

City of Sumner

Stormwater Management Program



February 2010

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1. INTRODUCTION

The National Pollutant Discharge Elimination System (NPDES) permit program is a requirement of the federal Clean Water Act. The permit was initiated to protect water quality through detection and elimination of pollutant discharges. The federal Environmental Protection Agency (EPA) has delegated permit authority to state environmental agencies towards developing, implementing and enforcing stormwater regulations and policies. In Washington, the NPDES-delegated permit authority is the Washington State Department of Ecology (Ecology).

This document was prepared for the City of Sumner to meet the requirements for a Stormwater Management Program (SWMP) as required by the NPDES Phase II permit issued by Ecology. The SWMP was developed to outline the reduction of pollutant discharges from the City's Municipal Separate Storm Sewer System (MS4).

The overall purpose of this program is to protect water quality by reducing pollutant discharges to the maximum extent possible (MEP). This will be done through the application of Best Management Practices (BMP's) and compliance with the Washington State's All Known and Reasonable Treatment (AKART) requirements where applicable in the major divisions of the NPDES Permit listed below:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Controlling Runoff from New Development, Redevelopment and Construction Sites
- Pollution Prevention and Operation and Maintenance for Municipal Operations

The Permit requires a report annually, by March 31st of the following year. The SWMP document describes the permit requirements and previous year's activities as well as a summary of potential plans based on future requirements of the Permit in the forthcoming years. An updated SWMP is required with each years report.

2. NPDES PHASE II PROGRAM COMPONENTS

Sumner is defined as a Phase II community by the Washington State Department of Ecology (DOE), and therefore, is required to comply with the requirements of the Phase II National Pollution Discharge Elimination System Stormwater (NPDES) Permit. Phase II communities are those that:

- Own and operate a storm drain system.
- Discharge to surface waters.
- Are located in urbanized areas.
- Have a population of more than 1,000.

Phase II communities were required to complete an NPDES Phase II Stormwater Permit Application and submit to DOE by March 10, 2003. The NPDES Phase II Permit (Permit) was issued to Sumner on January 17, 2007 and went into effect on February 16, 2007. The Permit, as it stands now, expires on February 15, 2012.

The program divisions listed in the Permit are as follows:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Controlling Runoff from New Development, Redevelopment and Construction Sites
- Pollution Prevention and Operation and Maintenance for Municipal Operations

These program component requirements, how the City of Sumner is currently addressing requirements and plans to address these requirements in the future, are discussed in greater detail in the sections below. In general, the City of Sumner has activities and programs in place that meet current NPDES Phase II Permit requirements. As future requirements are introduced, the City will need to develop and implement more programs to manage current specifications and demands.

2.1 PUBLIC EDUCATION AND OUTREACH

2.1.1 *Permit Requirements*

This component aims to implement a public education program to distribute educational materials to the community and conduct outreach activities concerning the impacts of stormwater discharges on water bodies. These materials can be distributed in an assortment of ways including but not limited to: online postings, newsletters, posters and brochures.

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An additional part of this program includes informative steps the public can take to reduce pollutants in stormwater runoff. The education program will target a variety of groups including: residents; businesses; industries; elected officials; policy makers; planning staff and other employees of the City, in an effort to contact and inform those most likely to impact stormwater.

To ensure that the program is successful, a measurement of the behaviors and understanding of water quality was recorded after a survey was administered to the citizens of Sumner. The information and results provided, will be used as a basis to guide future public education and outreach programs

2.1.2 Current Activities

The City of Sumner has a public education program in place. Current Sumner policy requires that stormwater control facilities, serving other than single-family residential developments, be owned and maintained by the homeowners' association, property owner or other designee. The developer is required to execute and record an *Agreement to Maintain Stormwater Facilities and to Implement a Pollution Source Control Plan* in instances where the City will not assume ownership and maintenance of a stormwater facility.

Also, the requirements of the Sumner Municipal Code mandate that BMP's must be installed and complete before permits are issued so that all construction at new commercial operations are required to include basic water quality pollution prevention of the facility. In addition to mandatory stormwater education for commercial employees, the City encourages high customer volume businesses to display water quality practice informational brochures.

Other educational material such as brochures on lawn and yard care has been posted on the City's website or in the City's Community Connection Newsletter.

