

# City of Las Vegas Drinking Water Quality Report 2023

## Spanish (Español)

Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúscalo o hable con alguien que lo entienda bien.

## Is my water safe?

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies. Last year, we conducted tests for over 80 contaminants. We only detected 13 of those contaminants, and found only 3 at a level higher than the EPA allows. As we informed you at the time, our water temporarily exceeded drinking water standards. (For more information see the section labeled Violations at the end of the report.)

## Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

## Where does my water come from?

The primary water source for the City of Las Vegas drinking water is surface water acquired from the Gallinas River and stored in Storrie Lake, Peterson and Bradner Reservoirs. Bradner Reservoir was offline from 2014 to 2019 for rehabilitation. Rehabilitation of the embankments and spillway is complete and filling began on August 2019. Permit is dependent on maintaining final hold elevation. An alternate source of water, for approximately 10% of the city's needs, is the Taylor Well Field. This water is used sparingly to avoid impacts to the aquifer.

## Source water assessment and its availability

For more information about contaminants, testing methods, potential health and steps you can take to minimize exposure contact EPA's Safe Drinking Water Hotline (800) 426-4791 or visit

their [www.epa.gov/safewater](http://www.epa.gov/safewater). More information on the City of Las Vegas Public Water Supply can be obtained online at [www.dww.water.nv.gov](http://www.dww.water.nv.gov) or obtaining a copy of the Source Water Assessment conducted by contacting the Drinking Water Bureau at 505-476-8620 or toll free 1-877-654-8720 or by calling the Utilities Department at (505) 454-3832.

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791). The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity: microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and 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 that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How can I get involved?

The Las Vegas Utility Advisory Committee and City Council meet regularly to discuss topics critical to our water system. Contact the City Clerks Office at (505) 454-1401 for information on dates and times these meetings are held. Information is also available online at [www.lasvegasnv.gov](http://www.lasvegasnv.gov). Consider volunteering with local watershed groups, which can be found on EPA's Adopt a Watershed network.

Description of Water Treatment Process

Your water is treated in a "treatment train" (a series of processes applied in a sequence) that includes coagulation, flocculation, sedimentation, filtration, and disinfection. Coagulation removes dirt and other particles suspended in the source water by adding chemicals (coagulants) to form tiny sticky particles called "floc," which attract the dirt particles. Flocculation (the formation of larger flocs from smaller flocs) is achieved using gentle, constant mixing. The heavy particles settle naturally out of the water in a sedimentation basin. The clear water then moves to the filtration process where the water passes through sand, gravel, charcoal or other

filters that remove even smaller particles. A small amount of chlorine or other disinfection method is used to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water before water is stored and distributed to homes and businesses in the community.

### Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit [www.epa.gov/watersense](http://www.epa.gov/watersense) for more information.

### Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

### Significant Deficiencies

A routine sanitary survey conducted in 2021 by the New Mexico Environmental Department Drinking Water Bureau found 20 significant deficiencies. 9 of the deficiencies cited in the sanitary inspection were addressed and corrected in 2021. 3 of the deficiencies were addressed and corrected in 2022.

Due to the Hermits Peak Calif Canyon Fire in 2022, the City of Las Vegas obtained an extension to complete the remaining 8 deficiencies. The City will complete the remaining deficiencies in 2024.

### Additional Information for Lead

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. City of Las Vegas Public Water Supply is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

### Total Organic Carbon (TOC) Explanation

We monitor monthly for Total Organic Carbon (TOC) removal and maintain a running annual average (RAA) of the results. During the third and fourth quarter of 2023 the RAA for TOC removal was less than required.

This ongoing TOC violation is not an emergency. If it had been you would have been notified immediately. Total organic carbon has no health effects. However, TOC provides a medium for the formation of disinfection by-products. These by-products include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these by-products in excess of the Maximum Contaminant Level (MCL) may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

## Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report.

Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the

concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
<b>Disinfectants &amp; Disinfection By-Products</b>								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Chlorine (as Cl <sub>2</sub> ) (ppm)	4	4	.7	0.5	.7	2023	No	Water additive used to control microbes.
Haloacetic Acids (HAA5) (ppb)	NA	60	32	1.58	45	2023	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	90	49.5	119	2023	Yes	By-product of drinking water disinfection. The Running Annual Average (RAA) for 2023 is 83 ppb, over the MCL of 80 ppb.
Total Organic Carbon (% Removal)	NA	TT	NA	7.1%	28.6%	2023	Yes	Naturally present in the environment.
<b>Inorganic Contaminants</b>								
Barium (ppm)	2	2	.044	.044	.044	2023	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	.25	.25	.25	2023	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Violation		Typical Source		
Copper - (ppm)	1.3		0.029	No		Corrosion of household plumbing systems; Erosion of natural deposits		
Lead - (ppm)	0		2.1	No		Corrosion of household plumbing systems; Erosion of natural deposits		
<b>Microbiological Contaminants:</b> Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.								

