City of Tumwater, Washington | 2016

Water Resources | Programs & Utilities

Public Works Department | Water Resources | 555 Israel Road SW | Tumwater, WA 98501 | (360) 754-4140 | www.ci.tumwater.wa.us/utilities

Drinking Water

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What is It?

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Where does our drinking water come from?

As a Tumwater utility customer, the water that comes out of your tap is from groundwater sources. Groundwater is located beneath the Earth's surface in spaces between layers of sand and gravel, called aquifers. Groundwater is recharged when precipitation soaks through the ground in a process called infiltration. Pollution to groundwater can occur when toxic substances are allowed to infiltrate. Groundwater is withdrawn by wells and treated before being delivered through a pressurized system to your household taps. This water is stored in reservoirs to meet high demand and add pressure to assist in distribution. The City of Tumwater currently operates 12 wells to ensure an adequate water supply for customers. This report contains the information on how you can help to protect our water.

The City of Tumwater rigorously tests its water supply to ensure high quality. See the annual Water Quality Testing Results section on page 3 of this report for more information. Reclaimed water is used water that has been cleaned to a high level, so it can be used for beneficial purposes. Washington State defines four classes of reclaimed water: A, B, C and D. Locally, LOTT Clean Water Alliance, our local wastewater utility, produces only Class A reclaimed water, the highest quality, which can be used for a wide variety of non-drinking uses, such as irrigation (golf courses, parks and landscaping), decorative fountains and ponds, streamflow and wetland enhancement and groundwater recharge. Reclaimed water flows through a system of purple-colored pipes which are separate from drinking water and wastewater pipes.

What is wastewater?

Wastewater refers to any water that needs cleaning after it is used and sent down an indoor drain. It includes water from dish washing, laundry, baths and showers, toilets, commercial and industrial uses and countless other sources. A wastewater pipe system, called a sanitary sewer system, collects and conveys wastewater from Tumwater homes and businesses, except those on septic systems, to the LOTT Clean Water Alliance treatment plant in downtown Olympia. LOTT "cleans" wastewater through both physical and

A message from the Mayor

It is my pleasure to offer you the City of Tumwater's Water Resources Programs & Utilities Report. The report details our water quality sampling results collected during 2015 and provides information about our other utility services and programs.

I am proud to announce that, once again, our drinking water is safe and meets all federal and state regulations for water quality. The dedicated City staff who operate and maintain your water system continually strive to ensure that the water delivered to your tap is of the highest quality possible.



Pete Kmet, Mayor

All water resources are interconnected. Therefore, we are bringing together information for all our utilities in one report — drinking water/reclaimed water, stormwater and wastewater. Each utility operates as a business within the City budget, where fees for services must pay for operating and infrastructure expenses.

The first reclaimed water project in Tumwater is online through a partnership between the City and LOTT Clean Water Alliance. The project brings the highest quality reclaimed water to the golf course for irrigation and the new Deschutes Valley Park next to East T Street.

Please take a moment to read the articles to learn how we can all work together to protect, preserve and conserve our water resources. If you have any questions about our utility systems or programs, please call (360) 754-4140.

Where Does Our Water Go? U.S. RESIDENTIAL WATER USE

biological processes.

What is stormwater? What is surface water?

Stormwater is rain and snow melt that flows to nearby waterways. Often, it flows off impervious surfaces, runs down the street and then into stormdrains. Ideally, before flowing into the nearest stream or lake, this runoff that flows into the storm drain is intercepted by a stormwater pond or other treatment facility, which captures pollutants present in the water. Stormwater ponds help sediments and pollutants to settle out of the water and provide a place where rainfall runoff can safely infiltrate back into surface or groundwater, thereby reducing water pollution, erosion and flooding.

Surface water is the fresh and salt water system found on the surface of the Earth, including creeks, streams, wetlands, lakes and bays. Surface water helps to recharge groundwater aquifers, and groundwater helps to recharge our streams and lakes.

