

# Water Efficiency Programs

## *Portland Water Bureau*



AWWA-PNWS Conference May 3, 2019

Penny Milton & Jeff Sandberg



# Overview

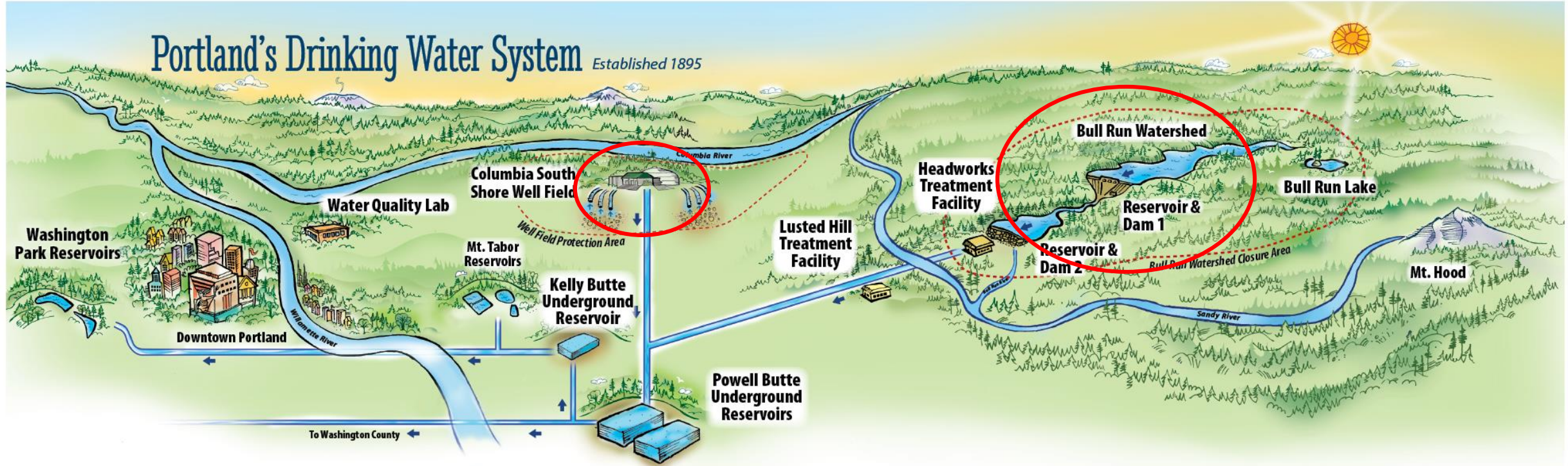
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- Background on Portland's system
- Our programs at a glance
- Getting into the flow (data)
- Incentives and rebates
- Low-income customer support
- Partnerships





# Portland's Water System



- Water for approximately 935,000 people region wide
- Daily demand averages from 80 – 130 MGD. Max 163 in 2014.



# Bull Run Watershed





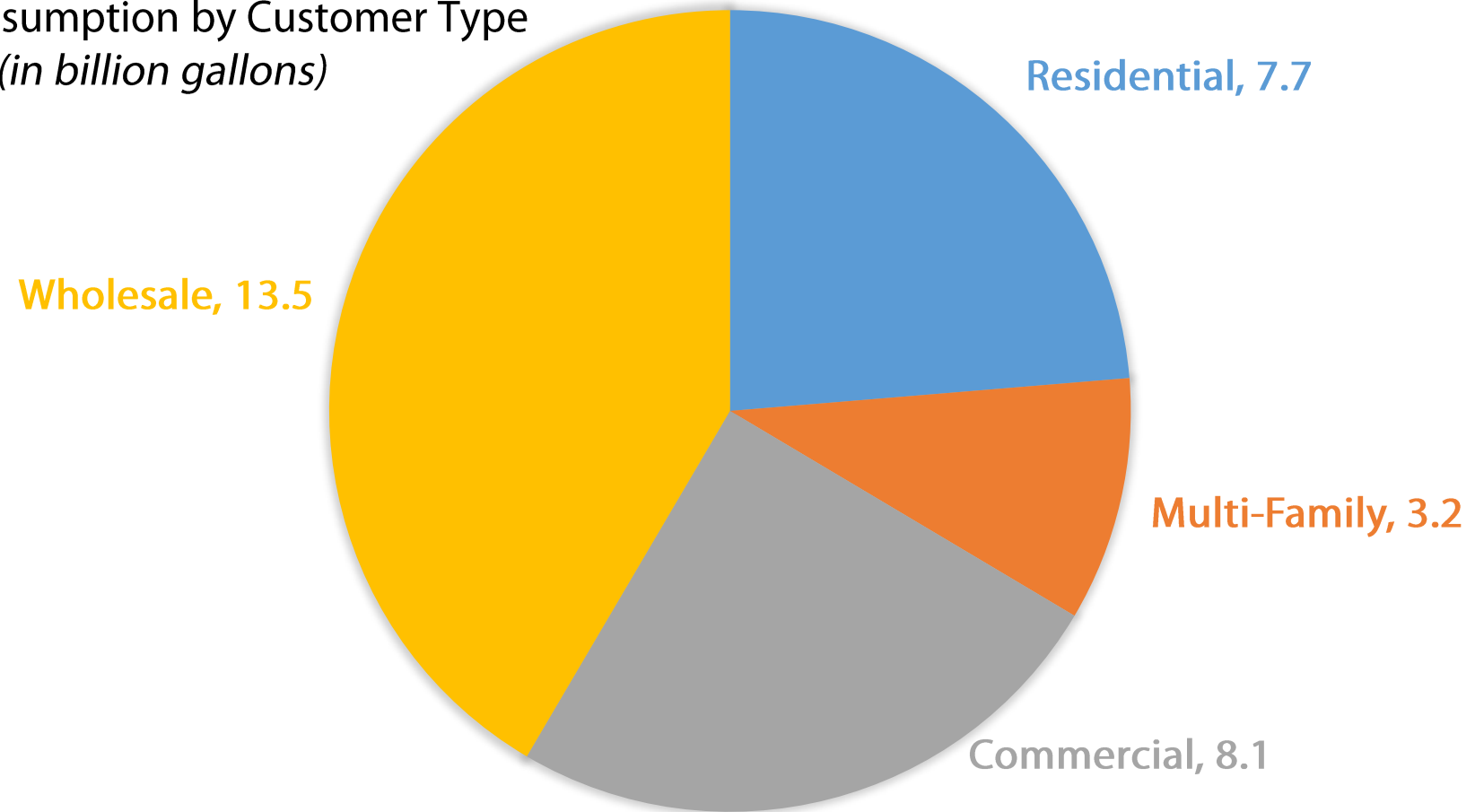
# Columbia South Shore Wellfield





# Our Customers

Annual Consumption by Customer Type  
(in billion gallons)





# Why Conservation?

- Manage summer peaking
- Increase stream flows for fish
- Saves customers money
- Community values
- State requirement
- Reduce energy use and chemical input





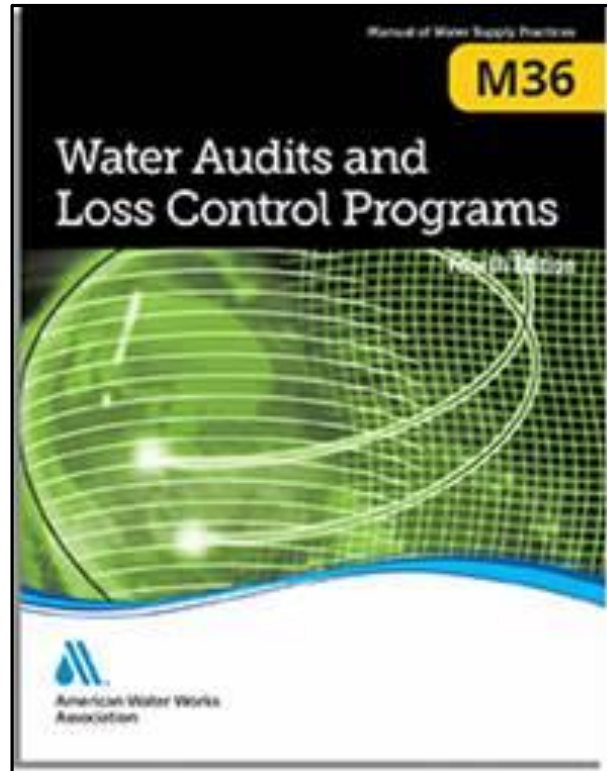
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# Water Loss Commercial Multifamily Residential



