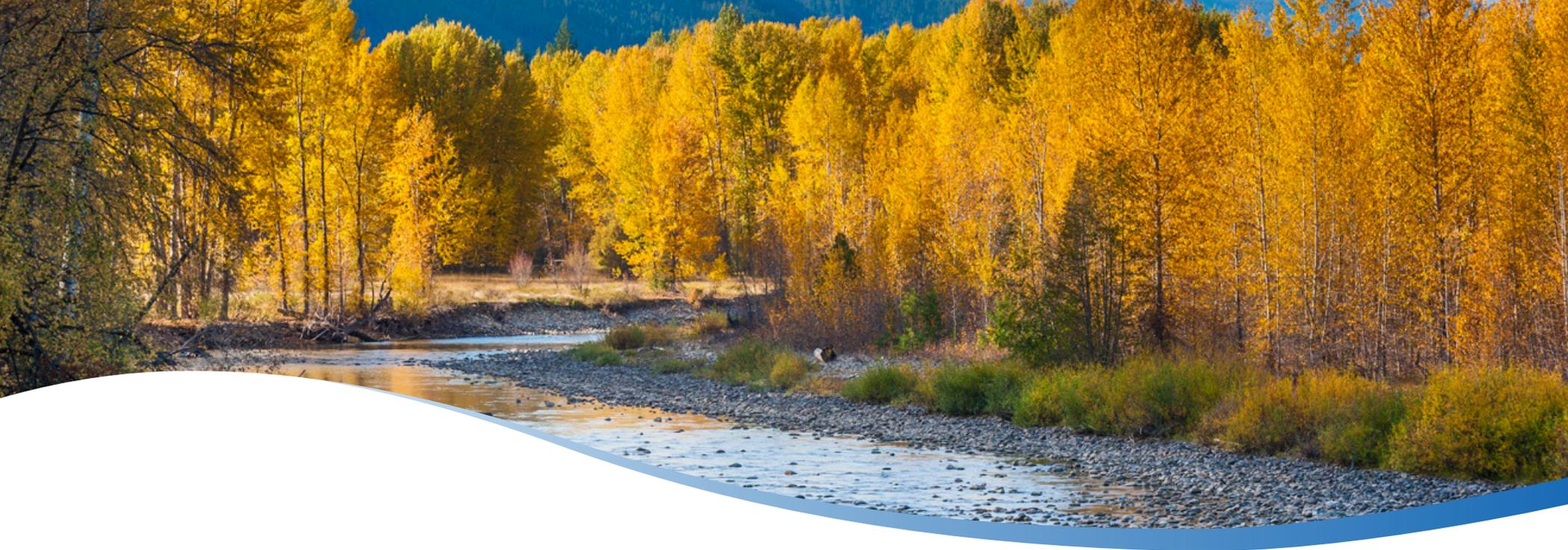




Cascade Water Efficiency Program 2018 Annual Report

Cascade provides safe, clean and reliable water to members in a cost-effective and environmentally responsible manner.



Summary

The 2018 Cascade Water Efficiency Program (program) saves approximately 70 million gallons of water, 12.4 million kilowatt hours of energy, and 5 million pounds of avoided greenhouse gas emissions per year. These savings are equivalent to providing all the indoor water needs for more than 900 families and removing more than 400 cars from the road. The program benefits thousands of residents, businesses, schools, and public agencies through a variety of education and outreach activities, training, and replacement of old fixtures and equipment. The program promotes Cascade as a leader in resource management, and it provides the requisite water efficiency measures and savings goal Cascade members need to meet their state-mandated water use efficiency requirements. Cascade employs 1.5 full-time employees to manage the program, and total expenses in 2018 were \$484,258 including materials, services, and salaries.

PROGRAM AT A GLANCE...