The Storm Drainage Utility, a ratepayer-financed program of the Tumwater Public Works Department, reduces flooding, erosion and pollution caused by stormwater runoff while protecting and enhancing aquatic habitat.

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Stormwater utility protects water and habitat

Rain keeps the Northwest green, but stormwater runoff picks up pollutants (oil dripping from cars, excess fertilizer from yards, fecal coliform from pet waste, and more)

Should I be concerned about lead in Tumwater's drinking water?

With lead in drinking water currently making headlines across the country, water customers may be wondering about the safety of our water supply. The City of Tumwater continuously monitors the water it provides to its customers to ensure quality and safety.

Our water supply is routinely tested and adheres to high quality standards set by the Washington Department of Health and the E.P.A. No lead has been detected in the source or our drinking water. There are no known lead pipes in the City's water distribution system.

Lead in plumbing fixtures within older homes or businesses poses the greatest possible risk. The City of Tumwater performs lead monitoring at the tap every three years. The next round will be performed this summer.

The only way to know with certainty if you have lead at the tap is to have your water tested by a certified laboratory. If you are concerned, Tumwater Public Works can provide you with a list of certified labs. Other ways you can minimize your potential exposure include purchasing a certified water filter that removes lead, making sure you run water to flush the system, and avoiding consuming water from the hot water tap, where lead is more likely to be present.

For information, contact Public Works at (360) 754-4140.

Pick up your copy!

For Business

For Homes



Thurston Green Business.com Find out where to shop "green" or learn how to get your business recognized for green business practices.



Using mulch is one of the easiest ways to beautify your landscape, but the benefits are more than eye-pleasing. Organic mulches, such as wood chips, bark, leaves and compost benefit having to be replaced as often as organic mulches.

Benefits of mulch:

Maintains soil moisture; minimizes watering needs

Draining Your Pool or Hot Tub?

It is illegal to drain any water containing chlorine or other chemicals directly to any water body, including storm drains, or over any surfaces leading to water bodies or storm drains.

Follow these tips to obey the law and avoid polluting our waterways:

- 1. Turn off the chlorination system or stop adding chlorine and other chemicals a minimum of ten days prior to draining. Dechlorinating tablets may be used to speed up the dechlorination process.
- 2. For large amounts of water (pools), the best option is to drain directly to a wastewater system if you are on sewer. You can tell if you are on sewer if there are City and LOTT sewer charges on your water bill. Since residential sewer charges are a flat rate, there is no extra charges for disposing of large amounts of water from residential property.
- 3. For small amounts of water (hot tubs), or if you are on a septic, drain small amounts at a time to grass, landscaping or gravel. Do not allow water to flow off your property, and never discharge to a septic system.
- 4. The best time to discharge water from pools and hot tubs to the sewer system is mid-day (non-peak hours) during the summer months

For further information, please contact **Tumwater Public Works** at (360) 754-4140.

REPORT SPILLS/DUMPING TO WATERWAYS. INCLUDING STORM DRAINS, 24-HRS/DAY

Tumwater Public Works Operations (360) 754-4150 WA State Department of Ecology (360) 407-6300

Save Water and Money This Summer!

In Tumwater, the largest residential use of water in the summer is directed to lawns, gardens and landscapes. You can help save this precious summer resource and save yourself some money by following these tips:

Lawns

- Mow your lawn to a height of 2-3 inches. This helps protect your lawn from "sunburn" and encourages deeper roots. Grass roots tend to be the same depth as the top growth, and longer roots make for healthier grass that needs less frequent watering.
- Never fertilize an established lawn in the summer. This just encourages short-term growth rather than long-term health, increases water needs and creates more work to mow. Wait until fall to fertilize.
- Water infrequently, but deeply. This encourages roots to grow deeper, resulting in a healthier lawn. Use a water gauge (free from your City water utility) to measure how much water you apply. The basic rule of thumb is to apply one inch of water per week. Since Tumwater has sandy soils, you may need a bit more. Experiment with using less and less water. You might be surprised with how little is actually needed!
- Use a timer on your irrigation system or sprinkler, and set it for the amount of time it takes to apply 1" of water. Free hose timers and irrigation system rebates are available from your City water utility. Water early in the morning or evening to reduce evaporation.
- Consider letting your lawn go dormant for the summer. Letting your lawn turn golden will not kill your grass! It is merely "sleeping" and will revive with the fall rains. If the summer is as hot and dry as expected, do apply 1/2" of water every 2-3 weeks to protect your lawn until the fall rains return.

