complete the application for this permit, for a period of at least five years. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or when requested by the Ecology. On request, monitoring data and analysis shall be provided to Ecology.

C. Recording of Results:

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place and time of sampling; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Test Procedures:

All sampling and analytical methods used to meet the monitoring requirements in this permit shall conform to the Guidelines Establishing Test Procedures for the Analysis of Pollutants contained in 40 CFR Part 136, unless otherwise specified in this permit or approved in writing by Ecology.

E. Flow Measurement:

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations or at a minimum frequency of at least one calibration per year. Calibration records should be maintained for a minimum of three years.

F. Lab Accreditation:

All monitoring data, except for flow, temperature, conductivity, pH, total residual chlorine, and other exceptions approved by Ecology, shall be prepared by a laboratory registered or accredited under the provisions of, Accreditation of Environmental Laboratories, Chapter 173-50 WAC. Soils and hazardous waste data are exempted from this requirement pending accreditation of laboratories for analysis of these media by Ecology.

G. Additional Monitoring:

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G10. REMOVED SUBSTANCES

With the exception of decant from street waste vehicles, the Permittee shall not allow collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of stormwater to be resuspended or reintroduced to the storm sewer system or to waters of the state. Decant from street waste vehicles resulting

from cleaning stormwater facilities may be reintroduced only when other practical means are not available and only in accordance with the Street Waste Disposal Guidelines in Appendix 4.

G11. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

G12. REVOCATION OF COVERAGE

The director may terminate coverage under this General Permit in accordance with Chapter 43.21B RCW and Chapter 173-226 WAC. Cases where coverage may be terminated include, but are not limited to the following:

- A. Violation of any term or condition of this general permit;
- B. Obtaining coverage under this general permit by misrepresentation or failure to disclose fully all relevant facts;
- C. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;
- D. A determination that the permitted activity endangers human health or the environment, or contributes significantly to water quality standards violations;
- E. Failure or refusal of the permittee to allow entry as required in Chapter 90.48.090 RCW;
- F. Nonpayment of permit fees assessed pursuant to Chapter 90.48.465 RCW;

Revocation of coverage under this general permit may be initiated by Ecology or requested by any interested person.

G13. TRANSFER OF COVERAGE

The director may require any discharger authorized by this General Permit to apply for and obtain an individual permit in accordance with Chapter 43.21B RCW and Chapter 173-226 WAC.

G14. GENERAL PERMIT MODIFICATION AND REVOCATION

This General Permit may be modified, revoked and reissued, or terminated in accordance with the provisions of WAC 173-226-230. Grounds for modification, revocation and reissuance, or termination include, but are not limited to the following:

- A. A change occurs in the technology or practices for control or abatement of pollutants applicable to the category of dischargers covered under this General Permit;

- B. Effluent limitation guidelines or standards are promulgated pursuant to the CWA or Chapter 90.48 RCW, for the category of dischargers covered under this General Permit;
- C. A water quality management plan containing requirements applicable to the category of dischargers covered under this General Permit is approved; or
- D. Information is obtained which indicates that cumulative effects on the environment from dischargers covered under this General Permit are unacceptable.
- E. Changes in state law that reference this permit.

G15. REPORTING A CAUSE FOR MODIFICATION OR REVOCATION

A Permittee who knows or has reason to believe that any activity has occurred or will occur which would constitute cause for modification or revocation and reissuance under Condition G12, G14, or 40 CFR 122.62 must report such plans, or such information, to Ecology so that a decision can be made on whether action to modify, or revoke and reissue this Permit will be required. Ecology may then require submission of a new or amended application. Submission of such application does not relieve the Permittee of the duty to comply with this Permit until it is modified or reissued.

G16. APPEALS

- A. The terms and conditions of this General Permit, as they apply to the appropriate class of dischargers, are subject to appeal within thirty days of issuance of this General Permit, in accordance with Chapter 43.21B RCW, and Chapter 173-226 WAC.
- B. The terms and conditions of this General Permit, as they apply to an individual discharger, are appealable in accordance with chapter 43.21B RCW within thirty days of the effective date of coverage of that discharger. Consideration of an appeal of General Permit coverage of an individual discharger is limited to the General Permit's applicability or nonapplicability to that individual discharger.
- C. The appeal of General Permit coverage of an individual discharger does not affect any other dischargers covered under this General Permit. If the terms and conditions of this General Permit are found to be inapplicable to any individual discharger(s), the matter shall be remanded to Ecology for consideration of issuance of an individual permit or permits.
- D. Modifications of this Permit are appealable in accordance with Chapter 43.21B RCW and Chapter 173-226 WAC.

G17. PENALTIES

40 CFR 122.41(a)(2) and (3), 40 CFR 122.41(j)(5), and 40 CFR 122.41(k)(2) are hereby incorporated into this Permit by reference.

G18. DUTY TO REAPPLY

The Permittee must apply for permit renewal at least 180 days prior to the specified expiration date of this permit.

G19. CERTIFICATION AND SIGNATURE

All applications, reports, or information submitted to the Department shall be signed and certified.

- A. All permit applications shall be signed by either a principal executive officer or ranking elected official.
- B. All reports required by this Permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - 1. The authorization is made in writing by a person described above and submitted to the Department, and
 - 2. The authorization specifies either an individual or a position having responsibility for the overall development and implementation of the stormwater management program. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
- C. Changes to authorization. If an authorization under condition G19.B.2 is no longer accurate because a different individual or position has responsibility for the overall development and implementation of the stormwater management program, a new authorization satisfying the requirements of condition G19.B.2 must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. Certification. Any person signing a document under this Permit shall make the following certification:

“I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that Qualified Personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for willful violations.”

G20. NON-COMPLIANCE NOTIFICATION

In the event it is unable to comply with any of the terms and conditions of this permit, the Permittee must:

- A. Notify Ecology of the failure to comply with the permit terms and conditions in writing within 30 days of becoming aware that the non-compliance has occurred. The written notification must include all of the following:
 - 1. A description of the non-compliance, including dates.
 - 2. Beginning and end dates of the non-compliance, and if the compliance has not been corrected, the anticipated date of correction.
 - 3. Steps taken or planned to reduce, eliminate, or prevent reoccurrence of the non-compliance.
- B. Take appropriate action to stop or correct the condition of non-compliance.

G21. UPSETS

Permittees must meet the conditions of 40 CFR 122.41(n) regarding “Upsets.” The conditions are as follows:

- A. Definition. “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- B. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (C) of this condition are met. Any determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, will not constitute final administrative action subject to judicial review.
- C. Conditions necessary for demonstration of upset. A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:
 - 1. An upset occurred and that the Permittee can identify the cause(s) of the upset;
 - 2. The permitted facility was at the time being properly operated; and
 - 3. The Permittee submitted notice of the upset as required in 40 CFR 122.41(l)(6)(ii)(B) (24-hour notice of noncompliance).
 - 4. The Permittee complied with any remedial measures required under 40 CFR 122.41(d) (Duty to Mitigate).
- D. Burden of proof. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

DEFINITIONS AND ACRONYMS

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.

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 the Permittee's application is received by Ecology, or prior to a modification of this Permit, whichever is later.

Beneficial Uses means uses of waters of the states 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 ("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.

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

Common plan of development or sale means a site where multiple separate and distinct construction activities may be taking place at different times on different schedules, but still under a single plan. Examples include: phased projects and projects with multiple filings or lots, even if the separate phases or filings/lots will be constructed under separate contract or by separate owners (e.g. a development where lots are sold to separate builders); a development plan that may be phased over multiple years, but is still under a consistent plan for long-term development; and projects in a contiguous area that may be unrelated but still under the same contract, such as construction of a building extension and a new parking lot at the same facility. If the project is part of a common plan of development or sale, the disturbed area of the entire plan shall be used in determining permit requirements.

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.

Co-permittee means an operator of a regulated small MS4 which is applying jointly with another applicant for coverage under this permit. A co-permittee is an owner or operator of a regulated small MS4 located within or adjacent to another regulated MS4. A co-permittee is only responsible for complying with the conditions of this permit 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.

Detailed Implementation Plan means the formal implementation plan for a Total Maximum Daily Load (TMDL) or water quality clean-up plan.

DIP means Detailed Implementation Plan.

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

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

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

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.

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.

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.

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. Disinfection of water mains and appurtenances requires a chlorine residual of 10 mg/L at the end of the disinfection period. This level is well above the Maximum Residual Disinfectant Level of an annual average of 4 mg/Liter chlorine for potable water.

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.

Large Municipal Separate Storm Sewer System means all municipal separate storm sewer systems located in an incorporated place with a population of 250,000 or more, a county with unincorporated urbanized areas with a population of 250,000 or more according to the 1990 decennial census by the Bureau of Census.

Low Density Residential Land Use means, for the purpose of permit section S8 Monitoring, one unit per 1-5 acres.

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).

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.

Medium Municipal Separate Storm Sewer System means municipal separate storm sewer systems located in an incorporated place with a population of more than 100,000 but less than 250,000, or a county with unincorporated urbanized areas of more than 100,000 but less than 250,000 according to the 1990 decennial census by the Bureau of Census.

MEP means Maximum Extent Practicable.

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.

Notice of Intent for Construction Activity and Notice of Intent for Industrial Activity mean the application forms for coverage under the *Baseline General Permit for Stormwater Discharges Associated with Industrial Activities*.

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.

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.

Physically Interconnected means that one MS4 is connected to a second MS4 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 MS4 belonging to another entity.

Pollutant Generating Impervious Surfaces (PGIS) are surfaces considered to be significant sources of pollutants in stormwater runoff. Such surfaces include those that are subject to vehicular use, industrial activities, or storage of erodible or leachable materials that receive direct rainfall or run-on or blow-in of rainfall. Metal roofs are considered to be PGIS unless coated with an inert, non-leachable material. Roofs that are subject to venting of indoor pollutants from manufacturing, commercial or other operations or processes are also considered PGIS. A surface, whether paved or not, shall be considered PGIS if it is regularly used by motor vehicles. The following are considered regularly-used surfaces: roads, unvegetated road shoulders, bike lanes within the traveled lane of a roadway, driveways, parking lots, unfenced fire lanes, vehicular equipment storage yards, and airport runways.

Process Wastewater means any water which, during manufacture or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by product, or waste product.

Qualified Personnel or Consultant 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.

RCW means the Revised Code of Washington State.

Regulated Small Municipal Separate Storm Sewer System (MS4) 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 the NPDES permitting authority and is not eligible for a waiver or exemption under S1.C.

Replaced impervious surfaces means, for structures, the removal and replacement of any exterior impervious surfaces or foundation; or, for other impervious surfaces, the removal down to bare soil, or base course, and replacement. Exemptions and partial exemptions are defined in Appendix 1 of this Permit.

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.”

Shared Waterbodies means waterbodies, including downstream segments, lakes and estuaries that receive discharges from more than one permittee.

Secondary Permittee is an operator of regulated small municipal separate storm sewer system which is not a city, town or county. Secondary Permittees include special purpose districts and other MS4s that meet the criteria for a regulated small MS4 in S1.B.

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

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 6 Determining Construction Site Sediment Transport Potential for a more detailed definition.

Small Municipal Separate Storm Sewer System or Small MS4 is a conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels and/or storm drains which is:

- 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.

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

Total Maximum Daily Load (TMDL) means a water cleanup plan. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and an allocation of that amount to the pollutant’s sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The calculation must include a margin of safety to ensure that the water body can be used for the purposes the state has designated. The calculation must also account for 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.

Urbanized Area (UA) is a 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. For the year 2000 Census, the U.S. Census Bureau classified "urban" as all territory, population, and housing units located within an Urbanized Area (UA) or an Urban Cluster (UC). It delineated UA and UC boundaries to encompass densely settled territory, which consists of: core census

block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile. In addition, under certain conditions, less densely settled territory may be part of each UA or UC. The U.S. Census Bureau announced the "Census 2000 Urbanized Areas" on May 1, 2002. More information can be found at the U.S. Census Bureau website.

Urban/higher density rural subbasins means any subbasin or portion thereof that is within or proposed to be within the urban growth area (UGA), or any rural area subbasin or portion thereof fifty percent or more of which is comprised of lots smaller than 5 acres in size.

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.

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.

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.

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APPENDIX B

- **Acronyms and Definitions**

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Acronyms and Definitions

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.

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 (BMPs) 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- 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).

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.

MTRs mean 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- 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 including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels and/or storm drains which is:

- 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.

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

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.

City Departments

All- Utilities, Parks, Finance, CAO, PCD, DSD, IT, Trans, HR, Civic Services, Fire, City Clerks, Police

CAO- City Attorney's Office

HR- Human Resources

IT- Information Technology

DSD- Development Services Department

PCD- Planning and Community Development

Trans- Transportation

APPENDIX C

- **Ecology's Guidance for City and County Annual Reports for Western Washington Phase II Municipal Stormwater General Permits**

Available at: <http://www.ecy.wa.gov/pubs/0710100.pdf>

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Guidance for City and County Annual Reports for Western Washington Phase II Municipal Stormwater General Permits



December 2007
Revised December 2008, November 2009, December 2010

Publication Number 07-10-100



To ask about the availability of this document in a format for the visually impaired, call the Water Quality Program at 360-407-6401. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

I. Components of the Annual Report

At the request of several Phase II cities, towns, and counties, the Department of Ecology (Ecology) developed and updated this guidance for preparing annual report submittals. The Western Washington Phase II Municipal Stormwater Permit (effective February 16, 2007 and modified June 2009) requires you to send your annual report for the previous calendar year to Ecology by March 31 of each year.

The annual report submittal package includes three components:

1. An updated Stormwater Management Program (SWMP) document
 - The SWMP document (S9.E.1) must meet the description in permit section S5.A.2.
2. An Annual Report form
 - A completed Annual Report form: either a hard copy of Appendix 3 – Annual Report Form for Phase II Western Washington cities, towns and counties OR the Annual Report form Excel file at:
<http://www.ecy.wa.gov/programs/wq/stormwater/municipal/annualreports.html>
3. Supplemental documentation for the Annual Report form
 - Documentation necessary to respond to specific questions in the Annual Report form, including information associated with S9.3 requirements (changes in geographic boundaries and implications for the SWMP).

Ecology does not approve these documents. However, Ecology municipal stormwater staff will review them each year to evaluate permit compliance and target technical assistance. The sections below describe the three components in further detail. An Appendix provides guidance for developing LID reports that permittees must submit with the 2010 Annual Report.



Photo by Brian Walsh

II. Preparing the SWMP Document

Ecology strongly suggests that you write the SWMP document as a planning and implementation document, not a detailed report of past activities. It should generally describe your stormwater management program and how your jurisdiction plans to meet permit requirements in the future. The SWMP document does not create an obligatory work plan or legal commitment beyond what the permit requires.

The SWMP document has three separate audiences and purposes:

1. Ecology – Document how you intend to meet permit requirements for a Stormwater Management Program, as described in permit condition S5.A.2.
2. The public – Solicit input and build local support for your stormwater management program by posting it on your website as described in Public Involvement and Participation requirements (S5.C.2.b).
3. Your staff and officials – Build support for and understanding of your program.

