

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.

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 2016, the Ecology GROSS grant-funded *Lost and (Puget) Sound* video and lessons were distributed to approximately 64 science classes in 11 Seattle Middle Schools. At the Elementary level, more than 750 students from Seattle Public Schools participated in the field trip extension to the Land and Water unit at either Longfellow, Piper's, Taylor or Thornton Creek. In addition, 1300 students attended urban watershed fieldtrips related to Salmon in the Schools at Piper's Creek. Several years of teacher surveys have indicated that participating teachers 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 2016, 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 2016, 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 both a free car wash coupon and 10% off car repair coupon to reduce financial barriers to auto-related behavior change. In 2016, 70 people participated in the 11 auto leaks workshops offered to the public.

To increase workshop participation and raise awareness, SPU continued to partner with King County, Pierce County, the Washington Department of Ecology, the City of Burien, and other community-based agencies/institutions in the region. In 2016, this broader regional effort, known as Don't Drip & Drive – a multi-year, multi-strategy behavior change campaign funded by the Washington Department of Ecology – 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 in the following year, establishment of partnership with all Puget Sound area AAA auto shops, and updates to the dedicated auto leak prevention website www.fixcarleaks.org.



Car Wash Program

In 2016, 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 personal and family vehicles, as well as alternatives to fundraising car washes – by way of a Seattle Times 8-page Sunday insert. The Seattle Times estimates 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. Further, as a result of the Water Quality Protection Pledge program (listed in the "STORM/PSSH" section of this document), 1,752 individual Seattle residents made a specific pledge to either take their car to a commercial car wash or wash their car on a lawn. Through that same program, 383 PSCWA 50% off car washing coupons were directly mailed to those individuals who participated in the pledge program, and 1,499 pledge participants received a mobile Chinook Book app including access

to 18 individual discounted or free car washing coupons. Analysis of and planning for a survey to assess car washing behaviors in partnership with local community-based organizations was initiated. 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 2016, 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 North King County Stormwater Outreach Group (SOGgie). In 2016, SPU partnered with North King County SOGgie to publish an 8-page Seattle Times Sunday spread about multiple stormwater 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-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. This effort continued in 2016. 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 BMP vehicles considering that information is available and accessible for a wide general public audience. In 2016, SPU also participated in planning for a comprehensive update to the PSSH website, a wide-ranging resource for 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 effort that educates the general public about the impacts of pet waste on water quality. In 2016, the program's outreach created new partnerships with 12 apartment building managers, 7 animal clinics, and 10 pet stores. Strategies in 2016 included the following: increase the number of pet waste dispenser locations and the distribution of educational materials that promote community stewardship and BMP's.

The Doo Diligence Program maintains 75 pet waste mutt-mitt dispenser locations in targeted areas in Seattle. In 2016, 139,800 mutt-mitt baggies were used by Seattle dog owners and more than 1,000 brochures distributed to the general public.

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 three focus areas: Tree Ambassador volunteer

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work, Trees for Neighborhoods tree planting, and public communications. 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 2016, Trees for Seattle engaged 2,424 people through our events. We supported 2,800 volunteer hours, increased our monthly e-newsletter distribution to 1,800 people (a 66% increase from 2015), added 109 followers to our Facebook social media page (a 29% increase), and answered 397 technical support inquiries via phone and email. We also engaged in a rebranding process in conjunction with all other urban forestry groups within the City of Seattle, now becoming collectively known as Trees for Seattle.

Trees for Seattle'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 2016 Trees for Seattle trained 38 new Tree Ambassadors. 2016 events included 16 Tree Walks and 36 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 2016, residents planted 1,015 trees at 470 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—84% reported learning something new about tree planting and 100% said that they would



recommend us to others. Volunteers planted 46 trees for 18 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 2016, field crews surveyed all 428 street trees planted by program participants in 2014 and 2015. Collected data showed a 94% survival rate and that 91% of living trees were in good or fair condition. The field crew provided each surveyed feedback on their tree care practices, leaving each household a tree health report with individualized notes and care instructions. Overall, since 2009, Trees for Neighborhoods has helped residents plant over 7,300 trees across the city.