A word about your Toilet ...

Baby wipes, cat litter, ations, paper tow

Landscaping

- Use native or water-wise plants in your landscape. Not only are they beautiful, but native plants are especially suited for our climate and require no watering once established. They have the added benefit of being disease-resistant and attracting birds and butterflies.
- Apply a 2-4" layer of mulch to reduce evaporation and protect your plants from extreme weather.

Gardens

- Amend garden soil with compost to add nutrients and help retain moisture.
- Use an organic mulch around plants to retain moisture and block thirsty weeds.
- Use a drip irrigation system to deliver water directly to the roots of plants.

What does this odd list have in common? These are items people often flush down their toilets. Just because you can flush something down the toilet does not mean you should flush it. These and other items cause clogs and backups in our sewer system, and they're not good for septic systems either!

If the clog happens between your house and the street, it is your responsibility to make the often expensive repair. If it happens in the City lines, it still costs ratepayers through their utility fees. Plus, a clog has the potential to cause a sewage spill that could threaten the health of humans and wildlife.



- Controls weeds (without pesticides!)

In addition, organic mulch:

- Improves soil aeration, structure and drainage
- Can improve soil fertility

Proper mulching technique:

- and disease
- Keep mulch level; do not mound around plants

- Rake mulch periodically to keep it fresh



What can you flush? The answer is simple: only flush what comes out of your body and toilet paper! Everything else belongs in the trash.

Water Savings Success

City of Tumwater Water Customers Curb Consumption!

The City of Tumwater has exceeded its water conservation goal! In 2008, the City of Tumwater Water System had an average consumption of 400 gallons per day per connection. In 2015, the City of Tumwater Water System reduced that consumption to an average of 340 gallons per day per connection. This represents a 15% reduction in water use per connection. Thank you to all of our water customers for the conservation measures they have implemented!

While the population has increased, water demand per connection has decreased. This is due to a combination of water conservation efforts and increased efficiency in modern plumbing fixtures. As our population continues to grow, we will need to find new sources of water and/or find ways to use the water we have more efficiently. Building the infrastructure for new water sources is expensive, so increasing the efficient use of water will save ratepayers money in the long run.

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While we are off to a great start, the City of Tumwater will be working to set a new water savings goal within the next year. Please continue to do your part by maximizing your use of water conservation measures. Contact the City for information on incentives and rebates to help with water conservation in your home or business.

For more information about water savings goals or water conservation incentives and rebates, contact City of Tumwater Public Works at (360) 754-4140.

For additional information on water conservation, including how to calculate your potential water savings for installing water savings devices, visit the EPA website at https://www3.epa.gov/watersense/index.html

Good News! Tumwater's drinking water quality is excellent

The City of Tumwater tests your water supply for more than 100 different substances. In 2015, drinking water quality in Tumwater was excellent, and our water supply systems continues to meet or exceed all drinking water standards!

Water Quality Testing Results

Your drinking water comes from wells located throughout the City and the immediate vicinity. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals as well as substances left by animals or humans. Because our soils are very sandy in most areas, contaminants can travel quickly and easily through groundwater. Contaminants that may threaten human health are regulated.

The EPA has set safety limits, called the MCL and the MCLG (see definitions in right-hand column), for numerous compounds considered harmful to humans. Municipal water systems are required to disclose levels detected, no matter how low, for all of these chemicals. The table below shows the regulated compounds detected between 2010 and 2015. All samples were well below legal limits. Substances for which there were no detections, with the exception of total coliform bacteria, are not listed.

