



WESTERN WASHINGTON PHASE II MUNICIPAL STORMWATER PERMIT

A FEDERAL CLEAN WATER ACT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) AND
WASHINGTON STATE WASTE DISCHARGE GENERAL PERMIT



City of Bellevue, Washington
NPDES ANNUAL REPORT
2015 STORMWATER MANAGEMENT
PROGRAM / 2014 COMPLIANCE REPORT

March 2015



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CITY OF BELLEVUE

2015 STORMWATER MANAGEMENT PROGRAM PLAN

1. INTRODUCTION

1.1 Overview and Background

The National Pollutant Discharge Elimination System (NPDES) permit program is a requirement of the federal Clean Water Act, which is intended to protect water quality and restore waters for “fishable, swimmable” uses. 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 (Ecology). The NPDES permit also implements relevant provisions of Washington State’s Water Pollution Control Law.

Municipalities with a population of more than 100,000 (based on the 1990 census) have been designated as Phase I communities and must comply with Ecology’s Phase I NPDES Municipal Stormwater Permit as operators of large municipal separate storm sewer systems (MS4s). Municipalities with populations of less than 100,000 (based on the 1990 census) have been designated as Phase II communities and must comply with Ecology’s Western Washington Phase II NPDES Municipal Stormwater Permit as operators of small and medium MS4s. More than 80 small and medium cities, including Bellevue and urban portions of 5 counties in western Washington, must comply with the Phase II Permit.

The Permit authorizes the discharge of stormwater runoff from municipal drainage systems into the state’s surface waters (i.e., streams, rivers, lakes, wetlands, etc.) and groundwater as long as municipalities implement Permit-specified “best management practices” (BMPs). These BMPs are intended to protect water quality and reduce the discharge of “non-point source” pollutants to the “maximum extent practicable” (MEP). In addition, BMPs are intended to meet state AKART (all known, available, and reasonable methods of prevention, control, and treatment) waste discharge requirements.

The BMPs specified in the Permit are collectively referred to as the Stormwater Management Program (SWMP or Program) and grouped under the following Program components:

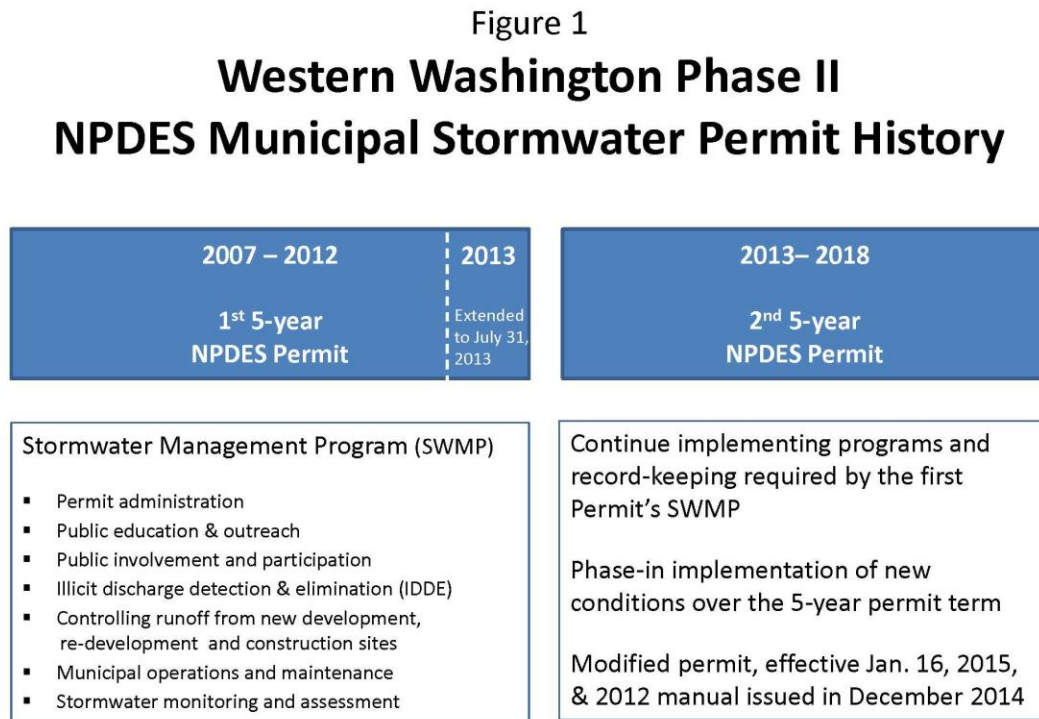
- Public Education and Outreach (E&O)
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination (IDDE)
- Controlling Runoff from New Development, Redevelopment, and Construction Sites
- Municipal Operations and Maintenance (O&M)
- Monitoring and Assessment

As a programmatic permit, the components work together to ensure protection of water quality in our streams, lakes, wetlands and groundwater. In addition, the Permit requires reporting and, if applicable, implementation of waterbody-specific cleanup plans developed by Ecology (aka Total Maximum Daily Loads or TMDLs). To date, Ecology has not developed such plans for Bellevue water bodies.

Permit conditions are phased in over the 5-year Permit term. The Permit requires the City to report annually (March 31 of each year) on progress in program implementation for the prior year (i.e., Compliance Report). The Permit also requires submittal of documentation that describes proposed SWMP activities for the coming year (e.g., the SWMP Plan). Ecology revises and reissues the Permit at the end of 5 years.

1.2 Permit History

Figure 1 illustrates the general history of the Western Washington Phase II Municipal Stormwater Permit.



Ecology issued Washington's first Phase II Municipal Stormwater Permit to Western Washington municipalities in 2007 (January 17, 2007 to February 15, 2012 permit term). Ecology issued it as one general permit with the general permit conditions applicable to all Phase II municipalities in Western Washington, including Bellevue. The Phase II permit was appealed by several parties and the permit was modified June 17, 2009 in response to the state Pollution Control Hearings Board appeal rulings.

In August 2012, Ecology extended the first Permit to July 31, 2013, issued a new 5-year Permit (2013–2018) effective August 1, 2013, and also issued a new 2012 Ecology *Stormwater Management Manual for Western Washington* (2012 Ecology Manual) which contains stormwater requirements for new development, redevelopment and construction sites. The new 2013–2018 Permit retains the first Permit's SWMP structure and phased implementation approach. It continues and builds upon the first Permit's Program requirements by increasing certain Permit requirements and adding new ones.

The Phase II permit was appealed by several parties and Ecology modified the permit and 2012 Ecology Stormwater Management Manual in response to the state Pollution Control Hearing Board appeal rulings. Ecology issued the modified Permit and 2014 Manual in late December 2014. The modified permit is effective January 16, 2015. The bulk of the changes address low impact development technical implementation challenges and the remainder address permit definitions and the lack of notice and a meaningful opportunity to review draft Permit documents.

The modified, 2013–18 Western Washington Phase II Municipal Stormwater Permit and modified 2014 Ecology Stormwater Management Manual are available on Ecology's Web site at:

- <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/permitMod2014.html>

1.3 2013-2018 Permit Implementation Timeline

The new, 2013-2018 Permit requirements are phased in over the course of the 5-year permit term. New and/or increased Permit requirements and key compliance dates are described here and shown in Figure 2.

January 1, 2014 Ongoing

Illicit Discharge Detection and Elimination

- Complete an incident response report, containing permit-specified information, for each illicit discharge or connection found by or reported to the permittee. Beginning with the report due March 31, 2015, compile and submit the incident response reports for the calendar year with the annual compliance report.

March 31st Annually

Stormwater Management Program Administration

- Submit the annual report electronically using Ecology's new Water Quality Permitting Portal (WQWebPortal), beginning with the annual report due March 31, 2015.

August 15th Annually

Monitoring and Assessment

- Pay Bellevue's \$84,647 fee for participating in the collectively funded Regional Stormwater Monitoring Program (RSMP) to Ecology by August 15th annually.

February 2, 2016

Public Education and Outreach

- Measure the understanding and adoption of targeted behaviors from at least one target audience in one subject area and use the results to direct education and outreach resources more effectively.

December 31, 2016

Controlling Runoff from New Development, Redevelopment and Construction Sites

- Adopt new stormwater development regulations (codes and standards) specified in the Permit and the new Ecology Stormwater Management Manual, including vesting requirements and new Low Impact Development (LID) Best Management Practices (BMPs) by December 31, 2016. Implement new plan review, inspection, and escalating enforcement processes and procedures necessary to implement the program in accordance with Permit conditions by December 31, 2016.
- Conduct a review and revision process of citywide land use and development-related policies, codes, and standards or other enforceable documents to implement LID principles that minimize impervious surfaces, native vegetation loss and stormwater runoff by December 31, 2016. The range of issues outlined in *Integrating LID into Local Codes: A Guidebook for Local Governments* (Puget Sound Partnership, 2012) is to be considered.
- Prepare a summary of the LID Principles review and revision process and include the summary in the Annual Report no later than March 31, 2017. The intent of the LID Principles and LID BMP requirements is to make LID the preferred and commonly-used approach to site development.

December 31, 2016

Municipal Operations and Maintenance

- Establish maintenance standards for facilities (private facilities per S5.C.4 and municipal facilities per S5.C.5) that are as protective as or more protective of facility function than those specified in Chapter 4, of Volume V of the 2014 *Stormwater Management Manual for Western Washington*.

August 1, 2017

Municipal Operations and Maintenance

- Inspect all municipal catch basins at least once by August 1, 2017, and every two years thereafter.

December 31, 2017 and Annually

Illicit Discharge Detection and Elimination

- Develop new IDDE field screening procedure and complete field screening for at least 40% of the municipal separate storm sewer system (MS4) by this date; complete 12% annually thereafter.

February 2, 2018

Illicit Discharge Detection and Elimination

- Update municipal storm drainage maps, if necessary, to meet modified permit requirements.
- Revise ordinance or regulatory mechanism to meet requirements of IDDE (Permit Section S5.C.3.b.)

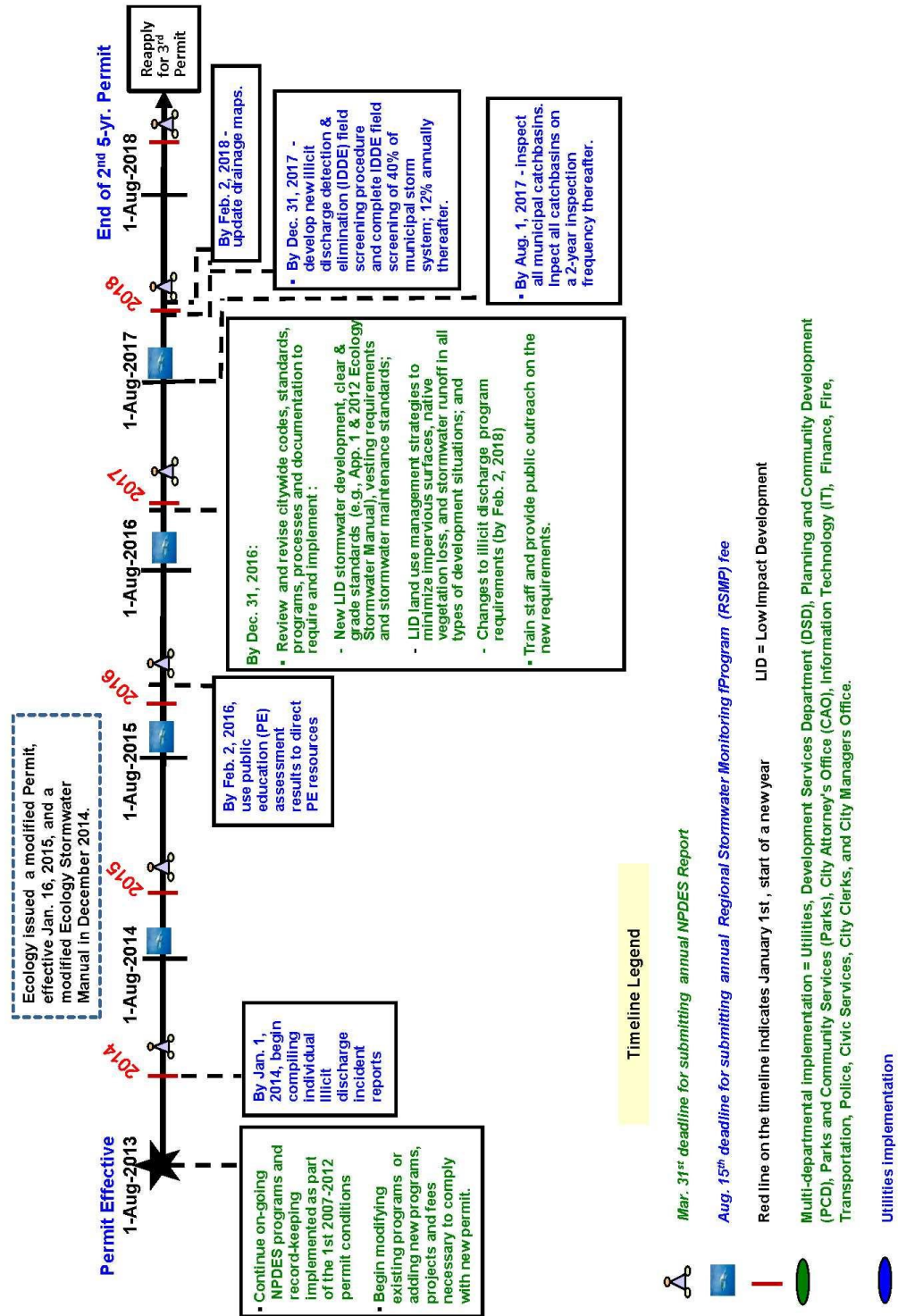
1.4 NPDES Annual Report

As noted above, the Permit requires submittal to Ecology of an Annual Report by March 31 of each year of the Permit term. The NPDES Annual Report consists of the following documents. This is the eighth Report since the first Permit was issued in 2007.

- **SWMP Plan**, which is developed by the City and summarizes the continuing/current and planned citywide Permit implementation activities to assure continued NPDES Permit compliance for the coming year (2015).
 - Appendix A contains acronyms for city departments and Permit and SWMP acronyms and definitions.
 - Appendix B contains the 2014 Compliance Report to which the 2015 SWMP Plan is an attachment.
- **Compliance Report**, which is a specific “fill in the blanks” spreadsheet provided by Ecology and documents the City’s permit compliance activities for the preceding calendar year (2014). The Compliance Report is very prescriptive and is completed administratively by citywide staff at the end of the calendar year. Ecology did not require a 2013 Compliance Report for the first Annual Report submittal under the new Permit because 2013 was a transition year between the first and second Permits. The first Compliance Report under the new Permit is for the 2014 calendar year and will be submitted with the SWMP Plan as part of the 2015 Annual Report submittal.

On December 8, 2014, Ecology informed permittees that, beginning with the report due March 31, 2015, the annual report will be required to be submitted electronically, using Ecology’s new Water Quality Permitting Portal (WQWebPortal).

Figure 2
Five - Year Permit Timeline
for implementation of the 2013 - 2018 NPDES W. WA. Phase II Municipal Stormwater Permit



1.5 Department Responsibilities

The Permit requirements affect departments across the City organization. To encourage collaboration and efficient use of resources, the City has chartered implementation teams for each Permit component. These teams consist of members from affected departments. The affected departments include Utilities, Development Services Department (DSD), Information Technology (IT), Civic Services, Fire, Planning and Community Development (PCD), City Attorney's Office (CAO), Finance, Parks and Community Services (Parks), Transportation (Trans.), Police, City Clerk's Office, and the City Manager's Office (CMO).

Figure 3 illustrates the internal coordination and management structure established by the City to manage implementation of the NPDES Permit.

1.6 2015 SWMP Plan Organization

This SWMP Plan is the City's second Plan submitted under the 2013–18 Permit. The Plan describes the:

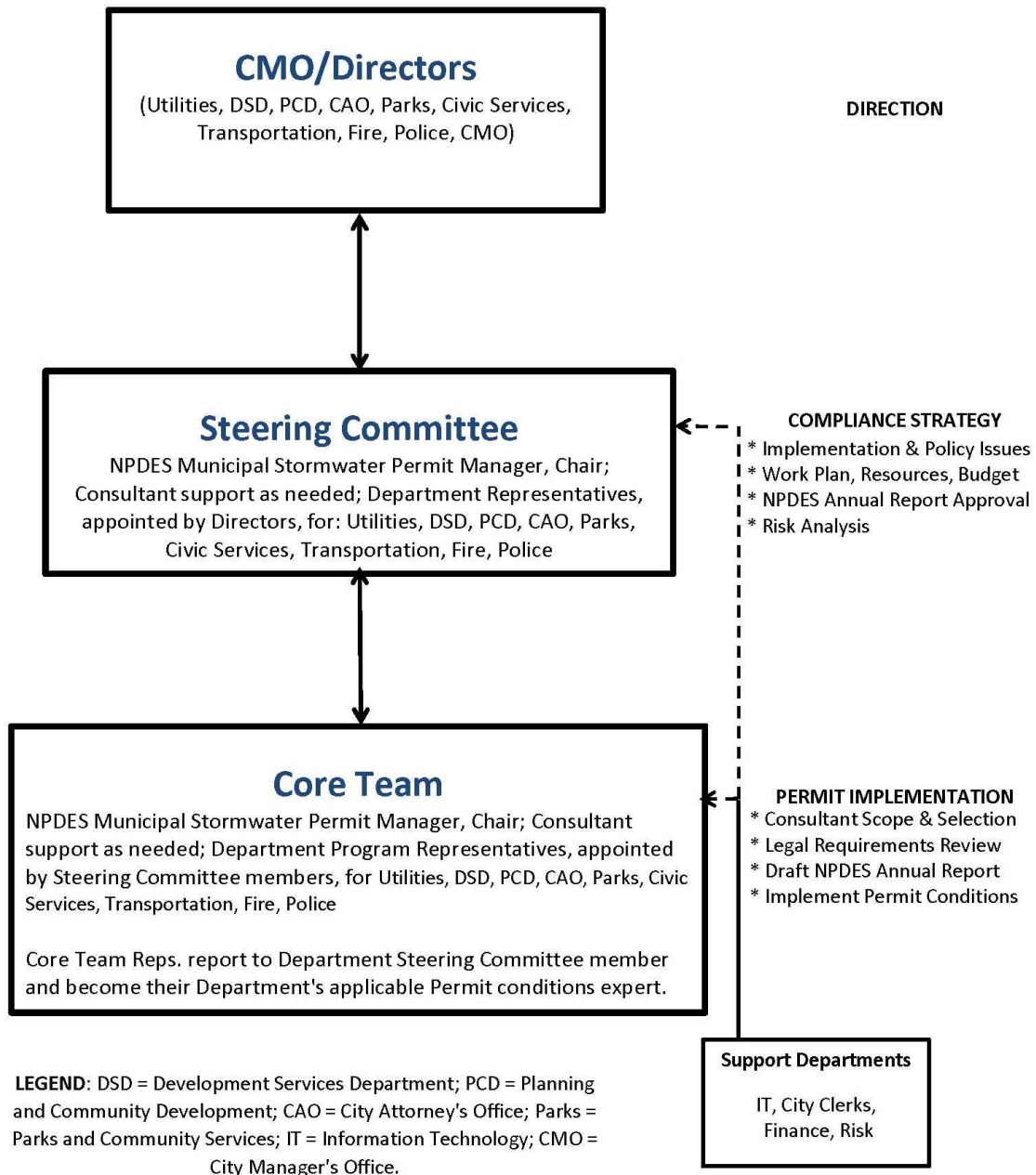
- Permit requirements
- Continuing/current programs and activities
- Planned activities to maintain compliance and implement the increased or new activities required by the 2013-2018 Permit in 2015.

The content in this SWMP Plan is based on Permit requirements and is organized similar to the Permit:

- **Section 2** addresses Permit requirements for administration of the City's SWMP for 2015.
- **Section 3** addresses Permit requirements for Public E&O for 2015.
- **Section 4** addresses Permit requirements for Public Involvement and Participation for 2015.
- **Section 5** addresses Permit requirements for IDDE for 2015.
- **Section 6** addresses Permit requirements for Controlling Runoff from New Development, Redevelopment, and Construction sites for 2015.
- **Section 7** addresses Permit requirements for Municipal O&M for 2015.
- **Section 8** addresses Permit requirements for the Monitoring and Assessment for 2015.

Each section includes a summary of the relevant Permit requirements and a description of continuing/current and planned compliance activities.

Figure 3 **INTERNAL MANAGEMENT STRUCTURE FOR NPDES PERMIT IMPLEMENTATION**



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CITY OF BELLEVUE 2015 STORMWATER MANAGEMENT PROGRAM PLAN

2. STORMWATER MANAGEMENT PROGRAM ADMINISTRATION

This section describes Permit requirements related to Stormwater Management Program Administration, lists the continuing and/or current programs and activities that meet Permit requirements and identifies the planned activities recommended for continued compliance with the new 2013-18 Permit.

2.1 Permit Requirements

The Permit (Section S5.A) requires the City to:

- Develop and implement a SWMP and annually prepare written documentation of the SWMP Plan for the coming year for submittal to Ecology by March 31 of each year. The purpose of a SWMP is to reduce the discharge of pollutants from the municipal stormwater system to the maximum extent practicable, meet state AKART requirements, and protect water quality. The program is to include the actions and activities described in Sections 2 through 8 of this SWMP Plan.
- Submit annual compliance reports (for the previous calendar year) beginning in 2015 to Ecology by March 31 every year. The reports are to summarize SWMP implementation status and present information from assessment and evaluation activities conducted during the reporting period.
- Coordinate among departments within each jurisdiction to eliminate barriers to compliance with the terms of the Permit; include a written description of internal coordination mechanisms in the Annual Report due by March 31, 2015.

2.2 Continuing/Current Activities

The City currently implements activities and programs that meet the Permit requirements. The City will continue to implement these programs and activities as new and/or increased requirements in the 2013-18 Permit are implemented. The current compliance activities associated with the above Permit requirements include:

- The City has created an NPDES implementation group and organizational management structure. The City has defined roles and responsibilities and developed processes and procedures for completing updates to future SWMP Plans and the Annual Compliance Report.
- The City developed training materials and provides ongoing staff training to meet Permit requirements.
- The City developed a Compliance Report database for the first Permit to streamline documentation by staff of citywide compliance activities. The City intends to modify the database for the new Permit once Ecology issues the modified Permit. This is not a Permit requirement but helps the City administer the Permit and document citywide compliance activities in a centralized location.
- The City developed a procedure to estimate NPDES costs.
- The City developed NPDES implementation budget estimates for the City's 2015, 2016 budget process.
- The City continues to refine its NPDES training program, making use of outside training opportunities when available and improving methods to track and document City staff's NPDES Permit-required training.

- The City developed a written description of the internal citywide NPDES coordination mechanisms to be submitted with the 2015 Annual Report. The written description is an attachment to the 2014 Compliance Report.
- The City is on track to comply with Ecology's requirements for submittal of the eighth Annual Report by March 31, 2015.

2.3 Planned Activities

The City has a Stormwater Program Management Administration program but will need to update current efforts in order to efficiently administer the citywide permit and maintain compliance as the new requirements are phased in over the 5-year Permit term (2013-18). Actions recommended for efficient administration and continued compliance include:

- Developing an overall strategy for code updates required by individual Permit components.
- Developing a database for citywide compliance reporting and documentation under the new Permit.
- Summarizing SWMP administration activities and programs for Compliance Report submittals.

Table 2-1 is the work plan for 2015 SWMP Stormwater Management Program Administration activities. These tasks were developed through meetings with staff from affected City departments. City department references used in the "lead" and "support" columns are defined in Appendix A.

Table 2-1. 2015 Stormwater Management Program Administration Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
SWMP-1	Continue to refine and implement the first Permit's Stormwater Management Program Administration activities and programs as the new Permit's requirements are implemented.	Utilities	Steering Committee	Ongoing
SWMP-2	Develop overall strategy for code updates required by individual Permit components	Utilities + PCD/DSD + CAO	All	Ongoing
SWMP-3	Develop a database for citywide compliance reporting and documentation under the new Permit	Utilities	All	Ongoing Assess need for a report database after using Ecology's new Water Quality Permitting Portal (WQWebPortal).
SWMP-4	Review Permit definitions against City definitions and application to permit requirements and, if necessary, develop a plan for handling inconsistencies.	Utilities + DSD/PCD + CAO	All	Begin in 2015 after Ecology issues the modified Permit and Ecology Stormwater Management Manual.
SWMP-5	Summarize annual activities for the "Stormwater Management Program Administration" component of the Annual Report; identify any updates to Program document.	Utilities	All	The Annual Report submittal is due on or before March 31 of each year.

CITY OF BELLEVUE 2015 STORMWATER MANAGEMENT PROGRAM PLAN

3. PUBLIC EDUCATION AND OUTREACH

This section describes Permit requirements related to Public Education and Outreach (E&O), lists the continuing and/or current programs and activities that meet Permit requirements and identifies the planned activities recommended for continued compliance with the new 2013-18 Permit.

3.1 Permit Requirements

The Permit (Section S5.C.1) requires the City to:

- Implement an E&O program designed 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 shall be designed to educate target audiences (e.g., the general public, businesses, homeowners, students, developers, City employees, etc.) about the stormwater problem and provide specific actions they can take to minimize the problem.
- Create stewardship opportunities to encourage participation in activities such as stream teams, storm drain marking, volunteer monitoring, riparian plantings, and education activities.
- Measure the understanding and adoption of the targeted behaviors for at least one targeted audience in at least one subject area to use in directing E&O sources more effectively, as well as to evaluate changes in adoption of the targeted behaviors. Use the resulting measurements to direct E&O resources no later than February 2, 2016. This requirement can be met individually or as a member of a regional group.
- Track and maintain records of Public E&O activities.

3.2 Continuing/Current Activities

The City currently implements activities and programs that meet the Permit requirements. The City will continue to implement these programs and activities as new and/or increased requirements in the 2013-18 Permit are implemented. The current compliance activities associated with the above Permit requirements include:

- The City conducts numerous E&O activities that address stormwater management. These programs directly address general public, residents/homeowners, businesses, developers, contractors, engineers, and some industries and include but are not limited to:
 - Car wash kits and related outreach and education
 - Storm drain marking of public storm drains, with expansion to private storm drains
 - Natural yard care classes
 - Puget Sound Starts Here campaign, including a variety of programs and educational activities, such as Don't Drip & Drive
 - General outreach and communication, including theater advertisements
 - Used motor oil and hazardous waste recycling program
 - Elementary school assemblies and workshops program

- Powerful Choices for the Environment targeting middle school students
 - Advanced-placement environmental science presentation and support for high school students
 - Natural Resources Week, promoting protection of surface water to elementary school students
 - Stream team workshops
 - Stormwater maintenance and BMPs technical outreach through the municipal stormwater operations and maintenance and private drainage inspection programs
 - Public E&O on hazards associated with illicit discharges and improper disposal of waste
 - Development services one-stop resource center provides information and consultations with staff from across the city on development regulations and Permit requirements
- The City conducted surveys and focus groups measuring attitudes about stormwater pollution and car wash behavior to create an awareness baseline from which to measure future improvements. The City is tracking behavior improvements through the Carwash Research project.
 - The City continues to participate in the Puget Sound Starts Here campaign, which is a regional effort to educate the public while finding effective ways to track measurable improvements.
 - The City tracks its E&O efforts.
 - The City continues to work extensively with the STORM (Stormwater Outreach for Regional Municipalities) Group to help identify appropriate program evaluation techniques.

