

2010

**National Pollution Discharge Elimination System, Phase II Permit
Goals, Policies, Procedures and Practices for
All Lands Owned or Maintained by
City of Bothell Public Works Department**



Surface Water Management

City of Bothell

01/20/2010

Appended 01/14/2011

Appended 01/14/2012

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Introduction

The ecology of urban waters faces special challenges due to concentrated human activity. The typical urban environment exposes these waters, including their shores and sediments, to many sources of pollution. The City of Bothell owns and manages land within an urban environment.

Pollution sources within the City of Bothell include industry, businesses, municipal waste water, storm water, spills, marina, and septic systems, among others. In addition, urban populations residing next to these waters add pollution ranging from cleaners and paints to motor oil and fertilizers.

These pollutants cause many problems for urban waters such as litter, degraded river and stream banks, compromised wetlands, contamination of water courses, increased fecal coliform bacteria contributing to unsafe waters to swim in, and toxic substances entering the food chain. Cleanups are expensive to businesses and taxpayers, and polluted areas often cannot be used for development, industry, or recreation without first having to conduct expensive cleanup actions. The Sammamish River, North Creek, and Swamp Creek are listed as impaired waters by Washington State Department of Ecology. Several species of fish are federally listed as threatened in these waters.

The City owns and maintains a variety of buildings with associated parking lots and landscaped areas. They include the Police Station, Municipal Court, City Hall, Dawson Building, Dawson Portable, Fire Stations (three locations), and maintenance shops (Central Shop, Parks Shop, and Shop 1). Shop 1 is identified as a heavy equipment maintenance and storage area with a material storage yard. The City has a Storm Water Pollution Prevention Plan (SWPPP) for Shop 1. The City anticipates moving most operations from Shop 1 to a new Public Works Operations Center in 2010. The new location is currently under construction with occupancy expected in late 2010.

Therefore, it is the City of Bothell's policy to reduce pollutants to the maximum extent practicable (MEP) in discharges from all lands owned or maintained by the City which are subject to Western Washington Phase II Municipal Stormwater Permit, WDOE 2009. Lands include but are not limited to parks,

open space, road right-of-way, maintenance yards, buildings, and storm water treatment and flow control facilities.

Goal Statement

The goal of the Public Works Department's NPDES Phase II permit program is to protect and enhance Bothell's built and natural environment for the safety, health, and welfare of her citizenry's quality of life.

Policies

The goal is to be achieved through policies that promote efficient delivery of essential services in a sustainable manner for the benefit of city neighborhoods, businesses, and visitors. These essential services will use responsible planning, design, construction, and maintenance of the City's infrastructure, development and implementation of recreation programs and community events, and their implementation through application of adopted Comprehensive Plan, codes, and standards.

The City is required under National Pollutant Discharge Elimination System Phase II permit (S.4.D, WDOE 2009) to use Best Management Practices (BMPs) necessary to provide **all known, available, and reasonable methods of prevention, control, and treatment (AKART)** of surface and storm water pollution. In most instances there are prescribed BMPs necessary to comply with state water quality standards. Proper selection and use is needed to achieve successful outcomes.

Furthermore, it is the policy of the City to create and attain measurable benchmarks to improve the operations and maintenance for lands owned and/or maintained by the City. The Public Works Director will identify lead staff to oversee the creation and attainment of measurable benchmarks for each division, which will include Operations, Fleet and Recreation, Facilities and Parks Capital Improvement Program, and Engineering.

It is the responsibility of the individual division's lead to submit their NPDES Phase II permit work plans to the lead Surface Water Program Coordinator for review and inclusion into this document. Final approval of annual work plans is made by the Public Works Director or his/her designee by December 31st of each year for the following year.

Division Policies, Procedures, and Practices

To fulfill the policies set forth in this document, procedures, tasks and/or practices have been identified by division. Each division, when appropriate, is to submit a work plan that describes procedures, tasks, practices, measurable benchmarks, and a means of tracking benchmarks. Work plans are to be revised annually, summarizing what was successfully completed and providing a plan to complete what was not successfully achieved.

Administrative Division

- Record and track permit-related costs.
- Assist with NPDES Phase II permit related tasks as identified.
- No annual work plan is required.

