#### 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). 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

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, 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.

#### 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).

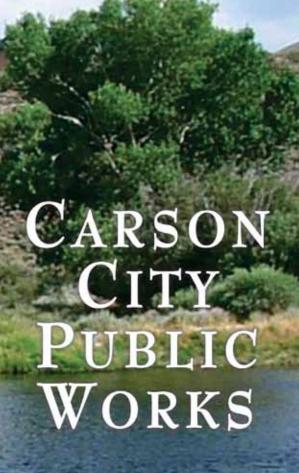
**Concerning Arsenic in Our Water:** Carson City has seven wells whose output has arsenic levels in excess of the 10 parts per billion standard set on January 23, 2006. The arsenic level in the water supplying our customers has been successfully managed through well management and blending with other sources. All water supplied to our customers in 2023 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 2023, 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 2023. 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 2023 indicated continued compliance with the standards for lead and copper. Our next lead and copper sampling will be in 2026.

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 6 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.



2024 Water Quality Report

# Water hardness in your home

Have you done a load of dishes in the dishwasher, taken out the glasses, and noticed spots or film on them? This is hard-water residue — it's not dangerous, but it is unsightly. Yes, mineral buildup will occur in your home such as in your coffeemaker, which is why some people occasionally run vinegar (an acid) through the pot. The acidity of vinegar helps dissolve mineral particles by making them charged. These newly charged particles become attracted to the positive and negative charges in water and can be washed away easily. Vinegar can be used to clean spots from glasses and dishes as well as tubs, showers and sinks, but care should be taken when used on metal cookware or plumbing, as metal can be sensitive to acids. Many cleaning products, such as toilet bowl cleaners, use acids like hydrochloric acid to clean, as they help dissolve the mineral build up from hard water.

Most appliances such as dishwashers, ice makers and clothes washers have information in the owner's manuals about the best cleaning methods to remove hard water deposits.

Water heaters and the conditions in them affect other appliances throughout your home as you use hot water. Your water heater's tank is the perfect place for mineral buildup. As water is heated and cools, minerals are deposited into the heater's tank, saturating that water. As your other appliances use this more concentrated hard water, it creates deposits within the equipment as well as on your dishes and other surfaces.

These hard water deposits are mostly calcium carbonate, which is white. The deposits can also contain small amounts of other minerals, such as iron and manganese, which can stain the deposits in a range of colors from yellow to tan, grey, brown, orange or even pink.

Hard water within the water heater also leads to mineral solids buildup in the bottom of the heater's tank. Because of this buildup, the heating elements at the bottom of your water heater are insulated from the water. Over time, the buildup will decrease your water heater's efficiency causing longer waits for hot water and an increase in energy needed for heating. The buildup of mineral deposits also causes deterioration of your water heater's tank over time, which can easily lead to a leak or full breakdown.

Water heaters should be flushed out at least once a year to clear debris and mineral buildup. Water heaters that rely on hard water with a water softener may need to be flushed more frequently. It can depend on the size of your tank, frequency of use and quality of your home's supply, but most without water softeners may need to have their water heaters flushed every three months or so. The instructions for cleaning are most often found in the owner's manual for the heater. If you do not wish to try cleaning it out yourself, many of our local plumbers do water heater and plumbing system maintenance.

GPG	РРМ	Classification						
Less than 1	Less than 17.1	Soft						
1 - 3.5	17.1 - 60	Slightly Hard						
3.5 - 7	60 - 120	Moderately Hard						
7 - 10	120 - 180	Hard						
Over 10	Over 180	Very Hard						
1 gpg (Grains/Gallon) = 17.1 ppm (Parts/Million)								

## What about tankless water heaters?

Even if you have a tankless water heater, you still need to be aware of problems caused by hard water. Hard water deposits can build up on the heating element, causing a drop in water pressure, the amount of hot water it produces and overall performance – just like a traditional water heater. Your owner's manual should have instructions for cleaning tankless water heaters.

Mineral sediment made up of calcium and magnesium can build up inside your water heater over time and disrupt efficiency as well as reduce its lifespan. Mineral buildup can also cause loud, unpleasant noises to come from the water heater. Whether you hire a professional or do it yourself, flushing your tankless water heater is something you need to add to your list of yearly maintenance tasks. By doing so, you can improve your water heater's efficiency and delay an expensive water heater replacement down the road. When you flush a water heater, the cleaning agent used helps remove this buildup and restores the machine. Routine maintenance like flushing will help increase your machine's longevity.

