

# take a look

## Clackamas River Water Providers (CRWP)

Encourages you to take a look at your home water system to identify ways you can conserve water and be more efficient with our precious water resource.

**FOR MORE INFORMATION:** To request free conservation devices for your home or for information on how to participate in our Conservation Rebate Program, please visit us at [www.clackamasproviders.org](http://www.clackamasproviders.org) or call **503-723-3511**.

**PLEASE NOTE:** This water audit is for indoor use only.

### **Members of the Clackamas River Water Providers:**

Clackamas River Water, City of Estacada, City of Gladstone, City of Lake Oswego, Oak Lodge Water District, South Fork Water Board (Oregon City & West Linn), Sunrise Water Authority (Happy Valley & Damascus), and City of Tigard.

*Saving Water Makes Cents!*

# home water audit kit

**For Testing Home Water Use**



*This kit includes: Toilet leak detection tablets • Flow meter bag • Drip gauge*

## CRWP Public Education and Outreach Coordinator

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Clackamas River  
Water Providers



*Working together to protect and conserve our drinking water.*

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# who are we?

**The Clackamas River Water Providers** is a coalition of the municipal water providers that get their drinking water from the Clackamas River and who are working together to conserve and protect our drinking water source. Combined we provide drinking water to almost 300,000 people in Clackamas County.

As Clackamas County continues to grow, so does the demand for high quality water. Learning how to conserve water at home plays a key role in making the best use of this precious resource we share. This audit kit will help you do just that.



## Where our Water Originates

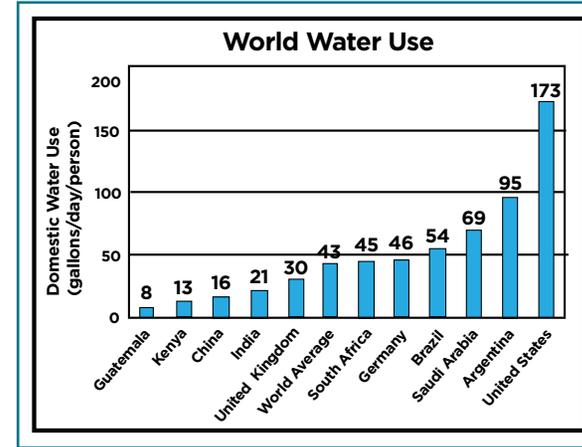
The Clackamas River begins on the slopes of Olallie Butte, a High Cascade volcano. The river flows 82.7 miles from its headwaters (elevation 6,000 ft) to its confluence with the Willamette River near Gladstone and Oregon City (elevation 12 ft).

The watershed is made up of 16 sub watersheds and drains more than 940 sq miles. More than half of its length it runs through forested areas over rugged terrain. The lower reaches flow through agricultural and densely populated areas. The watershed crosses two counties and includes federal land administered by the US Forest Service and BLM, state land, and private land.

Water is taken out of the river and treated for human consumption. Once water is treated it moves through a complex system of pipes, valves, and pumps to storage tanks or reservoirs. There it is stored until it is needed by homes and businesses in our communities.