Engineering Division

- Utilize City of Bothell's Municipal Code (BMC) Title 17 and Title 18 for project design standards.
- Prepare a work plan containing, among other things, a checklist for project manager's use to ensure complete and adequate design review of proposals.
- Provide training to program managers and project engineers on the design and installation Low Impact Development techniques.
- Program managers, project engineers, and inspectors, when appropriate, will be certified as Certified Erosion and Sediment Control Lead (CESCL).
- Track annual training of staff.

Drainage Plan Review

- Track number of drainage plans reviewed and the number approved.
- Track the number and type of alternatives or variances granted.
- Track and report on instances where Low Impact Development techniques were not feasible. Note reasons for non-feasibility.
- Track number of qualifying sites (sites with drainage plans) inspected prior to clearing and construction.

- Provide drainage plan reviewers periodic training on Low Impact Development techniques.
- Drainage plan reviewers and inspectors will be CESCL certified.
- Track annual training of staff.
- Develop a work plan that includes type of practices and procedures to be used for drainage plan review and site inspections.

Transportation

- For transportation projects, establish a goal to reduce road related storm water polluted discharges.
- Look for opportunities of retrofit projects such that road related pollutants are reduced from entering surface waters.
- Encourage and promote projects that reduced pollution-generating activities through reduction of vehicle emissions and vehicle trips.
- Annually summarize actions taken to reduce road related pollutants from entering surface waters.

Utilities: Storm Water Facility Maintenance

- Annually inspect and maintain storm water facilities while adhering to the performance standards in the Surface Water Design Manual and the conditions set forth in the City's Programmatic HPA permit conditions.
- Develop work plan that identifies and prioritizes improvement of storm water facilities that are significantly contributing to surface water degradation.

Maintenance and Operations Division

Road Repair and Maintenance

- The following guidelines describe the Best Management Practices to be utilized for road repair and maintenance (Table 1). Maintenance standards of Title 17, Bothell Standards, Surface Water Design Manual, Appendix A includes those portions of King County's Surface Water Design Manual Appendix A related to water conveyance. For a complete copy of all referenced documents, see attached Appendix 1.
- No work plan submittal is required at this time.

Table 1 – Best Management Practices for Road Repair and Maintenance.	
Pipe Cleaning	Appendix A of Surface Water Design Manual.
Culvert Cleaning	Appendix A of Surface Water Design Manual.
Ditch Maintenance	Appendix A of Surface Water Design Manual. Regional Road Maintenance ESA Program Guidelines.
Street Cleaning	Regional Road Maintenance ESA Program Guidelines. Municipal Pollution Prevention/Good Housekeeping Practices, Ver. 1.0, 2008, Chapter 4, MO-4 Street Sweeping.
Road Repair and Resurfacing Including Pavement Grinding	Regional Road Maintenance ESA Program Guidelines.
Snow and Ice Removal	Regional Road Maintenance ESA Program Guidelines.
Utility Installation	BMC Title 17 and 18, Surface Water Design Manual. Regional Road Maintenance ESA Program Guidelines.
Pavement Striping Maintenance	Avoid striping operations while the pavement is wet, during humid conditions, or if rain is likely.
Maintenance of Roadside Areas, Including Vegetation Management	Regional Road Maintenance ESA Program Guidelines.
Dust Control	Regional Road Maintenance ESA Program Guidelines.

Park Lands Maintenance

- Table 2 outlines practices to be utilized by the City’s Parks Division. The practices were derived from EPA, 2008, Municipal Pollution Prevention/Good Housekeeping Practices, Ver. 1.0, Chapter 4, MO-7.

Table 2 – Practices for City of Bothell’s Park Lands: Practices Commonly Used to Improve Park and Landscape Maintenance Operations