# Water Loss Program

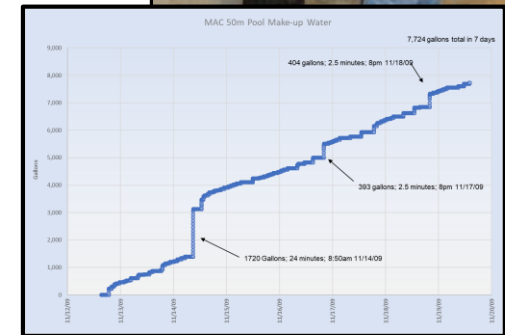
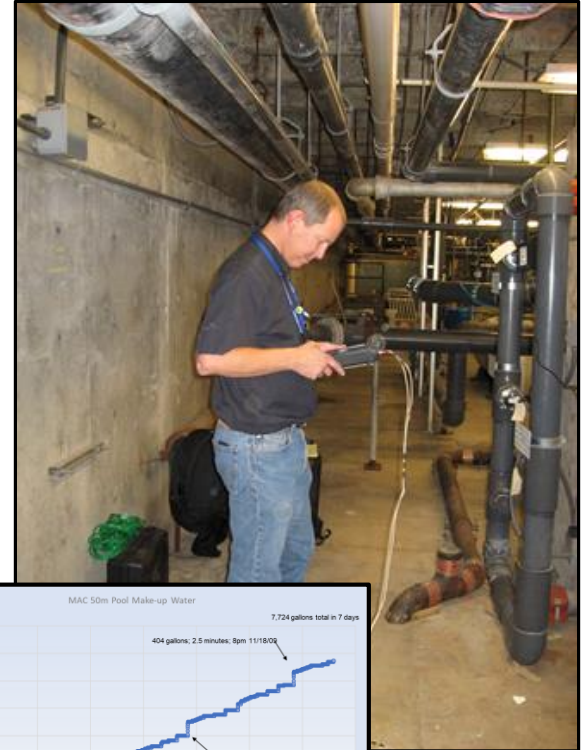
- Annual Water Audit
  - Type of loss
  - Real Loss
  - Apparent Loss
- Identify data gaps
- Stakeholder connection
- Progress report





# Commercial

- Onsite water use evaluations:
  - Equipment
  - Fixtures
  - Processes
- Water consumption analysis



# Commercial

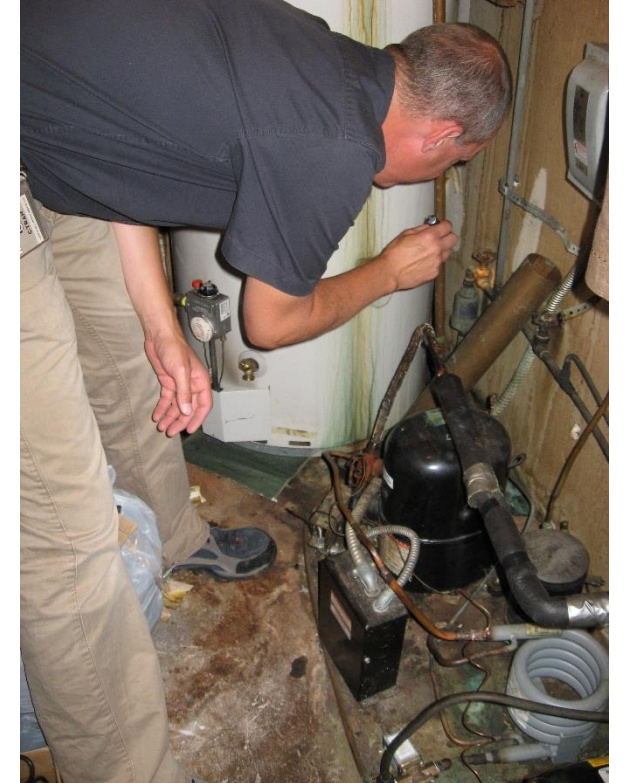
- Irrigation audits
- Rebates / Incentives





# Commercial

- High water use investigations
- Presentations



# Multifamily

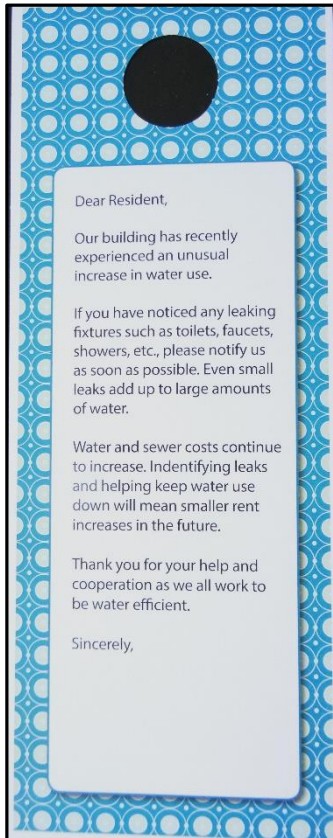
- Engage HOAs / tenants
- Focus on low-income





# Multifamily

- Equipment/issues common to multifamily





# Multifamily

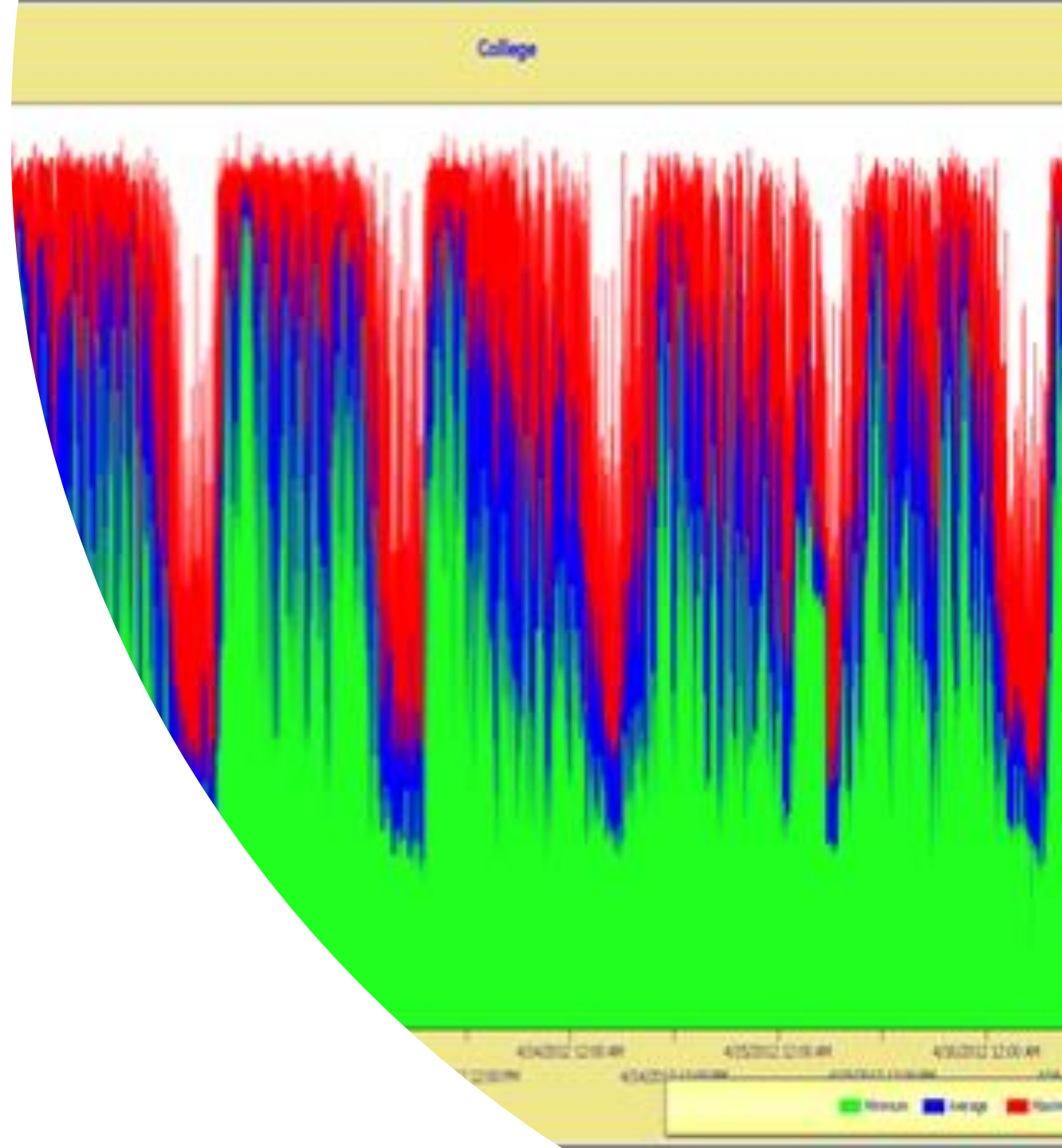
- Toilets





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# Flow Data Tools & Analysis

