

City of Bothell

# Public Education and Outreach Program

Summary Report 2015



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## Introduction

Most polluted stormwater runoff is caused by the everyday actions of people that live in, travel through, or visit our area. While **difficult, changing peoples'** daily habits is more effective than attempting to clean up these pollutants **after they've reached our streams.**



*Photo: children learning about how water flows through a watershed*

## Goal

The goal of the education and outreach program is to reduce or eliminate behaviors and practices that cause or contribute to polluted stormwater runoff.

## Overview

Social marketing, using marketing to change behaviors for the good of the individual and community, has been used for over forty years in the realms of social services, public safety, and disease prevention (think of campaigns such as *Click it or Ticket*, *This is your Brain on Drugs*, or *Five a Day*). Social

marketing combines standard marketing with social science and other practices to help determine the best way to motivate someone to change a regular habit. The City of Bothell has chosen to use various social marketing strategies to change individual behaviors that pollute our local waterways.

The amount of people you reach and the amount of times you reach them over time also play a key role in establishing and maintaining the change in individual behaviors. In the City of Bothell, broad outreach strategies began in 2008 to provide understanding and education concerning several different water pollution issues. The goal was to give our residents, businesses, and the general public a clear view of the water pollution issues facing our community and establish a level of basic understanding concerning polluted stormwater runoff, pollution control, the flow of water, and the water cycle.



*Photo: Parr Creek planting event for Martin Luther King Jr day of service*

For 2015, broad education was provided to local target audiences through a variety of outreach media. These types of outreach included:

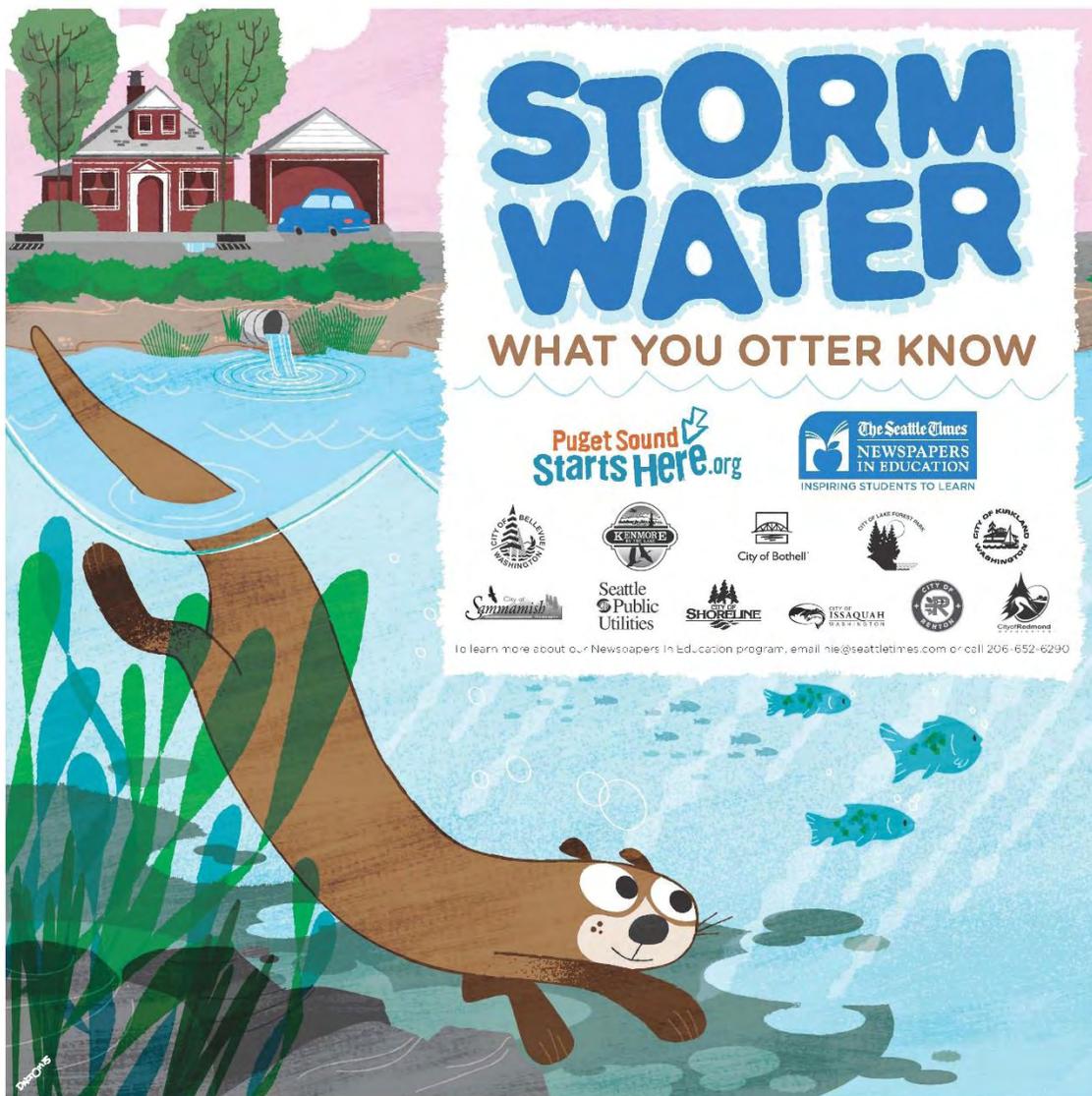
- Bothell Cable News (BCTV)
- Bothell Bridge
- City P.R.I.D.E. Post
- Newspaper articles in Bothell Reporter, Seattle Times, etc.
- Press releases

