



CITY OF MOXEE ANNUAL WATER QUALITY REPORT – 2018

INTRODUCTION

What is a Drinking Water Quality Report?

A Drinking Water Quality Report is a report on the quality of drinking water supplied to you by your public water system. Drinking Water Quality reports are required to be published annually under the 1996 Safe Drinking Water Act Amendments administered by the United States Environmental Protection Agency. This report is designed to inform you about the quality of water and services we deliver to you every day. Our goal is to provide you with a safe and dependable supply of drinking water. The City of Moxee has historically provided full disclosure of information about the City's water supply to interested parties and views the Annual Drinking Water Quality Report as an opportunity to enhance public awareness.

Information provided in this report includes the following:

- ◆ Regulations on water quality and safety that protect your health.
- ◆ Water source and system information.
- ◆ City programs that protect the high quality of our water sources.
- ◆ Current and historic water quality data.

What is the Source of My Water?

The City of Moxee's drinking water supply is pumped from three wells with a combined maximum production capacity of approximately 1,800 gallons per minute or 2.59 million gallons per day, although under normal operating conditions only two pumps are in operation during any one day. The wells are typically operated on alternating days. The wells are controlled by a telemetry system, which controls the pump's operation based on the water level in the reservoirs.

Well No. 1 is located at 306 South Iler Street in a concrete block building attached to the City Swimming Pool. Well Number 1 was drilled and cased to a depth of 1,326 feet and is described as a flowing artesian well with a shut-in pressure of 20 psi. Well No. 2 is located west of Faucher Road, next to the City's two 535,000 gallon water storage tanks. Well No. 2 was drilled and cased to a depth of 978 feet. Well No. # 3 is located at 806 E. Charron Rd and was drilled to a depth of 783 and is also described as a flowing artesian well with a shut pressure of approximately 8 psi. All three existing City wells withdraw water from the Columbia River Basalt Group. This geological formation consists of distinct hydro geologic units. Starting with the oldest, these three units are known as the Grande Ronde Wanapum, and Saddle Mountain Units. From driller's well logs, it appears that all three City wells draw from the Saddle Mountain Aquifer. Water is pumped from the City wells, chlorinated and transmitted directly to the City's reservoirs, which in turn is gravity fed back to the distribution system with a static pressure ranging from 40 to 70 psi.

The City of Moxee is pleased to report that our drinking water is safe and meets federal and state requirements.

Water Quality Monitoring Requirements

The City of Moxee routinely monitors for constituents in your drinking water according to Federal and State laws. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk. Existing state law contains regulations on bacteriological contaminants, inorganic chemicals, nitrates, lead and copper, physical characteristics, trihalomethanes, volatile organic chemicals, synthetic organic chemicals, and radionuclides. A number of additional federal drinking water regulations are expected within the next ten years. These regulations will define new or additional water quality requirements. The following table summarizes the City's water quality monitoring requirements.

Water Quality Monitoring Frequency

Contaminant Type	Monitoring Requirement [1]
Bacteriological contaminants	5 samples per month in the distribution system/4 during Jun-Aug
Lead and Copper	20 samples every 3 years
Asbestos	1 sample every 9 years in the distribution system
Total Trihalomethanes (THM)	The City is required to monitor for trihalomethanes annually
Halo Acetic Acids (HAA5)	1 sample each year in the distribution system
Nitrates	1 sample each year at each well
Complete Inorganic chemicals (IOCs)	1 sample every 3 years at each well
Volatile Organic chemicals (VOCs)	1 sample every 6 years at each well
Herbicides	1 sample every 9 years at each well waived, until 2021
Pesticides	1 sample every 9 years at each well waived, until 2021
Soil Fumigants	1 sample every 3 years Waived
Gross Alpha	1 sample every 6 years
Radium 228	1 sample every 6 years

Why are Contaminants in My Water?

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man-made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All 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 Agencies Safe Drinking Water hotline at (800-426-4791).

Do I Need to Take Special Precautions?

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 (1-800-426-4791).

(MCL's) Maximum Concentration Levels are set at very stringent levels. This is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-million chance of having the described health effect.

Use Water Efficiently

In 2009 the City implemented a Water Use Efficiency Plan and in February 2016 established a new goal. Under the plan the goal is to reduce water consumption by 1% for residential services, schools and public facilities over the next six years. Your bill and water meter readings are tools that can help you discover leaks or unusually high usage. This information can be useful to help you conserve water and help the City reach our goal.

The City of Moxee is required to file an annual report with the Department of Health on the volume of water pumped from its sources (water produced) and the volume of water sold to its customers (water consumed). The volume of water produced and water consumed in 2018 are shown below:

2018 Water Production	139,562,300 gallons
2018 Water Consumption	140,491,843 gallons

The difference between production and consumption of .67% is due to such factors as timing of meter readings, hydrant flushing and minor meter inaccuracies.

The City of Moxee will continue to track the volume of water produced and consumed in its ongoing effort to use water efficiently.