In 2016, we continued to incorporate results from the 2014 planting workshop effectiveness evaluation into the Trees for Neighborhoods project through improving our workshops, increasing the number of 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.

One main workshop was held in 2016, reaching 217 participants. The workshop served 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 workshop: “The Case for Sustainable Landscapes” was held at South Seattle Community College on October 19th. Morning presentation topics included urban population growth and stormwater management, stormwater education and conservation strategies, transitioning to sustainable lawn care, improving water quality, and using adaptive permaculture practices. New in 2016, the morning session included simultaneous interpretation into Spanish. All eight Spanish-speaking participants in the morning session found the interpretation to be very or extremely useful. Afternoon breakout sessions focused on irrigation technologies, integrated pest management, benefits to urban trees in stormwater runoff, and identification and control of insects (conducted in Spanish).

In addition to the training offered to Spanish-speaking landscapers on October 19th, a second workshop was conducted in Spanish on November 2nd: “Sustainable Landscaping Practices and Tools.”. 16 Spanish-speaking landscape professionals attended the Spanish workshops in 2016.

In addition to the workshops, the Green Gardening Program distributed quarterly email newsletters to landscape professionals in 2016 that included season-specific topics, links to articles and relevant policy information, and a calendar of upcoming sustainable landscape continuing education opportunities (including those through the Green Gardening Program). The e-newsletters delivered useful information beyond what the Green Gardening workshops and trainings provided. Featured topics included irrigation rebates, education on natural lawn care, successful irrigation startup, green stormwater infrastructure, and tips for planting and mulching.

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 2016, 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 600 individual contractors have been trained, and more than 60 businesses are participating contractors in the RainWise rebate program.
- In partnership with King County, hosted or participated in more than 55 events, reaching more than 1600 people, across Seattle to share information on stormwater issues and management techniques and to increase participation in the RainWise rebate program.



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 2016, 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 late summer for multi-ethnic at-risk youth in collaboration with Seattle Youth Garden Works, and two in fall for diverse P-Patch Program volunteers in SE Seattle, and Spanish-speaking residents through Christ the King church in NE Seattle. The newly trained volunteers joined the existing volunteer cadre in completing 1,091 hours of outreach and making 8,558 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 7,369 public requests for information on Integrated Pest



Management (IPM), plant selection, soil building, RainWise, and other resource conservation issues. 72% percent of the Garden Hotline contacts were with residents within the City of Seattle, and 28% in King County outside Seattle.

Besides phone and email contacts, the Hotline conducted 115 classes and outreach events, with 55% 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 the October 2016 survey of Hotline customers, 89% 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 2016, SPU completed a multi-agency agreement to form a regional green business program that will expand the Enviostars brand that has historically focused on small quantity hazardous waste to include stormwater quality along with other green business priorities. Program development is proceeding with program launch expected in 2017.

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 2016 the program conducted 17 training events, in collaboration with professional organizations and local governments, which were attended by a total of 620 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.

2016 also brought progress in professional standards and certification. The national Sustainable Sites standards which we helped develop (www.sustainablesites.org – the site and landscape equivalent of the LEED green building standards) certified its first post-pilot projects, and launched a professional training and credentialing program. And Washington’s ecoPRO Sustainable Landscape Professional (<https://ecoprocertified.org>) entered its fourth 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 .

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/GrowingHealthySoil/index.htm>
- For more information on reLeaf (Tree for Seattle) visit: <http://www.seattle.gov/trees/>
- For more information on RainWise visit: <http://www.700milliongallons.org/>
- For more information on Natural Landscape Professional Development visit: 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 or visit <http://www.seattle.gov/util/myservices/drainagesewer/aboutthedrainagesewersystem/stormwatermanagementplan/>