

A scenic view of a river flowing over rocks, surrounded by lush green vegetation. The water is white and foamy as it cascades over the rocks. The surrounding area is filled with various green plants, including tall grasses and leafy shrubs. The overall scene is bright and natural.

# CARSON CITY PUBLIC WORKS

**2019 Water  
Quality Report**

# Flushing our system to remove sediments and color

There are several reasons for flushing:

1. It removes stale water, water with lower chlorine residual and water containing higher disinfection by-products.
2. It moves out the sediments which collect in areas of low water use or flow and dead ends. These sediments can cause taste, odor and color problems.
3. It helps prolong the useful life of the system by scouring out excess build-up that can cause reduced water flow and pipe deterioration.
4. Flushing, even in drought conditions, is a necessary part of maintaining our water distribution system and the quality of the water within it. Fortunately, the water flushed from the mains in the distribution system accounts for only a very small portion of the total water used in Carson City.



During periods of flushing, the water in certain areas may become discolored as it moves out of the system. This water may be drawn into customers' homes, and although discolored and aesthetically unappealing it is safe for consumption. We try to notify every customer who may be affected by discolored water during the spring flushing. We use several methods, including notifications in local media, signboards by roadways, and the Code Red communications system. You can sign up for Code Red notifications via home phone, cell phone, text or email at [www.carson.org/alerts](http://www.carson.org/alerts).

Be in the Know. Sign up for



Carson City has instituted the CodeRED Emergency Notification System — an ultra high-speed telephone communication service for emergency notifications. This system allows us to telephone all or targeted areas of the city in case of an emergency situation that requires immediate action (such as a boil-water notice, missing child or evacuation notices). The system is capable of dialing 50,000 phone numbers per hour. It then delivers our recorded message to a live person or an answering machine, making three attempts to connect to any number.

**Carson City will also use the system to notify water customers of actions within our water system such as main flushing, or fire flow testing that may affect the water appearance in your area. You can set up your notifications to suit yourself by going to [www.carson.org/alerts](http://www.carson.org/alerts) and clicking to update your contact information. You can be alerted by home phone, cell phone, text or e-mail.**

Carson City Public Works and the Carson City Water System also use social media to communicate non-emergency information with our customers. We can be found on social media by going to:



<https://www.facebook.com/CarsonCityGovernment>



<https://www.youtube.com/user/CarsonCityGov>



<https://twitter.com/CarsonCityGov>





a (very) brief

# history of Carson City's Water

The Consolidated Municipality of Carson City, Nevada's territorial and state capital, was founded in 1858. From 1860 through 1864 several water companies were formed and granted the rights to provide water to Carson City.

None of those companies actually built anything. The first water system was built by Edward D. Sweeney and began service from the Carson City Water Works in April 1869. The following month William A Hawthorne and Calvin P. Stevens began supplying water from the Cold Spring Water Works.

Eventually these two companies became one. The Southwest Gas Company bought the Carson Water Company in 1961, and sold it to Carson City under an agreement dated June 7, 1971. A deed transferring the company's property to Carson City was filed on January 6, 1972.

Carson City opened the Quill Water Treatment Plant in October of 1992. The plant uses diatomaceous earth (DE) filtration for the treatment process. Although DE filtration has been in use since the early 1940s, this was the first water treatment plant of its kind in the state of Nevada.



## Present Day

Carson City's water distribution system consists of 250 miles of water mains, 4,200 fire hydrants, 3 surface water sources that feed into the Quill plant, 29 groundwater wells, 15 storage tanks and 16 pressure zones.

The Production Division maintains the Quill Water Treatment Plant and wells to ensure efficient operations and an adequate supply of water. The production staff monitors, regulates flows, samples and maintains the surface water flows and groundwater wells to maximize the conjunctive use of the City's variety of sources.

The Distribution Division maintains the system's water mains, valves and hydrants, and the City's portion of the service line, which is up to and including the water meter.



## COLD SPRINGS

### WATER WORKS !

THE UNDERSIGNED, HAVING UNDERTAKEN to supply the Citizens of Carson with Pure, Soft Spring Water,

— TAKEN FROM —

### LIVING SPRINGS,

Hereby notifies the Public that he is prepared to supply

— WITH —

### WATER FROM THEIR PIPES ,

At the following rates

### To Families or Bars, FIFTY CENTS PER WEEK.

To persons using an extra supply as for Laundry purposes, Irrigating, &c., the rates will be proportionally larger.

We will lay our Pipes the DISTANCE OF A BLOCK

To Accommodate Two Parties,

The Customer furnishing the Top Pipe.