## Water Use

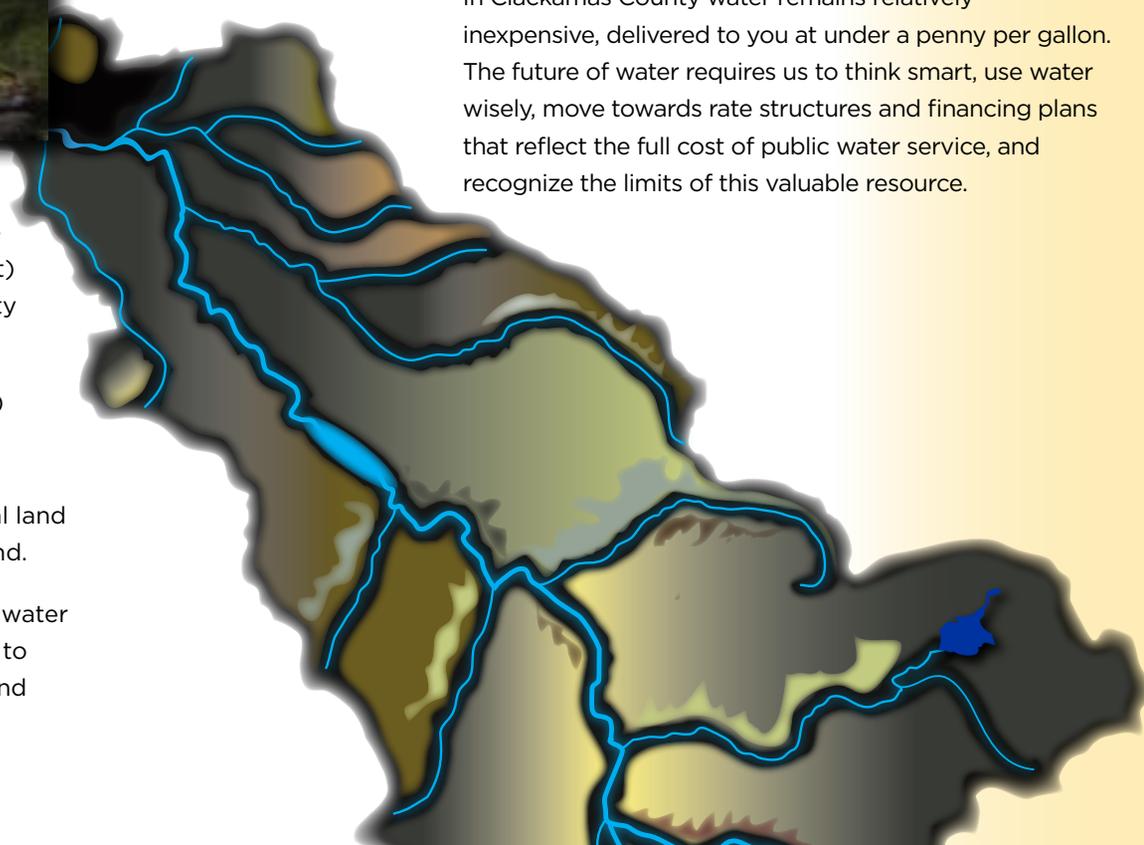
Water use varies enormously around the world. Across the United States, water use averages 173 gallons per person per day. The world average is just 43 gallons per person per day. In Clackamas County we use an average of 75 gallons per person per day.



## The Value of Water

A safe reliable water supply is critical to the success of any community. It creates jobs, attracts industry and investment, and provides for the health and welfare of citizens in ways ranging from disease prevention to fire suppression.

In Clackamas County water remains relatively inexpensive, delivered to you at under a penny per gallon. The future of water requires us to think smart, use water wisely, move towards rate structures and financing plans that reflect the full cost of public water service, and recognize the limits of this valuable resource.



# toilets **STEP #1**

Conserving water begins with understanding your own patterns of water use. This Home Water Audit Kit will help you look at your water use in terms of gallons and dollars.

## How much water does your toilet use?

To calculate how much water your toilet uses with each flush, you need to calculate the volume of water in the tank - or back of the toilet. Measuring volume is a simple calculation of the length x width x height of an object. With a toilet you will need to measure the height of water in the tank because not all tanks will completely empty of water when flushed. To measure the volume of your toilet follow these steps:

1. Remove the toilet tank lid and measure the internal length and width of the tank.
2. Measure the **height of the water** in the tank. Flush the toilet and measure the height of the water that remains in the tank before it refills (not all tanks will completely empty of water). Subtract the post-flush depth from the pre-flush depth to calculate the actual depth of the flush.
3. Place the numbers you measured in the formula boxes below and complete the calculation to determine the flush volume of your toilet. To account for water in the toilet bowl an additional 0.6 gallons per flush is added.



Toilet Water Use				
How to Calculate	Number of flushes	Gallons per flush	Flushes per day times Gallons per flush	
Typical Toilet	12	3.5 GPF	42 Gallons per day	
Toilet 1				
Toilet 2				
Toilet 3				
		<b>Total:</b>		

## Is your toilet leaking?

Lift the toilet tank cover and look at the mechanism inside. If you can see or hear water running, you could have a large leak (300 gallons per day). If you cannot see or hear water running, drop one of the leak detection tablets in the toilet tank. Do not flush. If the dye color appears in the toilet bowl within 10 minutes, you have a medium leak (150 gallons per day). If the dye color appears in the bowl after 10 minutes, you have a small leak (50 gallons per day).