Other Information

The City of Moxee along with Yakima County and 6 other water purveyors in the Upper Yakima Valley have developed a regional wellhead protection plan. The goal of the plan is to prevent contamination of drinking water supplies. The City of Moxee is committed to supplying its customers with high quality and aesthetically pleasing drinking water.

New Water Treatment Equipment

In October 2017, the City completed construction of a new building to house a large water treatment filter system designed to remove iron and manganese from Well #2. The presence of iron and manganese can discolor water at very low concentrations. This filter system has been very effective at removing these minerals from Well #2's water which has significantly reduced the amount of iron and manganese in the drinking water and many customers have noticed water quality improvements. We still have mineral build up on the system's piping that should dissipate over time, so you may still occasionally see some discoloration. If you do, please contact City Hall and we will flush the system in your area. As always thank you for your patience during this process.

Cross Connection

One of the many threats to our drinking water supply is known as cross-connection (CC). A CC is the point at which a non-drinking water substance can possibly come in contact with drinking water. Connections as seemingly innocent as a sprinkler system, hot tub or ornamental pond, can easily enable contaminants to enter potable (drinking) water lines via backflow. Customers installing potential CC's like these and other water-using equipment should contact the City to determine if a backflow device is required. **Never connect your drinking water piping to the pressurized irrigation system. This could cause serious health problems by contaminating your drinking water.**

Who Can I Call for More Information?

The City of Moxee Public Water System ID # is 573000. Additional questions or comments about the City water supply, quality or general drinking water issues can be directed to the following contacts:

Byron Adams
City of Moxee
P.O. Box 249
Moxee, WA 98936
(509-575-8851)

Environmental Protection
Agency (EPA)
Safe Drinking Water Hotline
(1-800-426-4791)

State Department of Health
Suite 305
1500 West 4th Avenue
Spokane, WA 99204
(509-456-3115)

WATER QUALITY DATA CITY OF MOXEE WATER

This water quality data table lists all the contaminants that were detected during the most recent monitoring period. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Definitions of the terms and abbreviations used in the table are given below.

Definitions:

MCL: Maximum Contaminant Level, or the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCGL's as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal, or the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

AL: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

N/A: Not applicable

ppb: Parts per billion or micrograms per liter.

ppm: Parts per million or milligrams per liter.

Contaminants (units)	MCL	MCLG	Maximum Result in City of Moxee Water System	Range of Detections	Sample Date	Violation	Typical Source of Contaminant
Inorganic Contaminants							
Lead (ppm)	0.015	0.001	.00590	.00015-.00590	12/2016	No	Erosion of natural deposits. Corrosion of household plumbing systems.
Copper	1.3	0.02	0.132	.00475-.132	12/2016	No	Erosion of natural deposits. Corrosion of household plumbing systems.
Arsenic (ppb)	0.01	0.01	0.00329	0.0001 – 0.00329	11/2016	No	Erosion of natural deposits: Runoff from orchards.
Fluoride (ppb)	4	4	1.61	0.33-1.61	11/2016	No	Erosion of natural deposits
Nitrate-N	10	10	.06	.06-< 0.05	8/2018	No	Erosion of natural deposits; runoff from fertilizer use
Nitrite-N	1	1	< 0.05	< 0.05	8/2018	No	Erosion of natural deposits; runoff from fertilizer use
Inorganic Contaminants Regulated Secondary							
Iron ppm	0.3	0.3	0.585	.0123 - .585	11/2016	No	Erosion of natural deposits
Manganese ppm	0.05	0.05	0.03871	.0106 - .03871	11/2016	No	Erosion of natural deposits
Unregulated Secondary							
Sodium ppm	N/A	N/A	56.1	15.6 – 56.1	11/2016	No	Erosion of natural deposits
Hardness ppm	N/A	N/A	120	19.8 – 120	11/2016	No	Erosion of natural deposits
Conductivity ppm	700	700	292	270 -292	11/2016	No	Erosion of natural deposits
Total dissolved solids	500	500	176	146 – 176	11/2016	No	Erosion of natural deposits
Other							
Gross Alpha	NA	NA	ND	0	4/2018	No	
Magnesium	N/A	N/A	12.8	1.23 -12.8	11/2016	No	Erosion of natural deposits
Calcium	N/A	N/A	27.0	5.9 - 27.0	11/2016	No	Erosion of natural deposits
Volatile Organic Chemicals (HAA5 & THM)							
Trichloroacetic ppb	60	N/A	ND	1.1-1.2	10/2018	No	Disinfection byproducts
Bromo chloroacetic ppb	60	N/A	ND	ND	10/2018	No	Disinfection byproducts
Chloroform ppb	80	N/A	.61	.52-.61	10/2018	No	Disinfection byproducts
Bromo dichloromethane ppb	80	N/A	1.23	1.15-1.23	10/2018	No	Disinfection byproducts
Chloro dibromo methane ppb	80	N/A	2.3	1.74-2.3	10/2018	No	Disinfection byproducts
Bromoform ppb	80	N/A	2.13	2.04-2.13	10/2018	No	Disinfection byproducts

About Arsenic: While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at higher concentration and is linked to other health effects such as skin damage and circulatory problems.

