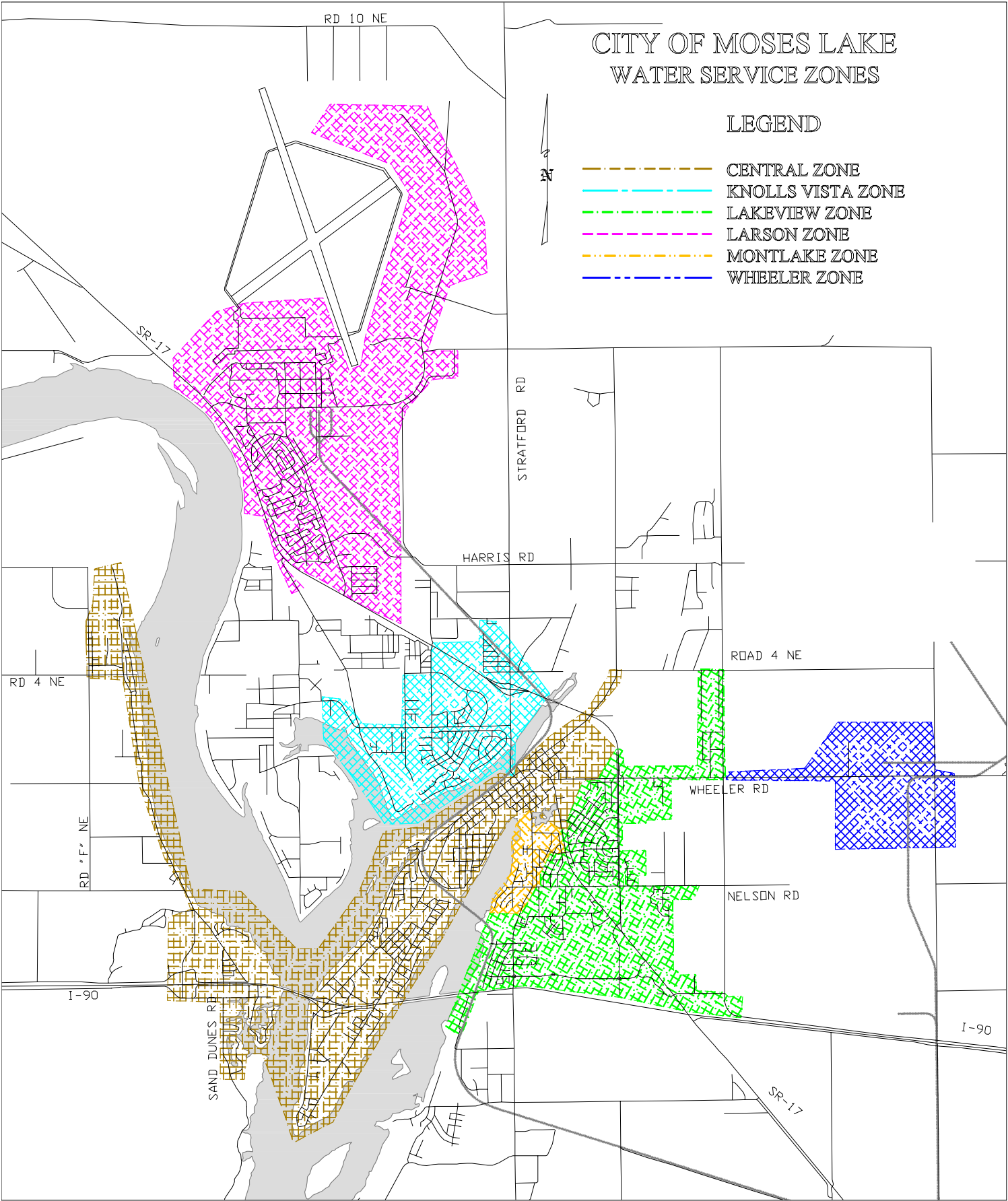


CITY OF MOSES LAKE DRINKING WATER QUALITY REPORT FOR 2008



CITY OF MOSES LAKE

DRINKING WATER QUALITY REPORT FOR 2008

WATER SERVICE ZONES

The City of Moses Lake Water System is divided into 6 service zones. The following chart shows the wells that serve each zone. The water in each zone is comprised of a combination of the wells in the zone. Hardness ratings (below) and fluoride levels (pg. 6) are listed in this report by well.

