

# Water Quality Report

This report is a snapshot of the quality of the water provided to City of Wamego customers last year. Included are the details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and State standards. We are committed to providing you with information because informed customers are our best allies. It is important that customers be aware of the efforts that are made continually to improve their water system.

First of all, note that the City of Wamego water supply is entirely met by ground water, pumped at five wells. Four wells tap the terrace deposits associated with the Kansas River, and the fifth taps glacial deposits at a higher elevation. At each wellhead, the water is chlorinated to protect you against microbial contaminants. We also add a zinc phosphate compound that increases the Ph of the water, thereby reducing corrosion. This agent also provides a protective coating to pipes and sequesters contaminants such as lead, copper and manganese. We have achieved significant reductions in these contaminants, and since adding the formulation, no corrective action has been required by the State.

The City also introduces sodium fluoride at each wellhead. This is an effective means of reducing tooth decay in children. The fluoride levels reported on the following table represent a combination of both naturally occurring fluoride and the fluoride introduced at the wellheads.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those 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.

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

The sources of drinking water (both tap water 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 before we treat it include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, 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, storm water runoff, and residential uses.
- Organic contaminants, including synthetic and volatile organic chemicals, which are byproducts 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 the result of mining activity.



In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Wamego's water is treated according to these regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water system is required to test a minimum of five samples per month in accordance with the Total Coliform Rule for microbiological contaminants. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public.

## Water Quality Data

The following tables list all of the drinking water contaminants detected during the 2017 calendar year. The presence of these contaminants does not necessarily mean that the water poses a health risk. Unless noted, the data presented in this table is from the testing done January 1 – December 31, 2017. The State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old. **The bottom line is that the water provided to you is safe.**

**The Wamego water supply system is managed by the Wamego City Commission, which holds regular meetings the first and third Tuesdays of each month, at 6:00 PM, in the City Commission room at the Wamego City Office; 430 Lincoln Ave. City customers and the public in general may attend the meetings and voice concerns about the system. Questions may be directed to Merl Page, Wamego City Manager, at the City Office; call (785) 456-9119.**

The table lists regulated contaminants which were found in the Wamego water supply, the levels detected in the water and how these levels compare with various standards. To use the table, you will need to know these terms:

**Maximum Contaminant Level Goal or MCLG:** The level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLGs allow for a margin of safety.

**Maximum Contaminant Level or 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 treatment technology.

**Secondary Maximum Contaminant Level or SMCL:** The recommended level for a contaminant that is not regulated and has no MCL.

**Action Level or AL:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements.

**Running Annual Average (RAA):** An average of sample results obtained over the most current 12 months and used to determine compliance with MCLs.

**ppm:** parts per million, or milligrams per liter (MG/L).

**ppb:** parts per billion, or micrograms per liter (UG/L).

**Picocuries per Liter (PCI/L):** A measure of the radioactivity in water.

Regulated Contaminants	Collection Date	Highest Value	Range (low/high)	Unit	MCL	MCLG	Typical Source
ARSENIC	6/27/2017	5.2	1.6 - 5.2	ppb	10	0	Erosion of natural deposits
ATRAZINE	8/28/2017	1.9	0.19 - 1.9	ppb	3	3	Runoff from herbicide used on row crops
BARIUM	6/27/2017	0.14	0.099 - 0.14	ppm	2	2	Discharge from metal refineries
CHROMIUM	6/27/2017	2.4	1.1 - 2.4	ppb	100	100	Discharge from steel and pulp mills
FLUORIDE	6/27/2017	0.27	0.15 - 0.27	ppm	4	4	Natural deposits; Water additive which promotes strong teeth.
NITRATE	7/26/2017	4.1	0.89 - 4.1	ppm	10	10	Runoff from fertilizer use
SELENIUM	6/27/2017	4.8	1.6 - 4.8	ppb	50	50	Erosion of natural deposits
TRICHLOROETHYLENE	8/28/2017	2.2	2.2	ppb	5	0	Discharge from metal degreasing sites and other factories

Disinfection Byproducts	Monitoring Period	Highest RAA	Range (low/high)	Unit	MCL	MCLG	Typical Source
TOTAL HALOACETIC ACIDS (HAA5)	2017	3	3.4	ppb	60	0	By-product of drinking water disinfection
TTHM	2017	12	12	ppb	80	0	By-product of drinking water chlorination

Lead and Copper	Monitoring Period	90 <sup>th</sup> Percentile	Range (low/high)	Unit	AL	Sites Over AL	Typical Source
COPPER, FREE	2015 - 2017	0.79	0.035 - 0.91	ppm	1.3	0	Corrosion of household plumbing

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. Your water system 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 or at <http://www.epa.gov/safewater/lead>.

Radiological Contaminants	Collection Date	Highest Value	Range (low/high)	Unit	MCL	MCLG	Typical Source
COMBINED RADIUM (-226 & -228)	7/26/2017	1.6	1.6	PCI/L	5	0	Erosion of natural deposits

Secondary Contaminants-Non Health Based Contaminants-No Federal Maximum Contaminant Level (MCL) Established.	Collection Date	Highest Value	Range (low/high)	Unit	SMCL
ALKALINITY, TOTAL	6/27/2017	240	190 - 240	MG/L	300
ALUMINUM	6/27/2017	0.022	0.022	MG/L	0.05
CALCIUM	6/27/2017	120	57 - 120	MG/L	200
CHLORIDE	6/27/2017	87	13 - 87	MG/L	250
CONDUCTIVITY @ 25 C UMHOS/CM	6/27/2017	990	440 - 990	UMHO/CM	1500
CORROSIVITY	6/27/2017	0.54	-0.2 - 0.54	LANG	0
HARDNESS, TOTAL (AS CaCO3)	6/27/2017	380	170 - 380	MG/L	400
IRON	6/27/2017	0.43	0.023 - 0.43	MG/L	0.3
MAGNESIUM	6/27/2017	19	5.7 - 19	MG/L	150
MANGANESE	6/27/2017	0.15	0.0068 - 0.15	MG/L	0.05
NICKEL	6/27/2017	0.016	0.0073 - 0.016	MG/L	0.1
PH	6/27/2017	7.8	7.2 - 7.8	PH	8.5
PHOSPHORUS, TOTAL	6/27/2017	4	0.24 - 4	MG/L	5
POTASSIUM	6/27/2017	12	1.8 - 12	MG/L	100
SILICA	6/27/2017	37	27 - 37	MG/L	50
SODIUM	6/27/2017	57	27 - 57	MG/L	100
SULFATE	6/27/2017	120	8.6 - 120	MG/L	250
TDS	6/27/2017	620	270 - 620	MG/L	500
ZINC	6/27/2017	0.02	0.012 - 0.02	MG/L	5

Please Note: Because of sampling schedules, results may be older than 1 year.

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 high concentrations and is linked to other health effects such as skin damage and circulatory problems.

**During the 2017 calendar year, we had no violations of drinking water regulations.**