- City website
- Weekly posts on City social media sites (Facebook and Twitter)
- Water education presentations
- Workshops
- City-sponsored and private events
- Volunteer events
- Community newsletters
- Utility vehicle signs
- Bus ads
- Banners and stationary signs
- Online web ads
- You-tube videos
- Earned media interviews and articles

The City of Bothell will continue to utilize these outreach media sources in 2016 to ensure our messaging is received repeatedly through a variety of means.

*Examples of print media outreach are provided in Appendix A.*

Broad regional awareness messaging was conducted in 2015 in accordance with the Stormwater Outreach for Regional Municipalities (STORM) coalition and the Puget Sound Starts Here (PSSH) campaign found at [www.pugetsoundstartshere.org](http://www.pugetsoundstartshere.org). This allowed the City to align messaging with over 80+ surrounding county and city governments, 100+ businesses, 400+ non-profits, and provide better outreach through a combined and consistent regional message. The City of Bothell also co-chaired the STORM coalition to ensure limited funding resources were utilized effectively and topics were applicable for smaller jurisdictions. Sub-regional outreach was conducted through the Stormwater Outreach Group (known as the SOGgies) which consists of the Cities of Bothell, Kirkland, Redmond, Shoreline, Bellevue, Sammamish, Kenmore, Issaquah, Lake Forest Park, Clyde Hill, Newcastle, and Seattle. These cities chose to pool funding for sub-regional messaging efforts and evaluation to reduce production costs and leverage larger jurisdictional resources.



*Examples of sub-regional bus boards, newspaper inserts, and regional outreach we conducted are provided in Appendix B.*

The City will continue to be an active participant in STORM and SOGgies in 2016 and will co-chair the STORM coalition as able to provide essential input and direction on future outreach efforts. The City will also continue to promote the PSSH campaign to raise awareness of individual impacts to Puget Sound and further regional messaging.

## Targeted Outreach Programs

### **Natural Yard Care**

**Target audience:** *Bothell residents located within Snohomish County with a parcel size under an acre (2014)*

**Goal for success:** *To reduce and potentially eliminate the use of chemical fertilizers and pesticides on residential lawns and gardens and provide information on protective yard care techniques.*



*Photo: natural yard care workshop*

The City chose to partner with Snohomish County and sixteen other cities for 2014-2015 to implement and **evaluate the County's** slightly different behavior change workshop model against the technical assistance program model in Thurston County and the King County neighborhood workshop model **we've been using since 2010**. The Snohomish County program was offered to randomly selected landowners with lots under an acre in size within the Snohomish County portion of Bothell. All homeowners were entered into a database and 1,000 homes were randomly selected to participate. These homeowners received two mailers inviting them to participate in a series of

workshops. Basic differences in the Snohomish program from the King County program include:

- Mailer solicitation was conducted at random instead of by geographic neighborhood location
- A much larger target group was selected
- Zero door-to-door canvassing took place
- There were only three touch points instead of seven
- Different mailers were used with slightly different graphics
- The workshops took place in a central church location outside of Bothell instead of a community center within City limits
- Online registration was changed
- Information packets were not given out
- No refreshments were provided
- Master gardeners were used to answer questions
- Different speakers were utilized for a few of the talks
- The consulting firm was different

Evaluation between the various models found that a hybrid of workshops and demonstrations would generate the highest rate of behavior change. Regional participants will meet in 2016 to determine the best way for all of us to utilize the information and develop the most effective program for our respective jurisdictions.

*Examples of outreach materials and photos are provided in Appendix C.*

## **Car Washing**

***Target Audience:*** *Bothell residents that wash their vehicles at home*

***Goal for success:*** *To reduce and eliminate the number of residents that allow their vehicle wash water to enter Bothell storm drains.*

One current behavior contributing to stormwater pollution is home car washing that allows wash water to drain to streets and storm drains. In order to properly address this source of pollution, the City chose to conduct research in 2014 to determine the magnitude of the issue in Bothell, the current practices and attitudes of its residents towards this behavior, and appropriate next steps to address this issue.

## 2015 Outreach based on recommendations:

The City of Bothell conducted a variety of outreach through media, events, trainings, and volunteer opportunities to reach our target audience.

### Incentives

We provided Chinook Book mobile coupons for responses to surveys along with a vehicle leak test kit.

### Interviews

A few interviews with local car dealers were conducted to hear their concerns about using commercial facilities and see if one would be willing to be a spokesperson for endorsing the use of commercial facilities. We utilized contacts created through our Local Source Control Program that were identified as possibly willing to provide us with information and recommendations. The following are their responses:

Brooks Biddle- Dave Grant

- 1) Do you feel that commercial car wash facilities damage the clear coat and scratch paint on vehicles?
  - a. ***Yes and no, hand washing can be more damaging depending on what materials are used and both can cause swirl marks and damage the clear coat***
- 2) If so, is there something vehicle owners can do to prevent this?
  - a. ***Waxing every year is very important. It keeps dirt off, protects the clear coat, and makes washing far easier***
- 3) Are there any types of facilities that are better than others?
  - a. ***Brushless is typically better***
- 4) What other concerns do you have about vehicle owners using car wash facilities?
  - a. ***I have no other concerns***
- 5) Would you be willing to be a spokesperson for endorsing the use of commercial car wash facilities to protect streams?
  - a. ***Not sure, call me later***

Dream City- Lance J

- 1) Do you feel that commercial car wash facilities damage the clear coat and scratch paint on vehicles?
  - a. ***Yes and no, process causes damage not matter what but different factors affect the outcome***

- i. Soap- homeowners use dish soap which is HORRIBLE! You might as well wash with sand paper. It causes more issues than washing the car
  - ii. Water- recycled water makes a difference. It's good for conservation but doesn't currently purify enough to keep from harming the clear coat/paint
  - iii. Brushes- brushes are more abrasive than using brushless
  - iv. Frequency- very frequent washing will cause more damage than less washing
- 2) If so, is there something vehicle owners can do to prevent this?
  - a. Wax is key- dirt is very abrasive (sand paper is sand...)
  - b. Waterless- works really well without water and solves multiple issues
  - c. Pre-rinsing- whatever you're doing, is improved with a pre-rinse
  - d. Maintenance- maintaining all aspects of facilities is very important (brushes, mechanisms, drainage, etc.)
- 3) Are there any types of facilities that are better than others?
  - a. We need to build one right together and maintain it properly
    - i. Community owned and operated-taxes? contribution by users? cost share? bill for operational costs?
    - ii. No regulation- don't require systems but help everyone to build one properly
    - iii. Example- Lee Johnson- 4 dealerships went in together on a car washing facility that cleans 100 cars/week. Is properly automated and operated by one guy. Runs a vehicle through in 2-3 minutes. It's a good idea and does a good job
- 4) What other concerns do you have about vehicle owners using car wash facilities?
  - a. Nothing different than what's already stated
- 5) Would you be willing to be a spokesperson for endorsing the use of commercial car wash facilities to protect streams?
  - a. I'm willing to discuss issues and opportunities