Turf Reduction	<ul style="list-style-type: none"> • Plant trees and/or other native vegetation in suitable areas. • Consider turf alternatives, such as native or low-water, cool-season turf grass. • Allow natural regeneration in suitable areas.
Turf Management	<ul style="list-style-type: none"> • Sweep any grass clippings away from paved surfaces after mowing. • Use mulching mowers where feasible and use composting as the preferred method of grass disposal. • Use erosion control measures when soils are exposed. • Place stockpiled materials away from storm drains.
Native Plantings	<ul style="list-style-type: none"> • Provide native and naturalized landscaping guidance and plant lists. • Require use of appropriate native and naturalized landscaping on municipally-owned properties.
Landscape Management	<ul style="list-style-type: none"> • Collect landscape waste (including grass clippings) and dispose of at a waste recycling/composting facility. • Do not use leaf blowers to blow waste into streets, storm drains, or ditches.
Pesticide / Herbicide Application	<ul style="list-style-type: none"> • Develop an integrated pest management plan that uses pesticides only as a last resort. Sammamish River and North Creek have listed ESA species Chinook salmon designation and may require more stringent control on the use of pesticides and herbicides. • Follow the manufacturer’s labels for application directions. • Use manual and/or mechanical methods where feasible rather than herbicides to remove weeds. • Consider a low or no pesticide approach to maintaining landscaped areas.
Fertilizer Application	<ul style="list-style-type: none"> • Reduce or eliminate the application of fertilizers or pesticides within 5 feet of pavement, 25 feet of a storm drain inlet, or 50 feet of a stream or water body. • Consider a low or no fertilizer approach to maintain turf. • Apply only when rain is not expected. • Perform a soil test to determine actual fertilization needs and application rate. • Calibrate fertilizer spreaders to avoid excessive application.
Irrigation	<ul style="list-style-type: none"> • Employ shutoff devices to prevent irrigation after precipitation or if a pressure drop occurs due to broken sprinkler heads or lines. • Design irrigation systems specific to each landscaped area’s water requirements. • Select native plant species whenever possible and group together plants with similar water requirements in order to reduce excess irrigation. • Where feasible, use soaker hoses rather than sprinklers and irrigate in the morning or evening to conserve water.
Employee Training	<ul style="list-style-type: none"> • Train employees on the use and appropriate application of pesticides, herbicides, and fertilizers. • Ensure that designated no mow areas are well advertised. • Educate staff on the benefits of trees and native and naturalized species.

- Develop work plan to include short and long term goals for park lands maintenance practices in regards to reducing or eliminating pollutant discharges to surface waters.

Facilities and Parks Capital Projects, Fleet, and Recreation Divisions

- Write a SWPPP for the new Operations Center facility in 2010.
- Expand and enhance the identified goals, policies and actions related to improving surface water quality in the *Parks, Recreation & Open Space Action Program, 2008 (PROSAP)*. This document can be used as the work plan to meet Parks and Recreation's contribution to reduce or eliminate discharges of pollutants to surface waters.
- Develop a work plan that identifies all maintained facilities and their respective practices to reduce or eliminate pollutants discharged to surface waters.
- Fleet management need not submit a work plan.
- It should be primary practice for fleet management to ensure a clean physical and operational fleet of vehicles. Develop a fleet wash schedule to ensure that fleet vehicles are reducing or eliminating pollutant discharges to surface waters from their operation.
- Recreation sponsored events should be periodically reviewed for possible discharge of pollutants to surface waters.
- The City hosts an annual Fourth of July parade which can generate large amounts of waste and potential pollutants to surface waters. The City uses street sweepers and staff to remove garbage after the event. During years of predicted rain, all catch basins along the parade route will be assessed for feasibility of installation and removal of catch basin inserts.

References

City of Bothell, 2009. Bothell Municipal Code, Title 17, Bothell Standards, Surface Water Design Manual and Appendix A.

EPA, 2008. Municipal Pollution Prevention/Good Housekeeping Practices, Ver. 1.0, Chapter 4, MO-4 and MO-7.

PROSAP, 2008. Parks, Recreation & Open Space Action Program, City of Bothell. Adopted by City Council September 9, 2008 .

Regional Road Maintenance Technical Working Group, 2004. Regional Road Maintenance ESA Program Guidelines for ESA 4(d) Habitat Protection, Regional Forum.

WDOE, 2009. Western Washington Phase II Municipal Storm Water Permit. State of Washington Department of Ecology, Olympia, WA.

Appendix 1.

Bothell Municipal Code, Title 17, Bothell Standards, Surface Water Design Manual and Appendix A. (Please see City of Bothell Home Page for links to entire BMC Title 17.