Community Engagement

- 468 Classroom Presentations | 12,256 Students Reached
- 8 Teacher Fellows | 3,900 Student Impacts
- 15 Community Events | 10,000 Customer Interactions
- 25 Cascade Gardener Classes | 694 Cascade Gardener Attendees
- 202 Garden Hotline Calls
- 3 Water Smart Trainings | 75 Water Smart Attendees
- 4 Sustainable Landscaping Courses
- 4 King County Housing Staff Irrigation Trainings
- 23 King County Housing Staff Irrigation Training Attendees
- 7 Soil and Water Stewardship Training Events

Savings Generating Measures (Direct Installations, Rebates, Distribution)	Completed
Residential Clothes Washers	1,549
Residential Showerheads	7,758
Residential Aerators	4,136
Residential Leak Detection	759
Multifamily Showerheads	750
Multifamily Kitchen Aerators	33
Multifamily Bathroom Aerators	235
Commercial Aerators	137
Commercial Showerheads	136
PreRinse Spray Valves	1
Web Page Orders	667
Event-Distributed Conservation Items	10,499
Member-Provided Items	4,396





193,228
TOTAL GALLONS
PER DAY
SAVED



Relationship to Long-Term Objectives

The water efficiency program serves Cascade’s mission by lowering regional water demand so that Cascade may delay or defer development of the White River / Lake Tapps Project or other sources of water supply. By utilizing existing water supplies more efficiently, Cascade will save millions of dollars for its members and their ratepayers, leave more water in streams for fish, and reduce the region’s carbon footprint through decreased energy usage involved in the treatment, transmission, and heating of drinking water.



Continued Partnerships

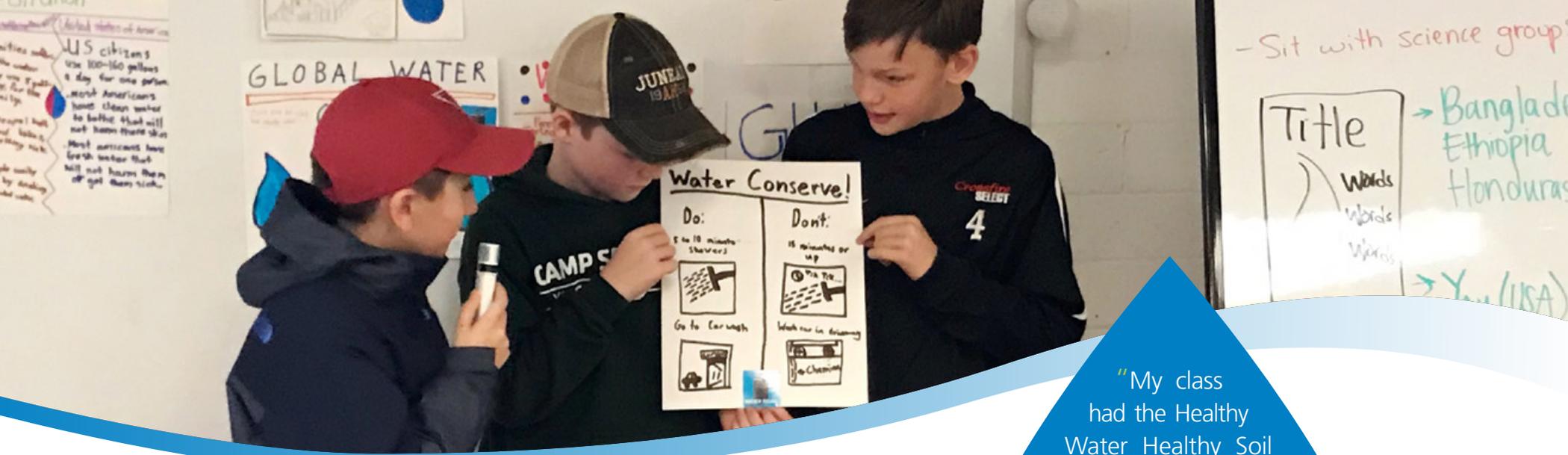
Cascade continues to grow and sustain partnerships in the region to leverage resources and promote the importance of reliable, clean, drinking water. In 2018, Cascade collaborated with many entities including Lake Washington Institute of Technology, US Environmental Protection Agency, Bellevue School District, Lake Washington School District, Puget Sound Energy, Sustainability Ambassadors, Tilth Alliance, and King County Housing Authority.



