

A close-up photograph of a chrome faucet pouring clear water into a clear glass. The water is captured in mid-pour, creating a dynamic, slightly blurred stream. The glass is held by a hand, and the background is dark and out of focus. The text 'Water Quality Report' is overlaid in a bold, black, sans-serif font with a white drop shadow.

Water Quality Report

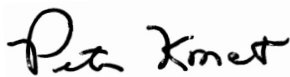
**City of Tumwater
2012**

A Word from Mayor Kmet

It is my pleasure to offer you the City of Tumwater's annual Drinking Water Quality Report. The report details water quality sampling results collected during 2011, and I am proud to announce that, once again, our drinking water is of excellent 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.

The City continues to make long-term investments to ensure our customers have access to clean, safe potable water. Following the purchase of the former Brewery water rights, which would have expired had they not been acquired, the City is partnering with both Olympia and Lacey to redevelop the former Brewery wellfield and put those rights to use for our communities. Securing the Brewery water rights was a step in the right direction, but our work is not done. Our community is expected to nearly double in size in the next twenty years, so we need to continue to maximize production from existing wells while we seek new water rights to serve this growing need.

Please take a moment to review this annual summary of water quality monitoring and information regarding ways in which we can all work together to protect, preserve and conserve our water resources. If you have any questions regarding our water system, including additional ways that City Water Resources staff can help you conserve water around your home or business, please contact your Tumwater water utility at 360-754-4140.



Pete Kmet
Mayor



Who Watches Your Water?

U.S. Environmental Protection Agency (EPA) sets national standards for more than 100 potential drinking water contaminants under the Safe Drinking Water Act. Visit the EPA's drinking water web site, www.epa.gov/safewater, or call the EPA Safe Drinking Water Hotline at 1-800-426-4791.

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

Washington State Dept of Ecology (DOE) enforces national and state environmental standards. Contact the DOE Southwest Region Office at 360-407-6300. To report a spill into any of our waterways, call the Washington Emergency Management Division at 1-800-258-5990.

Tumwater Public Works Dept operates the water system, conducts water quality testing and protects the City's water supply. Contact Steve Craig, Operations Manager, at 360-754-4150.

Food and Drug Administration (FDA) and the WA Dept 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 Dan Smith at 360-754-4140.

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Want to stay connected with what's happening in your City?

Sign up to join one or more of the City's email lists at www.ci.tumwater.wa.us. Remain up-to-date on Parks & Recreation activities and events, road construction projects, press releases, Golf Course events, meeting agendas and other breaking news from your City. **Join Now and Stay Connected!**

Your Drinking Water

The City of Tumwater regularly tests your water supply for more than 100 different substances. In 2011, overall drinking water quality in Tumwater was excellent, and our water supply continues to meet or exceed all drinking water standards!

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 and potential health effects, visit <http://water.epa.gov/drink/index.cfm> or call the EPA Safe Drinking Water Hotline at 1-800-426-4791.

Chemical and Bacteriologic Testing Results

Nitrates – Routine testing for nitrates, a chemical compound commonly found in residential areas using septic tanks and in agricultural areas with livestock or using fertilizers, revealed levels of nitrates well below the Maximum Contaminant Level Goal (MCLG) of 10 ppm. Reducing the use of fertilizer and properly maintaining septic tanks helps lower nitrate levels.

Bacterial – The City conducts sampling for bacterial presence throughout the water system 30 times each month. Coliform is an indicator that conditions may be present that

are conducive to growth of bacteria in the system. **There were no detections of bacteria during the 2011 sampling.**

Disinfectant By-Products – As a disinfected system, the City is required to sample the groundwater for disinfectant by-products (DBPs) quarterly. DBPs are the by-product of chlorine reacting with naturally occurring organic matter in the distribution system. In 2011, the City detected trace amounts of DBPs at levels far below the EPA's level of concern for drinking water.

Water Use Efficiency

The City of Tumwater is committed to the efficient use of our water resources. For the 2010-2015 planning period, the City Council established a water conservation goal that would reduce consumption from 2010 levels by 110,280 gallons per day by the end of 2015. Since 2010, water use has been reduced by more than 69,444 gallons per day! The City is proud of the conservation efforts of its customers.

