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# 1. Introduction

## 1.1 The Purpose of the Stormwater Management Program Document

This document constitutes the City of Lynnwood 2011 Stormwater Management Program (SWMP) as required under condition S5 of the *Western Washington Phase II Municipal Stormwater Permit* (the Permit). The purpose of the document is to detail actions that the City of Lynnwood will take between January 1, 2011 and December 31, 2011 to maintain compliance with conditions in the Permit. This SWMP will be an attachment to the Annual Compliance Report for the Permit for 2010, which is due at the Department of Ecology on March 31, 2011.

## 1.2 The NPDES Program

The National Pollutant Discharge Elimination System (NPDES) is a program created under the Federal Clean Water Act with the intent of protecting and restoring water quality in lakes and stream so that they can support "beneficial uses" such as fishing and swimming. Governmental and private entities wishing to discharge water or wastewater to surface waters regulated by the Federal Government (Waters of the US) must obtain permits and comply with certain conditions or face fines and other penalties. NPDES permits have been written for discharges from construction sites, concentrated animal feeding operations, industrial activities, publicly-owned wastewater treatment plants, and municipal stormwater systems.

In Washington State, the US Environmental Protection Agency has delegated the authority over NPDES permits to the Washington State Department of Ecology (Ecology). Ecology has issued several general permits for discharges from stormwater systems that apply to municipalities with different sizes of populations and that are located in different regions of the State (Eastern and Western Washington). Phase I refers to municipalities of >100,000, and Phase II to those with a population of less than 100,000 according to the 1990 census.

## 1.3 The Western Washington Phase II Municipal Stormwater Permit

Lynnwood has a population of less than 100,000 and is in Western Washington. Thus our stormwater program must comply with conditions in the *Western Washington Phase II Municipal Stormwater Permit*. The Permit was issued on February 16<sup>th</sup>, 2007, was amended June 17, 2009, and will remain in effect until February 15<sup>th</sup> of 2012. The Permit allows municipalities to discharge stormwater from municipal systems into "waters of the state" such as rivers, lakes and streams, as long as we implement programs to reduce pollutants in stormwater to the "maximum extent possible" by conducting programs and activities in the following program areas:

- Public Education and Outreach
- Public Involvement
- Illicit Discharge Detection and Elimination
- Construction and Post-construction runoff controls
- Pollution Prevention and Municipal Operations and Maintenance
- Monitoring

The SWMP must be prepared and submitted annually and must contain the planned actions and activities that will be used in the following year to gain compliance with the permit. In addition, the Permit requires the City to submit an Annual Compliance Report by March 31<sup>st</sup> of each year that details actions taken in the previous year to achieve compliance. The full text of the Permit is available at:

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

be viewed upon request by contacting the City of Lynnwood Surface Water Management at (425) 670-5207.

### **1.4 Implementation Timing**

The current Permit is valid for 5 years, from February 17, 2007 to February 15, 2012, and allows for phased implementation of stormwater management programs and actions. Table 1 provides an overall of schedule and due dates.



In addition to continuing the programs developed in previous years, the major activities due in 2011 fall in the areas of detecting and controlling the discharge of pollutants to the stormwater system through spills, dumping and illicit connections detailed in Section 4 of this SWMP. Noted below are required tasks for 2011 associated with the Permit, as required by Ecology in information associated with the Annual Compliance Report:

- Annual Compliance Report for activities conducted in 2010 is due March 31, 2011.
- Annual written update of Permittee's 2011 SWMP, must be attached to the Annual Compliance Report.
- Develop and implement a comprehensive illicit discharge detection and elimination program.
- Map the City's storm sewer system.
- Conduct the field assessment of three high priority water bodies.
- Distribute public education and outreach information.
- Inspect the municipally owned stormwater treatment and flow control structures, including catch basins.
- Continue activities that were required in prior years of permit, including:
  - Continue tracking the costs of implementation of the SWMP.
  - Continue education and outreach program.
  - Continue public participation in development of SWMP.
  - Continue to publicize 425-670-KRUD, the pollution hotline number that's used to report instances of spills, dumping or other illicit discharges.
  - Continue ongoing training for appropriate field staff who are responsible for identification, investigation, termination, cleanup and reporting of spill, dumping and illicit connections.
  - Continue and refine procedures and process in place for plan review, inspection, and enforcement of the new code and design requirements.
  - Verify that staff conducting plan review, inspection, and enforcement have proper training in the new or updated requirements for controlling runoff from new development, redevelopment, and construction sites, and provide additional training if needed (see Section 5 for details).

## 1.5 City Coordination and Responsibilities

Compliance with the Permit will require coordination and documentation of activities in several City departments. The Public Works Department Surface Water Utility staff will coordinate City efforts, and will meet with staff from other departments regularly to insure that on-going and planned activities meet Permit requirements. It is anticipated that activities required for Permit compliance will be carried out largely by the Public Works, Information Services, Planning, Parks, City Manager's Office (City Attorney), and Finance departments. The Fire/Building and Police departments will be involved to a lesser extent.

## 1.6 The Surface Water Utility – Other Activities

This SWMP details activities that are planned and that fall under the purview of the Permit. Stormwater management is one part of the City's overall surface water management strategy. The Surface Water Utility conducts a suite of programs that reduce flooding, protect and improve water quality, and protect and restore aquatic habitat in the City's streams and lakes. Although not directly required, flood reduction and aquatic habitat restoration efforts can often further stormwater management goals. For details on Surface Water Utility activities not addressed in this SWMP, including the Surface Water Management Comprehensive Plan, see the City website at <http://www.ci.lynnwood.wa.us/Surfacewater> or contact the Public Works Department at (425) 670-5207.