SERVICE ZONES	WATER HARDNESS RATING (as CaCO ₃) by Pressure Zone			
	Well	ppm	gpg	Rating
Central Zone Peninsula & Westlake Areas	4	90	5	M.H.
	7	11	1	Soft
	10	13	1	Soft
	19	193	11	V.H.
Knolls Vista Zone Knolls Vista Area	3	12	3	Soft
	9	2	<1	Soft
	14	48	3	Soft
Lakeview Zone Terrace Area	11	15	1	Soft
	12	225	13	V.H.
Larson Zone Grant County Airport And Larson Housing	21	63	4	M.H.
	23	69	4	M.H.
	24	45	3	Soft
	28	60	4	Soft
	29	188	11	V.H.
Montlake Zone Below Division Street	8	49	3	Soft
Wheeler Zone East of D & L Foundry	17	18	1	Soft
	18	158	9	Hard

WATER HARDNESS RATING

Hardness, ppm as CaCO ₃	Rating
0 – 60	Soft
61 – 120	Moderately Hard (M.H.)
121 – 180	Hard
181 – Up	Very Hard (V.H.)

WATER SOURCE

The City of Moses Lake has 17 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 2, 2008 at 17.76 million gallons. The wells' production rates range from 520 to 2,090 gpm. Our total production for 2008 was 3.17 billion gallons.

pH LEVELS

pH levels range from 8.0 to 8.5

The US Geological Survey and the World Health Organization classify water hardness in parts per million (ppm) as Calcium Carbonate (CaCO₃). In general, water softer than 50 ppm, as CaCO₃, is corrosive. Water harder than 80 ppm requires the use of more soap. Water harder than 200 ppm may cause incrustations in pipes. Desirable hardness values are 50 to 80 ppm. More than 150 ppm is undesirable. More than 500 ppm as CaCO₃ is unacceptable. Moses Lake wells range from a minimum of 2 ppm to a maximum of 225 ppm. Another measure of hardness is grains per gallon (gpg) as CaCO₃. (1 gpg = 17.1 ppm).

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WATER TESTING AND WATER QUALITY DATA TABLE

The Federal Safe Drinking Water Act of 1974 regulated 22 contaminants in drinking water. In 2008, approximately 100 contaminants were regulated. Population, industrialization and scientific and technologic advances have led to greater scrutiny of our drinking water.

The table below lists all the drinking water contaminants that we detected in the most recent samples. The presence of these contaminants does not necessarily indicate that the water poses a health risk. The Environmental Protection Agency (EPA) allows Washington State Department of Health (DOH) to waive testing for certain contaminants if it will not result in unreasonable risk to health. Washington State DOH has waived testing for some synthetic and volatile organic contaminants at some city wells.

EPA WATER QUALITY DATA TABLE (health effected based)

Contaminants	MCLG	MCL	Highest Level	Range of Detection	In Compliance	Date of Sample
INORGANIC CONTAMINANTS						
1. Arsenic (ppb)	0	10	5.8	ND - 5.8	Yes	2006
2. Barium (ppm)	2	2	0.064	ND - 0.064	Yes	2006
3. Fluoride (ppm)	4	4	1.93	0.36 - 1.93	Yes	2006 &/2008
4. Nitrate (ppm)	10	10	3.36	ND - 3.36	Yes	2008
SYNTHETIC ORGANIC CONTAMINANTS (Including Pesticides)						
No detects						
VOLATILE ORGANIC CONTAMINANTS						
5. Trichloroethylene (ppb)	0	5	1.4	ND - 1.4	Yes	2008
6. Total Trihalomethane (ppb)	N/A	80	4.2	ND - 7.5	Yes	2008
7. Haloacetic Acids (ppb)	N/A	60	2.53 avg.	ND 4.4	Yes	2008
UNREGULATED CONTAMINANTS						
8. DCPA Acid Metabolites (ppb)	N/A	N/A	7.7	ND - 7.7	Yes	2008
RADIOACTIVE CONTAMINANTS						
9. Radionuclide (gross alpha) pCi/L	-	-	4.03	ND - 4.3	N/A	2007
10. Gross Alpha, pCi/L	-	-	5	ND - 0.26	N/A	2007

