

## 67 – Public Education and Outreach Efforts

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The 2013 NPDES Phase I Municipal Stormwater Permit directed the City of Seattle to implement a program for conducting education and outreach to specific audiences on specific topics. The City has prepared an education and outreach program of best management practices to meet these requirements. The following sections include a brief description of the education and outreach activities associated with each of the BMPs, what strategies are in place to track improvements in the target audience's understanding of the problems, and a summary of 2015 activities.

### **Protect Our Waters (POW) Community and Youth Programs**

This program educates the general public about the impacts of stormwater flows into surface waters and the impacts associated with impervious surfaces. The program includes teacher training, curriculum resources, field trips and community service/service learning activities. Programs are implemented through a partnership between Seattle Public Utilities (SPU) and Seattle Public Schools (SPS).

SPU and SPS have identified existing curriculum areas where applied stormwater issues can support and enrich student learning. As a result local geographic references, stormwater-related content and new lessons have been added to district-wide science curriculum for elementary (5<sup>th</sup> grade) and middle school (6<sup>th</sup> grade) students. In addition, field trips at the elementary level tie the investigation of an applied problem - the impacts of stormwater on a real stream - to district-wide grade level content (either the Land and Water science kit or Salmon in the Classroom program). The field trips bring children to a local urban stream where they explore hydrologic concepts and the impacts of urbanization on lotic systems. Community service and service learning opportunities, such as storm drain stenciling, extend the reach of this content into the adult community and build a personal stewardship ethic.

In 2015 SPU provided materials for approximately 50 stormwater related district-wide science kits. Materials included the Ecology GROSS grant-funded *Lost and (Puget) Sound* video and lessons and an original power point presentation titled *Discovering Seattle's Land and Water*. Twenty-five teachers received training on the kits and the use of the new materials. In addition 800 children



attended urban watershed fieldtrips related to Salmon in the Schools at Piper's Creek, and over 2,200 students attended a field trip extension to the Land and Water unit at either Longfellow, Piper's, Taylor or Thornton Creek. More than thirty different public, private and parochial schools in Seattle participated in the program. Several years of teacher surveys have indicated that teachers that participate in these programs see increases in student understanding of the impacts of stormwater and impervious surfaces.

Working with the Seattle School District provides an opportunity to reach a diverse geographic audience and engage students with direct, applied learning. The program links closely with current

school science curriculum to reinforce target messages and illustrate concepts with real, local examples.

In 2015, programs for the general public included direct education, social marketing, partnerships, inclusive engagement and personal stewardship strategies to promote water quality and watershed health. SPU partnered with the Puget Sound Starts Here (PSSH) group and developed and distributed more than 400 Chinook Book mobile coupons to promote stormwater BMP's, including car washing, and reached more than 27,000 active Chinook Book mobile users in the Puget Sound region. SPU provided public tours of creek watersheds and stormwater projects, staffed public festivals and events and supported volunteer storm drain marker and stencil events. In addition educational materials such as E-newsletters and BMP beverage coasters were distributed. SPU also supported public stewardship programs such as Salmon Watcher and Salmon Stewards, community advisory councils, and the Green Infrastructure Partnership and collaborated with regional Tribes to produce Salmon Homecoming reaching over 1000 students.

### **Doo Diligence Pet Waste Program**

The Doo Diligence Pet Waste Program is a city-wide outreach effort that educates the general public about the impacts of pet waste on water quality. In 2015, the program employed several programmatic strategies to engage residents on the topic of source control BMPs, environmental stewardship actions, and opportunities to improve pet waste disposal practices. Strategies in 2015 included: highly visible signage in public places, the distribution of targeted outreach materials, and maintenance of pet waste baggie dispensers at key locations throughout Seattle.

The Doo Diligence Program maintains 68 pet waste baggie dispenser sites in targeted areas in Seattle. In 2015 136,000 mutt-mitt baggies were used by Seattle dog owners. A map of dispenser locations is posted on the Doo Diligence web page.