Water Quality Table

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 may travel quickly and easily through groundwater to city wells. Contaminants that may threaten human health are regulated.

The EPA has set safety limits, called the MCL and the MCLG, 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 in 2011. During 2011, all samples were well below legal limits.

Primary Standards Regulated 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/mo.	0	No Detections (ND)	2011	No	Contamination from mammals naturally present in the environment
Nitrate as Nitrogen	10 ppm ¹	10 ppm	0.80 - 1.83 ppm	Oct 2011	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion from natural deposits
Total Trihalomethanes	0.080 ppm	N/A	ND - 0.0054 ppm	2011	No	Reaction of chlorine with naturally occurring organic matter
Total Haloacetic Acids	0.060 ppm	N/A	ND - 0.0011 ppm	2011	No	
Chlorine Residual	4.0 ppm	Detectable amt. of 0.05 ppm or higher	0.04 - 0.75 ppm	2011	No	Chlorine is used as a disinfectant in the water treatment process

Secondary Standards Regulated by EPA

Chloride	250 ppm	N/A	3.6 - 4.1ppm	2010		Naturally occurring in environment; geology, natural weathering
Sulfate	250 ppm	N/A	2.9 - 4.8ppm	2010		Naturally occurring in the environment

State Regulated

Turbidity	1.0 NTU ³	N/A	ND - 0.14 NTU	2010		Naturally occurring in the environment
Sodium	20 ppm	N/A	5.88 - 6.95 ppm	2010		
Hardness	N/A	N/A	45.0 - 70.1 ppm	2010		
Conductivity	700 µS/cm ⁴	N/A	127 -177 µS/cm	2010		

Lead and Copper (Taken at Customer Tap)

	Action Level (AL)	Amount Detected	Sites above Action Level (AL)	Range	Sample Date	Typical Source of Contamination
Copper	1.3ppm	90% of homes tested had levels less than .034 ppm	Zero sites above AL (31 sites sampled)	0-0.62 ppm	2010 (taken every 3 years)	Corrosion of household plumbing
Lead	15ppb ⁵	90% of the homes tested had levels less than 9 ppb	One site above AL (31 sites sampled)	0-25 ppb		

¹ppm = parts per million ²pCi/L = picocuries per liter ³NTU = Nephelometric Turbidity Unit
⁴µS/cm = microsiemens per centimeter ⁵ppb = parts per billion

Table Definitions

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.

Non-Acute Violation: An exceedence of state regulations that poses a possible or less than immediate risk to human health.

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

Our Source of Drinking Water is Lead Free

The source of our drinking water, groundwater, does not contain lead. City of Tumwater is required to test our water supply for lead at the household tap every three years, testing representative samples from older Tumwater residences. From the last test in 2010, lead levels at the household tap were under the action level threshold for all but one residence. (See table at left.)

In Washington State, lead in drinking water comes primarily from materials and components used in household plumbing. The more time water has been sitting in pipes, the more dissolved metals, such as lead, it may contain. Elevated levels of lead can cause serious health problems, especially in pregnant women and young children.

To help reduce potential exposure to lead: for any drinking water tap that has not been used for six hours or more, flush water through the tap until the water is noticeably colder before using for drinking or cooking. You can use the flushed water for watering plants, washing dishes or general cleaning. Only use water from the cold water tap for drinking, cooking and, especially, making baby formula. Hot water is likely to contain higher levels of lead.

If you are concerned about the level of lead in your water, you may wish to have your water tested. Information on lead in drinking water is available from EPA's Safe Drinking Water Hotline at www.epa.gov/safewater/lead or 1-800-426-4791.

If your home was built prior to 1986 and you would like to be considered to be a testing site for the next City of Tumwater lead testing in 2013, please contact Tim Wilson, Public Works Dept Water Resource Specialist at 360-754-4140. If you are selected for the testing sample, the test will be conducted at no charge.



Save Water and \$\$\$ at Home!