2.1.3 Future Activities

As a part of the ongoing requirements of the NPDES Permit, the City has fabricated an Education/Outreach Program list of innovative methods and approaches in continuing to educate the community of Sumner on the topic of water quality.

This list contains several simple means towards changing detrimental behaviors, those of which include: online posting of local facilities that recycle hazardous materials like paint, oil and fluorescent light bulbs, clearly distinguishing the environmental hazards between materials that go down the sink (sewer facilities) and those that are washed down the storm drains, and creating posters that can be placed around the City. To avoid creating large quantities of reading material, there are also a couple activities for the community to participate in. A River Clean-Up is being organized in partnership with Trout Unlimited. In recognition of Earth Day a clean-up week will be organized to accept items such as paper, appliances and paint disposal. Along with this program will be the promotion and advertising of a new motto: "Only Rain Goes Down the Drain".

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Stormwater Activities Schedule

Date	Event	Location
April 17, 2010	River Clean –Up	Puyallup River/ Mama Stortini’s
April 24, 2010	Paper Shredding	McLendon’s Hardware Store

2.2 PUBLIC INVOLVEMENT AND PARTICIPATION

2.2.1 *Permit Requirements*

This program component requires that the City of Sumner develop a public involvement and participation program that complies with state and local public notice requirements. The City of Sumner currently participates in various groups and organizations pertaining to the importance of water quality and future issues. The City also has a program available for the public to partake in the development and formation of this SWMP.

2.2.2 Current Activities

The City of Sumner has a public involvement and participation program in place that meets requirements of this program component.

The City is a leading member of the Puyallup River Watershed Council (PRWC). This group works to coordinate water quality programs and activities in the Puyallup River basin.

The City is also an active member of the South Puget Sound Phase II Coordinator’s Group. This organization meets bi-monthly to discuss stormwater related issues and address methods of compliance regarding NPDES Permit deadlines.

Recently, the City has become aware of a local caucus group and plans to continue involvement with this association.

In addition to involvement in the PRWC, the South Puget Sound Phase II Coordinator’s Group, and the local caucus group, the City has Sumner Municipal Code (SMC’s) stormwater regulations require that all industrial and commercial sites paint or emboss “DUMP NO WASTE – DRAINS TO STREAM” adjacent to all storm drain inlets. Sumner also has a public involvement and participation activity for car washes. The City has implemented the use of a catch basin inserts designed to collect water from car washes so that it can be pumped into the sanitary sewer system. The goal of this catch basin insert is to eliminate the flow of water containing soap and other contaminants into the storm sewer system and educate the public on why this water needs to go to the sanitary sewer system. There is also an informational handout for this activity in Appendix A.

The public will have opportunities to aid in the development of the City's SWMP through an online survey. Citizens are encouraged through the Sumner Community Connection Newsletter to go online, read the SWMP and complete the survey with commentary. The SWMP, annual report(s) and other submittals are made available to the public on our City website. Comments will be addressed accordingly.

2.2.3 Future Activities

The City will post an updated SWMP and annual report on its website (www.ci.sumner.wa.us) by March 31st of each year. Any other submittals required by the Permit will also be posted as necessary on the website. The public will continue to have the opportunity to comment on the SWMP by means of the online survey. The City also hosts several council meetings for which the public can attend and voice their opinions.

Active involvement with the various groups and organizations as well as coordination between municipal departments will continue in support of protecting water quality. The City of Sumner plans to be a part of the EPA Puget Sound Watershed Management Assistance Grant in collaboration with the City of Puyallup and many other municipalities in the Pierce County region.

2.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION

2.3.1 *Permit Requirements*

Compliance with this program component requires the City to implement and enforce an Illicit Discharge Detection and Elimination (IDDE) program in the City's MS4. Required program elements are as follows:

- Develop a municipal storm sewer system map that includes information on the City's MS4 (e.g. outfalls, receiving waters, connection points, areas that don't discharge to surface water, etc.).
- Effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater, illegal discharges, and dumping into the City's MS4.
- Develop and implement a program to detect and address non-stormwater discharges, spills, illicit connections and illegal dumping into the City's MS4.
- Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper waste disposal.
- Implement procedures for program evaluation and assessment which includes a program to track spills and illicit discharges (both number and type), record inspections made and record any feedback received from public education effort.
- Provide appropriate training to City employees on IDDE into the City's MS4.

