



2017 City of Medical Lake Water Quality and Efficiency Report PWS 53400V

The City of Medical Lake is pleased to announce that the water provided to you meets or exceeds all federal and state requirements for safe drinking. This report is provided to all of our customers and describes your drinking water quality for the period of January 1st to December 31st, 2016. The City is committed to supplying safe water that meets or exceeds state and federal standards and achieves the highest standards of customer service.

Important Water Facts

The Source

The City of Medical Lake takes water from an underground aquifer via four wells. Three wells are shared by both the City and DSHS. Well 1&2 known as the Hallett Wells, and Well 3 known as the Lehn Rd. Well are located to the west of the City in the Espanola area. The fourth and deepest well, Well 4 known as the Craig Rd. Well, is located outside the City just southeast of the SR 902 and Craig Rd. intersection. The water pumped from these wells is blended together throughout the City's distribution system. The City has an intertie with the Four Lakes Water District #10. The intertie connects the City's Craig Rd. Well to the Four Lakes Water District Craig Rd. Well, and either entity can supply the other water in the event of an emergency. The City also wholesales water to the Spokane Water District #16 (Strathview) via an intertie located at SR 902 and Welcome Rd. Water from all City wells is treated with chlorine to eliminate any microbial contamination of your drinking water.

Consolidated Support Services, a division of DSHS, has also prepared a Water Quality Report that is available for viewing at their office located within the DSHS Campus.

Water Use Efficiency Program

In November of 2015, the City set two goals to accomplish over the following five years. Those goals were to reduce the amount of water produced and purchased by 1% annually, and to reduce the average annual consumption per residence by a total of 4%. The City currently regulates residential and commercial irrigation, uses Class A reclaimed water from its wastewater treatment facility, and has an inclining water rate schedule all designed to help with water conservation. The City tracked its total water produced and purchased in 2016:

Produced and Purchased: 279,267,000 gal.

Total Consumed: 254,269,000.

Total Unaccounted for: 24,998,000.

Total Unaccounted for: Percentage: 9.1%

Additional Water Information

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) sets the amount of certain contaminants that can be present in water provided by public water systems. The Food and Drug Administration (FDA) sets the limits for contaminants in bottled water. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling **the EPA's Safe Drinking Water Hotline at 1-800-426-4791.**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the **Safe Drinking Water Hotline at 1-800-426-4791.**

If you have any questions, please call Maintenance Supervisor Scott Duncan at 509-299-7715.

2016 Water Analysis Results

Note: Well 1&2 is SO 4; Well 3 is SO 6; Well 4 is SO 5

Parameter	Major Source	Units	EPA Regulations		City of Medical Lake Results			Comply?
			Ideal Level/ Goal (MCLG)	Maximum Allowable (MCL)	Highest Level Detected			
					Well 1&2	Well 3	Well 4	
Total Coliform Bacteria	Naturally present in the environment	% Positive	0	5% Positive per Month				Yes
Total Coliform bacteria monitoring is used to track microbial quality in the water distribution system. The City collected 72 samples and DSHS collected 36 samples. Not more than 5% of the monthly samples can be positive for total coliforms. No total coliform was detected in 2015.								
Nitrate	Erosion of natural deposits, animal waste	ppm	10	10	<0.5 (2014)	ND (2016)	1.75 (2016)	Yes
Fluoride	Erosion of natural deposits	ppm	4	4	0.49 (2003)	0.402 (2011)	0.227 (2010)	Yes
Chlorine	Added as a drinking water disinfectant	ppm	4.0 MRDLG	4.0 MRDL	City Wide Avg: 0.27 Range: 0.09-0.89			Yes
Copper	Plumbing, erosion of natural deposits	ppm	1.3	1.3 Action Level	<0.002 (2009)	ND (2011)	0.00127 (2010)	Yes
Lead	Plumbing, erosion of natural deposits	ppb	0	15 ppb Action Level	<0.002 (2009)	ND (2011)	ND (2010)	Yes
No Synthetic Organic Compounds were detected at Craig Rd. Well (2015) or Lehn Rd. Well (2015).								
Gross Beta	Decay of natural and manmade materials	pCi/L	0	50			ND (2003)	Yes
Gross Alpha	Erosion of natural deposits	pCi/L	0	15	1.59 (2009)	0.351 (2015)	0.408 (2015)	Yes
Radium 136 and 228	Erosion of natural deposits	pCi/L	0	5	1.05 (2009)	0.1 (2015)	1.01 (2008)	Yes
Radon	Erosion of natural deposits	pCi/L	0	300	235± (tested on 12/14/99)			Yes
Turbidity	Soil Erosion	NTU	N/A	TT	0.30 (2009)	0.186 (2011)	ND (2010)	Yes
Turbidity is a measure of the cloudiness of the water. It is monitored as it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.								