## But hard water can also have some benefits

Humans need minerals to stay healthy, and the World Health Organization (WHO) states that drinking water may be a contributor of calcium and magnesium in the diet and could be important for those who are marginal for calcium and magnesium intake. The minerals dissolved in water are provided in a dissolved form easy for the body to use. Also, hard water within our plumbing system coats the interior surfaces of plumbing helping to prevent some leaching of metals such as lead and copper into the drinking water.



The United States enjoys one of the world's most reliable and safest supplies of drinking water. Congress passed the Safe Drinking Water Act (SDWA) in 1974 to protect public health, including regulation of public water systems. The SDWA requires EPA to establish and enforce standards that public drinking water systems must follow. EPA delegates primary enforcement responsibility (also called primacy) for public water systems to states and Indian tribes if they meet certain requirements. Nevada's drinking water systems are regulated by the Nevada Department of Environmental Protection, Bureau of Safe Drinking Water.

Nevada's Drinking Water Operator Certification Program protects public health and the environment by having certified drinking water operators directly responsible for drinking water treatment plants and water distribution systems. Trained and certified operators are necessary to ensure that public water systems are managed in a manner that fully protects public health and the environment. These people must obtain and keep current a fully certified operator certificate issued by the Nevada Department of Environmental Protection.

Clean, drinkable water in Carson City is produced by the Carson City Public Works Water System. This system is run 24/7 by a staff of highly trained, dedicated professionals called water system op-

erators. There are 18 highly trained operators, managed by two managing and supervising operators, and are assisted by two administration staff, all of whom work diligently every day to provide a plentiful supply of the best, cleanest drinking water possible. Our operators have a combined **253 years** of experience.

Our administrative staff have more than 10 years of experience as well as many ongoing hours training with the latest in software to be sure your account handling is as accurate and efficient as possible.

Carson City's water operators are certified by the Nevada Department of Environmental Protection's Bureau of Safe Drinking Water (NDEP BSDW). Obtaining the certifications requires both education and experience, approved by NDEP BSDW. Our operators are all dual certified, holding certifications in both water treatment systems and in water distribution systems. We have five operators with Grade 4 (the highest level) certificates, 11 at Grade 3, 11 at Grade 2, and five at Grade 1. Rigorous tests must be passed at each level. Renewing the certifications requires NDEP BSDW approved continuing education hours as well as appropriate experience. Continuing education hours and experience for one type of certification do not carry over to the other so our dual certified operators must have double the experience and continuing education to maintain the dual certification.

In addition to the drinking water treatment and distribution certifications, our operators and supervisors have degrees and certifications in Civil Engineering, Supervisory Management, Utility Management, Water Resource Engineering, Back-flow Prevention, and Cross Connection Control as well as Industrial Waste Inspection certifications. These inspectors protect our water resources.

Summar	y of Distribution and Tre	atment Certificat	ion Requirements Renewal
Level	Education	Experience*	Requirements Per Renewal Period
Grade 1	High School Diploma or General Education Development (GED)	6 months of experience	7 contact hours (0.7 CEU)
Grade 2	High School Diploma or General Education Development (GED)	1 year of experience	7 contact hours (0.7 CEU)
Grade 3	High School Diploma or General Education Development (GED) and a minimum of 72 hours post-secondary education	2 years of experience with 1 year of Grade 2 full certification	14 contact hours (1.4 CEU)
Grade 4	High School Diploma or General Education Development (GED) and a minimum of 144 hours post-secondary education	4 years of experience with 1 year of Grade 3 full certification	14 contact hours (1.4 CEU)

\*If experience requirement is not satisfied, applicant will receive an Operator in Training (OIT) certification for the respective grade.

# **Overall Picture of Carson City Water System at population of 59,647**

#### <u>3 Groundwater Basins:</u>

Carson Valley Dayton Valley Eagle Valley

#### **4 Surface Water Sources:**

Ash Canyon 1.10 - 67.00 NTU Kings Canyon 0.64 - 6.77 NTU Carson River (used as ground water) Marlette-Hobart 0.56 - 8.84 NTU

- 21 active and 9 inactive Municipal Production Wells, 1 Surface Water Treatment Plant that uses 3 surface water sources, and 1 inter-tie to utilize purchased ground water
- 2023 Total Storage Capacity 25,700,000 gallons in 14 above ground tanks

#### Average Water Demands

(MGD = Million Gallons per Day): Average Winter Demand 4.95 MGD Average Summer Demand 12.39 MGD Peak Day Summer Demand 18.56 MGD

Carson City currently owns 18,648 Acre-Feet (Ac-Ft) of water which, to date 17,602 are "usable" water rights. The City used approximately 9619.12 Ac-Ft in 2023. 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 Source Water Protection Plan was updated in 2023. It was endorsed by NDEP and adopted by the Board Of Supervisors in December 2023. 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 a preventative rather than 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.