We also spoke with the only commercial car wash owner legally operating with Bothell city limits to discuss our findings regarding the state of repair within their facilities and encourage proper repair and maintenance. They appreciated the information and said they would work to provide education to the public regarding their servicing.

### Code review

After speaking with staff **and reviewing city code, we couldn't** find any codes that require car washing facilities or designated spaces that infiltrate or drain to sewer for single family, multi-family, or businesses with fleet vehicles.

### **Next Steps for 2016**

General education- we will continue to use the existing resources and will expand social media. We will work with staff to discuss options mentioned in interviews. We are waiting on Surface Water Management Areas (SWMAs) to target specific audiences.

Incentives- we will continue to offer coupons for car wash facilities and waterless products

Code revisions- we will review with staff whether anything should be created or altered to encourage appropriate vehicle washing facilities.

Facility Access- we will review with staff the possibility of creating a community owned facility



*Photo: Soap from improper vehicle washing entering a storm drain*

*Car washing progress report can be found in Appendix D.*

### **Pet Waste**

**Target audience:** *Bothell residents that own a dog*

***Goal for success: To reduce the amount of pet waste left on public and private property.***

Within Bothell, the North and Swamp Creek watersheds have been listed on the 303 (d) list of impaired water bodies for fecal coliform bacteria and dissolved oxygen by the Department of Ecology (Ecology) since 1996. For this reason, Bothell has conducted a more robust program to reduce and eliminate known non-point sources of fecal coliform such as pet waste, failing septic, sewage, and bird feeding.

For pet waste, past surveys (most recent in 2012) have shown that picking up pet waste has been established as a social norm among Bothell residents, so we were able to adapt our efforts to maintain this awareness and move to enforcement. In 2011, we established a pet waste ordinance that made leaving pet waste on public and private property a punishable offense (see BMC 6.16.011 and 8.06.240).

In 2015, we worked with our animal control officer to conduct targeted education and outreach concerning the right to enforce in problem parks, neighborhoods, and public spaces. Because outreach is a continuum and needs to be revisited in order to maintain established behaviors, we will continue to promote the appropriate best management practice among our resident target audience in 2016.



*Photo: pet owner showing the proper BMP*

*Examples of pet waste and bird feeding materials as well as the adopted ordinance are provided in Appendix E.*

## **Youth Stormwater Education**

**Target audience:** *All Bothell K-12 grade children attending public school.*

**Goal for success:** *To educate our Bothell students concerning their individual impacts on their local water, direct storm drain connections to local waterways, and basic knowledge concerning polluted stormwater runoff and the water cycle.*

The City of Bothell began contracting in 2009 with the non-profit organization, Nature Vision, Inc., to administer water education courses to all service area schools. These classes are tailored to provide water education courses that meet teachers' Essential Academic Learning Requirements (EALR). Teachers are solicited electronically using a water education flyer (shown in Appendix F), and several classrooms sign up for programs averaging 2,000+ Bothell students per year. In order to be sure the stormwater messages are reaching the parents, a stormwater flyer and return postcard with stormwater education activities are given to all students and teachers (in both hard copy and electronic formats) providing an opportunity for parents to work with their children to understand and quantify their individual stormwater impacts.

A three tiered evaluation strategy is conducted each year to determine student retention of information, understanding, and teacher satisfaction over time.

The City is also a partnering agency in the regional Sammamish Watershed Festival which provides an all-day field trip event for over 800 4<sup>th</sup> grade students during the second week of March. The City will work within the steering committee to help administer a successful event at the Brightwater Education Center in Woodinville and help generate enthusiasm for water quality related topics.

