

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

This program educates the general public as well as youth and school-age children 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.

Seattle Public Utilities (SPU) has partnered with Seattle Public Schools (SPS) to identify 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 (5th grade) and middle school (6th 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 2017 the 1,430 elementary students participated in the Land and Water science unit and a focused investigation at either Longfellow, Piper's, Taylor or Thornton Creek. In addition, 1,745 students and 315 adults attended urban watershed fieldtrips related to Salmon in the Schools at Seattle Creeks. Several years of teacher surveys have indicated that participating teachers see increases in student understanding of the impacts of stormwater and impervious surfaces. Sixty-nine teachers attended professional development related to integrating stormwater lessons into their classroom curriculum.

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 2017, programs for the general public included direct education, social marketing, partnerships, inclusive engagement and personal stewardship strategies to promote behavior change and understanding about water quality and watershed health. 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 Stewards, and collaborated with regional Tribes to produce Salmon Homecoming reaching over 1000 students.

In addition, SPU supported GSI programs for the public including bi-monthly meetings of the Green Infrastructure Partnership (GrIP) (a collaborative green stormwater infrastructure forum) and partnered to implement the annual Green Infrastructure Summit. (Also, see RainWise Program section)

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

In 2017, 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 to encourage ongoing maintenance best practices. When available, each kit included two free car wash coupons and 10% off car repair coupon to reduce financial barriers to auto-related behavior change. In 2017, 126 vehicle owners participated in 13 auto leaks workshops offered to the public. To increase workshop participation and raise awareness, SPU continued to partner with King County, Futurewise, the Washington Department of Ecology, the City of Burien, and other community-based agencies/institutions in the region. In 2017, this broader regional effort, known as Don't Drip & Drive – a multi-year, multi-strategy behavior change campaign grant funded by the Washington Department of Ecology – with financial matching from SPU and other listed partners – implemented an array of outreach and education activities, as well as ongoing planning and regional coordination. Specific activities performed include targeted community outreach in Spanish and English, key automotive behavior surveying at local events, recruitment of 21 Seattle-based auto mechanics willing to offer free leak inspections and 10% off car repair, establishment of partnership with all Puget Sound area AAA auto shops, and updates to the dedicated auto leak prevention website [www.fixcarleaks.org](http://www.fixcarleaks.org). Key regional outcomes from Phase III of the Don't Drip and Drive campaign, completed in 2017, include the following: 35,440 vehicle owners reached, 10,724 vehicles with leaks detected, 5,968 leaking vehicles repaired, 71,000 unique visitors to the campaign website with an average length of 2 minutes, and more than 3,000 visitors to the Spanish language site. Online advertising impressions were estimated at 28,071,801 in English and 447,000 in Spanish.



### **Car Wash Program**

In 2017, the Car Wash Program focused on incentivizing desired car wash behavior in partnership with the Puget Sound Car Wash Association (PSCWA). Free regional car washing coupons were distributed at public events in targeted neighborhoods as well as within Vehicle Maintenance Kits associated with SPU's Automotive Maintenance Program. Approximately 400 Puget Sound Car Wash Association carwash coupons were distributed to local residents through these specific efforts. In addition, students were educated about car washing best practices – regarding family vehicles, as well as alternatives to fundraising car washes – by way of a Seattle Times 8-page Sunday insert. The Seattle Times estimates (based on previous campaigns) this insert was received by 1.1 million online readers, 287,780 print

copies were distributed, and that 829 educators along with 38,015 students were reached at 481 locations regionally. Because the Seattle Times support for this two-year campaign ended abruptly after completing the 2017 insert, there was no ability to collect 2017 distribution data. Therefore, 2016 data is presented to indicate the reach of this campaign. Further, as a result of the Water Quality Protection Pledge program (listed in the “STORM/PSSH” section of this document), 166 individual Seattle residents were asked to make a specific pledge to either take their car to a commercial car wash or wash their car on a lawn. Through the same program, 768 previous pledge participants were asked to report on their car washing behaviors as result of an earlier pledge. Those 934 participants (166 residents and 768 pledge participants) also received a mobile Chinook Book app which includes access to 18 individual discounted or free car washing coupons. Analysis of car washing behaviors continued as a pre-survey item for applicants of SPU’s free Auto Leaks Workshops. The Environment & Conservation section of SPU’s public-facing website also includes an educational page on car washing BMP’s as well as alternative suggestions to charity car washes.