CONTAMINANT DETECTIONS

1. Arsenic was detected within allowable levels in Wells 8, 12, 14, 18, 19, 21, 23, 24, 28, and 29.
2. Barium was detected within allowable levels at Wells 8, 28, and 29.
3. Fluoride was detected below the secondary MCL of 2 ppm. See chart on page 6.
4. Nitrate was detected within allowable levels in Wells 4, 8, 12, 18, 21, 23, 24, 28, and 29.
5. Trichloroethylene was detected within allowable levels at Well 23.
6. Trihalomethanes were detected within allowable levels in the distribution system.
7. Haloacetic Acids were detected within allowable levels in the distribution system.
8. DCPA Acid Metabolites were detected at Wells 11, 12, and 18.
9. Radionuclide (gross alpha) was detected at Well 18.
10. Radium 228 was detected at Wells 3, 4, 9, 21, and 29.

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DRINKING WATER QUALITY REPORT FOR 2008

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 be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides - which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

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

Radioactive contaminants - which can be naturally occurring or be the result of oil and gas production and mining activities.

TYPICAL SOURCES OF CONTAMINANTS:

1. Arsenic - Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
2. Barium - Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
3. Fluoride - Erosion of natural deposits, Discharge from fertilizer and aluminum factories. Fluoride present in city water is naturally occurring. Fluoride is not added to city water.
See page 6 for additional fluoride information.
4. Nitrate - Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
5. Trichloroethylene - Discharge from metal degreasing sites and other factories.
6. Total Trihalomethane - By-products of drinking water chlorination.
7. Haloacetic Acides - By-products of drinking water chlorination.
8. DCPA Acid Metabolites - An herbicide used on grasses and weeds with fruits and vegetable crops.
9. Radionuclide - Erosion of natural deposits.
10. Radium 228 - Erosion of natural deposits.

HEALTH INFORMATION PROVIDED BY 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 Environmental Protection Agency'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. 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 at 1-800-426-4791.

CITY OF MOSES LAKE

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Disinfection Byproducts Monitoring and Reporting Violation

The following is information about chlorination and disinfection byproducts

Chlorine is added to drinking water to kill or inactivate harmful organisms that cause various diseases. This process is called disinfection. However, chlorine is a very active substance and it reacts with naturally occurring substances to form compounds known as disinfection byproducts (DBPs). The most common DBPs formed when chlorine is used are trihalomethanes (THMs) and haloacetic acids (HAAs)

The primary reason for adding chlorine to water is to make it safe to drink by killing or inactivating harmful microorganisms that cause diseases such as typhoid, cholera, dysentery, and giardiasis. Health professionals regard the chlorination of water as one of the most important advances in the field of public health protection. Chlorinating drinking water has saved millions of lives.

Research is still continuing on the health effects of DBPs and improvements in water treatment technology. Because of the immense benefits in reduction of infectious diseases, and the simplicity and low cost of water treatment using chlorine, chlorination is the most appropriate choice as a method of ensuring safe drinking water for most water systems.

In 2007 samples for disinfection byproducts were not taken. The sampling was resumed in 2008.

Systems that draw from deep wells, such as the city's, tend to contain little organic substances. Even though the water is chlorinated, lesser amounts of DBPs are typically found. Our past results have been very low.