In 2014-2015, the City also worked with the Puget Sound Partnership (PSP) and the Pacific Education Institute (PEI) to create new stormwater classroom curriculum that meets the new common core and next

generation education standards and helps students prepare for the new testing requirements. This way, stormwater education can be incorporated into the general education requirements ensuring more students receive stormwater messaging at a more in-depth level.

In 2016, the City is working with PEI, IslandWood, and King County to administer a grant that would allow us to pilot the new curriculum in the classroom, develop additional learning tools for the various modules, offer additional teacher training, and develop a similar curriculum tailored to Eastern Washington.



*Photo: youth at Watershed Festival learning about wetlands as filters*

Examples of youth education outreach are provided in Appendix F.

## **Dumpster Maintenance Assessment**

**Target audience:** The target audience for this project is small quantity hazardous waste businesses which utilize products that can contribute to stormwater pollution (restaurants, auto repair, multi-family, etc.) within Bothell city limits.

**Goals for success:** To determine whether three business related dumpster maintenance best management practices (BMP's) are potentially contributing to storm water pollution in Bothell.

Improper dumpster maintenance at local businesses can contribute to stormwater pollution which impacts local streams. This assessment will serve as a tool to help determine the water quality benefit of a city-wide business dumpster maintenance program.

Objectives for this project include:

- Determine whether BMP #1-dumpster lid is closed after each use, is already being practiced with a majority of the target audience
- Determine whether BMP #2-dumpsters found leaking are repaired or replaced, is occurring between business owners/operators and the garbage hauling company
- Determine whether BMP #3-area around dumpster is clear of debris and staining, is being practiced with a majority of the target audience

#### Outreach Materials

Three outreach materials are also being evaluated to learn whether information is being received and passed along to other staff/employees:

- BMP #1 - a sticker depicting the BMP for placement on the dumpster by the business
- BMP #2 - a card with the hauler contact information distributed to all target businesses
- BMP #3 - notification to business or property management.

#### Site Visits

The target number of commercial dumpster customers receiving the outreach is 100 in a one year period. Only commercial customers with dumpsters will be tabulated (no small containers or trash compactors will be included). Site visits are scheduled in accordance with procedures established through the LSC program. Once site visits have been set, the LSC Specialist conducts a pre-inspection and records current dumpster practices and the state of the dumpster. They then conduct their regular inspection and provide the described outreach materials **along with verbally describing the desired BMP's. Any issues with a damaged or leaking dumpster are reported to the Special Projects Administrator and garbage hauler with a notice to correct per our contract.**

The Surface Water Program Coordinator or Local Source Control Specialist follow up 30-60 days after each inspection and record whether the dumpster lid is closed, the sticker has been placed, and if necessary, whether the dumpster has been replaced.

### Control

The control is 100 randomly selected commercial customers within Bothell that utilize dumpsters. The same initial observations of the three **BMP's are conducted but contact with the business is not made.**

### Initial Findings for 2015

Evaluation findings for 2015 are provided below in reference to the categories above:

1) 102 control site inspections were conducted in August and the BMP findings are as follows:

- BMP #1- 34% found with their lid open
- BMP #2- 2% found to be leaking or damaged
- BMP #3- 14% found with garbage outside the dumpster

11 experimental site visits with subsequent follow-up were conducted in June-November and the BMP findings are as follows:

- BMP #1- 27% found with lid open during pre-inspection and none were found during follow-up inspection
- BMP #2- 9% found with leaking or broken dumpster during pre-inspection and 9% were found during follow-up inspection
- BMP #3- 9% found with garbage around dumpster area during pre-inspection and 9% were found during follow-up inspection
- Stickers were placed on 18% of the dumpsters during the follow-up inspection

2) Review of our waste hauler contract has found no placement, containment, or drainage requirements. It does, however, contain requirements for keeping containers in good repair with no leaks and has provisions to contain, clean, and report any known spills to our stormwater drainage system to the City spill hotline.

