2017 City of Elko Water Quality Report

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 and covers the time period of January 1, 2017-December 31, 2017; and in a few instances the most recent data from 2015 and 2016. During this time we sampled and performed analysis for over 100 contaminants. We detected 18 contaminants, and 17 were well below the EPA established limits. The City Water Department is complying with EPA's action level requirements for the contaminant above the MCL and is later discussed in this report.

THE CITY OF ELKO WATER DEPARTMENT TAKES A GREAT DEAL OF PRIDE IN THE QUALITY OF WATER THEY DELIVER TO YOU, OUR CONSUMER.

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 Drinking Water Hotline (800-426-4791).

Where does my water come from?

The City of Elko water comes from 17 wells which pump water from the underground aquifer referred to as the Elko Segment of the Humboldt River Basin.

Source water assessment and its availability

A source water assessment was completed in 2017. A copy can be obtained by contacting the Elko Water Department at 775-777-7375.

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).

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.

Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

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?

City water department staff works around the clock to provide top quality water to every tap. We ask that each of our customers help us protect our water source which is the heart of our community, our way of life and our children's future.

Additional Information for Lead

Your water meets the health standard for Lead, but 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 City of Elko Public 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.

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.

Additional Information for Nitrate

Although your water meets drinking standards, Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six 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 for advice from your health care provider.

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	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Disinfectants & Disinfectant By-Products There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants								
TTHMs [Total Trihalomethanes] (ppb)	0	80	4.8	1.2	4.8	2017	No	By-product of drinking water disinfection
Inorganic Contaminants								
Arsenic (ppb)	0	10	6	6	6	2017	No	Erosion of natural deposits; runoff from orchards; Runoff from glass and electronics production wastes
Chromium (ppb)	100	100	4	2	4	2016	No	Discharge from steel and pulp mills; Erosion of natural deposits
Barium (ppm)	2	2	0.15	0.11	0.15	2016	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	0.5	0.1	0.5	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	9.8	0.48	9.8	2017	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	50	50	8	5	8	2016	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Radioactive Contaminants Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.								
Radon (pCi/L)	N/A	N/A	936	1.133	936	2015	No	
Gross Alpha Particle Activity (pCi//L)	0	30	39.6	1.22	39.6	2017	No	Erosion of natural deposits
Gross Alpha Excluding Radon & Uranium (pCi/L)	0	15	11.9	< 0.1	11.896.	2017	No	Erosion of natural deposits
Gross Beta Particle Activity (pCi/L)	0	50	25	5.9	25	2017	No	Decay of natural and man-made deposits. The EPA considers 50 pCi/L to be the level of concern for Beta particles.
Radium (combined) 226/228) (ug/L)	0	5	1.26	1.26	1.26	2017	No	Erosion of natural deposits
Combined Uranium (ug/L)	0	30	41	1	41	2017	No	Erosion of natural deposits

Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	0.13	2016	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	15	2	2016	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Contaminants	MCLG Or MRDLG	MCL, TT or MRDL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Volatile Organic Contaminates								
Trichloroethylene (ppb)	0	5	0.75	0.26	0.75	2017	No	Discharge from metal degreasing sites and other factories
Tetrachloroethylene (ppb)	0	5	0.71	0.71	0.71	2017	No	Discharge from fractions and dry cleaners

Unit Descriptions	
Term	**Definition**
ug/L	ug/L : Number of micrograms of substance in one liter of water
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)
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 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

Exceedances
Uranium Some people who drink water containing uranium in excess of the MCL (30 ug/L) over many years may have increased risk of getting cancer and kidney toxicity. The violation occurred on July 25, 2017 when one of the City wells exceeded the MCL of 30 ug/L. The result was 41 ug/L. The City Water Department is following all the recommendations of the regulatory agency and has started quarterly monitoring on the Well in question. On October 25, 2017 the City Water Department started the quarterly monitoring and the result was 26 ug/L which is below the MCL of 30 ug/L. The City water Department will continue to monitor quarterly until all four quarters are below the MCL**.** **Gross Alpha** Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminants	**MCLG**	**Your Water**	**# Samples Exceeding AL**	**Sample Date**	**Exceeds AL**	**Typical Source**
Microbiological Contaminants						
Total Coliform (TCR**)**	**0**	Systems that collect less than 40 samples per month-No more than 1 positive monthly sample	**1**	June 2017	Yes	Naturally present in the environment

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

Health Information About the Above Level 1 Assessment

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful waterborne pathogens may be present, or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify and correct any problems that were found during these assessments.

During the past year, we were required to conduct one Level 1 assessment(s). One Level 1 assessment(s) was completed on 06-29-17. In addition, we were required to take one corrective action, which we have completed. This involved determining where the source of contamination occurred. The City of Elko Water Department completed a complete assessment of the entire distribution system. Part of this assessment was sampling numerous locations near the original sample sites that were positive for coliform bacteria. The City of Elko Water Department was able to narrow it down to two homes where the samples had been collected at the outside water faucets. During this process, The City of Elko Water Department worked closely with the homeowners of these two sample sites to figure out where the contamination originated. Upon close inspection of the outside faucets, it was discovered that two of them had some type of foreign organic matter inside of them. When this was discovered, the faucets were cleaned of any foreign material, sanitized and repeat samples were collected. These samples were all negative for coliform bacteria. In July of 2017 The City of Elko Water Department installed new dedicated sample stations at all the locations in the City where samples were being collected at outside residential faucets.

The City of Elko public water system (PWS I.D. # NV0000272) sampled for the contaminants listed in the table below as required by State and Federal Laws within the correct month but due to a shipping delay they did not make it to the lab. Because of this delay the sample had to be retaken which was outside the monitoring period. This is a failure to monitor violation of one week, and not any exceedance of any Maximum Contaminant Level; no known health effects are believed to have resulted due to the missed samples. We will return to compliance by issuance of this public notice and performing all monitoring as required by the State during the calendar year of 2018.

The City of Elko Water Department did monitor for the contaminants the following week and the results were below the MCL. The results for Total Trihalomethanes (TTHM's) were 4.8 ppb with an MCL of 80 ppb and the results for Haloacetic Acids (HAA5's) were < 2.0 ppb with an MCL of 60 ppb. Historically the City of Elko Water Department has had very low and well below limits for these, two contaminants.

Sampling for the contaminants will be initiated during 2018, and you will be notified of any violation of the standards**.**

What does this mean to me?

This is not an emergency. **You do not need to boil water or use an alternative source of water at this time.**

The contaminants the public water system did not monitor for, are listed in the table below, with the period during which samples should have been taken, and the number of samples required for each contaminate.

Violation Type	ID or Tag Number	Source Name	Contaminate	Monitoring Period	Number of Samples Required	Number of Samples Taken
27	DS01	Distribution System	DBPR Stage 2	February 2017	One	0

If you have any questions or comments regarding these violations, please call PWS contact: Dale Johnson at phone no. 775-777-7375.

If other people, such as tenants, residents, patients, students, or employees, receive water from you, it is important that you provide this notice to them by posting in a conspicuous location or by direct hand or mail delivery.

For more information, please contact:
Contact Name: Dale Johnson, Water/Sewer Superintendent
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Phone: 775-777-7375 Fax: 775-777-7379
Email: djohnson@elkocitynv.gov