### **Automotive Maintenance Program (AMP)**

In 2015, SPU continued to educate residents and the general public about the impacts of vehicle fluids on stormwater quality through our free Auto Leaks Workshops. The goal of each four-hour workshop is to remove barriers for BMP adoption and create the connection between clean water and vehicle maintenance. All participants receive a Vehicle Maintenance Kit after completion of the workshop. A total of 84 Maintenance Kits were given to participants who attended the workshop. In 2015, 67 people participated in the 10 auto leaks workshops offered to the public.



To increase workshop participation and raise awareness, SPU continued to partner with King County, City Departments and other community-based agencies/institutions in the region. Workshop posters, brochures, and social media with information about car maintenance BMPs were shared with the public through our community partners. One issue of SPU's Curb Waste and Conserve direct mail newsletter (distribution approx. 280,000) included information promoting the auto leaks classes. AMP also provided a dedicated hotline for inquiries and registrations for the

Auto Leaks Workshops. In addition to the hotline, AMP revamped its website and email to make it more user-friendly for learning about the program and registering for the Auto Leaks Workshops. Pre-Workshop survey can now be completed via online or phone.

In 2015, SPU offered two language specific workshops to the Spanish-speaking communities. Curriculum for the workshops were translated into Spanish and an interpreter was provided for each of the two workshops. SPU collaboratively worked with Sea Mar Community Health Center, Denise Louie Early Education Center, Beacon Hill International School, Morelos Transmission, and El Centro de la Raza to outreach to the Spanish-speaking communities. A total of 18 people participated in the Spanish-speaking workshops. In addition to the language specific workshops, AMP completed one workshops for teens receiving services from YouthCare, an organization dedicated to helping homeless youth move from survival mode into thriving and healthy young adulthood. The curriculum was adjusted to accommodate the youths' needs and their interest in Automotive Maintenance.

### **Natural Soil Building**

The Natural Soil Building Program (NSB) is supported by SPU Solid Waste and Water Supply funding as well as SPU Drainage funding and the Local Hazardous Waste Management Program in King County. The NSB Program has two components: the Master Composter Soil Builder (MCSB) volunteer training and outreach program, and the Garden Hotline (which answers phone and email requests, and also conducts classes especially for underserved and ESL audiences). The NSB program provides outreach and education on Natural Yard Care (including pesticide and fertilizer reduction) and also on RainWise techniques (LID and GSI) for the general public, residents, property owners and landscape professionals.

In 2015 the Master Composter Soil Builder program conducted four multi-day trainings for volunteers: one in the Spring for a diverse group of English-speaking MCSB volunteers, one in summer for multi-ethnic at-risk youth in collaboration with Seattle Youth Garden Works, and two in early fall for diverse low-income volunteers in the Just Garden Project in South Park, and Spanish-speaking members of Iglesia Levantando la Cosecha in SE Seattle who will be doing outreach with future low-income participants. The newly trained volunteers joined the existing volunteer cadre in completing 1,206 hours of outreach and making 8,893 customer contacts on Natural Yard Care and RainWise at community events, demonstrations, and classes around Seattle.

The Garden Hotline serves all of King County through additional funding from the county-wide Saving Water Partnership and the Local Hazardous Waste Management Program in King County. The Garden Hotline responded to 9,432 public requests for information on Integrated Pest Management (IPM), plant selection, soil building, RainWise, and other resource conservation issues. Seventy-one percent of the Garden Hotline contacts were with residents within the City of Seattle, and 29% in King County outside Seattle. Besides phone and email contacts the Hotline conducted 159 classes and outreach events, with 51% of event contacts provided in underserved, immigrant, or communities of color. Hotline staff also wrote articles for community media, updated factsheets and guides, and assisted in preparing materials for translation. A survey of Hotline customers in 2015 indicated 94% satisfaction and usefulness of the information they received in helping them change behaviors.

### **Seattle reLeaf**

Seattle reLeaf is a citywide interdepartmental program that focuses on increasing and maintaining healthy tree cover. Seattle reLeaf has two main projects: Tree Ambassador and Trees for Neighborhoods. Seattle reLeaf is an appropriate BMP for educating the public about landscaping and buffers and it engages residents in the stewardship and restoration of the urban forest canopy. In 2015, Seattle reLeaf hosted 50 events, engaging 2,325 people. We supported 1,800 volunteer hours, launched a monthly newsletter to 854 people, and answered 390 technical support inquiries.

