

2017 Annual Water Quality Report

Big Horn Regional Joint Powers Board

PWS WY5601630

Is my water safe?

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Where does my water come from?

Our water is provided by groundwater wells as follows: City of Worland's Wells #1 and #3, and Big Horn Regional JPB Well #2.

Source water assessment and its availability

You can obtain a copy of our source water assessment from our office located at 1100 North 10th Street in Worland, WY.

Why are there contaminants in my drinking water?

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 (EPA) Safe Drinking Water Hotline (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 the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (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:

microbial contaminants, such as viruses and bacteria, that 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 stormwater 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 stormwater 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 stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How can I get involved?

If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the third Wednesday of every month., or you can call the Big Horn Regional office at 307-347-4042.

Description of Water Treatment Process

Your water is treated by disinfection. Disinfection involves the addition of chlorine or other disinfectant to kill dangerous bacteria and microorganisms that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

Cross Connection Control Survey

The purpose of this survey is to determine whether a cross-connection may exist at your home or business. A cross connection is an unprotected or improper connection to a public water distribution system that may cause contamination or pollution to enter the system. We are responsible for enforcing cross-connection control regulations and insuring that no contaminants can, under any flow conditions, enter the distribution system. If you have any of the devices listed below please contact us so that we can discuss the issue, and if needed, survey your connection and assist you in isolating it if that is necessary.

- Boiler/ Radiant heater (water heaters not included)
- Underground lawn sprinkler system
- Pool or hot tub (whirlpool tubs not included)
- Additional source(s) of water on the property

- Decorative pond
- Watering trough

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Additional Information for Lead

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. Big Horn Regional Joint Powers 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 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>.

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

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Haloacetic Acids (HAA5) (ppb)	NA	60	.3	NA	.45	2017	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	.92	NA	3.14	2017	No	By-product of drinking water disinfection
Inorganic Contaminants								
Arsenic (ppb)	0	10	2	NA	2	2016	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Fluoride (ppm)	4	4	.3	.2	.3	2016	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	.42	.2	.5	2017	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	50	50	5	NA	5	2016	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Sodium (optional) (ppm)	NA		3.3	2.2	3.3	2016	No	Erosion of natural deposits; Leaching
Microbiological Contaminants								
Total Coliform (TCR) (positive samples/month)	0	1	0	NA	NA	2016	No	Naturally present in the environment
Radioactive Contaminants								
Alpha emitters (pCi/L)	0	15	5.97	1.79	5.97	2015	No	Erosion of natural deposits
Radium (combined 226/228) (pCi/L)	0	5	2.93	.8	2.93	2015	No	Erosion of natural deposits
Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source	
Inorganic Contaminants								
Lead - action level at consumer taps (ppb)	0	15	1	2016	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	

Undetected Contaminants

The following contaminants were monitored for, but not detected, in your water.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Violation	Typical Source
1,1,1-Trichloroethane (ppb)	200	200	ND	No	Discharge from metal degreasing sites and other factories