General reminders for preparing a SWMP document

1. The permit requires you to organize the SWMP document to follow the program components as they are organized in the permit.
2. Indicate specific activities that are happening or planned for the upcoming year, at a minimum, under each program component. You may also identify activities that build program capacity (e.g. staffing, equipment procurement, departments involved). Keep your descriptions brief, to the point, and clear for your public audience.
3. Reference other documents, policy statements, codes, ordinances, etc. You need not repeat information in the SWMP document that another publicly accessible document explains sufficiently. For example, you do not need to restate permit language for each component. If you briefly summarize the permit requirements, your SWMP document will better meet the needs of the public audience.
4. As described in S5.A.2.b, you may identify additional activities that your community implements to support the specific program component (i.e., beyond the stated minimum measures for each section of S5.C. in your permit). You may include these additional activities in the permit-required components of your Stormwater Management Program, or may present them in separate chapters or appendices of the SWMP document.
5. Describe where you are coordinating internally and with other regulated entities to implement any particular program component (or additional activity). Note specific coordination mechanisms, activities, programs, policies, and projects. Clarify who is doing what.

III. Preparing the Annual Report Form

Permittees must submit the Annual Report to Ecology by March 31 in one of two formats:

- The Appendix 3 format found in the permit

OR

- Excel file format of the same document downloaded from Ecology's website at

<http://www.ecy.wa.gov/programs/wq/stormwater/municipal/annualreports.html>

[NOTE: An updated Excel annual report form that reflects the 2009 permit modification is available for the 2009 and subsequent Annual Reports.]

The completed form, including certification and signature, constitutes compliance with reporting under Reporting Requirements (S9.E.2). You must use this form (either version) to report compliance activities during the reporting period—the previous calendar year. Keep all records related to your permit and the SWMP for at least five years. **In all cases, deadlines in the body of the permit are correct. In case of a discrepancy with a deadline noted in the Annual Report form, always report based on deadlines in the body of the permit.**

Instructions for completing your Annual Report Form in the Appendix 3 format in the permit:

1. The Contact Name in Permittee Information (Section I) refers to the staff contact, not the responsible official(s) identified under Certification (Section IV).
2. Limit the information you provide in the Comments section to approximately 50 words. For additional information, you may cross-reference with other annual reporting documents such as the supplemental documentation or your SWMP document. You may also provide web links to online documents such as ordinances or reports. Please specify the section or pages of the referenced document where appropriate. We encourage you to use these options to avoid duplicating reporting information that is easily accessible elsewhere.
3. Section VI - Clarifications and answers to address Errata in Appendix 3. [NOTE: Many of these changes have been incorporated into the updated Annual Report-Excel version.]:
 - Question 7: Attach in supplemental documentation a description of the public education and outreach activities that are required to begin by February 16, 2009, (S5.C.1.c).
 - Question 12: If your jurisdiction does not have a website, please note that you submitted your SWMP to Ecology to post on its website.
 - Question 13: Answer YES when you have fully implemented the program described in S5.C.3 and its associated minimum performance measures.
 - Questions 35 and 36 refer to public education efforts related to the illicit discharge detection and elimination program requirements in S5.C.3.d and S5.C.3.e.
4. Clarifications for Section VII Information Collection, BMP Evaluation, and Monitoring
 - Sections A, B, and C- Complete in each annual report, as noted in S8.B.2 of the permit.
 - Section D, Question 1: Cities with populations smaller than 10,000 should check NA (Not applicable).

- Section D, Question 2: The reference to the permit section should be S8.C.1.b.ii and iii or S8.C.2.a.ii.
 - Section D, Question 4: Cities with populations smaller than 10,000 should check “N” (No).
5. For questions in Annual Report Section VI, if there is NA and the question does not apply to you, circle NA and explain in the Comments field. For other questions:

For each question, select the category below that best describes your program’s implementation status for the reporting year.	If your answer is “YES”...	If your answer is “NO”...
<p>Did you meet the permit requirement by the deadline noted in the permit? OR</p> <p>Did you implement this existing requirement over the entire reporting period?</p>	<p>Circle YES or answer Y.</p> <p>You may provide additional detail in the <i>Comments</i> field.</p>	<p>Circle NO or answer N.</p> <p>In <i>Comments</i> field provide: “reasons why, corrective steps taken and proposed, and expected dates that the deadline will be met.” [See S9.E.2.d]</p>
<p>Did you meet the permit requirement <u>in advance of</u> the permit deadline?</p>	<p>Circle YES or answer Y.</p> <p>You may note in <i>Comments</i> that this requirement has been met ahead of the permit deadline.</p>	<p>Answer NA if you have not met this requirement and note in <i>Comments</i> that the requirement <u>is not yet due</u>.</p>

Please refer to the INSTRUCTIONS tab of the Annual Report Excel file for directions on how to fill out the answer fields. Also see *10 Steps for Electronic Annual Report Submittal* which is available on the Ecology Annual Reports webpage at <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/annualreports.html>

IV. Preparing Annual Report Supplemental Documentation

The annual reporting requirement for Western Washington Phase II cities and counties requires permittees to include additional documentation to supplement responses to questions in the Annual Report Form. The Annual Report form identifies some of these supplemental submittals, while others are noted in the body of the permit. The table of contents below provides an outline of the key information permittees may need to provide as supplemental documentation.

Table of Contents for supplemental documentation

1. Notification of any changes to authorization pursuant to G19.C (S9.E.2.h), if applicable.
2. Copies of interlocal agreement(s) that identify the other governmental entity/ies and the permit obligations they are implementing on your behalf (S9.E.2.f), if applicable. [NOTE: Do NOT resubmit each year if agreements are unchanged.]
3. Notification of any annexations, incorporations or jurisdictional boundary changes in the geographic area of coverage during the current reporting period, and implications for the SWMP (S9.E.3), if applicable.
4. Attached documentation to address specific items in the Annual Report form, including:
 - Description of public education and involvement activities as per S5.C.1.c and S9.E.c [Required to begin by February 16, 2009.]
 - Summary of feedback received from illicit discharge detection and elimination public education efforts as per S5.C.3.e. [Required by August 19, 2011.]
 - Documentation of maintenance delays as per S5.C.4.c.ii(2) and S5.C.5.a.ii. [Required beginning February 16, 2010.]
 - Justification for reduced inspection frequency, including records, pursuant to S5.C.4.c.iii and S5.C.5.b. [Required beginning February 16, 2010.]
 - Status report of TMDL implementation (S7.A), if applicable. [Deadline varies by TMDL]
 - If required, status of the implementation of any actions taken pursuant to S4.F and the status of any monitoring, assessment, or evaluation efforts conducted during the reporting period
 - Site maps and descriptions of long-term stormwater monitoring sites (S8.C.2.a.i). [Required for the fourth Annual Report, covering calendar year 2010.]
 - Proposed questions and monitoring plans for SWMP effectiveness monitoring (S8.C.2.a.ii) [Required for the fourth Annual Report, covering calendar year 2010.]
 - Summary of identified barriers to the use of low impact development (LID) and measures to address the barriers (S9.E.4.a). [Required for the fourth Annual Report, covering calendar year 2010.]
 - A report describing current, potential or planned activities to implement and promote LID pursuant to requirements in S9.E.4.b.1 through S9.E.4.b.iv. [Required for the fourth Annual Report, covering calendar year 2010.] **For guidance on developing this report, please refer to the appendix of this document (pages 6-9).**
5. A brief description of any stormwater monitoring studies involving the permittee's MS4 in accordance with S8.B.1, if applicable. Include location of study, media and parameters studied, and study citation.

Contact the following Ecology staff for more information

Island, Skagit, and Whatcom Counties	Christina Maginnis cmag461@ecy.wa.gov	360-715-5212
Snohomish County	Rachel McCrea rmcc461@ecy.wa.gov	425-649-7223
King County and Kitsap County	Anne Dettelbach adet461@ecy.wa.gov	425-649-7093
Clallam and Pierce Counties	Vince McGowan vmcg461@ecy.wa.gov	360-407-7320
Clark, Cowlitz, Grays Harbor, Lewis, and Thurston Counties	Deborah Cornett dcor461@ecy.wa.gov	360-407-7269

Appendix: Western Washington Phase II Municipal Stormwater Permit

Low Impact Development Reporting Guidance

Introduction

Purpose

The Western Washington Phase II Municipal Stormwater General Permit (Phase II permit) requirement in Special Condition S9.E.4 requires permittees to submit with the annual report by March 31, 2011 information that includes:

- A summary of identified barriers to the use of low impact development (LID) within the area covered by the permit *and* measures to address the barriers.
- A report describing:
 - LID practices that are currently available and that can reasonably be implemented within this permit term.
 - Potential or planned non-structural actions and LID techniques to prevent stormwater impacts.
 - Goals and metrics to identify, promote, and measure LID use.
 - Potential or planned schedules for the Permittee(s) to require and implement the non-structural and LID techniques on a broader scale in the future.

Ecology suggests that permittees focus this task on preparing to implement low impact development (LID) requirements expected in the next permit cycle.

Background

The February 2, 2009 PCHB ruling on an appeal of the Phase II permit identified these specific reporting requirements for Western Washington Phase II permittees. Ecology modified the Phase II permit in June 2009 to add the requirements, and established a submittal deadline of March 31, 2011.

To develop Western Washington LID requirements, Ecology conducted a stakeholder advisory group process from October 2009 to August 2010. Participants representing a wide range of interests provided Ecology with input on a technical performance standard, feasibility, processes and timing for revising codes to adopt and implement the standards, and broader-scale application of LID principles.

<http://www.ecy.wa.gov/programs/wq/stormwater/municipal/LIDstandards.html>

Ecology presented the committee and the public with an outline of the agency's draft proposal for LID requirements and timelines at a meeting on August 12, 2010.

<http://www.ecy.wa.gov/programs/wq/stormwater/municipal/LID/LIDjointMTGmaterials081210.pdf>

References

The following sources may be useful in preparing submittals for S9.E.4.a and b:

- Survey of Local Governments that Participated in the 2005-2009 LID Local Regulation Assistance Project, Puget Sound Partnership, April 2010
http://www.psp.wa.gov/downloads/LID/PSPSurveyLIDRegulAsistance_23April2010.pdf
- Puget Sound Partnership's LID Local Regulation Assistance Project (2005, 2006, 2008, 2009)
http://www.psparchives.com/our_work/stormwater/lid/lid_regs.htm
- Water Quality Scorecard, Incorporating Green Infrastructure Practices at the Municipal, Neighborhood, and Site Scales, USEPA
http://www.epa.gov/smartgrowth/pdf/2009_1208_wq_scorecard.pdf

Identified Barriers and Measures to Address Them – Individual Summaries (S9.E.4.a)

The LID reporting requirements in permit condition S9.E.4.a stipulate that cities and counties must individually submit a summary of identified barriers and measures to address them. Individual reports allow permittees to tailor the report to their jurisdiction, since each city and county may have different circumstances. By identifying LID implementation barriers and measures to address them, you will be more prepared to remove the barriers to meet future requirements.

The Phase II Permit includes a definition of LID on page 47 of 51. This definition includes two scales of LID: 1) structures or facilities built for stormwater management, and 2) land development principles. Both scales of LID are relevant for the barriers report.

Types of LID barriers can include:

- Regulatory (generally refers to local code requirements and administrative procedures).
- Operations and maintenance.
- Staff and/or developer training and experience.
- Community acceptance and understanding.
- Environmental (such as native soil types, groundwater levels, floodplain management, presence of existing infrastructure, contaminated soils or groundwater, areas of seeps and springs, sole source aquifers).

Ecology expects the summary to identify at least one action or measure that could be taken to address each identified barrier. If appropriate, a specific action may address multiple barriers. Listing an action in this report submittal does *not* constitute a commitment to do it. Actions (or measures) can include developing or securing funding, conducting staff training, conducting scientific studies, implementing innovative approaches, and other ideas that apply locally.

LID Practices, Goals, Planned Actions and Timelines – Individual or Cooperative Reports (S9.E.4.b)

The requirements in permit condition S9.E.4.b call for a report that may be written individually or in cooperation with other permittees. Neighboring jurisdictions or sub-regional groups of permittees that share characteristics may choose to submit a cooperative report. For example, jurisdictions with similar barriers may choose to develop and submit a cooperative report. Ecology intends for this to lay the groundwork for communities to achieve efficiencies by working together to implement future requirements.

The report will have four parts, at a minimum, to respond to the requirements at S9.E.4.b.i through iv. Generally these are: LID practices available now, potential future LID practices, goals and metrics, and schedules. Your responses in this report submittal do *not* constitute commitments or requirements.

LID practices currently available and reasonable to implement soon

“LID practices” broadly refers to LID, which is defined in the Phase II permit. It includes both non-structural actions and LID techniques. This report section should provide Ecology with a description or list of LID practices currently allowed or required by local codes and rules, as well as those that are likely to be adopted or implemented before February 2012 (the permit expiration date).

Potential or planned non-structural actions and LID techniques

This section of the report should look out beyond the current permit cycle and should focus on actions and techniques not currently in use.

Non-structural actions can also be referred to as development principles. Generally, these are measures authorized through development codes or reflected in comprehensive plans or other land use policies that advance LID implementation. Chapters 2, 3 and 4 of the *LID Technical Guidance Manual for Puget Sound*

(http://www.psp.wa.gov/downloads/LID/LID_manual2005.pdf) discuss non-structural actions. Examples include:

- Clustering and impervious surface limits
- Narrower roads
- Native vegetation retention
- Stream buffers
- Reduced lot setbacks
- Habitat corridors
- Conservation easements or transfer of development rights programs

LID techniques are generally small-scale engineered facilities and devices or installations that are built for the purpose of mimicking pre-development hydrologic functions. Chapter 6 of the *LID Technical Guidance Manual for Puget Sound* discusses LID techniques. Examples include rain gardens, permeable pavements and green roofs.

Goals and metrics to identify, promote, and measure LID use

In this section Ecology recommends that permittees provide indicators of progress in implementing the LID techniques, practices, and actions identified in the previous sections. This could be satisfied by reporting on the numbers of each LID technique installed in the municipality. Permittees may suggest goals for expanding the use of LID principles and techniques and methods to measure progress toward the goals. If progress isn't made as expected, it could lead to examining the goals, the metrics, and/or the methods used to achieve them.

Potential or planned schedules to require or implement the non-structural and LID techniques on a broader scale in the future

Describe a schedule for implementing potential or planned actions identified in the previous sections. This schedule could include potential or preferred timelines, phasing, and sequencing information for both non-structural actions and LID techniques. Describe the sequence of events and the timelines that will work for your jurisdiction, or group of jurisdictions.

An example of sequencing could include the need for a comprehensive plan amendment, followed by limited stormwater code amendments to adopt LID techniques, and a later update of broader development codes to allow or require non-structural actions (see list of examples and the extensive list of potential actions in the references above). Alternatively, some jurisdictions may prefer to amend the comprehensive plan and update stormwater and broader development codes at the same time.