Tumwater water customers are eligible to receive FREE: one shut-off spray nozzle for hoses, one hose timer, one rain gauge, one indoor water-saving kit and a rebate of \$10 each on the purchase of up to six rain barrels!

Drop by the Public Works Dept in Tumwater City Hall on any weekday (except holidays) between 8:00am and 5:00pm to pick up items.

Need a new Washer?

LOTT sewer customers can receive a \$50 rebate on the purchase of an approved, water-efficient washing machine. Rebates are also available for commercial customers providing coin-operated units (multi-family developments and laundries).

FREE Toilets for Tumwater Customers

Tumwater's 2012 conservation program offers free toilet replacement programs. Tumwater water customers can receive help replacing older non-efficient toilets. The program has two components, *both applying to toilets with flush volumes of three gallons or higher:*

- Residential customers can receive vouchers for new toilets.
- Institutional, commercial or multi-family customers can receive high-efficiency units ordered through Tumwater Water Resources.

Available to qualified customers on a first-come, first-served basis.

To learn about additional water conservation rebates and other money-saving programs, contact Tumwater Water Resources at 360-754-4140.

Spill Reporting 24-hour Hotlines

- ◆ Tumwater Public Works Emergency Line 360-754-4150
- ◆ WA Dept of Ecology SW Regional Office 360-407-6300
- ◆ WA Emergency Management Division 1-800-258-5990

Hazo House

For FREE disposal of hazardous household products, visit the Hazo House at 2418 Hogum Bay Rd NE in Lacey. Hours are Friday - Tuesday, 8am - 5pm. Call 360-867-2491 for more information.

Help Protect Our Local Water!

Tumwater Stream Team helps protect and enhance the water resources and associated habitats and wildlife within the City of Tumwater through citizen education and action.

Tumwater Stream Team volunteers plant native trees and shrubs along the Deschutes River and Percival Creek, mark storm drains, monitor local water quality and educate area residents about water quality issues.

For information about upcoming events, or to be added to the Stream Team mail or e-mail list, contact Debbie Smith, Tumwater Stream Team Coordinator at dmsmith@ci.tumwater.wa.us or call 360-754-4148.



www.streamteam.info

Household Tips to Protect Our Water from Nitrates

Nitrate is a chemical found in fertilizers, animal manure and human waste. It can also occur naturally in soil. Rain or irrigation water can carry nitrates down into groundwater, which is the source of our drinking water. Only trace amounts of nitrates, well below the level of threat to human health, have been found in Tumwater drinking water.

Because exposure to nitrates can reduce the ability of red blood cells to carry oxygen, it can be a serious health threat. For this reason, it is important to take steps in our homes and yards to prevent possible future contamination to our groundwater, the source of our drinking water.

Follow these tips:

Use fertilizer sparingly

- ◆ Test your soil to determine the amount of fertilizer needed
- ◆ Fertilize once in fall and/or spring, if needed

Water wisely

- ◆ Limit lawn watering to one inch of water per week
- ◆ Aerate your lawn to encourage water to seep in to roots

Dispose of pet waste properly

- ◆ Always pick up and bag dog waste and place in trash
- ◆ Always bag litter from cats and other small pets and place in trash
- ◆ Drain aquariums to the sanitary sewer, if possible

Manage hobby farm manure

- ◆ Pick up manure and keep it off the ground and under cover
- ◆ For free help to manage manure and improve pastures, contact Thurston Conservation District at www.thurstoncd.com or 360-754-3588

Maintain your home's sewer system

- ◆ Only flush what comes out of your body and toilet paper
- ◆ Call a plumber if you notice any unusual wet spots and/or odors in your home or yard

Maintain your home's septic system

- ◆ Have septic systems inspected and pumped a minimum of every 3-5 years
- ◆ Hook up to public sewer system, if available, for more effective treatment



Own a dog? Check out these FREE resources for residents and neighborhoods!

Free dog waste bag dispensers are available to Tumwater residents. On-leash bag dispensers are available at the Tumwater Public Works counter. For neighborhood pet waste stations, call Debbie Smith at 360-754-4148.