

The Portland Water Bureau's water efficiency program provides information, technical assistance, and incentives to all Portlanders. The programs described in the report below are tied to commitments that were made to the State in the bureau's Water Management and Conservation Plan (<http://www.portlandoregon.gov/water/wmcp>). An on-going driver for the Portland Water Bureau's efficiency programs is a mandate from the State of Oregon, which requires that water efficiency programs be implemented to retain the bureau's ability to develop additional groundwater capacity. Programs include:

- Technical assistance
- Rebates and incentives
- Education and outreach
- Partnerships

## WATER EFFICIENCY GOALS

The Portland Water Bureau's residential water efficiency goal is for per capita water use to remain at or below 66 gallons per person per. The water efficiency goal for commercial programs is to obtain an average 25 percent water reduction for all customers who receive a site visit and comprehensive report. Both goals have consistently been met.

## TECHNICAL ASSISTANCE

### COMMERCIAL FACILITY SURVEYS



In fiscal year 2017-18, 40 facility surveys were conducted for commercial water customers including two fire stations, restaurants including Fresh Roll, Domino's Pizza, Cha Cha Cha Taqueria and others. Continued work with Widmer Brewing led to the completion of a second major water efficiency improvement. Assistance was provided to hotels, multifamily facilities, office buildings, churches and other customer types. Additional assistance including data logging, development of water-use histories, and water efficiency advice through email and phone conversations was provided to an additional 79 customers. Customers who participate in a facility survey or

request consumption histories receive written reports with graphs and water conservation devices such as showerheads, faucet aerators, and kitchen pre-rinse sprayers, if needed.

### ADVANCED METERING PILOT PROJECT



In fiscal year 2017-18, the water efficiency program continued to pilot-test Badger Beacon software and Orion meter reading devices. Orion devices are cellular transmitters that can be installed in existing meter boxes and attached to standard encoder-equipped meter registers. The Orion device uses cellular infrastructure to transfer meter-read data to the Badger web portal. The Portland Water Bureau and the customer can access consumption data online or via smartphone or tablet applications. The goal of the project is to evaluate the effectiveness of the Orion/Beacon technology for potential future integration into the PWB billing system.

This year, additional Orion devices were installed at Oregon Health and Sciences University with more planned installations on wholesale meters.

## SUSTAINABILITY AT WORK

The water efficiency program sponsors the Sustainability at Work Program (SAW) of the Bureau of Planning and Sustainability, which assists Portland businesses with resource efficiency. In fiscal year 2017-18, SAW referred four customers to the commercial program for higher-level customer assistance. The water efficiency program provides water efficiency devices to SAW for distribution to businesses.

## WATERSENSE CERTIFIED IRRIGATION PROFESSIONALS LIST



The water efficiency program continues to maintain and publish a list of Portland-area irrigation professionals who are licensed contractors in the State of Oregon, are certified by the Irrigation Association, and are partners of the U.S. Environmental Protection Agency WaterSense Program. The regularly updated list makes it easy for customers to find qualified professionals and raises awareness of the WaterSense label.

## REBATES & INCENTIVES

### WATER EFFICIENCY DEVICE DISTRIBUTION

The water efficiency program distributes outreach materials and water conservation devices through the internet, phone, at customer site visits, community events, and through the Portland Water Bureau customer service walk-in center. In fiscal year 2017-18, 11,344 devices were distributed.

DEVICES	Commercial	Single Family	Low Income	Multifamily	Events	TOTAL
5-minute Shower Timers	0	397	9	48	1948	<b>2,402</b>
1.5 gpm Showerheads	47	421	11	76	322	<b>877</b>
1.5 gpm Kitchen Faucet Aerators	10	360	7	63	1914	<b>2,354</b>
1.0 gpm Bathroom Faucet Aerators	49	540	10	113	1671	<b>2,383</b>
0.5 gpm Bathroom Faucet Aerators	20	3	0	2	0	<b>25</b>
Toilet Fill-Cycle Diverter	42	479	9	155	348	<b>1,033</b>
Toilet Leak Detection Tablets	101	459	9	422	1042	<b>2,033</b>
Home Water Audit Kit	12	141	1	3	39	<b>196</b>
Watering Gauge	0	2	0	0	0	<b>2</b>
Hose Nozzle	0	23	6	0	0	<b>29</b>
Commercial Toilet Dual Flush Handle	0	0	0	0	0	<b>0</b>
Restaurant Pre-Rinse Spray Valves	10	0	0	0	0	<b>10</b>
						<b>11,344</b>