Savings Goal

Cascade’s water efficiency savings goal is a cumulative savings of 0.6 million gallons (mg) per day on an average annual basis and 1.0 mg per day on an average peak season basis for the period 2014 - 19. In 2018, Cascade achieved a savings of 193,228 gallons per day or about 32% of its six-year savings goal. Along with savings from 2014–17, Cascade has achieved approximately 146% of its annual goal and 92% of its peak season goal.





Youth Education

Cascade provided 468 water education programs for 12,256 students at schools within all Cascade member service areas. Cascade offers fifteen programs designed to help schools meet Washington Science, Technology, Engineering, and Mathematics (STEM) requirements and Next Gen standards. All programs discuss water efficiency concepts and include an explanation of Cascade and its members. Program evaluations provided by teachers are very positive; many schools register for programs months in advance.



The Global Water Crisis

Cascade added **The Global Water Crisis** to its suite of programs. This addition allows students to link the problems resulting from the lack of clean drinking water in Bangladesh and Honduras with the opportunity to communicate directly with educators and students in those countries. More than 600 students participated in The Global Water Crisis program last year.

“My class had the Healthy Water Healthy Soil presentation at Campbell Hill Elementary and they loved it!!!! The hands-on aspect was really fun for each of them, and they **ALL** participated. We would definitely try... this program again in the future!”

– **Ashley Rodriguez, Teacher**

Campbell Hill Elementary
Skyway Water & Sewer District



Community Gardens

Cascade's partnership with Tilth Alliance includes community workshops on rainwater harvesting, drip irrigation, and other topics to help residents use water wisely. Residents construct community gardens and maintain pea patches with the support of Tilth Alliance and Cascade.

Garden Hotline

Cascade supports the regional Garden Hotline, a service provided by Tilth Alliance, Seattle Public Utilities, and others. Residents can call the Garden Hotline Monday through Saturday and receive expert advice on sustainable gardening techniques and conserving water in their landscapes. In 2018, 202 residents in Cascade member areas utilized this service. The Garden Hotline also promotes Cascade Gardener events.