# **IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER**

Units	Ave	Min	Max	MCL	MCLG	Notes and Major Sources	Violation
ACU	5.00	0.00	5.00	15.00		Secondary MCL	No
ppb	5.60	0.00	14*	10.00	0.00	Erosion of natural deposits; compliance based on locational running annual average for some sources; all averages were below the MCL.	No*
ppb	26.00	26.00	26.00	2000.00	2.00	Secondary MCL; erosion of natural deposits	No
ppm	31.00	8.50	78.00			Provided as information only	
ppm	9.30	1.10	21.00	250.00		Secondary MCL	No
ppm	1.800	1.800	1.800	100.00	0.00	Discharge from steel and pulp mills, or erosion of natural deposits. Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.	No
ppm	0.34	0.05	1.30	2.00	4.00	Natural deposits; 4.00 is the Federal standard, NV has the lower 2.00 standard	No
ppm	0.05	0.01	0.17	0.60		Secondary MCL	No
ppm	4.90	2.20	8.60			Provided as information only	No
ppm	0.03	0.00	0.40**	0.10		Secondary MCL**	Yes **
ppm	1.11	0.00	3.68	10.00		Runoff from fertilizer, leaching from septic tanks, sewage, natural deposits	No
ppm	0.00	0.00	0.00	1.00		Runoff from fertilizer, leaching from septic tanks, sewage, natural deposits	No
TON	1.25	1.00	2.00	3.00		Secondary MCL	No
Units	7.70	6.50	8.20	6.5 to 8.5		Secondary MCL	No
ppm	30.00	5.00	82.00			Provided as information only	No
ppm	50.00	1.20	300.00	500.00		Secondary MCL	No
ppm	218.00	64.00	560.00	1000.00		Secondary MCL	No
	ACU ppb ppm ppm ppm ppm ppm ppm ppm ppm ppm	ACU 5.00   ppb 5.60   ppb 26.00   ppm 31.00   ppm 9.30   ppm 9.30   ppm 0.34   ppm 0.34   ppm 0.05   ppm 1.11   ppm 0.03   ppm 1.25   Units 7.70   ppm 30.00   ppm 50.00	ACU 5.00 0.00   ppb 5.60 0.00   ppb 26.00 26.00   ppm 31.00 8.50   ppm 9.30 1.10   ppm 9.30 1.10   ppm 0.34 0.05   ppm 0.34 0.05   ppm 0.03 0.00   ppm 1.11 0.00   ppm 0.03 0.00   ppm 0.125 1.00   ppm 0.00 0.00   ppm 30.00 5.00   ppm 30.00 5.00	ACU 5.00 0.00 5.00   ppb 5.60 0.00 14*   ppb 26.00 26.00 26.00   ppm 31.00 8.50 78.00   ppm 9.30 1.10 21.00   ppm 9.30 1.800 1.800   ppm 0.34 0.05 1.30   ppm 0.34 0.05 1.30   ppm 0.03 0.01 0.17   ppm 4.90 2.20 8.60   ppm 1.11 0.00 3.68   ppm 0.03 0.00 0.00   TON 1.25 1.00 2.00   Units 7.70 6.50 8.20   ppm 30.00 5.00 82.00   ppm 50.00 1.20 300.00	ACU 5.00 0.00 5.00 15.00   ppb 5.60 0.00 14* 10.00   ppb 26.00 26.00 26.00 2000.00   ppm 31.00 8.50 78.00    ppm 9.30 1.10 21.00 250.00   ppm 9.30 1.800 1.800 1.00.00   ppm 0.34 0.05 1.30 2.00   ppm 0.05 0.01 0.17 0.60   ppm 0.03 0.00 0.40** 0.10   ppm 1.11 0.00 3.68 10.00   ppm 0.03 0.00 0.00 1.00   ppm 0.03 0.00 0.00 1.00   ppm 1.11 0.00 3.68 10.00   ppm 3.00 0.00 0.00 1.00   ppm 3.00 5.00 8.20 6.5 to 8.5   ppm 30.00 5.00 82.00	ACU 5.00 0.00 5.00 15.00   ppb 5.60 0.00 14* 10.00 0.00   ppb 26.00 26.00 26.00 2000.00 2.00   ppm 31.00 8.50 78.00     ppm 9.30 1.10 21.00 250.00    ppm 9.30 1.10 21.00 250.00    ppm 0.34 0.05 1.30 2.00 4.00   ppm 0.34 0.05 1.30 2.00 4.00   ppm 0.03 0.01 0.17 0.60    ppm 0.03 0.00 0.40** 0.10    ppm 1.11 0.00 3.68 10.00    ppm 0.00 0.00 1.00 3.00    ppm 0.00 0.00 3.00     ppm 1.25 1.00 2.00 3.00	ACU5.000.005.0015.00Secondary MCLppb5.600.0014*10.000.00Erosion of natural deposits; compliance based on locational running annual average for some sources; all averages were below the MCL.pph26.0026.0026.00200.002.00Secondary MCL; erosion of natural depositsppm31.008.5078.001Provided as information onlyppm9.301.1021.00250.00Secondary MCLppm1.8001.8001.800100.00Discharge form steel and pulp mills, or erosion of natural deposits. Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.ppm0.340.051.302.004.00Natural deposits; 4.00 is the Federal standard, NV has the lower 2.00 standardppm0.050.010.170.60Secondary MCLppm4.902.208.60Frovided as information onlyppm0.030.000.04**10.00Secondary MCLppm0.030.000.04**10.00Secondary MCLppm0.030.000.001.00Secondary MCLppm0.030.000.001.00Secondary MCLppm0.010.000.00Secondary MCLppm0.020.000.00Secondary MCLppm0.030.000.00Secondary MCLppm0.000.000.00Secondary MCL </td

