

City of Mukilteo  
Annual Stormwater Management Program  
(SWMP) Plan  
January 2015 – December 2015

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## Executive Summary

### The NPDES Program

The National Pollutant Discharge Elimination System (NPDES) is a program created under the Federal Clean Water Act, with authority over the program given to Washington State Department of Ecology (Ecology). Ecology issues Permits to governmental and private entities. The intent of the NPDES is to protect and restore water quality in lakes and streams 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 and State governments must obtain an NPDES Permit and comply with conditions set forth in the Permit.

### The Western Washington Phase II Municipal Stormwater Permit

The City of Mukilteo has been operating under an NPDES Permit (the Permit) since 2007. The current Permit covers the period from August 1, 2013 to July 31, 2018. The Permit allows municipalities to discharge stormwater from municipal systems into “waters of the state,” as long as they implement programs to reduce pollutants in stormwater to the maximum extent practicable (MEP), apply all known and reasonable technologies (AKART) to address stormwater pollutants, and protect receiving waters from degradation. The full Permit can be viewed at Department of Ecology’s website: <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseIIww/5YR/2014mod/WWAPhaseII-Permit-2014Final.pdf>

### Purpose of the Stormwater Management Program Plan

This document is the City of Mukilteo’s 2015 Stormwater Management Program (SWMP) Plan, covering the period between January 1, 2015 and December 31, 2015. The purpose of the document is to outline the City’s planned activities as they relate to Permit compliance. The City prepares and posts the SWMP Plan with the intent of soliciting feedback from the public during a draft phase, and informing the public regarding the planned activities relating to Permit compliance. The SWMP Plans are posted on the City’s website.

As required, this SWMP Plan follows the organization of the five elements in Section 5.C of the Permit.

S.5.C.1 - Public Education and Outreach

S.5.C.2 - Public Involvement and Participation

S.5.C.3 - Illicit Discharge Detection and Elimination

S.5.C.4 - Control Runoff from New Development, Redevelopment and Construction Sites

S.5.C.5 - Municipal Operations and Maintenance

Information on Section 7, Compliance with Total Maximum Daily Load Requirements, and Section 8, Monitoring, are also included in this document. The Permit requires the City to submit an Annual Report by March 31st of each year, detailing actions taken in the previous year to achieve compliance. The Annual Report is available at <http://www.ci.mukilteo.wa.us/Page.asp?NavID=292>.

## Introduction

The Permit requires a multi-faceted approach in addressing stormwater impacts. The goal of each of the City's approaches is outlined in the following categories: Public Education and Outreach, Public Involvement and Participation, Illicit Discharge Detection and Elimination, Control Runoff from New Development, Redevelopment and Construction Sites, and Municipal Operations and Maintenance. Following is an overview of each of the programs administered by the City.

### Public Education and Outreach

Public education and outreach is designed to reach specific audiences based on daily activities that create stormwater pollution. Audiences can include the general public, businesses, homeowners and their landscapers, developers, engineers, planners, and contractors. The City's program addresses several specific water quality issues as well as establishes a level of basic education concerning watersheds, stormwater, and the water cycle. In 2015, the City's specific water quality issues will include: natural yard care, low impact development techniques, pet waste management and disposal, private stormwater facility maintenance, and car washing techniques. For the ongoing behavior change programs, the City has partnered with Snohomish County for a natural yard care program.

### Public Involvement and Participation

Public involvement is actively sought in the development of the SWMP. Citizen involvement increases understanding and creates a sense of responsibility towards the health of affected watersheds. Citizens may review and comment on the SWMP by visiting the City of Mukilteo's website at <http://www.ci.mukilteo.wa.us/index.asp>. In addition, the City has established a Citizen Advisory Committee to be actively involved in the update of the City's 2015-2021 Stormwater Management Plan. All materials are posted on the City's website at <http://www.ci.mukilteo.wa.us/Page.asp?NavID=302>.

### Illicit Discharge Detection and Elimination

Only rain is allowed down storm drains. Illicit Discharge Detection and Elimination (IDDE) efforts focus on discharges that are not entirely composed of stormwater. The City has an IDDE hotline, (425) 263-8088, for the public to report suspected illicit discharge activities. Investigations and responses to illicit discharges are designed to detect, remove, and prevent illicit discharges. In 2009, the City Council adopted Ordinance 1222 updating City stormwater regulations. This included Title 13.12.080 *Discharge of polluting matter – Illicit connections - prohibited* and Title 13.12.310 *Enforcement*. The City has an established detection program with our public works, planning, and engineering staff. The City's drainage inventory atlas is available online at <http://www.ci.mukilteo.wa.us/Page.asp?NavID=284>.