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Violation	Typical Source
1,1,2-Trichloroethane (ppb)	3	5	ND	No	Discharge from industrial chemical factories
1,1-Dichloroethylene (ppb)	7	7	ND	No	Discharge from industrial chemical factories
1,2,4-Trichlorobenzene (ppb)	70	70	ND	No	Discharge from textile-finishing factories
1,2-Dichloroethane (ppb)	0	5	ND	No	Discharge from industrial chemical factories
1,2-Dichloropropane (ppb)	0	5	ND	No	Discharge from industrial chemical factories
2,4,5-TP (Silvex) (ppb)	50	50	ND	No	Residue of banned herbicide
2,4-D (ppb)	70	70	ND	No	Runoff from herbicide used on row crops
Alachlor (ppb)	NA		ND	No	
Antimony (ppb)	6	6	ND	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; test addition.
Atrazine (ppb)	3	3	ND	No	Runoff from herbicide used on row crops
Benzene (ppb)	0	5	ND	No	Discharge from factories; Leaching from gas storage tanks and landfills
Benzo(a)pyrene (ppt)	0	200	ND	No	Leaching from linings of water storage tanks and distribution lines
Beryllium (ppb)	4	4	ND	No	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	5	5	ND	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints
Carbofuran (ppb)	40	40	ND	No	Leaching of soil fumigant used on rice and alfalfa
Carbon Tetrachloride (ppb)	0	5	ND	No	Discharge from chemical plants and other industrial activities
Chlordane (ppb)	0	2	ND	No	Residue of banned termiticide
Chlorobenzene (monochlorobenzene) (ppb)	100	100	ND	No	Discharge from chemical and agricultural chemical factories
Chromium (ppb)	100	100	ND	No	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	200	200	ND	No	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories
Dalapon (ppb)	200	200	ND	No	Runoff from herbicide used on rights of way
Di (2-ethylhexyl) adipate (ppb)	400	400	ND	No	Discharge from chemical factories
Di (2-ethylhexyl) phthalate (ppb)	0	6	ND	No	Discharge from rubber and chemical factories
Dibromochloropropane (DBCP) (ppt)	0	200	ND	No	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Violation	Typical Source
Dichloromethane (ppb)	0	5	ND	No	Discharge from pharmaceutical and chemical factories
Dinoseb (ppb)	7	7	ND	No	Runoff from herbicide used on soybeans and vegetables
Endrin (ppb)	2	2	ND	No	Residue of banned insecticide
Ethylbenzene (ppb)	700	700	ND	No	Discharge from petroleum refineries
Ethylene dibromide (ppt)	0	50	ND	No	Discharge from petroleum refineries
Heptachlor (ppt)	0	400	ND	No	Residue of banned pesticide
Heptachlor epoxide (ppt)	0	200	ND	No	Breakdown of heptachlor
Hexachlorobenzene (ppb)	0	1	ND	No	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene (ppb)	50	50	ND	No	Discharge from chemical factories
Lindane (ppt)	200	200	ND	No	Runoff/leaching from insecticide used on cattle, lumber, gardens
Mercury [Inorganic] (ppb)	2	2	ND	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
Methoxychlor (ppb)	40	40	ND	No	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Nitrite [measured as Nitrogen] (ppm)	1	1	ND	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Oxamyl [Vydate] (ppb)	200	200	ND	No	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs [Polychlorinated biphenyls] (ppt)	0	500	ND	No	Runoff from landfills; Discharge of waste chemicals
Pentachlorophenol (ppb)	0	1	ND	No	Discharge from wood preserving factories
Picloram (ppb)	500	500	ND	No	Herbicide runoff
Simazine (ppb)	4	4	ND	No	Herbicide runoff
Styrene (ppb)	100	100	ND	No	Discharge from rubber and plastic factories; Leaching from landfills
Tetrachloroethylene (ppb)	0	5	ND	No	Discharge from factories and dry cleaners
Thallium (ppb)	.5	2	ND	No	Discharge from electronics, glass, and Leaching from ore-processing sites; drug factories
Toluene (ppm)	1	1	ND	No	Discharge from petroleum factories
Toxaphene (ppb)	0	3	ND	No	Runoff/leaching from insecticide used on cotton and cattle
Trichloroethylene (ppb)	0	5	ND	No	Discharge from metal degreasing sites and other factories

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Violation	Typical Source
Vinyl Chloride (ppb)	0	2	ND	No	Leaching from PVC piping; Discharge from plastics factories
Xylenes (ppm)	10	10	ND	No	Discharge from petroleum factories; Discharge from chemical factories
cis-1,2-Dichloroethylene (ppb)	70	70	ND	No	Discharge from industrial chemical factories
o-Dichlorobenzene (ppb)	600	600	ND	No	Discharge from industrial chemical factories
p-Dichlorobenzene (ppb)	75	75	ND	No	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene (ppb)	100	100	ND	No	Discharge from industrial chemical factories

Additional Monitoring

As part of an on-going evaluation program the EPA has required us to monitor some additional contaminants/chemicals. Information collected through the monitoring of these contaminants/chemicals will help to ensure that future decisions on drinking water standards are based on sound science.