Seattle reLeaf's Tree Ambassador project empowers Seattle residents to become local leaders in urban forest stewardship. Tree Ambassador volunteers lead community events in their neighborhoods, including street tree weeding and mulching work parties, small-scale landscape renewal projects, and public tours of neighborhood trees. In 2015 Seattle reLeaf trained 28 new Tree Ambassadors. 2015 events included 21 tree walks and 13 community work parties at 9 sites. The Trees for Neighborhoods project builds a healthier, greener Seattle by engaging residents in planting trees on private residential property. In October and November 2015, residents planted 1,010 trees at 422 households in neighborhoods across Seattle.

Trees included evergreens, Pacific Northwest natives, fruit, and power line friendly trees. All participants attended a tree planting and care workshop before picking up their new trees—83% reported learning something new about tree planting and 100% said that they would recommend the program to others.

Volunteers were trained to plant trees for 8 elderly and disabled residents who are not physically able to plant trees on their own. .

During 2015's historically hot and dry summer drought, regular watering reminders were sent via email and postal mail to all past participants. Past participants were also offered workshops on proper structural pruning of young trees. A new addition in 2015 was a field evaluation of street trees planted since 2009. Collected data showed a 71% survival rate for our trees, which is on par with similar programs across the country. Overall, since 2009, Trees for Neighborhoods has helped residents plant over 6,300 trees across the city.



In 2015, results from the 2014 planting workshop effectiveness evaluation were incorporated into the Trees for Neighborhoods project through improving our workshops and providing direct, individual feedback on care practices to past participants during field evaluation data collection.

### **Seattle Green Business Program (formerly Resource Venture)**

To provide outreach to businesses, SPU funds the Seattle Green Business Program, a free resource conservation program for Seattle businesses, currently being implemented by Cascadia Consulting, under contract with SPU. Under this contract, the program provides site specific technical assistance to businesses, develops targeted outreach materials in multiple languages and implements SPU's Spill Kit Incentive Program, which provides spill kits and assistance in developing a spill plan to participating businesses. In 2015, SPU was part of a regional effort to expand the Envirostars brand to a regional, multi-media program. The program will launch in 2016-2017.

### **Spill Kit Program**

The Spill Kit Incentive Program provides free spill kits to Seattle businesses. The program also assists businesses in developing their spill plan and offers training to help employees understand how to deploy the kit during a spill. The program is currently part of the Seattle Green Business Program and is advertised during inspections and through mailings and green business program outreach visits. In 2015, over 250 spill kits were provided to Seattle businesses.



### **Car Wash Program**

In 2015 the Car Wash Program focused on educating high schools about strategies other than charity car washes for fundraisers. We created a postcard and worked with 6 area high schools to message around car washing. We also asked schools to inform their donors and other organizations that raise funds for the school, but are indirectly affiliated with the schools, to contact SPU for approval for car wash events so that locations can be vetted for drainage connectivity. We did not receive any reports of illicit car wash events in 2015.

In an effort to discourage car wash events in the MS4, SPU water quality inspectors handed out information to car wash fundraisers and host sites in locations when car wash events were discovered. In addition, businesses located in the MS4 that were reported for hosting car wash events are contacted, educated and informed that they should discontinue those activities.

### **STORM/Puget Sound Starts Here (PSSH)**

In 2015, the City continued to participate in STORM (Stormwater Outreach for Regional Municipalities) strategic planning and program activities. SPU supports STORM as an active member of the Core Team and participates in the North King County Stormwater Outreach Group (SOGgie). In 2015 SPU partnered with North King County SOGgie to publish an 8-page spread about general stormwater BMP's, including one full page dedicated car washing BMPs. SPU is a partner in the STORM grant for the Vehicle Leaks Campaign, which complements the City's grant for the Automotive Maintenance Program. SPU co-led planning for PSSH month including a major outreach effort with regional jurisdictions for a PSSH Chinook Book Mobile coupon distribution where respondents who received the Chinook Book coupons signed a Water Quality Protection pledge committing to practicing using the BMPs listed on the coupons, including: fall natural yard care tips, pet waste and car leaks BMPs, and Saving Water Partnership messages. As part of this regional effort, the City provided letters of support to regional partners pursuing GROSS grant funding, which in 2015 resulted in STORM receiving a grant to continue work on the Stormwater Curriculum (Drain Rangers) for classrooms and included needed curriculum extensions such as videos, teacher packets, illustrations, posters, etc., and additional teacher training and more piloting in the classrooms to inform existing and additional models. SPU staff also regularly shared examples of programs and materials with other municipalities (both Phase I and Phase II permittees) through STORM. The City continued to include the PSSH brand and website address on many related outreach materials. The Puget Sound Starts Here (PSSH) website focuses on stormwater BMPs for cars, pets, yard care and home cleaning. STORM and the PSSH campaign are appropriate BMPs because information is available and accessible for a wide general public audience.

