

City of Mukilteo
Stormwater Management Program (SWMP)
Plan
January 2016 – December 2016



Prepared by
The City of Mukilteo
11930 Cyrus Way
Mukilteo, WA 98275

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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). The intent of the NPDES Program is to protect and restore water quality in waters of the State so that they can support “beneficial uses,” such as fishing and swimming. Governmental and private entities must obtain an NPDES Permit, and comply with conditions set forth in the Permit, before discharging stormwater or wastewater to surface waters regulated by the Federal and State governments.

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 Annual Stormwater Management Program Plan

This document is the City of Mukilteo’s 2016 Stormwater Management Program (SWMP) Plan, covering the period between January 1, 2016 and December 31, 2016. 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 most current SWMP Plans are posted on the City’s website.

As required, this SWMP Plan follows the Permit’s organization in Section 5.C.

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://mukilteowa.gov/departments/public-works/surface-water/stormwater-maintenance/npdes>

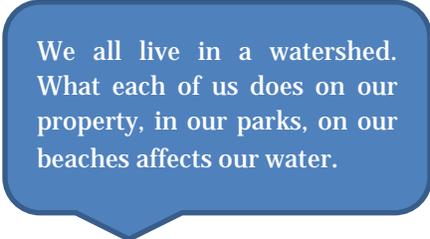
Introduction

The Permit requires a multi-faceted approach in addressing stormwater impacts. The City has goals and planned activities associated with each section of the Permit: 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. Below is a discussion of the City's requirements, goals, and planned activities as they relate to Permit requirements. The City's *Comprehensive Surface Water Management Plan* was a more comprehensive planning effort, completed in 2015. It can be found at <http://mukilteowa.gov/departments/public-works/surface-water/programs-and-planning>.

Permit S5.C.1 - 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

Public education and outreach is designed to reach specific audiences about 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.

The City of Mukilteo has several programs to help residents and business owners understand stormwater pollution as a significant water quality concern. The City is involved in education programs locally and regionally, leveraging other successful outreach campaigns. The City tailors existing programs to fit the needs of our residents and stormwater needs. 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.

Education and Outreach 2016 Planned Activities

To meet the requirement to build general awareness of the general public and businesses in 2016, 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 2016, it is our goal to continue incorporating a stormwater message into the program.

- Continue partnership with the Snohomish County and Snohomish Conservation District, through the District's *Sound Education* programs, 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

In 2016, a group of local volunteers, led by Beach Watchers, will encourage behavior change to users of the City's dog park, by providing education and encouraging participation in a pledge. These volunteers will also deliver information on pet waste to local vet clinics in 2016.

Ongoing messaging to eliminate car wash wastewater from entering the MS4

Provide outreach and education for car washing through the City's website. The City will explore the possibility of implementing a car wash kit loan program in 2016.

Private stormwater system and BMP maintenance

Continue working with private property homeowners and Homeowner's Associations to educate them on private stormwater BMPs on an individual basis. The City anticipates preparing a program outline to provide standard materials and focused outreach to private facility owners in 2016. The roll out of this program is dependent on funding.

Bluff and vegetation management

The City of Mukilteo has many steep slope areas, where uncontrolled stormwater runoff has the potential to exacerbate slide potential. Education on bluff management is a unique focus for the City. In 2016, the City will continue to:

- Participate in the Landslide Working Group to help educate homeowners on bluff and vegetation management.
- Continue partnership with BNSF, WSDOT, Sound Transit and the City of Everett, through the Landslide Hazard Working Group, to explore alternatives to managing stormwater on steep bluffs.

Natural Yard Care

In early 2016, findings from the behavior change study for the Natural Yard Care partnership was released. Mukilteo anticipates continued partnership with Snohomish County in promoting natural yard care, incorporating the findings of the 2015 report. A focus memo was written to this effect. This activity is meant to meet the requirement to affect and document behavior change.

Business Awareness and Outreach

The City anticipates a new partnership with ECOSS, a non-profit organization who provides outreach to businesses and helps them develop a spill response plan. It is anticipated that

ECOSS will reach out to 25 businesses in 2016. Each business participating in the program will receive a no-cost spill kit.

Other 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.
- Build general awareness of engineers, contractors, developers, and land use planners, in 2016 the City will continue to:
 - 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*.

Permit 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

Public involvement is actively sought in the development of the SWMP Plan. Citizens may review and comment on the SWMP by visiting the City of Mukilteo's website at <http://mukilteowa.gov/departments/public-works/surface-water/stormwater-maintenance/npdes/>.

Public Involvement and Participation 2016 Planned Activities

In 2016, the City will begin marking publicly owned storm drains within the City with "Dump No Waste" markers. The City will actively seek public participation through the Beach Watchers program to mark storm drains with "Dump No Waste" markers.

Permit 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

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. 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://mukilteowa.gov/departments/public-works/development-services>

Illicit Discharge Detection and Elimination 2016 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.
- Identify discharge points.
- Place a concerted effort on verifying private facility locations.
- Maintain the City's Stormwater Atlas on the web at <http://archive.ci.mukilteo.wa.us/Page.asp?NavID=284>
- In 2016, the City will begin a process of updating its mapping of stormwater infrastructure, including field verifications of infrastructure. Field data will be cross referenced with as-built drawings. This will be an ongoing effort, but the City expects live data will be made available online by late 2017.

Update the City's regulatory mechanism for IDDE as part of the LID Code update process.

Continue to implement ongoing program to detect and identify non-stormwater discharges.

Response to IDDE is reactive at this time. During 2016, the City will continue to follow the *Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual*. Staff

will be purchasing equipment this year with Stormwater Capacity funds to assist with tracing efforts. Other program items to continue include:

- Maintain City's Spill Hotline: (425)263-8088
- Complete training program outline.
- MS4 Screening. The City is screening least 40% of its MS4 for illicit connections and discharges through annual catch basin and facility inspections (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. 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 2016 Planned Activities

- Continue to implement the *2014 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 review and revise the Municipal Code, other planning documents, and policies according to the Permit requirements. A consultant will be selected to assist with this process.
- Facility Inspections: Continue regularly scheduled facility and BMP inspections.

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*. 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 2016 Planned Activities

- Inspect all municipally owned or operated stormwater facilities. The City has approximately 120 stormwater treatment and flow-control facilities. The City will inspect each of these in 2016 for maintenance needs.
- 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.
- 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 2016:
 - 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.
- Catch Basin Inspections. The City anticipates completing the inspection requirement by the end of 2016.
- The City is planning to upgrade the City's decant facility and add a vector truck to provide more efficient stormwater maintenance operations, beginning in 2016.

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

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.

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. No additional stormwater monitoring is expected in 2016.



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 ¹	\$23,175 ¹	\$4,774	\$4,917	\$5,065	\$5,217
S5.C.3 Illicit Discharge Detection and Elimination	\$2,250	\$2,317	\$23,870 ²	\$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 ³	\$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	
TOTAL ANNUAL COST	\$1,652,598	\$3,095,470	\$2,192,585	\$2,012,010	\$2,006,756	2,038,631

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)