2.3.2 Current Activities

The City of Sumner has a municipal storm sewer system base map that is regularly updated by the City to include development and redevelopment projects upon completion and receipt of as-built information. Additional information is periodically provided by Pierce County (due to Interlocal agreement).

The City of Sumner has ordinances and other programs in place that meet requirements for the IDDE component of the Permit. Sumner Municipal Code (SMC) and other programs currently in place concerning illicit discharge control are as follows:

- SMC 13.48.234 Illicit discharge, this code defines of illicit discharge according to the City.
- SMC 13.48.820, Illicit discharges, this code prohibits illicit discharge.
- SMC 13.48.830, Enforcement, this code defines how the City will enforce the codes.
- SMC 13.48.860, Penalty, this code defines how the City will penalize failure to comply with the codes.
- Nonpublic stormwater facility operators are required to execute and record an *Agreement to Maintain Stormwater Facilities and to Implement a Pollution Source Control Plan* as shown in Appendix C.
- Stormwater Pollution Prevention Plans have been developed for Sumner-maintained streets, the Sumner WWTP, and the Sumner Meadows Golf Links. The golf course and WWTP plans state that dry weather surveys will be conducted annually for IDDE.
- Illicit discharges to the Sumner storm system are detected during routine catch basin and stormwater conveyance system maintenance activities. Catch basin and stormwater conveyance cleaning is typically conducted on an as-needed basis.
- Documentation of activities including when inspections take place, times and types of spills, public feedback from education efforts and training for municipal staff has been implemented.

2.3.3 Future Activities

The City will initiate an ongoing program to detect Illicit Discharges and Illicit Connections to the MS4 as well as train staff to document illicit connections and spills. Arrangements are being prepared to send two staff members for IDDE training in the spring of 2010. Staff will also be trained to perform field assessments and visual inspections of high priority outfalls and water bodies in preparation for regulated monitoring of receiving waters and source identification.

The planned activities stated earlier for public education and outreach will include information on IDDE in an effort to decrease the number of IDDE's found throughout the City.

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Newly revised City code addressing issues of Illicit Discharges and Illicit Connections will be enforced by inspectors and staff.

A report will be created to recognize efforts made in IDDE public education.

The City will continue to develop its map of the MS4 including the locations of all known stormwater outfalls and structural BMP's. Methods for locating and tracking areas with a higher probability for having illicit discharges will be developed. The City will also develop and implement procedures for source identification and proper response when contamination is acknowledged.

2.4 CONTROLLING RUNOFF FROM NEW DEVELOPMENT, REDEVELOPMENT, AND CONSTRUCTION SITES

2.4.1 *Permit Requirements*

Compliance with this program component requires the City to develop, implement, and enforce a program to reduce pollutants in stormwater runoff to the municipal stormwater infrastructure from any new development, redevelopment and construction site activities that result in a land disturbance, development or sale. The minimum elements included in this program component are:

- An ordinance or other regulatory mechanism to address runoff from new development, redevelopment and construction site projects. City codes, ordinances and development specifications may require smaller sites to comply with these requirements as well.
- Develop and implement a permit process with plan review, inspection and enforcement capability including adequate long-term operation and maintenance of the stormwater facilities and BMP's.
- Develop and implement procedures for documenting inspections and enforcement actions.
- Make available copies of the *Notice of Intent for Construction Activity* and *Notice of Intent for Industrial Activity* for representatives of new developments and redevelopments.
- Develop and implement a training program for staff responsible for implementing the program to control stormwater runoff from new development, redevelopment and construction sites including permitting, plan review, construction site inspections and enforcement.