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

The remainder of this document details the required elements of the SWMP as noted in Condition S5.C of the Permit, and notes current and planned compliance activities. The subsection of Condition S5.C associated with each section is noted in parentheses in the section on Permit Requirements.

## 2. Public Education and Outreach

### 2.1 Permit Requirements

The Permit (Section S5C.1) requires the City to provide a stormwater education and outreach program that will:

- Prioritize and address the target audiences and subject areas listed in the Permit based on stormwater issues and practices currently existing in Lynnwood.
- Develop education and outreach programs that are designed to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts.
- Measure changes in the understanding and adoption of behaviors by the target audience, and use that information to evaluate past programs, and to direct future programs.
- Maintain records of public education and outreach activities.
- Summarize activities in the Annual Report.

### 2.2 Current Activities

The City currently has activities and programs that meet the Permit requirements. Table 2.1 lists target audiences and behaviors that are currently being addressed by education and outreach programs.

**Table 2.1 Current Education and Outreach Programs and Activities**

Item	Target Audience	Goal and/or Behaviors Promoted
Portable Education Booth	General Public	Raise awareness of stormwater impacts and ways that citizens can reduce these impacts
Dispensing Pet Waste Bags	General Public	Raise awareness and reduce fecal coliform bacteria in waterways
Storm Drain Marking	General Public	Awareness, prevention of discharge of non-stormwater materials into the stormwater system
<i>Inside Lynnwood</i> Newsletter	General Public, Homeowners	General awareness of urban stormwater impacts and issues
Stormwater Education Grants Program	K – 12 School Children	General awareness of urban stormwater impacts and issues
Business license issuance / renewal information on best management practices	Businesses, Property Managers	Use of management practices that prevent discharge of pollutants into the stormwater system
Source control technical assistance	Businesses	Work with businesses to develop practical methods of reducing or eliminating discharge of non-stormwater materials into the stormwater system
Construction and Contractor's Meetings	Engineers, Contractors, Developers, Review Staff, Land Use Planners	Increase awareness of technical standards for stormwater site and erosion control plans, Low Impact Development (LID) techniques and tools

In addition, Lynnwood has also been an active participant in the STORM (Stormwater Outreach for Regional Municipalities) group to help identify appropriate program evaluation techniques.

### 2.3 Planned Activities

The City of Lynnwood's stormwater education and outreach program currently targets a variety of audiences and behaviors. Activities to maintain compliance will center around prioritizing existing programs and developing new ones based on the audiences listed in the Permit, developing methods of evaluating, understanding and adoption of behaviors and of adjusting programs based on such evaluation, and tracking and maintaining records of public education and outreach activities. Table 2.2 summarizes education and outreach activities that are planned for 2011.

**Table 2.2 Education and Outreach Work Plan for 2011**

Item Title	Additional Departments Involved	Schedule Notes
Continue to evaluate and prioritize existing programs, and develop new programs as resources become available	Solid Waste	Continue through 2011 and beyond
Continue coordination and collaboration with other NPDES jurisdictions to identify opportunities for regional awareness and behavior change programs	None	Continue through 2011 and beyond
Continue participating in STORM (Stormwater Outreach for Regional Municipalities) and the Puget Sound Starts Here efforts	None	Continue through 2011 and beyond
Refine strategy and methods to evaluate changes in understanding and adoption of target behaviors	None	Continue through 2011 and beyond
Continue activities listed in Table 2.1, and add additional activities as necessary	TBD	Continue through 2011

### 2.4 Staffing

The City of Lynnwood's Surface Water Management Division of the Public Works Department has 4 full-time employees, and a season intern. Public education and outreach activities are primarily accomplished by the Engineering Technician Aide, however all personnel engage in education and outreach activities (as detailed in table 2.1 and 2.2) throughout the year.

## 3. Public Involvement and Participation

### 3.1 Permit Requirements

The Permit requires the City to:

- Create opportunities for public involvement through advisory councils, watershed committees, participation in developing rate-structures, stewardship programs and environmental activities of other similar activities. At a minimum, the public must be able to participate in the decision-making processes involving the development, implementation and update of the SWMP.
- Make the SWMP and Annual Compliance Report available to the public, including posting on the City's website.
- Summarize activities for the Annual Compliance Report.

### 3.2 Current Activities

The City currently has activities and programs that meet the Permit requirements. Such activities include:

- Posting of the draft SWMP on the City's website along with an invitation to the public to submit comments on the document.
- In 2011, citizens, business owners, and developers were invited to comment on the SWMP, and the adoption of Illicit Discharge Detection and Elimination Program Manual.
- The City Council held public hearings on budgetary expenditures regarding Surface Water Utility Fees.