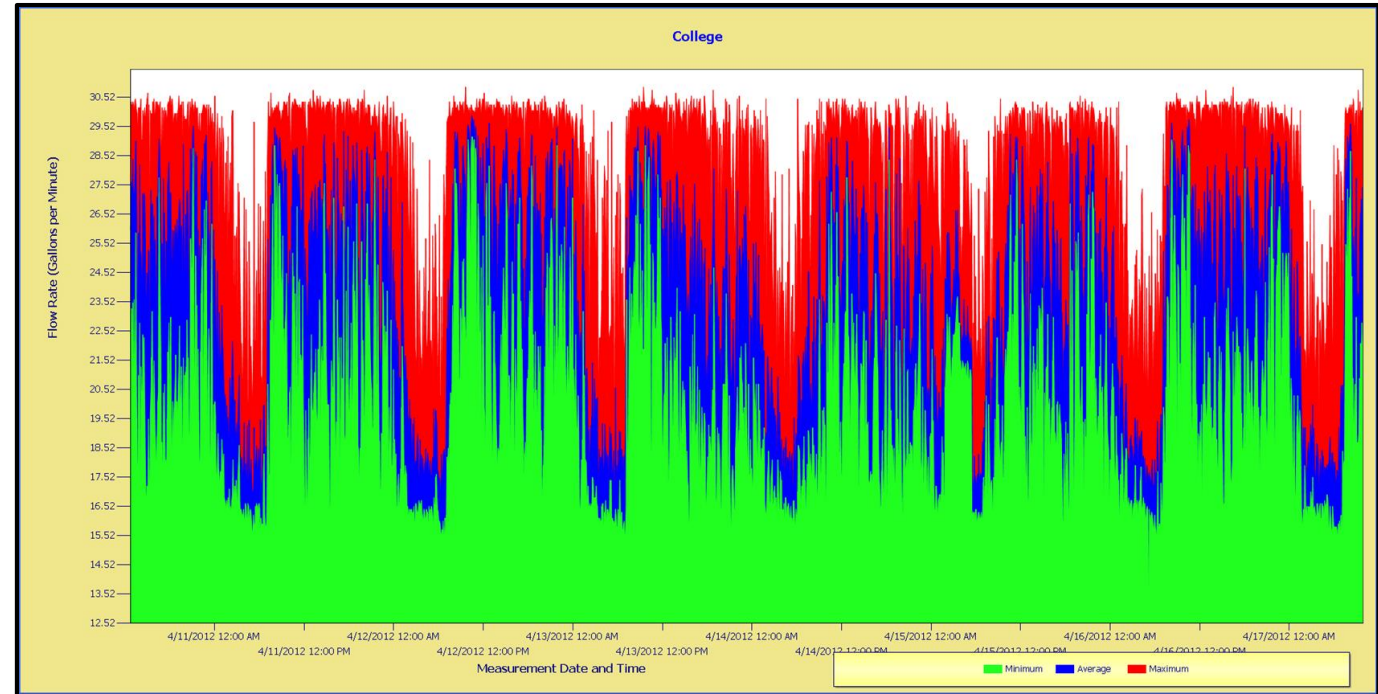


# Obtaining Flow Data – Meter Master

- Data logger
- Manual installation
- Temporary – 7 days
- 10 second resolution



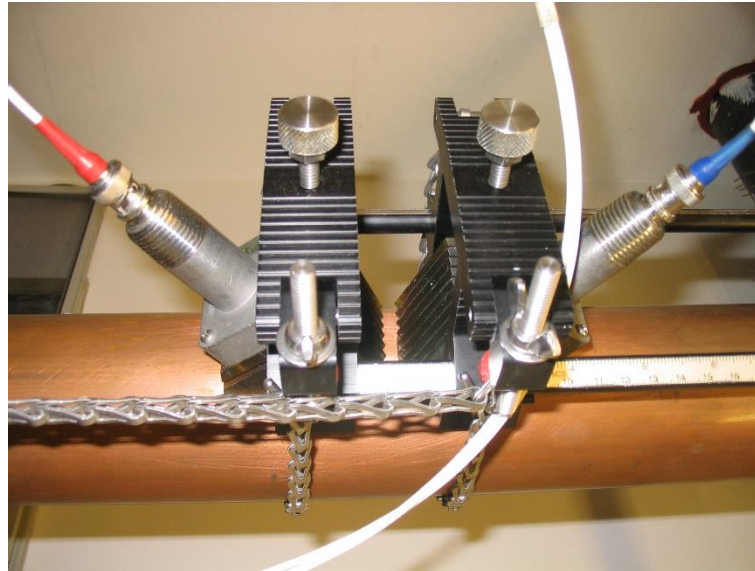
7.9 Million Gallons / year





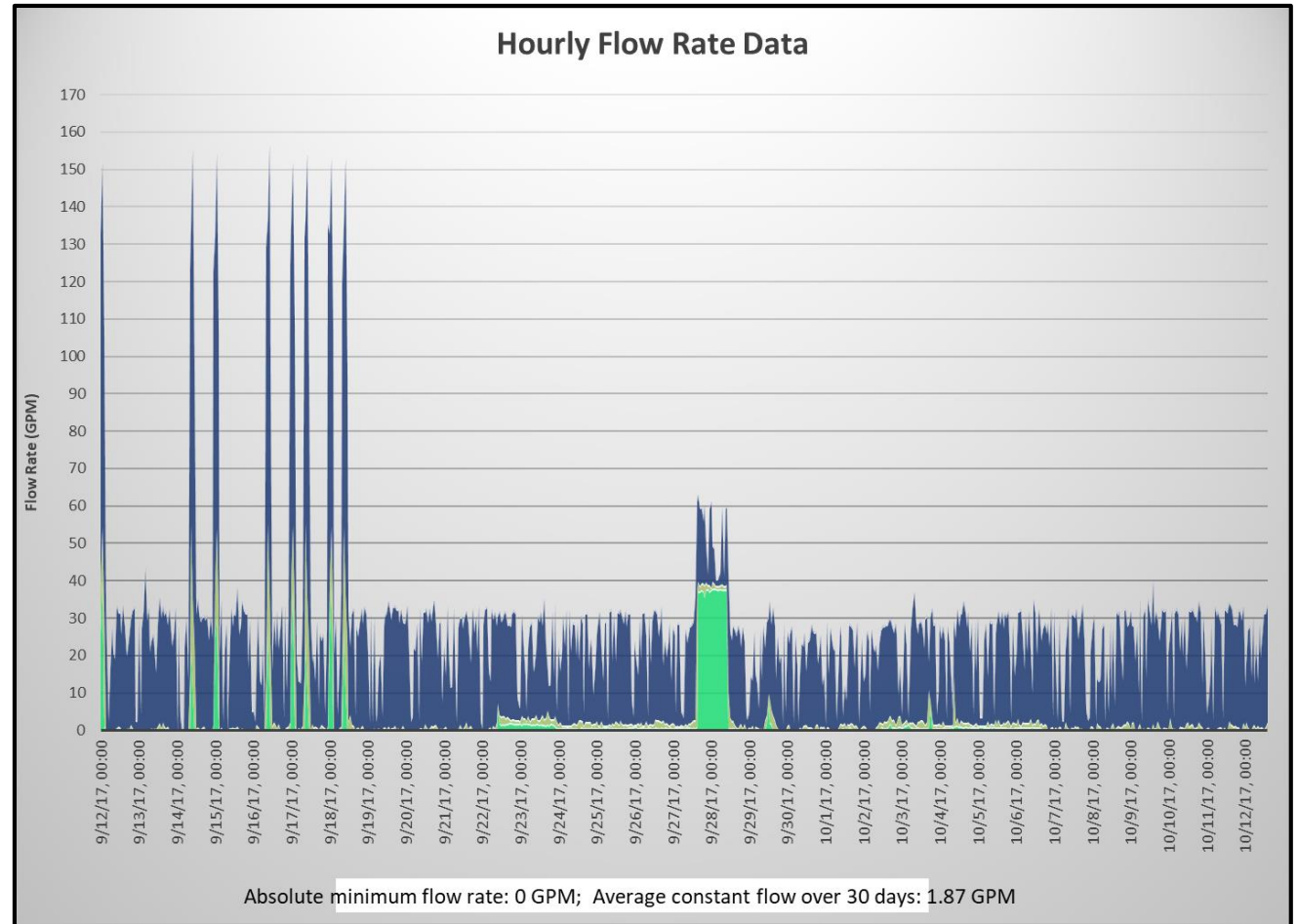
# Obtaining Flow Data - Ultrasonic

- Specific areas
