

2016 City of Elko Water Quality Report

Is my water safe?

YES. 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, 2016-December 31, 2016; and in a few instances the most recent data from 2015. During this time we sampled and performed analysis for over 100 contaminants. We detected 19 contaminants, and 17 were well below the EPA established limits. The other 2 were Secondary Standards which are non-enforceable guidelines regulating contaminants that may cause cosmetic effects or aesthetic effects in drinking water. The City Water Department has satisfied EPA's action level requirements for these 2 contaminants.

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 2006. A copy can be obtained by contacting the Elko Utilities Department at 775-777-7212.

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

<u>Contaminants</u>	<u>MCLG Or MRDLG</u>	<u>MCL, TT or MRDL</u>	<u>Your Water</u>	<u>Range Low</u>	<u>Range High</u>	<u>Sample Date</u>	<u>Violation</u>	<u>Typical Source</u>
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	3	2.7	3	2016	No	By-product of drinking water disinfection
HAA5 Total Haloacetic Acids (ppb)	0	60	5	< 1.0	5.1	2016	No	By-product of drinking water disinfection
Inorganic Contaminants								
Arsenic (ppm)	0	10	9	3	9	2016	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	0.56	9.8	2016	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	21.7	4.7	21.7	2016	No	Erosion of natural deposits
Gross Alpha Excluding Radon & Uranium (pCi/L)	0	15	5.48	<0.1	5.48	2016	No	Erosion of natural deposits
Gross Beta Particle Activity (pCi/L)	0	50	18.6	11	18.6	2016	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	.328	.328	.328	2015	No	Erosion of natural deposits
Combined Uranium (ug/L)	0	30	24	11	24	2016	No	Erosion of natural deposits

<u>Contaminants</u>	<u>MCLG</u>	<u>AL</u>	<u>Your Water</u>	<u>Sample Date</u>	<u># Samples Exceeding AL</u>	<u>Exceeds AL</u>	<u>Typical Source</u>	
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	
Secondary Standards								
Non-enforceable guidelines regulating contaminants that may cause cosmetic effects or aesthetic effects in drinking water. The City Water Department believes the exceedance for Iron and Aluminum was due to the seasonal well in question not being flushed long enough before the samples were collected. The three monthly repeat samples for each contaminant were below the action level. The well in question is seasonal and cannot be used September through March. This well was only started to pull the required samples and was not put into use at the time of the sampling. Before this well was put into use the well was flushed for a longer period and repeat samples were collected. In the future the City Water Department will ensure the seasonal wells are flushed for an extensive amount of time before samples are collected.								
Iron	.03/.06	.06	.79	2016	1	Yes	Noticeable Effects Above Secondary MCL Rusty Color; sediment; metallic taste; reddish or orange staining	
Aluminum	.005/.20	.20	.72	2016	1	Yes	Noticeable Effects Above Secondary MCL Colored Water	
Microbiological Contaminants								
Total Coliform (TCR)	0	Systems that collect less than 40 samples per month-No more than 1 positive monthly sample			0	2016	No	Naturally present in the environment
<u>Contaminants</u>	<u>MCLG Or MRDLG</u>	<u>MCL, TT or MRDL</u>	<u>Your Water</u>	<u>Range Low</u>	<u>Range High</u>	<u>Sample Date</u>	<u>Violation</u>	<u>Typical Source</u>
Volatile Organic Contaminates								
Trichloroethylene (ppb)	0	5	2.9	.2	2.9	2016	No	Discharge from metal degreasing sites and other factories

Additional Monitoring

As part of an on-going evaluation program the EPA has required us to monitor 20 additional unregulated contaminants/chemicals. Information collected through the monitoring of these contaminants/chemicals will help ensure that future decisions on drinking water standards are based on sound science. In the table below are the 8 contaminants that were detected.

Name of Contaminant	Reported Level (Average)	Low Range	High Range
Bromochloromethane (Halon 1011) (ppb)	.002	0	.15
Chlorate (ppb)	87.98	0	520
Chlorodifluoromethane (HCFC-22) (ppb)	0.009	0	.31
Chromium (total chromium) (ppb)	1.03	.47	4.1
Chromium -6 (Hexavalent chromium) (ppb)	0.68	.18	1.3
Molybdenum (ppb)	1.876	0	3.5
Strontium (ppb)	423.20	10	1000
Vanadium (ppb)	13.15	.4	49

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

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