2009 Bothell Surface Water Design Manual

The main document adopted by the City of Bothell. It is available on the City of Bothell website by navigating to *City Services* and then the *Surface Water Management* page. The link for the manual is on the right hand side of the page, or:

<http://www.ci.bothell.wa.us/CityServices/PublicWorks/SurfaceWaterManagement.ashx?p=1292#>

Department of Ecology's Stormwater Management Manual for Western Washington (revised 2005)

This document is referenced within the 2009 Bothell Surface Water Design Manual. It is available on the Department of Ecology website link below:

<http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>

2009 King County Surface Water Design Manual

This document is referenced within the 2009 Bothell Surface Water Design Manual. It is available on the King County website at the link below:

<http://www.kingcounty.gov/environment/waterandland/stormwater/documents/surface-water-designmanual.aspx>

City of Bothell, 2012. Integrated Pest Management Program: Park lands and city-owned property maintenance work plan. City of Bothell, Public Works Operations Division.

INTEGRATED PEST MANAGEMENT PROGRAM

Park Lands and City-owned Property
Maintenance Work Plan



City of Bothell™

2012

Introduction

The Parks Section of Bothell's Public Works Operations Division, provides a broad range of benefits to the community by administering and maintaining safe, clean, and attractive parks facilities, active and passive recreational and volunteer opportunities, wildlife preservation, environmental protection, and cultural enrichment. To ensure that these benefits continue, the parks system and facility grounds are professionally managed and maintained with care, skill, and diligence.

Goal

The principal goal of the Parks Division is to preserve, enhance, and provide stewardship to the park and public resources held in public ownership. To achieve this goal, the Division has adopted the following objectives as a guide in the implementation of its maintenance and management program:

Objectives

Objective # 1: To protect the health, safety, and welfare of the community

Strategy # 1: Minimize the use of pesticides/herbicides in our environment

- **Tactic #1: Integrated Pest Management.** In accordance with the pesticide laws and regulations enforced by the Washington State Department of Agriculture and industry standards, the Division manages an integrated pest management program that promotes plant health care, non-chemical pest control, and safe use, storage, and application of pesticides.
- **Tactic #2: Tolerate acceptable levels of pests.** The Division will not apply pesticides beyond that which is absolutely necessary. It will be a policy to tolerate certain levels of weeds, insects, and plant disease on City-owned property, to the extent that public health, natural aesthetics, and use of public land are not negatively impacted and compromised.
- **Tactic #3: Licensing for all staff who apply pesticides.** In accordance with the Washington State Licensing Guidelines, the Division requires all staff responsible for the use, application, and storage of pesticides, to have a current Washington State Pesticide License.
- **Tactic #4: Minimize use and application of pesticides.** It is Division policy to minimize the use and application frequency of pesticides whenever

possible. Target applications of pesticides are preferred over broad-based applications.

- **Tactic #5: Use least toxic pesticide available.** When the use of pesticides is necessary, it is Division policy to use the least toxic pesticides available to minimize the effects on the environment.
- **Tactic #6: Use, handle, and store chemicals properly.** All chemicals used on property managed or maintained by the Division will be used in accordance with manufacturer's instructions and recommendations. Material Safety Data Sheets (MSDS) sheets for each chemical on record will be maintained consistent with State statute.
- **Tactic #7: No lawn or broadleaf herbicides are used at William Penn Park or Brackett's Landing.** Brackett's Landing has been proposed as a good location for a demonstration site showcasing natural techniques.

Strategy #2: Fertilizer Application

- **Tactic #1: Encourage use of organic slow-release fertilizers near all waterways.** This includes streams, lakes, wetland areas, and utility and storm drainage areas. We recognize the importance of minimizing phosphate and nitrogen loading in surface water, which if improperly applied, may ultimately end up in the water system.
- **Tactic #2: Reduce dependency on chemical fertilizers.** The Division is working to reduce chemical fertilizers across sports fields and City parks and is utilizing a variety of means to achieve this end:
 - **Bridge Products** - The Division is currently testing a broad application of a bridge product at Stipek Park to determine whether this type of slow-release is of benefit and can justify the additional expense.
 - **Soil Testing** - The Division has started annual soil testing of sports fields to determine the presence of key components and allow for reduction in chemical fertilizer application.
 - **Slow-Release Products** - The Division currently uses 40-60% slow-release in their current mixture in an effort to improve soil conditions without adversely affecting the environment.
 - **Using Little/No Fertilizer** - Many City-maintained areas are currently managed with little to no use of any chemical fertilizer. Examples of these sites include; William Penn, Conifer View, Blyth, and Bloomberg Hill parks. The Division has also reduced the use of shrub fertilizer on established natives.
 - **Mulch Mowing** - All riding lawn mowers are mulch mowers which are utilized on over 70% of the City-owned and maintained properties.