  - Production lines
  - Cleaning apparatus
  - High use investigation

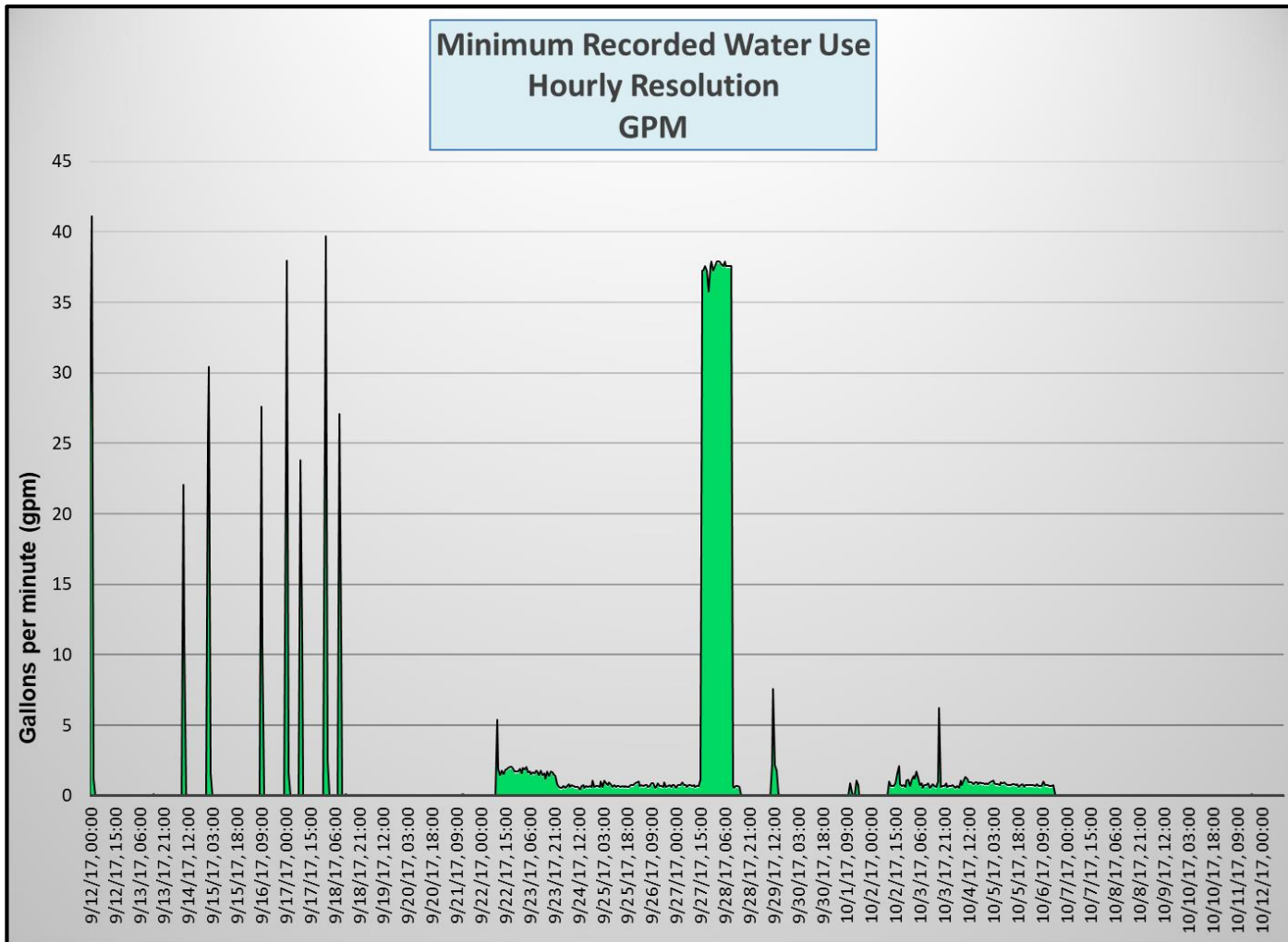


# Obtaining Flow Data – OMNI meters

- Manual download
- Permanent
- Previous 30 days
- Hourly resolution





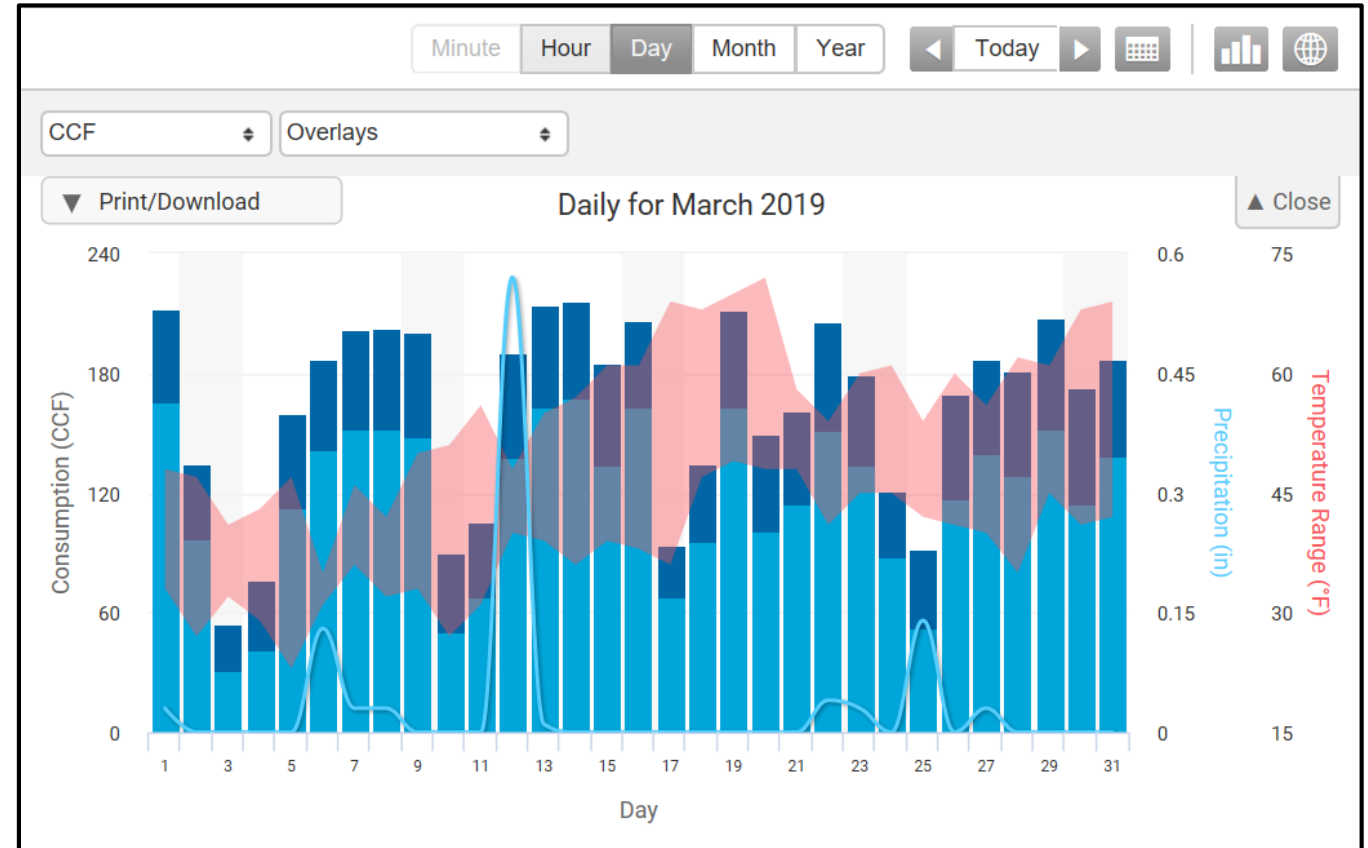
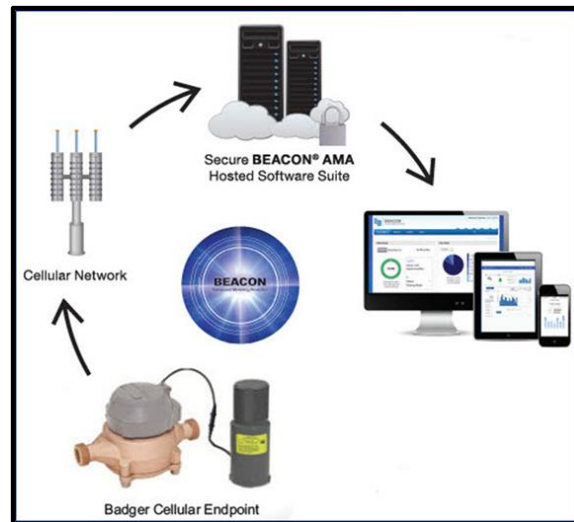