Summary

In addition to providing Ecology with input for developing future LID requirements, the LID reporting requirement is a planning process intended to prepare Phase II permittees for adopting LID requirements. The reporting process takes permittees through a progression of activities to identify:

- Barriers that exist now and things you can do to reduce those barriers now.
- LID practices that could be readily implemented in the near term, such as the next 1-2 years.
- Additional LID practices that could be done in the future.
- Ways you would measure the implementation of these future LID practices.
- A schedule for when and how these LID practices could be implemented in the future.

APPENDIX D

- **City of Bellevue 2010 Annual Compliance Report**

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I. Permittee Information	
Permittee Name City of Bellevue, WA	Permittee Coverage Number WAR04-5504
Contact Name Phyllis Varner	Phone Number 425-452-7683
Mailing Address P.O. Box 90012	
City Bellevue	State Zip + 4 WA 98009-9012
Email Address pvarner@bellevuewa.gov	

II. Regulated Small MS4 Location							
Jurisdiction City of Bellevue	Entity Type: Check the box that applies						
	<table border="1"> <thead> <tr> <th>County</th> <th>City/Town</th> <th>Other</th> </tr> </thead> <tbody> <tr> <td></td> <td>X</td> <td></td> </tr> </tbody> </table>	County	City/Town	Other		X	
County	City/Town	Other					
	X						
Major Receiving Water(s) All streams in Bellevue are tributaries to Lake Washington or Lake Sammamish. See www.bellevuewa.gov for stream information.							

III. Relying on another Governmental Entity	
<p>If you are relying on another governmental entity to satisfy one or more of the permit obligations, list the entity and briefly describe the permit obligation(s) they are implementing on your behalf below. <i>Attach a copy of your agreement with the other entity to provide additional detail.</i></p>	
Name of Entity:	Permit Obligation(s):

PLEASE indicate reporting year and your jurisdiction in Line 1, above.

PLEASE refer to the INSTRUCTIONS tab for assistance filling out this table.

NOTE: Items that have future compliance dates must still be answered to indicate status.

NOTE: For clarification on how to answer questions, place cursor over cells with red flags.

NOTE: Highlighted items indicate requirements that are due in 2010.

PLEASE review your work for completeness and accuracy. Save this worksheet as you go!

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
1. Attached annual written update of Permittee's Stormwater Management Program (SWMP), including applicable requirements under S5.A.2 and S9?	Y			City of Bellevue 2011 NPDES Stormwater Management Program (NSWMP)
2. Attached a copy of any annexations, incorporations or boundary changes resulting in an increase or decrease in the Permittee's geographic area of permit coverage during the reporting period, and implications for the SWMP as per S9.E.3?	Y		Bellevue did not annex, incorporate or make boundary changes in 2010.	
3. Implemented an ongoing program for gathering, tracking, maintaining, and using information to evaluate SWMP development, implementation and permit compliance and to set priorities? (S5.A.3)	Y			
4. Began tracking costs or estimated costs of the development and implementation of the SWMP? (Required no later than January 1, 2009, S5.A.3.a)	Y			

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
5. SWMP includes an education program aimed at residents, businesses, industries, elected officials, policy makers, planning staff and other employees of the Permittee? <i>(Required to begin by February 15, 2009, S5.C.1)</i>	Y			
6. Distributed appropriate information to target audiences identified in the area served by the MS4? <i>(Required to begin by February 15, 2009, S5.C.1.a)</i>	Y			
7. Tracked the types of public education and outreach activities implemented. <i>(Required to begin by February 15, 2009, S5.C.1.c)</i>	Y			
7b. Number of activities implemented:		17		
8. Measured the understanding and adoption of the targeted behaviors among at least one targeted audience in at least one subject area. <i>(Required to begin by February 15, 2009, S5.C.1.b)</i>	Y			
9. Provided opportunities for the public to participate in the decision making processes involving the development, implementation and updates of the Permittee's SWMP? <i>(Required by February 15, 2008, S5.C.2.a)</i>	Y			
10. Developed and implemented a process for public involvement and consideration of public comments on the SWMP? <i>(Required by February 15, 2008, S5.C.2.a)</i>	Y			

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
11. Made the most current version of the SWMP available to the public. (S5.C.2.b)	Y			
12. Posted the SWMP and latest annual report on your website. (S5.C.2.b)	Y			
12b. NOTE website address in <i>Attachment</i> field:	Y			www.bellevuewa.gov
13. Initiated or implemented an ongoing program to detect and remove illicit connections and illegal discharges into the Permittee's MS4? (Required August 19, 2011, S5.C.3)	NA		Requirement is not yet due.	
14. Developed and currently maintain a map of your MS4? (Required by February 16, 2011, S5.C.3.a)	NA		Requirement is not yet due.	
14b. Initiated a program to develop and maintain a map of all connections to the MS4 authorized or allowed by the Permittee after the Permit effective date? (S5.C.3.a.ii)	Y			
15. Map shows the location of all known municipal separate storm sewer outfalls, receiving waters and structural stormwater BMPs owned, operated, or maintained by the Permittee? (Required by February 16, 2011, S5.C.3.a.i)	NA		Requirement is not yet due.	
16. Map shows all storm sewer outfalls with a 24 inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems and includes tributary conveyances, associated drainage areas and land use? (Required by February 16, 2011, S5.C.3.a.i)	NA		Requirement is not yet due.	

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
17. Map shows geographic areas served by the Permittee's MS4 that do not discharge stormwater to surface waters? (<i>Required</i> by February 16, 2011, S5.C.3.a.iii)	NA		Requirement is not yet due.	
18. Map has been made available upon request? (S5.C.3.a.iv)	NA		Requirement is not yet due.	
19. Developed and implemented regulatory actions necessary to effectively prohibit non-stormwater, illicit discharges into the Permittee's MS4? (<i>Required</i> by August 15, 2009, S5.C.3.b)	Y		Amended Bellevue City Codes (BCC) in 2009 to comply with NPDES permit requirements. See ordinances 5905 [BCC 24.06 Storm & Surface Water Utility], 5906 [BCC 23.76 Clearing and Grading Code], and 5907 [BCC 1.18.75. Civil Violations Code] located at http://www.bellevuewa.gov/doc_library.htm	
20. Developed and implemented an ongoing program to detect and address non-stormwater illicit discharges, including spills, and illicit connections into the Permittee's MS4? (<i>Required</i> by August 19, 2011, S5.C.3.c)	NA		Requirement is not yet due.	
21. Developed procedures for locating priority areas likely to have illicit discharges, including at a minimum: evaluating land uses and associated business/industrial activities present; areas where complaints have been registered in the past; and areas with storage of large quantities of materials that could result in illicit discharges, including spills? (<i>Required</i> by August 19, 2011, S5.C.3.c.i)	NA		Requirement is not yet due.	

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
22. Implemented field assessment activities, including visual inspection of priority outfalls identified during dry weather, and for the purposes of verifying outfall locations, identified previously unknown outfalls, and detected illicit discharges? <i>(Required by August 19, 2011, S5.C.3.c.ii)</i>	NA		Requirement is not yet due.	
23. Prioritized receiving waters for visual inspection? <i>(Required by February 16, 2010, S5.C.3.c.ii)</i>	Y			
24. Conducted field assessments for three high priority water bodies? <i>(Required by February 16, 2011, S5.C.3.c.ii)</i>	NA		Requirement is not yet due.	
25. Conducted field assessments on at least one high priority water body? <i>(Required annually after February 16, 2011, S5.C.3.c.ii)</i>	NA		Requirement is not yet due.	
26. Developed and implemented procedures for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported to the Permittee? <i>(Required by August 19, 2011, S5.C.3.c.iii)</i>	NA		Requirement is not yet due.	
27. Developed and implemented procedures for tracing the source of an illicit discharge; including visual inspections, and when necessary, opening manholes, using mobile cameras, collecting and analyzing water samples, and/or other detailed inspection procedures? <i>(Required by August 19, 2011, S5.C.3.c.iv)</i>	NA		Requirement is not yet due.	

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
28. Developed and implemented procedures for removing the source of the discharge, including notification of appropriate authorities; notification of the property owner; technical assistance for eliminating the discharge; follow-up inspections; and escalating enforcement and legal actions if the discharge is not eliminated? <i>(Required by August 19, 2011, S5.C.3.c.v.)</i>	NA		Requirement is not yet due.	
29. Informed public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste? <i>(Required by August 19, 2011, S5.C.3.d)</i>	NA		Requirement is not yet due.	
30. Distributed appropriate information to target audiences identified pursuant to S5.C.1? <i>(Required by August 19, 2011, S5.C.3.d.i)</i>	NA		Requirement is not yet due.	
31. Publicized a hotline or other local telephone number for public reporting of spills and other illicit discharges? <i>(Required by February 15, 2009, S5.C.3.d.ii)</i>	Y			
31b.		53		
31c. Number of follow-up actions taken in response to calls:		52	1 of the 53 calls was resolved on the phone; others required field investigation for response and resolution. Note - Utilities responded to a total of 182 illicit discharges (unrelated to construction projects) in 2010. This includes the 53 illicit discharges reported to the hotline and those reported by City field staff. Of these 182 reports, 12 resulted in site-specific structural changes to prevent on-going illicit discharges.	

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
32 Maintained a hotline or other reporting number for public reporting of illicit discharges, including spills? <i>(Required by February 15, 2009, S5.C.3.d.ii)</i>	Y			
32b. NOTE hotline number in <i>Comments</i> field	Y		24-hour emergency line 425-452-7840	
33 Tracked the number of illicit discharges, including spills, identified? <i>(Required by August 19, 2011, S5.C.3.e)</i>	NA		Requirement is not yet due.	
33b. Number of illicit discharges identified:		0	Requirement is not yet due.	
34 Tracked the number of inspections made for illicit connections? <i>(Required by August 19, 2011, S5.C.3.e)</i>	NA		Requirement is not yet due.	
34b. Number of inspections:		0	Requirement is not yet due.	
35 Received feedback from IDDE public education efforts? <i>(Required by August 19, 2011, S5.C.3.e)</i>	NA		Requirement is not yet due.	
36 Attached report on IDDE public education efforts? <i>(Required by August 19, 2011, S5.C.3.d, S5.C.3.e)</i>	NA		Requirement is not yet due.	
37 Municipal field staff responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, improper disposal and illicit connections are trained to conduct these activities? <i>(Required by August 15, 2009, S5.C.3.f.i)</i>	Y		Staff training completed in 2009. [Per 2009 Annual Report, one training session held with 71 City staff.]	
37b. Number of trainings provided:		0	Completed in 2009.	
37c. Number of staff trained:		0	Completed in 2009.	
38 Provided follow-up training as needed to address changes in procedures, techniques or requirements? <i>(Required by August 15, 2009, S5.C.3.f.i)</i>	Y			
38b. Number of trainings provided:		4		
38c. Number of staff trained:		69		

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
39 Developed and implemented an ongoing training program on the identification of an illicit discharge/connection, and on the proper procedures for reporting and responding to the illicit discharge/ connection for all municipal field staff, which, as part of their normal job responsibilities, might come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system? <i>(Required by February 16, 2010, S5.C.3.f.ii.)</i>	Y			
39b.		3		
39c.		236		
40 Developed, implemented and enforced a program to reduce pollutants in stormwater runoff to a regulated small MS4 from new development, redevelopment and construction site activities? <i>(Required by February 16, 2010, S5.C.4)</i>	Y			
41 Applied stormwater runoff program to all sites that disturb a land area 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale? <i>(Required by February 16, 2010, S5.C.4)</i>	Y			
42 Applied stormwater runoff program to private and public development, including roads? <i>(Required by February 16, 2010, S5.C.4)</i>	Y			

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
43 Applied the Technical Thresholds in Appendix 1 to all sites 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale? <i>(Required by February 16, 2010, S5.C.4)</i>	Y		Bellevue applies the technical thresholds in Appendix 1 to all sites requiring permits, regardless of size.	
44 Adopted and implemented regulatory mechanism (such as an ordinance) necessary to address run-off from new development, redevelopment and construction site activities? <i>(Required by February 16, 2010, S5.C.4.a)</i>	Y		Amended Bellevue City Codes (BCC) in 2009, effective date January 1, 2010. See ordinances 5905 [BCC 24.06 Storm & Surface Water Utility Code], 5906 [BCC 23.76 Clearing and Grading Code], and 5907 [BCC 1.18.75. Civil Violations Code] located at http://www.bellevuewa.gov/doc_library.htm .	
45 Retained existing local requirements to apply stormwater controls at smaller sites or at lower thresholds than required pursuant to S5.C.4? (S5.A.4)	Y			
46 The ordinance or other enforceable mechanism includes the minimum requirements, technical thresholds, and definitions in Appendix 1 (or an equivalent approved by Ecology under the NPDES Phase I Municipal Stormwater Permit) for new development, redevelopment, and construction sites? <i>(Required by February 16, 2010, S5.C.4.a.i)</i>	Y			
47 The ordinance or other enforceable mechanism includes exceptions and variance criteria equivalent to those in Appendix 1? <i>(Required by February 16, 2010, S5.C.4.a.i., and Section 6 of Appendix 1)</i>	Y			

Question	Y/N/NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
48 Were exceptions or variances to the minimum requirements in Appendix 1 granted? (Required by February 16, 2010, S5.C.4.a.i., and Section 6 of Appendix 1)	N			
48b. If so, how many were granted?		0		
49 The ordinance or other enforceable mechanism includes a site planning process and BMP selection and design criteria that, when used to implement the minimum requirements in Appendix 1 (or equivalent approved by Ecology under the Phase I Permit) will protect water quality, reduce the discharge of pollutants to the maximum extent practicable and satisfy the State requirement under Chapter 90.48 RCW to apply all known, available and reasonable methods of prevention, control and treatment (AKART) prior to discharge? (Required by February 16, 2010, S5.C.4.a.ii)	Y			
49b. Cite documentation to meet this requirement in Attachment field:	Y			See ordinances listed in Question #44 response and the revised Storm & Surface Water Engineering Standards and Clearing & Grading Development Standards located at http://www.bellevuewa.gov/doclibrary.htm . The standards incorporate the site planning process and BMP selection and design criteria from the 2005 Ecology Manual.

Question	Y/N/NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
50 The ordinance or other enforceable mechanism provides the legal authority, through the approval process for new development, to inspect private stormwater facilities that discharge to the Permittee's MS4? (<i>Required</i> by February 16, 2010, S5.C.4.a.iii)	Y		See response to Question #44.	
51 The ordinance or other enforceable mechanism allows non-structural preventive actions and source reduction approaches such as Low Impact Development (LID) Techniques to minimize the creation of impervious surfaces and minimize the disturbance of native soils and vegetation? (<i>Required</i> by February 16, 2010, S5.C.4.a.iv)	Y		See response to Questions #44 and #94.	
52 If the ordinance or regulatory mechanism allows construction sites to apply the Erosivity Waiver in Appendix 1, Minimum Requirement #2, does it include appropriate, escalating enforcement sanctions for construction sites that provide notice to the Permittee of their intention to apply the waiver but do not meet the requirements (including timeframe restrictions, limits on activities that result in non-stormwater discharges, and implementation of appropriate BMPs to prevent violations of water quality standards) to qualify for the waiver? (If waiver is allowed, the qualification is <i>required</i> by February 16, 2010, S5.C.4.a.iii)	NA		Bellevue's Clearing and Grading Code does not provide an erosivity waiver option.	