### NON-RESIDENTIAL WATER EFFICIENCY INCENTIVE PROGRAM

The water efficiency program offers financial incentives to help small businesses and non-profits improve water efficiency by replacing older, inefficient equipment with high-efficiency models. In fiscal year 2017-18, a \$755 incentive was given to Danwei Canting to replace water-cooled WOKs with air-cooled equivalents. A \$5,000 incentive was given to Widmer Brewing to replace a water-based rinsing system with one that uses ionized air.

## WATERSENSE TOILET REBATE PROGRAM



In fiscal year 2017-18, the WaterSense Toilet rebate program helped customers replace 654 toilets with high-efficiency models (see below). Water savings will be analyzed after a full year of water use has been completed.

Customer Class	# of toilets replaced	Dollars expended
Income-qualified residential	31	\$3,086
Residential	541	\$27,050
Multifamily	63	\$3,150
Commercial	19	\$950
<b>TOTAL</b>	<b>654</b>	<b>\$34,236</b>

## OUTDOOR REBATE

In fiscal year 2017-18, the water efficiency program provided rebates for automatic irrigation system improvements, including multi-stream rotating nozzles and WaterSense-labeled irrigation controllers.

Customer Class	# of Controller rebates	# of Multi-stream Rotating Nozzles rebates	Dollars expended
Residential	54	69	\$5,595
Multifamily	3	96	\$1,438
Commercial	0	50	\$150
<b>TOTAL</b>	<b>57</b>	<b>215</b>	<b>\$7,183</b>

## OUTREACH & EDUCATION

### SMARTDRIPS WATER CONSERVATION INFORMATION DISTRIBUTION



The water efficiency program partners with the Bureau of Transportation's SmartTrips program to distribute water conservation information through a program called SmartDrips. For fiscal year 2017-18, the SmartDrips offering included a multi-lingual stainless-steel water bottle and *Clean, Cold, Constant*, a brochure welcoming the recipient to Portland and explaining how the water system works. The brochure includes toilet

leak detection tablets. New this year was a conservation kit email promotion to residents who received their SmartTrips resources online.

### CHILDREN'S CLEAN WATER FESTIVAL SPONSORSHIP



The Portland Water Bureau is a sponsor of the Children's Clean Water Festival, and water efficiency staff serves on the planning committee to help organize the event every year. This year's festival was held on March 13, 2018 at the University of Portland campus. Ten school districts were represented, and the festival brought 1,372 4th- and 5th- grade students to

the event, including classes from seven schools within the Portland Water Bureau service area. Russell Elementary, Cesar Chavez, Llewellyn, Bridger, Woodlawn, Rosa Parks, and Faubion schools attended. This was the 25<sup>th</sup> year the festival has been held.

## OUTDOOR SCHOOL SPONSORSHIP



In fiscal year 2017-18, the water efficiency program sponsored Outdoor School programs for students from the Portland Water Bureau service area. 5,100 middle school and 1,000 high school students attended Outdoor School to learn and teach water curriculum. Water efficiency and water cycle messages were shared during field study, on-site in restrooms, at mealtimes, and clean-up.

## SCHOOL ASSEMBLY PROGRAMS



In fiscal year 2017-18, the Portland Water Bureau provided 32 free school assembly programs, reaching more than 6,300 students. Two new shows for students K-2 were offered this year: *Where'd the Water Go?* performed by Rick Huddle, and *Professor Drop and the Droplets* by KC Puppetree. *Water – The Musical* was offered for grades 3-5, performed by Thinking People's Theatre. These shows were well received with teachers rating the quality as "excellent" (71%) or "very good" (29%). Evaluations

demonstrated that eleven Next Generation Science Standards were addressed by the assembly programs. Participating teachers received resource kits that included a class set of activity booklets, pencils, and stickers as well as invitations to order free water conservation kits.