3.3 Planned Activities

The City has a Public E&O program but will need to update current efforts in order to maintain compliance as the new requirements are phased in over the 5-year Permit term (2013-18). Actions recommended for continued compliance include:

- Collaborating with other NPDES municipalities to identify appropriate program evaluation techniques.
- Developing strategies and priorities to supplement existing education activities.
- Developing a strategy/process to evaluate understanding and adoption of target behaviors and use the measurements to direct future E&O efforts.
- Refining E&O program as needed to address new Permit elements, such as low-impact development (LID).
- Summarizing Public E&O activities and programs for the Annual Reports.

Table 3-1 is the work plan for the 2015 SWMP Public E&O activities. These tasks were developed through meetings with staff from affected City departments. City department references used in the “lead” and “support” columns are defined in Appendix A.

Table 3-1. 2015 Public Education and Outreach Work Plan

Task ID	Task Description	Lead	Support	Schedule Notes
EDUC-1	Continue to refine and implement the first Permit's Public E&O activities and programs as the new Permit's requirements are implemented.	Utilities + DSD	All	Ongoing
EDUC-1.1	Refine E&O program as needed to address new Permit elements, such as changes to codes and standards to implement low impact development (LID) principles and BMP requirements	Utilities + DSD	All	Ongoing
EDUC-2	Measure and evaluate the understanding and adoption of targeted behaviors for one targeted audience in one subject area of Bellevue's Public Education and Outreach Program or as a member of a regional group. Use the information developed to direct public education and outreach resources more effectively.	Utilities + DSD	All	Ongoing. Completion date is February 2, 2016.
EDUC-3	Summarize annual activities for the "Public Education and Outreach" component of the Annual Report; identify any updates to Program document.	Utilities + DSD	All	The Annual Report submittal is due on or before March 31 of each year

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CITY OF BELLEVUE 2015 STORMWATER MANAGEMENT PROGRAM PLAN

4. PUBLIC INVOLVEMENT AND PARTICIPATION

This section describes Permit requirements related to Public Involvement and Participation, lists the continuing and/or current programs and activities that meet Permit requirements and identifies the planned activities recommended for continued compliance with the new 2013-18 Permit.

4.1 Permit Requirements

The Permit (Section S5.C.2) requires the City to:

- Provide ongoing opportunities for Public Involvement and Participation through advisory boards and commissions, public hearings, and watershed committees; 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 SWMP.
- Make the SWMP Plan and Annual Compliance Report available to the public, including posting on the City's Web site. Make other documents required to be submitted to Ecology in response to Permit conditions available to the public.

4.2 Continuing/Current Activities

The City currently implements activities and programs that meet the Permit requirements. The City will continue to implement these programs and activities as new and/or increased requirements in the 2013-18 Permit are implemented. The current compliance activities associated with the above Permit requirements include:

- The City has defined a series of activities intended to meet the Permit requirements for public involvement in development of the 2015 SWMP Plan, including a public meeting on the draft 2015 SWMP Plan, and briefings and presentations to Commission(s) and City Council on the Program and/or Program elements.
- The City's SWMP Plans and Compliance Reports are made available to the public on the City Web site.

4.3 Planned Activities

The City has a Public Involvement and Participation program but will need to update current efforts in order to maintain compliance as the new requirements are phased in over the 5-year Permit term (2013-18).

Actions recommended for continued compliance include:

- Implementing Public Involvement and Participation opportunities.
- Summarizing Public Involvement and Participation activities and programs for the Compliance Report submittals.

Table 4-1 is the work plan for the 2015 SWMP Public Involvement and Participation activities. These tasks were developed through meetings with staff from affected City departments. City department references used in the "lead" and "support" columns are defined in Appendix A.

Table 4-1. 2015 Public Involvement Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
PIP-1	Continue to refine and implement the first Permit's Public Involvement and Participation activities and programs as the new Permit's requirements are implemented.	Utilities	All	Ongoing
PIP-2	Summarize annual activities for the "Public Involvement and Participation" component of the Annual Report; identify any updates to Program document.	Utilities	All	The Annual Report submittal is due on or before March 31 of each year.

CITY OF BELLEVUE 2015 STORMWATER MANAGEMENT PROGRAM PLAN

5. ILLICIT DISCHARGE DETECTION AND ELIMINATION

This section describes the Permit requirements related to Illicit Discharge Detection and Elimination (IDDE), lists the continuing and/or current programs and activities that meet Permit requirements and identifies the planned activities recommended for continued compliance with the new 2013-18 Permit.

5.1 Permit Requirements

The Permit (Section S5.C.3) requires the City to:

- Implement an ongoing program designed to prevent, detect, characterize, trace, and eliminate illicit discharges and illicit connections into the permittee's municipal separate storm sewer system (MS4). An illicit discharge means "any discharge to a MS4 that is not composed entirely of stormwater or of non-stormwater discharges allowed as specified in this permit (S5.C.3)" and illicit connection means "any infrastructure connection to the MS4 that is not intended, permitted or used for collecting and conveying stormwater or non-stormwater discharges allowed as specified in this permit (S5.C.3). Examples include sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to the MS4."
- Maintain a storm sewer system map that includes stormwater system information identified in the Permit (e.g., outfalls, receiving waters, etc.).
- Implement ordinances that prohibit illicit discharges and illicit connections and which contain escalating enforcement procedures and actions. The ordinances or other regulatory mechanisms shall be revised, if needed to meet new Permit requirements, no later than February 2, 2018.
- Develop procedures for and complete field screenings of at least 40 percent of the MS4 no later than December 31, 2017, and on average 12 percent each year thereafter.
- Publicly list and publicize a hotline or other local telephone number for public reporting of spills and other illicit discharges.
- Track through closeout illicit discharge and connection reports and the actions taken in response to them, including enforcement actions. Beginning January 1, 2014, include individual descriptions of actions taken for each illicit discharge found by or reported to the permittee and attach to the annual compliance report.
- Maintain an ongoing training program for City staff that may come into contact with or respond to illicit connections or discharges. Train program staff on proper IDDE response procedures and processes and train municipal field staff to recognize and report illicit discharges.
- Inform public employees, businesses, and general public of hazards associated with illegal discharges and improper disposal of waste.
- Summarize all illicit discharges and connections reported to the City and include a description of the response actions taken for each illicit discharge and connection according to the Permit-specified timeline, including enforcement actions, in the Compliance Report.

5.2 Continuing/Current Activities

The City currently implements activities and programs that meet the Permit requirements. The City will continue to implement these programs and activities as new and/or increased requirements in the 2013-18 Permit are implemented. The current compliance activities associated with the above Permit requirements include:

- The City maintains a storm sewer map in multiple electronic formats and has standard operating procedures (SOPs) for keeping the MS4 map and inventory up to date. The map is updated with new facilities or corrected for inconsistencies based on field verification.
- The City reviewed and modified its IDDE program to ensure consistent citywide implementation of the Permit requirements.
- The City amended city codes and revised procedures to implement the Permit's illicit discharge and escalating enforcement requirements from the 2007-2013 Permit. The amended codes, located online at www.bellevuewa.gov/doc_library.htm, include:
 1. Ordinance 5905, Bellevue City Code Chapter 24.06, Storm and Surface Water Utility Code
 2. Ordinance 5906, Bellevue City Code Chapter 23.76, Clearing and Grading Code
 3. Ordinance 5907, Bellevue City Code Chapter 1.18.075, Civil Violations Code
- The City developed a Stormwater Pollution Communications Plan and additional outreach materials to increase awareness of stormwater pollution impacts and empower citizens to adopt new behaviors that prevent pollutants from entering the storm drainage system and downstream waters.
- The City developed submittal materials for the new Construction Stormwater Pollution Prevention Plan (SWPPP) requirements that address illicit discharges from construction sites.
- The City implemented the stormwater outfall illicit discharge screening and source control program requirements from the 2007-2013 Permit. This included performing a storm drainage outfall reconnaissance inventory, prioritizing receiving waters for inspection, and implementing field screening and source control activities for prioritized receiving waters.
- The City developed illicit discharge awareness and response training materials and implemented a training program for City staff. In 2012, the City developed outreach materials to prevent water quality impacts from fire prevention confidence testing (e.g., fire sprinkler system, fire pump, and other required system testing activities).
- The City has a 24-hour emergency response line for public reporting of spills and other illicit discharges (425-452-7840).
- The City completed mapping of Bellevue's 2012 annexed area's stormwater facilities by July 1, 2014 per the schedule in the 2012 Compliance Report, Question 2.
- The City worked with Ecology to develop a voluntary incident report form for illicit discharge and illicit connection which meets the Permit's new documentation requirements. The City trained staff and began implementing the new documentation requirements in 2014.

5.3 Planned Activities

The City currently has an IDDE program, but will need to update current efforts in order to maintain compliance as the new requirements are phased in over the 5-year Permit term (2013-18). Actions recommended for continued compliance include:

- Updating the municipal storm system map to address data gaps and new Permit conditions.
- Updating codes and ordinances to address new or modified Permit requirements for the IDDE program.

- Revising the IDDE program, processes and procedures to implement new IDDE requirements, including those for documenting and reporting illicit discharges and connections and those for the IDDE Field Screening Program.
- Updating IDDE training curricula for all municipal field staff.
- Summarizing IDDE activities and programs for the Compliance Report submittals

Table 5-1 is the work plan for the 2015 SWMP IDDE activities. These activities were developed through meetings with staff from affected City departments. City department references used in the “lead” and “support” columns are defined in Appendix A.

Table 5-1. 2015 Illicit Discharge Detection and Elimination Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
IDDE-1	Continue to refine and implement the first Permit's IDDE activities and programs as the new Permit's requirements are implemented.	Utilities + DSD + Trans	All	Ongoing
IDDE-2	Review and update storm system mapping practices and procedures to address new Permit requirements, definitions and data gaps.	Utilities	IT	Complete by February 2, 2018
IDDE-3	Review and amend codes to comply with IDDE Permit requirements. Update informational IDDE brochures.	Utilities + DSD	All	Complete by February 2, 2018
IDDE-4	Review and update IDDE program, processes and procedures as needed to implement new IDDE requirements.	Utilities + DSD + Trans	All	Ongoing
IDDE-4.1	Revise the IDDE field screening program by developing methodology and completing field screening of 40% of the municipal stormwater system to detect and eliminate illicit discharges. Develop reporting tool to easily summarize results.	Utilities	All	Complete by December 31, 2017
IDDE-5	Update and continue implementing IDDE training for municipal field staff, including those responsible for responding to illicit discharges and staff whose work allows them to observe and report illicit discharges.	Utilities + DSD + Trans	All	Begin in 2014. Ongoing.
IDDE-6	Summarize annual activities for the “Illicit Discharge Detection and Elimination” component of the Annual Report; identify any updates to Program document.	Utilities + DSD + Trans	All	The Annual Report submittal is due on or before March 31 of each year

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CITY OF BELLEVUE 2015 STORMWATER MANAGEMENT PROGRAM PLAN

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

This section describes the Permit requirements related to Controlling Runoff from New Development, Redevelopment, and Construction Sites, lists the continuing and/or current programs and activities that meet Permit requirements and identifies the planned activities recommended for continued compliance with the new 2013-18 Permit.

6.1 Permit Requirements

The Permit (Section S5.C.4) requires the City to:

- Implement and enforce an updated program to reduce pollutants in stormwater runoff to the municipal separate storm sewer system (MS4) from new development, redevelopment, and construction site activities no later than December 31, 2016. The program must apply to private and public development projects, including roads, and address construction and development-related pollutant sources.
- Adopt new stormwater development regulations (codes and standards) specified in the Permit and the new Ecology Stormwater Management Manual, including vesting requirements and new Low Impact Development (LID) Best Management Practices (BMPs) by December 31, 2016. Implement new plan review, inspection, and escalating enforcement processes and procedures necessary to implement the program in accordance with Permit conditions by December 31, 2016.
- Conduct a review and revision process of citywide land use and development-related policies, codes, and standards or other enforceable documents to implement LID principles that minimize impervious surfaces, native vegetation loss and stormwater runoff by December 31, 2016. The range of issues outlined in *Integrating LID into Local Codes: A Guidebook for Local Governments* (Puget Sound Partnership, 2012) is to be considered.
- Prepare a summary of the Low Impact Development Principles review and revision process and include the summary in the Annual Report no later than March 31, 2017. The intent of the LID Principles and LID BMP requirements is to make LID the preferred and commonly-used approach to site development.
- Adopt regulations (codes and standards) to verify adequate long-term operations and maintenance (e.g., post-construction) of new, private, permanent stormwater facilities and BMPs (i.e., private drainage system inspections) 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 Chapter IV of the new Ecology Manual by December 31, 2016.
- Perform annual inspections of private, permanent stormwater treatment and flow control facilities that were permitted and constructed in accordance with the Permit requirements effective January 1, 2010.
- Participate in a watershed-scale stormwater planning process led by a Phase I county if your Phase II jurisdiction is located within the selected watershed. Bellevue is not located within a selected watershed.
- Provide copies of the Notice of Intent (NOI) for construction or industrial activities to representatives of the proposed new development and redevelopment.

- Provide training to staff on updated codes, standards, and procedures, and create public education and outreach materials.
- Summarize annual activities for the “Controlling Runoff” component of the Annual Compliance Report.

6.2 Continuing/Current Activities

The City currently implements activities and programs that meet the Permit requirements. The City will continue to implement these programs and activities as new and/or increased requirements in the 2013-18 Permit are implemented. The current compliance activities associated with the above Permit requirements include:

- The City implements a program to reduce pollutants in stormwater runoff to the MS4 from new development, redevelopment, and construction site activities. The City enforces this program through the city code.
- The City amended city codes and revised standards to meet the first Permit’s requirements for development, redevelopment, construction, and post-construction stormwater management. The development-related code amendments became effective January 1, 2010. The amended codes and revised standards, located online at www.bellevuewa.gov/doc_library.htm, include:
 1. Ordinance 5905, Bellevue City Code Chapter 24.06, Storm and Surface Water Utility Code
 2. 2010 Surface Water Engineering Standards (updated annually)
 3. Ordinance 5906, Bellevue City Code Chapter 23.76, Clearing and Grading Code
 4. 2010 Clearing and Grading Development Standards
 5. Ordinance 5907, Bellevue City Code Chapter 1.18.075, Civil Violations Code
- The City adopted the 2005 Ecology *Stormwater Management Manual of Western Washington* as the citywide stormwater standard for development, redevelopment, and construction projects as part of the code amendments, effective January 1, 2010.
- The City modified its plan review, inspection, enforcement, and documentation procedures to address the first Permit’s requirements.
- The City modified its development services information management system to document development plan review, inspection, and enforcement actions per the first Permit’s requirements.
- The City provided training to staff on the new regulations and processes and procedures required by the first Permit.
- The City modified its post-construction inspection program for private stormwater facilities (i.e., the Private Drainage Inspection Program) to meet Permit requirements for inspection and documentation.
- The City revised its maintenance standards for private and public stormwater and surface water systems to meet the first Permit’s requirements. The revised standards are located online at www.bellevuewa.gov/doc_library.htm.
- The City continues to make information about and copies of Ecology’s application forms for Construction NPDES and Industrial NPDES permits available to the public at the Permit Center.
- The City developed a summary of LID barriers and a report on LID practices and submitted these documents with the 2010 Compliance Report.
- The City began the processes to implement the permit requirements for Low Impact Development Principles and Best Management Practices (BMPs – e.g., by adopting the new Ecology Stormwater Management Manual) in 2014.

- The City included funding in the 2015-2016 budgets to implement the new Ecology Manual and LID Principles requirements.

6.3 Planned Activities

The City has a Controlling Runoff from New Development, Redevelopment, and Construction Sites program but will need to update current efforts in order to maintain compliance as the new requirements are phased in over the 5-year Permit term (2013-18). Actions recommended for continued compliance include:

- Selecting and adopting a new Stormwater Management Manual
- Updating codes and standards to reflect the new Manual and Permit requirements.
- Developing new standardized plan review, inspection, enforcement, and compliance documentation and tracking processes and procedures to reflect the new manual and Permit requirements.
- Conducting staff training and public education and outreach on implementing new manual
- Conducting a review and revision process of City land use and development-related regulations to incorporate low impact development principles of minimizing impervious surfaces and native vegetation loss.
- Revising and adopting new post-construction drainage system maintenance standards.
- Participating in NPDES permittee regional forums and activities to assess and influence stormwater management and planning requirements in future permits.
- Summarizing annual activities for the “Controlling Runoff from New Development, Redevelopment, and Construction Sites” component of the Annual Report (including the post-construction private drainage system inspection and maintenance requirements), including updates to the SWMP Plan.

Table 6-1 is the work plan for the 2015 SWMP activities related to Controlling Runoff from New Development, Redevelopment, and Construction Sites. These tasks were developed through meetings with staff from affected City departments. City department references used in the “lead” and “support” columns are defined in Appendix A.

Table 6-1. 2015 Controlling Runoff From New Development, Redevelopment, and Construction Sites Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
CTRL-1	Continue to refine and implement the first Permit's Controlling Runoff from New Development, Redevelopment, and Construction Sites activities and programs as the new Permit's requirements are implemented	Utilities + DSD	All	Ongoing
CTRL-2	Adopt the new modified Ecology Stormwater Management Manual for Western Washington (Appendix 1 of the Permit) or an equivalent Phase I Manual	Utilities + DSD	CAO, Trans, Parks	Begin in 2014. Deadline is December 31, 2016.
CTRL-2.1	Affirm Manual option: the new modified Ecology Manual or equivalent Phase I Manual	Utilities + DSD	CAO, Trans, Parks	Ongoing
CTRL-2.2	Identify steps to amend development codes for consistency with new stormwater and vesting requirements (Permit and 2012 Ecology Manual); includes clearing and grading & stormwater codes	Utilities	CAO	Ongoing
CTRL-2.3	Identify steps to revise development standards; stormwater, clearing & grading, maintenance	Utilities + DSD	CAO	Ongoing.

Table 6-1. 2015 Controlling Runoff From New Development, Redevelopment, and Construction Sites Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
CTRL-2.4	Identify changes in development services processes to implement new stormwater development requirements. Develop tools for permit reviewers and applicants to implement criteria for low impact development (LID) best management practices (BMPs) including BMP selection, design, infeasibility and competing needs criteria, and BMP limitations.	Utilities + DSD	CAO, Trans, Parks	Begin in 2015
CTRL-3	Conduct a review and revision process of City land use and development-related regulations to incorporate low impact development principles of minimizing impervious surfaces and native vegetation loss.	DSD + PCD + Utilities	Fire, Trans, Parks, CAO	Ongoing Complete by December 31, 2016.
CTRL-3.1	Conduct an opportunity analysis of citywide regulations (codes and standards) with public input and consultant support to identify recommended areas of focus, criteria, public review process and schedule.	DSD + PCD + Utilities	Fire, Trans, Parks, CAO	Ongoing
CTRL-3.2	Coordinate LID Principles opportunity analysis with the City's current Comprehensive Plan Update project and, if needed, modify policies to incorporate LID Principles.	DSD + PCD + Utilities	Fire, Trans, Parks, CAO	Ongoing.
CTRL-5	Participate in NPDES permittee regional forums and activities to assess and influence stormwater management and planning requirements in future permits, especially those associated with the new LID requirements and the new Phase I Permit multi-jurisdiction watershed scale stormwater planning requirement that involves some Phase II permittees (not Bellevue) this Permit term.	Utilities	CAO, CMO	Ongoing
CTRL-6	Continue to support Ecology by distributing copies of the Notice of Intents for Construction Activity and Industrial Activity	Utilities + DSD	CAO	Continue in 2014. Ongoing
CTRL-7	Summarize annual activities for "Controlling Runoff from New Development, Redevelopment, and Construction Sites" component of the Annual Report; identify any updates to Program document.	Utilities + DSD + PCD	All	The Annual Report submittal is due on or before March 31 of each year.

CITY OF BELLEVUE 2015 STORMWATER MANAGEMENT PROGRAM PLAN

7. MUNICIPAL OPERATIONS AND MAINTENANCE

This section describes the new Permit requirements related to Municipal Operations and Maintenance (O&M), lists the continuing and/or current programs and activities that meet Permit requirements and identifies the planned activities recommended for continued compliance with the new 2013-18 Permit.

7.1 Permit Requirements

The Permit (Section S5.C.5) requires the City to:

- Implement an O&M program with the ultimate goal of preventing or reducing pollutants in stormwater runoff from MS4 and municipal O&M activities.
- Implement maintenance standards for the MS4 that are at least as protective as those specified in the 2012 Ecology Manual, no later than December 31, 2016.
- Perform inspections of stormwater flow control and treatment facilities and catch basins in accordance with Permit requirements, 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 maintained by the City and from municipal O&M activities, including but not limited to streets, parking lots, roads, or highways owned or maintained by the City. Train staff to implement the processes and procedures and document that training.
- Implement Stormwater Pollution Prevention Plans (SWPPPs) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the City.
- Summarize annual activities for the “Municipal Operations and Maintenance” component of the Compliance Report, including any updates to the SWMP Plan.

7.2 Continuing/Current Activities

The City currently implements activities and programs that meet the Permit requirements. The City will continue to implement these programs and activities as new and/or increased requirements in the 2013-18 Permit are implemented. The current compliance activities associated with the above Permit requirements include:

- The City implements municipal stormwater facility inspections at permit-specified frequencies.
- The City implements inspection, operation, and maintenance processes and procedures for Bellevue-owned or -operated stormwater catch basins and flow control and treatment facilities to meet Permit requirements.
- The City revised storm drainage maintenance standards for public and private drainage systems to comply with the first Permit requirements.
- The City updated its O&M program and implemented procedures to reduce stormwater impacts from the operation and maintenance of stormwater and surface water systems, streets, parking lots, roads, and lands owned or maintained by the City.

- The City created and implemented SWPPPs for seven City properties with heavy equipment and material storage facilities onsite.
- The City implemented a program for annual inspection of City-owned flow control and runoff treatment facilities, once-per-Permit-term inspection of municipal catch basins, and for performing identified maintenance within prescribed Permit timelines.
- The City prepared a report and schedule for maintenance of stormwater flow control and treatment ponds whose maintenance requires additional time to complete (e.g., beyond Permit-prescribed maintenance timelines), as allowed by the Permit. This report and schedule was submitted with the 2012 Compliance Report (report is titled *Performance of Detention Pond Facility Maintenance*). Maintenance of the ponds is expected to be completed as scheduled by the end of 2015.
- The City completed implementation of NPDES requirements for Bellevue's 2012 annexed areas' stormwater facilities, including mapping requirements, by July 1, 2014, the scheduled completion date submitted with the 2012 Compliance Report.
- The City modified and implemented the O&M training program to provide ongoing citywide pollution prevention training for municipal field staff.
- The City began assessing alternative inspection approaches to meet the new 2-year catch basin inspection frequency and improvements to its municipal stormwater operation and maintenance programs in order to maintain compliance with the Permit requirements and meet other stormwater program and workload needs.
- The City considered but did not allocate additional funds in the 2015-2016 budgets to meet new municipal operation and maintenance program requirements.

7.3 Planned Actions

The City has a Municipal Operations and Maintenance program but will need to update current efforts in order to maintain compliance as the new requirements are phased in over the 5-year Permit term (2013-18). Actions recommended for continued compliance include:

- Inspecting all municipal stormwater catch basins by August 1, 2017.
- Refining catch basin inspection frequency to meet new Permit requirement of once every 2 years by August 1, 2017.
- Administratively adopting maintenance standards identified in the new 2012 Ecology Stormwater Manual.
- Maintaining stormwater ponds per the schedule in the *Performance of Detention Pond Facility Maintenance* supplement to the 2012 Compliance Report.
- Refining practices, policies and procedures that reduce stormwater impacts associated with runoff from lands owned by the City.
- Updating SWPPPs when conditions change at City facilities and to refine practices and training.

Table 7-1 is the work plan for the 2015 SWMP O&M for Municipal Operations activities. The tasks were developed through meetings with staff from affected City departments. City department references used in the "lead" and "support" columns are defined in Appendix A.

Table 7-1. 2015 Municipal Operations and Maintenance Work Plan

Task ID	Task Description	Lead	Support	Schedule Notes
MO&M-1	Continue to refine and implement the first Permit's O&M for Municipal Operations activities and programs as the new Permit's requirements are implemented.	Utilities	All	Ongoing
MO&M-2	Inspect all municipal stormwater catch basins at least once by August 1, 2017 (4 years).	Utilities	Not applicable	Ongoing Complete by August 1, 2017
MO&M-3	Modify the inspection and operations and maintenance program for the municipal separate storm sewer system (MS4) to implement new permit requirements	Utilities	Fire, IT, Civic Svcs, Parks, Trans	Ongoing
MO&M-3.1	Determine if an alternative inspection frequency for municipal catch basins can be supported.	Utilities	IT	Ongoing Complete by August 1, 2017
MO&M-3.2	Administratively adopt new maintenance standards for stormwater facilities from the new Ecology Stormwater Management Manual.	Utilities	CAO	Complete by December 31, 2016
MO&M-3.3	Review and modify processes and procedures and provide training as needed to implement the new stormwater maintenance standards, reduce stormwater impacts from all lands owned by the City, implement Stormwater Pollution Prevention Plans and document compliance.	Utilities	Fire, IT, Civic Svcs, Parks, Trans	Ongoing
MO&M-4	Implement the maintenance schedule for municipal stormwater ponds per the Performance of Detention Pond Facility Maintenance supplement to Question 63 of the 2012 Compliance Report.	Utilities	Not applicable	Ongoing Complete by the end of 2015
MO&M-5	Summarize annual activities for "Municipal Operations and Maintenance" component of the Annual Report; and identify any updates to Program document.	Utilities	All	The Annual Report submittal is due on or before March 31 of each year

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CITY OF BELLEVUE 2015 STORMWATER MANAGEMENT PROGRAM PLAN

8. MONITORING AND ASSESSMENT

This section describes the new Permit requirements related to water quality Monitoring and Assessment, lists the continuing and/or current programs and activities that meet Permit requirements and identifies the planned activities recommended for continued compliance with the new 2013-18 Permit.

8.1 Permit Requirements

The Permit (Section S8) requires the City to:

- Where applicable, conduct water quality monitoring required in water quality cleanup plans issued by Ecology. Ecology has not issued any water quality cleanup plans for water bodies in Bellevue.
- Conduct sampling or testing required for characterizing illicit discharges pursuant to the Program's IDDE conditions.
- By December 1, 2013, notify Ecology as to which of the following options are to be adopted for status and trends monitoring for each Permit cycle for small streams and marine nearshore status and trends monitoring in Puget Sound.
 - Option 1: Pay into a collective fund to implement a Regional Stormwater Management Program (RSMP) for small streams and marine nearshore status trends due to Ecology annually beginning August 15, 2014. (Bellevue cost per Ecology: \$30,009)
 - Option 2: Beginning July 31, 2014, conduct wadeable stream water quality, benthos, habitat, and sediment chemistry monitoring at the frequencies as specified in the Permit. In addition, beginning in October 2015, conduct sediment chemistry, mussel, and bacteria monitoring according to the Permit requirements. All the data and analyses should be reported annually according to the Ecology approved Quality Assurance Project Plans (QAPPs).
- By December 1, 2013, notify Ecology which of the following options are to be adopted for SWMP effectiveness studies for each Permit cycle:
 - Option 1: Pay into a collective fund to implement RSMP effectiveness studies due to Ecology annually beginning August 15, 2014. (Bellevue cost per Ecology: \$50,001)
 - Option 2: By February 2, 2014, submit a draft stormwater discharge monitoring QAPP to Ecology describing why selected discharge monitoring locations are of interest for monitoring and evaluations. Monitor at locations chosen and submitted in the annual reports that were due March 31, 2011.
- Pay into a collective fund to implement the RSMP Source Identification Information Repository (SIDIR) due to Ecology annually beginning August 15, 2014. (Bellevue cost per Ecology: \$4,637)
- Provide a description of stormwater monitoring or studies conducted by the City during the reporting period. If stormwater monitoring was conducted on behalf of the City, or if studies or investigations conducted by other entities were reported to the City, a brief description of the type of information gathered or received shall be included in the Compliance Report.