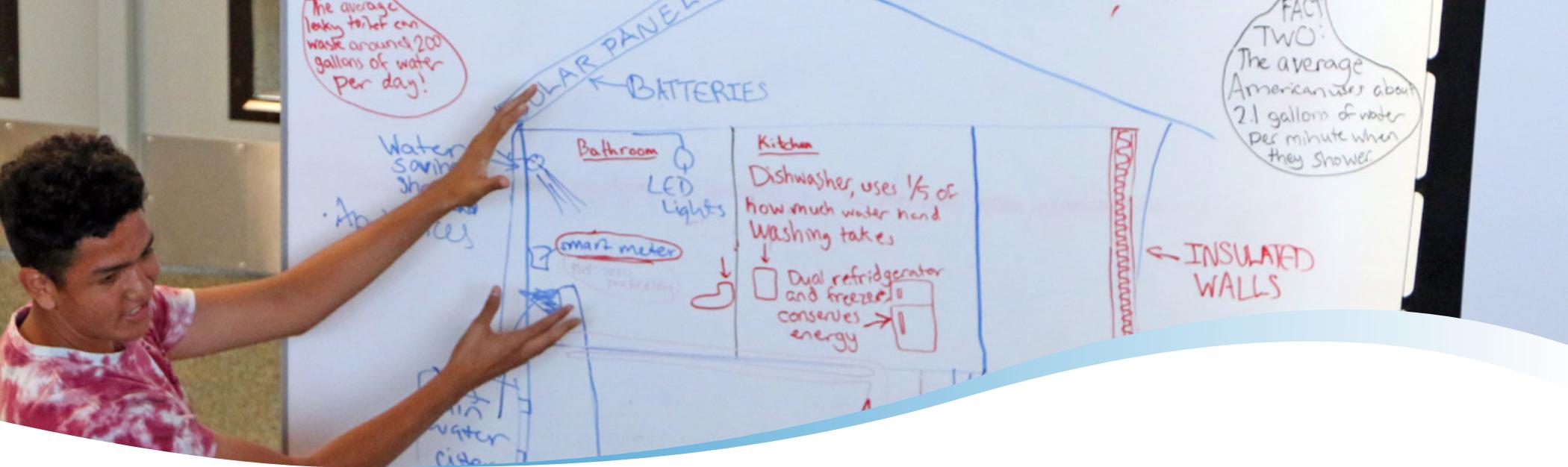
Volunteer Spotlight

In 2016, Anita Waghani attended a Cascade-sponsored WaterSmart workshop and was inspired by what she learned.

Anita became a Soil and Water Stewardship volunteer, where she helped install drip irrigation in community gardens such as the Hopelink food bank garden in Bellevue. She later installed a demonstration rainwater collection system at McAuliffe Park in Kirkland.

In 2018, Anita became an intern with Tilth Alliance and was recently hired as the garden coordinator for the McAuliffe Park learning garden. Now she works with community members to grow food organically and demonstrates water conservation through drip irrigation, mulching, soil building, and proper plant choices. Anita is a natural community builder, lifelong learner, and dedicated to sharing what she learns with others.





Teacher Fellows

The Teacher Fellows program recruits master teachers from Bellevue, Issaquah, and Lake Washington school districts to design water-based learning experiences for their students. Teachers are supported by Cascade through a stipend and through materials and resources relating to human and natural resources. This program allows Cascade to target its resources to have a broader and more lasting impact within school districts.

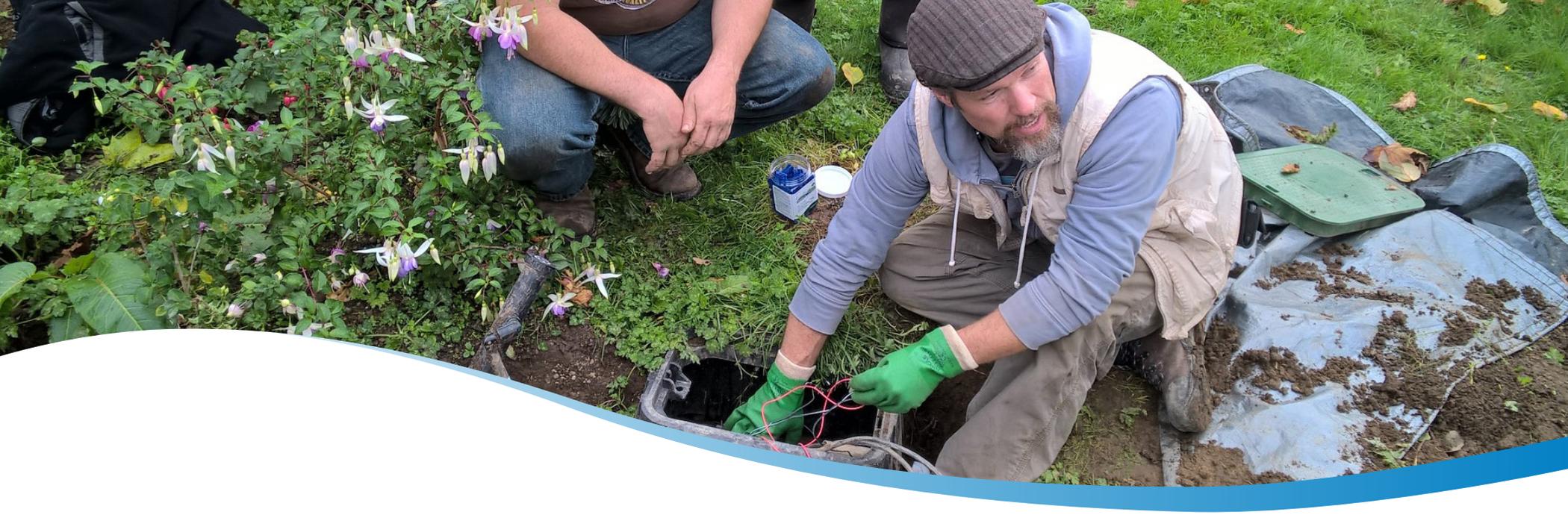
Cascade supported eight Teacher Fellows in 2018 who taught and promoted water-based social studies and science units. Those fellows engaged with 41 peers who impacted 3,900 students in 16 schools in Cascade member areas.