### 3.3 Planned Activities

The City plans to continue to solicit annual input on the SWMP and other aspects of the Surface Water Program as shown in the table below:

**Table 3.1 Public Involvement Work Plan for 2011**

Item Title	Additional Departments Involved	Schedule Notes
Conduct public involvement process for 2011 SWMP	Information Services	To be complete by March 31, 2011
Post SWMP and Annual Report on City website	Information Services	To be complete by March 31, 2011
Solicit comment and input on the Illicit Discharge Detection and Elimination Program Manual	None	Spring, 2011 to be adopted in Summer 2011

## 4. Illicit Discharge Detection and Elimination

### 4.1 Permit Requirements

The Permit (Section S5C.3) requires that the City:

- Develop an ongoing program to detect and remove illicit connections, discharges, and improper disposal including spills into the municipal stormwater system.
- Develop a municipal storm sewer map that includes attributes of stormwater system outfalls and notes receiving waters.
- Develop and implement an ordinance to prohibit non-stormwater discharges and dumping into the stormwater system.
- Publicly list and publicize a hotline or other local telephone number for public reporting of spills and other illicit discharges. Track reports of discharges and actions taken to address the reported problem.
- Provide training for municipal field staff on the identification and reporting of illicit discharges into the stormwater system.
- Conduct a process to identify and prioritize areas likely to have illicit discharges. Such a process could include evaluating land uses and associated business/industrial areas, noting areas where complaints have been registered in the past, and identifying areas where large quantities of materials are stored that could result in spills.
- Conduct visual inspection of at least three high-priority water bodies by February 17, 2011, and then conduct visual inspection of at least one high-priority water body each year thereafter.
- Adopt and implement procedures for program evaluation and assessment.
- Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.
- Summarize activities for the Annual Compliance Report.

### 4.2 Current Activities

The City currently conducts activities that meet the Permit requirements. Current illicit discharge detection and elimination (IDDE) activities that are part of Permit compliance include:

- The City maintains maps and an associated GIS database for the municipal separate stormwater system using Cartegraph and ARCMAP. The information and precise pinpoint mapping of both the public and private stormwater system is constantly being refined. Maps are available upon request.
- The city hired a consultant to train field staff on illicit discharge identification and response, with the training sessions to be held in June 2011.
- Outfall identification (of all sizes) and mapping began summer of 2009, and will continue during the summer of 2011.
- Water quality complaints and reports of spills or dumping are investigated on average within 1 working day of receipt.
- The City set up 425-670-KRUD as its illicit discharge hotline. This hotline is publicized in City publications, online, and in utility bills. Records are kept of calls received, and actions taken as a result of these calls.

### 4.3 Planned Activities

Lynnwood retained the services of Herrera Environmental Consultants to prepare the City's IDDE program and procedures. This program manual should be adopted in Summer 2011.

**Table 4.1 Illicit Discharge Detection and Elimination Work Plan for 2011**

<b>Item Title</b>	<b>Additional Departments Involved</b>	<b>Schedule Notes</b>
Develop and fully implement City-wide IDDE program per Permit conditions	Police, Fire, Parks and Recreation, Community Development	Anticipated completion of program manual in Summer 2011
Continue updating storm system map to address data gaps and Permit conditions	None	On-going throughout the year
Define drainage area and other attributes as needed for each municipal separate stormwater outfall with a 24-inch nominal diameter or larger	None	As needed
Use procedures to tag connections to the municipal separate stormwater system that have occurred after February 16, 2007	None	On-going as new connections are made. This is done through the building permit process.
Continue enforcement strategy and documenting enforcement actions taken	Community Development	On-going as needed
Review and enhance programs for providing education to the general public on reduction of pollutants in permitted non-stormwater discharges	Business Licensing	Continue through 2011 and beyond
Verify that field staff have adequate training, provide and document additional training if needed	Community Development, Parks and Recreation, Building and Property Services	Annually
Develop and implement on-going training program for field staff	Community Development, Parks and Recreation, Building and Property Services	Annually
Conduct field assessment of one high-priority water body	None	Summer 2011 continuing through 2012

# 5. Controlling Runoff from New Development, Redevelopment and Construction Sites

## 5.1 Permit Requirements

The Permit requires that the City develop, implement and enforce a program to reduce pollutants in stormwater runoff from new development, redevelopment, and construction site activities. This program must include:

- Adopt an ordinance that addresses runoff from new development, redevelopment and construction sites.
- Adopt minimum stormwater design standards that are equivalent to the minimum technical requirements in Appendix 1 of the permit.
- Implement a program (permitting process) to review plans, inspect sites during construction, and to take enforcement action against those failing to follow approved guidelines or to provide facilities as required during plan review.
- Adopt codes and standards and develop practices to allow for non-structural preventative actions and source reduction practices such as Low Impact Development Techniques (LID) that use amended or native soils and vegetation to minimize runoff and remove pollutants from stormwater.
- Adopt an ordinance, maintenance standards, inspection procedures, and enforcement provisions to verify long-term operation and maintenance of permanent stormwater control facilities constructed after the effective date of the Permit.
- Provide for training staff on new / revised regulations, standards, processes and procedures.
- Provide training and outreach to the public including engineers and developers on the new codes, processes and procedures.
- Develop a process for centralized recordkeeping of activities associated with regulation of new development, redevelopment, and construction sites as required in the Permit.

## 5.2 Current Activities

Lynnwood currently has a program that meets Permit requirements. Current activities associated with controlling runoff from new development, redevelopment, and construction sites associated with Permit compliance include:

- The City inspects and reviews all public and private projects with land disturbance, regardless of size. All of the City's inspectors and reviewers are Certified Erosion and Sediment Control Lead certified (CESCL).
- For projects greater than 1 acre in size, the City has adopted and enforces the same standards as the Washington Department of Ecology (in the General Construction NDPES Permit). Lynnwood gives all developers copies of the Notice of Intent for Construction Activity and Notice of Intent for Industrial Activity during the predevelopment review phase.
- Lynnwood Municipal Code 13.40 addresses development standards for development, redevelopment and construction sites and includes a permit review and approval process, design standards, erosion control requirements, maintenance standards, inspection and maintenance of post-construction permanent stormwater controls, and enforcement provisions. These standards meet all of the requirements of Appendix 1 of the permit.
- The City maintains records of review, inspection, and enforcement actions by staff.