8.2 Continuing/Current Activities

The City currently implements activities and programs that meet the Permit requirements. The City will continue to implement these programs and activities as new and/or increased requirements in the 2013-18 Permit are implemented. The current compliance activities associated with the above Permit requirements include:

- The City submitted monitoring reports required by the first Permit with the 2010 Compliance Report.
- The City participated in a variety of regional and state monitoring forums to develop feasible and effective monitoring requirements for the new Permit. As a result of this forum's work, Ecology included a regional stormwater monitoring option in the new Permit.
- The City conducts sampling or testing required for characterizing illicit discharges pursuant to the Permit's IDDE program conditions.
- The City reviews water quality monitoring data and/or reports conducted by or for the City to determine if potential water quality violations are identified.
- The City reports potential water quality violations to Ecology within 30 days of becoming aware of the potential violations per the Permit's Compliance with Standards condition S4F.
- The City notified Ecology of its intent to participate in the Regional Stormwater Monitoring Program (RSMP) and began providing program funding in 2014. The City provided a payment of \$84,647 to Ecology to fund the RSMP. The payments will occur annually for four years of the Permit cycle (2014-2017). The payment covers Status and Trends Monitoring (\$30,009), effectiveness studies (\$50,001), and source identification and diagnostic monitoring (\$4,637).

8.3 Planned Activities

The City has a Monitoring and Assessment program but will need to update current efforts in order to maintain compliance as the new requirements are phased in over the 5-year Permit term (2013-18). Actions recommended for continued compliance include:

- Making annual payments to Ecology to participate in the Regional Stormwater Monitoring Program.
- Providing descriptions of stormwater monitoring conducted by the City in annual compliance reports.
- Participating in regional and state monitoring forums to inform future permits.

Table 8-1 is the work plan for the 2015 SWMP Monitoring and Assessment activities. The tasks were developed through meetings with staff from affected City departments. City department references used in the "lead" and "support" columns are defined in Appendix A.

Table 8-1. 2015 Monitoring and Assessment Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
MNTR-1	Continue to refine and implement the first Permit's Monitoring and Assessment activities and programs as the new Permit's requirements are implemented.	Utilities	All	Ongoing
MNTR-2	Meet the new Permit's Section 8 Monitoring and Assessment requirements by participating in the Regional Stormwater Monitoring Program (RSMP).	Utilities	CAO	Ongoing
MNTR-3	Participate in regional and state monitoring forums	Utilities	CMO	Ongoing.

Table 8-1. 2015 Monitoring and Assessment Work Plan				
Task ID	Task Description	Lead	Support	Schedule Notes
	and future legislative actions as needed to ensure scientifically sound analysis and appropriate use of monitoring data in stormwater management and future Permits.			
MNTR-4	Summarize annual activities for "Monitoring and Assessment" component of the Annual Report; identify any updates to Program document.	Utilities	All	The Annual Report submittal is due on or before March 31 of each year

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APPENDIX A

- **Acronyms for City Departments**
- **Permit Acronyms and Definitions (from the modified Western Washington Phase II Permit, effective January 16, 2015)**

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Acronyms for City Departments

City Departments

All: Utilities, Parks, Finance, CAO, PCD, DSD, IT, Trans, HR, Civic Services, Fire, City Clerks, Police

All: Also used as a general reference for staff from multiple City departments who support lead departments in implementing the SWMP Plan

CAO: City Attorney's Office

CMO: City Manager's Office

DSD: Development Services Department

HR: Human Resources

IT: Information Technology

Parks: Parks and Community Services

PCD: Planning and Community Development

Risk: Risk Management

Trans.: Transportation

CCO: City Clerk's Office

CMO: City Manager's Office

Permit Acronyms and Definitions

The following definitions and abbreviations are taken directly from the Phase II Permit or from this SWMP Plan and are reproduced here for the reader's convenience.

40 CFR means Title 40 of the Code of Federal Regulations, which is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the U.S. federal government.

AKART means all known, available, and reasonable methods of prevention, control, and treatment. See also State Water Pollution Control Act, Revised Code of Washington (RCW) Chapters 90.48.010 and 90.48.520.

All known, available and reasonable methods of prevention, control and treatment (AKART) refers to the State Water Pollution Control Act, Chapter 90.48.010 RCW and Chapter 90.48.520 RCW.

Applicable TMDL means a total maximum daily load (TMDL) that has been approved by EPA on or before the issuance date of this Permit, or prior to the date that Ecology issues coverage under this Permit, whichever is later.

Beneficial uses means uses of waters of the state, which include but are not limited to use for domestic, stock watering, industrial, commercial, agricultural, irrigation, mining, fish and wildlife maintenance and enhancement, recreation, generation of electric power and preservation of environmental and aesthetic values, and all other uses compatible with the enjoyment of the public waters of the state.

Best management practices (BMPs) are the schedules of activities, prohibitions of practices, maintenance procedures, and structural and/or managerial practices approved by Ecology that, when used singly or in combination, prevent or reduce the release of pollutants and other adverse impacts to waters of Washington State.

BMP means best management practice.

Bypass means the diversion of stormwater from any portion of a stormwater treatment facility.

Census-defined urban area means urbanized area.

Circuit means a portion of an MS4 discharging to a single point or serving a discrete area determined by traffic volumes, land use, topography, or the configuration of the MS4.

Component or Program Component means an element of the Stormwater Management Program listed in S5 Stormwater Management Program for Cities, Towns, and Counties or S6 Stormwater Management Program for Secondary Permittees, S7 Compliance with Total Maximum Daily Load Requirements, or S8 Monitoring of this Permit.

Conveyance system means that portion of the municipal separate storm sewer system designed or used for conveying stormwater.

Co-Permittee means an owner or operator of an MS4 that is in a cooperative agreement with at least one other applicant for coverage under this Permit. A Co-Permittee is an owner or operator of a regulated MS4 located within or in proximity to another regulated MS4. A Co-Permittee is only responsible for Permit conditions relating to discharges from the MS4 the Co-Permittee owns or operates. See also 40 CFR 122.26(b)(1).

CWA means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. (6-483 and Pub. L. 97-117, 33 U.S.C. 1251 et seq.).

Director means the Director of the Washington State Department of Ecology, or an authorized representative.

Discharge Point means the location where a discharge leaves the Permittee's MS4 through the Permittee's MS4 facilities/BMPs designed to infiltrate.

Ecology means the Washington State Department of Ecology.

Entity means a governmental body, or a public or private organization.

E&O means education and outreach.

EPA means the U.S. Environmental Protection Agency.

General Permit means a permit that covers multiple dischargers of a point source category within a designated geographical area, in lieu of individual permits being issued to each discharger.

Groundwater means water in a saturated zone or stratum beneath the surface of the land or below a surface water body. Refer to Washington Administrative Code (WAC) Chapter 173-200.

Hazardous substance means any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical, or biological properties described in WAC 173-303-090 or WAC 173-303-100.

Heavy equipment maintenance or storage yard means an uncovered area where any heavy equipment, such as mowing equipment, excavators, dump trucks, backhoes, or bulldozers are washed or maintained, or where at least five pieces of heavy equipment are stored on a long-term basis.

Highway means a main public road connecting towns and cities.

Hydraulically near means runoff from the site discharges to the sensitive feature without significant natural attenuation of flows that allows for suspended solids removal. See Appendix 7 Determining Construction Site Sediment Damage Potential for a more detailed definition.

Hyperchlorinated means water that contains more than 10 milligrams/liter chlorine.

IDDE means Illicit Discharge Detection and Elimination.

Illicit connection means any infrastructure connection to the MS4 that is not intended, permitted, or used for collecting and conveying stormwater or non-stormwater discharges allowed as specified in this Permit (S5.C.3 and S6.D.3). Examples include sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to the MS4.

Illicit discharge means any discharge to an MS4 that is not composed entirely of stormwater or of non-stormwater discharges allowed as specified in this Permit (S5.C.3 and S6.D.3).

Impervious surface means a non-vegetated surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A non-vegetated surface area that causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or stormwater areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces that similarly impede the natural infiltration of stormwater.

Land-disturbing activity means any activity that results in a change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil topography. Land-disturbing activities include, but are not limited to, clearing, grading, filling, and excavation. Compaction that is associated with stabilization of structures and road construction shall also be considered land-disturbing activity. Vegetation maintenance practices, including landscape maintenance and gardening, are not considered land-disturbing activity. Stormwater facility maintenance is not considered land-disturbing activity if conducted according to established standards and procedures.

LID means low-impact development.

LID BMP means low-impact development best management practices.

LID principles means land use management strategies that emphasize conservation, use of onsite natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff.

Low-impact development (LID) means a stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation, and transpiration by emphasizing conservation, use of onsite natural features, site planning, and distributed stormwater management practices that are integrated into a project design.

Low-impact development best management practices (LID BMP) means distributed stormwater management practices, integrated into a project design, that emphasize pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation, and transpiration. LID BMPs include, but are not limited to,

bioretention, rain gardens, permeable pavements, roof downspout controls, dispersion, soil quality and depth, vegetated roofs, minimum excavation foundations, and water reuse.

Material storage facilities means an uncovered area where bulk materials (liquid, solid, granular, etc.) are stored in piles, barrels, tanks, bins, crates, or other means.

Maximum extent practicable (MEP) refers to paragraph 402(p)(3)(B)(iii) of the federal Clean Water Act, which reads as follows: Permits for discharges from municipal storm sewers shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques, and system, design, and engineering methods, and other such provisions as the Administrator or the State determines appropriate for the control of such pollutants.

MEP means maximum extent practicable.

MS4 means municipal separate storm sewer system.

Municipal separate storm sewer system (MS4) means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

- (i) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of Washington State.
- (ii) Designed or used for collecting or conveying stormwater.
- (iii) Which is not a combined sewer;
- (iv) Which is not part of a publicly owned treatment works (POTW) as defined at 40 CFR 122.2.; and
- (v) Which is defined as “large” or “medium” or “small” or otherwise designated by Ecology pursuant to 40 CFR 122.26.

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking, and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the federal Clean Water Act, for the discharge of pollutants to surface waters of the state from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington State Department of Ecology.

Native vegetation means vegetation comprising plant species, other than noxious weeds, that are indigenous to the coastal region of the Pacific Northwest and that reasonably could have been expected to naturally occur on the site. Examples include trees such as Douglas Fir, western hemlock, western red cedar, alder, big-leaf maple; shrubs such as willow, elderberry, salmonberry, and salal; and herbaceous plants such as sword fern, foam flower, and fireweed.

New development means land-disturbing activities, including Class IV General Forest Practices that are conversions from timber land to other uses; structural development, including construction or installation of a building or other structure; creation of hard surfaces; and subdivision, short subdivision, and binding site plans, as defined and applied in Chapter 58.17 RCW. Projects meeting the definition of redevelopment shall not be considered new development. Refer to Appendix 1 for a definition of hard surfaces.

New Permittee means a city, town, or county that is subject to the Western Washington Municipal Stormwater General Permit and was not subject to the Permit prior to August 1, 2013.

New Secondary Permittee means a Secondary Permittee that is covered under, a municipal stormwater general permit and was not covered by the Permit prior to August 1, 2013.

NOI means Notice of Intent.

Notice of Intent (NOI) means the application for, or a request for coverage under a General Permit pursuant to WAC 173-226-200.

Notice of Intent for Construction Activity means the application form for coverage under the Construction Stormwater General Permit.

Notice of Intent for Industrial Activity means the application form for coverage under the General Permit for Stormwater Discharges Associated with Industrial Activities.

NPDES means National Pollutant Discharge Elimination System.

O&M means operations and maintenance.

Outfall means a point source as defined by 40 CFR 122.2 at the point where a discharge leaves the Permittee's MS4 and enters a surface receiving waterbody or surface receiving waters. Outfall does not include pipes, tunnels, or other conveyances that connect segments of the same stream or other surface waters and are used to convey primarily surface waters (i.e., culverts).

Permittee unless otherwise noted, the term "Permittee" includes city, town, or county Permittee, Co-Permittee, New Permittee, Secondary Permittee, and New Secondary Permittee.

Physically interconnected means that one MS4 is connected to another storm sewer system in such a way that it allows for direct discharges to the second system. For example, the roads with drainage systems and municipal streets of one entity are physically connected directly to a storm sewer system belonging to another entity.

Project site means that portion of a property, properties, or rights-of-way subject to land-disturbing activities, new hard surfaces, or replaced hard surfaces. Refer to Appendix 1 for a definition of hard surfaces.

QAPP means Quality Assurance Project Plan.

Qualified personnel means someone who has had professional training in the aspects of stormwater management for which they are responsible and are under the functional control of the Permittee. Qualified personnel may be staff members, contractors, or volunteers.

Quality Assurance Project Plan (QAPP) means a document that describes the objectives of an environmental study and the procedures to be followed to achieve those objectives.

RCW means the Revised Code of Washington State.

Receiving waterbody or receiving waters means naturally and/or reconstructed naturally occurring surface water bodies, such as creeks, streams, rivers, lakes, wetlands, estuaries, and marine waters, or groundwater, to which a MS4 discharges.

Redevelopment means, on a site that is already substantially developed (i.e., has 35 percent or more of existing hard surface coverage), the creation or addition of hard surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including construction,

installation, or expansion of a building or other structure; replacement of hard surface that is not part of a routine maintenance activity; and land-disturbing activities. Refer to Appendix 1 for a definition of hard surfaces.

Regional Stormwater Monitoring Program (RSMP) means, for all of western Washington, a stormwater-focused monitoring and assessment program consisting of these components: status and trends monitoring in small streams and marine nearshore areas, SWMP effectiveness studies, and a Source Identification Information Repository (SIDIR). The priorities and scope for the RSMP are set by a formal stakeholder group. For this Permit term, RSMP status and trends monitoring will be conducted in the Puget Sound basin only.

Regulated small municipal separate storm sewer system means a municipal separate storm sewer system (MS4) that is automatically designated for inclusion in the Phase II stormwater permitting program by its location within an urbanized area, or by designation by Ecology and is not eligible for a waiver or exemption under S1.C.

RSMP means Regional Stormwater Monitoring Program.

Runoff is water that travels across the land surface and discharges to water bodies either directly or through a collection and conveyance system. See also “Stormwater.”

Secondary Permittee is an operator of a regulated small MS4 that is not a city, town, or county. Secondary Permittees include special purpose districts and other public entities that meet the criteria in S1.B.

Sediment/erosion-sensitive feature means an area subject to significant degradation due to the effect of construction runoff, or areas requiring special protection to prevent erosion. See Appendix 7 Determining Construction Site Sediment Transport Potential for a more detailed definition.

Shared water bodies means water bodies, including downstream segments, lakes, and estuaries that receive discharges from more than one Permittee.

SIDIR means Source Identification Information Repository.

Significant contributor means a discharge that contributes a loading of pollutants considered to be sufficient to cause or exacerbate the deterioration of receiving water quality or instream habitat conditions.

Small municipal separate storm sewer system means an MS4 that is not defined as “large” or “medium” pursuant to 40 CFR 122.26(b)(4) and (7) or designated under 40 CFR 122.26 (a)(1)(v).

SOP means standard operating procedure.

Source control BMP means a structure or operation that is intended to prevent pollutants from coming into contact with stormwater through physical separation of areas or careful management of activities that are sources of pollutants. The SWMMWW separates source control BMPs into two types. Structural source control BMPs are physical, structural, or mechanical devices, or facilities that are intended to prevent pollutants from entering stormwater. Operational BMPs are non-structural practices that prevent or reduce pollutants from entering stormwater. See Volume IV of the SWMMWW for details.

STORM means Stormwater Outreach for Regional Municipalities.

Stormwater means runoff during and following precipitation and snowmelt events, including surface runoff, drainage, or interflow.

Stormwater associated with industrial and construction activity means the discharge from any conveyance that is used for collecting and conveying stormwater, which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant, or associated with clearing, grading and/or excavation, and is required to have an NPDES permit in accordance with 40 CFR 122.26.

Stormwater Management Program (SWMP) means a set of actions and activities designed to reduce the discharge of pollutants from the MS4 to the MEP and to protect water quality, and comprising the components listed in S5 (for cities, towns, and counties) or S6 (for Secondary Permittees) of this Permit and any additional actions necessary to meet the requirements of applicable TMDLs pursuant to S7 Compliance with TMDL Requirements, and S8 Monitoring and Assessment.

Stormwater treatment and flow control BMPs/facilities means detention facilities, treatment BMPs/facilities, bioretention, vegetated roofs, and permeable pavements that help meet Appendix 1 Minimum Requirements 6 (treatment), 7 (flow control), or both.

SWMMWW or Stormwater Management Manual for Western Washington means *Stormwater Management Manual for Western Washington* (as amended in 2014).

SWMP means Stormwater Management Program.

SWPPP means Stormwater Pollution Prevention Plan.

TMDL means total maximum daily load.

Total maximum daily load (TMDL) means a water cleanup plan. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The calculation must include a margin of safety to ensure that the water body can be used for the purposes the state has designated. The calculation must also account for seasonable variation in water quality. Water quality standards are set by states, territories, and tribes. They identify the uses for each water body, for example, drinking water supply, contact recreation (swimming), and aquatic life support (fishing), and the scientific criteria to support that use. The Clean Water Act, Section 303, establishes the water quality standards and TMDL programs.

Tributary conveyance means pipes, ditches, catch basins, and inlets owned or operated by the Permittee and designed or used for collecting and conveying stormwater.

UGA means Urban Growth Area.

Urban Growth Area (UGA) means those areas designated by a county pursuant to RCW 36.70A.110.

Urbanized area is a federally designated land area comprising one or more places and the adjacent densely settled surrounding area that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile. Urbanized areas are designated by the U.S. Census Bureau based on the most recent decennial census.

Vehicle maintenance or storage facility means an uncovered area where any vehicles are regularly washed or maintained, or where at least 10 vehicles are stored.

Water Quality Standards means Surface Water Quality Standards, Chapter 173-201A WAC, Ground Water Quality Standards, Chapter 173-200 WAC, and Sediment Management Standards, Chapter 173-204 WAC.

Waters of the state include those waters as defined as “waters of the United States” in 40 CFR Subpart 122.2 within the geographic boundaries of Washington State and “waters of the state” as defined in Chapter 90.48 RCW, which includes lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Waters of the United States refers to the definition in 40 CFR 122.2.

APPENDIX B

- **City of Bellevue 2014 Compliance Report (1st Compliance Report under the 2013-2018 Permit and 1st use of the new electronic submittal form)**

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Annual Report

Question Number	Permit Section	Questions
1	S5.A.2	<p>Attach updated annual Stormwater Management Program Plan (SWMP Plan). (S5.A.2)</p> <p>Saved Document Name: Bellevue Q1 FINAL 2015 NPDES SWMP Plan Document - 2014 Compliance Rpt_1_03162015_0350.pdf</p>
2	S9.D.5	<p>Attach a copy of any annexations, incorporations or boundary changes resulting in an increase or decrease in the Permittee's geographic area of permit coverage during the reporting period per S9.D.5.</p> <p>Not Applicable</p>
3	S5.A.3	<p>Implemented an ongoing program to gather, track, and maintain information per S5.A.3, including costs or estimated costs of implementing the SWMP.</p> <p>Yes</p>
4	S5.A.5.b	<p>Coordinated among departments within the jurisdiction to eliminate barriers to permit compliance. (S5.A.5.b)</p> <p>Yes</p>
4b	S5.A.5.b	<p>Attach a written description of internal coordination mechanisms. (Required to be submitted no later than March 31, 2015, S5.A.5.b)</p> <p>Saved Document Name: Bellevue Q4b Attachment - Internal Coord Mech 2014 Compliance Rpt_4b_03162015_0351.pdf</p>
5	S5.C.1.a.i and ii	<p>Attach description of public education and outreach efforts conducted per S5.C.1.a.i and ii.</p> <p>Saved Document Name: Bellevue Q5 & Q17 Attachment PE&O & ID Educ 2014 Compliance Rpt_5_03182015_1015.pdf</p>
6	S5.C.1.b	<p>Created stewardship opportunities (or partnered with others) to encourage resident participation in activities such as those described in S5.C.1.b.</p> <p>Yes</p>
7	S5.C.1.b	<p>Used results of measuring the understanding and adoption of targeted behaviors among at least one audience in at least one subject area to direct education and outreach resources and evaluate changes in adoption of targeted behaviors. (Required no later than February 2, 2016, S5.C.1.b)</p> <p>Not Applicable</p>
7b	S5.C.1.b	<p>Attach description of how this requirement was met.</p> <p>Not Applicable</p>
8	S5.C.2.a	<p>Describe the opportunities created for the public to participate in the decision making processes involving the development, implementation and updates of the Permittee's SWMP. (S5.C.2.a)</p> <p>Yes - see Bellevue Q8 attachment</p>
9	S5.C.2.b	<p>Posted the updated SWMP Plan and latest annual report on your website no later than May 31. (S5.C.2.b)</p> <p>Yes</p>
9b	S5.C.2.b	<p>List the website address.</p> <p>http://www.bellevuewa.gov/stormwater-runoff-management.htm</p>

10	S5.C.3.a.i - vi	Maintained a map of the MS4 including the requirements listed in S5.C.3.a.i.-vi. Yes
11	S5.C.3.b.v	Implemented a compliance strategy, including informal compliance actions as well as enforcement provisions of the regulatory mechanism described in S5.C.3.b. (S5.C.3.b.v) Yes
12	S5.C.3.b.vi	Updated, if necessary, the regulatory mechanism to effectively prohibit illicit discharges into the MS4 per S5.C.3.b.vi. (Required no later than February 2, 2018) Not Applicable
12b		Cite the Prohibited Discharges code reference Not Applicable
13	S5.C.3.c.i	Implemented procedures for conducting illicit discharge investigations in accordance with S5.C.3.c.i. Yes
13b	S5.C.3.c.i	Cite methodology Yes - see Bellevue Q13b and Q14 attachments
14	S5.C.3.c.i	Percentage of MS4 coverage area screened in reporting year per S5.C.3.c.i. (Required to screen 40% of MS4 no later than December 31, 2017 (except no later than June 30, 2018 for the City of Aberdeen) and 12% on average each year thereafter. (S5.C.3) 13
15	S5.C.3.c.ii	List the hotline telephone number for public reporting of spills and other illicit discharges. (S5.C.3.c.ii) 425-452-7840
15b	S5.C.3.c.ii	Number of hotline calls received. 83
16	S5.C.3.c.iii	Implemented an ongoing illicit discharge training program for all municipal field staff per S5.C.3.c.iii. Yes
17	S5.C.3.c.iv	Informed public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste. (S5.C.3.c.iv) Yes
17b	S5.C.3.c.iv	Describe the information sharing actions. (S5.C.3.c.iv) Yes, see Bellevue Q5 & Q17 attachment
18	S5.C.3.d	Implemented an ongoing program to characterize, trace, and eliminate illicit discharges into the MS4 per S5.C.3.d. Yes
19	S5.C.3.d.iv	Number of illicit discharges, including illicit connections, eliminated during the reporting year. (S5.C.3.d.iv) 297
20	S5.C.3.d.iv	Attach a summary of actions taken to characterize, trace and eliminate each illicit discharge found by or reported to the permittee. For each illicit discharge, include a description of actions according to required timeline per S5.C.3.d.iv Saved Document Name: Bellevue Q20 Attachment Individual IDDE Rpts - 2014 Compliance Rpt_20_03172015_1117.pdf
21	S5.C.3.e	Municipal illicit discharge detection staff are trained to conduct illicit discharge detection and elimination activities as described in S5.C.3.e.