Name	Reported Level	Range	
		Low	High
Alachlor (ppb)	-2		

Unit Descriptions	
Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
ppt	ppt: parts per trillion, or nanograms per liter
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
positive samples/month	positive samples/month: Number of samples taken monthly that were found to be positive
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
MCLG	MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below

Important Drinking Water Definitions	
	which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL	MCL: Maximum Contaminant Level: 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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL	MRDL: Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

TT Violation	Explanation	Length	Health Effects Language	Explanation and Comment
Ground Water Rule violations	MONITOR GWR TRIGGERED/ADDITONAL, MAJOR - We failed to collect follow-up samples within 24 hours of learning of the total coliform-positive sample. These needed to be tested for fecal indicators from all sources that were being used at the time the positive sample was collected.	2017	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.	We will collect follow-up samples within 24 hours of learning of a total coliform positive sample.

For more information please contact:

Contact Name: Mike Neuffer
Address: 1100 N. 10th
Worland, WY 82401
Phone: (307) 347-4042

Consumer Confidence Report (CCR) Certification for Wyoming Community Water Systems Serving Fewer than 10,000 Persons

Community Water System Name: _____

Public Water System Identification No: _____ Year CCR Due: _____

Important: In 1999, Governor Jim Geringer exercised his authority under the Safe Drinking Water Act to waive the direct mailing requirement for CCRs for small community water systems in Wyoming. Small community water systems can instead meet their annual reporting requirements under the CCR Rule by the methods of report distribution listed below.

Directions: Please mark the boxes in the section relevant to your drinking water system and fill in the associated blanks. Then sign the form in the last section.

Community Water Systems Serving Fewer than 10,000 Persons must complete all three (3) of the following actions:

1. Notified customers by direct mailing* that the CCR shall be printed in a local newspaper or made available on an internet web site.
Specify date and method of direct notice to customers:

and

2. Published the CCR as an insert in one or more local newspapers serving the area of service or published the CCR on an internet web site.
Specify newspaper and the date of publication, or specify the internet web site address:

and

3. Made paper copies of the CCR available to the public upon request.
Describe what information was provided to the customer so that he/she could request a paper copy of the CCR, if desired:

*Direct mailing can include mailing a paper notice or emailing a notice to your customers.

Community Water Systems Serving 500 Persons or Fewer must complete both of the following actions:

1. Provided direct notice* to each customer that the annual CCR is available.
Specify the date and method of direct notice to customers, and where the report was made available:

and

2. Made paper copies of the CCR available to the public upon request or through an internet web site.

Describe what information was provided to the customer so that he/she could request a paper copy of the CCR, or specify the internet web site address:

*Direct notice can include mailing a paper notice to or emailing a notice to your customers.

The community water system named above hereby confirms that its Consumer Confidence Report (CCR) has been distributed to customers or that appropriate notices of availability have been given as specified on this form. Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to EPA Region 8.

CERTIFIED BY:

Name (please print): _____

Title: _____ Phone #: _____

Signature: _____

Today's Date: _____

Please sign and send your completed certification by mail, fax, or email for receipt no later than October 1st of each year for the CCR due that same year:

MAILING ADDRESS:

US Environmental Protection Agency, Region 8
 Drinking Water Program (8P-W-DW)
 Attn: CCR Rule Manager
 1595 Wynkoop St.
 Mailcode: 8P-W-DW
 Denver, CO 80202-1129

EMAIL:

To: R8DWU@epa.gov
 Subject: CCR Certification

FAX:

1-(877) 876-9101
 Attn: CCR Certification