

2014 Stormwater Management Program (SWMP) for

City of Woodinville

Prepared for:
City of Woodinville, Washington

Prepared by:
Otak, Inc.
10230 NE Points Drive, Suite 400
Kirkland, WA 98033
Otak Project No. 31948L



May 2014

TABLE OF CONTENTS

- 1. **INTRODUCTION** 1
 - 1.1 Overview and Background 1
 - 1.2 Distribution of Responsibilities 2
 - 1.3 Document Organization 2
 - 1.4 Additional Stormwater Activities 2

- 2. **PUBLIC EDUCATION AND OUTREACH** 4
 - 2.1 Permit Requirements 4
 - 2.2 Programs and Activities 4
 - 2.3 Planned Activities 5
 - 2.4 Lead Department and Support 5

- 3. **PUBLIC INVOLVEMENT** 6
 - 3.1 Permit Requirements 6
 - 3.2 Programs and Activities 6
 - 3.3 Planned Activities 6
 - 3.4 Lead Department and Support 6

- 4. **ILLICIT DISCHARGE DETECTION AND ELIMINATION** 7
 - 4.1 Permit Requirements 7
 - 4.2 Programs and Activities 7
 - 4.3 Planned Activities 8
 - 4.4 Lead Department and Support 8

- 5. **CONTROLLING RUNOFF FROM NEW DEVELOPMENT, REDEVELOPMENT AND CONSTRUCTION SITES** 9
 - 5.1 Permit Requirements 9
 - 5.2 Programs and Activities 9
 - 5.3 Planned Activities 10
 - 5.4 Lead Department and Support 10

- 6. **POLLUTION PREVENTION AND OPERATION AND MAINTENANCE FOR MUNICIPAL OPERATIONS** 11
 - 6.1 Permit Requirements 11
 - 6.2 Programs and Activities 11
 - 6.3 Planned Actions 12
 - 6.4 Lead Department and Support 12

- 7. **CONCLUSION** 13

CITY OF WOODINVILLE STORMWATER MANAGEMENT PROGRAM

I. INTRODUCTION

I.1 Overview and Background

The *National Pollutant Discharge Elimination System and State Waste Discharge General Permit for Discharges from Small Municipal Separate Storm Sewers in Western Washington*, hereafter referred to as the Phase II Permit, outlines stormwater program activities and implementation milestones that permittees must follow to comply with federal Clean Water Act and the State Water Pollution Control Law. Phase II permittees are expected to develop a Stormwater Management Program (SWMP) that includes the required activities, to implement those activities within the required timeframes of the permit, and to submit annual reports to Ecology by March 31st of each year.

The current Phase II permit was issued by Washington Department of Ecology on August 1, 2012 and became effective on August 1, 2013. The permit covers a five-year period from August 1, 2013 to July 31, 2018. While the actual years of the permit run from February 16 to February 15 of the following year, the reporting requirements cover a calendar year from January 1 to December 31.

The Phase II Permit applies to cities with populations less than 100,000 located within, or partially within, an urbanized area and that operate a municipal separate storm sewer system (MS4) which discharges to a water of Washington State. Urbanized areas are defined as population centers with greater than 50,000 people and densities of at least 1,000 people per square mile, and are based on the 2000 census.

Ecology also can designate entities with a population of 10,000 or more that are located outside of urbanized areas as additional permittees. Designation criteria can include considerations such as discharge to sensitive waters, high population density, high growth or growth potential, contiguity to an urbanized area, significant contribution of pollutants to waters of the US, or ineffective protection of water quality by other programs. The City of Woodinville has been designated by Ecology as a Phase II permittee. At the time of initial permit issuance in 2007, Woodinville's population was below the 10,000 threshold. However, the City is located within the greater Seattle urbanized area with discharges to several high quality surface waters. Consequently, Ecology issued the City a Phase II Permit on January 17, 2007.

Stormwater discharges from the City enter several surface water bodies, including the Sammamish River, Little Bear Creek, Woodin Creek, Derby Creek, and Cold Creek. A portion of the City's drainage system also discharges to Lake Leota.