## Water Quality Hotline

The City maintains a Water Quality Hotline to allow the public to report water quality concerns



within Seattle. Each case is investigated and issues are resolved using the City's source control procedures and progressive enforcement policy. This BMP provides a mechanism for the public to take an active role in stormwater pollution prevention and help the City increase awareness of activities that have negative impacts on stormwater. Outreach to the public includes magnets, bill inserts, business cards and creek-watershed newsletters.

Staff responds to water quality issues during business hours. For spills during non-business hours, callers are instructed to call the Operations Response Center to dispatch an on call Spill Responder. In 2015, the program logged approximately 350 water quality concerns. The majority of concerns are reported via the web page or through other means, rather than the hotline.

## Green Gardening Program

The Green Gardening Program educates nursery and landscape professionals and horticulture students on how to reduce their use of pesticides. The program promotes Best Management Practices (BMPs) for environmentally-sensitive landscaping practices, with an emphasis on Integrated Pest Management (IPM), as well as water conservation, landscape stormwater mitigation, and the recycling of organic materials, either on-site or via collection programs.

Two workshops were held in 2015, reaching 397 participants. The workshops serve private sector landscape professionals who generally work throughout Seattle and King County, as well as public sector landscapers, landscape business managers and owners, program managers, students, and educators. The first workshop: "Water Management Essentials for Landscape Professionals" focused on soil/water/plant relationships. It was held at South Seattle Community College on February 25th, reaching 142 participants. The second workshop: "Resilient Landscapes for Our Changing Urban Environment", was held at South Seattle Community College on October 21 and reached 255 participants.

On-site nursery staff trainings were also held in 2015. These training reached 122 nursery staff from 12 nurseries in King County. The training was titled "Easy-to-spot Plant Diseases."

Two trainings were offered to Spanish-speaking landscapers in Spanish: "Tree Biology and Care" and "Soil Best Practices." Both workshops were held at South Seattle College; one in conjunction with the Green Gardening Fall Workshop and one as a stand-alone training jointly marketed by the EnviroStars program. Thirty-two (32) Spanish-speaking landscape professionals attended the workshops.

In 2015, The Green Gardening Program interviewed Vietnamese landscapers to better understand their practices, needs, effectiveness of printed material, and the best outreach methods to reach Vietnamese landscape professionals. Two bilingual educational ads – "Natural Lawn Care Tips" and "Natural Yard Care Tips" – were published in a local Vietnamese newspaper in March, April, and June. In addition to the educational ads, an article on sustainable landscaping practices was published in March.

## **RainWise**

The RainWise program provides education to the general public, homeowners, landscapers and property managers about low impact development techniques, including site design, pervious paving, retention and expansion of existing vegetation, and installation of rain gardens and cisterns within City of Seattle MS4 areas. This program provides education and outreach on how to slow, spread, filter and infiltrate stormwater. In 2015, the program implemented the following educational/technical elements to raise awareness about Green Stormwater Infrastructure (GSI), including stormwater treatment and flow control:

- Posted rain garden designs, plant lists, maintenance guidelines, and other information and brochures on various GSI techniques on the SPU website ([www.seattle.gov/util/rainwise](http://www.seattle.gov/util/rainwise)), as well as handed out hard copies at events.
- Launched a new website, <http://www.700milliongallons.org/>, in partnership with King County that explains the City's goal to manage 700 million gallons of polluted runoff per year with green stormwater infrastructure (GSI) by 2025. It also educates property owners about GSI techniques they can use on their property and explains the RainWise rebate program.
- Held two RainWise training workshops for contractors. To date over 500 contractors have been trained, and 56 are represented as participating contractors.

