



CARSON
CITY
PUBLIC
WORKS

2015
Water Quality
Report

Carson City

Water Operators

Water has been important for people for tens of thousands of years. Without water there would be no life on earth. The human body is made up largely of water. Possibly greater than the importance of water by itself is the importance of clean water. Most living things require a certain type of water to live. For example, fish in the ocean need salt water. Humans require very clean water to live. We must have a plentiful supply of water that is free of chemicals and diseases.



Clean, drinkable water in Carson City is produced by the Carson City Public Works Water System. This system is run by a staff of highly trained, dedicated professionals called water system operators. There are 17 operators in the system who are responsible for producing and distributing the clean water from the three surface water sources and 32 wells in Carson City.

These 17 people hold 34 state-regulated and approved certifications, with 13 of them holding certifications in two disciplines. The two disciplines are water treatment and water distribution. These certifications are not easy to get; they require initial education and extensive testing. The tests are designed to be hard, with passing rates of 57% for distribution tests, and 51% for treatment tests. Getting certified shows mastery of many skills ranging from pipe and pump maintenance to water treatment techniques, factors affecting water quality, water sampling, and water quality regulations. The certifications are in four distinct levels per discipline, with each higher step requiring more education and tougher testing, as well as more hands-on experience.



Keeping these certifications requires continuing education in courses approved by the state and federal regulators. Certifications are renewed every two years. Each year Carson City's water staff must complete a total of more than 115 hours of continuing education to meet the requirements for certification renewal. The water operations staff has over 181 total years of work experience, with nine of them having more than five years, and another six of them having from 10 to 20 years of experience on the job.

The water system is staffed seven days a week, and an operator is on-call 24 hours per day, 365 days per year to respond to any and all water emergencies. The system is controlled by an interconnected computerized system called a SCADA (supervisory control and data acquisition) system, which reports on, and helps control, the 32 wells, 15 tanks, 15 pressure zones, 15 booster pumps, 44 pressure

reduction valves and greater than 10,000 other valves throughout the city. The system has over 260 miles of pipe. The operators use the SCADA system among other tools to continuously monitor and adjust the water system, to assure that you always have a ready supply of healthy clean water.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

INORGANIC CONTAMINANTS										
Analyte	year tested	Units	Ave	Min	Max	MCL	MCLG	Notes and Major Sources		Violation
Aluminum	2014	ppb	69.50	45.00	94.00	50 - 200		Secondary MCL, Naturally occurring mineral that can cause discolored water		No
Apparent Color	2014	ACU	4.75	3.00	10.00	15.00		Secondary MCL		No
Arsenic Total ¹	2014	ppb	6.89	1.00	24.00	10.00		Erosion of natural deposits, compliance based on locational running annual average for some sources, all averages were below the MCL.		No
Barium	2014	ppb	25.02	7.20	71.00	2000.00		Secondary MCL, erosion of natural deposits		No
Bromide	2014	ppb	12.44	7.60	24.00			provided as information only		No
Calcium Total	2014	ppm	32.31	10.00	110.00			provided as information only		No
Chloride	2014	ppm	8.92	1.10	64.00	250.00		Secondary MCL		No
Chromium Total	2014	ppb	1.30	1.30	1.30	100.00				No
Fluoride	2014	ppm	0.36	0.05	1.60	2.00	4.00	Natural deposits		No
Iron Total	2014	ppm	0.19	0.03	0.45	0.60		Secondary MCL		No
Magnesium Total	2014	ppm	5.50	1.10	15.00			provided as information only		No
Manganese Total	2014	ppb	16.44	2.70	51.00	50.00		Secondary MCL		No
Nitrate as Nitrogen	2014	ppm	1.44	0.14	6.70	10.00		Runoff from fertilizer, leaching from septic tanks, sewage, natural deposits		No
	2014	TON	1.20	1.00	2.00	3.00		Secondary MCL		No
PH (H3=past HT not compliant)	2014	Units	7.95	7.30	8.50	6.5 to 8.5		Secondary MCL		No
Potassium Total	2014	ppm	2.42	1.00	6.00			provided as information only		No
Sodium Total	2014	ppm	26.03	7.40	88.00			provided as information only		No
Sulfate	2014	ppm	45.23	0.75	320.00			Secondary MCL		No
Total Dissolved Solids (TDS)	2014	ppm	207.69	70.00	650.00	1000.00		Secondary MCL		No
Total Hardness as CaCO3	2014	ppm	102.85	34.00	290.00			provided as information only		No
Zinc Total	2014	ppb	26.33	24.00	28.00	5000.00				No

