

WATER QUALITY DATA TABLE

Detected Compounds	Mclg	Mcl	Highest Level	Range Of Detection	Typical Sources	Sample Date
INORGANIC CONTAMINANTS						
Fluoride (ppm)	4	4	3.46	0.26 - 3.46	Naturally present in the environment. We do not add fluoride to the drinking water. Fluoride was found in the Central, Knolls Vista, Montlake, and Wheeler zones within allowable levels.	2009 through 2013
Nitrate (ppm)	10	10	5.02	ND - 5.02	Naturally present in the environment. Nitrate was detected in the Lakeview, Wheeler, and Larson zones within allowable levels.	2009 through 2013
DISINFECTION BY-PRODUCTS						
NAME OF CONTAMINANT	MCLG	MCL	SAMPLE POINT	SAMPLE RESULT	TYPICAL SOURCES	SAMPLE DATE
Total Trihalomethanes (ug/L)	N/A	80	#1 #2 #3 #4	16.5 7.8 ND 22.2	A by-product of chlorination	OCT. 2013
Haloacetic Acids (ug/L)	N/A	60	#1 #2 #3 #4	1.8 ND ND 2.6	A by-product of chlorination	OCT. 2013
Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to help EPA determine their occurrence in drinking water and potential need for future regulation.						

LEAD AND COPPER						
Samples were taken from 31 homes within the distribution system.						
Contaminant	Year of Testing	Measure	90th percentile	# of Sites Exceeding Action Level	Action Level	Common Sources of substance
Lead	2011	ppb	2.81	0	15	Corrosion of household
Copper	2011	ppm	0.0499	0	1.3	plumbing systems; erosion of natural deposits.

**90th percentile value:** 90% of the samples were at or below this value. EPA considers the 90th percentile value the same as an “average” value for other contaminants. Lead and copper are regulated by a treatment technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the action level, water systems must take additional steps.

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

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 Moses Lake Water Division 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 2 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 (800-426-4791) or at <http://www.epa.gov/safewater/lead>. City of Moses Lake Water Division staff will be collecting Lead and Copper samples in June and July of 2014.

UNIT DESCRIPTIONS	IMPORTANT DRINKING WATER DEFINITIONS
mg/L: number of milligrams of substance in one liter of water	MCLG: Maximum Contaminant Level Goal: 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.
ppm: parts per million, or milligrams per liter	MCL: Maximum Contaminant Level: this highest level of a contaminant that is allowed in drinking water. MCLs are set as close as feasible using the best available treatment technology.
ppb: parts per billion, or micrograms per liter	N/A: Not Applicable
N/A: not applicable	ppm: parts per million, or milligrams per liter (mg/L) The equivalent of one second in 12 days.
ND: not detected	ppb: parts per billion, or micrograms per liter (ug/L) The equivalent of one second in 32 years.

**WAIVERS**

The State Department of Health automatically grants sampling waivers for many of our sources. The City of Moses Lake Water Division takes samples from the wells in accordance to EPA and Washington State Department of Health, Office of Drinking Water regulations.



2013 WATER QUALITY REPORT

Your Drinking Water

This report is provided to you to help you make informed decisions about the water you drink and to encourage you to get involved in protecting and improving your drinking water resource. The report tells you the source of the water we provide, the quality of the water, and who makes the management decisions. The report is required by the Federal Clean Water Act, which refers to it as the Consumer Confidence Report. As the water system’s certified operator, I encourage you to call us with any concerns you have. Our goal is to provide you with fast, friendly, helpful, and efficient service.

Charles Arntz  
Water Division Supervisor  
509.764.3945



HEALTH INFORMATION PROVIDED BY THE EPA

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 (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-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 (800-426-4791).

WATER SOURCE

The City of Moses Lake has 19 wells which draw from confined aquifers in basalt rock over 300 feet below the ground surface. The aquifers have been free of the contaminants found in shallow wells. Pumping capacity is approximately 30 million gallons of water per day. Peak day production was on July 22, 2013 at 16.7 million gallons. The wells’ production rates range from 520 to 2,090gpm. Our total production for 2013 was 3 billion gallons.



DRINKING WATER INFORMATION

To ensure that tap water is safe to drink, the Department of Health and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Washington Department of Agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

WATER USE EFFICIENCY

In 2003 the State Legislature passed the Municipal Water Law, which directed the Department of Health (DOH) to adopt a rule that establishes Water Use Efficiency (WUE) requirements for all municipal water suppliers. There were several components in the requirements of the rule. These requirements included auditing for leakage, setting WUE goals, and submitting annual reports to the State DOH. In June 2010, the City Council set a goal to reduce the average residential water usage by 2% before 2015. This goal focuses on customer water use and water savings. All users are encouraged to conserve water in their daily lives.

WAYS WE'RE WORKING TOWARD USING OUR WATER EFFICIENTLY

We completed five days of leak detection in a portion of the city. The Department of Health goal for unauthorized use is 10% or below. Our system had a 9.8% unauthorized use of water, which gives us a three year average of 11.4%. We encourage our customers to use water efficiently during their daily routines.

THERMAL EXPANSION

The city installs check valves at the meter on most services. Consumers must be aware that the installation of a check valve results in a closed plumbing system within the premises. Provisions may have to be made by the owner to provide for thermal expansion within the closed system, such as the installation of an approved thermal expansion device.



CAPTION • CAPTION • CAPTION

CONTAMINANT INFORMATION

Provided by the Environmental Protection Agency (EPA) 40 CFR Part 141

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material; and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

**Microbial contaminants** such as viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

**Inorganic contaminants** such as salts and metals, which can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

**Pesticides and herbicides** which may come from various sources such as agriculture, urban stormwater runoff, and residential uses.

