

# City of Mukilteo

## Stormwater Management Program Plan

August 2013 – December 2014



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## **Executive Summary**

The National Pollutant Discharge Elimination System (NPDES) permit program's intent is to protect and restore waters. It is required under the Federal Clean Water Act by the authority of the Federal Environmental Protection Agency (EPA). EPA has delegated its permit authority to Washington State Department of Ecology (DOE). In fulfillment of the Permit, the City has prepared a Stormwater Management Program (SWMP).

The City's SWMP describes the implementation of programs to protect water quality by reducing the discharge of "non-point source" pollutants to the "maximum extent practicable" (MEP) through application of Permit-specified "best management practices" (BMPs) and Washington State's "all known, available, and reasonable methods of prevention, control, and treatment" (AKART) requirements (RCW 90.48.010 and 90.48.520). The practices specified in the Permit are collectively referred to as the Stormwater Management Plan and grouped under the following Program components:

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Control Runoff from New Development, Redevelopment and Construction Sites
5. Municipal Operations and Maintenance
6. Monitoring

### **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 will be focused on several water quality issues and establish a level of basic education concerning watersheds, stormwater, and the water cycle. The City will focus on natural yard care, low impact development techniques, pet waste management and disposal, private stormwater facility maintenance and best management practices (BMPs), and car washing techniques. For the ongoing behavior change programs, at least one targeted audience (residential) in one subject area (natural yard care) will be evaluated to determine the current level of understanding and adoption of targeted behaviors overtime. The results will be used to direct future education and outreach efforts most effectively.

### **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 Agenda's and materials are posted on the City's website at <http://www.ci.mukilteo.wa.us/Page.asp?NavID=302>.

### **Illicit Discharge Detection and Elimination**

Illicit Discharge Detection and Elimination (IDDE) efforts focus on discharges that are not entirely composed of stormwater. Investigations and response actions 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. In addition, our drainage inventory and stormwater facility atlas is available to the public at:

<http://www.ci.mukilteo.wa.us/Page.asp?NavID=284>. The City also has an IDDE hotline for the public to report suspected illicit discharge activities.

### **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 (2012) of the State Department of Ecology's Stormwater Management Manual for Western Washington. In addition, 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.

### **Monitoring**

The city will participate in the regional monitoring program for status and trends monitoring, and the effectiveness monitoring.

### **Annual Update**

This document is revisited annually to provide progress updates and future plans. The desired outcome of these efforts is improved water quality throughout the Puget Sound for the benefit of all of its citizens.

## Introduction

The National Pollutant Discharge Elimination System (NPDES) permit program is a requirement of the Federal Clean Water Act, which is intended to protect and restore our Nation's waters. The Federal Environmental Protection Agency (EPA) has delegated permit authority to State environmental agencies. In Washington, the NPDES delegated permit authority is the Washington State Department of Ecology (DOE). The City of Mukilteo must comply with the Phase II Municipal Stormwater Permit requirements issued by DOE.

The permit allows discharge of stormwater runoff from municipal drainage systems into the State's water bodies (e.g., streams, rivers, lakes, and wetlands) as long as municipalities implement programs to protect water quality by reducing the discharge of "non-point source" pollutants to the "maximum extent practicable" (MEP) through application of "all known and reasonable treatment" (AKART) "best management practices" (BMP).

The permit required each municipality to prepare a Stormwater Management Program (SWMP) Plan that describes the actions and activities comprising components listed in the permit to reduce the discharge of pollutants from their Municipal Separate Stormwater System (MS4) and to protect water quality.