LEAD & COPPER ²										
Analyte	year tested	Units	90th percentile	AL**	Sites over AL	Major Sources			Violation	
Copper Total	2014	ppm	0.430	1.300	0	Corrosion of household plumbing, Erosion of natural deposits			No	
Lead Total	2014	ppm	0.005	0.015	1	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 ³	2014	NTU	0.22	0.07	0.26	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 ⁴	2014	# of present	0	0	0	0 - 2 present	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 ⁵	2014	ppm	0.53	0.05	1.76	4		Additive for disinfection of water		No

RADIOACTIVE CONTAMINANTS ⁶										
Analyte	year tested	Units	Highest Value	Range	MCL	MCLG	Major Sources			Violation
Combined Radium 226 & 228	2014	pCi/L	4.33	0.396 - 4.33	5.00	0	Erosion of natural deposits			No
Combined Uranium	2014	ppb	42*	2.4 - 42	30.00	0	Erosion of natural deposits			No
Gross Alpha, Excluding Radon and Uranium	2014	pCi/L	8.00	0.2 - 8.0	15.00	0	Erosion of natural deposits			No
Gross Alpha, Including Radon and Uranium	2014	pCi/L	28.5**	3.5 - 28.5	15.00	0	Decay of natural and man-made deposits			No
Gross Beta Particle Activity	2014	pCi/L	12.80	3.5 - 12.8	50.00	0	Decay of natural and man-made deposits			No
Radium 226	2014	pCi/L	4.33	0.396 - 4.33	5.00	0				No
Radium 228	2014	pCi/L	1.08	0.54 - 1.08	5.00	0				No

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

** Compliance is based on Gross Alpha excluding Radon and Uranium

VOLATILE ORGANIC CONTAMINANTS / SYNTHETIC ORGANIC CONTAMINANTS										
Analyte	year tested	Units	Ave	Min	Max	MCL	MCLG	Major Sources		Violation
Hexachlorocyclopentadiene	2014	ppb	0.15	0.14	0.15	50	50	Discharge from chemical factories, flame retardants		No
2-Butanone (MEK)	2014	ppb	18.40	7.20	30.00					No

DISINFECTION BYPRODUCTS ⁷										
Analyte	year tested	Units	Ave	Min	Max	MCL	MCLG	Major Sources		Violation
Total Haloacetic Acids (HAAS)	2014	ppb	18	0	74*	60		By-Products of drinking water chlorination for disinfection		No
Total Trihalomethanes	2014	ppb	20	0	73	80		By-Products of drinking water chlorination for disinfection		No

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

An Explanation of the Water Quality Data Table

The table above shows the results of our water quality analysis for 2014. 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.

ARSENIC¹ — 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 wells sources, as well as the use of the Arsenic Treatment Removal Plant on Fifth St. Compliance with the MCL regulation is based on a running annual average at some sample sites. Samples are taken monthly at those sites. 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 & COPPER² — 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 2014 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 or at www.epa.gov/safewater/lead.

TURBIDITY³ — 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 COLIFORM⁴ — 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 total coliform detections in 2014.