All bagged clippings are deposited in a Waste Management yard waste bin that is composted at the Cedar Grove facility.

Strategy #3: Erosion Control

- **Tactic #1: Minimize exposure of soil/soil stabilization.** Parks staff will prevent erosion of exposed soils during minor projects by applying grass seed and other necessary BMP's.

Objective 2: To provide efficient cost-effective maintenance of the City's Park System

Strategy #1: Turf Reduction

- **Tactic #1: Create landscape beds as an alternative.** The Division works to create landscaped beds to reduce the amount of turf whenever possible. Examples of these created beds can be seen at William Penn and Tall Tree parks.
- **Tactic #2: Use synthetic turf as an alternative.** The Division has exchanged over 200,000 square feet (three sports fields) of natural turf to synthetic which has reduced the amount of fertilizer use by 100% and pesticide use by 95% (we still apply extremely small spot applications of pesticide in entrances when necessary). This translates into a reduced input of 4,000 pounds of synthetic fertilizer and 16 gallons of mixed pesticide each year which saves the City roughly \$15,000 per year in water, equipment, and labor.

Strategy #2: Turf Management

- **Tactic #1: Use of native grass.** The Division uses native perennial grass seed on turf applications which require less fertilizer and irrigation.

Strategy #3: Irrigation

- **Tactic #1: Employ temporary drip irrigation.** The Division advocates the use of temporary drip irrigation or low flow nozzles in capital and commercial projects whenever possible, which can then be abandoned after plant establishment when native vegetative stock is used.

- **Tactic #2: Employ smart watering system.** The Division utilizes a smart watering system that receives local weather information and adjusts needs accordingly to ensure that watering only occurs when required. This system also takes temperature into account and adjusts for evapotranspiration to further reduce unnecessary inputs. This smart watering system also provides additional water and labor saving services such as: alerting to breaks in irrigation lines, reducing the amount of labor necessary for timing maintenance, adjusting for moisture holding capacity of soil (system pauses several times during watering of clay soils) which allows time for water to infiltrate local soils before continuing to maximize efficiency and reduce surface water runoff that improves local water quality.

Strategy #4: Plant Salvage

- **Tactic #1: Salvage plants for reuse.** The Division actively seeks opportunities to salvage plant stock for reuse elsewhere in the City.
- **Tactic#2: Grow stock from seedling.** The City grows stock from seedling whenever possible to reduce costs, provide healthier stock, and protect local genetic integrity.

Objective #3: To provide comprehensive stewardship of the City's Park System

Strategy #1: Employee and Public Training

- **Tactic #1: Educational assistance for the public.** To promote public understanding and support of the benefits of the Integrated Pest Management program, it is the intent of the Division to provide educational assistance and information to the public regarding the use of pesticides.
- **Tactic#2: Integrated Pest Management (IPM) training.** Staff members attend IPM training in addition or in lieu of the applicators' license recertification classes in an effort to encompass a more holistic approach towards sustainable maintenance practices.

Objective #4: To maintain, renovate, and enhance the community's investment in parks, natural lands, trees, arterial landscapes, and recreational facilities assigned to it.

Strategy #1: Native Plantings

- **Tactic #1: Ensure plans and practices encourage native plantings.** The Division practices and encourages sound horticultural practices, resulting in a reduction in watering needs and decreased reliance on chemicals to control adverse

environmental conditions. To this end, parks and other City facility development plans are reviewed to ensure appropriate plant choices, cultural conditions and amenities, and implementation procedures to produce the healthiest plants possible to withstand pest infestation. Maintenance practices reflect a similar concern and emphasis.

- **Tactic #2: Increase use of native plants.** The Division currently utilizes 70-80% native plant material which has increased dramatically from approximately 50% in 2000. The Division tries to utilize native plant stock whenever possible to enhance facilities and protect native habitat.

Conclusion

The Parks Section of Bothell's Public Works Operations Division is committed to providing safe, clean, and attractive parks facilities, active and passive recreational and volunteer opportunities, wildlife preservation, environmental protection, and cultural enrichment. Staff will continue to actively seek ways to balance efficient service, safety, recreational needs, and environmental concerns to ensure our parks can be enjoyed by all for generations to come.