The practices specified in the permit are collectively referred to as the Stormwater Management Program (SWMP) Plan and grouped together under the following Program components as summarized in the previous section:

1. Public Education and Outreach
2. Public Involvement
3. Illicit Discharge Detection and Elimination
4. Control Runoff from New Development, Redevelopment and Construction Sites
5. Municipal Pollution, Prevention, Operation and Maintenance
6. Monitoring

The permit requires the City to report annually on progress in permit implementation for the prior year, this must be posted online by May 31<sup>st</sup>. The permit also requires submittal of documentation that describes proposed program activities for the coming year. Implementation of various permit conditions is phased throughout the five-year permit term from August 1, 2013 to July 31, 2018. The permit will be revised and reissued at the end of this period. As of December 31, 2013, the City of Mukilteo meets the initial permit requirements.

This plan is the City's SWMP compliance document. The remainder of this 2013 – 2014 SWMP Plan describes actions Mukilteo will take to demonstrate the City's understanding of and commitment to fully meeting the regulatory requirements of this Permit. The SWMP is a dynamic document that will be updated on an annual basis and will be integral to our permit compliance.

## 1. Public Education and Outreach

### Per Permit Element S5.C.1

Many stormwater issues are caused by the everyday actions of people that live in or visit our watersheds. The goal of public education and outreach is to reduce or eliminate behaviors and practices that cause or contribute to impaired watershed areas. In addition, it is to encourage the public to participate in stewardship activities. The City implements education both locally and regionally.

The minimum measures are:

- Provide an education and outreach program that targets specific audiences including the general public, businesses, homeowners, landscapers, property managers, engineers, contractors, developers, and City employees including review staff and land use planners.
- The education and outreach program will aim to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts.
- Measure the understanding and adoption of the targeted behaviors the City is trying to reduce or eliminate in at least one target audience in at least one subject area. Use this information to improve the education and outreach program.
- Track and maintain records of public education and outreach activities.
- Create stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities such as stream teams, storm drain marking, volunteer monitoring, riparian plantings and education activities.

#### Goal

The goal of the education and outreach program is to reduce or eliminate behaviors and practices that cause or contribute to adverse surface and stormwater impacts to our watersheds.

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 has chosen to use a variety of different methods to educate and change behavior patterns within the residential and business community. These methods and programs originated from successful Phase I and II Permittee implementation efforts, as the City of Mukilteo lacks sufficient funding to field new pilot programs. The City has tailored the existing programs to implement education and outreach within our jurisdiction based on the results of the Stormwater Community Research Report (March 2010). In addition, we have partnered with Snohomish County Health Department, Snohomish County, Snohomish Conservation District, Pierce County, Burlington Northern Santa Fe (BNSF) Railway, Washington Department of Transportation (WSDOT), Sound Transit, and neighboring municipalities. The current emphasis areas for general awareness include:

- General public and Businesses
  - 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
- Engineers, contractors, developers and land use planners
  - Low impact development techniques
  - Stormwater treatment and flow control BMPs
  - Technical standards for stormwater site and erosion control plans

The current emphasis areas for effective behavior change are:

- General public and Businesses
  - Use and storage of car washing and other soap products
  - Prevention of illicit discharge
- Residents, landscapers and property managers/owners
  - Pet waste management and disposal
  - Car washing
  - Natural yard care
  - Bluff and vegetation management
  - Private stormwater system maintenance and BMPs

The City has partnered 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.

The City has partnered with Snohomish County and neighboring municipalities to measure residents understanding and adoption of natural yard care techniques. The partnership will allow for sub-regional evaluation, fielding, and refinement to reduce program cost. The City will use the data received to direct education and outreach resources more effectively.

The City has partnered with BSNF, WSDOT, Sound Transit and the City of Everett to provide materials and open houses to educate residents on bluff and vegetation management, and private stormwater system maintenance and BMPs.

The long term goals for each emphasis topic are planned as follows:



**Table 1.1 Schedule for Education and Outreach**

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

#### Plans for Program Activities in 2014

The City plans to continue work on stormwater public education and outreach at a level commensurate with the 2013 efforts building on systems and procedures developed throughout the first permit cycle.