The studies included the global water crisis, wastewater engineering, and surface water management. The program challenges students to take action to improve the conditions of their local environment such as replacing old showerheads, checking their cars for oil leaks, and monitoring their neighborhoods for pet waste.



“The support provided through the fellows program has enabled me to move my curriculum outside the four walls of the classroom... This has a profound impact on my students. They can see the big picture of how the world works around them, become aware of the impacts of their actions, and gain the agency to make a difference... This kind of teaching empowers students, who then educate their families, such that the entire community becomes the benefactor of student learning.”

– Jeff Burgard, Teacher Fellow, 8th Grade, Issaquah School District



Sustainable Landscape Technologies

Lake Washington Institute of Technology (LW Tech) and Cascade have worked together for years to promote water efficiency and sustainability in the study of horticulture. The partnership culminated in the creation of the Irrigation Learning Lab in 2015. The Learning Lab serves as a hands-on training tool for students to learn the fundamentals of smart irrigation and green landscaping techniques. The Learning Lab is a regional asset that is used not only for LW Tech programs, but also by other landscape and irrigation professionals in the area.

In partnership with Cascade, LW Tech developed the first landscape and horticulture course series in the country with sustainability and water conservation as core objectives. The **Sustainable Landscape Technologies** course series has the following goals:

- Educate students interested in a career in sustainable landscape management;
- Target vocational updates for individuals already in the industry;
- Support the needs of the industries (landscape, irrigation, horticulture) with a qualified workforce;
- Provide a professional certificate program; and
- Prepare students and professionals to attain certifications such as IA, ecoPRO, CPH, LIC, and PLANET.

Four courses in the Sustainable Landscape Technologies series were offered in 2018. Staff from Cascade members attended at no charge to members.

Community Events

Cascade participated in fifteen community events and festivals in 2018 to promote the value of water and show conservation actions. All members were represented, and Cascade engaged with approximately 10,000 residents. Staff distributed more than 10,000 conservation items and answered questions about water supply and water efficiency. Cascade participated in the follow events or locations:

- Northwest Flower and Garden Show
- Earth Day at Ericsson
- Tukwila Backyard Wildlife
- Bellevue Strawberry Festival
- Bellevue Farmer's Market
- Lake Washington Institute of Technology
- Skyway Health and Safety Fair
- Issaquah Salmon Days
- Kirkland Farmer's Market
- Redmond Derby Days
- Sammamish Days
- Redmond Town Center
- Crossroads Mall
- Redmond Lights



We Need Water Because...

Cascade's public education campaign challenged residents to consider the value of water by completing the sentence, "We need water because..." The program includes a portable, modular chalkboard and handheld blackboard signs in seven languages prominent in Cascade's member service areas (Chinese, Spanish, Russian, Vietnamese, Hindi, Korean and English) for residents to share their responses, as well as a branded photo backdrop and photobooth props. The digital campaign included a revamped campaign website (in English and Spanish), campaign social media channels (Facebook, Instagram and Twitter), and digital campaign promotion on Facebook and Instagram.

The campaign provided a unique way to engage with people on the importance of water and demonstrated Cascade's leadership in resource conservation. Residents provided creative and insightful responses during events and online, leading to in-personal and digital discussions about water's critical role in our lives and the region.