		Yes
22	S5.C.4.a	Implemented an ordinance or other enforceable mechanism to address runoff from new development, redevelopment and construction sites per the requirements of S5.C.4.a.
		Yes
24	S5.C.4.a.i	Number of exceptions granted to the minimum requirements in Appendix 1. (S5.C.4.a.i., and Section 6 of Appendix 1)
		0
25	S5.C.4.a.i	Number of variances granted to the minimum requirements in Appendix 1. (S5.C.4.a.i., and Section 6 of Appendix 1)
		0
26	S5.C.4.b.i	Reviewed Stormwater Site Plans for all proposed development activities that meet the thresholds adopted pursuant to S5.C.4.a.i. (S5.C.4.b.i)
		Yes
26b	S5.C.4.b.i	Number of site plans reviewed during the reporting period.
		546
27	S5.C.4.b.ii	Inspected, prior to clearing and construction, permitted development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 Determining Construction Site Sediment Damage Potential, or alternatively, inspected all construction sites meeting the minimum thresholds adopted pursuant to S5.C.4.a.i. (S5.C.4.b.ii)
		Yes
27b	S5.C.4.b.ii	Number of construction sites inspected per S5.C.4.b.ii.
		444
28	S5.C.4.b.iii	Inspected permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. (S5.C.4.b.iii)
		Yes
28b	S5.C.4.b.iii	Number of construction sites inspected per S5.C.4.b.iii.
		480
29	S5.C.4.b.ii, iii and	Number of enforcement actions taken during the reporting period (based on construction phase inspections at new development and redevelopment projects). (S5.C.4.b.ii, iii and v)
		30
30	S5.C.4.b.iv	Inspected all permitted development sites that meet the thresholds in S5.C.4.a.i upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities. (S5.C.4.b.iv)
		Yes
31	S5.C.4.b.ii-iv	Achieved at least 80% of scheduled construction-related inspections. (S5.C.4.b.ii-iv)
		Yes
32	S5.C.4.b.iv	Verified a maintenance plan is completed and responsibility for maintenance is assigned for projects. (S5.C.4.b.iv)
		Yes
33	S5.C.4.c	Implemented provisions to verify adequate long-term operation and maintenance (O&M) of stormwater treatment and flow control BMPs/facilities that are permitted and constructed pursuant to S5.C.4. a and b. (S5.C.4.c)
		Yes
35		

	S5.C.4.c.iii	Annually inspected stormwater treatment and flow control BMPs/facilities per S5.C.4.c.iii. Yes
35b	S5.C.4.c.iii	If using reduced inspection frequency for the first time during this permit cycle, attach documentation per S5.C.4.c.iii Not Applicable
36	S5.C.4.c.iv	Inspected new residential stormwater treatment and flow control BMPs/facilities and catch basins every 6 months per S5.C.4.c.iv to identify maintenance needs and enforce compliance with maintenance standards. Yes
37	S5.C.4.c.v	Achieved at least 80% of scheduled inspections to verify adequate long-term O&M. (S5.C.4.c.v) Yes
38	S4.C.4.c.vi	Verified that maintenance was performed per the schedule in S5.C.4.c.vi when an inspection identified an exceedance of the maintenance standard. Yes
38b	S5.C.4.c.vi	Attach documentation of any maintenance delays. (S5.C.4.c.vi) Not Applicable
39	S5.C.4.d	Provided copies of the Notice of Intent for Construction Activity and Notice of Intent for Industrial Activity to representatives of proposed new development and redevelopment. (S5.C.4.d) Yes
40	S5.C.4.e	All 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 are trained to conduct these activities. (S5.C.4.e) Yes
42	S5.C.4.g	Participated and cooperated with the watershed-scale stormwater planning process led by a Phase I county. (S5.C.4.g) Not Applicable
43	S5.C.5.a	Implemented maintenance standards as protective, or more protective, of facility function as those specified in Chapter 4 of Volume V of the 2005 Stormwater Management Manual for Western Washington. Yes
44	S5.C.5.a	Applied a maintenance standard that is not specified in the Stormwater Management Manual for Western Washington. Yes
44b	S5.C.5.a	Please note what kinds of facilities are covered by this alternative maintenance standard. (S5.C.5.a) Natural Drainage Practices facilities (e.g., low impact development)
45	S5.C.5.a.ii	Performed timely maintenance per S5.C.5.a.ii. Yes
46	S5.C.5.b	Annually inspected all municipally owned or operated permanent stormwater treatment and flow control BMPs/facilities. (S5.C.5.b) Yes
46b	S5.C.5.b	Number of known municipally owned or operated stormwater treatment and flow control BMPs/facilities. (S5.C.5.b) 570
46c		

	S5.C.5.b	Number of facilities inspected during the reporting period. (S5.C.5.b) 568
46d	S5.C.5.b	Number of facilities for which maintenance was performed during the reporting period. (S5.C.5.b) 145
47	S5.C.5.b	If using reduced inspection frequency for the first time during this permit cycle, attach documentation per S5.C.5.b. Not Applicable
48	S5.C.5.c	Conducted spot checks and inspections (if necessary) of potentially damaged stormwater facilities after major storms as per S5.C.5.c. Yes
49	S5.C.5.d	Inspected all municipally owned or operated catch basins and inlets as per S5.C.5.d, or used an alternative approach. (Required once no later than August 1, 2017 and every two years thereafter, except once no later than June 30, 2018 and every two years thereafter for the City of Aberdeen) Yes
49b	S5.C.5.d	Number of known catch basins. 24500
49c	S5.C.5.d	Number of catch basins inspected during the reporting period. 5274
49d	S5.C.5.d	Number of catch basins cleaned during the reporting period. 1561
50	S5.C.5.d.i-ii	Attach documentation of alternative catch basin cleaning approach, if used. (S5.C.5.d.i or ii) Not Applicable
51	S5.C.5.f	Implemented practices, policies and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance activities under the functional control of the Permittee. (S5.C.5.f) Yes
52	S5.C.5.g	Implemented an ongoing training program for Permittee employees whose primary construction, operations or maintenance job functions may impact stormwater quality. (S5.C.5.g.) Yes
53	S5.C.5.h	Implemented a Stormwater Pollution Prevention Plan for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit that are not required to have coverage under an NPDES permit that covers stormwater discharges associated with the activity. (S5.C.5.h) Yes
54	S7.A	Complied with the Total Maximum Daily Load (TMDL)-specific requirements identified in Appendix 2. (S7.A) Not Applicable
55	S7.A	For TMDLs listed in Appendix 2: Attach a summary of relevant SWMP and Appendix 2 activities to address the applicable TMDL parameter(s). (S7.A) Not Applicable
56	S8.A	Attach a description of any stormwater monitoring or stormwater-related studies as described in S8.A. Not Applicable
57		

	S8.B.1	Participated in cost-sharing for the regional stormwater monitoring program (RSMP) for status and trends monitoring. (S8.B.1)
		Yes
58	S8.C.1	Participated in cost-sharing for the regional stormwater monitoring program (RSMP) for effectiveness studies. (S8.C.1) (Required to begin no later than August 15, 2014)
		Yes
59	S8.D.1	Contributed to the RSMP for source identification and diagnostic monitoring information repository in accordance with S8.D.1. (Required to begin no later than August 15, 2014)
		Yes
60	G3	Notified Ecology in accordance with G3 of any discharge into or from the Permittees MS4 which could constitute a threat to human health, welfare or the environment. (G3)
		Yes
61	G3	Number of G3 notifications provided to Ecology.
		36
62	G3.A	Took appropriate action to correct or minimize the threat to human health, welfare, and/or the environment per G3.A.
		Yes
63	S4.F.1	Notified Ecology within 30 days of becoming aware that a discharge from the Permittee's MS4 caused or contributed to a known or likely violation of water quality standards in the receiving water. (S4.F.1)
		Not Applicable
64	S4.F.3.a	If requested, submitted an Adaptive Management Response report in accordance with S4.F.3.a.
		Not Applicable
65	S4.F.3.d	Attach a summary of the status of implementation of any actions taken pursuant to S4.F.3 and the status of any monitoring, assessment, or evaluation efforts conducted during the reporting period. (S4.F.3.d)
		Not Applicable
66	G20	Notified Ecology of the failure to comply with the permit terms and conditions within 30 days of becoming aware of the non-compliance. (G20)
		Not Applicable
67	G20	Number of non-compliance notifications (G20) provided in reporting year.
		0
67b	G20	List the permit conditions described in non-compliance notification(s).
		Not Applicable

Attachments:**View Files Attached to Submission**

	DocDescr	DocName	DocExt	DocID	SubID	AppName
View		Bellevue Q1 FINAL 2015 NPDES SWMP Plan Document -	.pdf	342689	1488205	wqwebportal
View		Bellevue Q4b Attachment - Internal Coord Mech 2014	.pdf	342690	1488205	wqwebportal
View		Bellevue Q20 Attachment Individual IDDE Rpts - 201	.pdf	342809	1488205	wqwebportal
View		Bellevue Q8 Attachment public participation 2014 C	.pdf	342821	1488205	wqwebportal
View		Bellevue Q13b Attachment ID investig method 2014 C	.pdf	342822	1488205	wqwebportal

View	Bellevue Q14 Attachment IDDE Map % Area Screened - .pdf	342823	1488205	wqwebportal
View	Bellevue Q5 & Q17 Attachment PE&O & ID Educ 2014 C .pdf	342932	1488205	wqwebportal

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NPDES Western Washington Phase II Municipal Stormwater Permit
City of Bellevue, Washington
Permit No. WAR045504
Bellevue Question 4b Attachment
2014 Compliance Report

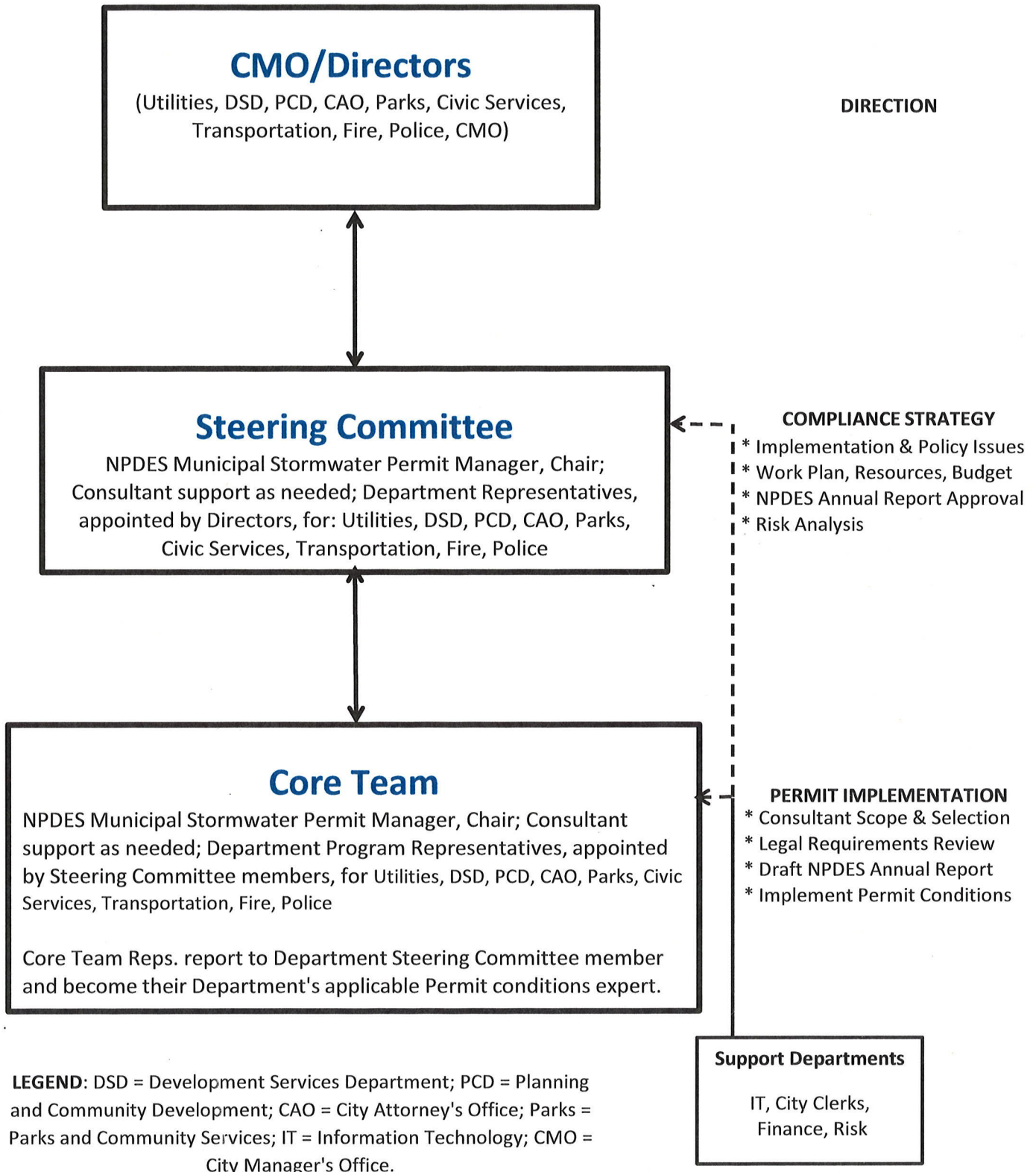
Question 4b: Attach a written description of internal coordination mechanisms. (Required to be submitted no later than March 31, 2015 per S5.A.5.b)

The Phase II Permit requires extensive business process coordination, information management and reporting across multiple City departments. The City of Bellevue employs a decentralized authority organization model with detailed roles and responsibilities to manage ongoing NPDES compliance activities. Management of the city-wide Permit is provided by an overall NPDES compliance manager (NPDES Municipal Stormwater Permit Manager) in the Utilities Department with oversight from a NPDES Steering Committee reporting to the City Manager's Office. There is a NPDES Core Team comprised of department-specific staff responsible for implementing permit conditions which reports to the NPDES Permit Manager and Steering Committee.

In general, departments take the lead for implementing permit conditions that apply to their programs and for permit conditions which apply to multiple department functions, a lead department will manage implementation of the condition through cross-departmental coordination or teams.

The attached figure illustrates the internal coordination and management structure established by the City to manage implementation of the NPDES Permit. Meetings of the Steering Committee and Core Team are held throughout the year to collaborate and coordinate on overall permit implementation. The Steering Committee and Core Team also review and comment on the draft NPDES permit, Ecology Stormwater Management Manual and associated documents during Ecology's public engagement process. More frequent meetings, ranging from quarterly to monthly to weekly, are held with a group of Steering Committee and Core team members to coordinate and collaborate on implementation of on-going and one-time permit conditions which apply to multiple department functions. Meetings with the CMO/Directors are held on an as-needed basis, typically once or twice per year.

INTERNAL MANAGEMENT STRUCTURE FOR NPDES PERMIT IMPLEMENTATION



NPDES Western Washington Phase II Municipal Stormwater Permit
City of Bellevue, Washington
Permit No. WAR045504

Bellevue Question 5 Attachment (also Q17b)
2014 Compliance Report

Question 5: Attach description of public education and outreach efforts conducted per S5.C.1.a.i and ii.

Question 17b: Describe the information sharing actions associated with informing public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste (S5.C.3.c.iv)

The permit conditions which questions 5 and 17b address are listed in Attachment A. Bellevue provides NPDES-required public education and outreach services through traditional public education outreach programs and efforts and through development-related and operational water quality programs. Descriptions of 16 City programs and efforts that provided education and outreach and information sharing activities to the public and employees in 2014 are attached.

- A Description of Permit Conditions
- 1 ECOSSE Pollution Prevention Outreach and Spill Kit Program
 - 2 Horses for Clean Water Program
 - 3 Illicit Discharge Detection and Elimination (IDDE) Program
 - 4 IDDE Public Employee Education Program
 - 5 Private Drainage Inspection Program
 - 6 Car Wash Research Program
 - 7 Natural Yard Care Program
 - 8 Paint Program
 - 9 Public Storm Drain Marking Program
 - 10 School Workshops Program
 - 11 Online and Print Materials Program
 - 12 Public Events Program
 - 13 STORM and SOGgies Regional Programs
 - 14 Stream Team
 - 15 Development Services Program
 - 16 Clearing and Grading Permit Inspection Program

ATTACHMENT A – NPDES Permit Conditions for Compliance Report Questions 5 and 17b

S5. C. 1. Question 5 of the 2013-2018 NPDES Annual Compliance Report – Public Education & Outreach

The Stormwater Management Program (SWMP) shall include an education program aimed at residents, businesses, industries, elected officials, policy makers, planning staff and other employees of the Permittee.

The goal of the education program is to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. An education program may be developed locally or regionally.

MINIMUM PERFORMANCE MEASURES

S5.C.1.a. Educate target audiences about the stormwater problem and provide specific actions they can follow to minimize the problem.

i. *To build general awareness*, Permittees shall select from the following target audiences and subject areas:

Target Audience	Subject Areas
General Public (including school age children)	* General Impacts of stormwater on surface waters * Impacts from impervious surfaces
Businesses	* Impacts of illicit discharges and how to report them * Low impact development (LID) principles & LID BMPs * Opportunities to become involved in stewardship activities
Engineers, contractors, developers, land use planners	* Technical stds. for stormwater site & erosion control plans * LID principles and LID BMPs * Stormwater treatment and flow control BMPs/facilities

ii. *To effect behavior change*, Permittees shall select from the following target audiences and BMPs:

Target Audience	Subject Areas
General Public (including school age children)	* Use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials
Businesses (including home-based and mobile)	* Equipment maintenance * Prevention of illicit discharges
Residents, landscapers and property managers/owners	* Yard care techniques protective of water quality * Use and storage of pesticides and fertilizers and other household chemicals. * Carpet cleaning and auto repair and maintenance. * Vehicle, equipment and home/building maintenance * Pet waste management and disposal * LID principles and LID BMPs * Stormwater facility maintenance

S5. C. 3. d. Question 17 and 17b of the 2013-2018 NPDES Annual Compliance Report – IDDE

Permittee shall inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

i. No later than 180 days prior to the expiration date of this Permit, distribute appropriate information to target audiences identified pursuant to S5.C.1.

	* Dumpster and trash compactor maintenance
--	--

Target Audience	Subject Areas
Public employees	* Hazards associated with illegal discharges and improper disposal of waste.
Businesses	
General Public	

Program: ECOSS Pollution Prevention Outreach and Spill Kit Program

Department/Division: Utilities/Operations and Maintenance/Water Quality Section

Permit Requirement:

- X S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s): Businesses

Subject Area(s): Prevention of illicit discharges; Impacts of illicit discharges and how to report them; Hazards associated with illegal discharges and improper disposal of waste.

Program Description: Beginning in 2013, the Environmental Coalition of South Seattle's¹ Puget Sound Spill Kit Program was employed to educate targeted business owners about pollution prevention and to provide free spill kits for their use. The program will continue in 2015.

2014 Accomplishments: New ☒ Ongoing ☐ One Time ☐ Other_____

Bellevue enlists the services of the Environmental Coalition of South Seattle (ECOSS) to perform education and spill kit delivery to targeted businesses. In 2014, 48 businesses in Bellevue were reached through this program. See the attached program report for more information.

Attachments

2014 ECOSS Pollution Prevention Outreach Report for the City of Bellevue

¹ ECOSS Environmental Coalition of South Seattle, a non-profit organization; <http://www.ecoss.org/>



2014 ECOSS Pollution Prevention Outreach Report For the City of Bellevue

Introduction

In 2013, The Environmental Coalition of South Seattle (ECOSS) began an expansion of the Puget Sound Spill Kit Program with funding from Puget Sound Partnership. The goal of the program is to help increase awareness of stormwater pollution, and spill preparedness in small to medium sized businesses with connectivity to Puget Sound. ECOSS has developed partnerships with several cities, including the City of Bellevue to help meet local water quality goals and assist in educating local businesses through this program.

By providing free spill cleanup materials as an incentive, ECOSS seeks to engage businesses on the subject of stormwater pollution prevention, help them save money, and contribute to a cleaner Puget Sound.

Implementation

Business Prioritization

The City of Bellevue provided an initial list of preferred businesses from which ECOSS launched the program. ECOSS' outreach staff added additional businesses to the list through field research based on the level of risk observed in the field. The following facility activities were used as the standard to assess risk:

- Fueling and fuel transfer
- Outdoor manufacturing
- Outdoor equipment/vehicle maintenance
- Outside drum or container storage
- Vehicle, equipment, or building washing
- Loading/unloading of products
- Landscape construction/maintenance
- Outside storage of uncovered materials

A total of 2804 businesses were served between 2013 and 2014 by this program in all of the participating cities. In the City of Bellevue, 48 businesses were identified and served through these approaches in 2014 (see Appendix A for a list of businesses served).

Initial Approach

The outreach staff contacted each business through an unannounced site visit during which they introduced themselves as a partner of the City of Bellevue. The outreach staff also took advantage of referrals through property management companies, business associations, networks, and in some cases other agencies as a means of introduction. The program brochure was the primary tool used to introduce the business to the program and inform them of the City of Bellevue's participation. The program brochure (Appendix B) contains information about the issue of polluted runoff, the benefits to participation in the program, and historical background on ECOSS and it is intended to help in gaining the businesses' trust.

Training

Participating businesses were given a brief primer on the subject of stormwater and its effect on water quality. As an incentive to responsibly address onsite spills, each business received a free spill kit (Figure 1) containing either oil or universal sorbent materials capable of cleaning 7 gallons of liquid. The kit contents are as follows:

- 1 - 6.5 Gal UN Rated Pail w/lid
- 2 - Disposal Bag (4 mil)
- 2 - Disposal Bag (6 mil)
- 4 - Poly Zip Ties
- 20 - Heavy Wt. Sorbent Pads
- 2 - 3"x 48" Sorbent Socks
- 1 - Pair Nitrile Gloves
- 2 - Splash Resistant Goggles
- 1 - Instruction/Contents Page
- 2 - Spill Response Labels
- 1 - Grate Hook



Figure 1: Spill kit provided to participating businesses

The outreach staff provided training on the proper use and disposal of kit materials. The businesses were provided with an Instructional Poster and were helped to post it in a visible location and to use it to train their employees (Appendix C). Businesses were asked to sign a pledge, reflecting their understanding of pollution prevention, and promising future trainings for their staff. During the initial visit a baseline survey (i.e.,

before participating in the program) was taken to develop an understanding of the level of awareness on the part of the business. This survey helps to paint a picture of businesses' beliefs regarding liability and responsibility before the interaction. Lastly, the information necessary to create a Spill Plan was collected, including site specific risks and contact information for emergency response.

Spill Plan and Site Map

The information collected onsite was used to create a laminated Spill Plan (Appendix D) listing potentially risky activity at each site and the relevant contact information. In addition, if a city provided ECOSS with stormwater infrastructure and drainage basin information (either in the form of Geographic Information System [GIS] data or electronic maps) then a Site Map was provided to each business to illustrate their connectivity to Puget Sound (Appendix E). The outreach team then made a follow-up visit to each business to provide the laminated Spill Plan and Site Map. During this visit, the outreach staff assessed the chosen location of the spill kit on-site and offered suggestions when applicable. The businesses were reminded of ECOSS' role as a resource for future trainings (also available in a variety of languages) for their employees.

Follow-up Survey

After the service, an attempt was made to contact a representative sample (35%) of all of the businesses served in the program. This attempt was made at least six months after the initial service. The purpose was to assess the level of understanding and awareness of the issue retained since the initial interaction. Businesses from all the participating cities were including in this survey.

Business Served and Their Stormwater Awareness

Characteristics

In 2014, a total of 48 businesses were served through this program in the City of Bellevue (Appendix A). A breakdown of the types of businesses served in this city is shown in Figure 2.

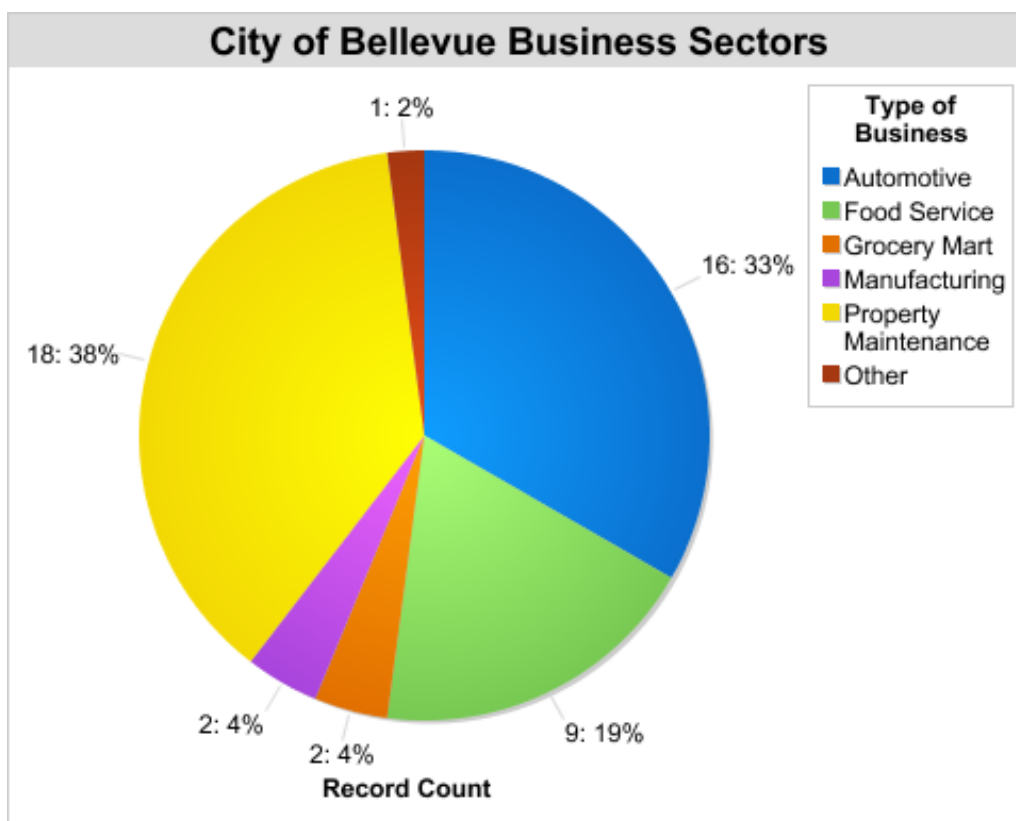


Figure 2: Business Sector Breakdown

Languages

Through this program, ECOSS' Multicultural Outreach Team utilized their language capacities to connect with hard-to-reach businesses. As seen in Figure 3, 6% of the businesses served in the City of Bellevue spoke English as a Second Language (ESL).

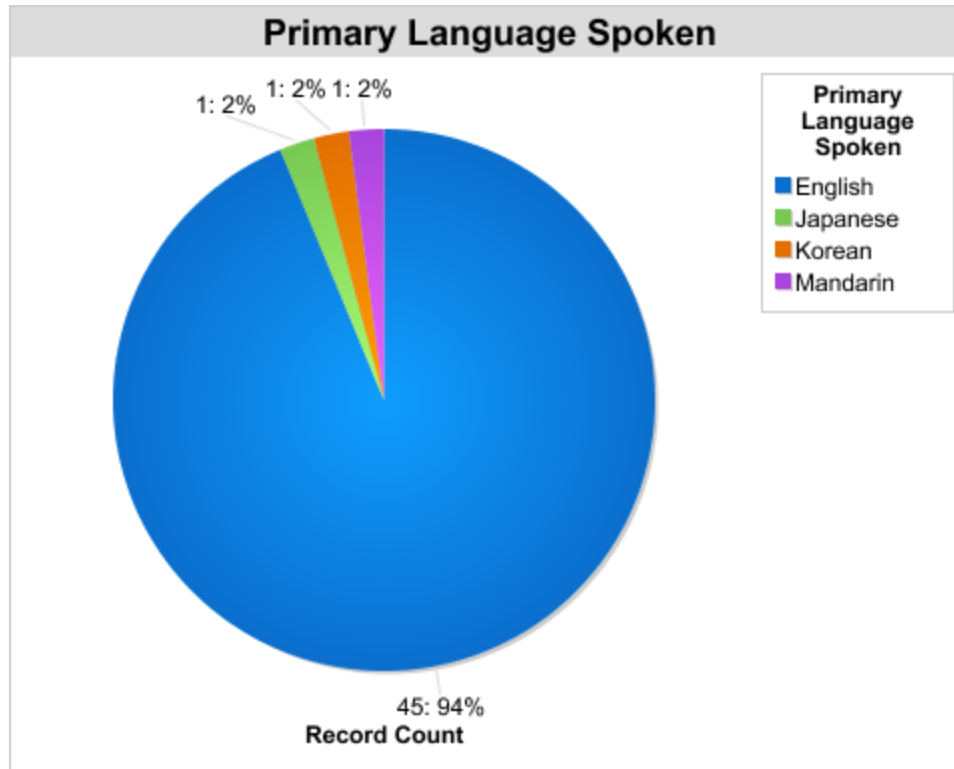


Figure 3: Primary Language Spoken Breakdown

The rest of this section includes results from all the participating cities.

Out of the total businesses served in this program throughout all the cities, 32% spoke ESL. A breakdown of the languages spoken by the businesses program-wide is shown in Table 1.

Demographic Data of Businesses Served	
Language	Percentage
English	68%
Korean	11%
Spanish	8%
Somali	1%
Vietnamese	3%
Chinese	1%
Other	8%

Table 1: Primary languages spoken by businesses

Multilingual Documents

In early 2014, ECOSS translated the Instructional Posters and Spill Plans into 5 different languages: Chinese, Korean, Somali, Spanish, and Vietnamese. The translated documents are available to businesses with employees who speak ESL. These documents were made to further assist multicultural businesses owners and employees to better understand stormwater management, and has been proven effective in the past.

Survey Results

As described above, a survey was conducted during each visit to understand the level of awareness of the issue on the part of each business, and a follow up survey was conducted with 35% of those businesses to gauge retention and behavior change. As depicted in Figure 4, after participating in the program 73% of the businesses reported knowing where their stormwater runoff went. This is a large improvement as only 41% of the businesses reported having this information before participating in the program.

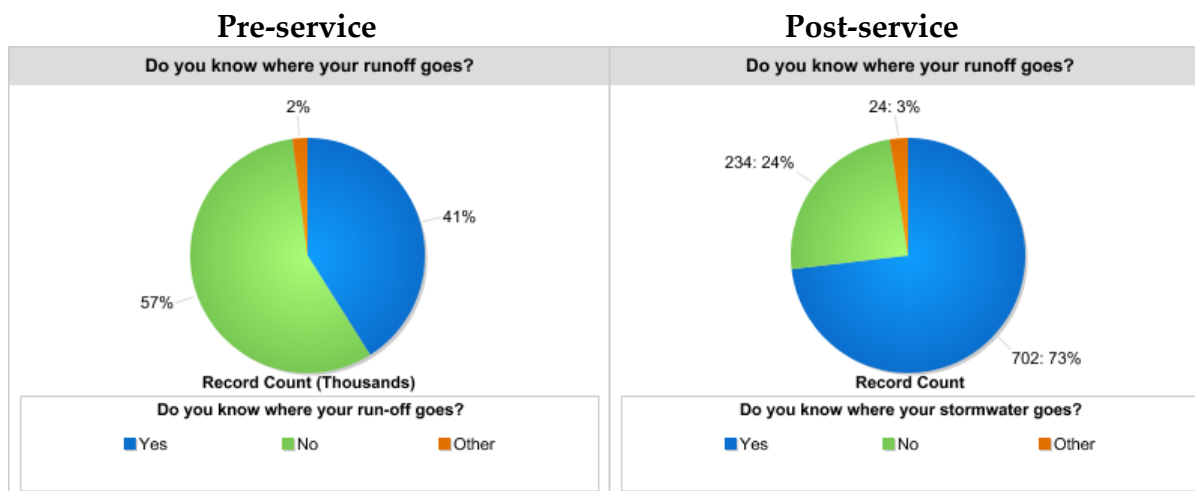


Figure 4: Pre and post-service answer to the question of whether a business knew where their stormwater runoff goes

Businesses were asked if they had spill cleanup materials and a Spill Plan onsite prior to the service. As seen in Figure 5, only 46% of businesses had materials, and only 7% had a Spill Plan. These percentages went up to 100% after program participation.

