



Annual Drinking Water Quality Report for 2017

PWS # WY 5600050

March 2018

The Joint Powers Water Board is pleased to present this year's Annual Quality Water Report. This report is designed to inform you about the quality of water and services we deliver to our customers every day. It is our commitment and our goal to provide you a safe and dependable supply of drinking water. Our continued efforts are focused on optimizing the water treatment process, ensuring quality water and protecting our water resources. Our water source is surface water from the Green River.

We are pleased to report that your drinking water is safe and meets federal and state requirements.

If you have any questions about this report or concerning your water utility, please contact David Latorre at the water treatment plant 875-4317 Ext. 225. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the fourth Thursday of each month, they are advertised, and notices are sent to each community with time and location.

The water plant routinely monitors for constituents in your drinking water according to Federal and State laws. The following table shows the results of our monitoring for the period of January 1, to December 31, 2017. 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.

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Parts per million (ppm) or Milligrams per liter (mg/L) Represents the unit of measure for the concentration of a contaminant in water – One part per million corresponds to one minute in two years, or one penny in \$10,000

Parts per billion (ppb) or Micrograms per liter (ug/L) Represents the unit of measure for the concentration of a contaminant in water - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

picoCurie (pCi/L) A picoCurie (**one trillionth**) of a Curie, is a unit of measurement used to measure the activity of radionuclide contaminants in drinking water. To put the relative size of one trillionth into perspective, consider that if the Earth were reduced to one trillionth of its diameter, the "picoEarth" would be smaller in diameter than a speck of dust. In fact, it would be six times smaller than the thickness of a human hair.

Nephelometric Turbidity Unit (NTU) - Nephelometric Turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Variances & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

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

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

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 treatment technology.

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.

Contaminant	Violation Y/N	Level Detected	Unit of measure	MCLG	MCL	Likely Source of Contamination
Turbidity	Y	1.45 80.11%	NTU	n/a	TT	Soil runoff
Nitrate as N	N	Non-Detect	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Acrylamide	N	0.000225	ppm	0	TT	Added to water during the treatment process.
Fluoride	N	0.2	ppm	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories water additive which promotes strong teeth;
Total Organic Carbons (TOC) Actual % removed	N	Highest 57.14% Lowest 20.00% Ann. Avg.37.88%		n/a	n/a	Trees, grass, animals and other carbon base life forms found in and around the water source.
Haloacetic acids (HAA-5s)	N	19.1	ppb	n/a	60 Ann. Avg.	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHMs)	N	17.9	ppb	n/a	80 Ann. Avg.	Byproduct of drinking water disinfection
Lead – 90 th percentile, Based on 6 samples (5 th highest value) Collected between June thru Aug. 2016	N	1	ppb	n/a	AL= 15 ppb	Corrosion of household plumbing systems, erosion of natural deposits. This sample was taken from a private residence on the system.
Copper – 90 th percentile, Based on 6 samples (5 th highest value) Collected between June thru Aug. 2016	N	1.09	ppm	1.3 ppm	AL= 1.30 ppm	Corrosion of household plumbing systems, erosion of natural deposits. This sample was taken from a private residence on the system.
Radionuclides Gross Alpha 2/2017 Gross Beta 1/2017 Radium 228 2/2017 Uranium 1/2012	N N N N	1.8 0.7 0.1 2.5	pCi/L pCi/L pCi/L ppb	n/a	15 50 5 30	. Erosion of natural deposits Erosion of natural deposits Erosion of natural deposits Naturally present in the environment

Turbidity is reported as the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified for the filtration technology being used. Turbidity has no health effects. However, turbidity can interfere with Disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Our system experienced a Surface Water Treatment Rule Violation **Rule 40 CFR§141.173 (a)** brought about by unusual high turbidities during the month of March 2017. The rule states that **(For systems using conventional filtration or direct filtration, the turbidity level of representative samples of a system's filtered water must be less than or equal to 0.3 NTU in at least 95 percent of the measurements taken each month.)** 19.89% of our samples for the month of March failed to meet this criteria, none of our testing has shown disease causing organisms in our drinking water. **This Violation was made public by Radio and News Paper publications on March 15th and March 16th, 2017.**

The sources of drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it can dissolve naturally occurring minerals and in some cases, radioactive materials. The water can also pick up substances such as:

- (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural operations and wildlife.
- (2) 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.
- (3) Pesticides and herbicides, which may come from agriculture, urban storm water run off and residential uses.
- (4) Organic chemical contaminants, which can come from industrial processes, gas stations, urban storm water runoff and septic systems.
- (5) Radioactive contaminants, which can be naturally occurring or the result of oil and gas production, and mining activities.

In order to ensure that tap water is safe to drink, EPA establishes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug administration establishes limits for contaminants in bottled water.

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 the 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.

MCL's are set at very stringent levels. 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-a-million chance of having the described health effect.

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. GR/RS/SW Co. Joint Powers Water Board 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 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>

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791). Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

The GR/RS/SW Co. Joint Powers Water Board was required to start monitoring our Source water (the Green River) on a monthly basis for *Cryptosporidium*. We started in October of 2016 and will continue sampling until September of 2018. As of yet, no *Cryptosporidium* has been detected. The GR/RS/SW Co. Joint Powers Water Board water treatment plant was designed with filtration plus an ozone disinfection system to specifically address microbial and other organic contaminants in the source water.

The GR/RS/SWCO/Joint Powers Water Board works around the clock to provide and maintain a safe and dependable water supply. We ask that all our customers assist us in protecting our water sources, which are the heart of our community, our way of life and our children's future.

Source Water Assessment Reports are available and can be obtained through the WYDEQ on their internet site under Water Quality, Watershed Protection, Water Quality Assessment, Section 303(d) The files are in (PDF) and can be opened and read online or downloaded.