$$\begin{array}{ccccccc}
 \boxed{\phantom{000}} & \times & \boxed{\phantom{000}} & \times & \boxed{\phantom{000}} & = & \boxed{\phantom{000}} & \div & \boxed{231} & = & \boxed{\phantom{000}} & + & \boxed{0.6} & = & \boxed{\phantom{000}} \\
 \text{Length in} & & \text{Width in} & & \text{Height of} & & \text{Volume} & & \text{Unit} & & \text{Tank} & & \text{Gallons} & & \text{Total gallons} \\
 \text{inches} & & \text{inches} & & \text{of water in} & & & & \text{Conservation} & & \text{Volume} & & \text{used in bowl} & & \text{per flush} \\
 & & & & \text{inches} & & & & \text{Factor} & & \text{(GPF)} & & & & \text{(GPF)}
 \end{array}$$

Toilet Leakage			
Your Home	Approximate gallons leaking per day:		
<b>Test Date:</b>			
Toilet 1			
Toilet 2			
Toilet 3			
<b>Total:</b>			

## **\$ CRWP Toilet Rebate Program \$**

Save more water by replacing your old water wasting toilet with a new EPA Watersense High Efficiency Toilet. Take advantage of the Clackamas River Water Providers (CRWP) Toilet Rebate Program and receive up to a \$100.00 rebate.

For more detailed rebate information, a full list of eligibility requirements and an application, visit our website at [www.clackamasproviders.org](http://www.clackamasproviders.org), email us at [christine@clackamasproviders.org](mailto:christine@clackamasproviders.org) or give us a call, at 503 723 3511.

# showers STEP #2

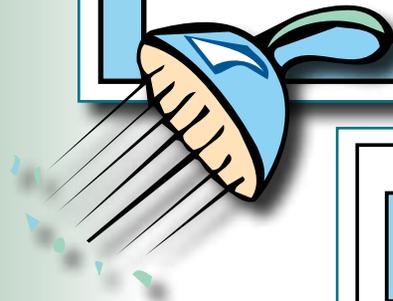
## How much water does your shower use?

Turn the shower on to the usual flow and hold the opening of the flow meter bag around the showerhead for exactly 5 seconds. Turn the water off quickly and note the water level on the bag (shown in gallons per minute). Enter the results in the “gallons per minute” column below.

Estimate how many minutes each day the showers are being used by your household.

Mark your estimate in the “minutes per day” column.

Shower Usage			
	Minutes per day	Gallons per minute	Gallons per day
How to calculate	# of minutes the shower runs each day	See the notes above	Minutes per day times gallons per minute
Typical Shower	10	2.5 gpm	42 gallons/day
Shower 1			
Shower 2			
Shower 3			
<b>Total:</b>			



### Is your shower leaking?

Hold the drip gauge under the leaking fixture for 5 seconds. Quickly remove it and note the leakage rate (gallons leaking per day).

Shower Leakage			
Your Home	Gallons leaking per day:		
Test Date:			
Shower 1			
Shower 2			
Shower 3			
<b>Total:</b>			

To request a free low flow shower head contact the CRWP at **503-723-3511** or email us at [christine@clackamasproviders.org](mailto:christine@clackamasproviders.org).

# faucets STEP #3

## How much water does your faucet use?

Turn the faucet on to the usual flow and hold the opening of the flow meter bag around the faucet for exactly 5 seconds. Turn the water off quickly and note the water level on the bag (shown in gallons per minute). Enter the results in the “gallons per minute” column below.

Estimate how many minutes each day the faucets are being used by your household. Mark your estimate in the “minutes per day” column.

Faucet Usage			
	Minutes per day	Gallons per minute	Gallons per day
How to calculate	# of minutes the faucet runs each day	See the notes above	Minutes per day times gallons per minute
Typical Faucet	8	3 gpm	24 gallons/day
Kitchen			
Bath 1			
Bath 2			
Other Faucet			
<b>Total:</b>			



### Faucet Leakage

Faucet Leakage			
	Gallons leaking per day:		
Test Date:			
Kitchen			
Bath 1			
Bath 2			
Other Faucet			
<b>Total:</b>			

### Is your faucet leaking?

Hold the drip gauge under the leaking fixture for 5 seconds. Quickly remove it and note the leakage rate (gallons leaking per day).