### Control Runoff from New Development, Redevelopment and Construction Sites

Runoff controls for new development, redevelopment and construction sites have been established. The City has a site planning permit process in place that protects water quality. Once a permit is issued, the

CESCL certified City staff inspects sites to ensure they are in compliance with approved TESC measures before clearing and grading is permitted, and keeps records of these inspections. The City has adopted the latest edition of the State Department of Ecology's Stormwater Management Manual for Western Washington. The City does not allow "erosivity waivers".

### Municipal Operations and Maintenance

Pollution prevention, and operations and maintenance activities have been developed to reduce and eliminate polluted discharges from City maintenance and operations divisions. The City has a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities. The City is planning on obtaining a programmatic Hydraulic Permit from the Washington State Department of Fish and Wildlife (WDFW) for work occurring in or along streams.

### Annual Update

This document is revised annually to outline goals for the upcoming year. The desired outcome of these efforts is improved water quality throughout the Puget Sound for the benefit of all of its citizens.



## 2015 Planned Activities

### ***Permit Element S5.C.- Public Education and Outreach***

#### Goal

The goal of the education and outreach program is to reduce or eliminate behaviors and practices that contribute pollution to our streams and the Puget Sound.

We all live in a watershed. What each of us does on our property, in our parks, on our beaches affects our water.

#### Overview

The City of Mukilteo has several programs to help residents and business owners understand stormwater pollution as a significant water quality concern. The City provides outreach to residents, schools, businesses, and its employees on ways to reduce impacts to our environment. The City is involved in education programs both locally and regionally, leveraging other successful outreach campaigns. This method assures continuity of message across the region, and reduces City costs to create programs and materials. The City tailors existing programs to fit the needs of our residents and stormwater needs. The City will continue to implement education and outreach within our jurisdiction based on the results of the Stormwater Community Research Report (March 2010). Examples of continuing partnerships include: Snohomish County Health Department, Snohomish County, Snohomish Conservation District, Burlington Northern Santa Fe (BNSF) Railway, Washington Department of Transportation (WSDOT), Sound Transit, and neighboring municipalities.

Table 1.1 Schedule for Education and Outreach for Permit Cycle

Topic	2014	2015	2016	2017	2018
<i>General Public and Businesses</i>					
Pet Waste Management and Disposal					
Car Washing					
Natural Yard Care					
Youth Stormwater and Water Quality Awareness Education					
Bluff and Vegetation Management					
Low Impact Development Techniques					
Private Stormwater System Maintenance and BMPs					
Prevention of Illicit Discharge					
<i>Engineers, Contractors, Developers, and Land Use Planners</i>					
Low Impact Development Techniques					
Stormwater Treatment and Flow Control BMPs					
Technical Standards for Stormwater Site and Erosion Control Plans					

Key:

Research and Development

Implementation

Adaptive Management

## Public Education and Outreach 2015 Planned Activities

To meet the requirement to build general awareness of the general public and businesses in 2015, the City will provide:

- Youth stormwater and water quality awareness
  - Partner with Snohomish County Beach Watchers to integrate stormwater messaging into its existing program, conducted at Lighthouse Park. The Beach Watchers provide outreach and education services for City residents primarily around the marine environment. In 2015, it is our goal to have them incorporate a stronger stormwater message into the program.
  - Continue partnership with the Snohomish Conservation District and Snohomish County to encourage residents, teachers and students to participate in activities such as natural yard care, using low impact techniques, storm drain marking, riparian plantings and education activities.
- Ongoing messaging for pet waste management and disposal. Promote pet waste management through articles in the Quarterly Newsletter, providing education and pet waste bags at City Hall, National Night Out, Touch a Truck, LID Workshops, or other appropriate events.
- Ongoing messaging to eliminate car wash wastewater from entering the MS4. Provide outreach and education for car washing through articles and advertisements in the Quarterly Newsletter.
- Private stormwater system maintenance and BMPs. Continue working with private property homeowners and Homeowner's Associations to educate them on private stormwater BMPs.
- Bluff and vegetation management
  - Participate in the Landslide Working Group to help educate homeowners on bluff and vegetation management.
  - Continue partnership with BSNF, WSDOT, Sound Transit and the City of Everett, through the Landslide Hazard Working Group, to provide materials on bluff and vegetation management, and private stormwater system maintenance and BMPs.
- Natural Yard Care / Voluntary Rain Gardens
  - Continue partnership with Snohomish Conservation District to follow up on workshops completed in 2014.
  - Complete an LID guide for homeowners in the highly sensitive areas in Smuggler's Gulch.
- General Activities
  - Update the City's Stormwater webpage, to reflect current programs and actions
  - Support future activities in regional campaigns, such as the Don't Drip and Drive campaign.
  - Use Puget Sound Starts Here messaging on stormwater related outreach materials and participate in PSSH programs, as appropriate.