		Primar	y Standards Reg	gulated	by EPA	
	Allowed Level (MCL)	Ideal Goal (MCLG)	Amt Detected/ Range of Detections	Sample Date	MCL Violation	Typical Source of Contamination
Total Coliform Bacteria	1 positive sample/ month	0	No Detections (ND)	2015	No	Naturally present in the environment
Nitrate as Nitrogen	10	10	0.29 - 1.8	2015	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion from natural deposits
Total Trihalomethanes	N/A ¹	80 ppb²	ND - 5.7 ppb	2015	No	Reaction of chlorine with naturally occurring organic matter
Total Haloacetic Acids	N/A	60 ppb	ND - 1.5 ppb	2015	No	Reaction of chlorine with naturally occurring organic matter
Barium	2	2	0.004	2015	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	0.1	0.1	ND - 0.44 ppb	2015	No	Discharge from steel and pulp mills; erosion of natural deposits
Chlorine Residual	4	Detectable amt of 0.05 ppm or higher	0.1 - 0.37	2015	No	Chlorine is used as a disinfectant in the water treatment process

Secondary Standards Regulated by EPA

Chloride	N/A	250	2.6	2015	N/A	Naturally occurring in the environment; geology, natural weathering
Copper	N/A	1	0.011	2015	N/A	Erosion of natural deposits
Iron	N/A	0	0.66	2015	N/A	Naturally occurring in the environment; geology, natural weathering
Manganese	N/A	0.05	0.01	2015	N/A	Naturally occurring in the environment; geology, natural weathering
Sulfate	N/A	250	7.5	2015	N/A	Naturally occurring in the environment
Total Dissolved Solids (TDS)	N/A	500	104	2015	N/A	Naturally occurring in the environment; geology, natural weathering
Zinc	N/A	5	0.025	2015	N/A	Naturally occurring in the environment; geology, natural weathering

			Radionucli	des		
Gross Beta deposits	4 millirems per year	50 pCi/L³	ND - 2.73 pCi/L	2015	No	Decay of natural and man-made of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation
		Ui	nregulated Cont	taminar	nts	
Chlorate	N/A	N/A	ND - 48 ppb	2015	N/A	Naturally occurring in the environment; geology, natural weathering
Hexavalent Chromium	N/A	N/A	0.161 - 0.574 ppb	2015	N/A	Discharge from steel and pulp mills; Erosion of natural deposits
Strontium	N/A	N/A	57 - 138 ppb	2015	N/A	Naturally occurring in the environment; geology, natural weathering
Vanadium	N/A	N/A	0.9 - 2.9 ppb	2015	N/A	Naturally occurring in the environment:

geology, natural weathering

					- /
Action	Amount	Number of sites	Range	Sample	Typical Source

What We Look For in Your Water

- Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic analytes, such as salts and metals, can occur naturally in soils or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, coming from a variety of residential and agricultural sources, can easily infiltrate into the groundwater if over-applied or used incorrectly.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum products. They can also come from gas stations, dry cleaners, urban stormwater runoff and septic systems.
- Radioactive contaminants that are naturally occurring or the result of oil and gas production and mining activities.
- To ensure that tap water is safe to drink, the EPA and the Washington State Department of Health regulate the maximum allowable amount of certain substances in water provided by public water systems. The U.S. Food and Drug Administration and/or Washington State Department of Agriculture regulations establish limits for contaminants in bottled water, which provide the same level of protection.
- Drinking water may reasonably be expected to contain at least small amounts of some substances. The presence of a minute amount of a contaminant does not necessarily indicate that water poses a health risk.
- Some people may be more vulnerable to contaminants in drinking water than the general population. Persons with compromised immune systems, such as those undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders and some elderly and infants, can be particularly at risk. These populations should seek advice about drinking water from their health care providers.
- For more information about groundwater, drinking water and possible contaminants including cryptosporidium and other microbial contaminants, and potential health effects, visit www. epa.gov/water, or call the EPA Safe Drinking Water Hotline at 1 (800) 426-4791.