1.2 Distribution of Responsibilities

Within the City organization, several departments contribute to meeting permit requirements. Currently, the stormwater management program is primarily the responsibility of the Public Works Department. The Public Works Department provides development review, mapping, maintenance (including City parks), spill response, IDDE, inspection, and capital project administration. The Development Services Department provides permitting and planning services. Ongoing support is provided by the Police Department (code enforcement), Executive Department (volunteer coordination, City Manager), and Administrative Services (Stormwater Utility billing, records retention).

1.3 Document Organization

This report comprises written documentation of the City's SWMP that is required to be updated annually. In accordance with the Phase II Permit terms, the SWMP has been designed to reduce the discharge of pollutants to the maximum extent practicable (MEP), meet all known, available, and reasonable methods of prevention, control and treatment (AKART) requirements, and to protect water quality. The following sections describe the actions that Woodinville has, or will, take to comply with the requirements of the Phase II permit.

- Section 2 - Public Education and Outreach, Special Condition S5.C.1
- Section 3 - Public Involvement and Participation, Special Condition S5.C.2
- Section 4 - Illicit Discharge Detection and Elimination (IDDE), Special Condition S5.C.3
- Section 5 - Controlling Runoff from New Development, Redevelopment, and Construction Sites, Special Condition S5.C.4
- Section 6 - Pollution Prevention and Operation and Maintenance for Municipal Operations, Special Condition S5.C.5

Special Conditions S7 (TMDLs), S8 (Monitoring), and S9 (Reporting) also apply to permittees; however, compliance activities for these conditions are not required to be included in the SWMP.

Additional permit conditions, such as Special Conditions S1 through S4 and General Conditions G1 through G20, apply to permittees, though they do not result in specific program activities. The SWMP is not required to document compliance with these activities. These conditions cover topics such as applicability of the Phase II Permit, permit-authorized discharges, and legal guidelines for transferring, revoking, and appealing the permit. Penalties for non-compliance are also included in these conditions.

1.4 Additional Stormwater Activities

In addition to implementing the Phase II Permit, the City focuses resources and staff on other stormwater activities.

In December of 2010, the City completed an update to the Comprehensive Stormwater Management Plan (CSWM). The City's SWM Program is built upon the Phase II Permit. The Phase II Permit required the City to update and expand its SWM Program by the end of 2012. In addition, the City needs to be in compliance with a number of other local, regional and state requirements including the

Puget Sound Partnership Action Agenda (Action Agenda) for cleaning up Puget Sound, the State's Underground Injection Control (UIC) Rule that governs stormwater infiltration, the Endangered Species Act (ESA), and the regional Watershed Resource Inventory Area (WRIA) habitat enhancement plan for the Lake Washington Watershed. These regulations will be integrated with the City's CIP needs and basin planning priorities as the CSWM Plan is implemented and through future updates.

The City is dedicated to stormwater infrastructure improvements. The City updated the CIP projects as part of the CSWM Plan that included projects to treat stormwater and enhance water quality. The City completed construction of the Sammamish River Outfall Retrofit project that provides treatment for 52 acres of commercial land use before discharging into the Sammamish River, a \$1.7 million project. The City funded this project partially through a grant from Ecology. The City is constructing a roadway widening at Woodinville-Duvall Road, started in 2010, that includes providing treatment of roadway runoff through a sand filter before being discharged to Lake Leota, a \$7.7 million construction project). The City completed the Chateau Reach project, which installed a sediment vault to help decrease flooding on SR202 and to decrease the amount of sediment in the local stream. The City is designing the Lake Leota Stormwater Quality Retrofit project, which will reduce pollutants entering Lake Leota from roadway runoff by installing manufactured bioretention systems. The project will be constructed in 2014.

The City tracks stormwater costs through the annual budgeting process and tracks stormwater related expenditures paid for by the Stormwater Utility. This includes cost tracking for the Phase II Permit, as it is a cost to the stormwater program.

2. PUBLIC EDUCATION AND OUTREACH

This section describes the permit requirements, programs, and activities related to Public Education and Outreach.

2.1 Permit Requirements

Special Condition S5.C.1 requires the following:

- Develop and administer an education program to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts and encourage the public to participate in stewardship activities. The program must target residents, businesses, industry, and city employees at all levels.
- Provide an education and outreach program designed to educate target audiences about the stormwater problem and provide specific actions they can follow to minimize the problem.
- Create stewardship opportunities to encourage residents to participate in activities such as stream teams, storm drain marking, volunteer monitoring, riparian plantings and education activities.
- Measure adoption of targeted behaviors for at least one target audience in at least one subject area. Use the resulting measurements to direct outreach resources most effectively and to evaluate changes in adoption of the targeted behaviors.