FLUORIDE INFORMATION

Well	Fluoride Level in mg/L	Sample Year
8	1.93	2006
17	1.84	2006
7	1.73	2008
9	1.67	2008
3	1.67	2008
10	1.35	2006
11	1.26	2008
28	1.12	2006
4	0.92	2006
24	0.90	2006
14	0.89	2006
23	0.83	2006
21	0.60	2006
18	0.56	2006
12	0.54	2006
19	0.46	2006
29	0.36	2006

BACKFLOW AND CROSS CONNECTIONS

A Cross Connection is an unprotected connection between the drinking water system and any potential source of contamination. When there is a cross connection, the potential for backflow exists. Examples of cross connections include, a hose inside a bucket of water or connections between potable water and sprinkler irrigation systems. **Backflow** occurs when pressure differentials cause water to flow "backwards" from a contaminated source into the drinking water. To help avoid these situations, install a backflow device on your home sprinkler system and always maintain an air gap of at least one inch when filling a container with a hose. The City of Moses Lake has an active cross connection control program that shows individuals and businesses how to identify and prevent cross connections.

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

For further information on cross connections or backflow devices, please call 509-766-9227.

CITY OF MOSES LAKE

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WATER USE EFFICIENCY

The City of Moses Lake implemented an official Water Use Efficiency Program in 2008. On February 12, 2008, the City Council set goals to work toward conservation and accountability of water use, by the customer and the water purveyor. The goals adopted by the Council were:

- 1. Within the next six years, complete a feasibility study for irrigating Larson Ballfields, Cascade Park, or Montlake Park out of the lake.**
- 2. By July 2009, install meters on Parks not currently being metered.**
- 3. Educate consumers to understand why and how to use water more efficiently.**
- 4. Contract a service to perform leak detection in a portion of the City of Moses Lake water system annually.**
- 5. Maintain per capita use or reduce water consumption by 1%.**

WAYS WE'RE WORKING TOWARD MEETING THE ABOVE GOALS:

City of Moses Lake Water Division worked toward the above goals by installing a water meter on one of the parks un-metered water services. The final meter will be placed in 2009. We also provided public education through the use of a booth at the Grant County Fair in August. We completed five days of leak detection in a portion of the city. We have scheduled another five day leak detection survey in another portion of the city for 2009. The Department of Health goal for unauthorized use is 10% or below. Our system operated at 13% unauthorized usage in 2008.

WHY CONSERVE WATER?

Water conservation is the most cost-effective and environmentally sound way to reduce our demand for water. Conservation stretches our water supplies farther. As our population in our service area grows, our water supply stays the same. Using less water also puts less pressure on our sewage treatment facilities and uses less energy for water heating.

HOW CAN I CONSERVE?

1. Water your lawn only when it needs it. Step on your grass, if it springs back when you lift your foot, it doesn't need water.
2. Fix leaky faucets and plumbing joints.
3. Don't run the hose when washing your car.
4. Install water-saving shower heads or flow restrictors.
5. Run only full loads in the washing machine and dishwasher.
6. Shorten your showers. Even a one to two minute reduction can save many gallons per month.

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.

CITY OF MOSES LAKE

Drinking Water Quality Report for 2008

EPA Consumer Confidence Report

English

This is very important information regarding the City of Moses Lake public potable (drinking) water system. You may wish to have this information translated.

Spanish

Este informe contiene informacion muy importante sobre su agua potable. Traduzcalo o hable con alguien que lo entienda bien.

Russian

В этом сообщении содержится важная информация о воде, которую вы пьёте. Попросите кого-нибудь перевести для вас это сообщение или поговорите с человеком, который понимает его содержание.

Japanese

このレポートには飲料水に関する重要な情報が記載されています。この英文を訳してもらうか、またはどなたか英語が分かる方にたずねてください。



DRINKING WATER QUALITY REPORT - 2008
This Water Quality Report contains information for customers connected to the City of Moses Lake potable water system. If you are served by another public system or on a private well, this report does not pertain to the quality of your water.

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