Question	Y/N/NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
53 Developed and implemented a permitting process to address runoff from new development, redevelopment and construction site activities with plan review, inspection, and enforcement capability? <i>(Required by February 16, 2010, S5.C.4.b)</i>	Y			
54 Applied permitting process to all sites that disturb a land area 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale? <i>(Required by February 16, 2010, S5.C.4.b)</i>	Y		Bellevue applies the permitting process to all sites requiring permits, regardless of size.	
55 Reviewed Stormwater Site Plans for new development and redevelopment projects? <i>(Required by February 16, 2010, S5.C.4.b.i)</i>	Y			
55b. Number of site plans reviewed during the reporting period:		396	This is the number of Clearing and Grading permits submitted for review in 2010. Majority are reviewed in 2010, but review of some of the permits extends into 2011.	
56 Inspected, prior to clearing and construction, all known development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 Determining Construction Site Sediment Potential? <i>(Required by February 16, 2010, S5.C.4.b.ii)</i>	Y			

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
56b. Number of qualifying sites inspected prior to clearing and construction during the reporting period:		191	This is the number of "preconstruction" inspections done in 2010 for Clearing and Grading permits submitted, reviewed and issued for construction in 2010 and which began construction in 2010. Note - not all issued permits go to construction immediately or ever for a variety of reasons.	
57 Inspected construction-phase stormwater controls at all known permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls? (Required by February 16, 2010, S5.C.4.b.iii)	Y			
57b. Number of sites inspected during the construction phase for the reporting period:		152	This is the number of "during construction" inspections for Clearing & Grading permits (e.g., for permits submitted, reviewed, and issued and with pre-construction inspections in 2010)	
58 Enforced as necessary based on the inspection at new development and redevelopment projects? (Required by February 16, 2010, S5.C.4.b.iii)	Y			
58b. Number of enforcement actions taken during the reporting period:		10	Enforcement actions for permits applied for and issued in 2010 include 8 correction notices and 2 stop work orders.	
59 Inspected qualifying permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater controls such as stormwater facilities and structural BMPs? (Required by February 16, 2010, S5.C.4.b.iv and v)	Y			

Question	Y/N/NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
59b. Number of qualifying sites known during the reporting period:		50	Qualifying sites represent permanent stormwater control permits issued in 2010.	
59c. Number of qualifying sites inspected during the reporting period:		14	Represents permanent stormwater control permits issued in 2010 that requested or were ready for a final inspection of their stormwater systems in 2010 (these inspections can occur well before projects receive final acceptance or occupancy).	
60. Verified a maintenance plan is completed and responsibility for maintenance is assigned for qualifying projects? (Required by February 16, 2010, S5.C.4.b.iv)	Y			
61. Enforced regulations as necessary based on the inspection? (Required by February 16, 2010, S5.C.4.b.iv)	Y			
61b. Number of enforcement actions taken during the reporting period:		6	6 correction notices were issued to permanent stormwater control permits.	
62. Developed and implemented an enforcement strategy to respond to issues of non-compliance with the regulations for qualifying projects? (Required by February 16, 2010, S5.C.4.b.vi)	Y			
63. Did the Permittee choose to allow construction sites to apply the Erosivity Waiver in Appendix 1, Minimum Requirement #2? (S5.C.4.b.vii)	NA		See comment to Question #52.	
63b. If yes, how many waivers were allowed ?		0		
64. Developed and implemented a long-term operation and maintenance (O&M) program for post-construction stormwater facilities and BMPs? (Required by February 16, 2010, S5.C.4.c)	Y			

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
65 Adopted an ordinance or other regulatory mechanism that clearly identifies the party responsible for maintenance, requires inspection of facilities and establishes enforcement procedures? (Required by February 16, 2010, S5.C.4.c.i)	Y		See ordinances 5905 [Bellevue City Code 24.06 Storm & Surface Water Utility] and 5907 [BCC 1.18.75. Civil Violations Code] located at http://www.bellevuewa.gov/doc_library.htm .	
66 Inspected post-construction stormwater controls, including structural BMPs, at new development and redevelopment projects? (Required by February 16, 2010, S5.C.4.c)	Y		Post-construction inspections of new development and redevelopment projects were completed (see response to Question #59). The first annual post-construction inspections will occur in 2011.	
66b. Number of sites inspected during the reporting period:		0	None because qualifying sites (e.g., private new development and redevelopment projects which received final approval or occupancy in 2010) would have their first annual post-construction inspections of stormwater controls including structural BMPs in 2011.	
66c. Number of structural BMPs inspected during the reporting period:		0	See comment under Question # 66b.	
66d. Number of enforcement actions taken during the reporting period:		0	See comment under Question # 66b.	
67 Established maintenance standards that are as protective, or more protective, of facility function as those specified in Chapter 4 of Volume V of the 2005 Stormwater Management Manual for Western Washington ? (Required by February 16, 2010, S5.C.4.c.ii)	Y		The Storm and Surface Water Maintenance Standards are available on the city website at: http://www.bellevuewa.gov/doc_library.htm	

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
68 Performed timely maintenance as per S5.C.4.c.ii? (Required by February 16, 2010, S5.C.4.c.ii)	NA		The first annual post-construction stormwater control inspections for new development and redevelopment projects receiving final approval or occupancy in 2010 will occur in 2011 and maintenance would occur by the end of 2012. Therefore, maintenance results will be reported in the 2012 annual report.	
68b. Attached documentation of any maintenance delays. (Required by February 16, 2010, S5.C.4.c.ii)	NA		See comment to Question #68.	
69 Established program to annually inspect all stormwater treatment and flow control facilities (other than catch basins) permitted by the Permittee according to S5.C.4.b. unless there are maintenance records to justify a different frequency? (Required by February 16, 2010, S5.C.4.c.iii)	Y			
70 If using reduced inspection frequency, Attached documentation as per S5.C.4.c.iii? (Required by February 16, 2010, S5.C.4.c.iii)	NA			

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
71 Inspected all new stormwater treatment and flow control facilities owned or operated, including catch basins, for new residential developments that are a part of a larger common plan of development or sale, every 6 months during the period of heaviest house construction (i.e., 1 to 2 years following subdivision approval) to identify maintenance needs and enforce compliance with maintenance standards as needed? <i>(Required by February 16, 2010, S5.C.4.c.iv)</i>	Y		Inspection program in place to implement this requirement; however, no inspections were completed in 2010 because none were triggered during the 2010 reporting period.	
71b. Number of facilities inspected during the reporting period:		0	One residential development received approval in 2010 but did not trigger this inspection requirement during the 2010 reporting period.	
72 Implemented a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, other enforcement records, maintenance inspections and maintenance activities? <i>(Required by February 16, 2010, S5.C.4.d)</i>	Y			
73 Provided copies of the Notice of Intent for Construction Activity and Notice of Intent for Industrial Activity to representatives of proposed new development and redevelopment? <i>(S5.C.4.e)</i>	Y			

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
74 All staff responsible for implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement were trained to conduct these activities? (Required by February 16, 2010, S5.C.4.f)	Y			
74b. Number of trainings provided:		1	Training on 2005 Ecology Stormwater Manual (sponsored by Ecology). Responses to Questions #74b and #74c do not include implementation training on new regulations and standards provided to staff as part of staff meetings, project discussions and/or in developing handouts for staff and permittees to use in applying the new requirements.	
74c. Number of staff trained:		17		
75 Developed and implemented an operations and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations? (Required by February 16, 2010, S5.C.5)	Y			
76 Adopted maintenance standards as protective, or more protective, of facility function as those specified in Chapter 4 of Volume V of the 2005 Stormwater Management Manual for Western Washington? (Required by February 16, 2010, S5.C.5.a)	Y		The Storm and Surface Water Maintenance Standards are available on the city website at: http://www.bellevuewa.gov/doc_library.htm	
77 Performed timely maintenance as per S5.C.5.a.ii? (Required by February 16, 2010, S5.C.5.a.ii)	Y			

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
77b. Attached documentation of any maintenance delays. (Required by February 16, 2010, S5.C.5.a.ii)	N		No maintenance delays identified at this time.	
78. Designed a program to annually inspect and maintained all stormwater treatment and flow control facilities (other than catch basins)? (Required by February 16, 2010, S5.C.4.c.iii)	Y			
78b. Number of known facilities:		388		
78c. Number of facilities inspected during the reporting period:		388		
79. If using reduced inspection frequency, Attached documentation as per S5.C.5.a.ii? (Required by February 16, 2010, S5.C.5.b)	NA			
80. Conducted spot checks of stormwater facilities after major storms? (Required by February 16, 2010, S5.C.5.c)	Y			
80b. Number of known facilities:		388		
80c. Number of facilities inspected during the reporting period:		16	Utilities conducts routine spot checks of 105 facilities and locations known to be prone to flooding, of which at least 16 are critical stormwater flow control & treatment facilities. Facilities and locations known to be prone to flooding were spot checked multiple times during the reporting period in response to major storm events.	
81. Inspected municipally owned or operated catch basins at least once before the end of the Permit term? (Required by February 16, 2010, S5.C.5.d)	Y			
81b. Number of known catch basins:		20,408	18,244 catch basins and 2,164 manholes	
81c. Number of inspections:		26,400	Inspected between 2007-2011 (several were inspected multiple times)	

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
81d. Number of catch basins cleaned:		7,093	Cleaned between 2007-2011	
82 Established and implemented practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads or highways owned or maintained by the Permittee, and road maintenance activities conducted by the Permittee? (Required by February 16, 2010, S5.C.5.f)	Y			
83 Established and implemented policies and procedures to reduce pollutants in discharges from all lands owned or maintained by the Permittee and subject to this Permit, including but not limited to: parks, open space, road right-of-way, maintenance yards, and stormwater treatment and flow control facilities? (Required by February 16, 2010, S5.C.5.g)	Y			
84 Implemented an operations and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations? (Required by February 16, 2010, S5.C.5.h.)	Y			
84b. Number of trainings provided:		8		
84c. Number of staff trained:		194		

Question	Y/N/ NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
85 Implemented a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit that are not required to have coverage under the Industrial Stormwater General Permit? (Required by February 16, 2010, S5.C.5.i)	Y		Developed and implemented Stormwater Pollution Prevention Plans for 6 city-owned facilities.	
86 Is there an approved Total Maximum Daily Load (TMDL) applicable to stormwater discharges from a MS4s owned or operated by the Permittee?	N			
87 Complied with the specific requirements identified in Appendix 2? (S7.A)	NA			
88 Attached status report of TMDL implementation? (S7.A)	NA			
89 Where monitoring was required in Appendix 2, did you conduct the monitoring according to an approved Quality Assurance Project Plan? (S7.A)	NA			
90 Took appropriate action to correct or minimize discharges into or from the MS4 which may constitute a threat to human health, welfare, or the environment? (G3)	Y			
90b. Attached a summary of the status of implementation of any actions taken pursuant to S4.F and the status of any monitoring, assessment, or evaluation efforts conducted during the reporting period? (S4.F.3.d)	N		No S4F notifications occurred during the 2010 reporting period.	

Question	Y/N/NA	#	Comments (50 word limit)	Name of Attachment & Page #, if applicable
91 Notified Ecology of the failure to comply with the permit terms and conditions within 30 days of becoming aware of the non-compliance? (G20)	N		No G-20 notifications were necessary in 2010.	
92 Notified Ecology immediately in cases where the Permittee becomes aware of a discharge from the Permittees MS4 which may cause or contribute to an imminent threat to human health or the environment? (G3)	Y			
93 Attached a summary of identified barriers to the use of low impact development (LID) and measures to address the barriers (Required to be submitted by March 31, 2011, S9.E.4.a)	Y			Identified Barriers to the Use of Low Impact Development (LID) and Measures to Address the Barriers (see attachment at end of report).
94 Attached a report describing LID practices currently available and that can be reasonably implemented, potential or planned non-structural actions and LID techniques to prevent stormwater impacts, goals and metrics to identify, promote, measure LID; and schedules to require and implement non-structural and LID techniques on a broader scale (Required to be submitted by March 31, 2011, S9.E.4.b)	Y			Low Impact Development Practices, Goals, Planned Actions and Timelines (see attachment at end of report).

VII. Information Collection, BMP Evaluation, and Monitoring

Complete Part A for all annual reports.

NOTE: Please note in Row 1 of the table if you have no information to report.

NOTE: Please limit your entries to 255 characters per cell. You may include additional information in your Supplemental Documentation attachment and reference it below with the page number.

A. Information Collection

Briefly describe any stormwater monitoring, studies, or type of information collected and analyzed during the reporting period. (S8.B.1)	Who/how to contact for additional information?
1. Phantom Lake water quality samples	Mike Graves - 425-452-2030
2. Larsen Lake water quality samples	Mike Graves - 425-452-2030
3. Draft Bellevue 2010 Adaptive Management Water Quality and Sediment Analysis - prepared for Parks & Community Services Dept. to look at effect of operational practices; includes streetscape sediment monitoring, paired water quality and golf course pond nutrient monitoring.	Pat Harris - 425-452-2930
4.	
5.	
6.	

VII. Information Collection, BMP Evaluation, and Monitoring

Complete Part B for all annual reports.

B. SWMP Evaluation (S8.B & S9)

You are required to assess the appropriateness of the BMPs you have selected to implement your SWMP. This evaluation is necessary to evaluate whether the MEP standard set by the permit is protective of water quality in your receiving water bodies. This assessment may be entirely qualitative. Answer **NA** if you are not yet implementing BMPs for a component of the SWMP. (S8.B.2 and S9)

Question	Y/N/NA	Comments (50 word limit)
1. Are the BMPs selected and implemented for Public Outreach appropriate to minimize pollutants in the MS4 to the MEP?	Y	Yes, staff are implementing the BMPs specified by Ecology in the permit as appropriate for minimizing pollutants in the MS4 to the MEP through public education and outreach and, where possible, assessing their effectiveness. For example, assessments show that there has been a reduction in # of fund-raising car washes that result in illicit discharges to the storm system from outreach efforts.
2. Are the BMPs selected and implemented for Public Involvement appropriate to minimize pollutants in the MS4 to the MEP?	Y	Yes, opportunities for public involvement on the Permit-specified NPDES Stormwater Management Program are provided at Bellevue Environmental Services Commission and City Council meetings and an annual public meeting on the Program.
3. Are the BMPs selected and implemented for Illicit Discharge Detection and Elimination appropriate to minimize pollutants in the MS4 to the MEP?	NA	Requirement is not yet due.
4. Are the BMPs selected and implemented for Construction Stormwater Pollution Prevention appropriate to minimize pollutants in the MS4 to the MEP?	Y	Yes, staff are implementing the construction stormwater pollution prevention BMPs specified by Ecology in the permit as appropriate for minimizing pollutants in the MS4 to the MEP and they are observed to be effective or required to be modified to achieve effectiveness on a case by case basis by inspectors.
5. Are the BMPs selected and implemented for Post-Construction Runoff Management appropriate to minimize pollutants in the MS4 to the MEP?	Y	Yes, the BMPs are appropriate and staff are implementing them for private and public projects. Escalating enforcement code language has strengthened the effectiveness of these measures.

