



2003 Elko Municipal Water System

This report is a State and Federal requirement of the Safe Drinking Water Act.

Water Source

The City of Elko's municipal water comes from seventeen (17) wells located in and around Elko. The water in these wells comes from the relatively shallow alluvial aquifer that is recharged by precipitation and snow melt runoff in the Elko area. The City of Elko works through zoning, subdivision ordinances, site plan review, and the City of Elko's vulnerability assessment study to ensure that potential contaminants are few around the City's well locations.

The City of Elko currently has monitoring waivers for certain chemical contaminants regulated by the Environmental Protection Agency (EPA). A monitoring waiver means the City of Elko's municipal water system does not have to test the water for these contaminants at the frequency normally required by the EPA. In order to receive a waiver, the Nevada State Health Division has conducted a vulnerability assessment of Elko's Water System.

The assessment established that the water system is unlikely to be contaminated by these chemicals based on a study of 1) the geology of the area; 2) past and current land uses; and 3) the existence of potential sources of contamination. For details about the specific chemicals for which there are monitoring waivers please call the City of Elko Engineering Department at (775)777-7210.

Treatment Process The City of Elko municipal water supply is groundwater and does not require the level of water treatment associated with surface water sources. The groundwater is pumped from water wells located in and around the City of Elko. This water is treated with chlorine to destroy possible bacterial contamination prior to delivery into the system.

Testing City of Elko Water Department routinely monitors for contaminants in your drinking water according to Federal and State laws. Attached are the results of our monitoring for the period of January 1st to December 31st, 2003. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk.

Microbiological Contaminants

Ten (10), locations throughout Elko were sampled bi-monthly for coliform bacteria., from the monitoring period of January 1, 2003, through December 31, 2003. In September 2003 the Elko City Water Department had two water samples test positive for coliform bacteria. The coliform bacteria was isolated to a single residence. Because the two samples exceeded 5% of the total monthly samples taken by the City of Elko for coliform bacteria, this incident is considered a non-acute violation of the USEPA's Total Coliform Rule. The city water department immediately corrected the problem. Both coliform bacteria positive samples were tested for E. coli and fecal coliform and were found to be negative.

Synthetic Organic Contaminants

(SOC's) (including pesticides & herbicides) . In the year 2003 the City of Elko sampled water from two (2) municipal wells and analyzed the water for the presence of SOC's. The analyses

indicated that SOC's were not present in these two (2) wells. Our drinking water met all state and federal requirements for SOC's in the year 2003.

Volatile Organic Contaminants

(VOC's) The City of Elko was required to sample one (1) municipal water production well for VOC's in 2003. The analyses indicated that no VOC's were present in this well. Our drinking water met all state and Federal requirements for VOC's in the year 2003.

Radioactive Contaminants

The City of Elko was not required to sample its seventeen (17) drinking water production wells for Alpha & Beta emitters or for natural uranium during the monitoring period of January 1, 2003 through December 31, 2003. The city water system has been tested for radioactive contaminants in past years and was found to meet federal requirements for radioactive contaminants at that time.



The City of Elko monitors for inorganic contaminants (IOCs) in our drinking water, such as metals, which are naturally occurring or may result from urban storm runoff and industrial or domestic wastewater discharges. A table showing the IOC's detected in Elko's drinking water is included below:

IOC TABLE

Constituents	MCL	MCLG	Water Well Range			Likely Source of Contamination
			Min.	Max.	Ave.	
Arsenic	10ppb	N/A	6ppb	6ppb	6ppb	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2ppm	2ppm	0.112ppm	0.112ppm	0.112ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4ppm	4ppm	0.23ppm	0.23ppm	0.23ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (as Nitrogen)	10ppm	10ppm	0.329ppm	5.70ppm	1.53ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Lead	0.015ppm	0.015ppm	ND	0.0020ppm	0.0004ppm	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	1ppm	1ppm	ND	0.0191ppm	0.0022ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Sodium	N/A	N/A	28.3ppm	55.6ppm	39.19ppm	N/A

Definitions:

Action level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level - the "Maximum Allowed" (MCL) is 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.

Maximum Contaminant Level Goal - the "Goal" (MCLG) is 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.

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or Milligrams per liter (mg/L) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (ug/L) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

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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, ask advice from your health care provider.

Total Coliform—Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially—harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

While your drinking water meets EPA's standard of arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons with cancer undergoing chemotherapy, people 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/CDC guidelines on appropriate means to lessen the risk of infection by microbiological contaminants and additional information about contaminants and potential health effects can be obtained by calling The Environmental Protection Agency's Safe Drinking Water Hotline at (800-426-4791).

The City of Elko Council meetings are held every second and fourth Tuesday of every month at 4:00 p.m. Please call our office if you have questions or comments (775)777-7210.

We at the City of Elko work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.