2.2 Programs and Activities

Woodinville activities in this area include:

- Provides car wash kits to fundraising groups.
- Shows videos on local television stations focused on general stormwater issues that specifically target residential car washing.
- Distributes a brochure addressing stormwater basics at the City information counter.
- Checks out Salmon Education Kits to local schools.
- Adopted King County training and information on 2009 King County Surface Water Design Manual.
- Conducts volunteer planting as part of the Sammamish ReLeaf project.
- Publishes articles in the City newsletter.
- Provides support to Scout troops and other groups in installing *Puget Sound Starts Here* plaques at catch basins.
- Provides a Stormwater Quality webpage that discusses the City's water resources, provides information on the impacts of stormwater runoff, allows reporting of illegal dumping and drainage problems, accepts requests for volunteer storm drain stenciling, and provides links to

stormwater quality documents. The City updates the page on a quarterly basis. See <http://www.ci.woodinville.wa.us/Live/StormWater.asp>.

Past activities include:

Educated winery facilities about proper wine production waste disposal; the liquid portion of which needs to be directed to the sanitary sewer.**2.3 Planned Activities**

Planned activities for 2014 include:

- Continue ongoing efforts noted above.
- Place a rotating selection of nine stormwater videos on the Stormwater Quality webpage.
- The City completed a community survey in 2009 and a follow-up survey in 2011 to determine current understanding of stormwater issues. In 2014, the City will use the results of those surveys to develop a plan for a targeted outreach program and follow-up measurements to be conducted in 2015.

2.4 Lead Department and Support

The Public Works Department leads this section of the program, with support from the Administrative Services and Executive Departments.

3. PUBLIC INVOLVEMENT

This section describes the permit requirements, programs, and activities related to Public Involvement.

3.1 Permit Requirements

Special Condition S5.C.2 of the Permit requires the City to:

- Provide ongoing opportunities for public involvement through advisory boards and commissions, public participation in developing rate structures and budgets, or other similar activities. The public must be able to participate in the decision-making processes involving the development, implementation, and update of the Stormwater Management Program.
- Make the SWMP document and Annual Report available to the public. Post these documents on the City's website.

3.2 Programs and Activities

Woodinville activities in this area include:

- Posts Annual Reports, including attached SWMPs, on the City's website.

Past activities include:

- Completed its Comprehensive Stormwater Management Plan (CSWMP) in December 2010.
- Held neighborhood meetings to receive input on the Lake Leota Stormwater Quality Retrofit project and the Woodinville-Duvall Road Widening project.

3.3 Planned Activities

Planned activities for 2014 include:

- Post the 2014 Stormwater Management Plan on the Stormwater Quality webpage.

3.4 Lead Department and Support

The Public Works Department leads this section of the program, with support from Administrative Services.

4. ILLICIT DISCHARGE DETECTION AND ELIMINATION

This section describes the permit requirements, programs, and activities related to Illicit Discharge Detection and Elimination (IDDE).

4.1 Permit Requirements

Special Condition S5.C.3 of the Permit requires the City to:

- Implement an ongoing program to prevent, detect, characterize, trace, and eliminate illicit discharges, illicit connections, and improper disposal into the MS4.
- Develop a storm sewer system map and update it on an ongoing basis.
- Implement an ordinance to prohibit non-stormwater illicit discharges that includes the following: a compliance strategy with informal compliance actions such as public education and technical assistance with source control and BMP maintenance; escalating enforcement penalties; and an enforcement strategy.
- Implement an ongoing program to detect and identify non-stormwater discharges and illicit connections to the MS4 that includes field screening. Document the field screening method used in the Annual Report.
 - Publicize a hotline or other local telephone number for reporting of spills or other illicit discharges. Track illicit discharge reports and actions taken in response to calls.
 - Provide appropriate training to City field staff on identification and reporting of illicit discharges.
- Implement an ongoing program to address illicit discharges and illicit connections, including procedures for characterizing illicit discharges, tracing the source, and eliminating the discharge through notification, technical assistance, inspections, and escalating enforcement.
- Train staff that are responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges and illicit connections.
- Track and maintain records of the activities conducted to meet the requirements of S5.C.3