<p>Are the BMPs selected and implemented for Good Housekeeping for Municipal Operations appropriate to minimize pollutants in the MS4 to the MEP?</p> <p>6.</p>	<p>Y</p>	<p>Yes, for example, the Stormwater Pollution Prevention Plans for heavy equipment yards and materials storage facilities identified structural changes to reduce the potential release of pollutants from these facilities and the City is implementing these structural changes.</p>
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VII. Information Collection, BMP Evaluation, and Monitoring

Complete Part C for all annual reports.

C. Changes in BMPs or objectives (S8.B)

If any of the BMPs or objectives is being changed, list the old BMP and objective, the new BMP and objective, and a justification for the change below. (S8.B.2., and S9)

NOTE: You may choose to attach additional documentation justifying Changes in BMPs or objectives. Note such attachments in the *Justification for change* field.

	Old BMP	Old Objective	New BMP	New Objective	Justification for Change
1	No changes.				
2					
3					
4					
5					
6					
7					

VII. Information Collection, BMP Evaluation, and Monitoring

D. Preparation for future, long-term monitoring

Complete section D for the fourth annual report only.

Question	Y/N/NA	Comments (50 word limit)	Name of Attachment? Page Number?
Identified outfalls or conveyances for long-term stormwater monitoring? 1. (S8.C.2.a)	Y		
Attach site maps and descriptions. 1b. (S8.C.2.a)	Y		City of Bellevue NPDES Stormwater Monitoring Plan (see attachment at end of report).
Identified at least two questions for SWMP effectiveness monitoring and developed monitoring plans? (S8.C.2.b)	Y		
Attach the proposed questions and monitoring plans for SWMP effectiveness monitoring. (S8.C.2.a.ii)	Y		City of Bellevue NPDES Stormwater Management Program Effectiveness Monitoring Plan (see attachment at end of report).
Monitoring plan developed for each question? (S8.C.1.b.iii)	Y		
3b. Attach a copy of the monitoring plan.	Y		See attachment in 1b.
Identified sites in preparation for future, long-term monitoring? (S8.C.1.a., and S8.C.2.b)	Y		
Attach a summary of the status of site identification for long-term stormwater monitoring; proposed questions for SWMP effectiveness monitoring; and status of developing the SWMP effectiveness monitoring plans.	Y		See attachments in 1b and 2b.

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Identified Barriers to the Use of Low Impact Development (LID) and Measures to Address the Barriers

PERMIT REQUIREMENT

The Phase II Western Washington NPDES Municipal Stormwater Permit requires municipalities, including Bellevue, to provide a summary of identified barriers to the use of low impact development (LID) and measures to address the barriers (Permit condition S9.E.4.a.). This document summarizes the barriers identified by Bellevue staff and measures to be taken to address the barriers. This report categorizes the barriers according to the Ecology guidelines. The types of barriers as defined by Ecology include:

- Regulatory
- Environmental
- Community acceptance and understanding
- Staff and developer training and experience
- Operations and maintenance

INTRODUCTION

Bellevue supports the appropriate use of LID in stormwater management programs. There are many barriers that need to be addressed in order to increase the use of LID (where feasible) in the future. These are described below.

The Washington State Department of Ecology has been developing proposals to better define LID and increase the use of LID by municipalities in the next NPDES municipal stormwater permits. In August 2010, Ecology issued a white paper on some proposals¹. The level of detail provided on the proposals was insufficient to assess their engineering and practical application, perform a cost-benefit analysis or identify potential legal issues.

Bellevue assumes Ecology will develop revised LID requirements and standards (based on their selected approach) and update the 2005 Ecology Stormwater Management Manual *prior to including new LID requirements in the next NPDES permit*. Updating the Manual requires a public review process which will allow municipalities and other stakeholders to assess and comment on the proposed new LID standards and requirements.

There is limited experience nationally and locally with implementation of LID facilities on a large scale over an extended time period. Steps to increase the use of structural LID facilities should proceed in conjunction with additional understanding and knowledge of the long-term implications.

LID BARRIERS AND MEASURES TO ADDRESS BARRIERS

Regulatory

LID definitions – LID and associated requirements have not been clearly defined. This makes implementation difficult and time-consuming. The Department of Ecology (Ecology) is working on further defining LID and associated requirements.

¹ LID Stormwater Standards, August 2010

Identified Barriers to the Use of Low Impact Development (LID) and Measures to Address the Barriers

‘Where feasible’ definition – Ecology is working on defining where LID is feasible per a ruling of the Pollution Control Hearings Board. Ecology completion of the “where feasible” definition is needed.

“Where feasible” process – Because of the lack of formal definition, Ecology has not clearly outlined a process or checklist for determining feasibility of LID practices on a site. In the interim, Bellevue has developed a site suitability assessment process for LID practices and engineering feasibility checklists for several LID practices used in the right-of-way. The City would need to revise these once Ecology guidance is developed.

Saturated Hydraulic Conductivity – Conductivity, also known as infiltration rate, is critical to determine the feasibility of LID. The current methods (PIT, infiltrometer, permeameter and grain size) in the state stormwater manual are highly subjective and give different answers. There are four different sections in the 2005 Ecology Manual and the LID Technical Guidance Manual that explain how to determine the infiltration rate, and they are all different. Ecology needs to provide better guidelines regarding the process for determining the appropriate technique and their use so that more accurate rates can be determined. Alternatively, Bellevue could clarify the process in the storm and surface water engineering standards if funding were available to hire a consulting engineer.

Modeling approach – Ecology’s modeling approach has a fundamental flaw. For individual practices, the Western Washington Hydrologic Model (WWHM) assumes that water that is infiltrated does not return as surface flow or interflow. In the City’s experience, interflow (and surface runoff) is a natural occurrence and can result in drainage problems and flooding. To ignore interflow (and surface runoff) in an area with a high percentage of glacial till is a prescription for disaster. Ecology should use the results of the LID research on interflow currently being conducted by Washington State University extension before it considers developing a LID hydrologic performance standard based on this modeling approach.

Model availability – The free version of Ecology’s model, WWHM, does not include modules for LID; users must buy the Pro version to obtain these modules. Ecology should make the LID modules available in the free version of WWHM in order to support LID implementation.

Allowable credit calculation – Ecology is working to refine LID credits to be used in reducing detention storage volume and for other potential LID incentives. Modeling results show LID practices can be more effective at reducing runoff volumes and durations than the credits that Ecology currently allows. This discourages the use of LID. Ecology should continue its work to refine its model and increase the credits allowed for LID based on research conducted since 2005.

Regulatory complexity – The implementation of on-site stormwater management per Minimum Requirement #5 is too complex for the small residential builder. Ecology should develop more prescriptive standards for single family residential projects that solely trigger on-site stormwater management best management practices (BMPs) to infiltrate, disperse and retain stormwater runoff to maximum extent practicable.

Identified Barriers to the Use of Low Impact Development (LID) and Measures to Address the Barriers

Required modification to existing policies and codes - City policies and codes must be amended in order to implement new LID definitions and requirements. The process required to amend policies and codes is significant. The City will need to do this after Ecology implements new LID definitions and requirements.

Required clarifications to design and construction standards – Ecology and the Puget Sound Partnership are working to refine LID design and construction standards for inclusion in the 2005 Ecology Stormwater Management Manual. After Ecology has updated the Manual, including a public review and comment process on the proposed changes, Bellevue expects Ecology will include adoption of the revised Manual as a requirement in the NPDES municipal stormwater permits. The City will then need to revise its storm and surface water engineering standards, clearing and grading development standards and storm and surface water maintenance standards. The process to revise standards is significant.

New development procedures – Many LID practices require protection of large areas during construction. This requires contractors to plan and construct in new ways. In a plat, a developer subdivides a property and installs only the roads and utility infrastructure, then sells lots to individual home builders. It is unclear how such a developer would meet MR5 and how the minimum requirements then apply to the new owners. The City should clarify procedures for these situations and educate staff and developers.

Basin scale LID requirement – Ecology outlined a new, untested basin scale LID proposal in their August 2010 LID white paper. There are many details that would need to be worked out and “a longer public and political process could be expected to accompany such an effort” [Pollution Control Hearings Board (PCHB) ruling on the Phase I LID appeal regarding applying LID at a basin-scale versus a parcel or subdivision scale].

If Ecology moves forward on a basin-scale LID requirement, then Ecology should consider requiring this proposal as a pilot project condition for Phase I permits only. Phase II municipalities, including Bellevue, could be subject to this requirement in a future permit depending on the outcome of the Phase I basin-scale pilot projects. This approach would recognize the differences between Phase I and II permits, untested nature of the proposal, need to develop implementation details before application on a wide-scale basis, and the PCHB *Phase I* LID ruling that:

“Little evidence was presented as to the elements and cost of basin or watershed planning that would be necessary to implement LID at this level...Given these several factors, the Board concludes that a permit condition requiring municipalities to implement LID at a basin or watershed level is not, at this time, reasonable or practicable. This is not to say that no steps can or should be taken at this time. Ecology has identified the particular importance of basin planning in areas which are relatively undeveloped where new development is occurring. The Board concludes that city and county permittees should identify such areas where potential basin planning would assist in reducing harmful impacts of stormwater water discharges upon aquatic resources.”

Identified Barriers to the Use of Low Impact Development (LID) and Measures to Address the Barriers

Land use controls – Ecology’s proposal in its August 2010 LID white paper suggests that the next NPDES permit will require municipalities to adopt LID measures as local land use controls despite a conflict in its authority to do so under the Clean Water Act. Identified barriers include potential conflicts between existing statutory requirements (like the Growth Management Act) and Ecology’s proposed LID mandates. Additional barriers to this approach include lack of clearly defined guidelines and available resources for municipal adoption and implementation of said controls.

Enforcement dilemma on private property – The City does not have a process or adequate resources to assure LID stormwater facilities constructed on individual single family residential lots (versus as part of a subdivision development), will not be modified and/or eliminated over time. Ecology should provide guidelines so that the region has consistent enforcement, likely on a complaint basis, for LID facilities on individual single family lots. The City should update applicable codes and enforcement protocols to prevent LID stormwater facilities on individual single family residential lots from being modified and/or eliminated over time.

Environmental

Poorly draining soils – Based on geotechnical investigations, data and maps, many areas of the City have soils inappropriate to implementation of LID infiltration options, limiting their widespread application. Geotechnical engineering is expensive for small residential lots. Ecology should allow use of a map of such areas to simplify the feasibility analysis process for individual single-family residential lots.

Moderate, steep, or unstable slopes – The City has areas having steep slopes that may be inappropriate to certain infiltration and flow attenuation LID options, limiting their widespread application. Ecology should allow use of a map of such areas to simplify the feasibility analysis process for individual single family residential lots.

High groundwater and ground/surface interflow – Areas of the City have high groundwater or ground/surface interflow that may be inappropriate for certain infiltration, flow attenuation, and flow reduction LID options. This is an area of high uncertainty and lacks significant data or resources to perform an analysis. The cost of this is borne by each applicant. Continue to evaluate on a site-by-site basis by each applicant.

Impacts to adjacent and down slope sites – Some infiltration and flow attenuation options have the potential to negatively impact adjacent or down slope areas. The case law on groundwater interflow is unknown. Ecology should research this issue and provide technical guidance to the permittees.

Reliability – Certain LID techniques have proven to have failure and other performance issues over time. The state should monitor LID performance over time. The City should identify and prepare to address potential reliability issues in implementing LID, particularly for public projects.

Groundwater Contamination – Potential for LID techniques, especially infiltration, to contribute to groundwater contamination is being studied. These studies are identifying

Identified Barriers to the Use of Low Impact Development (LID) and Measures to Address the Barriers

factors in LID planning, design and maintenance that influence the risk of groundwater contamination. Ecology (and others) should monitor LID uses for potential groundwater contamination impacts and to identify LID planning, design and maintenance factors that minimize this risk.

Community Acceptance and Understanding

Performance, reliability, life cycle cost, and unintended impacts – Early stormwater management efforts and some more recent efforts using LID techniques (such as infiltration) achieved limited success. Perceptions exist that it may be difficult to predict LID technique performance, that ground water quality may be negatively affected, and that LID facilities may be susceptible to failure and have relatively high replacement costs over time. The state should monitor LID performance over time and take a cautious approach to implementing LID until there is more experience and a better understanding of factors that support or prevent the successful use of LID. Ecology should communicate the results of this research to the permittees and adapt LID standards as necessary.

Perceptions of compromised public safety and property damage – Certain LID techniques are perceived by some as potentially compromising public safety (such as by transportation and fire agencies). Concerns include, but are not limited to, reduced emergency vehicle access/response (by using “skinny” streets), exacerbating landslide potential and causing water damage on adjacent properties (by using infiltration and dispersion), and standing water in rain gardens creating mosquito breeding areas. For example, see the article and blog about rain gardens constructed in a Seattle neighborhood in 2010 by Seattle Public Utilities: [http://www.myballard.com/2011/02/03/city-to-work-with-residents-on-roadside-raingardens/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed:+myballard+\(MyBallard\)](http://www.myballard.com/2011/02/03/city-to-work-with-residents-on-roadside-raingardens/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed:+myballard+(MyBallard)) To educate internally, Bellevue has sent many staff to the Puget Sound Partnership LID training workshops. Ecology and the Puget Sound Partnership should mount a public awareness campaign to inform the public about appropriate use of LID techniques.

Expectation management – Some members of the building industry are under the misimpression that LID can be used everywhere and in all cases to eliminate or drastically reduce other on-site stormwater management facility costs. Ecology and the Puget Sound Partnership should mount a public awareness campaign to inform the public about appropriate use of and reasonable expectations for results from LID techniques.

Staff and/or Developer Training and Experience

Experienced designer and contractor availability – While greater numbers of experienced LID system designers and contractors will become available over time, there are currently few fully trained, knowledgeable and experienced individuals available for system design, construction and maintenance. Ecology should continue to provide training to more quickly develop the pool of available LID designers and contractors. The City could also rely on Seattle’s growing pool of trained, certified designers and contractors.

Identified Barriers to the Use of Low Impact Development (LID) and Measures to Address the Barriers

Staff expertise – Many LID practices are new and complex, and require knowledge or expertise that review, planning and engineering staff do not have (e.g., plant biology and hydrogeology). Ecology should continue offering trainings in LID, and the City should continue to send staff to appropriate trainings.

Operations & Maintenance

Emergency response requirements – Local emergency response measures (e.g. firefighting activities) may potentially impact LID systems. Failure of LID systems that result in flooding or erosion may also require emergency response. The City must develop a strategy for addressing emergency response needs and limiting liability as a result of LID implementation.