### 5.3 Planned Activities

Lynnwood currently has a program that meets Permit requirements, but plans to take the following further actions:

- As needed, refine procedures for tracking and documenting Permit-related plan review, inspection, enforcement, and compliance activities.
- Review plan review, inspection, and enforcement procedures and make alterations if needed.
- Review and revise inspection frequencies for stormwater treatment and flow control facilities both during and after construction as needed.
- Determine staff training needs and provide training when needed.
- Develop programs to educate the public (including engineers and contractors) about new codes and standards and about Low Impact Development design strategies and technologies (one of the target audiences under the “Public Education and Outreach” section of the Permit).
- Investigate the permeability of soils within the City Center Redevelopment zone.
- Begin the process of a basin plan for the City Center Redevelopment zone, in accordance with Section 7 of Appendix 1 of the Permit.

**Table 5.1 Controlling Runoff from New Development, Redevelopment and Construction Sites Work Plan for 2011**

Item Title	Additional Departments Involved	Schedule Notes
Complete Stormwater Supplemental Technical Guidelines to assist developers in meeting Lynnwood's requirements	None	On hold, pending requirements in next Municipal Permit cycle
Review existing procedures for plan review, inspection, and enforcement in light of new regulations	None	On-going
Revise maintenance standards and requirements	None	On-going
Continue to provide copies of the Notice of Intent for Construction Activities and the Notice of Intent for Industrial Activities to representatives of proposal new development and redevelopment	Community Development	On-going
Continue training staff	Community Development, Parks and Recreation, Building and Property Services	On-going
Determine the need for programs to educate the public including engineers and contractors about new codes and standards and about Low Impact	Community Development	On-going

Development design strategies and technologies		
Investigate the permeability of soils within the City Center Redevelopment zone	None	Began in April 2011, continue through 2012
Begin the process of a basin plan for the City Center Redevelopment zone.	Community Development	Began in April 2011, continue through 2012

# 6. Pollution Prevention and Operation and Maintenance for Municipal Operations

## 6.1 Permit Requirements

The Permit (Section S5C.5) requires the City to:

- Develop and implement a municipal operations and maintenance program that has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- Adopt maintenance standards that are as protective as those noted in the *2005 Stormwater Management Manual for Western Washington*.
- Perform inspection of municipally owned and operated water quality treatment and flow control facilities and catch-basins at frequency required in the Permit.
- Establish and implement practices to reduce stormwater impacts associated with maintenance operations for streets, parking lots, roads or highways owned or maintained by the City.
- Establish and implement policies to reduce pollutants in runoff from all lands owned or maintained by the City.
- Develop and provide training to assist staff in implementing practices and policies to reduce pollutants in runoff from maintenance operations.
- Develop and implement a Stormwater Pollution Prevention Plan (SWPP) for all heavy equipment maintenance or storage yards, and material storage yards, and material storage facilities owned or operated by the City.

## 6.2 Current Activities

Lynnwood currently has programs that meet Permit requirements including the following:

- The City adopted a Comprehensive Surface Water Management Plan in August 2009, a large portion of which is dedicated to Surface Water Operations and Maintenance (O&M). Implementation of these recommendations continues.
- All O&M staff (in all utility departments) have attended training associated with pollutant reduction, and include annual refresher training.
- Water quality treatment and flow control facilities are inspected several times annually, and are cleaned and repaired as necessary.
- All catch-basins are inspected and cleaned at a minimum of every 3 years, many are done annually.
- The City developed a Stormwater Pollution Prevention Plan for its' Public Works facilities, adopted June 2009, and will update this plan in 2011.

## 6.3 Planned Activities

Lynnwood currently has programs that seek to reduce pollutants in runoff from City facilities and maintenance practices, but plan to implement the following activities in 2011:

- Continue to implement the maintenance standards as noted in the *2005 Stormwater Management Manual for Western Washington*.
- Review and revise inspection procedures and frequencies for municipally owned or operated permanent water quality treatment and flow control facilities and catch-basins.
- Review and revise practices to reduce impacts from runoff or maintenance practices associated with municipally owned or operated streets, parking lots, and roads.
- Review and update operation and maintenance practices for municipally-owned lands in order to reduce pollutants in runoff.
- Continue training for staff whose work could impact stormwater quality.

- Incorporate Parks Facilities in the Citywide Stormwater Pollution Prevention Plan, and review and update existing elements for all heavy equipment maintenance or storage yards, and materials storage facilities owned by the City.
- Update tracking and documentation methods and procedures associated with inspection, maintenance or repair activities primarily in Cartegraph.

**Table 6.1 Pollution Prevention and Operation and Maintenance for Municipal Operations Work Plan for 2011**

Item Title	Additional Departments Involved	Schedule Notes
Continue maintenance standards established in Surface Water Comprehensive Plan	None	On-going
Review inspection frequencies for water quality treatment and flow control facilities and revise if needed	None	On-going
Review maintenance and operation practices to reduce pollutant runoff from City streets	None	On-going
Review maintenance and operation practices for City-owned lands and review if necessary to reduce pollutants in runoff	Parks	Fall / Winter 2011
Continue training program for City staff whose work could impact water quality	Parks and Recreation, Community Development, Fire, Building and Property Management	On-going
Incorporate Parks Facilities in the Citywide Stormwater Pollution Prevention Plan, and review and update existing elements for all heavy equipment maintenance or storage yards, and materials storage facilities owned by the City	Parks	Summer 2011

# Appendix A

## Public Comment:

No public comments were received regarding the adoption of the Illicit Discharge Detection and Elimination Program Manual.