**Organic chemical contaminants** including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production. They can also come from gas stations, urban stormwater runoff, and septic systems.

**Radioactive contaminants** which can occur naturally or result from oil and gas production and mining activities.

WATER HARDNESS RATING

Hardness in ppm	
0 - 60	Soft
61 - 120	Moderately Hard
121 - 180	Hard
181 - up	Very Hard

pH levels range from 8.0 to 8.5

WATER SERVICE ZONES AND HARDNESS

The City of Moses Lake Water system is divided into 6 service zones. The water in each zone is comprised of a combination of the wells in the zone. Hardness levels are listed by wells.

Central Zone - Downtown, Peninsula, and Westlake Areas  
Wells 4, 7, 10, & 19 10 - 117 ppm (1 - 7 gpg)

Knolls Vista Zone - Knolls Vista Area  
Wells 3, 9, 14, & 33 54 - 90 ppm (3 - 5 gpg)

Lakeview Zone - Lakeview Terrace Area  
Wells 11 & 12 21 - 208 ppm (1 - 12 gpg)

Larson Zone - Grant County Airport  
Wells 21, 23, 24, 28, & 29 58 - 193 ppm (3 - 11 gpg)

Montlake Zone - Below Division Street  
Well 8 169 ppm (10 gpg)

Wheeler Zone - Wheeler Corridor  
Wells 17 & 18 16-166 ppm (1 - 10 gpg)

FLUORIDE

Secondary Maximum Contaminant Level Exceeded

The City of Moses Lake Water System, I.D. 56300X, located in Grant County recently violated the Secondary Maximum Contaminant Level (SMCL) of 2 mg/L for fluoride in drinking water. Fluoride contamination is rarely due to human activity. Fluoride occurs naturally in some areas and is found in high concentrations in the aquifer of our source water. Although this is not an emergency, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

The sample collected in April 2013 Well 9 had a fluoride concentration of 3.46 mg/L. The sample collected in July 2013 at Well 8 had a fluoride concentration of 2.65 mg/L. The sample collected in September 2013 Well 7 had a fluoride concentration of 2.37mg/L. The sample collected in September 2013 Well 17 had a fluoride concentration of 2.28 mg/L.

This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by the City of Moses Lake has a fluoride concentration between 0.26 and 3.46 mg/L. All results over 2.00 mg/L are listed above.

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/L of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/L of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/L because of this cosmetic dental problem.

Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

At this time No action is required by the water users. We are continuing to monitor fluoride levels. We will inform you if they exceed the limit of 4 mg/L.

For more information, please call Charlie Arntz at 509-764-3946. This notice is being sent to you by the City of Moses Lake Water Division, in the Water Quality Report, being mailed in May 2014.



PUBLIC CITY COUNCIL MEETINGS

The public potable water system is owned and operated by the City of Moses Lake. Its direction is provided by the City Council through the City Manager. The city Council meets on the second and fourth Tuesday each month, at 7:00 p.m. in the Council Chambers in the Civic Center located at 401 S. Balsam. The public is encouraged to attend.

WATER CONSERVATION

Water conservation has become an essential practice in all regions, even in areas where water seems abundant. In addition to saving money on your utility bill, water conservation helps prevent water pollution in nearby lakes, rivers, and local watersheds.

By using water-saving features, in-home water use can be reduced by 35%. This means the average household that uses 130,000 gallons per year could save 45,500 gallons of water per year. On a daily basis, the average household, using 350 gallons per day, could save 125 gallons of water per day. Water conservation at home is one of the easiest measures to put in place, and saving water should become part of everyday family practice. Water saving tips can be found at: <http://epa.gov/watersense>.

CROSS CONNECTION CONTROL

At the 1933 Chicago World's Fair, 98 people died from Dysentery due to sewage from the toilets that backed up into the water system. More recently, the neighbors to a food processing company discovered that their water was tainted with apple juice; not a health hazard to most but the coffee probably tasted funny. These events and many others like them are the result of cross connections. A cross connection is any potential or actual physical connection between potable water and a non potable fluid. These connections can range in severity from severe hazards (involving sewage or hazardous substances) to aesthetic problems (juice, dirt, etc.).

Without protective assembly devices, (referred to as backflow prevention assembly devices), the potable water supply can become contaminated by any customer in the system. A Cross Connection Control Program is required by the Washington State Department of Health and the United States Environmental Protection Agency (through the Safe Drinking Water Act) to protect the public from contaminated water. This program calls for facility inspections to identify and eliminate cross connections as well as annual testing of backflow prevention assemblies.

Although many people are not aware of it, we see common backflow preventers every day. The average household sink, whether in the bathroom or a kitchen, utilizes an air gap to prevent the potable water supply from becoming contaminated. Other appliances that utilize water (namely, clothes washers) have built-in backflow preventers as well. Some businesses, specifically hospitals and shops that use hazardous chemicals, are isolated from the rest of the system with heavy duty backflow prevention assemblies. Article from [www.mybuildingpermit.com](http://www.mybuildingpermit.com)

In accordance with WAC 51-56-0603.3.3, the premise owner or responsible person shall have their backflow prevention assembly tested by a Washington State Department of Health certified backflow assembly tester at least once a year.

CONTACT PHONE NUMBERS

Water Division	509-764-3946
Building Department	509-764-3756
City Manager	509-764-3701
Water Billing Office	509-764-3715
After Hours Water Emergencies	509-762-1160
Grant County Building Department	509-754-2011
Grant County Health District	509-766-7960
WA State Department of Health	509-329-2100
US EPA Safe Drinking Water Hotline	800-426-4791
EPA's web site:	<a href="http://www.epa.gov/safewater">www.epa.gov/safewater</a>
City of Moses Lake website	<a href="http://www.cityofml.com">www.cityofml.com</a>