Operation and maintenance standards – There is limited, general information available on LID operation and maintenance. Bellevue worked with a consultant to create some LID maintenance standards to use as a starting point for inspecting LID facility performance and identifying maintenance requirements. The maintenance standards are available at http://www.bellevuewa.gov/pdf/Utilities/Utilities_Storm_Maintenance_Standards_Feb_2010.pdf The state should be funding and monitoring long term operation, maintenance and performance studies of LID techniques.

Maintenance costs – Long-term maintenance costs of most LID techniques are unknown, since many have been used for less than 10 years. The state, as noted in O&M Standards comment above, should be funding and monitoring long term operation, maintenance and performance studies of LID techniques. Particularly where LID techniques are used in City projects, the City should track and prepare for addressing the maintenance costs.

Life cycle costs –LID life cycle costs are unknown as compared to more traditional stormwater management techniques. Ecology should provide conservative estimates of life cycle costs to the permittees. The City could then use these estimates to plan for potential increased life cycle costs when implementing LID measures on City projects.

Low Impact Development Practices, Goals, Planned Actions and Timelines

PERMIT REQUIREMENT

The Phase II Western Washington NPDES Municipal Stormwater Permit requires municipalities, including Bellevue, to provide a Low Impact Development (LID) report written individually or in cooperation with other permittees (Permit condition S9.E.4.b). This report is solely for the City. The permit requires the report to address four parts, but does not require the responses to constitute commitments or requirements. The four parts include:

- LID practices currently available and reasonable to implement soon;
- Potential or planned non-structural actions and LID techniques;
- Goals and metrics to identify, promote, and measure LID use; and
- Potential or planned schedules to require or implement the non-structural and LID techniques on a broader scale in the future.

INTRODUCTION

Bellevue supports the appropriate use of LID in stormwater management programs. There is limited experience nationally and locally with implementation of LID facilities on a large scale over an extended time period. Steps to increase the use of structural LID facilities should proceed in conjunction with additional understanding and knowledge of the long-term implications.

LID PRACTICES CURRENTLY AVAILABLE AND REASONABLE TO IMPLEMENT SOON

LID practices defined by the permit include non-structural actions and structural LID techniques¹. The following is a list of “LID practices” currently allowed or required by Bellevue city codes and engineering standards. The following LID practices are applicable as long as they are not constrained due to engineering limitations or other site limitations as noted in the applicable standards and/or codes (in other word...where feasible).

Non-structural actions

The following non-structural practices are required on all sites per Bellevue City Codes:

- Limitations on the amount of impervious area allowed (Land Use Code 20.20.460);
- Steep slope, floodplain, stream, and wetland buffers and Native Growth Protection Areas per the Critical Areas Overlay (LUC 20.25H and related codes);
- Significant tree retention and replacement (LUC 20.20.900);
- Shoreline requirements per the Shoreline Master Program (LUC 20.25E); and
- Construction per Clearing and Grading Code and Development Standards (BCC 23.76)

¹ Low Impact Development is defined in the Permit’s definitions and acronyms section as “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.”

Low Impact Development Practices, Goals, Planned Actions and Timelines

The following non-structural practice is required under the conservation subdivision code (LUC 20.45B.055):

- Cluster redevelopment (minimizes impervious areas and preserves vegetation).

The following documents and procedures have been put in place to assist in the implementation of LID practices:

- Transportation Maintenance and Capital Improvement Project Stormwater Management Guidelines (latest draft December 2010) – provides guidance for implementing LID and other storm requirements for roads projects.
- Storm and Surface Water Maintenance Standards, published February 2010, includes detailed maintenance procedures and schedules for Natural Drainage Practices (LID practices).
- 2010 Storm Requirements Worksheet – informal worksheet for developers and builders to determine which minimum requirements apply to their project.
- Natural Drainage Practices (LID) Guidelines for Single Family Residential Construction (latest draft February 2011) – provides guidance for implementing amended soil, post construction soil management and pervious pavement for single family residential applications.
- Natural Drainage Practices (LID) Development Services handouts out on rain gardens, pervious pavement, vegetated roofs, rain recycling and amended soils, published April 2010, includes information on each technique including benefits, best uses, limitations, design features and maintenance.
- City Comprehensive Plan – contains a policy-level discussion of LID and specific policies promoting use of LID (EN-27, EN-32, and EN-32).

The following “non-structural” actions are required when projects trigger equal to or greater than 2,000 square feet of new, replaced, or new plus replaced impervious surface per the storm and surface water engineering standards:

1. Smart site design
2. Site analysis process
3. Preserve native vegetation to the maximum extent practicable

Structural LID techniques

Information on the design, applicability and limitations of the structural LID techniques listed below are contained in the Bellevue storm and surface water engineering standards. The following LID techniques are required where feasible in Bellevue:

1. Amended soils
2. Sheet flow dispersion
3. Concentrated flow dispersion

Low Impact Development Practices, Goals, Planned Actions and Timelines

4. Roof downspout dispersion
 - a. Splash blocks
5. Roof downspout infiltration
 - a. Infiltration trench
 - b. Infiltration drywell
 - c. Perforated stub-out connection

The following LID techniques are allowed and encouraged where feasible in Bellevue:

1. Pop-up emitters for roof downspout dispersion
2. Rain recycling
3. Minimal excavation foundations
4. Reverse slope sidewalks
5. Bioretention (e.g., rain gardens)
6. Pervious pavement
7. Vegetated roofs
8. Runoff control credit for trees retained or planted

POTENTIAL OR PLANNED NON-STRUCTURAL ACTIONS AND LID TECHNIQUES

Non-structural actions can be referred to as development principles. These are measures authorized by development codes or reflected in comprehensive plans or other land use policies that advance LID implementation. LID techniques are small-scale engineered facilities and devices or installations that are built for the purpose of mimicking pre-development hydrologic functions. This section is subdivided into planned actions and potential actions.

Planned non-structural actions

The following planned actions are dependent on Washington State Department of Ecology actions:

1. Bellevue will review and comment on Ecology's revised Stormwater Management Manual.
2. Staff training on new LID requirements resulting from the new Ecology stormwater management manual and NPDES municipal stormwater permit and related updates to City codes, standards, and guidelines.
3. Update the Storm and Surface Water Utility and Clearing and Grading Codes - it is expected that the codes will need to be updated to meet the requirements of the new NPDES permit.
4. Update the Storm and Surface Water Engineering and Clearing and Grading Development Standards – the storm standards are updated every year in January, if necessary. It is expected that both standards will need revisions to comply with new Ecology stormwater management manual and NPDES permit requirements.

Low Impact Development Practices, Goals, Planned Actions and Timelines

The following planned action depends on available city resources.

5. GIS Analysis- Feasibility of infiltration in Bellevue. Using updated soils information from Geomapping Northwest, an analysis of feasible areas conforming to the engineering standards will be made.

Implementation of the following planned action depends on economic conditions and redevelopment activities:

6. Implementing LID practices, where feasible, in redevelopment that occurs in the Bel-Red corridor. The City recently changed zoning in an area known as the Bel-Red corridor to encourage and incentivize the use of LID practices where feasible with redevelopment.

Planned structural LID techniques

1. Annual review of Ecology approved proprietary structural LID techniques for use in public capital improvement projects.

Potential non-structural actions

The following non-structural actions are potentially applicable in Bellevue in the future but would require thorough analysis before adoption by the City.:

1. Cluster redevelopment including smaller lot sizes, larger open space reserves, reduced impervious surface allowances outside of critical overlay district;
2. Shared driveways or shared and reduced parking requirements- could reduce impervious surface area;
3. Roadway geometric changes – would require considerable input from the transportation, planning and public safety departments; and
4. Traffic calming through the use of chicanes or curb extensions- would require extensive public awareness campaign to alleviate neighborhood concerns

Potential structural LID techniques

The following LID techniques are potentially applicable in Bellevue in the future but would require thorough analysis before adoption by the City as required standards:

1. Lot stub disconnection
2. Analyze the performance of structural LID techniques over time using data from operations and maintenance inspections of private and public storm drainage systems and make changes to standards based on the results. The structural LID techniques targeted for study would be those used to meet flow control and water quality treatment development stormwater requirements.

Low Impact Development Practices, Goals, Planned Actions and Timelines

GOALS AND METRICS TO IDENTIFY, PROMOTE, AND MEASURE LID USE

This section of the report is intended to provide indicators of progress by Bellevue in implementing the LID techniques, practices, and actions identified in the previous sections. Until Bellevue and the region gain more experience, Bellevue proposes to track the number of each LID technique installed to meet flow control and water quality treatment development stormwater requirements (e.g. minimum requirements #6 and #7 of the 2005 Ecology Stormwater Management Manual) on city-owned properties and, if resources allow, analyze the performance of the structural LID techniques over time. Procedures for tracking structural LID techniques installed on City property are in the process of being developed. Procedures and resources for analyzing data in Bellevue have not been developed nor have resources been available to do so at this time. If resources allow, the monitoring will be extended to include LID techniques installed on private property.

POTENTIAL OR PLANNED SCHEDULES TO REQUIRE OR IMPLEMENT THE NON-STRUCTURAL AND STRUCTURAL LID TECHNIQUES ON A BROADER SCALE IN THE FUTURE

This section of the report is intended to describe a schedule for implementing potential or planned actions identified in previous sections, dependent on available City resources. The following theoretical and potential schedule is intended to describe a sequence of actions based upon Bellevue's current organizational structure and existing processes to implement code and/or standards revisions. This schedule is purely theoretical at this time and subject to future modifications based on available resources.

All potential non-structural and structural LID technique actions would begin after the next NPDES permit is issued. For each action, the City would determine feasibility. For actions determined feasible, the City would then analyze the impacts to various departments (planning and community development, transportation, parks, police, fire, utilities, city manager, design and development department); modify codes (land use, utilities, transportation); conduct citizen hearings; and complete an environmental review. Each action will take a different level of effort and length of time, as follows:

Potential non-structural actions

1. Cluster redevelopment- This technique will require a minimum of three to five years to implement.
2. Shared driveways and parking lots- If authorized, the study would take six months to 1 year to complete. In the past as part of transportation review of development proposals, the city has had limited success in reducing driveway curb cuts.
3. Roadway geometric changes- This technique would require a minimum of five years to implement.
4. Curb extensions or chicanes for traffic calming- This technique will require a minimum of three years to implement.

Low Impact Development Practices, Goals, Planned Actions and Timelines

Potential structural LID technique actions

1. Lot stub disconnection- This technique will require a minimum of three years to implement.
2. Analyze the performance of structural LID techniques over time as part of ongoing operations and maintenance inspections. This potential action would require a minimum of 10 years to implement due to the need for long-term performance information on structural LID techniques.

Planned non-structural actions

The following actions will likely begin after the next NPDES permit is issued, or as indicated, depending on available city resources:

1. Bellevue will review and comment on the updated Ecology stormwater management manual when Ecology issues the manual for the public review process.
2. Staff training on updated LID requirements based on the next permit, updated LID technical guidance manual, and related changes to codes, standards and guidelines.
3. Storm and surface water utility and clearing and grading codes update – the codes will be updated according to the next NPDES permit requirements and schedule.
4. Storm and surface water engineering and clearing and grading development standards update - every year in January, if necessary, the storm standards are updated. It can be expected that both standards will need revisions for the new NPDES permit and LID technical guidance manual, and these are planned to be updated according to the new NPDES permit requirements and schedule.
5. GIS Analysis - feasibility of infiltration in Bellevue. Using updated soils information from Geomapping Northwest, an analysis of feasible areas conforming to the engineering standards will be made in 2012-2013.

Planned LID techniques

1. Review of Ecology approved proprietary structural LID techniques for use in public capital improvement projects will be completed annually or as approved BMPs are brought to the attention of the Utilities Department.

City of Bellevue NPDES Stormwater Monitoring Plan

Prepared for the City of Bellevue's March 31, 2011, NPDES Municipal Stormwater Permit Annual Report submittal to the Washington State Department of Ecology

Section VIID of the NPDES 2010 Annual Compliance Report Attachment

Section 1

Monitoring Overview

This section provides a brief overview of the monitoring requirements that are set forth in the Washington State Phase II Municipal Stormwater Permit for Western Washington (Phase II permit).

1.1 Current Permit Monitoring Requirements

The Phase II permit regulates stormwater discharges for small municipal separate storm sewer systems (MS4s) as established in Code of Federal Regulations (CFR) Title 40, Part 122.26. The Phase II permit, issued in 2007 and modified in 2009, includes requirements for permittees to prepare to conduct a monitoring program in future permits.

The Phase II Monitoring Program described in Section S8.C includes the following two types of monitoring:

- Stormwater Monitoring (S8.C.1.a)
- Stormwater Management Program (SWMP) Effectiveness Monitoring (S8.C.1.b).

Stormwater Monitoring (S8.C.1.a) requires permittees to identify sites suitable for monitoring stormwater discharges based on jurisdictional size and land use types, and on known water quality problems and/or targeted areas of interest for future monitoring.

SWMP Effectiveness Monitoring (S8.C.1.b) requires permittees to identify questions that monitoring may answer to determine the effectiveness of specific components of their SWMPs. The permittee must develop a problem statement/description, hypothesis, specific parameters or attributes to monitor and expected modifications resulting from monitoring for at least two effectiveness questions.

This document covers stormwater monitoring (S8.C.1.a); effectiveness monitoring (S8.C.1.b) will be described in a separate monitoring plan.

1.2 Future Permit Monitoring Requirements

This monitoring plan was prepared to meet the requirements of the current (2007) Phase II permit, as noted above. However, the next permit, which is scheduled to be issued in 2012, may contain monitoring requirements substantially different from those envisioned in the current permit. Thus, this monitoring plan should be regarded as tentative and subject to change based on the next Phase II permit.

In 2008, the Department of Ecology (Ecology) convened the Puget Sound Stormwater Workgroup (SWG) to develop recommendations regarding a comprehensive, sustainable stormwater monitoring strategy for Puget Sound, as well as monitoring requirements for the next municipal stormwater National Pollutant Discharge Elimination System (NPDES) permits. The SWG members represent caucuses of local municipalities; state and federal agencies; environmental and business organizations; tribes; and agriculture.

The SWG submitted the comprehensive strategy in July 2010 to Ecology in a document titled *2010 Stormwater Monitoring and Assessment Strategy for the Puget Sound Region*. Based on this strategy, the SWG submitted monitoring recommendations for the next NPDES Phase I and II permits

on October 29, 2010, in a document titled *Recommendations for Municipal Stormwater Permit Monitoring*.

The SWG recommends that Ecology designate an independent entity to administer the stormwater-related monitoring and assessment activities in the next municipal stormwater permits. This recommendation is called the “pay-in” option because permittees and others served by the independent entity would fund those efforts. The SWG recommended receiving water monitoring rather than the outfall monitoring described in the current permit. Moreover, the SWG recommended that the regional entity (rather than each permittee) administer the program effectiveness monitoring and focus on questions of regional significance.