HAWTHORNE & STEVENS,

Proprietors.

Carson City, May 1, 1869

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The Carson Daily Appeal, April 25, 1869, Page 2

## CARSON CITY WATER WORKS !

THE UNDERSIGNED, PROPRIETOR OF THE

Carson City Water Works

HAVING LAID HIS PIPES

Through the Principal Streets of the City

Is now prepared to furnish Shops, Stores, Hotels, Restaurants, Private Residences, &c., with a constant and ample supply of

Pure, Soft Water,  
FRESH FROM THE COLD  
SPRINGS OF THE  
SIERRAS

Rates Moderate.

N.B. - Families and others will be supplied with

Water from the Cart,  
as heretofore, in such parts of the City as are not traversed by the Pipes

EDW. SWEENEY,  
PROPRIETOR CARSON CITY WATER WORKS.

Carson City, April 25, 1869

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The Carson Daily Appeal, May 4, 1869, Page 2

**Nevada Source Water Assessment Program Summary**  
**State of Nevada Division of Environmental Protection**  
**Bureau of Safe Drinking Water**  
**Summary Date: 05/26/2006 Assessor: State**

The Federal Safe Drinking Water Act was amended in 1996 and requires states to develop and implement source water assessment programs to analyze existing and potential threats to the quality of public drinking water throughout the state. A summary of the Carson City Public Works Water Systems susceptibility to potential sources of contamination was initially provided by the State of Nevada in 2005. The summary of this source water assessment was first included in the Carson City 2006 Water Quality Report and now may be accessed by calling Carson City Public Works at 775-887-2355 or online at [www.carson.org](http://www.carson.org).

**Water System Contact Information:**

- Water System Name: Carson City Public Works Water System
- County: Carson City
- BSDW System ID Number: NV0000015
- Number of Connections: 17,577
- Population Served: 54,742
- Owners Rep: Darren Schulz, Public Works Director
- Phone: 775-887-2355
- Fax: 775-887-2164
- Email: [dschulz@carson.org](mailto:dschulz@carson.org)
- Address: Carson City Public Works Water System, 3505 Butti Way, Carson City NV 89701
- Operator: Eddy Quaglieri, Water Utility Manager
- Phone: 775-283-7395
- Fax: 775-887-2164
- Email: [equaglieri@carson.org](mailto:equaglieri@carson.org)
- Address: Carson City Public Works, Water System, 3505 Butti Way, Carson City NV 89701

Information pertaining to the initial findings of the source water assessment is also available for viewing in person at the offices of the Bureau of Safe Drinking Water, 901 South Stewart Street, Suite 400, Carson City, NV 89701. Appointments are suggested; please call (775) 687-9520. Office hours are 8 a.m. to 5 p.m., Monday through Friday.

# IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

INORGANIC CONTAMINANTS <sup>6</sup>									
Analyte	year tested	Units	Ave	Min	Max	MCL	MCLG	Notes and Major Sources	Violation
Apparent Color	2017	ACU	3.67	3.00	5.00	15.00		Secondary MCL	No
Arsenic Total ICAP/MS <sup>1</sup>	2018	ppb	6.45	1.00	17.00	10.00		Erosion of natural deposits, compliance based on locational running annual average for some sources, all averages were below the MCL.	No
Barium	2017	ppb	32.10	8.60	81.00	2000.00		Secondary MCL, erosion of natural deposits	No
Calcium Total ICAP	2018	ppm	21.50	8.40	46.00			Provided as information only	No
Chloride	2018	ppm	3.60	1.40	7.60	250.00		Secondary MCL	No
Copper	2018	ppm	0.005	0.003	0.01	1.30	0.00	Corrosion of household plumbing systems, erosion of natural deposits	No
Fluoride	2018	ppm	0.23	0.06	0.53	2.00	4.00	Natural deposits	No
Iron Total ICAP	2018	ppm	0.21	0.04	0.37	0.60		Secondary MCL	No
Magnesium Total ICAP	2018	ppm	4.58	2.60	5.50			Provided as information only	No
Manganese Total ICAP/MS	2018	ppb	70.30	4.20	110.00	50.00		Secondary MCL	No
Nitrate as Nitrogen by IC	2018	ppm	1.76	0.18	5.40	10.00		Runoff from fertilizer, leaching from septic tanks, sewage, natural deposits	No
Odor at 60 C (TON)	2018	TON	2.00	2.00	2.00	3.00		Secondary MCL	No
PH	2018	Units	8.08	7.50	9.11	6.5 to 8.5		Secondary MCL	No
Potassium Total ICAP	2018	ppm	1.90	1.10	2.80			Provided as information only	No
Sodium Total ICAP	2018	ppm	12.68	4.90	23.00			Provided as information only	No
Sulfate	2018	ppm	3.28	0.97	5.50	500.00		Secondary MCL	No
Total Dissolved Solids (TDS)	2018	ppm	211.14	68.00	650.00	1000.00		Secondary MCL	No
Total Hardness as CaCO3 by ICP (calc)	2018	ppm	69.40	32.00	85.00			Provided as information only	No
Vanadium	2017	ppb	5.40	5.00	5.80				
Zinc Total ICAP/MS	2018	ppb	21.00	21.00	21.00	5000.00		Secondary MCL	No