1 public comment was received regarding the addition of personnel to the Surface Water Utility Division, during the budget deliberations.

1 public comment was received regarding the Basin Plan for the City Center Redevelopment.

No public comments were received regarding the SWMP as of March 1, 2012.

# City of Lynnwood Status of TMDL Implementation

## March 31<sup>st</sup>, 2011

### 1) Pollution Source Control Activities

The Illicit Connection Detection and Elimination program requirement to prevent non-stormwater discharges described in section S5.C.3.b of the City's NPDES Phase II Permit (Permit) shall address commercial animal handling areas and commercial composting facilities, including source control BMPs equivalent to those in the 2005 Western Washington Stormwater Manual Volume 4, pages 2-10 through 2-12.

In 2011, the City adopted a manual for detecting and eliminating illicit connections and discharges. During the 2011 reporting year, there were no illicit discharges identified with respect to fecal coliform bacteria, within the Swamp Creek Basin.

Additional details regarding our illicit discharge detection and elimination program can be found in the City's IDDE Program Manual.

### 2) Public Involvement

All municipal stormwater permit holders shall prepare a Bacterial Pollution Control Plan (BPCP) as subsection of their Stormwater Management Program (SWMP) to facilitate the public's participation in advising on the development, implementation, and update of TMDL-related portions of the SWMP. The BPCP shall include information on relevant activities being taken to reduce bacterial pollution including ordinances, inspection and enforcement resources and strategies, illicit discharge program elements, and water quality monitoring. Municipal stormwater permittees shall evaluate and document the applicability of the following approaches in the BPCP.

- Receiving water sampling to identify bacterial pollution sources within targeted sub basins.
- Development and implementation of a Pet Waste Ordinance or other equivalent mechanism.
- Evaluation of current water pollution ordinance enforcement capabilities.
- Evaluation of critical areas ordinance in relation to TMDL goals.
- Implementation of an educational program for K-12 students to increase their awareness of bacterial pollution problems.
- Investigation and implementation of methods that prevent additional stormwater bacterial pollution through stormwater treatment, reducing stormwater volumes from existing areas using low impact development retrofitting, and preventing additional sources of stormwater in association with new development using low impact development strategies.

The City has addressed the above requirements in the following manner:

- Bacteria sampling at 4 different locations throughout the City, in accordance with the QAPP (see attached results).

# City of Lynnwood Status of TMDL Implementation

## March 31<sup>st</sup>, 2011

- Lynnwood has regulations restricting pet waste, which can be found in the Lynnwood Municipal Code at 6.02.160, and 13.04.070.E.1.c, and 13.45.025.A.19.
- Lynnwood works closely with the Community Development Department, and the Snohomish Department of Health when engaging in bacteria-related enforcement. We engage in a perpetual adaptive management after each occurrence, to see what went right and wrong, and to improve our processes.
- Lynnwood's current Critical Areas Regulations meet best available science requirements. However, in 2012, Lynnwood will be amending its Critical Areas Regulations, and will be evaluating how well they correspond to the TMDL.
- Lynnwood has an ongoing K-12 education and grants program, with 3 participating schools in the 2010 – 2011 school year.
- The City completed and adopted an update to the City's Surface Water Management regulations, including water quality and quantity management in May 2010. LID methods are required to be evaluated as a part of all new and redevelopment.

### 3) TMDL Activity Documentation and Tracking

All municipal stormwater permit holders shall discuss program changes and BPRP activities completed during the previous year in a subsection of their Stormwater Management Program (SWMP) annual report. The purpose of this requirement is to allow for the timely tracking and evaluation of TMDL-related permit requirements by Ecology and the public.

BPRP activities completed during the 2011 reporting year include:

- Created bacteria prevention education and outreach material, including a portable booth and attending several outreach fairs.
- Distributed fecal bacteria information to all City residents which was contained in their utility bill.
- Continued to maintain 2 pet waste stations at City parks.
- Continued bacteria sampling at 4 different locations throughout the City, in accordance with approved QAPP.
- Dispensed pet waste bags and holders to dog owners at various outreach opportunities.

### 4) Public Outreach and Education

All municipal stormwater permit holders shall increase awareness of bacterial pollution problems and the need to protect water quality by properly managing animal wastes. This requirement shall be considered an additional minimum measure to the Phase I permit (S5.C.10.(b)(ii)). This requirement shall be integrated into one or more of the minimum measures S5.C.1.(a)i through iv for applicable Phase II cities.

# City of Lynnwood Status of TMDL Implementation March 31<sup>st</sup>, 2011

In 2011, the City had an education coordinator responsible for education and outreach. Duties included developing a classroom curriculum, attending education fairs and using education booth, administering stormwater education grants for City schools. Education material includes:

- A portable education booth which may be used at various public events.
- Three different education curriculums aimed at businesses, schools, and citizens.
- Pet waste leash dispensers and refill bags to distribute.
- Education posters and material.
- Distributed an informational flyer to all City residents educating them on the hazards of allowing fecal waste in our storm system (it went out in the utility bills).

## 5) Water Quality Monitoring

All municipal stormwater permittees must perform or contract out, water quality monitoring in accordance with either Options 1 or 2 below. This monitoring shall be described in a plan prepared in accordance with Ecology's Guidelines for Preparing Quality Assurance Project Plans (QAPPs) for Environmental Studies (Ecology Publication No. 01-03-003 or most current version). Phase II permittees shall submit their QAPP to Ecology for approval within 120 days of permit issuance.