2016 Water Analysis Results Cont.

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Parameter	Major Source	Units	EPA Regulations		City of Medical Lake Results			Comply?
			Ideal Level/ Goal (MCLG)	Maximum Allowable (MCL)	Highest Level Detected			
					Well 1&2	Well 3	Well 4	
Haloacetic Acids (HAA)	By-product of drinking water chlorination	ppb	N/A	60	ND	ND	ND	Yes
Total Trihalomethanes (TTHM)	By-product of drinking water chlorination	ppb	N/A	80	5.1	7.42	8.83	Yes
Perfluorooctane-sulfonic Acid (PFOS)	Industrial and consumer products	ppt	N/A	70			ND	Yes
Perfluorooctanoic Acid (PFOA)	Industrial and consumer products	ppt	N/A	70			ND	Yes

Haloacetic acids and trihalomethanes form as by-products of the chlorination process that is used to kill or inactivate disease-causing microbes. The results for TTHM and HAA reported are from the three locations within the City which are monitored to determine compliance with regulations, and from the Well 3 and Well 4 sources.

Water System Protection: Cross Connection Control

What is a "cross connection"?

A cross connection is a permanent or temporary piping arrangement which can allow the drinking water to be contaminated by a non-drinking water source if a backflow condition occurs.

What is "backflow"?

Backflow is water flowing in the opposite direction of its normal flow. Backflow can allow contaminants to enter the drinking water system through cross connections.

The City's Cross Connection Control Program ensures we maintain high water quality. To prevent contamination that may come from non-drinking water sources, backflow prevention assemblies are used. These assemblies vary in size, shape, value, and location, however, they all prevent backflow conditions.

To learn more about cross connection control, backflow prevention, or backflow assembly testing, call (509) 299-7715. For a list of Washington State Department of Health approved backflow assembly testers, visit www.instruction.greenriver.edu/wacertservices.

US EPA regulations require this statement be included with the lead and copper sampling results regardless of the levels observed: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Medical Lake is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water hotline or at <http://www.epa.gov/safewater/lead>.

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 6 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 for making baby formula. Hot water is likely to contain higher levels of lead. If you are concerned about 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 1-800-426-4791 or online at <http://www.epa.gov/safewater/lead>.

Radon is a radioactive gas you cannot see, taste, or smell. It is found throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will be (in most cases) a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air that contains radon can lead to lung cancer. Drinking water containing radon may cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For information on radon, call EPA's **Radon Hotline, at (800) SOS-RADON**.

Definitions

Maximum Contaminant Level Goal (MCLG) – The level of a contaminant in drinking water below which there is no known or expected 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 MCLGs as feasible using the best available water treatment technology.

Maximum Residual Disinfection Level (MRDL) – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfection Goal (MRDLG) – The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefit of the use of disinfectants to control microbial contaminants.

Treatment Technique (TT) – A required process and performance criteria intended to reduce the level of a contaminant in drinking water.

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

Parts per Million (ppm) / Parts per Billion (ppb) / Part per Trillion (ppt) – A part per million means that one part of a contaminant is present for every one million parts of water. Similarly, parts per billion and trillion indicate the amount of a contaminant per billion or trillion parts of water.

Picocuries per liter (pCi/L) – A measure of radioactivity in water.