LEAD & COPPER <sup>2</sup>								
Analyte	year tested	Units	90th percentile	AL**	Sites over AL	Major Sources	Violation	
Copper Total ICAP/MS	2017	ppm	0.260	1.300	0	Corrosion of household plumbing, erosion of natural deposits	No	
Lead Total ICAP/MS	2017	ppm	0.002	0.02	0	Corrosion of household plumbing, erosion of natural deposits	No	

\*\* AL is the Action Level, if the 90th percentile sample is over the AL the system must take action to make the water less corrosive.

MICROBIOLOGICAL CONTAMINANTS									
Analyte	year tested	Units	Ave	Min	Max	MCL	MCLG	Major Sources	Violation
Turbidity <sup>3</sup>	2018	NTU	0.20	0.04	0.45	5.00	1.00	Decay of natural and manmade deposits. Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (e.g., whether disease-causing organisms are present). Higher turbidity levels are often associated with higher levels of disease-causing microorganisms such as viruses, parasites and some bacteria. These organisms can cause symptoms such as nausea, cramps, diarrhea and associated headaches.	No
Total Coliform <sup>4</sup>	2018	present or absent	0 present	0 present	0 present	4 samples or repeat samples confirmed present/month	0	Naturally present in the environment. Not a health threat in itself; it is used to indicate whether other potentially harmful bacteria may be present.	No
Chlorine Residual <sup>5</sup>	2018	ppm	0.77	0.05	2.05	4		Additive for disinfection of water	No

RADIOACTIVE CONTAMINANTS <sup>6</sup>									
Analyte	year tested	Units	Ave	Min	Max	MCL	MCLG	Major Sources	Violation
Alpha, Gross	2018	pCi/L	-2.42	-13.00	5.90	15	0	Erosion of natural deposits	No
Beta, Gross	2018	pCi/L	5.46	3.00	12**	50***	0	Erosion of natural deposits	No
Radium 226	2018	pCi/L	0.99	0.21	3.50		0	Erosion of natural deposits	No
Radium 228	2018	pCi/L	1.55	0.56	3.50		0	Erosion of natural deposits	No
Uranium ICAP/MS	2018	ppb	14.60	2.60	50*	30	0	Erosion of natural deposits	No

\* Compliance with MCL was based on annual average which was always below the MCL

\*\* Because the beta particle results were below 50 pCi/L, no testing for individual beta particle constituents was required.

\*\*\* The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern.

VOLATILE ORGANIC CONTAMINANTS / SYNTHETIC ORGANIC CONTAMINANTS									
Analyte	year tested	Units	Ave	Min	Max	MCL	MCLG	Major Sources	Violation
Hexachlorocyclopentadiene	2018	ppb	0.07	0.07	0.07	50	50	Discharge from chemical factories, flame retardants	No
Di(2-Ethylhexyl)phthalate	2018	ppb	2.80	2.80	2.80	6	0	Discharge from rubber and chemical factories	No
Tetrachloroethylene (PCE)	2018	ppb	0.67	0.67	0.67	5	0	Discharge from factories and dry cleaners	No

DISINFECTION BYPRODUCTS <sup>7</sup>									
Analyte	year tested	Units	Ave	Min	Max	MCL	MCLG	Major Sources	Violation
Total Haloacetic Acids (HAA5)	2018	ppb	21.05	5.80	35.00	60		By-Products of drinking water chlorination for disinfection	No
Total Trihalomethanes	2018	ppb	16.02	0.50	46.00	80		By-Products of drinking water chlorination for disinfection	No

# An Explanation of the Water Quality Data Table

The table above shows the results of our water quality analysis for 2018. The table contains the name of each substance, the highest level allowed by regulation [the Maximum Contaminant Level (MCL), the ideal goals for public health], Maximum Contaminant Level Goal (MCLG), the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to the abbreviations used.