These include:

- Encouraging residents, teachers, and students to participate in activities such as natural yard care, use of low impact techniques, storm drain marking, riparian plantings and education activities.
- Measure residents understanding and adoption of natural yard care techniques.
- Outreach and education for Pet Waste Management and Disposal through articles in the Quarterly Newsletter, giving away pet waste bags at City Hall, National Night Out, Touch a Truck, LID Workshops, etc.
- Outreach and education for Car Washing through articles and advertisements in the Quarterly Newsletter.
- Participation in the Don't Drip and Drive Campaign.
- Participation in Puget Sound Starts Here Campaign, add a link on the City website directing residents to go to [www.pugetsoundstartshere.org](http://www.pugetsoundstartshere.org).
- Continue working with private property homeowner's and Homeowner's Associations to educate them on private stormwater BMPs.
- Participation in the Landslide Working Group to help educate homeowners on bluff and vegetation management.
- Educating engineers and contractors regarding BMPs for stormwater treatment, flow control, and erosion and sediment control.

## **2. Public Involvement and Participation**

### **Per Permit Element S5.C.2**

Public involvement increases understanding of local water quality issues and creates a sense of responsibility for the health of the watersheds located within the City of Mukilteo and the surrounding areas.

The City's SWMP shall include ongoing opportunities for public involvement and may include, but not be limited to, advisory councils, public hearings, watershed committees, participation in developing rate-structures or other similar activities. In addition, the City shall comply with all applicable state and local public notice requirements when developing elements of the SWMP.

The minimum performance measures are:

- Provide ongoing opportunities for public involvement to participate in the processes involving the development, implementation and update of the City's SWMP.
- Make the SWMP and Annual Compliance Report available to the public, including posting on the City's website by May 31<sup>st</sup> of each year. Make all other submittals available to the public upon request.

#### Goal

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

#### Overview

The residents of the City of Mukilteo are encouraged to participate in the development of the 2015-2021 Stormwater Management Plan. The City has formed a Stormwater Management Plan Citizen Advisory Committee, and created a website for the update to the plan that includes materials relating to the planning process which can be viewed at <http://www.ci.mukilteo.wa.us/Page.asp?NavID=302>. The City is currently developing a comment form for the website, and accepts comments in public forums such as City Council and Citizen Advisory Committee meetings.

The City will continue to post the SWMP Plan and the annual report on the city's website at: <http://www.ci.mukilteo.wa.us/Page.asp?NavID=292>. All other submittals will be available to the public upon request.

#### Plans for Program Activities in 2014

The City will create a public stormwater comment form on the City 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.

### **3. Illicit Discharge Detection and Elimination**

#### **Per Permit Element S5.C.3**

Illicit discharge detection and elimination (IDDE) is an essential program to protect the water quality in our watersheds, and surface and stormwater areas. 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).

The minimum performance measures are:

- The mapping of the municipal stormwater system shall continue on an ongoing basis, and will be updated periodically.
- Implement an ordinance that prohibits illicit discharges, and create a program to detect and address illicit discharges. The ordinance shall include escalating enforcement procedures and actions.
- Implement an ongoing program to detect and remove illicit discharges, connections, and improper disposal, including any spills into the municipal separate storm sewers owned or operated by the City.
- Publicize a hotline or other local telephone number for public reporting of spills and other illicit discharges.
- Train staff on proper IDDE response procedures.
- Track all spills, illicit discharges and connections reported to the City and response actions taken, including enforcement actions.

#### Goal

The goal of the IDDE program is to detect, remove, and eliminate illicit discharges into the municipal surface and stormwater system by education, regulations, and enforcement.

#### Overview

The City has developed and begun to implement an ongoing program to detect and remove illicit discharges and connections into the City's surface and stormwater system. A comprehensive GIS mapping system of the City's MS4 is in place and can be viewed on the City's website at <http://www.ci.mukilteo.wa.us/Page.asp?NavID=284>. The map contains all known municipal storm sewer outfalls and receiving waters, and structural stormwater BMP's owned or operated by the City. All known private stormwater facilities are mapped as well. The map is continually being cross checked, refined, and annually updated to reflect new information found in the field.