To meet the requirement to build general awareness of engineers, contractors, developers, and land use planners, in 2015 the City will:

- Promote trainings for Low Impact Development offered by Department of Ecology and other resources.
- Provide information to contractors, developers, and engineers on the technical standards for stormwater site and erosion control plans.



- Update FAQ sheets provided by the City on development projects and the most current *Stormwater Management Manual*.

To effect behavior change, the City has partnered with Snohomish County and neighboring municipalities to measure residents' understanding and adoption of natural yard care techniques. The City will continue to contribute to this program for 2015. The partnership allows for sub-regional evaluation, fielding, and refinement to administer an effective program for natural yard care practices. The City will use the data received to direct education and outreach resources more effectively. The program results will be available in early 2016.

## ***Permit Element S5.C.2 - Public Involvement and Participation***

### **Goal**

The City's goal for public involvement and participation is to actively engage all willing residents, business owners, property owners, and contractors, in all of the aspects of the surface and stormwater utility; broadening the sense of responsibility and understanding of the health of our watersheds throughout the community.

### **Overview**

In addition to this Stormwater Management Program Plan, the City of Mukilteo is also in the process of updating its Comprehensive Surface Water Management Plan. Residents are encouraged to participate in the development of both plans.

The City has formed a Surface Water Management Plan Citizen Advisory Committee, and created a website for plan updates, including materials relating to the planning process. This can be viewed at <http://www.ci.mukilteo.wa.us/Page.asp?NavID=302>. At all times during the process, the public is encouraged to review and provide comments. The City accepts comments in public forums such as City Council and Citizen Advisory Committee meetings.

The City will continue to post the NPDES SWMP Plan and the NPDES Annual Report on the city's website at: <http://www.ci.mukilteo.wa.us/Page.asp?NavID=292>.

### **Public Involvement and Participation 2015 Planned Activities**

The City will continue to accept comments via the City's website, continue with the Stormwater Management Plan Citizen Advisory Committee, and solicit public participation when reviewing rate structures in the upcoming year. The City will continue to offer public involvement opportunities similar to those offered in 2013 and 2014.

## ***Permit Element S5.C.3 - Illicit Discharge Detection and Elimination***

### **Goal**

The goal of the illicit discharge detection and elimination (IDDE) program is to detect, remove, and eliminate illicit discharges and connections found in the municipal stormwater system. This goal is achieved through inspections, education, regulations, and enforcement.

### **Overview**

One of the largest threats to the City's freshwater is illicit discharge from both small and large sources. IDDE is an essential program to protect the water quality of our streams, lakes, and Puget Sound. The permit requires an ongoing program designed to prevent, detect, characterize, trace, and eliminate illicit connections and illicit discharges into the Municipal Separate Storm Sewer System (MS4).

### **Illicit Discharge Detection and Elimination 2015 Planned Activities**

- Maintain maps of the City's stormwater drainage system (MS4).
  - Maintain and update the City's MS4 maps, including points of significance, such as outfalls, waters of the state, stormwater facilities, and all known connections.
  - Field staff will continue to verify the mapped drainage system.
  - Develop a strategy to meet the updated requirement regarding discharge points.
  - Place a concerted effort on verifying private facility locations.
  - Maintain the City's mapbook of the MS4 on the web at <http://www.ci.mukilteo.wa.us/Page.asp?NavID=284>.
- Review the City's regulatory mechanism for IDDE to assure that it is not administratively cumbersome to enforce.
- Continue to implement ongoing program to detect and identify non-stormwater discharges. Response to IDDE is reactive at this time. During 2015, the City will continue to follow the *Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual*. Staff will make recommendations for future capacity needs to fully implement this manual, with a more proactive program.
- Maintain City's Spill Hotline: (425)263-8088
- Update training for municipal staff that may encounter illicit discharges as part of their normal job duties - Conduct in-house trainings for field staff, led by Surface Water Technician.
- Update training for municipal field staff directly involved in spill response – Identify and attend appropriate spill training in identifying hazardous materials and appropriate response levels for staff.
- MS4 Screening. The City will identify a methodology to screen at least 40% of its MS4 for illicit connections and discharges (screening due December 31, 2017).