Review of our City code has found that a disposal provider is required. All container locations are required to be screened from view, stored onsite, and all containers shall be closed. An interview with our Lead Stormwater Drainage Review Engineer found they are willing to

place any language that we would like to see in our city code provided we write it and have it approved by our Utility Manager and Legal Department.

- 3) A work group with other jurisdictions was formed to share knowledge, resources, materials, and findings. The group consists of stormwater, solid waste, local source control, department of health, and FOG (fats, oils, and grease) professionals to determine the best way to address concerns without adding additional regulations for businesses. We continue to work together so that tips, lessons learned, and results can be shared and, where possible, compared.

We will continue the assessment through 2016 to capture the remaining data and complete an assessment report. We will determine at that time if, when, and how to continue with the program.



*Photo: Commercial dumpster showing all improper BMP's*

Dumpster maintenance progress report is available in Appendix G.

## **Environmental Stewardship Opportunities**

**Target audience:** Interested volunteers and residents with a yard that contain or abut wetland systems or surface waters.

**Goal for success:** To increase the amount of riparian structure, input, and shading along Bothell rivers, creeks, streams, lakes, and wetlands.



*Photo: planting and invasive removal event along the Sammamish*

The City partnered with KCD from 2012-2016 to conduct a riparian enhancement project with a Rose Foundation grant. The project allows students, teachers, businesses, and the general public to learn about stream planting and participate in planting native trees and shrubs around Parr Creek in the North Creek Business Park. This project will continue to be maintained with volunteers through 2016.

Photos of stewardship activities are available in Appendix H.

## **Hazardous Materials Use, Storage, and Disposal**

**Target Audience:** *All Bothell residents that utilize hazardous products.*

**Goal for success:** *To increase the awareness of household hazardous materials, provide awareness of proper BMP's for use, handling and storage, increase the use of proper disposal sites, and reduce the*

***amount of hazardous materials being used by our residents wherever possible.***

The City has been participating in hazardous waste outreach for a number of years through funding from the Local Hazardous Waste Management Program (LHWMP). Bothell has offered several collection events as well as provided outreach at every Bothell festival to encourage proper use, storage, and disposal of hazardous household chemicals and materials. In 2011-2015, vouchers were given to Bothell residents to drop off hazardous materials at the Shoreline Transfer Station free of charge. One event mailer, several flyers, and two articles were sent to all residents to provide education and information as follows:

- Articles detailing Wastemobile dates and providing hazardous waste use, handling, and disposal information were printed in the Bothell Bridge, BothellCool Newsletter, and Bothell Reporter.
- A recycling event mailer was sent to all Bothell residences offering information on every program available such as the Wastemobile dates, the Take it Back program, recycling events, Waste watchers, Shoreline Transfer Station, City facilities that will accept certain waste, as well as information on use, handling, and storage of all household hazardous chemicals.
- A bill insert was provided to all Waste Management customers detailing disposal dates, curbside collection, and our spill response hotline number.
- Small flyers were provided to the local Senior Center to provide information and solicit participation for the Wastemobile disposal dates among seniors.
- Video showing how easy it is to utilize the wastemobile.

All mailers sent people to our website for more information and offered LHWMP as an additional resource.

More education on use, handling, and storage will continue in 2016 through continued mailers, articles, collections, vouchers, and educational workshops through grant funding. Additional assistance with disposal will take place through free disposal opportunities with the

wastemobile, curbside collection, and drop off options at the new Recology facility in Bothell.

Business outreach was also conducted in 2015 by our Local Source Control Specialist, focusing on companies that generate small quantities of hazardous waste while working and conducting business within Bothell. Technical assistance and training has been and will continue to be offered on-site to ensure proper application, handling, safety, and disposal of hazardous products in 2016.

Examples of outreach materials for 2015 are provided in Appendix I.

## **Mobile Business Generated Pollution**

**Target audience:** Mobile cleaning companies that service the Bothell area including the North Creek and Canyon Creek Business Parks.

**Goal for success:** To reduce the amount of pollutants from mobile business chemical and wastewater use, handling, and improper disposal which discharge to Bothell's MS4.