Appendix 2.
Annual Report Summary by division for 2010

Annual Report Summary by division for 2011

2010 Annual Report

Status and Actions taken by Public Works Department Divisions as directed by Goals, Policies, Procedures, and Practices for all Lands Owned and Maintained by the City's Public Works Department

Compiled by: Andy Loch, Surface Water Management Coordinator

Date: January 13, 2011

Administrative Division

- Provided needed record tracking of permit related costs.
- Assisted with NPDES Phase II permit and related tasks as needed.

Engineering Division

See attached spreadsheet detailing accomplishments.

Drainage Plan Review

- Drainage plan tracking occurred and used in the NPDES Annual Report.
- All drainage plan review staffers and inspectors have received CESCL certification training.
- Tracking of annual training of staff has not been formally adopted. In 2011 staff is expected to develop a means to track annual training.
- Drainage plan review staff attended multiple LID trainings since 2009. Training has included use of porous concrete, soil amendments practices, and general overview of low impact development techniques.

Transportation

- New elements were introduced to promote the use of rain gardens on the traffic calming and traffic safety devices within the Citywide Traffic Calming and Collector Traffic Safety Program. This will be included in the 2011 plan's updates.
- Staffers are now aware and acknowledge that improvements to traffic flows, i.e. IT Improvement Program, will lead to less congestion and more efficient traffic flow thus reducing vehicle emissions and possible contaminants discharged to surface waters.
- No annual summary was made of actions taken to reduce road related pollutants from entering surface waters.

Utilities: Storm Water Facility Maintenance

- Annual inspection program successfully inspected all regional, city owned or maintained, storm water facilities. Private systems are being inspected but frequency is not on an annual basis.
- No work plan was developed to prioritize improvements of storm water facilities that cause significant contributions to surface water degradation.

Maintenance and Operations Division

Road Repair and Maintenance

- Work was performed under the use of all the appropriate Best Management Practices as outlined in this document and Surface Water Management Plan Version 2009-4.0.
- The City is investigating the use of a template Stormwater Pollution Prevention Operations and Maintenance Plan that was developed for Eastern Washington communities funded and approved by WDOE. This template can be used for Maintenance and Operations Division, Facilities, fleet maintenance, and Park Lands.

Park Lands Maintenance

- No work plan was developed.
- An Integrated Pest Management Plan has been implemented for park lands since about 2002, see attachment.
- More funding and staff resources are needed to improve park lands maintenance performance in regards to carrying out the practices outlined in Table 2 of this report.

Facilities and Parks Capital Projects, Fleet, and Recreation Division

- No SWPPP was written for the New Operations Center facility in 2010. The City will create a SWPPP for the new facility in 2011 and at the same time modify Shop-1's SWPPP.
- No effort was taken to expand and enhance the *Parks, Recreation & Open Space Action Program, 2008 (PROSAP)*. The plan is currently not due for revisions until 2014. It is expected at that time the plan will incorporate and/or add to the goals and policies enunciated within this document.

- No work plan was written to address all maintained facilities and their respective practices to reduce or eliminate pollutants discharged to surface water. The City will in 2011 investigate the use of a template Stormwater Pollution Prevention Operations and Maintenance Plan. The template was developed for Eastern Washington communities funded and approved by WDOE. The template can be used for Maintenance and Operations Division, Facilities, fleet maintenance, and Park Lands.
- In 2011 the city anticipates creating a SWPPP for the new operations center. The SWPPP will address vehicle fleet maintenance practices.
- Currently, fleet and facility maintenance staff use WDOE's Shop Guide for Dangerous Waste Management, Revised October 2009, Publication no. 09-04-015 at Shop-1 and new operations center.
- Recreation events are periodically reviewed for possible discharge of pollutants to surface waters. No such discharges were reported in 2010.
- The fourth of July parade in 2010 was a rain free event. Street sweepers and staff worked to remove garbage and waste after the event to prevent it from being discharged into surface waters.