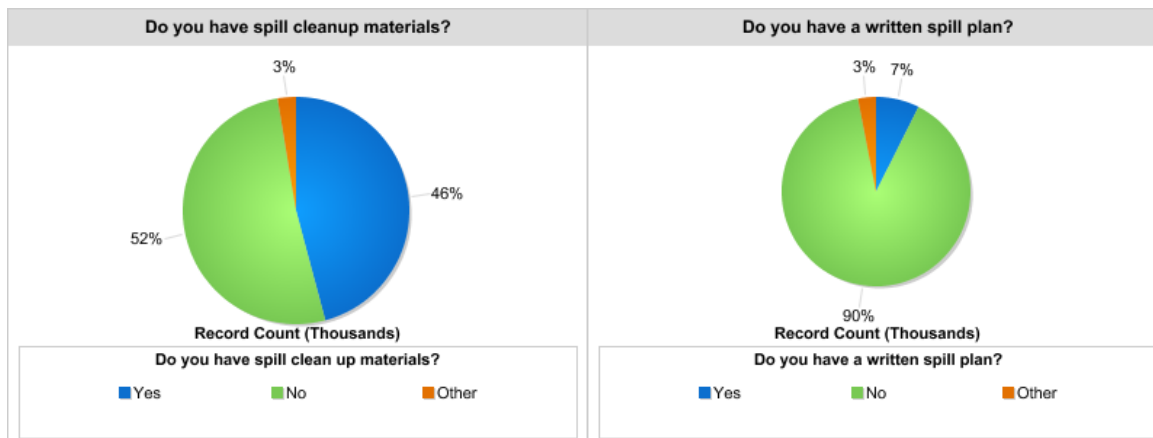


Figure 5: Answer to the question of whether a business had cleanup materials and a Spill Plan prior to the service

Since receiving the spill kit and training, 11% of the businesses surveyed report that they have used the material and information to clean up spills, which consisted most frequently of vehicle fluids (Figure 6).

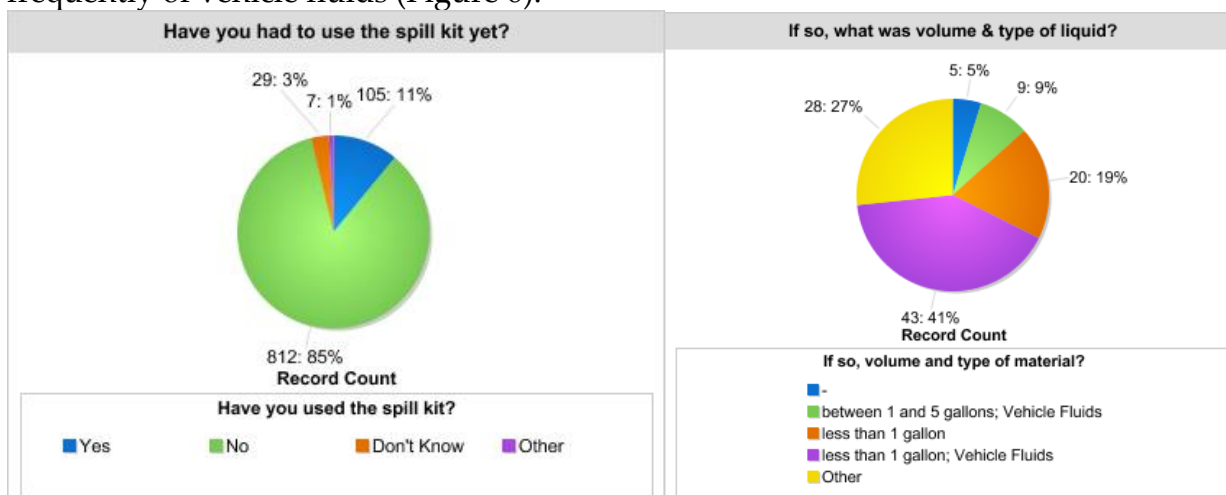


Figure 6: Post Service answer to the question of whether a business used the kit to clean an outdoor spill and what was the type and quantity of the spill

Conclusions

In summary, the main 2014 outcomes for the City of Bellevue from this project are:

- A total of 48 businesses in City of Bellevue received educational training and a spill kit (Appendix A).
- 6% of the businesses served in the City of Bellevue spoke ESL. The most common languages spoken other than English are Korean, Japanese and Mandarin within the served businesses.
- Program wide results:
 - 32% of business served spoke ESL.
 - Prior to the service, 41% of the businesses that took part in the program were aware of where polluted runoff went. After participating in the program, 73% of the businesses surveyed had this awareness of polluted runoff.
 - 11% of the businesses that participated in the follow-up survey reported having had outdoor spills since receiving a kit and using the kit to address the incident. The most commonly spilled substances were vehicle fluids. Out of our survey samples, at least 3 businesses also reported their spill voluntarily to the local municipalities.
 - Although the program did not track this data, it is thought that roughly 80% of the businesses contacted through outreach ended up participating in the program.
- Expressed support on the part of the municipality was crucial to gaining the trust of the business' representatives
- Collateral materials with the city's logo further reinforced the legitimacy of the program and the outreach team
- In-kind and direct support for the program has proven to be invaluable to ECOSS. It is estimated that in 2014, \$15,000 of in-kind support was provided per city. In addition, some of the cities provided \$2500 to purchase spill kits and other direct expenses.

Recommendations and Next Steps

- Based on the use of the kits amongst the business community, ECOSS recommends continuing to provide the program for 2015. By both engaging new businesses and revisiting some earlier-served businesses, ECOSS can further solidify the principles of spill prevention and clean-up within City's business community.
- ECOSS recommends revisiting previously served businesses to provide a refresher training. While conducting the Post-Service survey, we found that

though many businesses did provide trainings their employees, due to high staff turnover, inconvenience, and other reasons, a majority of the businesses that we worked with did not provide trainings on these issues to their staff. Not only would a refresher training encourage businesses to recognize instances in which the spill kit would be of use, but it would also help the City to develop meaningful relationships with the businesses by indirectly providing this free resource.

- ECOSS recommends mailing a co-branded postcard about the program in advance of the outreach visits. This will help provide a soft introduction for the business to the program and to ECOSS.
- ECOSS would like to explore funding (both in-kind and direct) to help offset program costs in 2015. By contributing a relatively small dollar amount to a regional program, ECOSS and the cities involved can off-set the high cost of public engagement towards water quality by leveraging all parties' limited resources. Levels of funding would be related to the total number of businesses served (based on the City of Bellevue's annual outreach goals).

Appendix A: Table of Businesses Served.

Business Name	Address	City	Primary Language Spoken
Type of Business: Automotive (16 records)			
Good Hands Auto Service	12005 NE 12th St, #9	Bellevue	Mandarin
Kirmac Collision Services	12130 Bel-Red Rd	Bellevue	English
Gene's Complete Auto Repair	12005 NE 12th St, Ste 12	Bellevue	English
Eschen Automotive	12005 NE 12th St, #14	Bellevue	English
Autologic	1407 132nd Ave NE, Suite 3	Bellevue	English
Surrey North Auto Repair	12003 NE 12th St	Bellevue	English
Dan Fast Muffler & Brake	12200 NE 12th St	Bellevue	English
Mann's Hitch & Truck Accessories	12005 NE 12th St, #18	Bellevue	English
Enterprise	12200 NE 12th St	Bellevue	English
Accutint	12003 NE 12th St, #1	Bellevue	English
Eastside Nissan Used Cars	12224 Bel-Red Rd	Bellevue	English
Mercedes-Benz of Bellevue	11850 Bel-Red Rd	Bellevue	English
Barrier Audi	1533 120th Ave NE	Bellevue	English
Tru-Line Bellevue	1423 - 130th Ave NE	Bellevue	English
Barrier Pre-owned	11855 NE Bel-Red Rd	Bellevue	English
Barrier Porsche	12000 Bel-Red Rd	Bellevue	English
Type of Business: Food Service (9 records)			
California Pizza Kitchen	595 106th ave NE	Bellevue	English
Purple Cafe and Wine Bar	430 106th Ave NE	Bellevue	English
Potbelly Sandwich Shop	10650 NE 4th St	Bellevue	English
I Love Sushi	23 Lake Bellevue Dr	Bellevue	Japanese
Jack in the Box	3179 156th ave s.e	Bellevue	English
Star bucks coffee	3181 156th ave s.e	Bellevue	English
The Goose Pub & Eatery	12001 NE 12th St	Bellevue	English
Crab Pot Bellevue	2 Lake Bellevue Dr	Bellevue	English
3 Pig Bar B-Q	1048 116th Ave NE, #150	Bellevue	English
Type of Business: Grocery Mart (2 records)			

120 GROCERY &DELI	12001 NE 12TH ST #76	Bellevue	Korean
7-eleven	3233 156th ave s.e	Bellevue	English
Type of Business: Manufacturing (2 records)			
Sunmark Upholstery	800 118th Ave NE	Bellevue	English
Sunset Glass Company Inc	11660 Ne 8th St	Bellevue	English
Type of Business: Other (1 record)			
Three Cedars Waldorf	556 - 124th Ave NE	Bellevue	English
Type of Business: Property Maintenance (18 records)			
Bellevue Square Managers, Inc	575 Bellevue Sq	Bellevue	English
Paccar Tower 2	555 106th ave NE	Bellevue	English
Bellevue Corporate Plaza	600 108th Ave NE	Bellevue	English
Expedia Inc	333 108th ave NE	Bellevue	English
Bellevue Tower South	500 106th ave NE	Bellevue	English
Bellevue Tower North	500 106th ave NE	Bellevue	English
Avalon Meydenbauer	10410 NE 2nd Street	Bellevue	English
Bellevue Place	10500 NE 8th St	Bellevue	English
The Westin Bellevue	600 Bellevue Way NE	Bellevue	English
Ashton	10710 NE 10th St	Bellevue	English
AVALONBAY COMMUNITIES, INC.	11200 NE 11th St	Bellevue	English
Hyatt Regency Bellevue	900 Bellevue Way NE	Bellevue	English
Avalonbay Communities Inc.	10349 NE 10th St	Bellevue	English
Spa Ten20 LLC	1020 108th ave NE	Bellevue	English
Lincoln Square	700 Bellevue Way NE	Bellevue	English
Avalonbay Communities Inc.	11000 NE 10th St	Bellevue	English
Paccar Tower	777th 106th Ave NE	Bellevue	English
Bank of American building	10555 NE 8th St	Bellevue	English
Grand Totals (48 records)			

Appendix B: Program Brochure



Why is Stormwater Important?

Stormwater is polluted runoff, and the leading source of pollution into Puget Sound. Small amounts of contaminants carried by runoff add up, combining to become a serious threat to local lakes, rivers, and Puget Sound.

Do You Know Where Your Storm Drains and Runoff Go?

ECOSS can determine where your stormwater flows, and will provide a drainage map for your site.



"We have ideas of things we can do to make our workplace better, but most of the time we are simply focused on our bottom line. For ECOSS to come to our door and take the time to show us how we can improve our impact, it makes all the difference."

— Son Vo, Warehouse Manager

ECOSS Provides Free Pollution Prevention Tools and Resources to Eligible Businesses

Why Should My Business Participate?

- Avoid clean up costs and fines
- Help keep pollution out of Puget Sound
- It's easy: training is simple and takes 10-15 minutes

ECOSS is now working with businesses across the Puget Sound. ECOSS provides free & confidential technical assistance.

To Get a Spill Kit or for assistance, contact:



John Loyd, Program Manager
spillkit@ecoss.org
206-767-0432 www.ecoss.org

Remember: Only Rain Down the Drain!

Photo on front courtesy of the Duwamish River Cleanup Coalition



FREE SPILL KIT

Stormwater Resources for Businesses



City of Bellevue

A pollution prevention partnership between ECOSS, businesses, and local agencies of Central Puget Sound.

Prevent Pollution & Save Money

You can save money and reduce liability by preventing pollution problems before they start.

Avoid clean up costs and fines:

- 50% of businesses surveyed had spills
- Catch basin cleanup costs average \$2,700
- Regulatory fines can be over \$10,000

In case of an outdoor spill:

- Use the Spill Kit to clean it up
- Dispose of the used materials properly
- Replenish your kit (cost of replacing materials typically ranges from \$20-60)

By using best practices, you will also be helping improve water quality in our lakes, streams, rivers, and Puget Sound.





Services are available in multiple languages, including Amharic, Arabic, Korean, Somali, Spanish, Tigrigna, and Vietnamese.

ECOSS Provides Free Environmental Services to Eligible Businesses

- Spill kit
- Spill plan and drainage map for your site
- Training for your employees
- Best Management Practices for your activities
- Assistance with permits and regulations
- Water, energy, and resource conservation recommendations



Free and Confidential Services

As a non-profit organization, our services are always free and confidential, and that's why businesses trust us. ECOSS has helped thousands of businesses improve their environmental performance since 1994.

If you appreciate the work we do, please let others know about our services. Businesses and individuals also support our work by becoming ECOSS members, visit www.ecoss.org or call 206-767-0432.



The Spill Kit program was created by ECOSS and Seattle Public Utilities in 2004. This expanded program is supported with funding from the Puget Sound Partnership, the Boeing Company, the Russell Family Foundation, the Rose Foundation, partner agencies, ECOSS members, and donors.

"Our staff are now prepared to respond to a spill and understand the importance of protecting our local waterways."

— Michael Nguyen, Business Owner

HOW TO CLEAN A SPILL






Stormwater is the leading source of pollution in the Puget Sound area. Small amounts of contamination can add up. By cleaning up spills before they reach our local lakes, rivers, and Puget Sound you can:

- Avoid fines
- Avoid expensive clean up costs
- Protect local waterways



1. Evaluate the situation. Put on protective equipment. Follow your spill plan.



2. Stop the source of the spill.



3. Protect the storm drain. If material has entered a storm drain, notify agencies listed on your spill plan.



4. Use kit materials to stop spill.



5. Clean up and dispose of used spill kit materials appropriately. For help call ECOSS: 206-767-0432



6. Restock the spill kit.

Remember: Only Rain Down the Drain!

For more information visit www.ecoss.org or contact ECOSS at 206-767-0432

Adapted from Seattle Public Utilities.











The Puget Sound Spill Kit Program has been funded by the US Environmental Protection Agency (EPA) under assistance from Agreement G031003103 to the Puget Sound Partnership (PSP). Washington State Department of Ecology, public and private bodies identified herein and others. The contents of this document are not necessarily official EPA views and policies. If the EPA, Ecology, PSP or others, find discrepancies or omissions in this document, they will be corrected for future editions.

Appendix D: Spill Plan

SPILL PREVENTION AND CLEANUP PLAN



Business Name		Phone	
Site Address			
Run-off from this site drains to:		Date	

SPILL PLANNING AND PREVENTION:

- ☒ Take inventory of chemicals and materials on site – *use less toxic materials where available.*
- ☒ Obtain appropriate spill response materials and personal protective equipment (PPE)
- ☒ Designate and train spill cleanup coordinator
- ☒ Train staff, at least once annually. Document your training

IN CASE OF A SPILL, CONTACT THE FOLLOWING:

	CONTACT NAMES	CONTACT PHONE NUMBERS
Business Owner, or Site Manager		
Onsite Spill Cleanup Coordinator		
REQUIRED PHONE CALLS to make if a spill that is too large to control reaches a catch basin, water-body, or exceeds kit capacity.	Bellevue Utilities Emergency Number	(425) 452-7840 24 hours
	WA State Dept of Ecology	(425) 649-7000 24 hours

SPILL CLEAN-UP:

- ☒ Evaluate situation, including safety considerations; notify owner/manager of spill
- ☒ Put On Personal Protective Equipment (PPE)
- ☒ Stop the source of the spill
- ☒ Protect the drain(s)
- ☒ Clean up spill by applying spill kit materials
- ☒ Dispose of clean up materials properly and restock the kit

FACILITY ACTIVITIES WITH POTENTIAL TO CONTAMINATE RUN-OFF

Activities	check all that apply	Activities	check all that apply
Fueling and fuel transfer		Loading/unloading of products	
Outdoor manufacturing		Landscape construction/maintenance	
Outdoor equipment/vehicle maintenance and repair		Outside storage of uncovered materials	
Outside drum or container storage		Customer and employee vehicles	
Vehicle, equipment, and building washing		Others:	

EQUIPMENT AND MATERIALS STORED ON SITE (>1 GALLON) WITH POTENTIAL TO CONTAMINATE RUN-OFF

Equipment	check all that apply	Vehicle Fluids	check all that apply	Misc. Chemicals	check all that apply
Forklifts		Antifreeze		Acid	
Trucks		Brake fluid, transmission fluid		Ammonia	
Cranes		Gasoline		Caustic, bases, lye	
Other:		Motor oil		Photographic chemicals	
Cleaning Products	check all that apply	Other fluids:		Pesticides, herbicides	
Liquids		Solvents, Paints, Lubricants	check all that apply	Other	check all that apply
Solids		Parts washer		Fertilizers	
Food Preparation/Waste	check all that apply	Dry cleaning fluids		Inks, dyes	
Cooking oil		Paint thinner, turpentine		Others:	
Grease (new or used)		Paint, coatings; oil based			
Dumpster		Paint, latex			
Trash compactor		Machine oil/coolant			
Other liquids:		Hydraulic fluid			
		Others:			

Need help developing your spill plan?

Contact Us! (206) 767-0432 or SpillKit@ecoss.org



Appendix E: Site Map

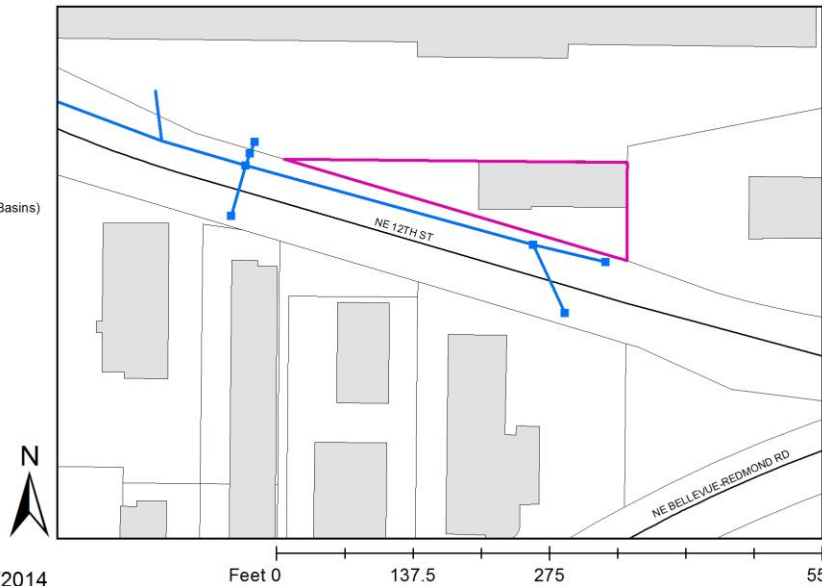
Dan Fast Muffler & Brake
12200 NE 12th St
Bellevue, WA 98005

Runoff from this
business drains to
Lake Bellevue
/Mercer Slough

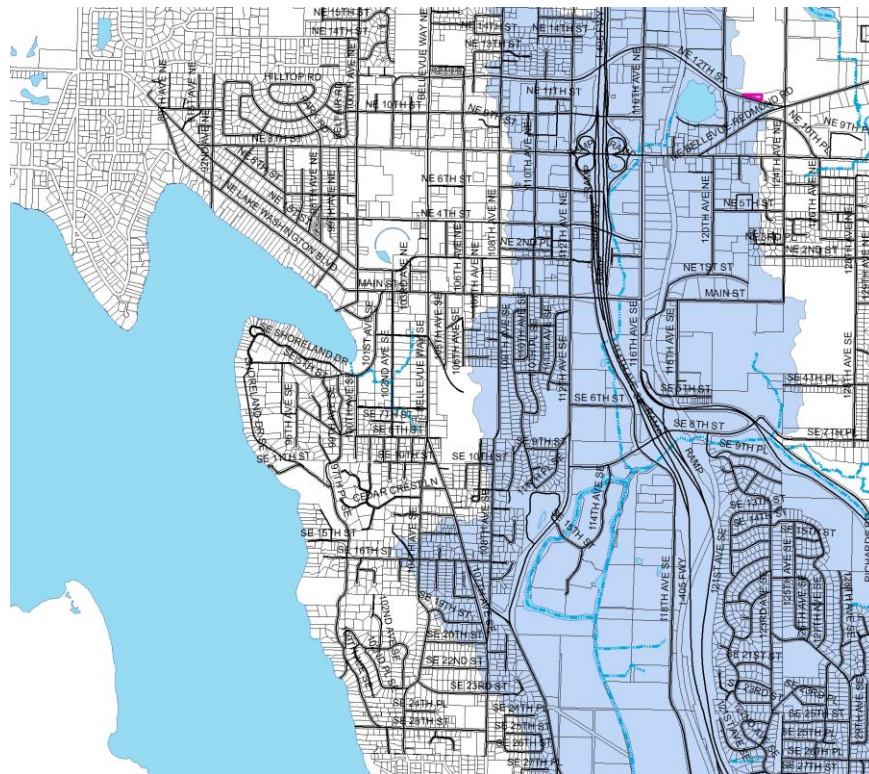


Legend

- Storm Drains(Catch Basins)
- Stormwater Pipes
- Streets
- Buildings
- Parcels



For educational purposes only. No warranties of any sort, including accuracy, fitness, or merchantability, accompany this document.



Program: Horses for Clean Water Program

Department/Division: Utilities/Operations and Maintenance/WQ Section

Permit Requirement:

- ☐ S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s): Residents; Property owners; General public

Subject Area(s): Pet waste management and disposal; Prevention of illicit discharges

Program Description: Using a King Conservation District Grant, Bellevue provided five educational workshops to property owners in the Bridle Trails community around best horse waste management practices. An educational video and outreach materials were developed for the project. In addition, the city commissioned a horse waste to energy feasibility study and developed a host of alternative disposal options for horse owners in the Bridle Trails area. See links and attachment for further information.

2014 Accomplishments: X New ☐ Ongoing X One Time ☐ Other_____

All phases of this project were completed in 2014.

Attachments:

http://bellevue.granicus.com/MediaPlayer.php?view_id=35&clip_id=4480

<http://www.thehorse.com/photos/slideshows/34406/small-horse-property-tour>

Bridle Trails Anaerobic Digester Feasibility Study 2014, prepared by McKinstry for the City of Bellevue.



Bridle Trails

Anaerobic Digester Feasibility Study

BELLEVUE, WA
25 NOVEMBER, 2014

FOR THE LIFE OF YOUR BUILDING

Bridle Trails Anaerobic Digester Feasibility Study

EXECUTIVE SUMMARY

The goal of the Bridle Trails Waste to Energy Feasibility Study is to provide a preliminary assessment if a proposed waste to energy project using equine (horse) waste as a fuel source can feasibly produce renewable power for a host entity on an economically and technically feasible basis. The scope of the study included the following deliverables:

- Fuel study to determine quantity of supply, considering willingness of horse owners to participate in waste to energy project and seasonal changes in number of resident horses in the Bridle Trails area.
- Transportation study to determine current and potential equine waste transportation and disposal options.
- Technical analysis to determine energy production levels and potential equipment options.
- Cost analysis to evaluation economic feasibility of the proposed waste to energy project.
- Sustainability assessment of environmental benefits from proposed waste to energy project.

The study revealed that the proposed waste to energy project is not economically feasible. Equine waste does not lend itself to cost-effective energy production. Equine waste produces approximately one fourth of the energy that equivalent volumes of bovine (cow) waste produce. The proposed project would have a Simple Payback Period of greater than ninety-five years, well in excess of the reasonable life of the equipment, and thus not feasible.

Given the findings based on energy production alone, the study did not calculate transportation costs to haul and store fuel, as it would only worsen the financial picture and progress toward carbon reduction goals.

Summary of results

	1 Horse	300 Horses
Reduction in Utility Production from Waste to Energy Project	213 kWh/yr.	63,900 kWh/yr.
CO2 Reduction (Lbs. CO2)	183 lbs. CO2/yr.	54,900 lbs. CO2/yr.
# of Vehicles removed from Roads	0	5
Annual Cost Avoided	\$14.33/yr.	\$4,200/yr
Simple Payback Period		95 years

Bridle Trails Anaerobic Digester Feasibility Study

INTRODUCTION

This study was funded by a grant from the King Conservation District and the City of Bellevue. McKinstry, a Seattle-based construction, engineering, and facility management company performed the study.

Work was performed in coordination with another grantee, Horses for Clean Water, an Idaho-based not-for-profit that leads education efforts for sustainable horse management practices.

FUEL STUDY

The goal of the fuel study is to determine the quantity of horse waste available within the greater Bridle Trails area of King County. This was attempted via a survey to participants at two educational events led by Horses for Clean Water. In addition to surveying the number of horses owned or stabled on a respondent's property, we asked horse owners in Bridle Trails about current waste management practices and costs, and preference for alternate waste management practices. We also asked horse owners their interest level in participating in a project that produced green energy.

We received 12 responses to the survey on April 3, 2014, and 11 on July 17, 2014. Statistically, the response rate was favorable, but overall the number of responses was not enough to develop an accurate estimate of the total number of horses in the Bridle Trails area. A mailed survey was considered, but was uneconomic given the budget of the study.

Survey results

Date of Survey	# responses	# Attendees	Response Rate
April 3, 2014	12	35	34%
July 17, 2014	11	28 (est)	39%

Given the low number of responses, the Technical Analysis developed renewable energy production estimates based on values for one horse and estimates on the overall horse population. See the Technical Analysis section for more detail.

However, the surveys revealed that horse owners in King County that attended the workshops already follow good waste management practices, including composting, and using commercial waste services to pick up and dispose of waste. Also, the surveys indicated that respondents were enthusiastic about a local project that would use horse waste to generate renewable power but did not want to increase costs of time spent managing waste.

TRANSPORTATION STUDY

The goal of the transportation study is to assess the availability and cost of horse waste transportation options. Although horse manure is not collected by the City of Kirkland and Bellevue's waste management providers, horse owners in Bridle Trails and the eastern King County geographic area have a range of manure disposal options. See Appendix A for detail on service providers and cost.

- Option A is the rental of a container that is placed on the horse owner's site, and is picked up and replaced by the service provider once per month or more frequently if necessary. This option ranges in cost from \$525/mo - \$325/mo.
- Option B requires self-arranged storage on site and pickup by a service provider. This option ranges in cost from \$75/mo - \$700/mo depending on the volume of waste and frequency of pickup.
- Option C is self-hauling to a disposal location in eastern Snohomish County. Tipping fees for this option range from \$0/load to \$10/load, but this option requires significant time, and may incur high fuel costs. The closest disposal location is a 45 mile round trip through roads in eastern King County

Bridle Trails Anaerobic Digester Feasibility Study

that have high traffic volumes and are frequently congested.