**Average flow: 37.5 gpm**  
**Total time: 20 hours**  
**Total volume: 45,000 gallons**



# Obtaining Flow Data - Beacon

- Download from cloud
- Permanent
- Data since installation
- Quarter-hour resolution





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# Rebates and Incentives



# Incentive Program

- Pays 50% of the costs - Up to \$5,000
- Standard projects
- Highly innovative
- Industry changing





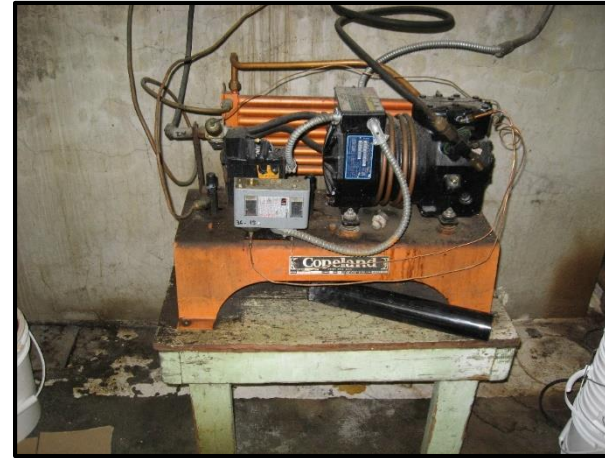
# Incentive – Widmer Brewing

- Vacuum pump – water sealed
  - \$32,000 / year
- Industry's first dry vacuum pump
- **Savings: 874,000 gal/year**
- Payback: 14 months
- \$5,000 incentive



# Incentive – Helen Bernhard Bakery

- Water-cooled condensers - refrigeration
  - \$ 15,000/ year
- Installed air-cooled unit
- **Savings: 607,000 gal/year**
- Payback: 18 months





# Incentive – Marcos Restaurant

- Boiler-based steamer and water-cooled ice machine
  - \$13,000 /year
- Installed connection-less model steamer / air-cooled ice machine
- **Savings: 500,000 gal/year**
- Payback: 19 months



# Rebates

ITEM	REBATE	RESTRICTIONS
Toilets & Urinals	\$50 (\$100 – low income)	50 per account. WaterSense
Irrigation controllers	\$100 /Residential & \$500 Comm.	WaterSense
Multi-stream rotators	\$3 per nozzle	32 heads residential & 96 heads commercial (per acct.)
Ice Machines (air-cooled)	50% of cost up to \$3,000	EnergyStar



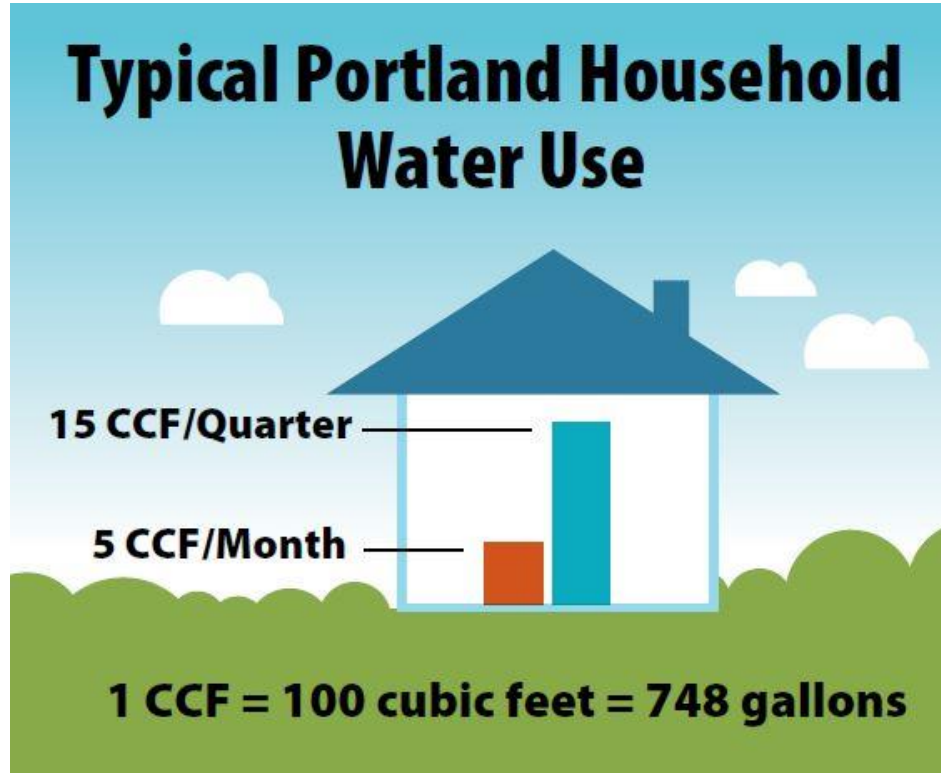


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# Residential Focus



# What is “Normal” for Residential Customers?



50 gallons/person/day on average in Portland



© Rolling Stone



# Residential – Water Saving Devices

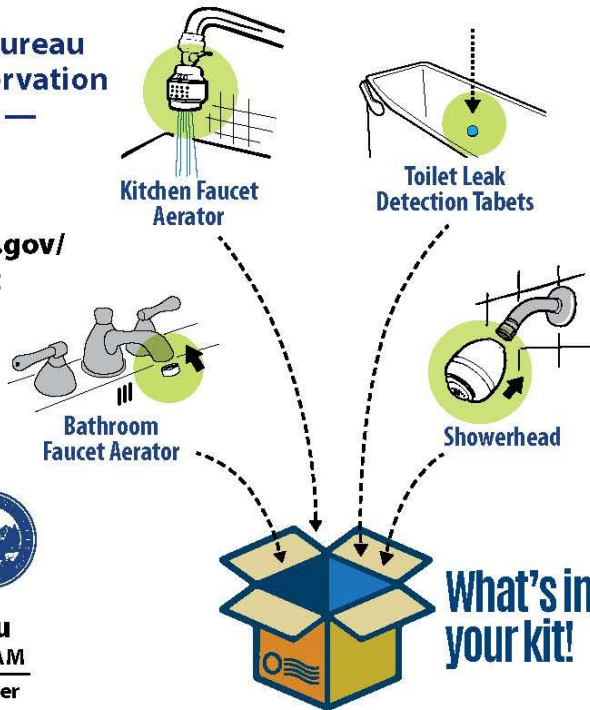
## FREE Water Conservation Kit!