To ensure consistency in its county-wide TMDL monitoring program, Phase I permittee Snohomish County has the option of following monitoring timelines and dates for submitting their QAPP, BPRP, and Early Action Plan (if applicable) following the timelines set forth in the North Creek and Snohomish Tributaries TMDL Detailed Implementation Plans.

Permittees may rely on another entity to satisfy the required TMDL monitoring component. Permittees that are relying on another entity to satisfy this monitoring obligation remain responsible for permit compliance if the other entity fails to perform the required monitoring.

TMDL related monitoring shall begin within 180 days of permit issuance. The monitoring start date will be extended day for day if Ecology requires more than 30 days to review the QAPP. Permittees shall choose one of the two options discussed below

**Option 1, Direct Measurement of Stormwater:** Estimate the concentration and loading of bacteria to Swamp Creek from stormwater within the permit holder's jurisdiction by sampling representative outfalls within the MS4. Specific sampling locations and frequencies of stormwater outfall monitoring will be determined during Ecology's approval of a prepared QAPP.

### **Option 2, Indirect Measurement of Pollution Sources (Recommended):**

Estimate changes in bacterial levels in Swamp creek as a result of stormwater inputs through receiving water monitoring coupled with flow duration or comparable analyses.

Within Option 2, permittees may either a) measure water quality entering and leaving their jurisdiction or b) measure water quality at the locations specified in Figure 1 of the TMDL as follows:

# City of Lynnwood Status of TMDL Implementation

## March 31<sup>st</sup>, 2011

- Snohomish County shall monitor bacteria levels at sites SCLU and SCLD and perform flow monitoring at sites Sc and Sl.
- The City of Everett shall monitor bacteria levels at site SCUP, which is in the vicinity of Avondale Road and 119<sup>th</sup> St SW.
- The City of Kenmore shall monitor bacteria levels at site 0470 and perform flow monitoring at site 56b.
- The Cities of Lynnwood, Mountlake Terrace, and Brier shall monitor bacteria levels at site SRLD. SRLD shall be located at the stream crossing along Cypress Way, Oak Way, or another site approved by Ecology.

Option 2 monitoring must be performed at a frequency that will produce at least 60 data points at each monitoring station over the five year permit cycle.

Permittees must also perform continuous flow monitoring at each monitoring point, or a representative location as approved by Ecology, to determine if a sampling event is affected, or dominated, by storm flows.

The city received an approved QAPP from the WDOE in April 2008. The City began sampling accordingly in May, 2008. Please see attached for sampling results.

### **6) Coordination of Stormwater Management Activities**

In association with Phase I permit condition S5.C(3), Snohomish County shall include the discussion of TMDL-related activities as part of the stormwater management coordination activities for physically connected and shared water bodies.

This requirement is not applicable to Lynnwood. However, Lynnwood regularly attends the Snohomish County coordination meetings.

### **7) Illicit Discharge Detection and Elimination**

The schedule and activities identified for the illicit discharge detection and elimination program in both the Phase I and Phase II permits shall be sufficient to meet TMDL requirements with the following clarifying conditions:

- Phase I Permit—Snohomish County shall give strong consideration to prioritizing Outfall Reconnaissance Inventories (ORIs) in areas where bacterial TMDLs are in place. All ORIs conducted in area covered by this TMDL shall include bacteria source screening for sewage/septic sources. The County shall develop threshold values for responding to obvious bacterial pollution problems and initiating investigation/termination activities as defined in permit condition S5C8(b)(vii).
- Phase II Permit—Water bodies addressed by the TMDL shall be designated as high priority water bodies (see permit condition S.5.C.3.(c)(ii)) and shall receive field assessments and screening prior to other receiving water bodies unless approved in writing from Ecology. The presence of sewage/septic system sources shall be investigated as part of all screenings.

# **City of Lynnwood Status of TMDL Implementation March 31<sup>st</sup>, 2011**

Lynnwood is incorporating this element in the development of our illicit discharge detection and elimination program. This program manual was adopted in June 2011.