## ***Permit Element S5.C.4, Control Runoff from New Development, Redevelopment and Construction Sites***

### Goal

Controlling pollutant loads and reducing peak flows from developed sites is a long term goal of Section 5C.4 of the Permit and the City. The program applies to private and public development, including roads. The City will adopt and update requirements which protect water quality.

### Overview

Section 5C.4 of the Permit requires that Mukilteo develop, implement and enforce a program to reduce pollutants in stormwater runoff from new development, redevelopment, and construction site activities. This area of the permit has some of the most significant changes from the 2007 permit term to the current permit term. Among other items addressed below, the Permit intends to make low impact development (LID) the preferred and commonly-used approach to site development.

Controlling runoff from developed properties is necessary to reduce peak flow flooding, pollutant loading, and other negative freshwater impacts. By implementing BMPs, developed properties can reduce their impact on water quality, and help protect the City's watersheds, including Puget Sound. Ongoing maintenance of permanent stormwater facilities is critical in meeting this goal. To this end, stormwater facilities permitted since July 29, 2009 require proof of ongoing maintenance.

### Control Runoff from New Development 2015 Planned Activities

- Continue to implement the (now updated) 2012 Stormwater Management Manual for Western Washington.
- Continue to implement a permitting process that requires site plan review, inspections and enforcement mechanisms for noncompliance
- Update training for staff involved in controlling stormwater runoff in development. Additional planning review and inspectors will attend Certified Erosion and Sediment Control Lead (CESCL) trainings.
- Low Impact Development (LID) standards in City Code. The City will begin reviewing and revising city Code and policies according to the Permit requirements. Staff are scheduled to attend trainings on the process. It is anticipated this work will be completed in-house.
- Private Facility Inspections: The program's first priority is to schedule and inspect the private facilities permitted after July 29, 2009 to ensure maintenance standards are being met. Beyond the Permit requirement, City staff also recommend inspections of smaller or older private facilities within the City's jurisdiction. Inspection reports will document conditions and itemize specific maintenance corrective actions. Notification letters will be sent to the property owners along with the inspection report and a timeline for action.

## ***Permit Element S5.C.5, Municipal Operations and Maintenance***

### **Goal**

The City's goal is to ensure that all of the municipally owned stormwater management facilities are functioning properly, and to prevent or reduce pollutant runoff to the maximum extent practical during the course of City activities. Maintenance activities must be carefully planned, coordinated, and documented to meet the Permit requirements.

### **Overview**

Pollution prevention and good housekeeping are the simplest and least costly methods to help protect stormwater quality from municipal facilities and City staff practices. The City follows the maintenance standards of Chapter 4.6 of Volume V of the *2012 Stormwater Management Manual for Western Washington*, and the *Western Washington Low Impact Development Operation and Maintenance Guidance Document*. Whether or not a facility has individual maintenance standards, all shall be maintained using the prior-referenced documents. The City Public Works facility operates under a Surface Water Pollution Prevention Plan to minimize impacts to surface water from the facility.

### **Municipal Operations and Maintenance 2015 Planned Activities**

- Inspections of all municipally owned or operated stormwater facilities. The City has initiated an annual inspection program of all City owned or operated, permanent stormwater treatment and flow-control facilities, other than catch basins. In 2014, it was recognized that the inspection list was incomplete. These additional facilities are currently being inspected and added to the permanent inspection list.
- Spot Checks. Stormwater public works staff routinely performs spot checks of potentially damaged permanent treatment and flow-control facilities, other than catch basins, after major storm events. In 2015, the City will explore ways to track this work electronically.
- Implement practices, policies and procedures to reduce stormwater impacts associated with runoff from all municipal lands and associated with municipal operations. City staff recommends exploring the following options in 2015
  - Adoption of ESA Regional Roads Maintenance Program Guidelines (or other similar program)
  - Adoption of an Integrated Pest Management Program (or other similar program)
- Update City staff training, as needed
- Inspection and Maintenance Records.
  - The City is implementing a cost-accounting management software system. The Municipal Operations program will use this program, where possible, to better track and record inspections, service requests, and maintenance.
  - The City intends to improve the electronic field forms currently used by staff for recording and retrieving inspection findings. These field forms will tie directly to our GIS system.