Through the Mukilteo Municipal Code 13.12.080 the City prohibits non-stormwater illegal discharges, and/or dumping into the City's MS4. The enforcement of all stormwater code provisions, including illicit discharges is provided for in MMC 13.12.310 and penalties are contained in MMC 1.32. Illicit discharges were prohibited in 2009 by Ordinance 1222, which updated the City stormwater regulations to fully reflect the NPDES permit language. The City is active in the enforcement of illicit discharges and continues to respond to incidences.

Over the course of the first permit, the City implemented procedural changes to the IDDE program components as new staff came on board and interdepartmental coordination was established. Currently, City staff from the public works, planning, and engineering departments responds to reports from other staff, agencies, and community members concerning possible illicit discharges or connections. In this regard, the response activities are reactive at this time. During this permit period the City will move towards a more proactive approach, establishing a program for evaluation and assessment which will seek to find potential discharges that need addressing prior to it becoming a problem.

A stormwater hotline number, 425-263-8088 is posted on the City's website at <http://www.ci.mukilteo.wa.us/SectionIndex.asp?SectionID=10>. The City staff records and responds to all calls regarding illicit discharges or illegal spills that are received on the hotline. All valid inquiries are followed up as necessary to resolve the issue. Follow-up actions are tracked and feedback is given to the initiators as well as the Department of Ecology as necessary.

The City established training for the municipal field staff during the first permit term. This training program will continue through this permit, and follow up training will occur as needed to address changes in procedures, techniques, or requirements. City staff who conduct inspections are also CESCL certified. The City currently uses the *Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual*, 2013. This manual was developed for the Department of Ecology to serve as guidance for municipalities in Washington that perform field screening and source tracing.



#### Plans for Program Activities in 2014

The City plans to continue responding to illicit discharges at a commensurate level of effort as in 2013. Beginning in 2015, the City will establish a program for evaluation and assessment of potential IDDE sites.

## **4. Control Runoff from New Development, Redevelopment and Construction Sites**

### **Per Permit Element S5.C.4**

Controlling runoff is a necessary measure to control the quantity and quality of surface and stormwater produced by sites for new development, redevelopment, construction and additions to existing development. By implementing BMPs, these sites contribute to the water quality and protection of the City's watershed areas, including Puget Sound. In addition, retrofitting existing developed sites can lead to increased water quality and decreased water quantity in the stormwater system located downstream of these sites.

The minimum performance measures are:

- Implement an ordinance that addresses runoff from new development, redevelopment, and construction site projects effective no later than December 31, 2016. The following requirements will be included: site planning requirements, BMP selection criteria, BMP design criteria, BMP infeasibility criteria, LID competing needs criteria, and BMP limitations.
- Implement an ordinance which gives legal authority to the City to inspect and enforce maintenance standards for private stormwater facilities that discharge to the City's system.
- Implement a program which includes a permitting process with site plan review, inspection and enforcement capability for both private and public projects using qualified personnel.
- Implement an ordinance and program to verify adequate long-term operation and maintenance (O & M) of stormwater treatment and flow control BMPs/facilities which clearly identifies the party responsible for maintenance and requires inspection of the facilities.
- Incorporate and require LID principles and LID BMPs into their local development-related codes, rules, standards no later than December 31, 2016, and submit a summary of the results of the review and revision process in the annual report no later than March 31, 2017.
- If a Phase I County has selected a watershed in the City's coverage area, the City will participate in the watershed-scale stormwater planning process led by the Phase I County.

### Goal

The City's program goal is to reduce pollutants in surface and stormwater runoff from new development, redevelopment, construction activities, additions to existing development, and private facilities (that trigger the NPDES inspection requirement). The program will apply to private and public development, including roads. The City will adopt requirements, updated as needed, which protects water quality, reduces discharge of pollutants, and satisfies state requirements to apply AKART prior to discharge.