## Swamp Creek Bacteria TMDL Sampling for City of Lynnwood

Month	Station ID	Date	Time	Sample ID #	Air Temp	WA Temp	Weather	Description of Stream	Results
January	SC1	1/27/2011	8:08 AM	SC1-1-33	41	40.0	Sunny, Chill	Clear, Running, High	4 CFU
	SC2	1/27/2011	8:23 AM	SC2-1-33	41	38.0	Slight Fog, Chill	Dark, Still	10 CFU
	GC1	1/27/2011	8:38 AM	GC1-1-33	41	41.5	Slight Fog, Chill	Cloudy/grey, flowing, low	10 CFU
	TC1	1/27/2011	9:00 AM	TC1-1-33	41	39.5	Fog, Chill	Clear, flowing, bubbles, low	4 CFU
February	TC1	1/27/2011	9:03 AM	TC1-2-33	41	39.5	Fog, Chill	Clear, flowing, bubbles, low	4 CFU
	SC1	2/23/2011	8:34 AM	SC1-1-34	35	34.5	Cloudy, Cold	Clear, Running, High	8 CFU
	SC1	2/23/2011	8:35 AM	SC1-2-34	35	34.5	Cloudy, Cold	Clear, Running, High	2 CFU
	SC2	2/23/2011	8:52 AM	SC2-1-34	36	32.0	Cloudy, Cold	Still, Brown	2 CFU
March	GC1	2/23/2011	9:11 AM	GC1-1-34	35	36.0	Cloudy, Cold	Slow Flow, Off-Grey Color	14 CFU
	TC1	2/23/2011	9:30 AM	TC1-1-34	36	37.5	Cloudy, Cold	Low level, clear, murky bottom	28 CFU
	SC1	3/23/2011	9:22 AM	SC1-1-35	44	39.5	Sunny,	Clear, running	2 CFU
	SC2	3/23/2011	9:37 AM	SC2-1-35	47	37.5	Sunny,	Clear, brown, still	18 CFU
April	GC1	3/23/2011	9:39 AM	GC2-2-35	47	37.5	Sunny,	Clear, brown, still	8 CFU
	GC1	3/23/2011	9:56 AM	GC1-1-35	47	42.5	Sunny,	Clear, flowing,	8 CFU
	TC1	3/23/2011	10:25 AM	TC1-1-35	50	43.5	Sunny,	Clear, flowing	2 CFU
	SC1	4/27/2011	8:56 AM	SC1-1-36	48	43.5	Broken clouds	Clear, flowing, bubbles, Medium	200 CFU
May	SC2	4/27/2011	9:14 AM	SC2-1-36	48	43.5	Broken clouds	Clear, Still, brown, Medium	42 CFU
	GC1	4/27/2011	9:31 AM	GC1-1-36	48	47.5	Broken clouds	Clear, Flowing, Medium	20 CFU
	GC1	4/27/2011	9:34 AM	GC1-2-36	48	47.5	Broken clouds	Clear, Flowing, Medium	14 CFU
	TC1	4/27/2011	9:49 AM	TC1-1-36	49	46.5	Broken clouds	Clear, Flowing	8 CFU
June	SC1	5/25/2011	9:45 AM	SC1-1-37	54	50.5	Cloudy	Clear, bubbles, flowing, medium	48 CFU
	SC2	5/25/2011	9:59 AM	SC2-1-37	55	50.5	Cloudy	Dark, Still, Medium	130 CFU
	GC1	5/25/2011	10:10 AM	GC1-1-37	55	52.5	Cloudy	Clear, running, low	66 CFU
	TC1	5/25/2011	10:20 AM	TC1-1-37	55	50.5	Cloudy	Clear, still, low	6 CFU
July	TC1	6/22/2011	8:50 AM	TC1-2-37	55	50.5	Cloudy	Clear, still, low	22 CFU
	SC1	6/22/2011	8:55 AM	SC1-1-38	58	55.5	Cloudy	Clear, flowing, medium, brown foam	100 CFU
	SC1	6/22/2011	9:14 AM	SC2-1-38	58	55.5	Cloudy	Clear, flowing, medium, brown foam	200 CFU
	SC2	6/22/2011	9:25 AM	GC1-1-38	59	60	Cloudy	Dark, brown, still, medium	82 CFU
August	GC1	6/22/2011	9:42 AM	GC1-1-38	60	57.5	Cloudy	Clear, flowing, low	110 CFU
	TC1	7/27/2011	8:59 AM	TC1-1-39	61	56.5	Cloudy	Clear, flowing, medium	36 CFU
	SC1	7/27/2011	9:35 AM	SC2-1-39	60	59	Cloudy	Clear, bubbles, flowing, medium	108 CFU
	SC2	7/27/2011	9:36 AM	SC2-2-39	60	59	Cloudy	Cloudy, brown, still, medium	42 CFU
September	GC1	7/27/2011	9:50 AM	GC1-1-39	61	60.5	Cloudy	Cloudy, brown, still, medium	49 CFU
	TC1	7/27/2011	10:00 AM	TC1-1-39	61	57	Broken clouds	Cloudy/clear, flowing, medium	56 CFU
	SC1	8/24/2011	8:46 AM	SC1-1-40	65	60	Sunny	Clear, Running, Medium	200 CFU
	SC2	8/24/2011	9:05 AM	SC2-1-40	64	61.5	Sunny	Milky, Still, Low/Medium	1850 CFU
October	GC1	8/24/2011	9:16 AM	GC1-1-40	68	63.5	Sunny	Cloudy, brown, still, medium	180 CFU
	GC1	8/24/2011	9:18 AM	DC1-2-40	68	63.5	Sunny	Clear, Running, Low	160 CFU
	TC1	8/24/2011	9:31 AM	TC1-1-40	69	60.5	Sunny	Clear, Running, Low	145 CFU
	SC1	9/28/2011	8:05 AM	SC1-1-41	50	53.5	Sunny	Clear, Flowing, Low	135 CFU
									160 CFU

**Monthly Average**

**6.4 CFU**

**10.8 CFU**

**8 CFU**

**5.7 CFU**

**5.4 CFU**

**10.6 CFU**

**9.1 CFU**

**4.94 CFU**

\*Samples are no longer taken to AmT test, COL WWTP doing analysis.