The Portland Water Bureau provides water conservation devices to customers — **FREE OF CHARGE.**

Order online at:  
**[www.portlandoregon.gov/water/conservationkit](http://www.portlandoregon.gov/water/conservationkit)**  
or call **503-823-4527.**



**Portland Water Bureau**  
WATER EFFICIENCY PROGRAM  
[www.portlandoregon.gov/water](http://www.portlandoregon.gov/water)



El Departamento de Aguas de Portland ofrece dispositivos de ahorro de agua a sus clientes – **LIBRE DE CARGO.** Para solicitar su kit de conservación, visítenos en **[www.portlandoregon.gov/water/conservationkit](http://www.portlandoregon.gov/water/conservationkit)** o llame al **503-823-4527.**

Thủy Cục Portland cung cấp các thiết bị bảo tồn nước cho khách hàng – **MIỄN PHÍ.** Để đặt hàng bộ bảo tồn của mình, hãy truy cập trực tuyến tại **[www.portlandoregon.gov/water/conservationkit](http://www.portlandoregon.gov/water/conservationkit)** hoặc gọi số **(503) 823-4527.**

波特兰水务局为顾客提供节水设备 – **免费。**要订购您的节水套件，请访问我们的网站 **[www.portlandoregon.gov/water/conservationkit](http://www.portlandoregon.gov/water/conservationkit)** or 请致电 **(503) 823-4527.**



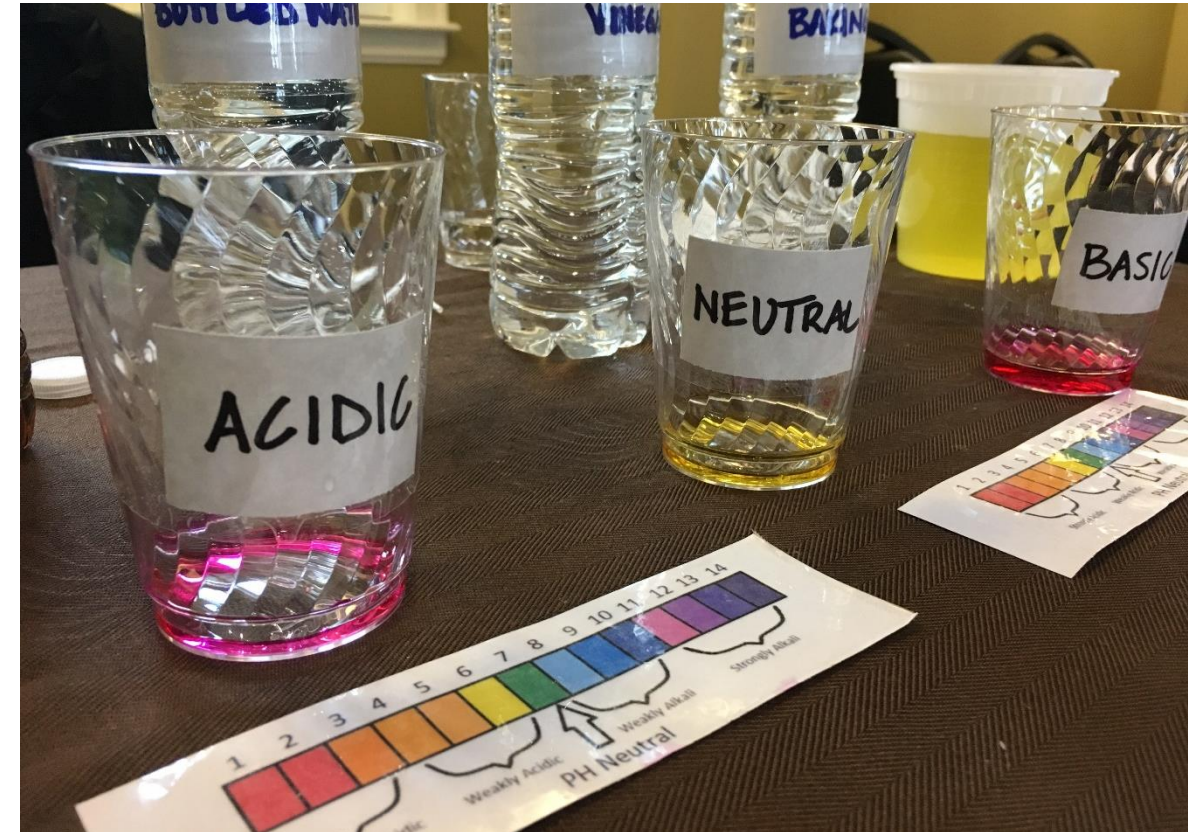


# Residential - Education

## School Assembly Program



## Children's Clean Water Festival





# Residential – Community Events

## Jade Night Market





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# Low-Income Customer Support

## We can help with your bill

### 1 Bill Discount

Eligible customers may receive a discount on their bill. Call the Community Service Center in your area to make an appointment to establish eligibility or apply online at: [www.portlandoregon.gov/water/financialassistance](http://www.portlandoregon.gov/water/financialassistance).

### \$500 Crisis Assistance

During a crisis, eligible customers may receive up to \$500 in assistance once every 12 months. The customer must pay a portion of their bill to receive assistance. Call City of Portland Customer Service at **503-823-7770** for more information.

### Fixtures Repair

For repair of leaky faucets, toilets, and underground pipes, eligible customers can receive assistance for their own homes. Call the Efficiency

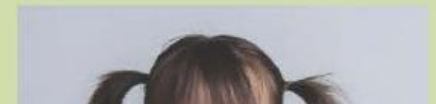
## Ways to reduce your bill

### 1 Clean River Rewards

Clean River Rewards, a Bureau of Environmental Services program, is Portland's stormwater discount program. When you contain the runoff on your property, you qualify for up to a 10% discount on your on-site stormwater management charge. Register online for Clean River Rewards at [www.CleanRiverRewards.com](http://www.CleanRiverRewards.com). To register by mail, call the Clean River Rewards hotline at **503-823-1371** to order a registration packet.

### 2 Free Water Conservation Information & Devices

The Portland Water Bureau offers free information and water conservation devices designed to help lower your sewer and water bills. Devices include showerheads, faucet aerators and toilet devices. For water conservation assistance, or to order devices, call **503-823-4527**, or visit [www.portlandoregon.gov/water/efficiency](http://www.portlandoregon.gov/water/efficiency).





# Low-Income Customer Support

## Who Qualifies?

Family Size	Maximum Monthly Income
1 person	\$2,850
2 people	\$3,260
3 people	\$3,665
4 people	\$4,070
5 people	\$4,400
6 people	\$4,725
7 people	\$5,050
8 people*	\$5,375

**\$100 Rebate**



# WaterSmart

## Home Water Reports

### Your Home Water Report for Aug 12 – Nov 14, 2016

This is an informational report and not a bill.

SERVICE ADDRESS:

ACCOUNT NUMBER:



### Your WaterScore



Way to go, WaterSaver!  
You ranked in the top 20%.

Gallons Per Day (GPD)  
11 CCF = 86 GPD



Your water use is compared to homes in Portland with 2 occupants and a similar yard size.

Learn more about your water use

**\$** Re-enroll in Autopay today!

The City has upgraded its payment system to meet new bank



WaterSmart Program  
1120 SW 5th Ave Room 600  
Portland, OR 97204

503.823.4527 [conserve@portlandoregon.gov](mailto:conserve@portlandoregon.gov)

### Your WaterScore

MAR 12 TO JUN 8, 2016



You used **more water** than similar households.

Gallons Per Day (GPD)  
43 CCF = 361 GPD



Your water use is compared to homes in Portland with 5+ occupants and a similar yard size.

### YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS:  
ACCOUNT NUMBER:

FIND MORE CONSERVATION & REBATE INFO AT:  
[portland.watersmart.com](http://portland.watersmart.com)

<RecipientID>portland62012</RecipientID>

**Are we comparing you fairly?**

Welcome to your first water report.