## **Natural Landscaping Professional Development**

This program is a series of well attended professional workshops (and supporting guides and web content) which target the specified behaviors and practices in the permit (low impact development (LID) techniques: including sustainable site design, soil BMPs and retention of native vegetation, plant selection and maintenance options that reduce pesticide and fertilizer use, and Natural Drainage/LID strategies for on-site stormwater management, and stormwater treatment and flow control). These workshops target permit audiences including engineers, design professionals, landscape contractors (including non-English-speakers), developers, builders, permitting and inspection staff, and land use planners. The program is built on survey and focus group work with these professionals and customers. Professionals who attend the workshops incorporate LID techniques into their designs and pass on information to the homeowners, landscapers and property managers that they work with. Many participants fill out in-class evaluations and they identify (pledge) the actions they intend to take as a result of the training.

In 2015 the program conducted 26 training events, in collaboration with professional organizations and local governments, which were attended by a total of 1,240 professionals: landscape and building contractors, developers, landscape architects and designers, engineers, architects, inspection and permitting staff, and outreach trainers. While the funding comes from several sources, most training events focused on LID and Green Stormwater Infrastructure design, construction, and maintenance, IPM and other chemical-reduction maintenance practices, soil best practices, and construction site erosion and sediment control. Ninety-six percent of respondents to post-workshop surveys rated the workshops as good or excellent, and 81% said they would use the guidelines and techniques presented in the workshops in current or future projects.

In 2015 three foundational professional classes were developed in webinar format to make them

available for remote learning by professionals around the region.

2015 also brought progress in professional standards and certification. The national Sustainable Sites ([www.sustainablesites.org](http://www.sustainablesites.org) – the site and landscape equivalent of the LEED green building standards) started certifying projects, and began developing a professional training and credentialing program. And Washington’s ecoPRO Sustainable Landscape Professional ([www.walp.org/ecopro](http://www.walp.org/ecopro)) entered its third year with a complete training curriculum and certification for landscape installation and maintenance professionals. SPU is a founding and technical advisory member of both those programs, which are shaped by concepts, BMPs, and training materials developed here; refer to [www.seattle.gov/util/landscapeprofessionals](http://www.seattle.gov/util/landscapeprofessionals).

### **For More Information:**

- For more information on Protect Our Waters visit: <http://www.seattle.gov/protectourwaters>
- For more information on the Do Diligence Pet Waste Program visit: <http://www.seattle.gov/util/EnvironmentConservation/MyHome/PreventPollution/PetWaste/index.htm>
- For more information on the Auto Maintenance Program visit: <http://www.seattle.gov/util/EnvironmentConservation/OurWatersheds/ProtectOurWaters/PreventPollution/AutoLeaks/index.htm>
- For more information on the Water Quality hotline visit: <http://www.seattle.gov/util/myservices/drainagesewer/pollutioncontrol/surfacewaterqualityinvestigations/>
- For more information on the Green Gardening program visit: <http://www.seattle.gov/util/ForBusinesses/Landscapes/TrainingCertification/GreenGardeningProgram/index.htm>
- For more information on the Natural Soil Building program visit: <http://www.seattle.gov/util/EnvironmentConservation/MyLawnGarden/CompostSoil/index.htm>
- For more information on reLeaf visit: <http://www.seattle.gov/trees/>
- For more information on RainWise visit: <http://www.700milliongallons.org/> or [www.seattle.gov/util/rainwise](http://www.seattle.gov/util/rainwise)
- For more information on Natural Landscape Professional Development visit: [www.seattle.gov/util/landscapeprofessionals](http://www.seattle.gov/util/landscapeprofessionals)
- For more information on the Green Business Program, a free resource conservation program for Seattle businesses, visit <http://www.seattle.gov/util/ForBusinesses/GreenYourBusiness/index.htm>
- For general questions about this SWMP or more information about this section, email [swmp@seattle.gov](mailto:swmp@seattle.gov) or visit <http://www.seattle.gov/util/myservices/drainagesewer/aboutthedrainagesewersystem/stormwatermanagementplan/>