- Catch Basin Inspections. The NPDES Permit requires all catch basins to be inspected at least once by August 1, 2017 and every two years thereafter. The city is exploring options to attain that level of inspection frequency.

### ***Permit Element S7, Total Maximum Daily Load Requirement***

There are no water bodies in the City of Mukilteo with a TMDL. Therefore, no activities are planned under this element.

### ***Permit Element S8.A, Monitoring and Assessment***

#### Goal

The goals of monitoring and assessment under the Permit are to: 1) study recommended BMPs to determine their effectiveness after implementation and through time; 2) monitor freshwaters to determine whether the region is achieving its goal of clean water; and 3) to track and record efforts in stopping pollution sources.

#### Overview

The Monitoring portion of the Permit has seen several significant changes for the new Permit term. Section 8 of the Permit covers Status and Trends Monitoring, Effectiveness Studies, and Source Identification and Diagnostic Monitoring (SIDM). In the first two categories, the City was given the option to either conduct its own qualifying Status and Trends Monitoring and/or Effectiveness Studies OR opt in to a regional collective fund. This fund will then be used to complete studies of regional significance. In the case of the SIDM, the City is required to pay into a collective fund.

The Stormwater Work Group (SWG), a subgroup of the Puget Sound Ecosystem Monitoring Program identifies objectives for stormwater monitoring. Working with regional input from several municipalities and the general public, the SWG develops an approach to provide information about stormwater impacts and the effectiveness of stormwater management actions. The SWG makes recommendations to Ecology for directed studies and shares the results with Permittees. For more information, see the SWG webpage at [www.ecy.wa.gov/programs/wq/psmonitoring/swworkgroup.html](http://www.ecy.wa.gov/programs/wq/psmonitoring/swworkgroup.html).

#### Opt In Decisions

For this Permit term, The City of Mukilteo opted to contribute to the Regional fund for the Status and Trends Monitoring and Effectiveness Studies for the Permit term. The City will also contribute to the SIDM for the Permit term. Any additional stormwater monitoring conducted by the City in 2015 will be included in the 2015 Annual Report, as required by the Permit.





## Estimated NPDES Implementation Costs

NPDES Permit Requirements	2013	2014	2015	2016	2017	2018
S5.A SWMP	\$9,000	\$6,952	\$9,548	\$9,835	\$10,130	\$10,433
S5.C.1 Public Education and Outreach	\$9,000	\$19,270	\$19,548	\$19,835	\$20,130	\$20,433
S5.C.2 Public Involvement	\$22,500 <sup>1</sup>	\$23,175 <sup>1</sup>	\$4,774	\$4,917	\$5,065	\$5,217
S5.C.3 Illicit Discharge Detection and Elimination	\$2,250	\$2,317	\$23,870 <sup>2</sup>	\$2,459	\$2,532	\$2,608
S5.C.4 Control Runoff from New Development, Redevelopment and Construction Sites	\$22,500	\$23,175	\$23,870	\$24,586	\$25,324	\$26,084
S5.C.5 Municipal Pollution, Prevention, Operation and Maintenance	\$1,375,284	\$2,996,854 <sup>3</sup>	\$1,872,119	\$1,926,051	\$1,911,934	\$1,948,892
S8.A Monitoring		\$13,878	\$13,878	\$13,878	\$13,878	\$13,878
S9 Reporting	\$2,250	\$2,317	\$2,387	\$2,458	\$2,532	\$2,608
Other requirements for PSWQMP	\$7,313	\$7,532	\$7,759	\$7,991	\$8,231	\$8,478
NOI Preparation					\$7,000	
<b>TOTAL ANNUAL COST</b>	<b>\$1,652,598</b>	<b>\$30,275,735</b>	<b>\$2,192,585</b>	<b>\$2,012,010</b>	<b>\$2,006,756</b>	<b>2,038,631</b>

1. Cost is higher the first two years of the permit due to public involvement and participation in the update to the 2015-2021 Stormwater Management Plan
2. Cost is higher in 2015 for the development of the IDDE Program and re-training of all municipal field staff
3. Cost is higher due to additional operations and maintenance requirements (anticipate some grant monies to cover some of these costs)