Date	Name of school	Name of show	# of Students
11/29/2017	Ainsworth	Professor Drop and The Droplets	150
11/29/2017	Bridger	Professor Drop and The Droplets	200
11/30/2017	Faubion	Professor Drop and The Droplets	150
12/1/2017	Woodstock	Water - The Musical	180
12/4/2017	Alameda	Professor Drop and The Droplets	300
12/13/2017	Beach	Where'd the Water Go?	120
1/5/2018	Menlo Park	Where'd the Water Go?	280
1/10/2018	Markham	Where'd the Water Go?	180
1/10/2018	Wood	Where'd the Water Go?	270

1/11/2018	Atkinson	Where'd the Water Go?	300
1/12/2018	Gilbert Heights	Where'd the Water Go?	120
1/18/2018	Creative Science School	Where'd the Water Go?	180
1/18/2018	Boise-Eliot	Where'd the Water Go?	270
1/24/2018	Sacramento	Where'd the Water Go?	210
2/6/2018	Forest Park	Where'd the Water Go?	90
2/6/2018	Harrison Park	Where'd the Water Go?	270
2/9/2018	Prescott	Where'd the Water Go?	180
2/29/2018	Shaver	Where'd the Water Go?	270
3/2/2018	Woodlawn	Where'd the Water Go?	270
3/2/2018	Astor	Where'd the Water Go?	160
3/9/2018	St. Clare School	Where'd the Water Go?	60
3/9/2018	Rosa Parks	Where'd the Water Go?	270
2/13/2018	Slavic Christian School	Professor Drop and The Droplets	54
2/15/2018	Lee	Professor Drop and The Droplets	230
3/20/2018	Grout	Where'd the Water Go?	270
3/21/2018	Duniway	Where'd the Water Go?	300
3/22/2018	Arthur Academy-Portland	Where'd the Water Go?	100
4/9/2018	Markham	Professor Drop and The Droplets	125
4/17/2018	Buckman	Professor Drop and The Droplets	200
5/10/2018	Lent School	Water - The Musical	190
5/16/2018	Kelly School	Water - The Musical	300
5/30/2018	Hayhurst School	Water - The Musical	150

## PRESENTATIONS AND WORKSHOPS

In fiscal year 2017-18, water efficiency program staff gave presentations to a variety of audiences including interested civic groups, commercial property managers, gardeners, and students.

Date	Presentation	# of contacts
11/7/2017	Girl Scouts Troop 45619	20
11/18/2017	Fix-it Fair "Saving Water Makes Cents"	11
12/15/2017	FIRST Lego League Robotics	5
1/27/2018	Fix-it Fair "Saving Water Makes Cents"	3
2/24/2018	Fix-it Fair "Saving Water Makes Cents"	15
3/31/2018	Portland Nursery "Water Wise Gardening"	20
4/10/18	SAW - Restaurant Data	5



## COMMUNITY EVENTS



The water efficiency program attended 21 community events, providing indoor- and outdoor-focused water conservation information and devices to customers. These events are excellent opportunities for one-on-one outreach and education about water conservation. New this year was an increase in language accessibility efforts at events. In working with the Community Engagement

Liaison program, we provided staff fluent in English and Spanish. We plan to continue this pilot effort and increase multi-lingual staffing at events. The events the water efficiency program attended this past year include:

Date	Event	# of Contacts	# of Devices Distributed
7/23/2017	Sunday Parkways	336	650
8/18/2017	Jade District Night Market	140	320
8/26/2017	Jade District Night Market	190	380
8/20/2017	Sunday Parkways	198	320
9/24/2017	Sunday Parkways	190	320
10/14/2017	NAYA Housing to Homeownership Fair	84	205
10/21/2017	Aging Well Conference	100	0
10/28/2017	African American Homeownership Fair	65	205
11/18/2017	Fix it Fair	119	377
1/27/2018	Fix it Fair	193	699
1/15/2018	Martin Luther King Day Celebration	106	240
2/24/2018	Fix it Fair	250	928
3/16/2018	Portlanders Stand with Refugees & Immigrants	104	185
3/20/2018	Fix a Leak Week in Pioneer Square	82	80
4/27/2018	Día de los Niños	39	42
5/20/2018	Sunday Parkways	239	332
6/2/2018	Protecting your Assets Workshop (AAAH)	17	99
6/9/2018	Latino Home Fair	78	211
6/23/2018	Good in the Hood	93	473
6/24/2018	Sunday Parkways	150	382
6/30/2018	Cully Park Grand Opening	204	444