### Overview

On July 20, 2009, the City of Mukilteo City Council adopted the *2005 Stormwater Management Manual for Western Washington or its successors issued by the Washington State Department of Ecology*. The city currently follows the *2012 Stormwater Management Manual for Western Washington*. The manual applies to all construction sites, and meets the technical thresholds in accordance with Appendix 1.

However, a permitting, inspection, and enforcement program has been in place that is more restrictive than the Appendix 1 thresholds. The City requires some form of erosion control on all projects that exceed 120 square feet of impervious surfaces or disturb more than 500 square feet of soil. The City's local requirements will be retained as the City continues to regulate stormwater from smaller sites or at lower thresholds than required. Sites that trigger the Appendix 1 thresholds receive more detailed reporting, increased inspection frequencies, and additional compliance items as necessary to meet the Permit requirements.

The City currently has the legal authority, through the 2009 adoption of Ordinance 1222, which updated the Mukilteo Municipal Code's stormwater regulations, to inspect private facilities. Private facilities are included in Titles: 13.12.090 *Emergency conditions requiring immediate action*, 13.12.100 *Ownership of the stormwater system*, 13.12.280 *Maintenance, repair and operation of the stormwater system*, 13.12.290 *Inspection of private stormwater facilities*, and Title 13.12.310 *Enforcement*. These regulations also clearly identify the party responsible for maintenance on private facilities. Currently the City's private stormwater facility program is in its infancy. The program's first priority is to schedule and inspect the private facilities that trigger the NPDES inspection requirement to ensure maintenance standards are being met. The second priority is to inspect smaller or older private facilities within the City's jurisdiction. Inspection reports document conditions and itemize specific maintenance corrective actions. Notification letters are sent to the property owners along with the inspection report and a timeline for action. Typically, maintenance would be required prior to the next annual inspection however there are circumstances that call for more frequent follow-up inspection and the City will continue to work with the owners until maintenance issues have been resolved.

The City follows the planning process and BMP selection and design criteria outlined in the 2012 Manual. Our permitting process includes site plan review, inspection, and enforcement capability. Copies of the Notice of Intent for construction or industrial activities are provided to project proponents. City databases are used to record permit activity and maintain a record of all inspections and enforcement actions taken by staff.

All permitted developed sites are inspected by qualified Public Works Department Inspectors for proper erosion and sediment controls and appropriate enforcement actions are taken as necessary to ensure compliance. The City's inspection program includes site visits prior to the onset of construction, during construction and post-construction. Verbal warnings are often given during inspections and corrections are made when the inspector is present. When necessary stormwater inspection correction notices are issued listing the items that do not comply with City codes along with the required and/or suggested corrective actions. Stop work orders are issued in cases where non-compliance persists, or if a possible severe water quality or quantity issue will result in the event of a heavy rainfall. The stop work orders remain in effect until additional inspections show compliance. All permitted development sites are inspected upon completion and prior to final approval or occupancy to ensure proper installation of permanent stormwater controls and to verify that a maintenance plan is in place. The City uses an escalating enforcement strategy of corrective warnings, monetary ticketing, and if necessary the case is transferred to the City's legal staff.

The City currently encourages the use of low impact development (LID) practices adopted by City Council on February 31, 2005 through Ordinance 1124, located within the Mukilteo Municipal Code Title 15.16.165 *Low Impact Development Techniques*. The City will begin a review and revision process of requiring LID principles and LID BMP's beginning in 2014 and based on the review will make changes to the current regulations no later than December 31, 2016.

The City will participate in the watershed-scale stormwater planning process if Snohomish County selects a watershed in the City's coverage area. At this time, Snohomish County has not selected a watershed in the City's coverage area.