2.4.2 Current Activities

The City of Sumner has adopted the Stormwater Management Manual for Western Washington as well as revised enforceable mechanisms that meet requirements for controlling runoff from new development, redevelopment and construction sites. These enforceable mechanisms currently in place related to this requirement include:

- The *City of Sumner Development Specifications and Standard Details* Chapter 5, Section 5.2 *Standard Specifications* lists and describes all the applicable references for standards that control runoff from new development, redevelopment and construction site activity in the City including the WSDOE *Stormwater Management Manual for Western Washington* (SMMWW); the *Low Impact Development Technical Guidance Manual for Puget Sound*; *WSDOT Standard Specifications for Road, Bridge and Municipal Construction*; *1992 King County Surface Water Design Manual* (KCSWDM) and others.
- The *City of Sumner Development Specifications and Standard Details* Chapter 5, Section 5.3, *Stormwater System Design Requirements* describes the process that new development, redevelopment and construction sites must go through prior to approval and acceptance from the City. Also included in Section 5.6 *Maintenance Responsibilities* are requirements for an *Agreement to Maintain Stormwater Facilities and to Implement a Pollution Source Control Plan*. This agreement is shown in Appendix C.
- SMC 16.04 requires public comment for projects subject to SEPA requirements. SMC 18.56 requires public comment during a Land Use Permit application process requiring a Type II, IV, V, VI.a, or VI.b decision.
- Notice of Intent for Construction Activity and Notice of Intent for Industrial Activity are provided to representatives of proposed new development or redevelopment.

Two staff members have attended courses on site plan review and construction using the Stormwater Management Manual for Western Washington 2005.

Maintenance of City owned stormwater facilities is performed annually in order to preserve the quality of water exiting the system and entering the receiving waterways.

2.4.3 Future Activities

The City will enforce newly adopted Sumner Municipal Code and modified Development Specifications and Standard Details in addition to the continuation of recording inspection and enforcement actions.

Scheduled maintenance activities will be performed as planned and records will be updated. Spot checks will be performed as needed and when complaints are phoned in from the Complaint Hotline.

Training of staff members responsible for regulating requirements of this program component will also be continued throughout the year.

2.5 POLLUTION PREVENTION AND OPERATION AND MAINTENANCE FOR MUNICIPAL OPERATIONS

2.5.1 *Permit Requirements*

This minimum control measure requires that the City develop and implement an operations and maintenance (O&M) program, including a training component, that has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

The minimum elements included in this program component are:

- The City will develop and implement O&M standards for municipal facilities that are as protective, or more protective, than those in Chapter 4 of Volume V of Ecology's 2005 SWMMWW.
- The City will develop an annual inspection program for flow control facilities, and will do spot checks after major storm events for damage.
- The inspection program will include inspection of all catch basins and inlets in the MS4 before the Permit expiration date.
- The inspections will be documented and work done or needed on the stormwater facilities will be noted according to the Permit requirements for reporting.
- The City will develop and implement a program to reduce the stormwater impacts from streets, parking lots, roads, highways and other lands owned, operated or maintained by the City, including road maintenance.
- The City will develop and implement a training program for City employees whose construction, operation and maintenance job functions may impact stormwater quality.
- The City will develop a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance yards and material storage facilities owned or operated by the City that is not required to have coverage under the Industrial Stormwater General Permit.

2.5.2 Current Activities

The City's maintenance standards are typically addressed in the *Agreement to Maintain Stormwater Facilities and to Implement a Pollution Source Control Plan* as shown in Appendix C or in a SWPPP specific to the site. The agreement standards are very similar to those specified in Chapter 4 of Volume V of Ecology's 2005 SWMMWW.

Catch basins are currently inspected with routine maintenance activities. These smaller activities are done on an as-needed basis. However, a complete cleaning of the MS4 system is also performed bi-annually to ensure BMP's are followed.

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Stormwater Pollution Prevention Plans (SWPPPs) were developed for City facilities likely to discharge pollutants to the City stormwater infrastructure. These SWPPP's implement measures to reduce stormwater impacts including pollutant discharges from all the areas owned by the City and implement an on-going training programs for employees that documents the training completed. These facilities include the Sumner wastewater treatment plant (WWTP), the Sumner Meadows Golf Links, and Sumner city streets. The SWPPPs for each City facility contain recommendations for routine pollution prevention, stormwater facility maintenance, stormwater facility inspection schedules, and training related to stormwater pollution prevention. SWPPPs for City facilities are contained in separate documents entitled *City of Sumner Wastewater Treatment Plant Stormwater Pollution Prevention Plan*, *City of Sumner Sumner Meadows Golf Links Stormwater Pollution Prevention Plan*, and *City of Sumner Street Maintenance Stormwater Pollution Prevention Plan*. An *Agreement to Maintain Stormwater Facilities and to Implement a Pollution Source Control Plan* was previously executed for the City Shop.