4.2 Programs and Activities

Woodinville activities in this area include:

- Maintains a storm sewer map in multiple electronic formats and uses standard operating procedures for keeping the municipal separate storm sewer system map and inventory up-to-date. Stormwater system mapping is complete. The map is corrected based on field verification. New connections are added to the map as they are installed.
- Prohibits illicit discharges through Woodinville Municipal Code chapter 1.07.030(7) and adopts additional codes and standards that address illicit discharges and civil infractions. The City

adopted King County Code 8.12 through City ordinance No. 24, which protects water quality and prohibits discharges to surface waters and illicit connections (WMC 14.06).

- Encourages citizens to report illicit discharges or dumping by phone, in person, or through the City website. The calls or messages are delegated to the appropriate authority for response (maintenance, engineering, construction inspector, or code compliance officer).
- Maintains records of illicit discharges and connections, response actions taken, and enforcement actions using CSR software.
- Operates a phone hot line number where spills and illicit discharge complaints can be reported.
- Conducts annual dry weather field assessments of its outfalls to the Sammamish River.

Past activities include:

- Co-hosted a meeting with the Woodinville Wine Association in 2009 to educate members about the proper disposal of wine production wastes.
- Identified, prioritized, and conducted field assessment activities in 2010 for the following three receiving waters, including visual inspection of outfalls: Sammamish River, Little Bear Creek, and Woodin Creek.
- Provided training to City staff in 2011 on IDDE ordinance and field procedures to identify, report, investigate, characterize, and remove illicit discharges.
- Documented the City's IDDE Program, including procedures for inspection, identification, and enforcement in 2011.
- Sent out a letter in 2013 educating wineries and other businesses on IDDE.
- Responded to one spill and another incident of discharge of chemicals into the storm sewer in 2013; involved the Department of Ecology as appropriate.

4.3 Planned Activities

Planned activities for 2014 include:

- Continue ongoing efforts noted above.

4.4 Lead Department and Support

The Public Works Department and Code Enforcement lead this section of the program, with support from the Executive Department.

5. CONTROLLING RUNOFF FROM NEW DEVELOPMENT, REDEVELOPMENT AND CONSTRUCTION SITES

This section describes the permit requirements, programs, and activities related to Controlling Runoff from New Development, Redevelopment and Construction Sites.

5.1 Permit Requirements

Special Condition S5.C.4 of the Permit requires the City to:

- Implement and enforce a program to reduce pollutants in stormwater runoff that enters the storm sewer system from new development, redevelopment, and construction site activities.
- Adopt and implement a regulatory process with legal authority for plan review, inspection, and enforcement necessary to implement the program in accordance with Permit conditions, including the minimum technical requirements in the 2012 *Stormwater Management Manual for Western Washington*.
- Review, revise and make effective development-related codes, rules, standards, or other enforceable documents to incorporate and require LID BMPs in order to make LID the preferred and commonly-used approach to site development.
- Review and revise other codes, rules, and standards considering the range of issues outlined in *Integrating LID into Local Codes: a Guidebook for Local Governments* (Puget Sound Partnership, 2012) and summarize the results.
- Adopt regulations that include provisions to verify adequate long-term operations and maintenance of stormwater treatment and flow control BMPs and facilities in accordance with Permit conditions, including an annual inspection frequency and/or approved alternative inspection frequency and maintenance standards for private drainage systems as protective as those in Volume V of the 2012 *Stormwater Management Manual for Western Washington*. Inspect all permanent stormwater treatment and flow control BMPs and facilities in new residential developments every six months until 90% of the lots are constructed.
- Make available the Notice of Intent (NOI) for Construction Activity and copies of the NOI for Industrial Activity to representatives of proposed new development and redevelopment.
- Train staff on the new codes, standards, processes and procedures.
- Track all inspections, maintenance and enforcement actions for inclusion in the Annual Report.
- Participate in watershed-scale stormwater planning for Bear Creek watershed in cooperation with King County and for Little Bear Creek watershed in cooperation with Snohomish County.
- Summarize annual activities for the Annual Report; identify any update to Program document.