Do you have **5+ occupants** and a **less than 2,000 sq. ft. yard**? If not, correct us by completing your profile at: [www.portland.watersmart.com](http://www.portland.watersmart.com). Your comparisons and recommendations will be adjusted in future reports.

**Concerned about lead?**

Homes built between 1970 and 1985 may have lead solder in their plumbing. Testing is the easiest way to know if this is adding lead to your water.

Portland Water Bureau is committed to providing clean, safe and reliable water to you and your family. Visit [www.leadline.org](http://www.leadline.org) to request a FREE lead-in-water test kit.

### Water-saving actions just for you

Selected based on your household characteristics, yard size, and historical water use.

[Log on to update your profile\\*](#)

Potential annual savings if you:



Mulch around your plants

A 2-3" layer of mulch around bushes and trees will help prevent weeds and retain water.



Install faucet aerators

Reduce flow and increase pressure - order a free faucet aerator



Install a high-efficiency toilet - \$50 Rebate

WaterSense\*-labeled toilets perform well and save water & money.

**Log on**

Get your full list of recommended actions, and see:

- Where you're using the most
- Your progress over time
- Services and rebate programs

[portland.watersmart.com](http://portland.watersmart.com)

A **free** service offered by your water utility and powered by WaterSmart Software®





WaterSmart  
Program

[My Account](#)

[Home](#)

[\\$ Billing](#)

[Track](#)

[Take Action](#)

[Settings](#)

# WaterSmart

## Customer Portal

### My WaterScore

**Nice Work**

Jan 5 - Apr 3

Nice work, WaterSaver.  
Continue to use water wisely.

Who am I compared to?

Efficient		89 GPD
Average		135 GPD
You		142 GPD

### I Want To...



Understand a high bill



Pay my water bill



Learn about my water  
quality



Order a free

### Notifications

 [Reminder](#) ▼

**Want Better Results?**

Complete your home water-use p...  
[read more](#)

 [Reminder](#) - April 15 ▼

**New Data Available**

Your WaterSmart Portal has been ...  
[read more](#)

## My Daily Use

142

Gallons Per Day

[View use](#)

Compare your past use  
for this billing period.



## Recommended



Install Faucet  
Aerators

Get a free kit!

[See more](#)

 **Announcement** ▼

Get help understanding if your bill  
is higher than normal

Evaluate your bill, online, any tim...  
[read more](#)



# Water Savings Results

## Savings over program period (treatment vs. control groups):

- Periodic (month-to-month) savings as high as 2.6%
- Total of 2 MG of water saved by 2,990 treatment group accounts
- 1% cumulative savings over program period to date
  - (Nov. 2016 – Jan. 2018)



# Customer Satisfaction

- Customers want to continue receiving Water Reports:
  - 75.6% of respondents remember reading some or all Water Reports sent
  - 86% of respondents want to continue receiving Home Water Reports
  - 71% of respondents indicated that reports prompted them to be more efficient
  - Less than 1% unsubscribed



# WaterSmart (Example A)

## Highlights

Digital engagement  
[Add primary email](#) ✎  
Unregistered

[PORTAL LINK](#) [OPEN REGISTRATION](#)

This customer is compared to homes that have:  
[2 occupants](#) ✎  
2,000 to 4,000 sq. ft. yard

SEE DETAILS

Jan 12-Apr 12 (2019-2)

863 GPD  
105 CCF

▲ 477%  
this period  
last year  
▲ 378%  
last period



⚠️ <b>Potential Leak</b> Unusually High Use	Period Jan 12 to Apr 12	Leak Rate 682 GPD	Volume 62,110 gallons	Alert Not Alerted ✎	Status No Response ✎	Cause
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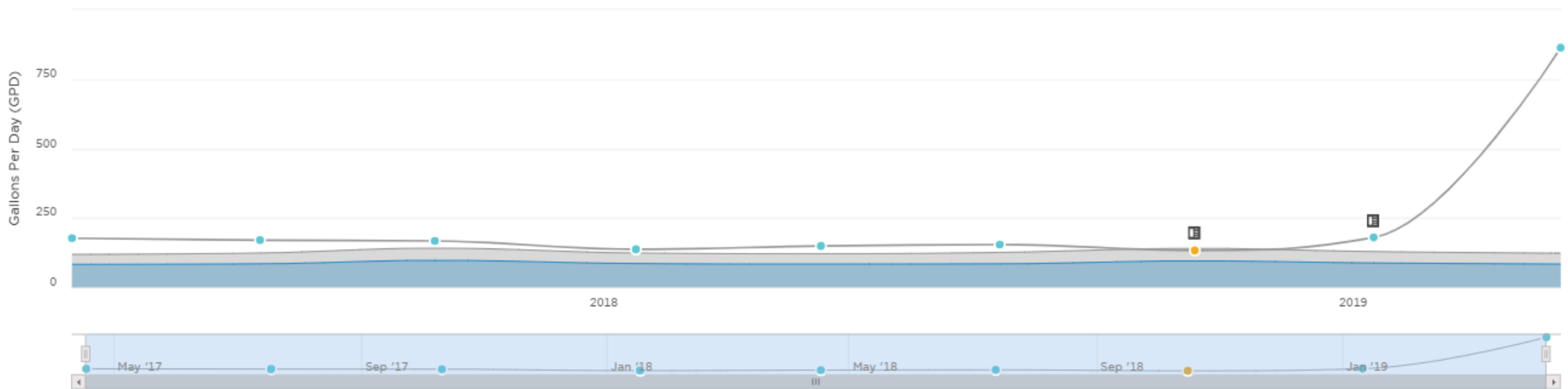
## History

BILLING LEAKS

Apr 16, 2017 — Apr 11, 2019

CCF GALLONS PER DAY

● Average Households ● Most Efficient ■ Water Report



# WaterSmart (Example B)

## Highlights

Digital engagement

SEE DETAILS

Oct 13-Jan 11 (2019-1)

SEE REPORT

PORTAL LINK

OPEN REGISTRATION

This customer is compared to homes that have:

2 occupants

2,000 to 4,000 sq. ft. yard

Attributes

Irrigator

65 GPD

8 CCF

▼ 15%  
this period  
last year

▼ 70%  
last period

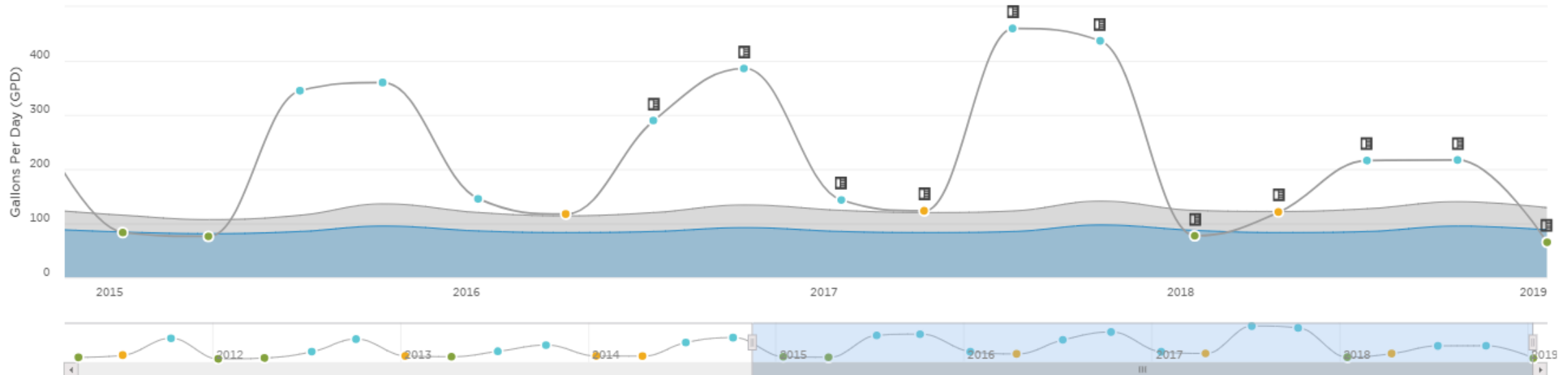


## History

Nov 15, 2014 — Jan 10, 2019

CCF GALLONS PER DAY

● Average Households ● Most Efficient ■ Water Report





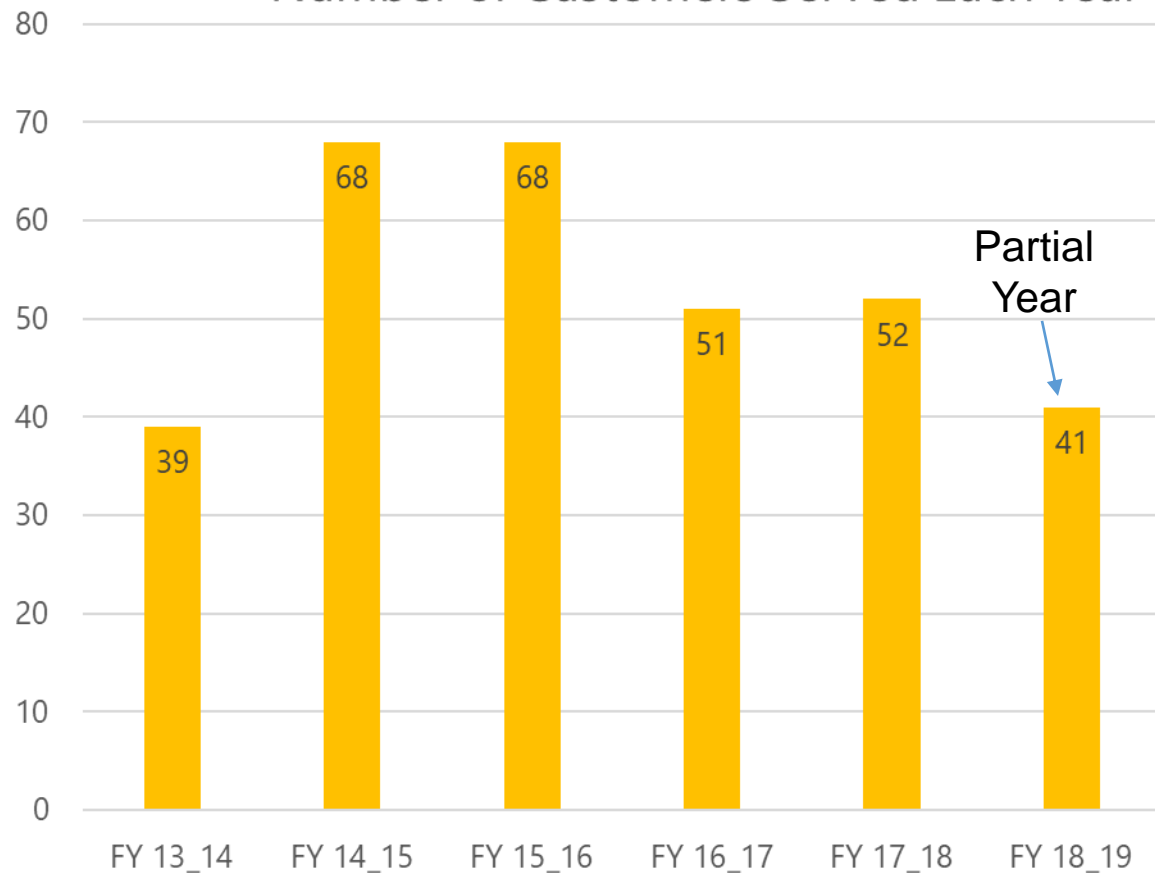
# Fixture Repair

- Low-income homeowners
- Water leaks
- Replacement of inefficient fixtures
- Multnomah County Partnership
- Working to remove barriers

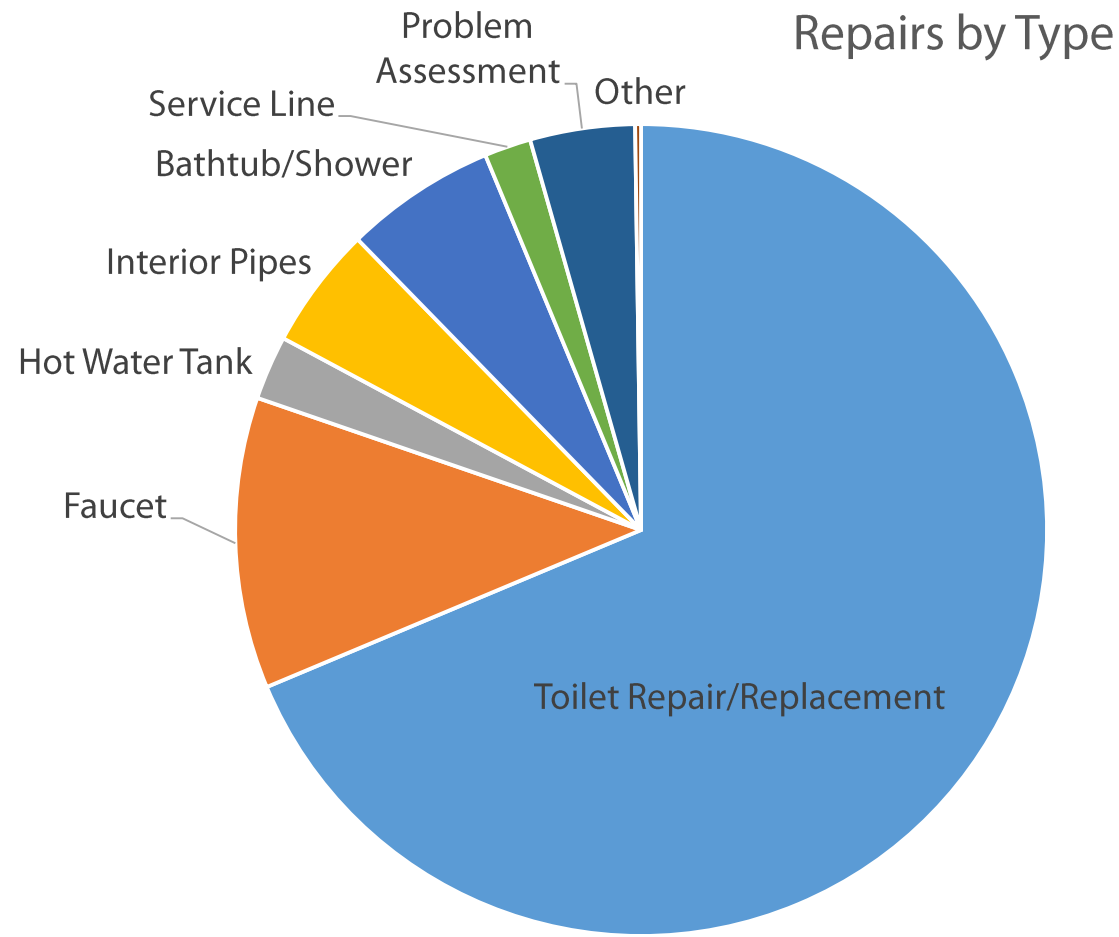


# Fixture Repair

Number of Customers Served Each Year



Repairs by Type





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# Partnerships



# ReBuilding Center Partnership

- Class scholarship sponsorship
- Instructor education
- Cross-promotion
- Device and brochure distribution
- Reclaimed items education
- Future collaborations





# PBOT Partnership

- Cross-bureau partnership since 2006
- Efficient use of resources
- Water efficiency devices & water related giveaways
- 4191 water bottles (2018)
- 49,647 new mover households (2018)





# PBOT Partnership



## Drink it

Portland's tap water meets or exceeds all drinking water standards and it costs less than a penny for three gallons! It's good for you and easy on your wallet.



## Store it

Disasters can affect the water system. Store 14 gallons of water for each person in your household (add extra for pets).



## Test it

Portland doesn't have lead pipes in the water system, but you may have lead in your home plumbing. Order a free lead-in-water test kit to check.

Ways to **LOVE**

PORTLAND  
TAP WATER



## Conserve it

Make the most of each drop by applying for a toilet rebate or ordering a free high-efficiency showerhead or faucet aerator.



## Explore it

Portland has two excellent water sources—the Bull Run River and Columbia South Shore Well Field. Learn more about your water system with the guide inside, or attend a tour or workshop.



# Questions?



Penny Milton

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