**ARSENIC**<sup>1</sup> — Carson City has seven wells whose output has arsenic levels above the 10 µg/L standard set in 2006. The arsenic levels in the water supplied to our customers has been successfully managed through well use management and blending between well sources, as well as the use of the Arsenic Treatment Removal Plant on Fifth Street. Compliance with the MCL regulation is based on a running annual average at specific sample sites where samples are taken monthly. 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.

**LEAD & COPPER**<sup>2</sup> — Compliance with the Action Level for lead and copper is based on the 90th percentile level, meaning if the level at the 90th percentile is over the Action Level the system must take actions to reduce lead and / or copper in the system. The results of the 90th percentile in the 2017 round of sampling were below the Action Levels for both lead and copper. 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. Carson City 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 (1-800-426-4791) or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

**TURBIDITY**<sup>3</sup> — The MCL allowable for turbidity is dependent on the treatment used. Carson City uses Diatomaceous Earth filtration, so the MCL for turbidity in our treated water is 1.0 NTU. Turbidity has no health effects, however turbidity can interfere with the disinfection of the water as well as provide a medium for microbial growth.

**TOTAL COLIFORM**<sup>4</sup> — Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. There were no MCL violations for total coliform in 2018.

**CHLORINE RESIDUAL**<sup>5</sup> — Chlorine residual is measured at the Quill Water Treatment Plant under the Surface Water Treatment Rule, and throughout the system weekly under the Total Coliform Rule. Under the Surface Water Treatment Rule the water leaving the Quill Water Treatment Plant cannot be less than 0.2 mg/L chlorine for more than 4 hours, and cannot exceed 4 mg/L. The water in the distribution system must have a minimum of 0.05 mg/L chlorine for greater than 97% of the samples taken each month.

## **RADIOACTIVE CONTAMINANTS**<sup>6</sup>

— Compliance with the standard is based on a running annual average from specific sample sites where samples are taken from monthly. All of the water reaching our customers in 2018 was in compliance with the Radionuclide Rule standards. Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer. 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. Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.

**DISINFECTION BY-PRODUCTS**<sup>7</sup> — Carson City began sampling for the Disinfection By-Product Rule 2 in October of 2012. Compliance is based on a running annual average of 60 µg/L for Haloacetic Acids and 80 µg/L for Total Trihalomethanes. Eight quarterly samples are taken from around Carson City and averaged. Results in 2018 varied from 0 to 35 µg/L for Haloacetic Acids with the average value of 24.1 µg/L. The results for Total Trihalomethanes ranged from 0.5 to 46 µg/L with the average at 16 µg/L. Some people who drink water containing Haloacetic Acids and Trihalomethanes in excess of the MCL over prolonged periods may be at a higher risk for developing cancer, with Trihalomethanes also putting them at greater risk for developing problems with the kidneys, liver or central nervous system.

### **Key Abbreviations**

**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. The MCLs are set by the Environmental Protection Agency (EPA) and Nevada Department of Environmental Protection Bureau of Safe Drinking Water (NDEP BSDW).

**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.

**NTU** = Nephelometric Turbidity Units. This unit is a measure of the turbidity of the water as scattering of light, using an instrument and method approved by EPA and NDEP BSDW.

**pCi/L** – Picocuries per Liter. Picocuries is a measure of radioactivity.

**ppm** = mg/L = parts per million, or milligrams per liter

**ppb** = µg/L = parts per billion, or micrograms per liter





## 2018 – 2019 Public Works projects

- The utility replacements in the Downtown Curry Streetscape project were completed this past year.
- The East-West Water Transmission Main Project is planned for completion in 2019 / 2020. This will add redundancy and resilience for better water management. This is the last phase of the transmission main that brings water from Minden to Carson City.
- A replacement for Well 3 on Winnie near Foothill Drive planned for construction in 2019 will greatly increase the capacity of this high-quality well.
- Many water line replacement projects are planned for 2019/20 including Airport Road replacement, Fairview Drive (Roop to Carson St.), Gardner Lane (Nye to Gardner) and Sherman-Airport to Kit Sierra.
- A new booster pump station will be built at Prison Hill Tank planned for in 2019 / 2020. This project is a replacement of aging pump stations that feed the Shadow Hills and Desert Mountain pressure zones in the southeast part of Carson City.
- Other water system improvements and studies are currently under way:
  - an engineering report on Quill Water Treatment Plant Upgrades/Expansion
  - an asset management project for better tracking of aging water infrastructure replacement needs
  - the Goni Canyon Tank Rehabilitation Project
  - a study on a new river induction well aimed at system redundancy, drought resiliency, capacity and water quality improvements
  - a utility rate refresh study
  - a water meter study