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

In 2017, 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 Steering Committee (formerly Core Team) and participates in the Central Sound Stormwater Outreach Group (SOGgie). In 2017, SPU partnered with North King County SOGgie to publish an 8-page Seattle Times Sunday spread about automotive and car washing BMP’s, specifically as they relate to salmon ecology. This effort was also distributed and directed, along with attendant curriculum, via the Seattle Times’ Newspapers in Education program, to 175 participating Seattle Schools. SPU is a partner in the STORM grant for the Vehicle Leaks Campaign, Don’t Drip & Drive, which complements the City’s Automotive Maintenance Program (as discussed in “AMP” section). SPU co-lead planning for PSSH month including a major outreach effort with regional jurisdictions at Safeco Field. 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 and co-leads and manages the popular PSSH Facebook page which focuses on stormwater BMPs for cars, pets, yard care and home cleaning. That audience included 1,788 Seattle residents. STORM and the PSSH campaign are appropriate BMP vehicles considering that information is available and accessible for a wide general public audience. In 2017, SPU also participated in planning for a comprehensive update to the PSSH website, a wide-ranging resource for regional and Seattle residents interested in combating the effects of stormwater pollution on their local waterways.

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

The Doo Diligence Pet Waste Program is a city-wide outreach program that promotes Best Management Practices (BMP’s) and educates the general public about the impacts of pet waste on water quality. In 2017 the program’s community outreach created new partnerships with 16 pet stores, 4 animal clinics and 8 apartment building managers, distributed 174,300 mutt-mitt baggies, increased the number of pet waste dispenser location sites to 83 and distributed 1,500 pet waste brochures. A city-wide map of dispenser locations was up-dated and posted on the web page. The program continues it’s strong partnerships with Seattle Animal Control, Seattle Parks, Neighborhood Community Groups, Apartment Building Managers, King County, Pet Stores and Animal Clinics.

### **Trees for Seattle (previously Seattle reLeaf)**

Trees for Seattle is a citywide interdepartmental program that focuses on increasing and maintaining healthy tree cover. Trees for Seattle has four focus areas: Tree Ambassador volunteer work, Trees for

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Neighborhoods tree planting, public communications, and interdepartmental and community partnerships. Trees for Seattle 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 2017, Trees for Seattle engaged 1,987 people through our events. We supported 1,625 volunteer hours, increased our monthly e-newsletter distribution from 1,800 to 2,600 people, engaged 647 people through social media, and answered 353 technical support inquiries via phone and email.



Trees for Seattle’s Tree Ambassador work engages Seattle residents in urban forestry. Tree Ambassador volunteers lead community events in their neighborhoods, including small-scale landscape renewal projects and public tours of neighborhood trees. In 2017, Trees for Seattle trained 25 new lead Tree Ambassadors and engaged 753 people in events. 2017 events included 15 Tree Walks and 30 community work parties.

The Trees for Neighborhoods project builds a healthier, greener Seattle by engaging residents in planting trees on private residential property. In October and November 2017, residents planted 1,014 trees at 478 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—78% reported learning something new about tree planting and 100% said that they would recommend us to others. Volunteers planted 17 trees for 9 elderly and disabled residents not physically able to plant trees on their own. Regular watering reminders were sent via email and postal mail to all past participants during the dry summer months to increase tree survival. Past participants were also offered workshops on proper structural pruning of young trees. In 2017, field crews surveyed all 679 street trees planted by program participants in 2014, 2015, and 2016. Collected data showed a 96% survival rate for 2014 trees, a 92% survival rate for 2015 trees, and a 94% survival rate for 2016 trees. The field crew provided each surveyed household feedback on their tree care practices, leaving each resident a tree health report with individualized notes and care



instructions. Overall, since 2009, Trees for Neighborhoods has helped residents plant over 8,300 trees across the city.