Definitions

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water, below which there is no known risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible, using the best available treatment technology.

Parts Per Million (ppm): Parts per million is measured in milligrams per liter (mg/L). One ppm is approximately equal to 1 drop in 22 gallons of water.

Parts Per Billion (ppb): Parts per billion is measured in micrograms per liter (µg/L). One ppb is approximately equal to 1 drop in 22,000 gallons of water.

Who Monitors Your Water?

U.S. Environmental Protection Agency (EPA) sets national

	Level	Delected	Level (AL)		Date	or containination
Copper	1	90% of the homes tested had copper levels less than 0.3087 mg/L	No site result above AL out of 38 sites sampled	0 - 0.665	2013 Every 3 years	Corrosion of household plumbing
Lead	0.015	90% of the homes tested had lead levels less than 0.003 mg/L	No site result above AL out of 38 sites sampled	0 - 0.005	2013 Every 3 years	Corrosion of household plumbing
	State	Regulated	d Parameters			- Martin

Detected Parameter	Allowed Level (MCL)	Ideal Goal (MCLG)	Amt Detected/ Range of Detection	Sample Date	MCL Violation
Sodium	NA	20 ppm	5.5	2015	No
Turbidity	N/A	1.0 NTU4	0.37 NTU	2015	No
Electrical Conductivity	700 µS/cm⁵	700 µS/cm	133 µS/cm	2015	No
Hardness as Calcium Carbonate	N/A	N/A	53.8	2015	N/A

All units in mg/L (ppm) unless otherwise stated ${}^{1}N/A = not applicable {}^{2}ppb = parts per billion {}^{3}pCi/L = {}^{4}NTU = Nephalometric Turbidity Unit {}^{5}\mu S/cm = microsiemens per centimeter$



standards for more than 100 potential drinking water contaminants under the Safe Drinking Water Act. Visit the EPA's drinking water web site, <u>www.epa.gov/safewater</u>, or call the EPA Safe Drinking Water Hotline at 1 (800) 426-4791.

Washington State Department of Health (DOH) enforces national and state health standards. The Southwest Regional Drinking Water Office can be reached at (360) 236-3030.

Washington State Department of Ecology (DOE) enforces national and state environmental standards. Contact the DOE Southwest Region Office 24-hour Hotline at (360) 407-6300 to report a spill.

Tumwater Public Works Department operates the water system, conducts water quality testing and protects the City's water supply. Contact Public Works maintenance at (360) 754-4150 or Water Resources at (360) 754-4140.

Food and Drug Administration (FDA) and the WA Department of Agriculture establish limits for contaminants in bottled water that must provide the same protection for public health.

Customers provide insight on water quality. Your questions, concerns and observations are valuable to us. To learn more about current water quality issues and decision-making processes, make comments or ask questions, contact Water Resources Program Manager Dan Smith at (360) 754-4140.

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Get Involved with Stream Team!



The Stream Team program is a free, family-friendly volunteer opportunity for local citizens to become involved in learning about and protecting our water resources. Stream Team volunteers participate in educational workshops and field trips, marking storm drains, planting trees, monitoring habitat and teaching others. There is no minimum time obligation to participate in Stream Team.

We have some great activities coming up this summer, including a **field class on dragonflies**, training to become a **Salmon Steward at the Tumwater Falls** Chinook salmon run, **marking storm drains** and **monitoring stream bugs on Percival Creek**. Other summer family-friendly events include **Marine Creature Monday**, where divers bring sea creatures up for children (and adults) to touch. There is also an opportunity to participate in a **beach seine** to pull sea creatures in using a large net. (All animals are carefully handled and replaced back in their habitat.)