#### Plans for Program Activities in 2014

The City plans to continue to control runoff at a commensurate level of effort as in 2013, and to begin a review and revision process of LID principles and BMP's. During 2015, the City will create a private stormwater inspection program and begin implementation for all private stormwater systems.





## **5. Municipal Operations and Maintenance**

### **Per Permit Element S5.C.5**

Stormwater runoff contains pollutants that can harm human health, degrade water quality and habitat, and impair ecosystem functions. These pollutants originate from vehicles, businesses, homeowner activities, and municipal activities, and include oil, hydrocarbons, heavy metals, deicers, sediment, pesticides/herbicides, fertilizer, and bacteria. During rain and snow melt events, stormwater runoff may accumulate these pollutants which are then washed into the receiving waters eventually leading to Puget Sound. The City has the responsibility to help prevent this through their municipal operations and maintenance.

Pollution prevention and good housekeeping are the simplest and least costly methods to implement to help protect stormwater quality from municipal facilities. These are integral components to an effective stormwater management policy because it is essential to prevent pollution from entering waterways.

The minimum performance measures are:

- Implement an operations and maintenance program, with the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- Adopt maintenance standards for the municipal separate stormwater system that are at least as protective as those specified in the 2012 Stormwater Management Manual for Western Washington.
- Perform annual inspections of stormwater flow control and treatment facilities.
- Perform spot checks of stormwater treatment and flow control BMPs/facilities after storm events that are greater than 24 hour with a 10 year or greater recurrence interval.
- Inspection of all catch basins and inlets at least once by August 1, 2017, and every two years thereafter.
- Implement practice, policies and procedures to reduce stormwater impacts associated with runoff from municipal operations and maintenance activities.
- Implement an ongoing training program for staff whose job functions may impact stormwater quality and provide follow up training for staff to implement new procedures.
- Prepare Stormwater Pollution Prevention Plans (SWPPPs) for all heavy equipment maintenance or storage yards identified for year-round facilities or yards, and material storage facilities owned or operated by the City.
- Maintain records of inspections and maintenance or repair activities.

#### 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. Maintenance activities must be carefully planned, coordinated, and documented to meet the requirements of the permit, avoid duplication, and make the best use of limited staff time and resources.

### Overview

The City shall follow 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 minimally maintained using the prior-referenced documents.

The purpose of the maintenance standard is to determine if maintenance is required. The standard is not a measure of a facility's required condition at all times between inspections. Exceeding the maintenance standard between inspections and/or maintenance is not a Permit violation. Unless there are circumstances beyond the City's control, when an inspection identifies an exceedance of the maintenance standard, maintenance shall be performed:

- Within one year for typical maintenance facilities, except catch basins.
- Within six months for catch basins.
- Within nine months for maintenance requiring re-vegetation.
- Within two years for maintenance that requires capital construction of less than \$25,000.

The above standards are annually attained. To ensure achievement, the program evaluates performance through the use of the NPDES Phase II Annual Report. An important component to successful tracking of performance is the use of an asset management software database. The Public Works/Engineering department anticipates acquiring a software program to ensure that needed work is performed in a timely manner and easily tracked.

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. Stormwater public works staff routinely performs spot checks of potentially damaged permanent treatment and flow-control facilities, other than catch basins, after major (greater than 24-hour/10-year recurrence interval rainfall) storm events. If spot checks indicate widespread damage and/or maintenance needs, inspections are performed on all stormwater treatment and flow-control facilities that may be affected. Maintenance is scheduled when a facility exceeds the applicable maintenance standards, based on the results of the inspections, and corrective actions are executed as soon as practical. The City maintains over 100 facilities including detention ponds, vaults, swales, and bio-swales.

All known catch basins and inlets owned or operated by the City have been recently entered into a GIS program that will track inspections, needed repairs, and when a required inspection is needed. The City previously used paper documentation and handwritten maps showing areas serviced. The NPDES Permit now 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 for catch basins to meet permit compliance.