In 2017, we continued to incorporate results from the 2014 planting workshop effectiveness evaluation into the Trees for Neighborhoods project through our workshops, watering and care email reminders, and providing direct, individualized feedback on care practices to past participants during field evaluation data collection.

### **Green Gardening Program**

The Green Gardening Program has educated landscape professionals on 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.

In 2017, the Local Hazardous Waste Management Program in King County, which funded the Green Gardening program, decided to terminate funding by the end of the year. SPU used 2017 available funding to conduct a “Gap Analysis” with the many professional, educational, and community partner organizations, regarding gaps that would be left by ending the Green Gardening Program, and opportunities for the partners, including SPU, to leverage resources to address some of those gaps. The information gathered showed that the Green Gardening Program has prepared the professional organization partners to fill some of the training gaps, but resources are still needed especially in the areas of Spanish and other-language training, and low-cost training opportunities. SPU will continue to address some of these gaps through its own Natural Landscaping Professional Development program, and by collaborating and providing key professional education resources on its website for the partner organizations.

### **RainWise**

The RainWise program provides education to the general public, homeowners, landscapers and property managers about low impact development techniques, with a focus on the installation of rain gardens and cisterns. In 2017, 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 City of Seattle and King County’s website, <http://www.700milliongallons.org/>. This website 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 65 individual contractors have been trained, and more than 64 businesses are participating contractors in the RainWise rebate program.



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- In partnership with King County, hosted or participated in more than 55 events, reaching more than 1650 people, across Seattle to share information on stormwater issues and management techniques.

### **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 on RainWise techniques (LID and GSI) for the general public, residents, property owners and landscape professionals. In 2017, 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, two in fall for diverse P-Patch Program volunteers in SE Seattle, and one for Just Garden low-income gardeners. The newly trained volunteers joined the existing volunteer cadre in completing 1,245 hours of outreach and making 8,827 customer contacts on Natural Yard Care and RainWise at community events, demonstrations, and classes around Seattle.



*Garden Hotline staff – school waste-reduction game.*

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 7,955 public requests for information on Integrated Pest Management (IPM), plant selection, soil building, RainWise, and other resource conservation issues. 73% percent of the Garden Hotline contacts were with residents within the City of Seattle, and 27% in King County outside Seattle.

Besides phone and email contacts, the Hotline conducted 142 classes and outreach events, with 58% 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. In an October 2017 survey of Hotline customers, 88% said that the information provided by the Garden Hotline helped them to change their yard and garden practices.

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

To provide outreach to businesses, SPU funds the Seattle Green Business Program, a free resource conservation referral and assistance program for Seattle businesses. 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 2017, SPU contributed to the launch of a regional green business program that expands the Envirostars brand beyond small quantity hazardous waste to include stormwater quality along with other green business priorities. In addition to Envirostars, Seattle continues to provide targeted stormwater outreach to Seattle businesses with high

pollution potential. Over 220 spill kits were distributed to businesses that also received on-site technical assistance with spill containment.

### **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.

In 2017 the program conducted 22 training events, in collaboration with professional organizations and local governments, which were attended by a total of 980 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. In 2016 one English and two Spanish-language professional classes were developed in webinar format to make them available for remote learning by professionals around the region.

2017 also brought progress in professional standards and certification. The national Sustainable Sites standards which we helped develop ([www.sustainablesites.org](http://www.sustainablesites.org) – the site and landscape equivalent of the LEED green building standards) added a number of new projects around the US and expanded its professional training and credentialing program. Washington’s ecoPRO Sustainable Landscape Professional (<https://ecoprocertified.org>) entered its fifth year with two more week-long trainings 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).