

Water Quality Report

**City of Tumwater
2011**



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

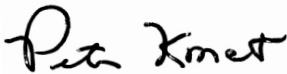
A Word from Mayor Kmet

As your mayor, it is my pleasure to offer you the City of Tumwater's annual Water Quality Report. This report details water quality sampling results collected during 2010, and I am proud to announce that, once again, our drinking water is of excellent quality. The dedicated City staff that operate and maintain your water system continually strive to ensure that the water delivered to your tap is of the highest quality possible.

I would also like to report that the City has completed the permanent installation of a system-wide disinfection system. The \$3 million project was coordinated with the Washington State Department of Health to ensure that we continue to safely provide good, clean water at the lowest effective treatment level possible. This should help keep our operating expenses lower, as well as preserve the wonderful taste of our water.

Please take a moment to review this annual summary of water quality monitoring and information about how 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 in your home or business, please contact your Tumwater water utility at 360-754-4140.

Sincerely,



Pete Kmet
Mayor



Who Watches Your Water?

The 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's Safe Drinking Water Hotline at 1-800-426-4791.

The 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.



The Washington State Department 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.

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

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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Your Drinking Water

The City of Tumwater regularly tests your water supply for more than 100 different substances. In 2010, overall drinking water quality in Tumwater was excellent and our water supply currently meets and exceeds 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, and 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 2010 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 2010, 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 2007-2012 planning period, the City Council established a water conservation goal that would reduce consumption from 2007 levels by 77,380 gallons per day by the end of 2012. Since 2007, water use has been reduced by more than 255,000 gallons per day! While recent weather trends have also contributed to this reduction, 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 ground-water 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 2010. During 2010, 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/month	0	No Detections (ND)	2010	No	Contamination from mammals naturally present in the environment
Nitrate as Nitrogen	10 ppm ¹	10 ppm	0.69 - 0.91 ppm	Sept 2010	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion from natural deposits
Total Trihalomethanes	0.080 ppm	N/A	ND - 0.009	May 2010	No	Reaction of chlorine with naturally occurring organic matter
Total Haloacetic Acids	0.060 ppm	N/A	ND	2010	No	
Chlorine Residual	4.0 ppm	Detectable amt. of 0.05 ppm or higher	ND - 0.98	2010	No	Chlorine is used as a disinfectant in the water treatment process
Radionuclides	50 pCi/L ²	0	ND - 1.53	Sept 2010	No	Naturally occurring in the environment
Secondary Standards Regulated by EPA						
Chloride	250 ppm	N/A	3.6 - 4.1ppm	2010		Naturally occurring in the 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.

What's that Pink Stuff?

Have you ever noticed a pinkish stain in wet areas of your home, such as in bath tubs, showers and pet dishes? Have you wondered if something in your drinking water was causing the pink color? Well, you can rest assured that the “pink stuff” is not in your water supply.

The pink staining is most commonly formed when the airborne, pink-pigmented bacteria, *Serratia marcescans* finds a moist place to grow. This bacteria is most commonly found in the air after new construction or remodeling. Its presence also increases in homes when the windows are open.

Serratia marcescans is not pathogenic to most people. In a small percentage of people, some sensitivity and reports of infection have occurred in hospital settings. This bacteria thrives in moist areas with a source of phosphorus, fatty substances or food debris. Moist places with soap residue are prime areas for this bacterial growth. The chlorine added by City of Tumwater as a disinfectant to your water supply actually prevents the growth of *Serratia marcescans* and its pink stain. Since chlorine dissipates in standing water, the pink stain occurs more frequently in areas that are constantly wet, such as shower stalls or pet dishes.

To reduce the colonies of *Serratia marcescans* in your home:

- Keep surfaces in your home as dry as possible
- Scrub moist surfaces with a mild household cleaner
- For stubborn stains, use a product containing chlorine bleach
- Avoid scratching surfaces, which attracts more bacteria
- Leave your washer door ajar after doing laundry
- Empty pet water dishes and wash before refilling



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

Tumwater water customers are eligible to receive FREE: two shut-off spray nozzles for hoses, two hose timers, two rain gauges, one indoor water-saving kit and a rebate on the purchase of up to six rain barrels!

Drop by the Public Works Department 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 2011 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.

Household Tips to Protect our Drinking Water

Household maintenance chores, such as working on the car, painting the house, working in the yard or draining the back yard hot tub can potentially lead to the pollution of our water resources. In Tumwater, our drinking water comes from local groundwater, so protecting this resource is a vital first step to ensuring healthy drinking water.

Remember the rule for storm drains: “only rain goes down the drain.” Car fluids, paints, and household and yard chemicals should never be allowed to be washed into our storm drains, since they flow to local waterways and groundwater. Not only is preventing stormwater pollution a good idea, *it's the law*. Violators can be fined.

Here are some tips to help keep our waterways and groundwater healthy:

Home Maintenance

- For latex paint, wash brushes and paint trays in the sink if you are on a sewer system; items with dried latex paint may be placed in the trash
- Oil-based paints, paint thinners and solvents must be disposed of at HazoHouse
- Pour carpet cleaning wastewater into the sink (through a strainer to collect debris) if you are on a sewer system; pour onto gravel, lawn or landscaping if on a septic system
- Redirect pressure washing wastewater to pervious areas such as gravel, lawn or landscaping, so that it does not flow into storm drains
- Direct wash water from concrete/cement projects onto gravel, soil, lawn or catch in a container; dispose of solidified concrete in trash.
- Make sure outdoor garbage cans have tight-fitting lids and do not leak

Yard Maintenance

- Keep grass clippings, leaves and other yard debris out of streets, storm drains, ditches, stormwater ponds and waterways
- Never apply yard chemicals near water or in the wind or rain (manual weed and pest removal preferred)
- Store all fertilizers and lawn products under cover and off the ground
- Store piles of beauty bark, compost and other erodible materials on gravel or grass, and cover piles with a tarp

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.



www.streamteam.info

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.

Car Maintenance

- Use drip pans, tarps, cardboard or newspaper under your car to collect any drips; repair leaks as soon as possible
- Collect car fluids in separate containers with tight-fitting lids and recycle
- Clean up spills with cat litter, then sweep up debris and place in trash
- Store automotive parts and supplies under cover and off the ground
- Clean your car, especially the undercarriage or engine, at a commercial car wash; if washing at home, redirect dirty car wash water to gravel, lawn or landscaping

Swimming Pool/Hot Tub Maintenance

- Dechlorinate your pool or hot tub with neutralizing chemicals before draining
- Water with a chlorine level below 0.1 ppm that has not been treated with copper-based algaecides may be discharged to the ground in a manner that does not allow the water to cause erosion, enter the storm drain or encroach on a neighbor's property
- Chlorinated water must be discharged to the sanitary sewer or collected by a pool maintenance company

Important Phone Numbers:

- ☞ **Tumwater Public Works 24-hour Emergency Line: 360-754-4150**
- ☞ **WA Department of Ecology SW Regional Office: 360-407-6300**
- ☞ **Washington Emergency Management Division: 1-800-258-5990**
- ☞ **HazoHouse: 360-867-2491**