

2016 ANNUAL DRINKING WATER QUALITY REPORT – April 2017

To the customers of Pardeeville Public Utilities:

We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the effort we make to continually improve the water treatment process, and protect our water resources. We are committed to ensuring the quality of your water. Our water source is supplied by three deep wells. Well #1 is located on W. Chestnut St., Well #2 is located on Roosevelt St., and Well #3 is located on Green St. Well #1 draws from the sandstone aquifer at 370' depth, Well #2 draws from the Dresbach aquifer at 382' depth and well #3 draws from the sandstone aquifer at 420' depth.

Prior to the installation of Well #3, a "Wellhead Protection Plan" was prepared. This plan helped in determining the best location for the third well in Pardeeville. The "Wellhead Protection Plan" also identified groundwater flow, the zone of influence, the groundwater recharge area and any potential contamination sources within a ½ mile radius of the delineated area of the well. We are required to go over the plan annually, make changes as needed, and forward them to the Department of Natural Resources (DNR). The "Wellhead Protection Plan" is available at our office for anyone to view. The DNR requires us to have a file on all private wells within the village in order to protect our aquifer from contamination and over usage. Village ordinance requires that all private wells be inspected, tested for safe water, and have a valid permit. If you have a private well and are currently out of compliance, please contact our utility office. Failure to comply with DNR Code and village ordinance may result in a fine ranging from \$125.00 up to \$500.00 per day. It's very important that we continue to protect our water supply in order to prevent contamination to the village aquifer.

In order to keep up with our community growth, the village continues to upgrade and maintain our system. The Village has a total of 132 hydrants, 293 valves, 946 water services and 979 customers. Pardeeville's Water system has 67,085 feet of water main. The three wells pumped 53,243 MGD of water during the calendar year of 2016. The Public Service Commission requires that municipalities under the population of 10,000 account for at least 75% of its water usage with no greater than a 25% loss. In 2016, we accounted for 98% of our water and had a 2% loss, which fell within the PSC guidelines. The operators continue to change and test

water meters annually, along with general maintenance of our distribution systems and wells. Each year we check & listen for leaks in our system, and make repairs as needed. In May of 2015, we contracted Municipal Well & Pump to complete the following work at Well #3. They pulled and rebuilt the pump, replaced the well casing, treated the well, and flushed the system and put it back into service. In the fall of 2014, we painted the interior and exterior of Water Tower #2, located at 212 W. Lafollette St. In 2015 we had both of our towers inspected, and any maintenance that was needed, was completed.

We have three Certified Water Operators, which operate and maintain the water system. The operators take continuing education courses to stay current on issues throughout the industry. These classes and seminars keep them familiar with codes, procedures and operations in order to ensure that safe drinking water standards are met.

The Department of Natural Resources (DNR) requires us to take samples of approximately 104 potential contaminants from our drinking water system. The DNR sends us the parameters we need to test for and the certified labs that we are allowed to use for the testing. During the 2016 calendar year, we were required to test for VOC's, Nitrates, TTHM and HAA5. All of the samples taken fell within the DNR guidelines.

Our water system is completely in compliance with all of the federal and state agencies that regulate municipal water utilities. We are required to test for lead and copper at individual home sites in various locations throughout our community. This testing is done every three years. The lead and copper testing requirements were met during the 2014 calendar year. The test results were within the guidelines set forth by the DNR. The purpose of these tests is to collect information on the levels of lead content at each residents home. Lead & copper testing will occur in 2017, as required by the DNR.

The Village is required to take two bacteria samples per month. These bacteria tests are done on a bi-weekly basis. The DNR regulations allow no more than one bacteria sample per month to test positive. There were not any bacteria samples that tested positive during the 2016 calendar year. The DNR requires Pardeeville Public Utilities to continuously chlorinate the water. We chlorinate at a rate of .20 to .25 mg/l. In addition to our two monthly chlorinated bacteria samples, the DNR requires us to take a non-chlorinated (raw) sample on our three wells quarterly. All of the samples that were taken tested negative. We also feed fluoride into the water system for the benefit of the residents, at a rate of .07 to .085 mg/l.

Maximum Contaminant Level (MCL) is the maximum contaminant level allowed for that sample. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day, at the MCL for a lifetime, to have a one-in-a-million chance of having the described health effect.