CHLORINE RESIDUAL⁵ — 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 CONTAMINANTS⁶ — Compliance with the standard is based on a running annual average at some sample sites. Water reaching our customers is sampled monthly at those sites. All of the water reaching our customers in 2014 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 BYPRODUCTS⁷ — Eight Quarterly samples are taken in Carson City and averaged. Compliance was based on a running annual average of 60 µg/L for Haloacetic Acids, and 80 µg/L for Total Trihalomethanes. Results in 2014 varied from 3.2 to 74 µg/L for Haloacetic Acids, with the average being 40.34 µg/L. The results for Total Trihalomethanes ranged from 0.5 to 73 µg/L, with the average of 20.23 µg/L. Carson City began sampling for the Disinfection By-Products Rule 2 in October of 2012. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys or central nervous systems, and may have an increased risk of getting cancer.

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

Carson City Unregulated Contaminant Monitoring 2014–2015

The 1996 Safe Drinking Water Act (SDWA) amendments require that once every five years EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs). The first Unregulated Contaminant Monitoring Rule (UCMR 1) was published on September 17, 1999; the second (UCMR 2) was published on January 4, 2007; and the third (UCMR 3) was published on May 2, 2012. This monitoring provides a basis for future regulatory actions to protect public health. The UCMR program was developed in coordination with the Contaminant Candidate List (CCL). The CCL is a list of contaminants that are not regulated by the National Primary Drinking Water Regulations, are known or anticipated to occur at public water systems and may warrant regulation under the Safe Drinking Water Act. Data collected through UCMR are stored in the National Contaminant Occurrence Database (NCOD) to support analysis and review of contaminant occurrence, to guide the CCL selection process and to support the Administrator's determination of whether to regulate a contaminant in the interest of protecting public health. UCMR benefits the environment and public health by providing EPA and other interested parties with scientifically valid data on the occurrence of these contaminants in drinking water, permitting assessment of the population being exposed and the levels of exposure. This data set is one of the primary sources of occurrence and exposure information the Agency uses to develop regulatory decisions for emerging contaminants. Results of UCMR 3 measurements should be interpreted accordingly.

The detection of a UCMR 3 contaminant above the MRL (minimum reporting levels) does not represent cause for concern, in and of itself. Rather, the implications of the detection should be judged considering health effects information (which is often still under development or being refined for unregulated contaminants).

Carson City's sampling for the third Unregulated Contaminant Monitoring Regulation (UCMR 3) began in August of 2014, and will continue until May 2015.

Unregulated Contaminant	MRL (µg/L)	range found, (µg/L)	Average Level found	Reference Concentration* (µg/L)	Major Sources
Chlorate	20	68 - 290	146.80	210	Chlorate is an anion that can enter drinking water from several potential sources, including from hypochlorite or chlorine dioxide disinfectant use, ozone oxidation of hypochlorite or chlorite, and source water contamination from pesticide runoff or paper mill discharges.
Chromium	0.2	0.22 - 0.88	0.42	100	Chromium is found naturally in rocks, plants, soil and volcanic dust, and animals.
Hexavalent Chromium Chromium-6	0.03	0.033 - 0.73	0.24	NA	Chromium-6 occurs naturally in the environment from the erosion of natural chromium deposits, and it can also be produced by industrial processes.
Molybdenum	1	1.8 - 29	8.43	40	Molybdenum (Mo) is a metallic element that is naturally present, usually at low levels, in the earth's crust.
Strontium	0.3	78 - 800	368.20	1500	Strontium is found naturally as a non-radioactive element. Strontium has 16 known isotopes. Naturally occurring strontium is found as four stable isotopes Sr-84, -86, -87, and -88.
Vanadium	0.2	0.97 - 12	4.96	21	Vanadium is a naturally occurring "rare earth" element that is found ubiquitously in the earth's crust. While elemental vanadium does not occur in nature, vanadium compounds are found in fossil fuels and exist in over 50 different mineral ores. Vanadium has six different oxidation states (1-, 0, 2+, 3+, 4+, and 5+) of which the latter three are the most common. The primary industrial use of vanadium is in the steel industry where it is used to strengthen steel.