More information on the SWG is available at

<http://www.ecy.wa.gov/programs/wq/psmonitoring/swworkgroup.html>.

Section 2

Suitable Monitoring Sites

The Phase II permit states that permittees shall select outfalls or conveyances based on known water quality problems and/or targeted areas of interest for future monitoring. Ecology's May 2010 *Monitoring and Reporting Guidance for Phase II Municipal Stormwater Permits* (Publication 10-10-030) was also used to select outfalls or conveyances.

The NPDES permit requires permittees to document the following information:

- why sites were selected
- possible site constraints for installation of and access to monitoring equipment
- brief description of the contributing drainage basin including size in acreage, dominant land use, and other contributing land uses
- any water quality concerns (or interests) in the receiving water of each selected outfall or conveyance.

The City used the following ranking/criteria to determine the monitoring sites:

- predominant land use
- previous water quality data collected
- water quality concerns
- aquatic life beneficial uses.

Bellevue has a population of 109,569, according to the 2000 census. Based on the thresholds set in Section S8.C.1.a, the City must select three outfalls where stormwater monitoring can be conducted and whose sub-basin represents the following land uses:

- commercial: includes multifamily residential
- high-density residential (HDR): four dwelling units per acre or greater or locally defined high-density
- industrial: not predominated by one facility with few operators.

The three chosen sites are described in detail below.

Site 1 (Commercial): Crossroads Outfall at Kelsey Creek

Location: See Map 1.

Brief description: The monitoring site is located at the 54-inch concrete outfall pipe (MH 76-332274) from Crossroads in the Kelsey Creek regional detention facility at NE 8th Street (DMP 133).

Reason for selection: The City used its ranking/criteria as follows to choose the site:

1. The predominant land use is commercial.
2. The City has an extensive monitoring history at this site, including water quality, Benthic Index of Biotic Integrity (BIBI), temperature and outfall reconnaissance inventory (ORI) data. Selecting this site allows the City to build upon past or current monitoring information (such as identifying trends and/or statistically significant changes) and increases the likelihood that the monitoring sites will be accessible and that power and other monitoring station needs are met.
3. Kelsey Creek has several water quality problems, which are discussed in more detail below.

- This site has high beneficial uses for fisheries because Kelsey Creek is habitat for salmonids, including Chinook, sockeye, and Coho salmon and cutthroat trout. Kelsey Creek is the most important stream in Bellevue for salmon.

Constraints: The commercial monitoring station will require time composites rather than flow-weighted composite sampling because of backwater issues at the outfall. The City would prefer to move the monitoring site upstream away from the outfall, but this is not possible because the upstream sites are on inaccessible private property.

Brief description of contributing drainage basin: The basin area is approximately 299 acres. The predominant land use (Table 1) is commercial, which includes multifamily residential. Table 1 also shows the other contributing land uses.

Table 1. Commercial Outfall Sampling Station	
Land use	% of sub-basin
Commercial	68.3%
Single Family Residential	15.9%
Unknown	6.4%
Open Space/ Parks	4.2%
Institution/Government	2.8%
Industrial	2.4%

Water quality concerns or interests: Kelsey Creek is habitat for salmonids, including Chinook, sockeye, and Coho salmon and cutthroat trout. Kelsey Creek is the most important stream in Bellevue for salmon because it provides critical salmonid habitat. The City has been collecting monitoring data in the Kelsey Creek basin and wants to be able to build on this existing database. Kelsey Creek is listed on Ecology’s 303d list (list of surface waters impaired by pollutants) for fecal coliform and assessed as a ‘waters of concern’ for dissolved oxygen.

Site 2 (High-Density Residential): Lakemont Facility Outfall at Lewis Creek

Location: See Map 2.

Brief description: This monitoring site (CB 95-322238) would be located at the 24-inch concrete outfall after the water has been treated and before it drains to Lewis Creek. This outfall collects runoff from the Lakemont development, which has a treatment train consisting of a wet vault, sand filter, and extended dry detention facility that provides water quality and quantity control.

Reason for selection: The City used its ranking/criteria as follows to determine the site:

- The predominant land use is high-density residential.
- The City has an extensive monitoring history at this site, including BIBI, metals, nutrients, and temperature data. Selecting this site allows the City to build upon past or current monitoring information (such as identifying trends and/or statistically significant changes) and increases the likelihood that the monitoring sites will be accessible and that power and other monitoring station needs are met.
- Lewis Creek has several water quality problems, which are discussed in more detail below.

- This site has high beneficial uses for fisheries because Lewis Creek is habitat for a population of late-run kokanee, petitioned for protection under the Endangered Species Act. Migratory cutthroat trout and Coho and sockeye salmon have also been observed on the reach downstream of Interstate 90.

Constraints: This site was previously instrumented for flow-weighted composite water quality sampling so there are no known constraints.

Drainage basin: The basin area is approximately 229 acres. The predominant land use (Table 2) is single family residential. The single family residential land use in this basin is considered high-density. Table 2 also shows the other contributing land uses.

Land use	% of sub-basin
Single Family Residential	55.9%
Commercial	14.0%
Unknown	12.9%
Open Space/ Park	10.6%
Vacant	6.6%

Water quality concerns or interests: Lewis Creek is habitat for a population of late-run kokanee, petitioned for protection under the Endangered Species Act. Migratory cutthroat trout and Coho and sockeye salmon have also been observed on the reach north of Interstate 90. Lewis Creek also drains to Lake Sammamish, a lake with nutrient (phosphorus) concerns. The City has been collecting monitoring data at the Lakemont facility, including the outlet, and wants to be able to build on this existing database. Lewis Creek is listed on Ecology’s 303d list (list of surface waters impaired by pollutants) for fecal coliform, temperature, and DO and assessed as a ‘waters of concern’ for mercury and pH.

Site 3 (Industrial): Goff Creek

Location: See Map 3.

Brief description: This monitoring site (CB 81-320816) would be located in a 36-inch corrugated metal pipe (approximately 200 feet east of the intersection of NE Bel-Red Road and 132nd Avenue NE) which outfalls to Goff Creek.

Reason for selection: The City used its ranking/criteria to determine the site.

- The predominant land use is industrial.
- The City does not have existing monitoring data for this site.
- Goff Creek does not have known water quality problems.
- Cutthroat trout are known to inhabit the entire length of Goff Creek. Chinook, Coho, and sockeye salmon have been documented in open-channel areas below Bel-Red Road.

There are only a few small existing areas of industrial land uses in Bellevue and most of these are predominated by just one facility. This site contains the highest concentration of industrial land uses near an outfall in Bellevue.

Constraints: The industrial monitoring station will require time composites rather than flow-weighted composite sampling because of a backwater issue. The City would prefer to move the monitoring site upstream away from the outfall.

Drainage basin: The basin area is approximately 7 acres. The predominant land use (Table 3) is industrial, with the rest of the basin being commercial.

Land Use	% of sub-basin
Industrial	58.5%
Commercial	41.5%

Water quality concerns or interests: There are no known water quality concerns.

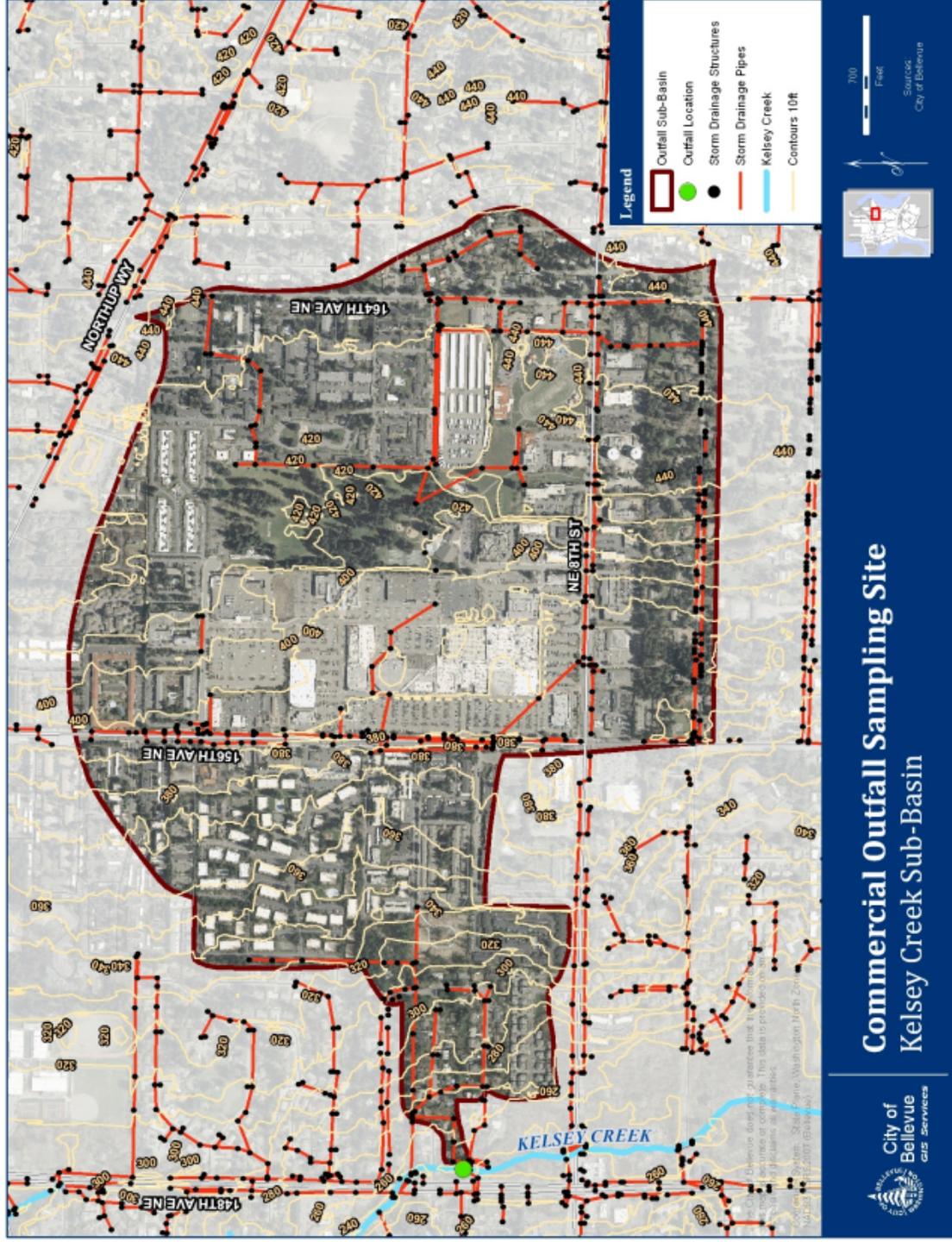
Limitations

Due to the current work of Ecology's Puget Sound Stormwater Work Group (SWG), it is anticipated that the permit requirements will significantly change in the next permit cycle. This plan is intended to meet the requirements of the existing permit (dated February 2007, modified June 2009), but the City may modify or change this plan based on new permit requirements.

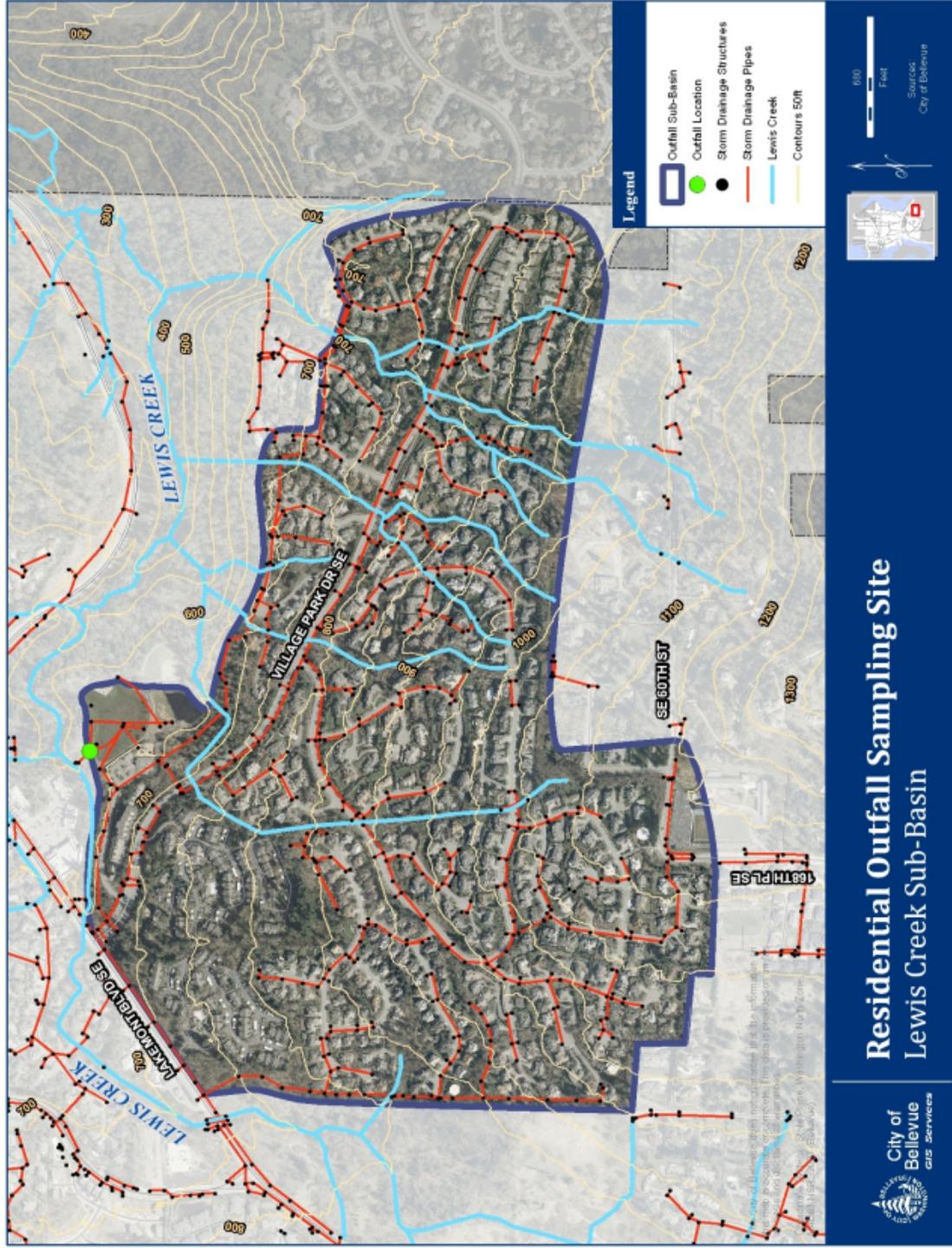
References

Information used to identify sites for consideration included:

- Bellevue Urban Runoff Program Report (Pitt and Bissonnette, 1983)
- Characterization and Source Control of Urban Stormwater Quality: Volume 1 Technical Report, City of Bellevue, Washington, 1995
- Ecology's 2008 Water Quality Assessment:
[http://www.bellevuewa.gov/pdf/Utilities/2008_Water_Quality_Assessment_305\(b\).pdf](http://www.bellevuewa.gov/pdf/Utilities/2008_Water_Quality_Assessment_305(b).pdf)
- Fish Distribution and Storm Drainage Basins map:
http://www.bellevuewa.gov/pdf/Utilities/FishDistribDrainBasins_a2.pdf
- Lakemont Storm Water Treatment Facility Monitoring Program, City of Bellevue and Shapiro Associates, Inc. 1999
- Pitt, R.E., and P. Bissonnette, Bellevue Urban Runoff Program, Summary Report, Pb84 237213, Water Planning Division, U.S. EPA, Washington, D.C., 1983.
- Puget Sound Stream Benthos: Monitoring Status and Data Management; Colton, J., D. Henderson, D. Lester, and J. Simmonds; King County Water and Land Resources Division, Seattle, Washington, 2009: http://pugetsoundstreambenthos.org/Docs/Puget_Sound_Benthos_Aug_7_2009.pdf
- Puget Sound Stream Benthos Page Benthic macroinvertebrate data (database and maps) for many agencies around the Puget Sound, City of Seattle, King County, Pierce County, and Snohomish County, 2010: <http://pugetsoundstreambenthos.org/default.aspx>
- Stream Typing Inventory Final Report:
http://www.bellevuewa.gov/pdf/Utilities/Streamtyping_Report.pdf
- Stream Benthic Index of Biotic Integrity Report 1998–2007:
http://www.bellevuewa.gov/pdf/Utilities/BELLEVEUE_Bugs_FINAL08_Summary.pdf
- Zoning maps: GIS data

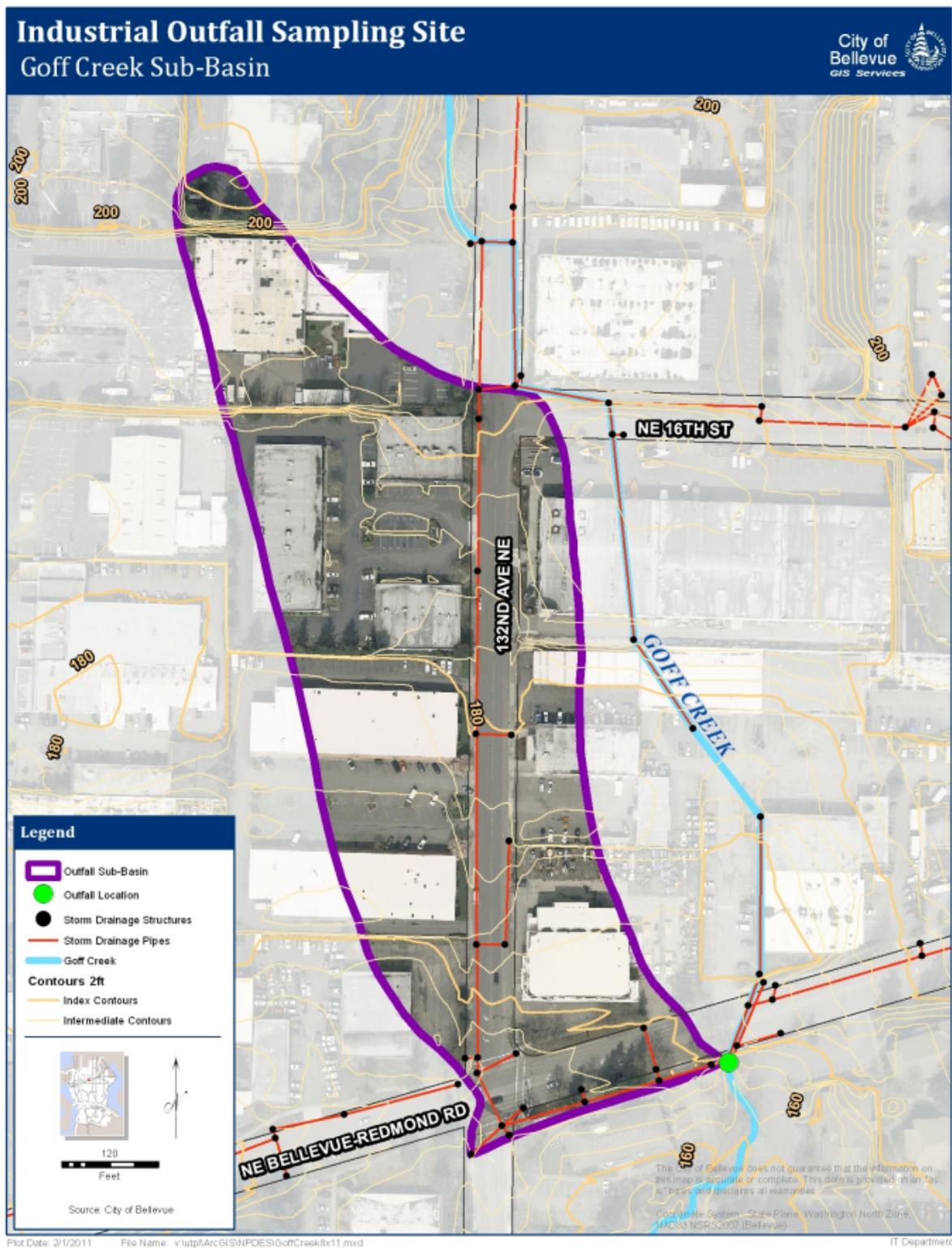


Map 1. Commercial Outfall Sampling Site



IT Department

Map 2. HDR Outfall Sampling Site



Map 3. Industrial Outfall Sampling Site

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City of Bellevue NPDES Stormwater Management Program Effectiveness Monitoring Plan

Prepared for the City of Bellevue's March 31, 2011 NPDES Municipal
Stormwater Permit Annual Report submittal to the Washington State
Department of Ecology

Section VIID of the NPDES 2010 Annual Compliance Report Attachment

Section 1

Monitoring Overview

This section provides a brief overview of the monitoring requirements that are set forth in the Washington State Phase II Municipal Stormwater Permits for western Washington (Phase II permit).

1.1 Current Permit Monitoring Requirements

The Phase II permit regulates stormwater discharges for small municipal separate storm sewer systems (MS4s) as established in Code of Federal Regulations (CFR) Title 40, part 122.26. The Phase II permit, issued in 2007 and modified in 2009, includes requirements for permittees to prepare to conduct a monitoring program in future permits.

The Phase II Monitoring Program described in Section S8.C includes the following two types of monitoring:

- Stormwater Monitoring (S8.C.1.a)
- Stormwater Management Program (SWMP) Effectiveness Monitoring (S8.C.1.b).

Stormwater Monitoring (S8.C.1.a) requires permittees to identify sites suitable for monitoring stormwater discharges based on jurisdictional size and land use types, and on known water quality problems and/or targeted areas of interest for future monitoring.

SWMP Effectiveness Monitoring (S8.C.1.b) requires permittees to identify questions that monitoring may answer to determine the effectiveness of specific components of their SWMPs. The permittee must develop a problem statement/description, hypothesis, specific parameters or attributes to monitor and expected modifications resulting from monitoring for at least two effectiveness questions.

This document covers effectiveness monitoring (S8.C.1.b); stormwater monitoring (S8.C.1.a) will be described in a separate monitoring plan.

1.2 Future Permit Monitoring Requirements

This monitoring plan was prepared to meet the requirements of the current (2007) Phase II permit, as noted above. However, the next permit, which is scheduled to be issued in 2012, may contain monitoring requirements substantially different from those envisioned in the current permit. Thus, this monitoring plan should be regarded as tentative and subject to change based on the next Phase II permit.

In 2008, the Department of Ecology (Ecology) convened the Puget Sound Stormwater Workgroup (SWG) to develop recommendations regarding a comprehensive, sustainable stormwater monitoring strategy for Puget Sound, as well as monitoring requirements for the next municipal stormwater National Pollutant Discharge Elimination System (NPDES) permits. The SWG members represent caucuses of local municipalities; state and federal agencies; environmental and business organizations; tribes; and agriculture.

The SWG submitted the comprehensive strategy in July 2010 to Ecology in a document titled *2010 Stormwater Monitoring and Assessment Strategy for the Puget Sound Region*. Based on this strategy,

the SWG submitted monitoring recommendations for the next NPDES Phase I and II permits on October 29, 2010, in a document titled *Recommendations for Municipal Stormwater Permit Monitoring*.

The SWG recommends that Ecology designate an independent entity to administer the stormwater-related monitoring and assessment activities in the next municipal stormwater permits. This recommendation is called the “pay-in” option because permittees and others served by the independent entity would fund those efforts. The SWG recommended receiving water monitoring rather than the outfall monitoring described in the current permit. Moreover, the SWG recommended that the regional entity (rather than each permittee) administer the program effectiveness monitoring and focus on questions of regional significance. The City believes that both proposed questions would be good candidates for the regional effectiveness studies that may be required in the next Permit.

More information on the SWG is available at

<http://www.ecy.wa.gov/programs/wq/psmonitoring/swworkgroup.html>.

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Section 2

Targeted Stormwater Program Effectiveness Questions

For the two questions, the Permittee shall develop a monitoring plan containing the following elements:

- A statement of the question, an explanation of how and why the issue is significant to the Permittee and a discussion of whether and how the results of the monitoring may be significant to other MS4s.
- A specific hypothesis about the issue or management actions that will be tested.
- Specific parameters or attributes to be measured.
- Expected modifications to stormwater management actions depending on the outcome of hypothesis testing.

Question 1- Do catch basins in non-arterial streets require less frequent inspection and cleaning than catch basins in arterials?

Problem Statement/Description: Catch basins remove large particles and pollutants associated with fine particulate that could otherwise reach down-gradient stormwater facilities or receiving water bodies. Periodic cleaning is important because trapping efficiency declines as a catch basin exceeds certain sediment levels, and trapped material can be re-suspended during high flow events.

The current Phase II permit requires catch basin inspection (and cleaning if necessary) once during the permit cycle (five years). It is often more efficient to inspect and clean catch basins at the same time on a specific circuit due to logistical factors such as traffic control. The City must devote substantial resources to meet this requirement. Other MS4 managers are likely having similar challenges.

Traffic levels could affect catch basin sediment accumulation rates and cleaning needs. A recent study conducted for the Oregon Association of Clean Water Agencies (ACWA) found significantly higher pollutant concentrations at sampling locations with average daily traffic (ADT) values >1,000. The ACWA study indicated that ADT class was a stronger predictor of concentrations than land use (Kennedy Jenks Consultants 2009). Freeways had the highest median total suspended solids concentrations of the land use categories included in the National Stormwater Quality Database (Pitt et al. 2004).

Hypothesis: Non arterial streets (streets with ADT equal to or less than 1,000) require less frequent cleaning than arterials (streets with ADT greater than 1,000).

Specific parameters or attributes: To test this hypothesis, the City would identify two outfall pipes with similar drainage area characteristics (e.g., slopes, storm drainage systems, and tributary area) and stormwater BMPs, but with different ADTs. One outfall pipe should serve an area having ADT >1,000 and the other ADT ≤ 1,000. The City would install bedload samplers at both outfalls. During the next two years, staff would periodically visit the bedload samplers to measure the mass of trapped sediment and calculate sediment accumulation rates. These data should help the City estimate baseline sediment accumulation rates in each area, and make it easier to discern the effects of sweeping. The City would then clean the catch basins in both catchment areas. After catch basin cleaning, the City would monitor sediment accumulation rates at the outfall pipes for another two years. Based on the previous Bellevue

Urban Runoff Program (BURP) study, monitoring may need to continue past this four year period into the next permit term to get the full benefits of the study,

Comparing the pre-cleaning and post-cleaning sediment accumulation rates would help the City discern the effects of catch basin cleaning on net bedload export from each catchment. Comparing the results for the low ADT and high ADT outfalls would help the City evaluate whether adjusting the cleaning frequency appears warranted.

Before monitoring the City would prepare a more detailed monitoring plan prescribing the number and location of sampling catchments, sampling frequency, analytical methods, sampling equipment, and weather tracking. The plan would document the key catchment area characteristics (in addition to ADT) that that could affect sedimentation rates (e.g., soils, slopes, construction activity, traction sand application, stormwater BMPs), in order to aid in data interpretation.

Expected modifications: The City may modify its catch basin cleaning frequency based on the results of this study. For example, if the study indicates that catch basins in low ADT areas can be cleaned less frequently without increasing bedload export, the City may adjust its maintenance schedule accordingly.

Question 2- Is street sweeping after snow events effective in reducing the traction sand loads to streams?

Problem Statement/Description: During snow and ice events, the City spreads sand on key roads and bridge decks to improve traction and reduce the risk of accidents. The City currently uses traction sand consistent with WSDOT specifications. The City may spread sand several times in a typical year. When the snow and ice melt, the resulting runoff can carry traction sand into the storm conveyance system and receiving water bodies.

Traction sand can accumulate in catch basin sumps and storm drainage systems, thereby decreasing treatment and conveyance capacities. Traction sand can be transported through the drainage system as bedload (Pitt and Burton, 2002). Traction sand (especially particles <.85 mm in diameter) which reaches streams can cause turbidity and sedimentation that adversely affect aquatic life (Reiser and White, 1988; Chapman, 1988; Lorch, 1998).

Street sweeping can reduce the amount of traction sand that reaches storm conveyance systems and receiving water bodies. Ideally, street sweeping should occur after the streets and bridges have thawed (so the sand is no longer needed for traffic safety) but before runoff carries the traction sand into the storm system.

Many other municipalities managing MS4s use traction sand. These municipalities are likely to have similar questions regarding traction sand.

Hypothesis: Street sweeping within two days after thaw significantly reduces delivery of traction sand to streams.

Specific parameters or attributes: To test this hypothesis, the City would use bedload samplers installed in three snow-priority route (as defined in the City's Snow Removal Plan) outfall pipes, three non snow-priority route (as defined in the City's Snow Removal Plan) outfall pipes, and one control (no sanding) outfall pipe. The bedload samplers would measure the net export of traction sand. The drainage areas should have similar characteristics (e.g., slopes, soils, drainage systems). To aid in data interpretation, the City would track the type (e.g., WSDOT) and amount of traction sand applied as well as the volume of material collected in subsequent sweeping within each area. The goal would be to monitor at least three sanding events; however, the City may monitor additional events if sediment export rates are highly variable and additional data are needed to discern differences related to street sweeping. The City may track other variables, such as sand application volumes, to aid in data interpretation.

Expected modifications: Based on the results of this study, the City may modify its traction sand application rates and the timing of street sweeping.

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Pitt, R., 1985. *Characterizing and Controlling Urban Runoff through Street and Sewerage Cleaning*. EPA/2-85/038. PB 85-186500/AS.

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Pitt, R., A. Maestre, R. Morquecho, T. Brown, T. Schueler, K. Capiella, P. Sturm, and C. Swann. 2004. *Findings from the National Stormwater Quality Database (NSQD): Research Progress Report*. University of Alabama and Center for Watershed Protection.

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