Digital Campaign Impact:



Reach: 296,316

Reach = The number of unique users who have seen the ads at least once

Impressions: 921,749

Impressions = The number of times ads were seen or served to FB users (can be served more than once to the same FB user)

Link Clicks: 9,110

Number of unique clicks through to the WNWB website

Engagement: 455 (FB), 3160 (Instagram)

Engagement = Likes, comments, shares, clicks

Video Views (Spanish + English): 68,940





Fix-A-Leak Week

In March, Cascade supports US EPA's annual Fix A Leak Week, which encourages people to find and fix leaks in their homes, schools, and businesses. During that week, Cascade produced and ran newspaper ads in local newspapers promoting the Fix A Leak Week mission of helping people save water.

Irrigation Training

Cascade worked with the King County Housing Authority and the Bellevue School District to provide irrigation training for staff, perform irrigation system assessments, and help with landscape planning and development of policies relating to landscape and irrigation management.



Cascade Gardener

This program uses expert instructors to teach gardeners how to have beautiful landscapes without excessive water and chemicals inputs. Cascade provided 25 classes for approximately 700 residents at venues in all member areas.

Partner Highlight

Cascade has worked with the Bellevue School District (BSD) for several years providing irrigation assessments and staff training. In 2018 BSD implemented many of the recommendations Cascade provided in a series of reports and stepped up its efforts to eliminate wasteful watering practices. As a result, BSD reported a reduction of 5.3 million gallons of water used to irrigate its grounds and sports fields and a monetary savings of \$63,250 compared to the previous year.

"Bellevue School District's partnership with Cascade Water Alliance has been exceptional, and we continue to appreciate their expertise and guidance tied to strategies for water cost reductions for our irrigation systems."

– Nancy Larson, Facilities Director, Bellevue School District



WaterSense Initiatives

Cascade continues its partnership with Puget Sound Energy to provide point-of-purchase rebates for EnergyStar certified residential clothes washers and WaterSense labeled showerheads.

Puget Sound Energy provides the administration of these programs with Cascade sharing in only the direct rebate costs making these measures very cost-effective. Cascade cost-shared in 1,549 clothes washer rebates, 7,595 showerhead rebates, and 3,520 faucet rebates to customers in 2018.

Irrigation Assessments

Cascade provided several irrigation assessments for communities like South Cove and Lakemont and the Lake Washington School District. The assessments provide a detailed audit of the functionality and efficiency of irrigation systems, as well as plant and soil health. Assessments sometimes reveal opportunities for significant water and monetary savings and Cascade remains engaged with property managers to help them affect change to the landscape and irrigation.

Multifamily and Small Business Retrofits

Cascade partners with Puget Sound Energy to provide direct installation of showerheads and faucet aerators in apartment complexes at no charge to the tenant or property owner. In 2018, Cascade cost-shared in the installation of 805 high-efficiency showerheads and aerators in apartments and condominiums in member areas, as well as 274 showerheads, aerators, and commercial kitchen spray heads in small businesses.

Website Ordering

Cascade offers free water efficiency items, such as showerheads, shower timers, and rain gauges, to homeowners in its member service areas through its website. The online ordering process is easy, and the items are shipped to the customer's door. Cascade provided 4,665 items to residents, apartment complexes, and Cascade members for distribution to customers.



Moving Ahead

In 2018 Cascade revised its Transmission and Supply Plan and water savings goal. The new goal continues Cascade's current level of water conservation activities and funding support through 2022. The water efficiency program will continue to offset the impacts to regional water demand through growth so for the foreseeable future, overall annual water demand will likely remain flat or near flat when adjusted for weather. Areas for continued or increased emphasis in 2019 include:

Teacher and student education on water issues and the study of water

- Opportunities for stream sampling to learn analytical techniques for water quality monitoring, data collection and analysis, and reporting
- More resources for teachers, such as videos, water study units, lesson plans, and materials, workshops, field trips, and expert presenters

Targeted outreach to multicultural groups

- Gardening classes in a variety of languages
- Attendance at community events
- Materials printed in various languages

Irrigation efficiency assistance to high-volume water users

- Technical assistance
- Materials to move towards sustainable landscaping

Continued training on irrigation efficiency and sustainable landscape training

- Partnership with Lake Washington Institute of Technology
- Cascade Gardener classes
- WaterSmart workshops