- Option D is posting to an online site, either operated by the King Conservation District or Craigslist, for disposal or pickup. Large landscaping services, and others, will take manure offered for free.

These costs and accompanying greenhouse gas emissions that would be generated by a transportation system to haul the waste were not used in the final analysis, as the economic feasibility of the project based on equipment costs alone was not viable.

TECHNICAL ANALYSIS

The goal of the Technical Analysis is to determine energy production levels from the horse waste. As the survey results were insufficient to provide a statistically accurate count of horses in the Bridle Trails area, the Technical Analysis was performed based on data for a single horse. Using the inputs below, an energy engineer calculated that the waste from a single horse will generate an amount of biogas that will generate renewable power that offsets approximately \$14 of electricity cost per year. This result is far below power generation derived from bovine waste, which can produce 3 times to 4 times more biogas, resulting in much higher levels of renewable power generation. The primary difference for the biogas and power production levels is the amount of nitrogen in the manure.

Technical analysis

Inputs	Values
Total Waste Production per 1,000 stalled horse/day	77 lbs. (includes bedding)
Total Methane energy content per horse/day	13,019 btu
Annual Energy Generation per horse/year	213 kWh
PSE Electric Rate	\$0.05/kWh
PSE Electric Rate (Demand)	\$9.44/kW
Annual Cost Avoided	\$14.33/yr.

Detailed energy calculations are available in Appendix B.

COST ANALYSIS

The goal of the Cost Analysis is to determine the economic feasibility of the proposed waste to energy project. Quantitatively, the project is uneconomic, as the value of power offset is not sufficient to amortize the cost of the equipment within the estimated life of the equipment.

The power generation offset results developed in the Technical Analysis were extrapolated to the estimated horse population in the Bridle Trails area to provide a better cost analysis framework. There are an estimated 300 horses in the Bridle Trails area. If every horse owner were to participate in the waste to energy project, the amount of energy offset would equal \$4,200/yr.

$$\$14 \text{ horse/yr} \times 300 \text{ horses} = \$4,200/\text{yr}$$

There is a wide range of equipment that can burn the volume of biogas that would be produced by the amount of waste digested by 300 horses. A reasonable cost estimate for an appropriately sized engine generator is \$400,000, but this cost does not include cost estimates for installation variables including site preparation, piping, and shed housing of the engine generator. With an estimated low-end cost of \$400,000, the simple payback on the engine generator alone is 95 years.

Bridle Trails Anaerobic Digester Feasibility Study

$$\$400,000/\$4,200/\text{yr} = 95\text{yrs}$$

As the simple payback significantly exceeds the estimated 20-year useful life of the equipment, the project is not economically feasible. Further investigation into transportation and fuel storage costs, other operations costs, and interconnection costs was not pursued.

SUSTAINABILITY ANALYSIS

The goal of the Sustainability Analysis is to provide a Rough Order of Magnitude (ROM) level analysis of environmental benefits of the proposed waste to energy project.

The Technical Analysis developed a value of electrical production offset by the proposed waste to energy system. This value was translated into Carbon Dioxide (CO₂) reduction in pounds CO₂ and metric tonnes. The annual reduction is also translated into other metrics that better illustrate the impact.

Sustainability impact

	1 Horse	300 Horses
Reduction in Utility Production from Waste to Energy Project	213 kWh/yr.	63,900 kWh/yr.
CO2 Reduction (Lbs. CO2)	183 lbs. CO2/yr.	54,900 lbs. CO2/yr.
CO2 Reduction (MT)	0.1 MT/yr.	24.9 MT/yr.
# of Vehicles removed from Roads	0	5
# of Miles Not Driven	310	93,000
# of 75 watt light bulbs not energized	2	686
# Average sized Houses removed from Power Grid	0	2
Acres of Trees Planted	0	7
Pounds of Coal Not Burned	85	25,000

The results above do not include effects of transporting the manure. Carbon dioxide emissions from burning fuel oil could quickly offset the benefits of the proposed waste to energy system. A value of 93,000 miles/yr. not driven (energy offset from 300 horses), is equivalent to a daily reduction in miles driven of 255 miles. Note that these values are established for an average sized passenger vehicle, not a commercial hauling vehicle. Thus, if a transportation vehicle or vehicles drove in excess of 255 miles/day while hauling manure, the carbon reduction effects of the waste to energy project would be negated.

SUMMARY AND NEXT STEPS

The anaerobic digestion of equine waste does not lend itself to cost-effective energy production. The major impediments to waste to energy projects using equine waste are technical and social. Technically, the composition of horse waste produces far less biogas than equivalent amounts of bovine waste. Socially, horses are typically widely geographically distributed, and live in small groups. 300 horses in a community such as Bridle Trails may belong to up to 200 discrete owners. A large group of owners may have widely different goals and constraints; aligning a group of this size to voluntarily cooperate may prove challenging. At dairies, where anaerobic digesters have been successfully developed, there can be up to several thousand cows, but one decision maker who stands to benefit from waste management costs and energy production revenues.

Bridle Trails Anaerobic Digester Feasibility Study

This study recommends that no further study be pursued on an equine waste fueled energy project. However, the effects of poor waste management on eastern King County's watershed will continue without effective measures to curb runoff contaminated by equine waste. This study recommends continued emphasis on safe waste management practices, coupled with training and outreach.

Further study could be continued with an assessment of stream impacts from equine waste in King County. This study would look at the costs and benefits of stream mitigation, and could help formulate policy or incentives that may positively impact the economic feasibility of a waste to energy system.

Appendices

Horse Manure Disposal Options

BRIDLE TRAILS AND EASTERN KING COUNTY AREA

PICKUP SERVICES

DeJong Sawdust & Shavings

11807 Avondale Road NE
Redmond, WA 98052

3413 Old Hartford Road
Lake Stevens, WA 98258
425-885-1821

- DeJong offers containers in 35cu yd and 45 cu yd sizes.
- \$525 for 1x/month pickup both sizes
- \$325 for >1x/month pickup both sizes
- They service most of King County Eastside, out as far as Fall City/Carnation
- If customer orders shavings/sawdust, price is \$75 less.
- There is currently a waiting list for containers.
- DeJong allows U-haul and dumping at both Lake Stevens and Snohomish County (Lowell-Latimer Road)
- At Lowell – Latimer, there is \$0/no charge for dumping. The yard is shared with Topsoils NW, who composts the manure.
- At Lake Stevens, tipping fees are \$10/yd with no purchase and \$5/yd if customer is picking up shavings (product sold by DeJong).

JIT Farm Systems

Bill Petitjean, Owner & Operator

PO Box 117
Carnation, WA
425-623-5925

JIT services most of east King County; provides both manure pick up services and back haul services for gravel/sawdust/other materials.

Prices range from \$75/mo for a 1 horse stable to \$700/mo for up to a 9 horse stable. JIT is a one-man operation at this time. Bill operates a truck with a 3 yard trailer. He is looking to expand his business and is interested in providing more service to Bridle Trails area. Additionally, Bill is a licensed engineer and knowledgeable on waste to energy systems.

DUMP SITES/U HAUL SITES

Topsoils NW

9010 Marsh Road
Snohomish, WA 98296
360-568-7645

Horse Manure Disposal Options

TNW partners with DeJong & Sons. Topsoils NW is a large soil/amendment producer located eastern Snohomish County.

As of Spring 2014, they allow horse owners to dump manure at no charge. TNW has previously charged \$7/ton. Open most daylight hours, early afternoon close on Sunday afternoons.

LOCATIONS THAT DO NOT ACCEPT HORSE WASTE

- Cedar Grove
- Snohomish County PUD
- Waste Management – WM does not operate in Bellevue. WM operates in Kirkland, but does not provide manure pickup service.

OTHER RESOURCES

- King Conservation District operates manure share list
- Craigslist has listing for manure disposal/pickup

APPENDIX B

City of Bellevue Anaerobic Digester Study

FIM 10.01-COB: Anaerobic Digester - Energy Analysis (08-11-14)

Table 5.1.1

Moisture Content of Raw Equine Waste

Material	Moisture Content, % by Weight	Source
Horse Manure	70%	(Warren, 2003)
Urine	100%	
Used Softwood Bedding	31%	(Wartell et al., 2012)

Table 5.1.2

Horse Waste Production, per 1,000 lb stalled horse

Material	Waste Production per Day	Source
Horse Manure	37 lb	(Wartell et al., 2012)
Urine	2 gal	(Wartell et al., 2012)
Used Softwood Bedding	20 lb	(Wartell et al., 2012)
Total Weight	77 lb	
Total Bone Dry Weight	25 lb	

Table 5.1.3

Volatile Solid Content of Raw Equine Waste

Material	Volatile Solids, %TS	Methane Production, ft ³ /lb VS	Source
Horse Manure	67%	0.34	(Frear et al., 2005)
Used Softwood Bedding	93%	1.14	(Wartell et al., 2012)

Table 5.1.4

Methane Production of Volatile Solids per 1,000 lb Stalled Horse

Source	Methane Energy Content, btu/day	Methane Energy Content, kWh/day	Biogas System Efficiency, %	Electricity Generated, kWh
Horse Manure	6,118	1.79	15%	0.27
Used Softwood Bedding	6,902	2.02	15%	0.31
Total	13,019	3.82	15%	0.58

Table 5.1.5

Energy Generation

Stalled Horses:	1 Horse(s)
Annual Days of Operation:	365 Days
Annual Energy Generation:	213 kWh
PSE Sched 10 Electric Rate:	\$0.05/kWh
PSE Sched 10 Electric Rate:	\$9.44/kW
Annual Cost Avoided:	\$14.33

APPENDIX B

Technical Analysis

APPENDIX B

Table 5.1.6

Energy Analysis References

Warren, L. K. (2003). Manure and Pasture Management for Horse Owners. Edmonton, Alberta: Alberta Agriculture, Food and Rural Development.

Wartell, B. A., Krumins, V., Alt, J., Kang, K., Schwab, B. J., Fennell, D. E. (2012). Methane Production from Horse Manure and Stall Waste with Softwood Bedding. Bioresource Technology, doi:10.1016/j.biortech.2012.02.012

Frear, C., Zhao, B., Fu, G., Richardson, M., Chen, S., (2005). An Evaluation of Organic Material Resources for Bioenergy Production in Washington State. Biomass Inventory and Bioenergy Assessment (Publication No. 05-07-047). Spokane, WA: Department of Ecology.

Program: Illicit Discharge Detection and Elimination Program
Department/Division: Utilities/Operations and Maintenance/Water Quality Section
Development Services Department/Clear and Grade Inspection Section

Permit Requirement:

- X S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s): Residents, Businesses, Developers, Property managers, Property owners, Public employees, General public

Subject Area(s): Impacts of illicit discharges and how to report them; Prevention of illicit discharges; Hazards associated with illegal discharges and improper disposal.

Program Description:

Implementing the Permit's Illicit Discharge Detection and Elimination Program requirements provides City staff with the opportunity for direct customer contact, education, Best Management Practices training, and initiating behavioral changes that reduce stormwater pollution; especially from single family residences which are the largest land use in Bellevue.

Staff has been able to educate homeowners' first hand to reduce their impacts on storm water. Staff works with homeowners to explore changes as simple as low cost landscaping alterations that direct runoff away from the municipal drainage system to housekeeping; or things such as how best to drain a swimming pool to protect the environment.

Education is the first step in an escalating enforcement strategy for preventing illicit discharges and illicit connections. City staff responds to illicit discharges from all sources including residential, business, construction site, public agency, public event, and municipal activities. Education and education materials are provided in person as part of the effort to change behaviors, implement BMP's, or make structural improvements to reduce the impacts of the activities.

2014 Accomplishments: ☐ New ☒ Ongoing ☐ One Time ☐ Other_____

In 2014, Bellevue responded to 325 reports of potential illicit discharges and illicit connections originating from residential, business, public agency, public event and municipal activities and permitted construction projects. After investigation, 297 were actual illicit discharges or connections and eliminated by City staff. In addition to responding to and eliminating the illicit discharges and connections, City staff educated the people responsible for the illicit discharge on impacts, City illicit discharge codes, containment and clean-up requirements and housekeeping and structural measures necessary to prevent future illicit discharges.

Attachments:

IDDE Code Card

IDDE Field Form of 1st Notice



Stormwater Pollution Prevention



The storm and surface water system in Bellevue is not connected to a sewage treatment plant. Runoff in storm drains flows directly into our local streams, lakes and wetlands. To protect water quality, Bellevue manages stormwater runoff by following "best management" practices and operates under a National Pollutant Discharge Elimination System Phase II Municipal Stormwater Permit issued by the state Department of Ecology. This permit is a requirement of the Federal Clean Water Act.

The Bellevue Storm and Surface Water Utility Code 24.06.125 prohibits storm and surface water pollution. The City will work with you to prevent storm and surface water pollution and to comply with code requirements and restrictions. For assistance, please call 425-452-7840.

24.06.125 Prohibited, permissible, and conditional discharges.

A. General.

1. No person, whether singly or in combination with others, shall dump, throw, drain or otherwise discharge, either directly or indirectly, nonstormwater and/or prohibited discharges into the storm and surface water system or receiving water within or contiguous to city of Bellevue municipal limits; and
2. Every permit issued to implement this code shall contain a performance standard requiring that no discharge of nonstormwater and/or prohibited discharges from a site or real property, directly or indirectly, to the storm and surface water system or a receiving water occurs.

B. Prohibited Discharges.

1. The following substances are prohibited from entering, either directly or indirectly, a storm and surface water system or receiving water within or contiguous to city of Bellevue municipal limits, including but not limited to: (see list at right)

Petroleum products including but not limited to oil, gasoline, grease, fuel oil and heating oil

Trash or debris

Domestic animal wastes

Chemicals

Paints

Steam cleaning wastes

Washing of fresh concrete for cleaning and/or finishing purposes or to expose aggregates

Laundry wastes

Soaps, including biodegradable soaps, detergents, or ammonia

Pesticides, herbicides, or fertilizers

Sewage

Heated water

Chlorinated water, chlorine, bromine, or other disinfectants

Degreasers and/or solvents

Bark and other fibrous material

Antifreeze or other automotive products

Lawn clippings, leaves, or branches

Animal carcasses

Silt or sediment

Concrete, cement or gravel

Acids, alkalis, or bases

Recreational vehicle wastes

Dyes (without prior permission of the utility)

Construction materials

Food wastes

Metals in either particulate or dissolved form

Flammable or explosive materials

Radioactive material

Batteries

Paints, stains, resins, lacquers, or varnishes

Drain cleaners

Swimming pool or spa filter backwash

Chemicals not normally found in uncontaminated water

Any other process-associated discharges except as otherwise allowed in this section

Any hazardous material or waste not listed above



Nothing But Rain Down the Storm Drain

Enforcement

Bellevue relies primarily on public education and voluntary corrective actions to achieve compliance; however, discharging pollutants into storm drains or waterbodies will be documented and can result in escalating enforcement.

The city reserves the right to proceed directly to a Notice of Violation, which can result in fines of \$500 per day or more [BCC 1.18.075(E)(2)(3)]. For repeat violations that occur within two years of a previous violation, the following penalties may be imposed [BCC 1.18.075(G)(2)].

- a. For the first repeat violation the penalty may equal up to \$1,000 per day;
- b. For the second repeat violation, the penalty may equal up to \$2,000 per day;
- c. For the third repeat violation, the penalty may equal up to \$3,000 per day;
- d. For the fourth repeat violation, the penalty may equal up to \$4,000 per day; and
- e. For each additional violation that may occur beyond the fourth repeat violation, the penalty may equal up to \$5,000 per day.



Remember, it's illegal to pollute waterways in Washington State. Call **425-452-7840** to report an illegal discharge in Bellevue. Thank you for keeping our shared waters healthy for people, fish, and wildlife.

Bellevue City Code: http://www.bellevuewa.gov/doc_library.htm

City of Bellevue, Stormwater Runoff Management:
<http://www.bellevuewa.gov/stormwater-runoff-management.htm>

Clean Water Act: <http://www.epa.gov/lawsregs/laws/cwa.html>

Department of Ecology, Water Quality:
<http://www.ecy.wa.gov/programs/wq/lwqhome.html>

Department of Ecology Laws & Rules:
<http://www.ecy.wa.gov/laws-rules/index.html>

Washington State Legislature, Water Pollution Control, 90.48 RCW:
<http://apps.leg.wa.gov/lrcwldispo.aspx?cite=90.48>

Illicit Discharge Detection/Elimination Field Form

Date: _____ Time: _____ Inspector: _____ ☐ SPILL ☐ IDDE ☐ SSO

I. Reported location: _____ LIS # _____

Description: _____

Caller Name: _____ Caller Phone: _____ Anonymous? ☐ Yes ☐ No

Other Important Contacts: _____

Referral Source: ☐ Field Observation ☐ PDI Inspection ☐ King County Industrial Waste Program

☐ Direct (Spiller) ☐ COB ☐ NorCom 911 ☐ Ecology - ERTS #: _____

Caller notified any other agencies? ☐ Yes ☐ No

☐ COB ☐ King County ☐ Ecology ☐ Public Health ☐ WDFW ☐ Other: _____

II. Responsible Party(RP): _____

Is this a Business? ☐ Yes ☐ No Contact _____ Title: _____

RP Address: _____ Phone: _____

RP different than owner? ☐ Yes ☐ No Name: _____

☐ Samples ☐ Photos: _____ Ecology Notified? ☐ Yes ☐ No (ERTS # _____)

III. Investigation: Inspector: _____ Other Inspector: _____

Site Visit: ☐ Yes ☐ No Date: _____ Time: _____ Weather: ☐ Sunny ☐ Overcast ☐ Raining ☐ Snowing

Pollutant Reach MS4? ☐ Yes ☐ No ☐ UK **Pollutant Reach Receiving Water Body?** ☐ Yes ☐ No ☐ UK

Basin _____ State Water _____

IV. Results

Pollutant: ☐ Automotive _____

☐ Chemicals _____

☐ Paints _____

☐ Wastes _____

☐ Soaps _____

☐ Sediments _____

☐ Other _____

Cause of Problem: ☐ Accidental Spill _____

☐ Process Related _____

☐ Illicit Connection _____

☐ Construction _____

☐ Other _____

Corrective Action Required:

☐ Stop illicit discharge immediately <http://www.codepublishing.com/wa/bellevue/?/Bellevue24/Bellevue24.html>

☐ Obtain Construction Discharge Permit <http://www.kingcounty.gov/environment/wastewater/IndustrialWaste.aspx>

☐ Clean Structures to Standard http://www.bellevuewa.gov/pdf/Utilities/Utilities_Storm_Maintenance_Standards_Feb_2010.pdf

☐ Implement Source Control BMPs http://www.bellevuewa.gov/pdf/Utilities/Utilities_Storm_Maintenance_Standards_Feb_2010.pdf

☐ Obtain Spill Prevention & Cleanup Materials / Train staff for spill response

☐ _____

Inspector provided City of Bellevue Stormwater Pollution Prevention education flyer? ☐ Yes ☐ No

Notes & Actions: _____

Sketch

Required to be completed by: _____ **Notify Inspector when completed by calling 425-452-7840**

Date

WO # _____ SR # _____ Parent WO# _____ Basin _____

Illicit Discharge Detection/Elimination Field Form

Excerpt From BCC 24.06.125 Prohibited, permissible, and conditional discharges

A. General.

1. No person, whether singly or in combination with others, shall dump, throw, drain or otherwise discharge, either directly or indirectly, nonstormwater and/or prohibited discharges into the storm and surface water system or receiving water within or contiguous to city of Bellevue municipal limits; and
2. Every permit issued to implement this code shall contain a performance standard requiring that no discharge of nonstormwater and/or prohibited discharges from a site or real property, directly or indirectly, to the storm and surface water system or a receiving water occurs.

B. Prohibited Discharges.

Please refer to the Stormwater Pollution Prevention card or visit <http://www.codepublishing.com/wa/bellevue/>

C. Permissible Discharges. The following types of discharges are permissible discharges unless the director determines that the type of discharge, directly or indirectly, to a storm and surface water system or receiving water within or contiguous to city of Bellevue city limits, whether singly or in combination with others, is causing or contributing to a violation of the city's NPDES permit or is causing or contributing to a water quality problem:

1	Diverted stream flows;
2	Rising ground waters;
3	Uncontaminated ground water infiltration;
4	Uncontaminated pumped ground water;
5	Foundation drains;
6	Air conditioning condensation;
7	Irrigation water from agricultural sources that is commingled with urban stormwater;
8	Springs;
9	Water from crawl space pumps;

10	Footing drains;
11	Flows from streams and associated buffers and wetlands;
12	Nonstormwater discharges covered by another NPDES permit; provided, that the discharge is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations; and provided, that written approval has been granted by the Washington State Department of Ecology for any discharge to the storm drain system; and
13	Discharges from emergency fire fighting activities.

D. Conditionally Permissible Discharges. The following types of discharges are conditionally permissible discharges if they meet the stated conditions or unless the director determines that the type of discharge, directly or indirectly, to a storm and surface water system or a receiving water within or contiguous to Bellevue city limits, whether singly or in combination with others, is causing or contributing to a violation of the city's NPDES permit or is causing or contributing to a water quality problem:

1. Potable water, including water from water line flushing, fire sprinkler system testing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Such planned discharges shall be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted, if necessary, and in volumes and velocities controlled to prevent resuspension of sediments in the storm and surface water system;
2. Lawn watering and other irrigation runoff, which shall be minimized through, public education and water conservation efforts;
3. Swimming pool discharges, shall be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted and reoxygenized, if necessary, and in volumes and velocities controlled to prevent resuspension of sediments in the storm and surface water system. Swimming pool cleaning wastewater and filter backwash shall not be discharged into the storm water system;
4. Street, parking areas and sidewalk wash water, water used to control dust, and routine external building wash down that does not use detergents are permitted if the amount of street wash and dust control water used is minimized, best management practices are used to prevent and/or minimize dirt, soil, or other pollutants from entering the storm and surface water system, and public education activities and/or water conservation efforts include information on reducing impacts of these discharges. At active construction sites, street sweeping shall be performed prior to washing the street;
5. Nonstormwater discharges covered by another NPDES permit; provided, that the discharge is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations; and provided, that written approval has been granted by the Washington State Department of Ecology for any discharge to the storm and surface water system;
6. Other nonstormwater discharges related to construction site dewatering discharges shall comply with the requirements of a stormwater pollution prevention plan (SWPPP) reviewed and approved by the city;
7. Other discharges from utility-owned infrastructure failures due to aging infrastructure or acts of God that result in nonstormwater discharges shall be minimized through municipal utility infrastructure programs, such as utility infrastructure repair, replacement, or rehabilitation; asset management programs, or preventive system repairs and maintenance; and
8. Other nonstormwater discharges resulting from city response to emergency or weather-related events.

E. Prohibition of Nonstormwater Connections. The construction, use, maintenance, or continued existence of nonstormwater connections (also known as illicit connections) to the storm and surface water system is prohibited regardless of whether such connections were previously made or lawful under past regulations in place at the time of connection.

F. Discharge of Pollutants – Liability for Expenses Incurred by the Utility. Any person responsible for pollutant discharge into the storm and surface water system who fails to immediately collect, remove, contain, treat or disperse such pollutant materials at the director or his designee's request shall be responsible for the necessary expenses incurred by the city in carrying out any pollutant abatement procedures, including the collection, removal, containment, treatment or disposal of such materials.

G. Source Control Best Management Practices. To prevent discharge of illicit or prohibited discharge materials into the storm and surface water system, source controls shall be applied in accordance with the storm and surface water operation and maintenance standards. (Ord. 5905 § 1, 2009.)

WO # _____ SR # _____ Parent WO# _____ Basin _____

Program: IDDE¹ Public Employee Education Program
Department/Division: Utilities/Operations and Maintenance/Water Quality Section
Development Services Department/Clearing and Grading Program

Permit Requirement:

- ☐ S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.
- ☐ S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s): Public employees

Subject Area(s): Hazards associated with illegal discharges and improper disposal of waste.

Program Description: Education about illegal discharges and improper disposal of waste is provided to public employees in a number of ways, including but not limited to:

- Awareness Level Training – Utilities Operations and Maintenance conducts ongoing training for field staff who may as part of their normal job duties come into contact with or otherwise observe an illicit discharge or illicit connection. Staff is trained in the proper procedures to report and respond to illicit discharges² and connections³.
- Investigative Training- Staff who are responsible for the identification, investigation, termination, clean-up, and reporting of illicit discharges and connections receive refresher training and updates on permit requirements on an annual basis.
- Utilities Operations and Maintenance IDDE Program staff also conducts citywide and group-specific training throughout the year.

2014 Accomplishments: ☐ New ☒ Ongoing ☐ One Time ☐ Other_____

In addition to awareness level and investigative training in 2014, two “open to citywide staff” illicit discharge detection and elimination (IDDE) training sessions were conducted and department-specific training was also conducted for Parks staff. The City also keeps the Certified Erosion and Sediment Control Lead (CESCL) certifications current for applicable field inspection program staff.

¹ IDDE Illicit Discharge Detection and Elimination

² Illicit discharge means any discharge to a municipal separate storm sewer system (MS4) that is not composed entirely of stormwater or of non-stormwater discharges allowed as specified in the NPDES W. WA Phase II Municipal Stormwater Permit.

³ Illicit connection means any infrastructure connection to the MS4 that is not intended, permitted or used for collecting and conveying stormwater or non-stormwater discharges allowed as specified in the Permit. Examples include sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to the MS4.

Program: Private Drainage Inspection Program

Department/Division: Utilities/Operations and Maintenance/Water Quality Section

Permit Requirement:

- ☐ S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.
- ☒ S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.
- ☒ S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s): Businesses; Residents; Property Owners; Property Managers

Subject Area(s): Prevention of illicit discharges; Hazards associated with illegal discharges and improper disposal of waste; Stormwater facility maintenance

Program Description: The Private Drainage Inspection program (PDI) provides storm drainage system inspection services and education on maintenance standards to businesses, residents, property owners and managers of over 1400 properties in Bellevue on an annual or biennial frequency. Education is an important key to maintaining the integrity and functionality of the private drainage systems, which represent at least half of all drainage systems in Bellevue. Nearly all of the businesses, residents, property owners and managers contacted during routine compliance inspections are provided with information on the adopted maintenance standards, illicit discharge educational materials, and the consequences of not complying with city codes.

2014 Accomplishments: ☐ New ☒ Ongoing ☐ One Time ☐ Other_____

In 2014, 640 properties were inspected through the PDI program. Of those that needed maintenance, nearly 90% completed requested maintenance within 30 days of their inspection

Program: Car Wash Research

Department/Division: Utilities/Resource Management Customer Service (RMCS)

Permit Requirement:

- X S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s): Businesses; General Public; Residents

Subject Area(s): General impact of stormwater on surface waters; Impacts from impervious surfaces; Impacts of illicit discharges and how to report them; Prevention of illicit discharges; Hazards associated with illegal discharges and improper disposal of waste.

Program Description: The Car Wash Research Program:

- Provides preemptive and onsite car wash education to inform businesses, charities, neighborhood association leaders, and residents how they can help prevent stormwater pollution by using car wash best management practices.
- Encourages the use of commercial car washes or the sale of commercial car wash coupons as an alternative fundraiser to holding charity car washes.
- Monitors charity car wash occurrences during strategic months of the year.

2014 Accomplishments: ☐ New ☒ Ongoing ☐ One Time ☐ Other_____

In 2014, the City continued to conduct onsite carwash education and outreach for 14 businesses hosting charity fundraising car wash events. The program has been very effective in preventing pollution from charity car washes for the past eight years at the visited businesses. Problem situations are quickly identified and corrected, resulting in immediate reduction of pollutants entering the storm drain system. Businesses and groups hosting charity car washes are educated about City code requirements and the need to correctly use car wash kits made available by the City. An "alternatives to car wash fundraising" brochure was also distributed through this program as well as an increasing list of preemptive outreach to businesses, secondary schools, Parent Teachers Student Associations and Neighborhood Associations. Feedback has been positive.