The City has developed and implemented a plan to inspect of all the catch basins, inlets, stormwater treatment and flow control facilities owned and operated by the City. The plan also includes spot checks on potentially damaged permanent treatment and flow control facilities after major storm events. It also includes documentation of the inspections and work performed or needed on the stormwater facilities.

In addition to catch basins and inlets the City of Sumner has also developed and implemented a program to inspect and maintain all other related facilities such as ponds, oil water separators and grease interceptors.

2.5.3 Future Activities

The City will continue to inspect and maintain facilities as described by the SWPPP's, Maintenance Agreements and in accordance with NPDES regulations established for City owned equipment and structures. Worksheets will be filled out and updated to reflect the current maintenance and operating situation.

Spot checks and annual inspections of the City's Municipal Separated Sewer Stormwater System (MS4) will continue as scheduled.

2.6 MONITORING

Phase II NPDES require municipalities to obtain an NPDES permit and to develop a stormwater management program to prevent harmful pollutants from reaching local water bodies. The current Permit cycle does not require any water quality monitoring unless it is pursuant to a TMDL requirement or part of the IDDE program. However, in anticipation of the subsequent 2012 NPDES Permit the City has established a Groundwater and Stream Low Flow Monitoring program.

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This monitoring program consists of 12 shallow groundwater monitoring wells and 4 stream gauges. The groundwater monitoring wells measure the depth of the groundwater and record the data using data loggers. The stream gauges located in Salmon Creek, Middle Creek and Milwaukee Ditch (2) measure depth and velocity of the flow and record using data loggers as well. The goal of this monitoring is to estimate groundwater gradients within the White River Valley to assess whether development has an effect on groundwater flow patterns and stream base flows.

The City is also starting another monitoring program. This monitoring program has been established to track stormwater runoff from a small LID in Sumner. The equipment purchased in 2007 included a rain gauge, soil saturation meter, weir and the related telemetry and controls. The runoff station was installed in 2008 and has then been programmed to record data on the amount of water infiltrated while taking the other current conditions into account. Data from this has been collected and is in the process of being converted and formatted to better understand the results of LID implementation.

3. CONCLUSION

The City of Sumner has met all the minimum requirements for the initial reporting period. The City has an established stormwater utility that is and will continue to be a funding source for stormwater facilities improvements and permit requirements. There are many things that the City is doing and has been doing that line up with Permit requirements and in the coming years there are many more programs to develop and implement.

The Public Education and Outreach component has a solid agreement in place for maintaining stormwater facilities and pollution control plans. In the coming year the City will need to develop and distribute more educational materials to target audiences listed in the Permit. The City also needs to continue documenting the progress of the behaviors of the targeted audiences and compare the results with those from the administered survey.

The City is actively participating in several watershed groups as part of their Public Involvement and Participation component. This relationship should continue and involve local residents in the development of this SWMP document. The City also needs to continue to paint or emboss “Dump No Waste – Drains to Stream” near all stormwater inlets.

The City has a good start on the IDDE program. The MS4 map includes the City’s existing infrastructure and will continue to develop as more information is gathered. The SMC’s clearly states how to deal with IDDE. More documentation on the inspections, spills, feedback and training needs to take place to meet the Permit requirements in the coming years.

The newly revised *City of Sumner Development Specifications and Standard Details* and the SMC now reflect the requirements for Controlling Runoff from New Development, Redevelopment and Construction Sites. These modifications will bring the City standards into alignment with many future requirements of the Permit. Additional work will be needed on inspection and enforcement actions and training for City staff according to the Permit requirements.

The SWPPP’s created for street maintenance, Sumner Meadows Golf Links and the wastewater treatment plant have established most of the minimal requirements for Pollution Prevention and Operation and Maintenance for Municipal Operations. The City shops operated on an *Agreement to Maintain Stormwater Facilities and to Implement a Pollution Source Control Plan*. This may need to be developed into a SWPPP in the future.

The City’s monitoring programs are gathering a substantial amount of information about groundwater levels in the area near Sumner. This information will need to be analyzed to see if any conclusions can be made for the BMP’s implemented in the City.