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

\*\* Violation of Secondary Contaminant Levels in April of 2023 at one site. Customers in the affected area were notified. Call Kelly Hale 775-283-7376 if you have questions or concerns.

LEAD & COPPER <sup>2</sup>								
Analyte	Units	90th percentile	AL**	Sites over AL	Major Sources	Violation		
Copper, Total	ppm	0.340	1.300	0	Corrosion of household plumbing, erosion of natural deposits	No		
Lead, Total	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.

The next Lead and Copper samples will be taken in the summer of 2026 with the assistance of some of our customers.

MICROBIOLOGICAL CONTA	MINANTS							
Analyte	Units	Ave	Min	Max	MCL	MCLG	Major Sources	Violation
Turbidity <sup>3</sup>	NTU	0.27	0.09	0.59	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>	present or absent	0	0	0	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>	ppm	0.66	0.05	1.56	4		Additive for disinfection of water	No
RADIOACTIVE CONTAMINAN	NTS 6							
Analyte	Units	Ave	Min	Max	MCL	MCLG	Major Sources	Violation
Alpha, Gross, Adjusted	pCi/L	8.1	-1.1	31.7	15	0	Erosion of natural deposits	No
Beta, Gross	pCi/L	4.7	-5.3	14.8	50	0	Erosion of natural deposits	No
Radium 226	pCi/L	0.29	-1.28	1.83		0	Erosion of natural deposits	No
Radium 228	pCi/L	-0.04	-2.65	1.79		0	Erosion of natural deposits	No
Uranium ICAP/MS	ppb	11.60	0.00	43.60***	30***	0	Erosion of natural deposits	No

\* Compliance with MCL for Gross Alpha is based on Alpha Gross minus Uranium, and Compliance with MCL is based the 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.

\*\*\*\* Compliance with MCL based on site specific running annual average which was always below the MCL.

DISINFECTION BYPRODUCTS <sup>7</sup>									
Analyte	Units	Ave	Min	Max	MCL	MCLG	Major Sources	Violation	
Total Haloacetic Acids (HAA5)	ppb	14.68	0.00	48.00	60		Byproducts of drinking water chlorination for disinfection	No	
Total Trihalomethanes (TTHM)	ppb	23.44	0.00	75.00	80		Byproducts of drinking water chlorination for disinfection	No	
INORGANIC CONTAMINANTS									
Analyte	Units	Ave	Min	Max	MCL	MCLG	Major Sources	Violation	
Hexachlorocyclopentadiene	ppb	0.06	0.00	0.06	50		Discharge from chemical factories, flame retardants	No	

# An Explanation of the Water Quality Data Table

The table above shows the results of our water quality analysis for 2023. 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  $\mu$ g/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 2023 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

#### 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.

 $\mathbf{pCi/L}$  – Picocuries per Liter. Picocuries is a measure of radioactivity.