We'll be happy to answer any questions about Carson City Water and our water quality. For more information contact Kelly Hale at 775-283-7376 or or Eddy Quaglieri at 775-283-7395. Learn more about the Carson City Public Works at [www.carson.org](http://www.carson.org)

**MEMBER:** Nevada Rural Water Association, American Water Works Association, Water Environment Federation, American Public Works Association, University of Southern California - Foundation for Cross Connection Control, Re-Use Nevada, The Groundwater Foundation, Carson City Subconservancy District, California Water Environment Association, Nevada Water Environment Association

**El informe contiene información importante sobre la calidad del agua en su comunidad. Tradúzcalo o hable con alguien que lo entienda bien.**

# Overall Picture of Carson City Water System at population of 54,742

## 3 Groundwater Basins:

Carson Valley      Dayton Valley      Eagle Valley

## 4 Surface Water Sources:

Ash Canyon 1.43-6.0 NTU  
Kings Canyon 0.18 to 6.0 NTU  
Carson River (used as groundwater)  
Marlette / Hobart 0.18 to 6.0 NTU

Purchased groundwater from Town of Minden, Sunridge  
Booster

## **29 Municipal Production Wells**

### **2018 — Total Daily Maximum Production**

16,930,000 gallons (from 30 Wells and  
Treatment Plant)

### **2018 — Total Storage Capacity**

26,108,000 gallons (15 above-ground Tanks)

## **Average Water Demands**

*(MGD = Million Gallons per Day):*

Average Winter Demand 5 MGD  
Average Summer Demand 16 MGD  
Peak Day Demand 19 MGD

Carson City currently owns 18,648 Acre-Feet (Ac-Ft) of water which, to date 16,660.81 are “usable” water rights. Presently, the City uses approximately 9,960 Ac-Ft per year. At a population of 75,000 it is predicted that the City’s water usage will be approximately 16,500 Ac-Ft. The Water Utility also has available 3,200 Ac-Ft of drought storage water rights, which cannot be assigned to new development, but can only be used for emergency purposes and system safety factors, such as in times of severe drought (State Engineer Order 1140).

## **Source Water Protection**

Carson City’s Wellhead Protection Plan was updated in 2014, and adopted by the Board of Supervisors on March 5, 2015. The plan’s goal is to establish a partnership between the public, private and community interests to protect the watershed, public health and the environment through an aggressive all-inclusive protection program. The program will focus on preventative rather than a reactive response to protecting our vital water resources.

## **Other Monitoring**

In addition to the testing we are required to perform, our water system voluntarily tests for many additional substances and microscopic organisms to make certain the water is safe and of high quality.



## **ADDITIONAL 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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

It is also important that residents have their private wells tested to ensure safe drinking water.

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 storm 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, stormwater runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes, 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 which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

## **AT-RISK POPULATION**

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/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 (1-800-426-4791).

**Concerning Arsenic in Our Water:** Carson City has seven wells whose output has arsenic levels in excess of the 10 parts per billion standard set on January 23, 2006. The arsenic level in the water supplying our customers has been successfully managed through well management and blending with other sources. All water supplied to our customers in 2018 was in compliance with the arsenic standard. 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 (40 CFR141.154(b)(1)).

**Concerning Fluoride:** The State of Nevada has set forth a more stringent MCL of 2.0 mg/L for fluoride than the federal limit of 4.0 mg/L assigned nationally. Some people who drink water containing fluoride in excess of the MCL over many years could develop bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of the teeth of children, usually in children younger than 9 years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

**Concerning Lead in Our Water:** Carson City Public Works Water Department conducted the required tap sampling for lead and copper in August and September of 2017, with the help of 30 of our customers. The sampling was accomplished through the cooperation of the homeowners and residents, who were asked to sample their water from a kitchen or bathroom faucet. We thank these customers for their help in meeting our regulatory obligations. These samples were taken to determine the contribution of distribution system pipes, faucets, fixtures and household plumbing and/or solder to the lead and copper levels in the water. All the sites sampled had results below the action limit for lead and copper in 2017. Compliance with the standards for lead and copper sampling is based on the 90th percentile sample results coming in under the action level for both lead and copper. The samples taken in 2017 indicated continued compliance with the standards for lead and copper. Our next lead and copper sampling will be in 2020.

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. Carson City Public Works Water Department 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 drinking 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 1-800-426-4791 or on the web at <http://www.epa.gov/safewater/lead>.

**Concerning Nitrate in Our Water:** 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 advice from your health care provider.