City of Bothell, Capital Improvement Program. Report on Implementation of Goals and Policies for 2010.	Training in 2010 (hours)	
	City Staff	CESL
Ken Garmann	0	0
Jason Torrie	16	0
Rita Hu		
Ronnie Bennet	0	4
Joe Celano	16	0
Chris Behrens	16	0
Steve Morikawa	0	0
Ryan Roberts	16	
Don Ranger	0	0
Nduta Mbuthia		
Khin Gyi		
Keith Russell	8	0

2011 Annual Report

Status and Actions taken by Public Works Department Divisions as directed by Goals, Policies, Procedures, and Practices for all Lands Owned and Maintained by the City's Public Works Department

Compiled by: Andy Loch, Surface Water Program Coordinator

Date: January 7, 2012

This document is a summary of status and actions taken in 2011 by Public Works Department Divisions as directed by Goals, Policies, Procedures, and Practices for all Lands Owned and Maintained by the City's Public Works Department

Introduction

In early 2011 Surface Water Management staff prepared and an internal report that reviewed deficiencies and/ or under performance of Public Works divisions in regards to the City's NPDES Phase II permit requirements. This led to a series of meetings with each division of Public Works. The purpose of the meetings were to review individual division work plans and measurable objectives to identify any potential non performance issues and highlight what was already being done. This report summarizes the efforts undertaken and their respective outcomes for 2011.

Administrative Division

- Provided needed record tracking of permit related costs.
- Assisted with NPDES Phase II permit and related tasks as needed.

Engineering Division (Capital Improvement Projects)

- Proposed adopting new mission statement to include "to enhance the environmental quality..." as part of the overall mission for CIP actions.
- Verified that CIP projects are utilizing current Bothell Municipal Codes for design and construction. Required permits and environmental review follows the Bothell construction standards, Chapter 17.

- Check lists to monitor project adherence to the standards are incorporated into the Bothell Construction standards, Chapter 17.
- Training in low impact development techniques, erosion control, and illicit discharge identification and reporting was offered to CIP staff in 2011.
- CIP and Surface Water Management staff have identified the need to incorporate potential storm water monitoring activities, where and when appropriate, into CIP projects. The downtown redevelopment should offer several opportunities to collaborate on storm water monitoring efforts.

Drainage Plan Review

- Drainage plan tracking was switched to a new city data base, Energov. The received multiple training sessions to learn the new database system.
- All drainage plan review staffers and inspectors have received CESCL certification training.
- Tracking of annual training of staff was initiated in 2011. Lack of training in LID practices was viewed as needed element. Plan review staff attended LID training in 2011. Drainage plan review staff attended multiple LID trainings since 2009. Training has included use of porous concrete, soil amendments practices, and general overview of low impact development techniques. Future training of construction inspectors is needed in regards to LID construction techniques.

Transportation

- When the next city comprehensive plan transportation element update occurs additional goal will be proposed: take steps to reduce road related storm water pollution.
- Staff looked at ways to promote the use of rain gardens on the traffic calming and traffic safety devices within the Citywide Traffic Calming and Collector Traffic Safety Program.
- Staffers received training and education of the use of LID techniques on how traffic can impact water quality and to look for means to reduce or eliminate adverse impacts.
- In 2012 Surface Water Management staff will develop a procedure to prioritize road segments by their level of contribution to polluted storm water discharges. The road prioritized list can then be used as an added tool to select and score transportation projects. This effort compliments

other storm water retrofit actions aimed at poorly functioning storm water treatments in urban areas.

- A goal is to be added to Commute Trip Reduction program in 2012 that links trip reductions as a means to reduce polluted road generated storm water discharges.
- Surface Water Management staff conducted an outreach effort to the City's Development Services Initiative work group. The group represents many of the departments within the City, Community Development, Public Works, and Fire Department. The DSI group develops methods to ensure efficiency and consistency during city permit review. The group was educated as to the importance, the how and why storm water is part of the permit process.

Utilities: Storm Water Facility Maintenance

- The internal report highlighted the need to increase our inspection efforts of storm water facilities and improve mapping efforts of outfalls to streams from the City's storm water system. The City hired two interns for the summer 2011 to help with storm water facility inspections of private facilities and mapping of outfalls to streams. This increased the speed and efficiency of the inspection program.
- Annual inspection program successfully inspected all regional, city owned or maintained, storm water facilities. Private systems are being inspected but frequency is not on an annual basis.
- The city initiated the first step to prioritize improvements, retrofits, of storm water facilities. The first step involved creating a basin feature layer map in the city's Geographic Information System database. The basin maps will facilitate aspects of basin planning such as hydrological modeling storm flows and current flow capacity of storm water systems.
- A common need for the Utilities and Maintenance & Operations divisions is an asset oriented management database. There is no common shared software program to track work performed and inspections. Efforts will continue in 2012 to acquire asset management software database.