To request a free low flow faucet aerator contact the CRWP at **503-723-3511** or email us at [christine@clackamasproviders.org](mailto:christine@clackamasproviders.org).

# baths STEP #4

## How much water does your bath use?

It takes an average of 35 gallons to fill a bathtub. Not every household uses their bathtub so only fill out the information below if someone in your household uses it. If your household takes less than one bath each day, use a fraction to indicate the number of baths. For example, if you only use your tub to wash your dog on Monday nights, you use 0.14 baths each day (1 bath divided by 7 days of the week).



Bath Usage			
	Baths per day	Gallons per bath	Gallons per day
Full Tub		35	
Half Tub		18	
Other			
		<b>Total:</b>	

# dishwasher STEP #5

## How much water does your dishwasher use?

Dishwashers vary in how much water they consume. Energy Star labeled dishwashers are more water efficient than non-labeled machines. If your household washes less than one dishwasher load each day, use a fraction to indicate the number. For example, if you wash 2 dishwasher loads each week, you wash .3 loads each day (2 loads divided by 7 days).



Dishwasher Usage			
	Loads per day	Gallons per load	Gallons per day
Energy Star		5	
Dishwasher		10	
		<b>Total:</b>	

## Conservation is Important

We seem to have plenty of water in our area – so why do we need to conserve it?

It may feel like it rains all the time – but we get very little rainfall in the Clackamas watershed during the summer months. This dry season is also the time when people start using water outdoors – causing demand for water to double or even triple. For our water systems, summer is the most important time to conserve water, however saving water indoors all year round also plays a very important part. Here are some other reasons why conservation is a good idea:

- **It Saves Money.** Every drop of water you use will eventually show up on your water and sewer bill. A silent leak can waste as little as a few gallons a day, or as much as thousands of gallons a month. Each gallon costs money.

- **It Saves Water.** As the population in our area continues to grow and weather patterns change, the demand for high-quality water increases. By working together to conserve water, we can postpone the need for costly new water projects.

- **It Helps Fish.** During the summer months the Clackamas River is at its lowest flows resulting in warmer water temperatures, and altered habitat for fish. By conserving water we leave more water in the river for fish. Because Steelhead, Coho and Chinook Salmon are listed as federally threatened species, and we are working hard to ensure that both fish and people receive the water they need.

- **It Saves Energy.** Each gallon conserved also contributes to reductions in the carbon footprint of potable water production. It also takes energy to heat water for showers. Therefore, conserving water simultaneously conserves energy and reduces our impact on the climate.

# washing machines STEP #6

## How much water does your washing machine use?

The amount of water a washing machine uses can vary by the size of the machine. Generally, a top-loading machine uses between 40-60 gallons per load. A front-loading machine uses less water - around 20 gallons per load. Take a look at your washing machine. Do you load laundry into the machine from the top or the front?

If your household washes less than one load of laundry each day, use a fraction to indicate the number. For example, if you wash 2 loads of laundry each week, you wash .3 loads each day.

### Washing Machine Usage

	Loads per day	Gallons per load	Gallons per day
Top-Loader		50	
Front-Loader		20	
<b>Total:</b>			



## **\$ CRWP Washing Machine Rebate Program \$**

Save more water by replacing your old water wasting clothes washer with a new *Energy Star* certified residential clothes washer. Take advantage of the Clackamas River Water Providers (CRWP) Rebate Program and receive a \$75.00 rebate.

For more detailed rebate information, a full list of eligibility requirements and an application, visit our website at [www.clackamasproviders.org](http://www.clackamasproviders.org), email us at [christine@clackamasproviders.org](mailto:christine@clackamasproviders.org) or give us a call, at **503 723 3511**.

# results STEP #7

## Summarize The Results

Total number of people in your household = \_\_\_\_\_

Calculate your household's indoor water use per year:

Fixture	Gallons per day from results	Gallons per year (per day x 365)	Cost per gallon* (water & sewer)	Cost per year (gallons per year times \$.0123)
Toilets			\$0.015	
Showers			\$0.015	
Faucets			\$0.015	
Leaks (toilets/showers/faucets)			\$0.015	
Baths			\$0.015	
Dishwasher			\$0.015	
Washing Machine			\$0.015	
<b>Total:</b> Household water use (indoor)			\$0.015	

\* Average cost for Portland metro area.

## Ideas for conserving water in your home:

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