In 2014, the consultant provided:

- Drop-in outreach to onsite charity car wash locations on 14 Saturdays.
- A stormwater pollution prevention informational booth at the City of Bellevue's Strawberry Festival and Auto Show.
- An updated flier incorporating a funding comparison of various fundraisers researched in a 2013 case study of Bellevue charity groups fundraisers. The flier encourages charity groups to choose alternative eco-friendly fundraisers instead of charity car washes.
- A presentation at the regional STORM Symposium



Flip over to find a fundraiser that is safe for our environment.

For more information contact the Stream Team at 425-452-5200 or streamteam@bellevuewa.gov.

Low-Cost Eco-Friendly Fundraisers

Everything that flows down a storm drain in Bellevue goes directly to streams, lakes, and wetlands. Soap, even biodegradable soap, makes it difficult for fish to breathe and kills helpful stream bugs. Dirty car wash water also carries oil, grease and fine sediment that clog the spaces between rocks where salmon incubate their eggs.

Try a GREEN fundraiser instead of a car wash and shrink your eco-footprint!

Research shows that local organizations are raising equal or greater revenue when choosing eco-friendly fundraisers over fundraiser car wash events.

Hold a clothing drive: The Eastside Football Club collected used clothing then sold it to a redistributor by weight. Their team collected unwanted articles of clothing from friends, family, and other sources. This option is available through www.clothes-for-the-needs-fundraising.com and other companies.

Commercial Car Wash Tickets: Tiltium Middle School sold commercial car wash tickets as a great way to earn money. Local streams were protected because commercial car washes capture and treat their used wash water. Tickets can be purchased at a discounted rate from either Brown Bear www.brownbear.com/ or the Puget Sound Car Wash Association www.charitycarwash.org.

Sell eco-friendly products such as reusable shopping bags or water bottles to raise money and support the environment. Many organizations allow your donors to go online to order products such as reusable water bottles with your charity's name on them, so you won't have to purchase any products in advance in order to raise funds. (Sample sites include www.greenraising.com and www.kittidesign.com.)

Hold a walk-a-thon on a school track or a road-a-thon. Ask people to pledge a certain dollar amount for each lap students walk or book they read for their cause.

Partner with a local business to receive a portion of their profits for a day or team up with your local Applebee's Restaurant to hold a Flypack Fundraiser and sell tickets for a morning breakfast event and earn money for your charity. www.applebees.com

Partner with TerraCycle: TerraCycle pays schools for collected empty juice packs and wrappers which they will then turn into bags, pencil boxes, and other items to reduce the waste going to the landfill. <http://terraCycle.net>

Hold a school auction, consider including experiences with teachers or senior staff.

Hold a Garage Sale: One family's trash could be another family's treasure! Earn money and give unwanted items a second home while keeping them out of the landfill.

Sell local coupon books: Try selling the popular Chinook Book with coupons and discounts for local businesses. <http://chinookbook.net>

Collect e-waste for recycling. There is no cost to participate and unlimited fundraising profit for collecting items such as empty ink cartridges, used cell phones, laptops, and tools for recycling. (Sample partners include www.cartidgesforkids.com, www.fundingfactory.com, and www.earthtonsolutions.com.)

Sample Fundraising Results

Average amount raised by traditional single-day car wash event: \$675

Average amount raised by charity groups participating in:

- Commercial car wash ticket sales: \$1,431
- Magazine drives: \$12,000
- Clothing drives: \$2,500

YOU DON'T NEED A CAPE TO DO THE RIGHT THING

Nothing but rain should ever go down a storm drain.

Runoff flowing into storm drains goes directly into local streams, lakes, and wetlands without treatment.

- Dirty car wash water contaminates our watersheds with petroleum hydrocarbons, heavy metals, phosphorus, nitrogen, and sediments.
- Soap disrupts the protective mucous layer on fish and natural oils in the gills, making fish more susceptible to diseases.
- Even biodegradable soap kills stream bugs. It reduces the microorganisms in soil to break down properly.

Use a commercial car wash to protect our environment.

Commercial car washes send their dirty water to the sewer for treatment.

Stream Team **Puget Sound Starts Here**

Program: Natural Yard Care

Department/Division: Utilities/Resource Management Customer Service (RMCS)

Permit Requirement:

- X S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.
- ☐ S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s): General Public; Residents; Property Owners

Subject Area(s): General Impacts of stormwater on surface waters; Yard care techniques protective of water quality; Use and storage of pesticides and fertilizers and other household chemicals

Program Description: The Natural Yard Care (NYC) program provides education and how-to-resources to Bellevue homeowners on yard care best management practices that encourage yard care behavior change to conserve and protect water resources, reduce yard waste and enhance public health.

2014 Accomplishments: ☐ New X Ongoing ☐ One Time ☐ Other_____

Bellevue held its first yard care program at Bellevue Botanical Garden in 1994 and the program's popularity quickly outgrew the BBG's classroom capacity. This year we brought our NYC program back "home" to BBG this year, hosting workshops at the BBG's new Education Center. New homeowners were invited to participate in a series of four classes in autumn 2014. Five speakers provided residents with an overview on NYC design and five steps in a fun yet informative manor. Local and regional on-line resources were share for follow up guidance and digging deeper into the topics. A total of 316 residents participated in the program, representing a total of 114 Bellevue area homes. This was a 14 percent increase over the number of participating households in 2013. An overall participant satisfaction rating of 98 percent was achieved. Participants were asked to apply the NYC practices they learned home and 93 percent of them pledged to do so, encouraging us to continue the program in 2015.

The desired behavior changes of the Natural Yard Care Program correlate directly with the five steps of NYC: 1) build healthy soil, 2) plant right for your site, 3) practice smart watering, 4) think twice before using pesticides, and 5) practice natural lawn care. These practices are

promoted through seasonal NYC workshops, City communication opportunities and special events. The practices are also modeled and promoted through the City's Waterwise Garden at the Bellevue Botanical Garden (BBG). In 2014, grant funds were used to hire consultants to assist the City with the design and production of NYC outreach materials and the implementation the NYC workshops.

The outreach materials included an organic sunflower seed packet used to connect residents to the City's on-line NYC resources. The packets were distributed at the BBG, the workshops and at special events. A total of 4,000 packets were distributed during the year. Outreach tables/displays featuring NYC were set up for the BBG open house (June), Movie Night at Bellevue Downtown Park (July) and Bellevue Farmers Market (August). Staff responded to questions from close to 700 visitors during the three events, connecting visitors to NYC resources as appropriate. The City's popular Natural Gardening Guides were also updated and printed for distributions primarily through City Hall and the BBG information/education areas. A total of 10,500 copies of the various guides were distributed.

<http://www.bellevuewa.gov/natural-gardening-resources.htm>.

Program: Paint Program

Department/Division: Utilities/Resource Management Customer Service (RMCS)

Permit Requirement:

- X S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s): General Public; Businesses; Residents; Property Owners

Subject Area(s): Use and storage of automotive chemicals, hazardous cleaning supplies, car wash soaps and other hazardous materials; Impacts of illicit discharges and how to report them; prevention of illicit discharges.

Program Description:

2013 marked the beginning of a new outreach task aimed at informing paint retailers and their customers about options for proper paint disposal and recycling. Task work began by recruiting interested paint retailers in Bellevue willing to distribute information to their contractor and residential customers (paint sticks imprinted with stormwater pollution prevention messaging, and paint brochures). We are proud to report that we were ultimately successful in gaining participation from management at 100% of paint retailers in Bellevue, equating to 14 sites.

2014 Accomplishments: ☒ New ☒ Ongoing ☐ One Time ☐ Other_____

This year marked the second year of an outreach task aimed at informing paint retailers and their customers about options for proper paint disposal and recycling. These sites have proven to be an excellent conduit for information to paint contractors and residents with leftover paint. Many sites can hardly keep in stock the educational stir sticks provided by the program to each participating retailer.

Attachments:



Paint, solvents, and adhesives contain chemicals that are harmful to people, fish, and wildlife. Never allow these materials to wash into the street or storm drain.

Waste materials from painting include excess paint, thinner, cleanup water, dust, and paint chips from preparation work. Runoff from painting and prep areas may be contaminated with toxins, oil, grease, metal, and debris.



STORM DRAINS



ARE NOT SEWERS

Storm drains collect rainwater to help prevent flooding. Water flowing into storm drains is not treated to remove pollutants before it flows directly into our local streams, lakes, and wetlands. These outside drains are typically located in streets and parking lots.

Sanitary sewers collect wastewater from indoor sources such as toilets, sinks, and floor drains where it flows to a wastewater treatment plant for processing. The treatment facility removes many pollutants before discharging the water to Puget Sound.



PROJECT ID:
U.S. POSTAGE
BELLEVUE, WA
98005-1001

City of Bellevue Utilities
425-452-7840
Bellevue, WA 98005

NOTHING BUT RAIN DOWN THE STORM DRAIN

PAINT AND FISH DON'T MIX



BEST MANAGEMENT PRACTICES FOR COMMERCIAL PAINTERS



PAINTING BEST MANAGEMENT PRACTICES

The following paint disposal and cleanup guidelines will help you protect the environment and comply with Bellevue city code.



If you have questions about Bellevue's storm and surface water system, or code requirements, please call 425-452-7840 or email utilities@bellevuewa.gov

Jobsite Procedures

- Maintain a clean working environment.
- Use ground cloths to collect dust and debris from site preparation work.
- Shelter spray painting area with tarps to prevent dust and overspray.
- Use drip pans in areas where paint, finishes, and other liquids are mixed, carried, and applied.
- Store and maintain spill kits in easily accessible locations.
- Sweep and/or vacuum the area when work is complete. Do not hose it down into the street or storm drain.
- Clean, store, and dispose of residual paint and materials properly.



Employee Training

Proper employee training is key to successfully implementing best management practices. Establish and document a regular training schedule for all new and existing employees and conduct annual refresher courses. Train employees on:

- Stormwater discharge restrictions, and wastewater discharge requirements.
- Careful and appropriate application techniques, and;
- Proper spill containment, response, and cleanup.

Disposal of Excess Paint and Materials

Never pour paint into a storm drain or sanitary sewer.

Latex Paint

- Liquid paint – do not throw in the garbage. It is no longer accepted at King County transfer stations or hazardous waste facilities.
- Unwanted paint – use it up or give it away. Check with local nonprofits to see if they need paint.
- Residual paint – air dry, or use kitty litter or paint hardener until solid and then put the cans in the garbage.
- Cleanup of latex paint brushes, rollers, and tools – wastewater can go into a sink connected to the sanitary sewer (never to septic).



Oil-based Paint

- Liquid, surplus, or residual oil-based paint cannot go in the garbage (even in small quantities). Dispose through a licensed hazardous waste firm.
- Brushes, containers, and tools used to apply oil-based paints, finishes, and solvents must be disposed through a licensed hazardous waste firm.
- Clean, store, and dispose of residual paint and materials properly.

Locate a licensed hazardous waste management firm at: www.thwmp.org/home/BHW/sog.aspx
NOTE: If your business never generates more than 220 pounds (approximately 27 gallons) of hazardous waste, you may be able to dispose of excess oil-based paint, stains, and seal fillers through a pilot program at the Tacoma Hazardous Waste Facility. Details at: www.thwmp.org/home/BHW/sog.aspx

The City of Bellevue's storm drainage system is not connected to a sewage treatment facility. Runoff entering storm drains flows untreated into local streams, lakes, and wetlands. Protect water quality by following "best management practices".

Remember, it is illegal to pollute waterways. Call 425-452-7840 to report pollution in Bellevue.

Enforcement

Bellevue relies primarily on public education and voluntary corrective actions to achieve compliance; however, discharging pollutants into storm drains or waterbodies will be documented and can result in escalating enforcement.

The city reserves the right to proceed directly to a Notice of Violation, which can result in fines of \$500 per day or more (BCC 1.18.075(G)(3)). For repeat violations that occur within two years of a previous violation, the following penalties may be imposed (BCC 1.18.075(G)(2)).

- For the first repeat violation the penalty may equal up to \$1,000 per day;
- For the second repeat violation, the penalty may equal up to \$2,000 per day;
- For the third repeat violation, the penalty may equal up to \$3,000 per day;
- For the fourth repeat violation, the penalty may equal up to \$4,000 per day; and
- For each additional violation that may occur beyond the fourth repeat violation, the penalty may equal up to \$5,000 per day.

Additional Information

Bellevue City Code:
www.bellevue.gov/codes/library/300
City of Bellevue, Stormwater Runoff Management
www.bellevuewa.gov/stormwater-runoff-management.htm

Thank you for keeping our shared waters healthy for people, fish, and wildlife.

Program: Public Storm Drain Marking Program

Department/Division: Utilities/Resource Management Customer Service (RMCS)

Permit Requirement:

- X S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.
- ☐ S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s): General Public

Subject Area(s): General impacts of stormwater on surface waters; prevention of illicit discharge.

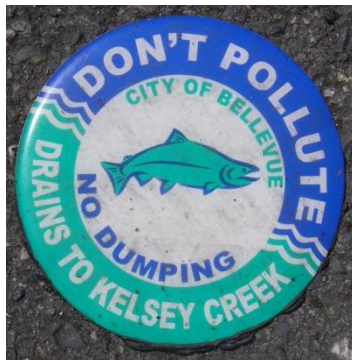
Program Description:

In 2011, the City finished marking all public storm drains with the permanent message, "Don't Pollute, Drains to Stream." The four-inch, colorful plastic markers are highly visible and durable for up to fifteen years. The program educates the public that surface water flows largely untreated into streams, lakes and wetlands by using visual reminders on every public storm drain.

A focus group conducted in 2009 found that 75% of participants had seen the markers, and participants were nearly unanimously positive about the markers' value as a pollution prevention message and a good use of public funds.

2014 Accomplishments: ☐ New ☒ Ongoing ☐ One Time ☐ Other_____

In 2014, the City replaced markers that had been removed by overlay projects.



Program: School Workshops

Department/Division: Utilities/Resource Management Customer Service (RMCS)

Permit Requirement:

- X S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.
- ☐ S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s): General Public (including school age children)

Subject Area(s): General impacts of stormwater on surface water; impacts from impervious surfaces; opportunities to become involved in stewardship activities; pet waste management and disposal; prevention of illicit discharges.

Program Description:

The city offers workshops to schools in the Bellevue School District that focus on pollution prevention. "Be the Solution" is an interactive workshop targeting high school biology students that reflects the City's key conservation goals and specific pollution prevention messages.

The City also provides a student action campaign to 4th and 5th graders in the Bellevue School District that is designed to involve and engage students in educating the community about the effects of pet waste in local stormwater. The program is called, Student Action Campaign: Preventing Pet Waste in Local Stormwater.

2014 Accomplishments: ☐ New ☒ Ongoing ☐ One Time ☐ Other_____

The "Be the Solution" workshop, which began in 2010 and continues annually, is presented to more than 1,300 high school students in the Bellevue School District each school year. Feedback from teachers includes the following comment:

- "They [students] have become very concerned about the pollution of storm drains and sewage systems and the health of the watershed."

The Student Action Campaign was presented to 386 students in 16 student groups at seven schools within the City between January 2014 and December 2014. All 535 students in campaign

classes pledged to always scoop, bag, and trash their dog's waste or to educate others if they did not own a dog. To begin their campaign, this student group first completed a classroom survey of their own families and pets. The results were as follows:

- Number of homes/families in class with cats: 70
- Number of cats total: 99
- Number of homes/families in class with dogs: 144
- Number of dogs total: 225
- 56.25 pounds of daily dog waste pledged to pick up

Students worked together to provide information in their school's morning announcements and to create educational posters on this topic that were posted throughout the school and then taken home to share the information with families. A total of 111 teachers, 440 additional staff members and 3,178 students attending the school were able to view the posters around the school grounds.

Every student was assigned a family Poo-llution Quiz to make their household aware of how they currently deal with their dog's waste. Students who do not own a dog used the quiz to interview a neighbor or friend of the family who did own at least one dog.



Program: Online and Print Materials

Department/Division: Utilities/Resource Management Customer Service (RMCS)

Permit Requirement:

X S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.

X S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.

X S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s):

X General public **X** Businesses ☐ Engineers, contractors, developers, Land use planners
X Residents, landscapers and property managers/owners ☐ Public employees

Subject Area(s):

- | | |
|---|---|
| X General impacts of stormwater on surface waters | X Impacts from impervious surfaces |
| X Impacts of illicit discharges and how to report them | <input type="checkbox"/> Low impact development (LID) principles & LID BMP's |
| X Opportunities to become involved in stewardship activities | <input type="checkbox"/> Technical stds for stormwater site & erosion control plans |
| <input type="checkbox"/> Stormwater treatment and flow control BMP's/facilities | <input type="checkbox"/> Equipment maintenance |
| X Use and storage of automotive chemicals, hazardous cleaning supplies, car wash soaps and other hazardous materials | |
| X Prevention of illicit discharges | X Yard care techniques protective of water quality |
| X Use and storage of pesticides and fertilizers and other household chemicals | X Carpet cleaning and auto repair maintenance |
| <input type="checkbox"/> Vehicle, equipment and home/building maintenance | X Pet waste management and disposal |
| <input type="checkbox"/> Stormwater facility maintenance | <input type="checkbox"/> Dumpster and trash compactor maintenance |

2014 Accomplishments: ☐ New **X** Ongoing ☐ One Time ☐ Other _____

Program Description:

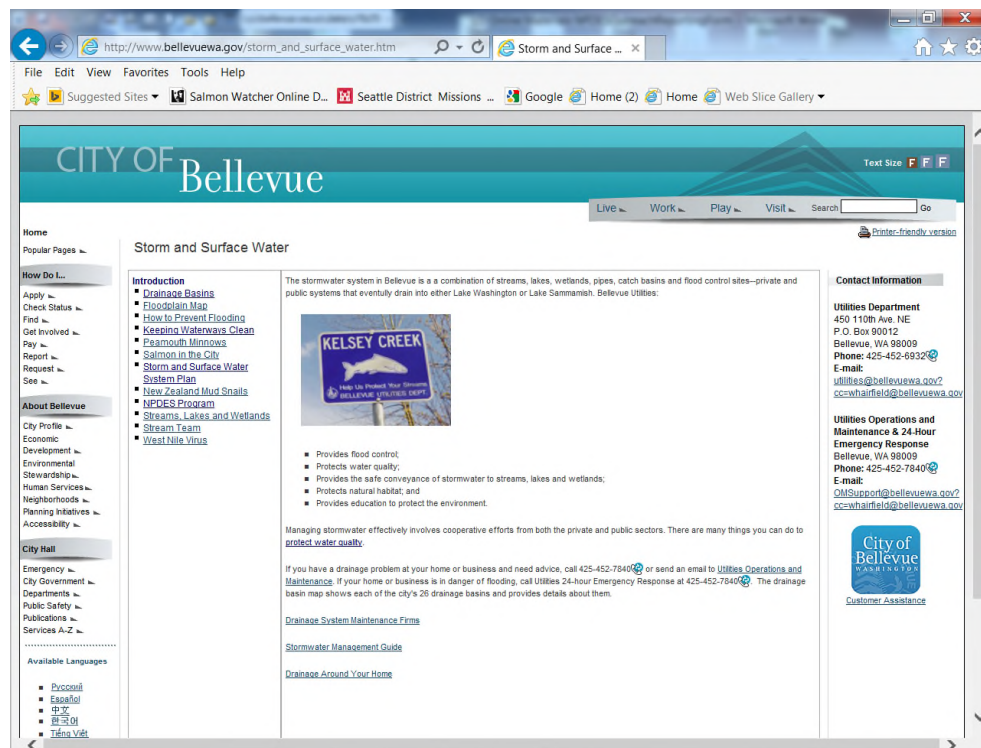
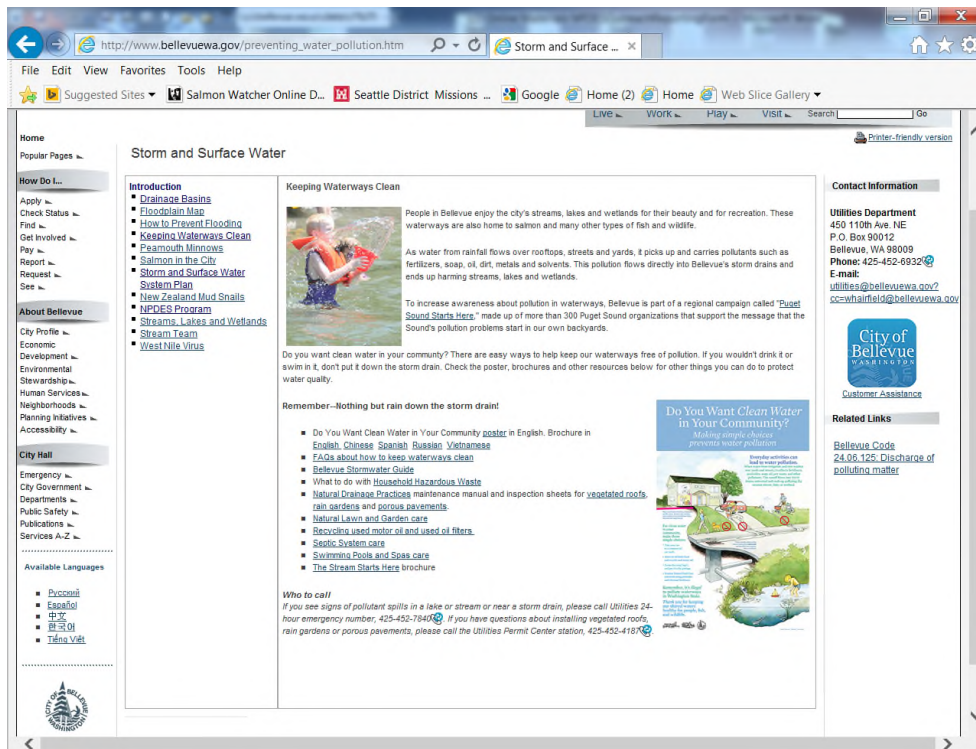
Businesses:

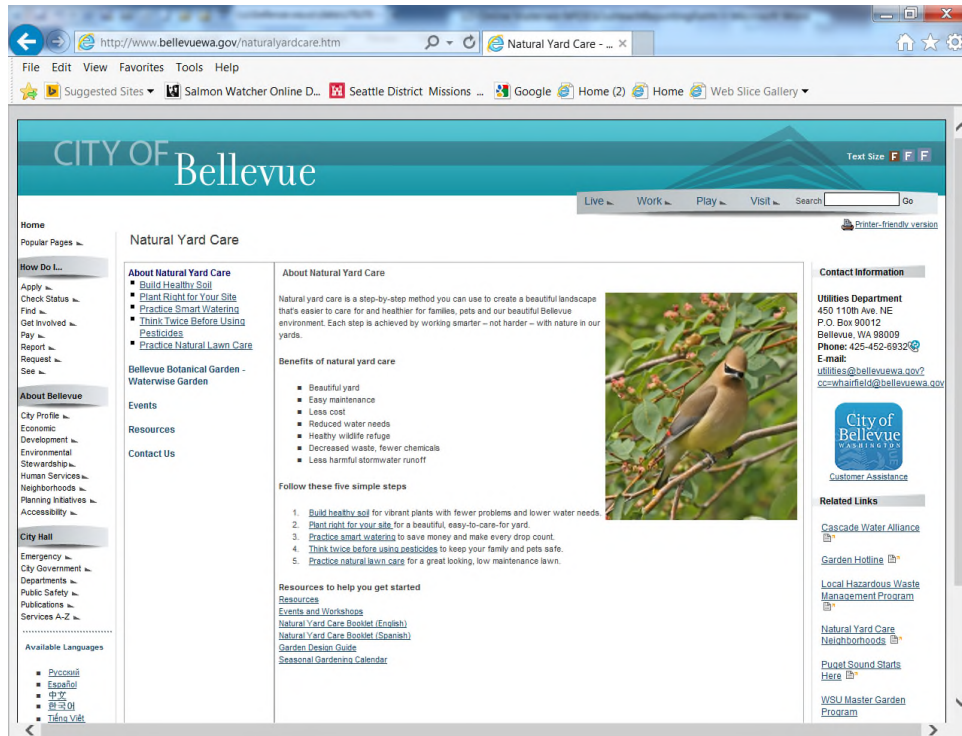
- Series of three pollution prevention posters and videos for businesses (i.e., Washing the Fleet, Spill Something, and Cleaning Up) (multiple languages)
- Your Local Stream Starts Here brochure
- Stormwater Pollution Prevention Code card
- Painting Contractor Best Management Practice brochure
- Pressure Washing Contractor Best Management Practice brochure

Residents:

- Clean Water in Your Community brochure and poster (multiple languages)
- Proper car care practices and hazardous waste disposal
- Natural Yard Care web page and materials
- Stormwater FAQ's
- Carbon Yeti Program

- **Examples:**







Keeping Our Waterways Clean

Frequently Asked Questions

What causes pollution in streams and lakes?

Some of the biggest causes of water pollution are sources that are hard to trace to a single place. When it rains, stormwater washes over streets and yards, collecting fertilizers, pesticides, oil, antifreeze, soil, pet waste, and other pollutants. They all wash into storm drains and end up polluting waterways and harming salmon and other fish and wildlife that live there.

Isn't soil "natural?" Why would it hurt water?

Soil, grass clippings and other natural debris may seem harmless, but they can clog the storm drainage system and increase the chance of flooding. Plant matter washed into waterways deprives aquatic life of oxygen as organics break down. Soil washed down storm drains clouds water, making it unsuitable for swimming. Sediment also smothers salmon eggs and damages aquatic habitat.

Are sewers and storm drains the same thing?

No. In Bellevue, they are two completely different systems. Wastewater from your sinks, showers, and toilets is discharged into the sewer system and treated before being released into Puget Sound. Stormwater entering the storm drains flows directly to streams, lakes, and wetlands.

Where do I take Household Hazardous Waste, like oil-based paint, pesticides, and cleaners?

Household hazardous waste can be disposed of at the [Factoria Transfer Station's Household Hazardous Waste Drop-off site](#) located at 13800 SE 32nd St. It is open Tuesday – Sunday, from 9am to 5pm. When shopping next time, choose safer, less hazardous products.

Do NOT put household hazardous waste in the garbage or recycling cart.

What should I do with Latex Paint?

Latex (water-based) paint is no longer considered hazardous. If you can't use it up or give it away, [drain it out](#) by mixing in kitty litter and then place it in the garbage.

Do NOT put wet latex paint in the garbage.

What's the best way to wash my car?

The most environmentally-friendly method of car washing is to go to a commercial car wash where about 80 percent of the water is recycled, and the dirty water goes to the sewer system for treatment. Car wash water is full of pollutants such as soap, oils, suspended solids, heavy metals, and other toxics. These pollutants can harm water quality for recreational activities. They can also damage fish eggs and a salmon's sense of smell, which can impact behaviors such as homing, foraging, and predator avoidance. If you wouldn't drink it or swim in it, don't put it down storm drains!



What goes into storm drains ends up in streams and lakes, like Chism Beach above. Nothing but Rain Down the Storm Drain!