Maintenance and Operations Division

Road Repair and Maintenance

- Work was performed under the use of all the appropriate Best Management Practices as outlined in this document and Surface Water Management Plan Version 2009-4.0.

- Two summer interns were hired to expedite inspections of all catch basins within city right-a-way. The efforts were successful and the division then initiated servicing those catch basins identified as needing maintenance.
- Interim plans were made to deal with the lack of central shared database for storm water management activities.
- Public Works and NorthShore School District entered agreement to co-write the Storm water pollution prevention plan (SWPPP) for new co-owned operations center. It is anticipated that the SWPPP will be completed by end of 2011.

Park Lands Maintenance

- Development of a work plan was finalized in 2011. The work plan was designed to improve park land maintenance practices to reduce or eliminate polluted storm water discharges. It can be found in appendix A: Integrated Pest Management Program, 2012.
- An increase in funding and staff resources are needed to improve park lands maintenance performance in regards to carrying out the practices outlined in Table 2 of this report.

Facilities and Parks Capital Projects, Fleet, and Recreation Division

- A SWPPP was being developed for the New Operations Center facility in 2011. The City in collaboration with NorthShore School District created a joint SWPPP for the new facility.
- City Public Works Department conducted a reorganization of what had been Facilities, Parks, and Recreation in one division. The reorganization separated Facilities and Parks into separate divisions. The new division titles are: Fleet & Facilities, and Recreation & Parks Capital Projects.
- Shop-1's SWPPP was audited in December 2011. The facility has been reduced to function as a warehouse and storage area for city public works. It retains use as a decant facility.
- No effort was taken to expand and enhance the *Parks, Recreation & Open Space Action Program, 2008 (PROSAP)*. The PROSAP plan is currently not due for revisions until 2014. It is expected sometime in 2012 or 2013 the PROSAP plan will begin its revision process at which time staff will incorporate and/or add to the plan the goals and policies enunciated within this document.

- The City continues to investigate all maintained facilities and their respective practices to reduce or eliminate pollutants discharged to surface water. The City in 2011 initiated possible use of a template Stormwater Pollution Prevention Operations and Maintenance Plan. The template was developed for Eastern Washington communities funded and approved by WDOE. The template can be used for Maintenance and Operations Division, Facilities, fleet maintenance, and Park Lands.
- Currently, fleet and facility maintenance staff use WDOE's Shop Guide for Dangerous Waste Management, Revised October 2009, Publication no. 09-04-015 at Shop-1 and new operations center.
- Recreation events are periodically reviewed for possible discharge of pollutants to surface waters. No such discharges were reported in 2011.
- The fourth of July parade in 2011 was a rain free event. Street sweepers and staff worked to remove garbage and waste after the event to prevent it from being discharged into surface waters.

2011 Storm Water/Surface Water Training Log - Capital Group

Last Updated: 1-17-12

Date	Date	Class Name	Tuition	Hours	# of Days	Sponsor	Notes
Chris Behrens	2010	CESCL		16			
Don Ranger	05/11/11	Water Crossing Design Guidelines	\$37.00	2.5	1	MPAC	dinner meeting
Don Ranger	5/11/2011	CESCL					Internal Bothell PW Training
Don Ranger	01/04/11	Illicit discharge detection and elimination	free	1		Kristen Terpstra	
Jason Torrie	2010	CESCL		16			
Joe Celano	2010	CESCL		16			
Keith Russell	1/25/2011	Dept of Ecology NPDES Web DMR Training	N/A	4		DOE	
Keith Russell	2010	CESCL		8			
Ken Garmann							
Khin Gyi							
Nduta Mbuthia							
Rita Hu							
Ronnie Bennett	1/4/2011	Illicit Discharge	Free	1		Kristen Terpstra	Internal Bothell PW Training
Ronnie Bennett	10/20/2011	Drainage - The Key to Good Roads	Free	1		Tillamook County, OR	NW PMA
Ryan Roberts	05/11/11	Water Crossing Design Guidelines	\$37.00	2.5	1	MPAC	dinner meeting
Ryan Roberts	2010	CESCL		16			
Steve Morikawa	05/11/11	Water Crossing Design Guidelines	\$37.00	2.5	1	MPAC	dinner meeting
Steve Morikawa	01/04/11	Illicit discharge detection and elimination	free	1		Kristen Terpstra	Internal Bothell PW Training