The city may inspect catch basins on a circuit basis, whereby a sampling of catch basins and inlets within each circuit is inspected to identify maintenance needs. Emphasis includes inspection of the catch basin immediately upstream of any system outfall. Stormwater public works staff will clean all catch basins within a circuit at one time if the inspection sampling indicates cleaning is needed to comply with the maintenance standards established. As an alternative to inspecting catch basins within a circuit, the City may at times inspect all catch basins, cleaning only those catch basins where cleaning is needed to comply with maintenance standards. Compliance with the inspection requirements shall be determined by the presence of an established inspection program designed to inspect all sites, and achieving inspection of 95 percent of all sites. There are approximately 10,000 catch basins entered into the GIS system, some of which are privately owned catch basins.

The City also has a street sweeper that provides two primary benefits. The more obvious benefit is the collection and removal of paper, leaves, and other visible debris that collect in the gutters. This debris can block storm water facilities, causing localized flooding during heavy rains. An equally important, but less visible benefit is the removal of metal particles and other hazardous waste products left by passing vehicles. Sweeping up these pollutants before they enter our waterways is one of the most effective source control measures the City has.

The City will develop and implement practice, policies and procedures to reduce stormwater impacts associated with runoff from municipal operations and maintenance activities. The City has not fully implemented practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads or highways owned or maintained by the City. Currently, the City performs the following:

- Pipe cleaning
- Cleaning of culverts that convey stormwater in ditch systems
- Ditch maintenance
- Street cleaning
- Road repair and resurfacing, including pavement grinding
- Snow and ice control
- Pavement striping maintenance
- Maintaining roadside areas, including vegetation management
- Dust control

The City has established and implemented policies and procedures to reduce pollutants in discharges from all City owned or maintained lands, including: parks, open space, road right of way, maintenance yards, and stormwater treatment and flow control facilities. These policies and procedures address, but are not limited to:

- Application of fertilizer, pesticides, and herbicides including the development of nutrient management and integrated pest management plans
- Sediment and erosion control
- Landscape maintenance and vegetation disposal
- Trash management
- Building exterior cleaning and maintenance

The City developed and implemented an ongoing training program for employees whose construction, operations, or maintenance job functions may impact stormwater quality. The training program addresses the importance of protecting water quality, operation and maintenance standards, inspection procedures, permit requirements, selecting appropriate BMPs, ways to perform job activities to prevent or minimize impacts to water quality, and procedures for reporting water quality concerns, including potential illicit discharges. Follow-up training is periodically provided as needed.

A Stormwater Pollution Prevention Plan (SWPPP) has been developed for the Public Works Shop. City public works staff performs internal site inspections of operations facilities to ensure that proper good housekeeping practices are being followed.

The City will keep records of inspections, maintenance, and repair activities conducted by the Public Works department.

#### Plans for Program Activities in 2014

The city plans to continue to implement pollution prevention and maintenance for municipal operations at a commensurate level of effort as in 2013. In addition, the City will create an inspection program in 2014 for implementation beginning in 2015.



## 6. Monitoring

### Per Permit Element S8.A

The City understands the primary goal of the NPDES Permit is to reduce discharges of pollutants to the maximum extent practicable and to protect water quality. The NPDES Permit allows Phase II jurisdictions to opt into a regional monitoring program. Rather than conducting an individual monitoring effort, the City can elect to pay into the regional monitoring group. The regional monitoring and assessment is broken out into three categories:

1. Status and Trends
2. Stormwater Management Program Effectiveness
3. Source Identification and Diagnostics

The City has chosen to pay into all three of the regional monitoring group's program elements. However, the City may conduct water quality testing on an as needed basis in determining possible pollutants.



## 7. NPDES Implementation Costs

NPDES II Requirements	2013 Permit Year 1	2014 Permit Year 2	2015 Permit Year 3	2016 Permit Year 4	2017 Permit Year 5	2018 Permit Year 6
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	

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 grants received for various projects