Actions you can take to prevent water pollution:

- Use fertilizers and pesticides sparingly or just use compost. Practice [Natural Yard Care](#).
- Take the car to a commercial car wash.
- Sell car wash tickets for fundraisers instead of holding car washes. (See more info below.)
- Fix car oil leaks and don't overfill your gas tank.
- Scoop pet poop, bag it, and throw it in the trash.
- Make sure workers around your home don't wash equipment near storm drains.
- Use less hazardous products. Dispose of Household Hazardous Waste properly at the Factoria Transfer Station.
- Keep grass clippings, leaves, soil, and other debris away from storm drains.
- Maintain [septic systems](#) properly.
- Drain [swimming pools and spas](#) properly.
- Take extra care if you live near a [lake or stream](#).
- Volunteer! Take part in a [Stream Team](#) activity.
- Mark your neighborhood [storm drains](#). Call Utilities at 425-452-6166.



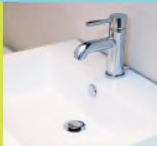
NOTHING BUT RAIN DOWN THE STORM DRAIN

Water in storm drains flows untreated into our local streams, lakes and wetlands!

Your actions can contribute significantly to stormwater pollution. Be part of the solution.

- Never pour or wash anything into a storm drain including dirty water, oil, paint, chemical spills, auto fluids or soapy water (even biodegradable soap pollutants).
- Never allow liquid from dumpsters, parts bins, or other containers to leak into the storm drain. Use appropriate secondary containment.
- Wash vehicles in a facility where all wash water goes to the sewer for treatment. If washing onsite, make sure water drains to a gravel or grassy area.

Wastewater from sinks, toilets, and indoor drains flows to a sewage treatment plant where it is treated before being released into Puget Sound.



PERMIT STD
POSTAGE
U.S. POSTAGE
BELLEVUE, WA
PERMIT NO. 61

TO:

City of Bellevue Utilities
450 110th Ave. NE
P.O. Box 90012
Bellevue, WA 98009



YOUR LOCAL STREAM STARTS HERE



Program: Public Events

Department/Division: Utilities/Resource Management Customer Service (RMCS)

Permit Requirement:

X S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.

X S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.

X S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s):

X General public ☐ Businesses ☐ Engineers, contractors, developers, Land use planners

X Residents, landscapers and property managers/owners ☐ Public employees

Subject Area(s):

X General impacts of stormwater on surface waters

X Impacts from impervious surfaces

X Impacts of illicit discharges and how to report them

☐ Low impact development (LID) principles & LID BMP's

X Opportunities to become involved in stewardship activities

☐ Technical stds for stormwater site & erosion control plans

☐ Stormwater treatment and flow control BMP's/facilities

☐ Equipment maintenance

X Use and storage of automotive chemicals, hazardous cleaning supplies, car wash soaps and other hazardous materials

X Prevention of illicit discharges

X Yard care techniques protective of water quality

X Use and storage of pesticides and fertilizers and other household chemicals **X** Carpet cleaning and auto repair maintenance

☐ Vehicle, equipment and home/building maintenance

X Pet waste management and disposal

☐ Stormwater facility maintenance

☐ Dumpster and trash compactor maintenance

2014 Accomplishments: **X** New **X** Ongoing ☐ One Time ☐ Other _____

Program Description:

Displays, activities, and outreach material at public events including:

- Elementary School Science Fairs
- Neighborhood Events
- Farmers Markets
- Summer Outdoor Movie Nights

Materials and activities include:

- Poop Toss game to educate about proper pet waste disposal
- Vehicle Leak Card
- At-home vehicle Leak Check Sheet
- Free car wash ticket with new car washing brochure
- Pollution Prevention buttons and frisbees

Attachments:



Program: STORM and SOGgies Regional Programs

Department/Division: Utilities/Resource Management Customer Service (RMCS)

Permit Requirement:

☒ S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.

☒ S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.

☒ S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s):

☒ General public ☒ Businesses ☐ Engineers, contractors, developers, Land use planners

☒ Residents, landscapers and property managers/owners ☐ Public employees

Subject Area(s):

- | | |
|--|--|
| <input checked="" type="checkbox"/> General impacts of stormwater on surface waters | <input type="checkbox"/> Impacts from impervious surfaces |
| <input type="checkbox"/> Impacts of illicit discharges and how to report them | <input type="checkbox"/> Low impact development (LID) principles & LID BMP's |
| <input type="checkbox"/> Opportunities to become involved in stewardship activities | <input type="checkbox"/> Technical stds for stormwater site & erosion control plans |
| <input type="checkbox"/> Stormwater treatment and flow control BMP's/facilities | <input type="checkbox"/> Equipment maintenance |
| <input checked="" type="checkbox"/> Use and storage of automotive chemicals, hazardous cleaning supplies, car wash soaps and other hazardous materials | |
| <input checked="" type="checkbox"/> Prevention of illicit discharges | <input checked="" type="checkbox"/> Yard care techniques protective of water quality |
| <input checked="" type="checkbox"/> Use and storage of pesticides and fertilizers and other household chemicals | <input checked="" type="checkbox"/> Carpet cleaning and auto repair maintenance |
| <input checked="" type="checkbox"/> Vehicle, equipment and home/building maintenance | <input checked="" type="checkbox"/> Pet waste management and disposal |
| <input type="checkbox"/> Stormwater facility maintenance | <input type="checkbox"/> Dumpster and trash compactor maintenance |

2014 Accomplishments: ☐ New ☒ Ongoing ☐ One Time ☐ Other_____

Program Description: The City of Bellevue is an active participant in STORM (STormwater Outreach for Regional Municipalities) and SOGgies (a smaller local Stormwater Outreach Group made up of neighboring cities) in the following ways:

- Hosting Quarterly and special meeting several times every year
- Serving on subcommittees for the STORM Symposium, Don't Drip & Drive, and Drain Rangers
- Participating in special meeting such as Strategic Work Planning
- Promoting Puget Sound Starts Here

Program: Stream Team

Department/Division: Utilities/Resource Management Customer Service (RMCS)

Permit Requirement:

X S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.

X S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.

X S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s):

X General public ☐ Businesses ☐ Engineers, contractors, developers, Land use planners

X Residents, landscapers and property managers/owners ☐ Public employees

Subject Area(s):

X General impacts of stormwater on surface waters

X Impacts from impervious surfaces

X Impacts of illicit discharges and how to report them

☐ Low impact development (LID) principles & LID BMP's

X Opportunities to become involved in stewardship activities

☐ Technical stds for stormwater site & erosion control plans

☐ Stormwater treatment and flow control BMP's/facilities

☐ Equipment maintenance

X Use and storage of automotive chemicals, hazardous cleaning supplies, car wash soaps and other hazardous materials

X Prevention of illicit discharges

X Yard care techniques protective of water quality

X Use and storage of pesticides and fertilizers and other household chemicals **X** Carpet cleaning and auto repair maintenance

X Vehicle, equipment and home/building maintenance

X Pet waste management and disposal

☐ Stormwater facility maintenance

☐ Dumpster and trash compactor maintenance

2014 Accomplishments: **X** New **X** Ongoing ☐ One Time ☐ Other _____

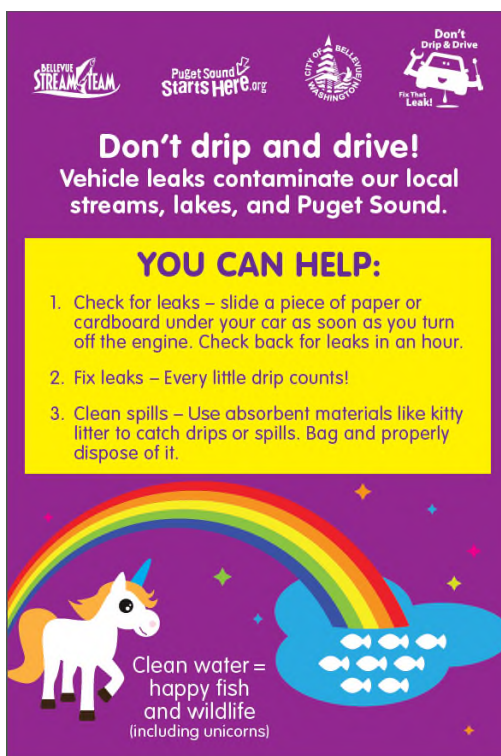
Program Description:

Stream Team volunteers gather important information about Bellevue's streams, lakes, and wetlands and help improve the City's fish and wildlife habitat in a variety of ways:

- **Salmon Watcher:** Volunteers monitor local streams for salmon returning in the fall, visiting a site for 15 minutes twice a week from September through December and reporting when, where and what type of salmon are sighted. They attend a two-hour workshop in September.
- **Peamouth Patrol:** Volunteers check local streams for 15 minutes twice a week from mid-April through May. They record spawning times and use of Bellevue streams. The volunteers attend a one-hour workshop in April before visiting the streams.
- **Earth Day/Arbor Day:** Volunteers installed hundreds of native plants near streams and in wetlands.

- Invertebrate Sampling: Staff and volunteers collect invertebrate samples from Bellevue streams for water quality monitoring.
- Summer Residential Fish Monitoring
- New outreach material created for car washing, vehicle leaks, and a display. Examples in file.
- Assessment and Feedback
- Stream Team reaches about 4,000 people directly each year through presentations and educational events. An average of 150 volunteers per year participate in stream restoration and monitoring projects. In 2014, 158 volunteers donated 392 hours. This included 2 training workshops, 1 restoration event, 6 monitoring events and volunteers making over 600 visits to a stream on their own.
- Stream Team also creates new educational materials (examples below) and produces 1-2 newsletters per year, and ads for the movie theater, busses, and newspapers.

New Outreach Material:



IDENTIFY AND FIX COMMON CAR LEAKS		What's leaking under my car? Here are six fluids that are likely to drip from your car, and how to recognize them.	
<ol style="list-style-type: none"> Slide the Drip Test Sheet under your car. We recommend doing this as soon as you turn your car off while the engine is still warm. Leave the sheet and car in place for a few hours or even overnight. Check the drip sheet for leaks. Take note of the color, texture, and location of any leaks. Use the color chart to help identify what your results mean. Contact your mechanic for further evaluation and repair of any leaks. 		Engine Oil Light brown to black, very greasy and slick, under front half of car	
		Transmission Fluid Reddish and thin or brown and thick, in the middle and towards the front of car	
		Power Steering Fluid Amber or reddish or light brown and thin, very front of vehicle	
		Brake Fluid Clear to brown, slightly yellow and slick, often appears near a wheel	
		Coolant (Anti-freeze) Yellow, green, or pink, greasy and slimy, front-most part of car, near radiator or under the engine	
		Water Clear and thin, under front of car - condensation from air-conditioning system	



when rainbows are

Bad

Oil allowed to flow down storm drains, by the gallon or by the drop, contaminates our local streams, lakes, and Puget Sound. Automotive fluids contain chemicals that have a hazardous effect on fish and wildlife.

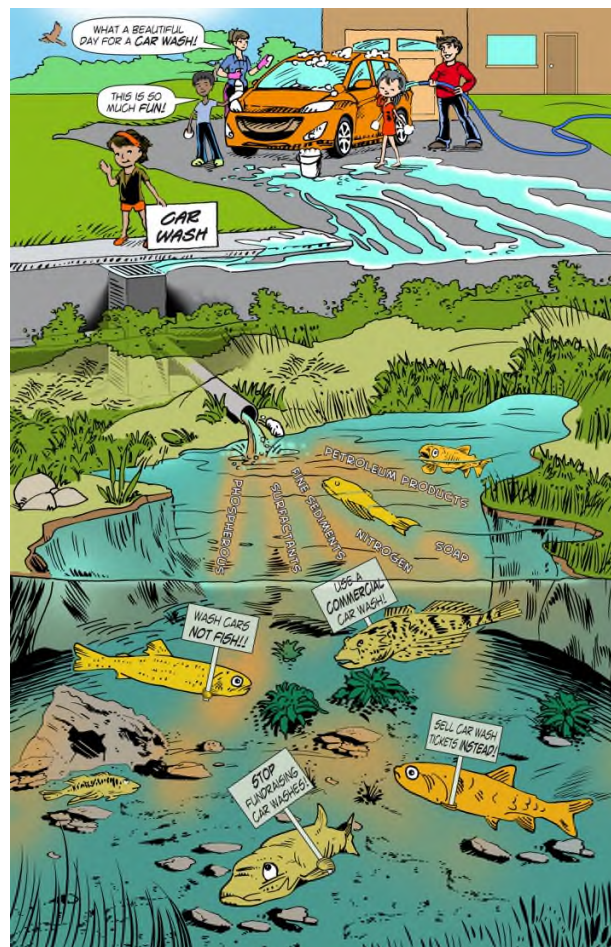
1. Check for leaks – Slide a piece of cardboard under your car as soon as you turn off the engine. Check it for leaks in half an hour.
2. Fix leaks – Even those little drips add up!
3. Clean spills – Use absorbent materials like kitty litter to catch drips or spills. Bag and properly dispose of it.

Not all rainbows are as cute as unicorns and glitter.



BELLEVUE STREAM TEAM
Don't Drip & Drive
Fish & Wildlife
CITY OF BELLEVUE WASHINGTON

Puget Sound Starts Here.org



YOU DON'T NEED A CAPE TO DO THE RIGHT THING



Use a commercial car wash to protect our environment.

Commercial car washes send their dirty water to the sewer for treatment.

CITY OF BELLEVUE WASHINGTON



Nothing but rain should ever go down a storm drain.

Runoff flowing into storm drains goes directly into local streams, lakes, and wetlands without treatment.

- Dirty car wash water contaminates our waterways with petroleum hydrocarbons, heavy metals, phosphorous, nitrogen, and sediments.
- Soaps dissolve the protective mucous layer on fish and natural oils in the gills, making fish more susceptible to diseases.
- Even biodegradable soap pollutes water. It requires the microorganisms in soil to break down properly.

BELLEVUE STREAM TEAM
Puget Sound Starts Here.org
CITY OF BELLEVUE WASHINGTON

NewSplash

SPRING 2014

BELLEVUE STREAM TEAM

Join Peamouth Patrol!

Would you like to see thousands of fish spawning in a local stream? Join Peamouth Patrol and help monitor Kelsey Creek for the annual return of native peamouth minnows. No prior experience is necessary. Just join us for this one workshop and learn everything you need to know. Volunteers are asked to check the stream for peamouth twice a week for 15 minutes whenever you have time through early June.

Thousands of peamouth return every spring between late April and early June. We've observed 13-15 spawning events per year, but each one usually only lasts 12-24 hours before the fish return back to Lake Washington. The more volunteers watching the better so we don't miss the fish! You can participate as an individual, family, or with friends.

Peamouth are about a foot long so they are really hard to miss where there's a crowd of them. Volunteers often observed wildlife while looking for peamouth. The fish and their eggs attract bald eagles, blue heron, various ducks, raccoon, and river otter. It's a wildlife party at the stream!

Tuesday, April 17th, 6:30-7:30
Bellevue City Hall room 112
 Registration appreciated!
 Contact Stream Team at streamteam@bellevuewa.gov or 425.452.5200.

Volunteers Needed for KELSEY CREEK RESTORATION

Earth Day Restoration Event

Saturday, May 3rd, 9:30 – 11:00
 Please register to receive location details. Contact Stream Team to sign up at streamteam@bellevuewa.gov or 425-452-5200.

Grab a shovel and a shrub! The banks of Kelsey Creek need more plants to hold the soil in place and improve habitat. We'll be installing mostly red osier dogwood and sword fern, two native streamside favorites.

Our site was a Bellevue Utilities Capital Improvement Project last summer. Large wood and boulders were placed around the stream to help improve fish passage over old concrete weirs. Now the banks of the stream are in need of more plants.

This area is popular spawning habitat for adult salmon returning to the city in the fall. Throughout the year, the stream is full of cutthroat trout, long nose dace, and lamprey. Juvenile coho salmon are also here year-round as they reside in our streams for a year before heading out to saltwater.

It is a little hard to see, but that splash in the middle of this photo is a chinook struggling to jump over one of the weirs prior to the 2013 stream restoration project.



NewSplash

FALL 2014

BELLEVUE STREAM TEAM

Salmon Watchers VOLUNTEERS NEEDED

THINK THEY SPOTTED US?

It's almost that time of year again when salmon return to our local streams to spawn. Join us at a Salmon Watcher Workshop to learn more about our local salmon. You can also sign up to volunteer to help monitor them for the fall.

New to the program? We'll teach you:

- How to identify the salmon species you may see in our region
- What salmon look for in stream habitat
- What you can do in your daily life to help salmon

Alumni, come for a refresher course!

Then, if you would like to sign up to watch for salmon and collect data during the fall spawning season, we'll get you all set up.

As a volunteer, visit your stream twice a week for at least 15 minutes, record what you see, and mail in your data from September through December. The information helps us learn more about how salmon use our local streams, monitor fish use of restoration sites, and support professional salmon monitoring and recovery efforts.

Just attend ONE of our classroom trainings.

No experience necessary. Registration appreciated but not required. Contact Stream Team to register or ask questions at streamteam@bellevuewa.gov or 425-452-5200.

All trainings are 7-9 p.m.

- Tuesday, September 9, Renton City Hall *
- Thursday, September 11, Woodinville City Hall
- **Tuesday, September 16, Bellevue City Hall**
- Wednesday, September 24, Carkeek Park Environmental Learning Center

* We're trying something new with the Renton training this year. We will be adding special information about the Cedar River and more about what folks can do at home to help protect water quality and salmon.



THIS DRAINS HERE

Stormwater flows directly to local streams, lakes, and wetlands WITHOUT treatment.

Help protect water quality

Your choices prevent pollution

Scoop the poop, bag it, and place it in the trash.
 Pet waste contains harmful microorganisms.

Wash your car at a commercial car wash.
 Even biodegradable soap pollutes water.

Use fewer chemicals.
 Build healthy soil with compost to reduce your need for pesticides and herbicides.

Fix vehicle leaks.
 Automotive fluids pollute our local streams, lakes, and Puget Sound.

CITY OF BELLEVUE | WASHINGTON



Program: Development Services (DS)

Department/Division: Development Services Department

Permit Requirement:

- X S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.
- ☐ S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s): Engineers, contractors, developers, land use planners, and public employees

Subject Area(s): Technical standards for stormwater site and erosion control plans, LID principles and LID BMPs, stormwater treatment and flow control BMPs/facilities, impacts and prevention of illicit discharges, hazards associated with illegal discharges and improper disposal of waste.

Program Description: Development Services is a combination of the Development Services Department (building, land use, clearing & grading, and code compliance) and the plan reviewers and inspectors from the Fire, Transportation (right of way and new development), and Utilities Departments. Most of the development services staff is co-located to facilitate project consultations and internal and external training.

Development Services maintains a Permit Center (open to the public on weekdays from 8 a.m. to 4 p.m.) that is staffed continually, where we communicate in person one-on-one or on the phone with members of our target audiences daily and where submittal requirements and many handouts are readily available.

2014 Accomplishments: ☐ New ☒ Ongoing ☐ One Time ☐ Other_____

Our outreach and education are customary and ongoing in Development Services. Some of the highlights for 2014 include:

- Submittal requirements (especially clearing & grading) and forms (construction inspection form) were updated.

- Code Compliance and Clearing & Grading supervisors revised their process to incorporate the new documentation requirement for construction-related illicit discharge incident reporting and clarified with their staff the process to handle illicit discharges, enforcement actions, and reporting requirements.
- Staff were educated in team meetings (Land Use, Clearing & Grading, and Code Compliance as well as other Development Services reviewers and building inspectors) on impacts from impervious surfaces and reduction of stormwater runoff from new development, redevelopment, and construction sites.
- Informal cross-department meetings to talk about illicit discharge response and extensive communication with engineers, contractors, and developers in the Permit Center and at project sites.
- Pre-application conferences on certain permit types were held to give potential applicants early feedback on their development concepts and help with developing a complete formal application and a project design consistent with the city's codes and policies.
- Development Services staff educated Utilities, Land Use, and Clearing & Grading customers (engineers, developers, contractors, homeowners) in the Permit Center.
- Field inspectors and code compliance officers educated their customers during regular inspections and compliance cases; often, a clearing & grading inspector accompanied a code compliance officer on a case.

Program: Clearing & Grading Inspection Program

Department/Division: Development Services Department

Permit Requirement:

- X S5.C.1.a.i. To build general awareness...about the stormwater problem and provide specific actions they can follow to minimize the problem.
- ☐ S5.C.1.a.ii. To effect behavior change... about the stormwater problem and provide specific actions they can follow to minimize the problem.
- X S5.C.3.d. To inform and distribute appropriate information to target audiences about the hazards associated with illegal discharges and improper disposal of waste.

Target Audience(s): Engineers, contractors, developers, land use planners, and public employees

Subject Area(s): Technical standards for stormwater site and erosion control plans, LID BMPs, impacts and prevention of illicit discharges, hazards associated with illegal discharges and improper disposal of waste.

Program Description: The Clearing and Grading Inspection Program staff inspects and enforces requirements of the Clearing and Grading code and permit conditions on new development and redevelopment construction sites. This includes inspecting the permittee's construction stormwater pollution prevention plans (CSWPPP) and addressing illicit discharges originating from permitted construction sites. Field inspectors and code compliance officers educate their customers (contractors, developers, engineers, property owners) on erosion and sediment control requirements, low impact development best management practices, and the impacts and prevention of illicit discharges during regular inspections. Education is the first tool in the City's escalating enforcement strategy for illicit discharges. The inspectors in turn receive education on erosion and sediment control practices, low impact development best management practices, illicit discharge response, and hazards associated with illegal discharges.

2014 Accomplishments: ☐ New ☒ Ongoing ☐ One Time ☐ Other_____

Education of contractors, developers, engineers, property owners as well as City inspection staff was customary and ongoing in 2014.

NPDES Western Washington Phase II Municipal Stormwater Permit
City of Bellevue, Washington
Permit No. WAR045504
Bellevue Q8 Attachment
2014 Compliance Report

Question 8: Describe the opportunities created for the public to participate in the decision making processes involving the development, implementation and updates of the Permittee's Stormwater Management Program (SWMP). (Condition S5.C.2.a)

The public has a number of opportunities to inform, influence and participate in decision making processes concerning the NPDES Western Washington Phase II Municipal Stormwater Permit and Bellevue's implementation of its SWMP conditions. Public engagement opportunities include weekly, monthly and annual as well as condition-specific implementation opportunities.

1. Weekly and Monthly Opportunities for Public Engagement

City Council (CC) A city council comprised of seven elected members governs Bellevue. The City Manager is chief executive of the city, working under the direction of the council. The public has the opportunity to comment on the Permit and the City's implementation of it during weekly Council meetings. In addition, residents also have a voice in Bellevue's government through several volunteer boards and commission.

Environmental Services Commission (ESC or Commission) The Commission advises Bellevue Utilities and the City Council on storm and surface water programs in the areas of planning, budget and rates, capital improvement project financing, contracts and policies. The ESC is comprised of seven persons who reside within the city and are appointed by the mayor with the concurrence of City Council. The public has the opportunity to comment on the Permit and the City's implementation of it during monthly ESC meetings and Commission-hosted public engagement processes specific to permit implementation. The Commissioners, representing Bellevue property owners, comment, support and influence the City's Permit implementation, budget and related policies and programs through their advisory role to City Council.

2. Annual SWMP Plan Review

Bellevue provides several opportunities annually for the public to engage in the development of the City's upcoming year's SWMP Plan. Annually, the upcoming year's draft SWMP Plan is provided to ESC and made available to the public on the City's website in December. A public meeting, including presentation, on the draft Plan is held by the Commission in January. The Commission then discusses the Plan at its February meeting and makes a recommendation to City Council on submittal of the SWMP Plan to Ecology. City Council reviews the NPDES annual reports (SWMP Plan and Compliance Report for the preceding year) and ESC recommendation on the SWMP Plan in early March and takes action at a second March meeting to authorize the City Manager to sign and certify the annual NPDES reports. The attached 2014-2015 public review schedule for the 2015 SWMP Plan illustrates this public engagement process.

3. Opportunities to Inform and Affect Implementation of Certain Permit Conditions

A public engagement process is required to implement certain Permit conditions and is necessary when defining how some Permit conditions will be implemented. The public and key stakeholders, as well as Commissions and Boards, have the opportunity to inform, influence and participate in decision making on implementation of these conditions.

An example under the current Permit is the low impact development (LID) principles condition S5.C.4.f.i. The Permit requires a public engagement process with stakeholders to implement this condition and it is also necessary to help define how this condition is implemented in Bellevue and to educate customers (internal and external) on changes to land use and development regulations resulting from its implementation. The public engagement plan will provide opportunities for the public, key stakeholders and several Commissions and Boards (ESC, Planning Commission, Transportation Commission, Parks Board and East Bellevue Community Council) which represent Bellevue's citizens to inform and influence the outcome.

4. Biennial Budget Process

The City's budget process provides many opportunities for the public to support, inform and influence funding for permit implementation. For example, the recent process budgeted funds to implement the low impact development principles and best management practices (BMPs) permit requirements.

5. Permit Implementation Support




The public also has opportunities to engage in actual implementation of permit conditions, for example, by reporting illicit discharges to the City's 24/7 emergency response line or participating in environmental stewardship opportunities such as the Stream Team. Attached is a description of Bellevue's 2014 environmental stewardship opportunities. The public also support permit implementation through the variety of public education and outreach opportunities provided by the City (see Public Education and Outreach Question 5 attachment for information on opportunities).

6. Draft NPDES Municipal Stormwater Permits and Stormwater Management Manuals

As time allow, Bellevue provides opportunities for the public to comment on new Ecology requirements during Ecology's formal public review processes for the draft Permit and Manual documents.

2014-2015 Schedule for NPDES Permit Annual Report

LEGEND

-  City Council Mtg.
-  Environmental Services Commission Mtg.
-  Submittal Deadline

2014

2015

December		January		February		March	
12/19		1/15		2/19	3/2	3/16	3/31
<ul style="list-style-type: none"> NPDES Annual Report 2015 Stormwater Management Program document and 2014 Compliance Report 	<div>ESC</div> <ul style="list-style-type: none"> Provide Commission with the draft 2015 Stormwater Management Program (SWMP) Plan document and 2014 Compliance Report Placeholder 	<div>ESC</div> <ul style="list-style-type: none"> NPDES Refresher and Update Public Meeting on the draft 2015 Stormwater Management Program Plan 	<div>ESC</div> <ul style="list-style-type: none"> Commission recommendation to Council on the 2015 Stormwater Management Program (SWMP) Provide Commission with completed 2014 Compliance Report 	<div>CC</div> <ul style="list-style-type: none"> Transmit Commission recommendation and public meeting comments in agenda memo to Council 2015 Stormwater Management Program document and 2014 Annual Compliance Report provided to CC 	<div>CC</div> <ul style="list-style-type: none"> Consent Calendar (for Resolution authorizing City Mgr. to sign and submit NPDES Annual Report) 	<div>SUBMIT</div> <p>report to Ecology</p>	

NPDES Western Washington Phase II Municipal Stormwater Permit
City of Bellevue, Washington
Permit No. WAR045504
Bellevue Q13b Attachment
2014 Compliance Report

Question 13b: Cite methodology for conducting illicit discharge investigations (S5.C.3.c.i.).

Bellevue uses field screening methodologies from the Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual (2013) prepared for the Washington State Department of Ecology by King County, Herrera Environmental Consultants and the Washington Stormwater Center. Methodologies used include catch basin/manhole and water quality and flow control facility inspections.

NPDES Western Washington Phase II Municipal Stormwater Permit
City of Bellevue, Washington
Permit No. WAR045504
Bellevue Q14 Attachment
2014 Compliance Report

Question 14: Percentage of MS4 coverage area screened in reporting year per S5.C.3.c.i (Required to screen 40% of MS4 no later than December 31, 2017 and 12% on average each year thereafter).

13.4%

See attached map of screened storm assets.

2014 IDDE Screened Storm Assets

City of
Bellevue
GIS Services