Throughout the year, Tumwater Stream Team has other fun volunteer events, including **tree planting** and educational activities to **welcome the Chinook salmon** back to the Deschutes River and to **release juvenile Chinook** into the river.

To sign up for a Stream Team event, go to **www.streamteam.info**. For more information, contact Tumwater Stream Team Coordinator, Debbie Smith at **dmsmith@ci.tumwater.wa.us** or (360) 754-4148.





What's the best way to protect our water resources while washing your vehicle? Use a commercial car wash! Local car washes conserve water by filtering and reusing wash water. Water contaminated with dirt, oil and other pollutants from your vehicle is sent down to the LOTT Sewer Treatment plant. This protects our local streams, lakes and groundwater, the source of our drinking water.

City of Tumwater is giving away FREE car wash coupons! The first 100 Tumwater utility customers who come to the City's Public Works Dept. will receive a coupon good at a number of Puget Sound car washes, including the two located in Tumwater. Coupon offer is limited to one per household.

Let Us Help Your Business Be WaterSmart

The WaterSmart Technology Program offers rebates to business and institutional sewer customers who install water-saving fixtures and equipment. **Rebates cover up to 75% of the installed project costs.**

Contact Tumwater Water Resources at (360) 754-4140 to find out how your business may qualify for new appliances and fixtures that not only save your business money, but it will also save our precious water resources!



City of Tumwater Public Works Department Water Resources Program 555 Israel Road SW Tumwater WA 98501

OR CURRENT RESIDENT

If you are a property manager, please share this report with your Tumwater tenant. Thank you!

Emergency Water Shut-off Service

If you need your water shut off immediately, call (360) 754-4150 – any time day or night, including holidays. Please do not try to access the meter to shut it off. Any damage caused by a customer to a meter will be the financial responsibility of the property owner.

Free pet waste resources

Don't Let Your Pet Pollute!

Water conservation devices available to Tumwater water customers

Free Indoor and Outdoor Water Saving Kits



Free Smart Watering DVD (Irrigation Systems)

Rain Barrel \$10 Rebate

Thank you for helping to keep our waters clean!

For more information and tips on cleaning up after your pet, contact your local stormwater utility, or go to www.streamteam.info/ actions/petwaste



"Don't Let Your Pet Pollute" brochures and FREE pet waste stations are available for neighborhoods and multi-family housing. Contact Debbie Smith at 360-754-4148 or dmsmith@ci.tumwater.wa.us.

Free On-Leash Dog Waste Bag Dispenser

Pick up your FREE dispenser with bags.

Limit 1 per household. Must be a Tumwater utility customer.



Indoor kit: High-efficiency shower head, faucet ae

shower head, faucet aerators and toilet leak detection tablets.

Outdoor kit: Heavy duty adjustable hose nozzle

Limit 1 per household. Must be a Tumwate utility customer. See below for more information.

Timers



Limit 1 per household. Must be a Tumwater utility customer. See below for more information.

High-Efficiency Toilet Program

LOTT Clean Water Alliance sewer customers can receive financial help to replace older non-efficient toilets. Programs available for residential, multi-family units or business customers.



LOTT Clean Water Alliance sewer customers can receive a \$50 rebate on the purchase of a qualified high-efficiency washing machine.

WashWise Program

Details and forms for toilet replacement and washing machines at www.lottcleanwater.org/rebates.htm

To learn about additional water conservation rebates and other money-saving programs, or to find out if you qualify, please contact Tumwater Water Resources at (360) 754-4140. Pick up your water conservation devices at Tumwater City Hall, Public Works Counter (in basement), 555 Israel Road SW, Monday through Friday (except holidays), 8 a.m. to 5 p.m., and start saving water today!

E.

Get sprinkler savvy! *Beautiful Landscapes through Smart Watering* will help you learn how to maintain a beautiful yard and keep your water bill to a minimum.

Limit 1 per household. Must be a Tumwater utility customer. See below for more information.

Collect rainwater for reuse in your home and yard. Rebate valid for up to six barrels per household.



