PUEBLO OF ZUNI

Zuni Water System
2016 Water Quality Report
(Provided by Zuni Utility Department)
(Issued June 2017 - PWS 063501124)

Is my water safe?
Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. Zuni Water Department vigilantly safeguards its water supplies and once again we are proud to report that our system has not violated a maximum contaminant level or any other water quality standard.

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?
The water for the Zuni Utility Department Water System comes from 2-wells that are both about 700 feet deep and are located near Ojo Caliente. The wells draw water from the Glorietta Sandstone/San Andres Limestone aquifer. The water is piped over 10 miles to where it is treated prior to going out to the distribution system.

Source water assessment and its availability
The 1996 amendments to the Safe Drinking Water Act authorize a Source Water Assessment Program to determine the susceptibility of a public drinking water supply to contamination. Source of contaminants regulated by the Safe Drinking Water Act are required to be inventoried during the assessment process. The EPA region 6 Source Water Protection Branch in cooperation with Division of Resource Management and Protection conducted this assessment in November of 2005.

Based on the following factors, your water system was determined to have a low susceptibility to contamination. The physical integrity of the well, the characteristics of the hydrologic system around the well, the characteristics of the contaminants inventoried and the likelihood of those contaminants to reach the source of the drinking water supply all impact the susceptibility of the source to contamination.

Additionally, the Pueblo is actively working with the New Mexico Rural Water Association to complete a draft source water protection plan.

Why are there contaminants in my drinking water?
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 that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

- Inorganic contaminants, such as salts and metals, that 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, urban storm water runoff, and residential uses.

- Organic chemical contaminants, including synthetic and volatile organic chemicals that 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 be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, USEPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.

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. The Zuni Utility Department is responsible for providing high quality 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.

Additional Information for Arsenic

While your drinking water meets EPA standards 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. The Zuni Water System has been advised to take a confirmation sample in 2015 as a follow-up to establish the next course of action about the high value. Arsenic confirmation sample has been collected as of June 2015 We are due to collect the next sample in 2018 .

Description of Water Treatment Process

The Zuni Utility Department uses gas Chlorination to treat its water source. Gas Chlorine is used to treat the Zuni water source, to combat bacteria that might be present in our water source. Dosage of the chlorine is monitored daily, to make sure that our water system is being disinfected to provide safe drinking water to the community.

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 shower-efficient showerhead. They're inexpensive, easy to install and can save you up to 750 gallons a month.
- Run your clothes washer only when it's full. You can save up to 1000 gallons a month.
- Fix or replace leaky toilets and faucets. Water leaking from these fixtures can add up when it is leaking 24 hours-a-day. 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.

- Always remember that water is not to be used for irrigating crops, gardens, lawns, trees and landscaping. It is also not to be used for watering live stocks, washing vehicles, filling swimming pools and washing driveways and streets.
- 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.
- If you have access to a computer and want to learn more, 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 contaminates 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 tubs (whirlpool tubs not included)
- Additional source (s) of water on the property
- Decorative ponds
- Watering troughs

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. If you have your own septic system, properly maintain your system to reduce leaching to water sources. Dispose of chemicals properly; take used motor oil to a recycling center. Volunteer and organize a project to help in protecting your community's watershed, and always remind household residents, that some storm drains dumps directly into your local water body.

How can I get involved?

You can assist the Zuni Utility Department and the community in protecting our valuable water resources by conserving water usage and reporting broken waterlines immediately. The ever present possibility of drought conditions calls for an even greater emphasis on the misuse of water for our community. The Zuni Utility Department still has a ban on using water for car washing, watering grass, trees and gardens, and prohibits the use of water for anything else other than domestic use. Notices are posted at all public places and will be reposted from time to time. You can also assist in reporting any type of misuse of water by calling 505-782-5654, and field crews will be dispatched out immediately to intervene. As community members, you can also attend scheduled Tribal Council General Meetings to provide your input and update yourselves on water related issues. Notices of such meetings should be posted for the time and dates of the meetings.

Other Information

As many of the community members are already aware, Zuni Pueblo switched to using new wells and a new treatment plant at the end of 2002. Since then there have been concerns expressed regarding hardness in the water. The water from the new wells does indicate that a considerable amount of hardness is present in the water. Typically the hardness will accumulate in the form of a white buildup or will be seen when water is brought to a boil. Hardness is something that is not a health concern. The Zuni Utility Department is examining options to address the issue of hardness in our community's water.
Currently the Pueblo of Zuni is in the process of making the Zuni Utility Department a separate enterprise. We are in the beginning stages of creating several aspects to meet the criteria to become the Zuni Tribal Utility Authority, Inc. (ZTUA). Once this is accomplished, we will take on the solicitation for community members, business owners and professional individuals who are interested in serving on the Zuni Water Board Committee. Please let us know if you are interested.

Zuni Water Quality Data Table

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

(Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.)

Inorganic Contaminants

Contaminants	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation?	Typical Source
Arsenic (ppb)*	0	10	9.6	NA	NA	2015	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium (ppm)	2	2	0.024	NA	NA	2013	No	Discharge of drilling wastes; Discharge from metal refineries, Erosion of natural deposits.
Fluoride (ppm)	4	4.0	0.41	NA	NA	2013	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer And aluminum factories.
Selenium (ppb)	50	50	3	NA	NA	2013	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Radioactive Contaminants

Contaminants	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation?	Typical Source
Beta/photon emitters (pCi/L)	0	50	4	NA	NA	2012	No	Decay of natural and man-made deposits. The EPA considers 4 pCi/L to be the level of concern for Beta particles.
Uranium (ug/L)	0	30	2.2	NA	NA	2012	No	Erosion of natural and man-made deposits

Disinfectants and Disinfection By-Products

Contaminants	MRDLG	MRDL	Your Water	Range Low	Range High	Sample Date	Violation?	Typical Source
Chlorine (mg/L)	4	4	0.6	0.6	0.6	2016	No	Water additive used to control microbes
Total Trihalomethanes	no goal for the total	80	4.22	4.22	4.22	2016	No	By-Products of drinking water disinfection

Lead and Copper Contaminants	MCLG	Action Level	90th Percentile	# Sites Over AL	Sample Date	Violation?	Typical Source
Copper (ppm)	1.3	1.3	0.212	0	2014	No	Erosion of natural Deposits; Leaching from wood preservatives; Corrosion of household
Lead (ppb)	0	15	2.3	0	2014	No	Erosion of natural deposits; Corrosion of household plumbing systems

Unit Descriptions

Term	Definition
ug/L	ug/L : Number of micrograms of substance in one liter of water
mrem/yr	mrem/yr: millirem per year (a measure of radioactivity)
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
positive	positive samples/month: Number of samples taken monthly that were found to be
NA	NA: not applicable
ND	ND: Not detected

Important Drinking Water Definitions

Term	Definition
MCLG	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.
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.
MRDLG	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.
MRDL	MRDL: Maximum Residual Disinfectant Level: The highest level of a drinking water disinfectant that is allowed in drinking water. Compliance is determined based on a running annual average of all samples taken in a year.
ALG	ALG: Action Level Goal: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
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