\*8/29/11 Resample of SC1-1-40 showed 3220 and 3440CFU

September	SC2	9/28/2011	8:25AM	SC2-1-41	50	52.5	sunny	Dark, Dark-Brown, Still, Medium	362 CFU
	GC1	9/28/2011	8:37AM	GC1-1-41	52	57	sunny	Clear, Running, Low	125 CFU
	TC1	9/28/2011	8:50AM	TC1-1-41	52	53	sunny	Clear, Running-Flowing, Medium	470 CFU
October	TC1	9/28/2011	8:52AM	TC1-2-41	52	53	sunny	Clear, Running-Flowing, Medium	434 CFU
	SC1	10/26/2011	8:32AM	SC1-1-42	41	43.5	Cloudy	Clear, Bubbles, Flowing, Low	225 CFU
	SC1	10/26/2011	8:35AM	SC1-2-42	41	43.5	Cloudy	Clear, Bubbles, Flowing, Low	205 CFU
November	SC2	10/26/2011	8:53AM	SC2-1-42	42	41.5	Cloudy	Cloudy, Still, Medium	36 CFU
	GC1	10/26/2011	9:06AM	GC1-1-42	42	47	Cloudy	Clear, Flowing, Low	4 CFU
	TC1	10/26/2011	9:15AM	TC1-1-42	42	46.5	Cloudy	Clear, Still, Medium	68 CFU
December	SC1	11/23/2011	8:42AM	SC1-1-43	44	45	Rain, Cloudy	Clear, Running, High	1100 CFU
	SC2	11/23/2011	8:58AM	SC2-1-43	45	43	Rain, Cloudy	Clear, Running, High	20 CFU
	SC2	11/23/2011	8:59AM	SC2-2-43	45	43	Rain, Cloudy	Clear, Running, High	24 CFU
September	GC1	11/23/2011	9:11AM	GC1-1-43	44	45	Rain, Cloudy	Cloudy, Running, High	<2 CFU
	TC1	11/23/2011	9:26AM	TC1-1-43	44	44	Rain, Cloudy	Cloudy, Running, High	300 CFU
	SC1	12/28/2011	8:58AM	SC1-1-44	53	45.5	Cloudy	Cloudy, Running, Medium	991 CFU
October	SC2	12/28/2011	9:15AM	SC2-1-44	54	43	Cloudy	Dark, Still, Medium	285 CFU
	GC1	12/28/2011	9:30AM	GC1-1-44	53	43.5	Cloudy	Milky, Running, Medium	1100 CFU
	GC1	12/28/2011	9:32AM	GC1-2-44	53	43.5	Cloudy	Milky, Running, Medium	932 CFU
November	TC1	12/28/2011	9:43AM	TC1-1-44	53	46	Cloudy	Clear, Flowing, Medium	96 CFU

310 CFU

108 CFU

\*1/28/11 Resample of SC1-1-43 showed 115 CFU

289 CFU

680 CFU

# IDDE Investigations

Date	Name	Address	Inspection	Photos	IDDE	ERTS	Enforcement	Notes
1/6/2011	Bret's Independent	21010 66th Ave W	Yes	No	No			Car washing, area of vehicle washing was done in a gravel area, no storm systems were impacted.
1/14/2011		168th & 52nd Ave W	Yes	Yes	Yes	624527		Gas spill on 52nd and 168th, FD and crews applied absorbency material to road, swept up.
2/4/2011	Interurban Trail		Yes	Yes	No			Complaint of chemicals on trail from cabinet shop above. No chemicals, natural occurring iron oxide.
2/14/2011	McDonalds	19808 44th Ave W	Yes	Yes	Yes		NOV 2/14, 6/20 inspection with follow up phone call on 6/27 which was never returned, 3rd NOV on 8/31	Hosing down dumpster area into storm system, grease build up in storm pipe.
2/25/2011	Rebecca O'Reilly	17410 62nd ave W	Yes	Yes	No			Pump draining water from back yard to drain in cul de sac.
3/14/2011	March 14, 2011 Flooding	5711 196th St SW 19411 56th Ave W 5405 196th St SW 19711 64th Ave W 18100 76th Ave W	No	No	No	625529, 625530, 625531, 625532, 625533		These ERTS were called in by John Ewell at the WWTP as these were all sewer overflows caused by a storm.
4/28/2011	Augusta Glen Apts	4830 168th St SW	Yes	Yes	Yes	626357	NOV sent to Property Management	Trash/debris, lawn clippings and branches being dumped into stream.
6/2/2011	Fred Meyer	4615 196th St SW	Yes	Yes	Yes	627129	NOV sent to store director	Paint spill in dumpster area, about a gallon to a gallon and a half. Isolated to CB's near dumpster area, Bravo Environmental cleaned area along with affected CB's.
6/9/2011	QFC	17525 Hwy 99	Yes	Yes	No			Hydraulic fluid leak from Waste Management truck. Cleaned up with Kitty litter or another absorbent material. Did not reach storm drains.
6/11/2011	WWTP	17000 76th Ave W	No	No	No			Email from John Ewell, diesel spill on driveway, cleaned with absorbent and swept up. Contained to paved areas, no storm drains affected.
7/19/2011	Rec Center Generator Area	18900 44th Ave W	Yes	Yes	No			Overflow from swimming pool being drained.

8/19/2011		17125 37th Ave W	Yes	Yes	No	628517		Complaint about vehicle repair shop being run from residence, fluids dripping into soil. Inspection done with Greg Lum (code enforcement), nothing found, not storm issue.
8/31/2011	Motoplex	17900 Hwy 99	Yes	Yes	Yes		NOV sent to Property Owner/Manager	On site motor vehicle washing, water entering stream.
11/28/2011	Frank & Sharon Burkland	3723 177th Pl SW	Yes	Yes	Yes		Letter sent	Paint being dumped into storm drain, appears to have been dumped a while ago.
12/21/2011		5528 189th St SW	Yes	Yes	Yes			Water main break, sediment into stream but settled to bottom rather quickly leaving stream clear.
12/29/2011	Tom Nelson	5902 200th St SW	Yes	No	No			Oil spill in trailer park parking lot. Transmission fluid from vehicle on private property, chemicals washed away by complainant prior to arrival. No storm systems in area were affected.