The following tables show the results of our monitoring for the period of January 1st to December 31st, 2016.

2016 Consumer Confidence Report Data PARDEEVILLE WATERWORKS, PWS ID: 11100496

Water System Information

If you would like to know more about the information contained in this report, please contact David Tracey at (608) 429-3054.

Opportunity for input on decisions affecting your water quality

Pardeeville Public Utility Meetings are the first Tuesday of each month at 6:00 p.m. at Village Hall

Health Information

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 (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 systems 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 Environmental Protection Agency's safe drinking water hotline (800-426-4791).

Source(s) of Water

Source ID	Source	Depth (in feet)	Status
1	Groundwater	370	Active
2	Groundwater	382	Active
3	Groundwater	420	Active

To obtain a summary of the source water assessment please contact, Brian Yahnke at (608) 429-3054.

Educational Information

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 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 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.
- 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. FDA regulations establish limits for contaminants in bottled water, which shall provide the same protection for public health.

Definitions

Term	Definition
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Level 1 Assessment	A Level 1 assessment is a study of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.
Level 2 Assessment	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine, if possible, why an E. coli MCL violation has occurred or why total coliform bacteria have been found in our water system, or both, on multiple occasions.
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.
MCLG	Maximum Contaminant Level Goal: 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.
MFL	million fibers per liter
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.
MRDLG	Maximum residual disinfectant 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.
mrem/year	millirems per year (a measure of radiation absorbed by the body)
NTU	Nephelometric Turbidity Units
pCi/l	picocuries per liter (a measure of radioactivity)
ppm	parts per million, or milligrams per liter (mg/l)
ppb	parts per billion, or micrograms per liter (ug/l)
ppt	parts per trillion, or nanograms per liter
ppq	parts per quadrillion, or picograms per liter
TCR	Total Coliform Rule
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

Detected Contaminants

Your water was tested for many contaminants last year. We are allowed to monitor for some contaminants less frequently than once a year. The following tables list only those contaminants which were detected in your water. If a contaminant was detected last year, it will appear in the following tables without a sample date. If the contaminant was not monitored last year, but was detected within the last 5 years, it will appear in the tables below along with the sample date.

Disinfection Byproducts

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
HAA5 (ppb)	D-4	60	60	1	1		No	By-product of drinking water chlorination
TTHM (ppb)	D-4	80	0	0.0	0.0		No	By-product of drinking water chlorination

Inorganic Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
ARSENIC (ppb)		10	n/a	1	0 - 1	3/25/2014	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
BARIUM (ppm)		2	2	0.043	0.022 - 0.043	3/25/2014	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM (ppb)		100	100	1	0 - 1	3/25/2014	No	Discharge from steel and pulp mills; Erosion of natural deposits
CYANIDE (ppb)		200	200	5	5	3/25/2014	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
FLUORIDE (ppm)		4	4	0.1	0.0 - 0.1	3/25/2014	No	Erosion of natural deposits; Water additive which promotes strong

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
								teeth; Discharge from fertilizer and aluminum factories
NICKEL (ppb)		100		2.0000	0.9200 - 2.0000	3/25/2014	No	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.
NITRATE (N03-N) (ppm)		10	10	4.83	2.90 - 7.20		No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SODIUM (ppm)		n/a	n/a	4.80	1.60 - 4.80	3/25/2014	No	n/a

Contaminant (units)	Action Level	MCLG	90th Percentile Level Found	# of Results	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
COPPER (ppm)	AL=1.3	1.3	0.1600	0 of 10 results were above the action level.	8/7/2014	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD (ppb)	AL=15	0	3.20	0 of 10 results were above the action level.	8/7/2014	No	Corrosion of household plumbing systems; Erosion of natural deposits

Radioactive Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
GROSS ALPHA, EXCL. R & U (pCi/l)		15	0	7.7	0.0 - 7.7	3/25/2014	No	Erosion of natural deposits
RADIUM, (226 + 228) (pCi/l)		5	0	4.3	2.5 - 4.3	3/25/2014	No	Erosion of natural deposits
GROSS ALPHA, INCL. R & U (n/a)		n/a	n/a	7.7	0.0 - 7.7	3/25/2014	No	Erosion of natural deposits

Additional Health Information

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than 6 months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

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. Pardeeville Waterworks 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 www.epa.gov/safewater/lead.