5.2 Programs and Activities

Woodinville activities in this area include:

- Adopted and uses the 2009 King County Surface Water Design Manual (KCSWDM) to guide stormwater management for new development and redevelopment projects. The 2009 KCSWDM provides provisions to allow non-structural preventive actions and source reduction approaches such as Low Impact Development techniques (LID), and measures to minimize the creation of impervious surfaces and the disturbance of native soils and vegetation.
- Conducts site plan review for sites meeting the thresholds in Appendix 1 of the 2007 Permit.
- Requires and completes construction and stormwater site inspections during pre- and post-construction phases. In 2013, the City performed 257 inspections on 77 sites. No enforcement actions were taken.
- Inspects all active construction sites two times per week.
- Implements a post-construction inspection and enforcement program for public and private stormwater facilities using maintenance requirements consistent with the 2007 NPDES Phase II Permit standards.
 - City staff inspected 111 private facilities in 2013.
 - City staff inspected 69 public facilities in 2013.
- Maintains records of inspections and enforcement actions by staff.
- Discusses NOIs in pre-application meetings with applicants. The NOIs are also available at the Development Services Counter.

Past activities include:

- Provided training to City staff in Erosion Certification in 2008 and 2010.
- Provided training to City staff on the new runoff control ordinance and maintenance standards along with permit review, field inspection, maintenance, and enforcement in 2010 and 2013.

5.3 Planned Activities

Planned activities for 2014 include:

- Continue ongoing activities noted above.
- Create a plan for developing and adopting a grading and erosion control ordinance in 2015 as a precursor to adopting the requirements, limitations and criteria in the 2012 *Stormwater Management Manual for Western Washington* in 2016.

5.4 Lead Department and Support

The Public Works Department leads this section of the program, with support on an as needed basis from Development Services.

6. POLLUTION PREVENTION AND OPERATION AND MAINTENANCE FOR MUNICIPAL OPERATIONS

This section describes the permit requirements, programs, and activities related to Pollution Prevention and Operation and Maintenance for Municipal Operations.

6.1 Permit Requirements

Special Condition S5.C.5 of the Permit requires the following from the City:

- Develop and implement an operations and maintenance (O&M) program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- Establish 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*.
- Conduct inspections and maintenance of stormwater flow control and treatment facilities and catch basins according to required frequencies, unless previous inspection data show that a reduced frequency is justified.
- Implement practices, policies, and procedures to reduce stormwater impacts associated with runoff from all lands, including but not limited to streets, parking lots, roads or highways, building, parks, and open space, owned or maintained by the City.
- Develop and implement an ongoing training program for staff whose job functions may impact stormwater quality. Document the training program.
- Prepare Stormwater Pollution Prevention Plans (SWPPP) for all heavy equipment maintenance or storage yards and material storage facilities owned or operated by the City that are not covered by an Industrial Stormwater General Permit.
- Maintain records of inspection, maintenance, and repair activities conducted by the City.

6.2 Programs and Activities

Woodinville activities in this area include the following:

- Performs annual inspections and maintenance for public water quality and flow control facilities, following the maintenance standards in the 2009 KCSWDM.
- Maintains records of inspections and maintenance activities.
- Implements a rotating catch basin inspection and cleaning program: unless known to require greater frequency of inspection and cleaning, basins are inspected on a 2-year cycle and cleaned on a 4-year cycle.
- Conducts spot checks of 45 locations for drainage problems before and after major storms.
- Implements a road maintenance program meeting the standards of the 2009 KCSWDM.
- Follows a facilities maintenance manual that addresses stormwater issues related to non-roadway maintenance and that includes an Integrated Pest Management Plan.

- Provides periodic O&M training to maintenance staff.
- As needed, updates the SWPPP for the City's heavy equipment maintenance and storage facility.

Past activities include:

- Provided training to all municipal field staff on the BMPs included in the SWPPP.

6.3 Planned Actions

Planned activities for 2014 include:

- Continue ongoing items noted above.
- Begin conducting catch basin cleanings for ¼ of the City on an annual circuit.
- Begin annual catch basin cleaning for facilities with known problems.

6.4 Lead Department and Support

The Public Works Department leads this section of the program, with assistance on an as needed basis from the Parks Department.

7. CONCLUSION

This SWMP has been prepared to demonstrate compliance with the requirements of the NPDES Phase II Permit. This SWMP is a living document that will be updated annually to reflect progress in implementing the stormwater management program components required for compliance with the Phase II Permit.