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

**ppb** =  $\mu g/L$  = parts per billion, or micrograms per liter

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.

**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 2023.

**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 monthly. All of the water reaching our customers in 2023 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. Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer.

**DISINFECTION BYPRODUCTS**<sup>7</sup> — Carson City began sampling for the Disinfection Byproduct 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. In 2023, nine quarterly samples were taken from around Carson City and the average at each site was calculated. Results remained well below the MCL. 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.

## 2023 – 2024 Public Works Water Projects

 The Quill Water Treatment Plant Upgrade Project is in the final phase of design and permitting with construction to start later this summer. The existing plant is over 30 years old and limited in its ability to treat the



city's surface water sources from Ash, Kings, and the Marlette / Hobart Lake Water System. Modernization of the treatment technology at this critical treatment facility will expand our usage of these critical surfaces water sources now and into the future.

- Carson City Public Works is preparing to rehabilitate the Tanstaafl Tank (500,000 gallon water storage tank) in the fall of 2024 as part of its recently completed Tank Rehabilitation Plan. This work includes a new interior and exterior coating and access safety improvements.
- Water line replacement projects that have been completed or are underway in this past year include:
  - The Eagle Station Pressure Zone Separation Upgrades were completed as part of the Eagle Station Lane Sewer Main Replacement Project.
  - William Street Complete Streets Project water main replacement from Carson Street to Saliman Road is nearing completion of design and construction is due to start in 2024.
  - Menlo Drive Reconstruction Project including replacement of water main from Lompa to Airport Road is currently under design with construction to be done in 2024.
- This past winter Carson City completed well rehabilitations at Well 9 and Well 55 to replace faulty equipment and restore pumping capacity at these sources.
- Other water system improvements and studies that have been completed or are in the works recently include:
  - An update of Carson City's Water Conservation Plan was completed and is available on the City's Public Works Water Division website [ https://www.carson.org/government/ departments-g-z/public-works/divisions/water/conservationtips ] in the Water Conservation drop down.
  - A Lead and Copper Service Line Survey was completed to supplement the City's Inventory and Database project for compliance with the EPA issued Revised Lead and Copper Rule.
  - The Carson City Source Water Protection Plan update was completed and adopted by the Board of Supervisors; this important document can be found on the City's Public Works Water Division website [https://www.carson.org/government/departments-g-z/public-works/divisions/water} in the Water Conservation drop down.

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 Joe Reyna at 775-283-7356. 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

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

## Nevada Source Water Assessment Integrated Source Water Protection Plan Program Nevada Division of Environmental Protection, Bureau of Safe Drinking Water (NDEP BSDW)

The Federal Safe Drinking Water Act was amended in 1996 to include a requirement for Source Water Assessment, which NDEP BSDW completed in 2005. A summary of the initial assessment can be viewed in person at NDEP BSDW offices at 901 S Stewart St, Carson City NV 89701, appointments are suggested, please call 775-687-9503.

NDEP BSDW created the Integrated Source Water Protection Plan Program (ISWPP) in 2010. Carson City completed and adopted the Community Source Water Protection Plan (CSWPP) under this program in 2014. Carson City Public Works, along with our partners in source water protection, updated the CSWPP in 2023. The CSWPP can be viewed on-line at www.Carson.org. Please call 775-887-2355 for more information or if you have questions.

### Water System Contact Information

- Water System Name: Carson City Public Works Water System
- County: Carson City
- BSDW System ID Number: NV0000015
- Number of Connections: 20,835
- Population Served: 59,647
- Address: Carson City Public Works Water System, 3505 Butti Way, Carson City NV 89701
- Owners Rep: Andy Hummel, Utility Manager
- Phone: 775-283-7357; Fax: 775-887-2164
- Email: ahummel@carson.org
- Operator: Joe Reyna, Water Operations Supervisor
- Phone: 775-283-7356; Fax 775-887-2164
- Email: jreyna@carson.org