### 2012-2015

Snohomish County determined that mobile businesses are not motivated to do the right thing regarding proper handling and disposal **BMP's**, so we reached out to educate those hiring for services and reinforce the need for property managers to hire reputable contractors **that utilize proper BMP's** in order to avoid fines for illegal discharges.

Our Local Source Control Specialist (LSCS) also made an effort to contact mobile businesses completing work within the City to provide technical assistance and inform them of the rules and regulations for proper disposal of their waste.

### 2016

The regional STORM group has obtained a grant from Ecology to develop a regional model to assist mobile businesses in adopting appropriate **BMP's**.

*An example of outreach to property owners is provided in Appendix J.*

## **Illicit Discharge Identification, Education, and Reporting**

**Target audience:** Bothell businesses most likely to have a spill occurrence (restaurants, landscaping companies, auto repair and maintenance) and the general public.

**Goal for success:** To reduce the amount of pollutants entering our stormwater system from spills and illicit discharges.

This program is currently being administered through the use of our LSCS hired through an Ecology grant. This position is designed to **encourage the use of proper BMP's to reduce the amount of** improperly disposed materials by small quantity hazardous material generators through direct outreach and technical assistance.

We are also educating staff and the general public through outreach media, trainings, incentive items with the spill hotline number (key chains, magnets, window clings, etc.) and will continue to get the spill number out through new and existing channels.

This program will continue through June 2016 and will be evaluated for success after that time.



*Photos: Site visits at local businesses discussing desired BMP's*

*Examples of outreach materials are provided in Appendix K.*

## Vehicle Leaks

**Target audience:** The general public who live near or drive through Bothell

**Goals for success:** Reduce the amount of oil and mechanical fluids released on Bothell roads due to vehicle leaks, and provide education for what to do if a spill occurs.

This program was run through a regional effort by the STORM group known as the **Don't Drip and Drive Campaign**. An event was conducted in Bothell through the Snohomish County Washington State Extension and paid for with a small STORM grant. Efforts in 2016 will greatly depend on the target audiences chosen by King County for Phase III.



*Photo: maintenance inspection photo from vehicle leaks program*

## Low Impact Development (LID)

**Target audience:** City staff, developers, and the general public.

**Goal for success:** To increase the awareness, understanding and acceptance of LID techniques among key staff and the general public.

Low impact development (LID) techniques involve educating several different groups including City staff and elected officials. The techniques add an element of complication due to lack of consistent language, individual site conditions, maintenance concerns, and the fact that each technique requires extensive education and expertise to ensure the success of design, installation, and maintenance. Further complications occur because most techniques require the use of a professional contracting company or consulting group for design review, site review, and proper installation.

We have several booklets available for the public from Washington State University (WSU) Extension that provide great information on all aspects of building a rain garden, including: detail design, placement, size, planting zones, and a list of native plants to suit each type of yard constraints.

In 2011-2013, we offered workshops on LID techniques in the fall and spring at the location of our demonstration rain garden (Bothell public library) so the public could view a working garden, begin to understand how they function, and gather information for their own property needs. We also completed a guide to walk Bothell residents through each approved LID technique and provide resource materials for them to complete each of the techniques on their own property.

For 2014, we utilized a grant from Ecology to create a demonstration neighborhood within the Queensborough watershed in an effort to reduce localized flooding and stream bank erosion and educate residents on these practices. Unfortunately, all designs proved to be infeasible due to high groundwater tables, liability concerns, and site constraints.

For 2015, we worked with Stewardship Partners to review and purchase a maintenance manual for new home owners with facilities on their property.

For 2016, we have hired a consultant to help us review all city development codes and determine which principles and techniques we can incorporate into our codes and design standards. We will work internally to prepare and include staff in the review process and externally to understand the wants and needs of the community and engage them in a dialog before final adoption of the code revisions and design changes take place.

***Example of provided rain garden maintenance manual provided in Appendix L***

## Conclusion

The City currently has an active education and outreach program designed to reduce and eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. We also encourage the public to participate in stewardship activities both locally and regionally. Staff are tracking outreach efforts and maintaining records of current public education and outreach activities and budgets in accordance with State requirements.