*Reference concentrations are based on the health reference levels where established. Under the current cycle of the Unregulated Contaminant Monitoring Rule (UCMR 3) chemicals are being studied at levels that are often significantly below those in prior UCMR cycles. Importantly, UCMR 3 minimum reporting levels (MRLs) were established based on the capability of the analytical method, not based on a level established as "significant" or "harmful." In fact, the UCMR 3 MRLs are often below current "health reference levels" (to the extent that HRLs have been established). EPA defines a reference dose as "an estimate of a daily oral exposure to the human population that is likely to be without an appreciable risk of deleterious effects during a lifetime."

If you have questions about this testing or the results, please contact Kelly Hale, Carson City Public Works Environmental Control Supervisor at 775-283-7376.

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



We'll be happy to answer any questions about Carson City Water and our water quality.

For more information contact Rit Palmer at 887-2355.

Learn more about the Carson City Public Works at 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

Overall Picture of Carson City Water System at population of 55,441

4 Groundwater Basins:

Carson Valley Dayton Valley
Eagle Valley Washoe Valley

4 Surface Water Sources:

Ash Canyon 0.96–8.0 NTU
Kings Canyon 0.2–6.3 NTU
Carson River (used as groundwater)
Marlette / Hobart 0.7–9.0 NTU
Purchased groundwater from Town of Minden,
Sunridge Booster

32 Municipal Production Wells

2014 — Total Daily Maximum Production

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

2014 — Total Storage Capacity

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

Average Water Demands

(MGD = Million Gallons per Day):

Average Winter Demand 5.8 MGD
Average Summer Demand 15.1 MGD
Peak Day Demand 19.9 MGD

Carson City currently owns 17,633.81 Acre-Feet (Ac-Ft) of water which, to date 16,660.81 are “usable” water rights. Presently, the City uses approximately 14,000 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, 2105. 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 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.



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 System, 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.

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: 55,441
- Owners Rep: Darren Schulz, Public Works Director
- Phone: 775-887-2355
- Fax: 775-887-2164
- Email: Dschulz@carson.org
- Address: Carson City Public Works, Water System, 3505 Butti Way, Carson City NV 89701
- Operator: Rit Palmer, Water Operations Supervisor
- Phone: 775-887-2355
- Fax: 775-887-2164
- Email: rpalmer@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.

Current Programs and Projects

Carson City values its natural resources and has implemented a variety of programs for their protection.

These programs include:

- Groundwater recharge
- Carson City Source Water Protection Plan
- Annual leak protection (approx. 30 miles per year)
- Treated wastewater reuse (for irrigation)
- Conjunctive use management
- Cross Connection Control Program
- Automatic meter reading
- Customer education
- Ultra-low water use plumbing fixture ordinance
- Three-day-a-week watering, no watering on Mondays
- Pretreatment program
- Septic abatement
- Industrial waste disposal
- Solid waste management
- Household hazardous waste disposal program
- Spills and complaints investigations
- Shallow groundwater monitoring
- School education program
- Annual distribution system flushing program

2014 and 2015 Public Works projects

- The North - South Water Transmission Main was completed and is in use.
- The Vista Grande Intertie between Douglas County and Carson City was completed in 2014.
- The North Douglas County / Carson City pump station, now called the Sunridge Booster is complete and actively providing water to the city.
- The Carson City Source Water Protection Plan was adopted by the Board of Supervisors on March 5, 2015.
- The East West Water Transmission Main Phase 2A-1 is due to be completed in 2015.
- The East West Water Transmission Main Phase 2A-2 is due to start in the fall of 2015.
- Installation of a new emergency generator at the Quill Water Treatment Plant will be completed in early 2015.
- One of the Ash Canyon tanks will be relined / recoated inside in early 2015.
- The Carson City Freeway Utility Relocations project is continuing.

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 byproducts 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. 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 2014 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 get 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 July, August and September of 2014, with the help of 30 of our customers. The sampling was accomplished through the cooperation of the homeowners and residents, who are 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 are 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. We had three sites over the action level for lead and / or copper in 2014, and those homeowners were notified. 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 2014 indicated continued compliance with the standards for 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 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. Carson City is actively pursuing sewer main extensions and has established a septic abatement program.