## REGIONAL MEDIA CAMPAIGN



The Portland Water Bureau is a member of the Regional Water Providers Consortium. Each year, the Consortium conducts two conservation-focused multi-media campaigns annually and ongoing social media content on Facebook and Twitter. The indoor-focused campaign runs for a month and a half each winter. The outdoor-focused campaign is a combination of television (mainstream and Spanish Language) and radio, which runs three months each summer. Portland Water Bureau

staff participates in message development and provides technical expertise for both media campaigns. A complete summary of the media campaign can be found on the Consortium website: [Regional Water Providers Consortium Annual Report 2017-2018](#)

## HAZELWOOD DEMONSTRATION GARDEN



The Hazelwood water-wise demonstration garden was established in 2007 to showcase water-efficient plants, different types of mulch, and a drip irrigation system with a soil moisture sensor controller.

The garden is located in the front of the East Portland Neighborhood Office and provides a welcoming front entrance for the community space. The garden is maintained regularly and is heavily used by the neighborhood and visitors to the neighborhood office.

## PARTNERSHIPS

### ENERGY TRUST OF OREGON

The water efficiency program began partnering with the Energy Trust of Oregon in 2006. In August of 2010, the Energy Trust began providing chrome showerheads to the water efficiency program for distribution to all types of customers via web and phone requests, SmartDrips kits, and Customer Service walk-in kits. The Portland Water Bureau and the Energy Trust continue to look for opportunities to work together.



### REGIONAL WATER PROVIDERS CONSORTIUM

The Regional Water Providers Consortium, made up of 22 water providers, facilitates partnerships to improve the planning and management of municipal drinking water supplies. Portland Water Bureau water efficiency program staff participate in the Consortium's Conservation Committee by attending monthly meetings, participating in education and outreach projects, and staffing Consortium events.



### SUSTAINABILITY AT WORK

The Sustainability at Work program provides education and free evaluations of local business operations in the areas of energy, water, waste and recycling, purchasing, green building, and transportation. The water efficiency program provides conservation devices, technical advice, and on-site water efficiency surveys for customers as needed.



## THE U.S. GREEN BUILDING COUNCIL

The U.S. Green Building Council oversees the green building rating systems known as LEED. Water efficiency program staff serve on the Water Efficiency Technical Advisory Committee of LEED, which holds primary responsibility for the development, implementation of, and revisions to LEED rating systems related to water efficiency.



## THE ALLIANCE FOR WATER EFFICIENCY

The Alliance for Water Efficiency (AWE) serves as a North American advocate for water-efficient products and programs, and provides information and assistance on water conservation efforts. The Water Bureau is a Bronze Charter Sponsor. AWE provides many opportunities for the water efficiency program, and others around the nation, to partner together and fund much-needed research in the water efficiency arena.



## EPA'S WATERSENSE PROGRAM

WaterSense is a national program sponsored by the U.S. Environmental Protection Agency to build partnerships for water conservation. WaterSense develops testing specifications for performance, solicits testers and devices to be tested, and labels products and services that meet its criteria for performance. WaterSense labels help customers identify proven water-efficient products and services. The Portland Water Bureau is a promotional partner.



## REBUILDING CENTER WORKSHOPS

The ReBuilding Center is a non-profit organization dedicated to reuse, sustainability and empowering community members to build practical skills in home plumbing repair, carpentry, electrical work and more. The water efficiency program has partnered with the rebuilding center to sponsor plumbing related adult education classes. Through this partnership we provide funding for scholarships, conservation devices for students, brochures related to water efficiency, DIY repairs and Portland Water Bureau resources.



**REBUILDING  
CENTER**

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