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Turbidity (NTU)	NA	0.3	94%	NA	NA	2023	Yes	Soil runoff
93% of the samples were below the TT value of .3. A value less than 95% constitutes a TT violation. The highest single measurement was .3. Any measurement in excess of 1 is a violation unless otherwise approved by the state.								
Radioactive Contaminants								
Alpha emitters (pCi/L)	0	15	1.9	1.2	1.9	2021	No	Erosion of natural deposits
Beta/Photon emitters (mrem/yr)	0	4	2.4	2.4	2.4	2021	No	Decay of natural and man-made deposits.
Radium (combined 226/228) (pCi/L)	0	5	.27	.27	.27	2021	No	Erosion of natural deposits
Uranium (ug/L)	0	30	1	1	1	2021	No	Erosion of natural deposits

Violations and Exceedances
In 2023 our water system received violations of drinking water violations. This is a summary of the violations. Public notices were provided in 2023.
<p><b>TTHMs [Total Trihalomethanes]</b> Testing results show that our system exceeds the standard or maximum contaminant level (MCL), for Total trihalomethanes at the sampling locations for the quarter(s) shown below:</p> <ul style="list-style-type: none"> <li>a. Storrie Lake Park – 1stQ2023 &amp; 2ndQ2023</li> <li>b. Alta Vista Med – 2ndQ2023</li> <li>c. Mikes Precision – 2ndQ2023, 3rdQ2023 &amp; 4thQ2023</li> </ul> <p><b>TTHM's were reduced with regular flushing of lines, reducing water age, improved treatment techniques and improved removal of Total and Dissolved organics</b> Running annual average continues to remain above the MCL.</p>
<p><b>Turbidity</b> Water samples taken Friday, January 13th, 2023, Thursday, February 16th, 2023, Wednesday, March 8th, 2023, Friday, November 17th, 2023, and Friday, December 8th, 2023 showed turbidity levels were above 1 turbidity unit (NTU), the maximum allowable. These exceedances were over 15 minutes and less than 1 hour. Turbidity exceeded 0.3 NTU's in more than 5% of the 4 hour recording periods during the month of February 2023.</p> <p>For each of the turbidity events, City Water Treatment Plant staff maintained adequate disinfection throughout the distribution system. City staff and contractors are continuing to replace system components to improve our treatment process. City is in compliance.</p>
<p><b>Comprehensive Performance Evaluation</b> The City exceeded a deadline to set up a Comprehensive Performance Evaluation (CPE). City staff procured an engineer to conduct a CPE. The evaluation was completed in 2023 and the City is in compliance.</p>

Violations and Exceedances
<p><b>Entry Point Chlorine Residual</b> Chlorine residual of 0.2ppm to 4ppm is required at the entrance to the distribution system. During March the plant was shut off and upon re-establishing the water flow there was a delay where the residual was developing. The clearwell was overflowed and not fully drained. Sufficient chlorine residual was documented throughout the system and tests showed there was no bacteria in the drinking water system. City is in compliance.</p>
<p><b>Significant Deficiencies</b> A routine sanitary survey conducted in 2021 by the New Mexico Environmental Department Drinking Water Bureau found 20 significant deficiencies. 9 of the deficiencies cited in the sanitary inspection were addressed and corrected in 2021. 3 of the deficiencies were addressed and corrected in 2022. The final 8 are being addressed in 2024.</p>
<p><b>Total Organic Carbon Removal</b> TOC removal was not met in the third or fourth quarter of 2023. Source Water TOC has been above average since August of 22. Equipment was replaced and staff and engineers are working on process improvements to improve TOC removal. TOC removal returned to compliance in Feb 2024. Not meeting TOC removal requirements may continue until the water quality improves and enhanced coagulation and enhanced treatment techniques are implemented.</p>

Unit Descriptions	
Term	Definition
ug/L	ug/L : Number of micrograms of substance in one liter of water
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
mrem/yr	mrem/yr: millirems per year (a measure of radiation absorbed by the body)
NTU	NTU: Nephelometric Turbidity Units. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
MCLG	MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL	MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Important Drinking Water Definitions	
Variations and Exemptions	Variations and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL	MRDL: Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

TT Violation	Explanation	Length	Health Effects Language	Explanation and Comment
Surface water treatment rule filtration and disinfection violations	<b>Turbidity exceeded 0.3 ntu's</b> during twelve 4 hour blocks of time in February of 2023. That was 6% of the time. SWTR requires systems to not exceed 0.3 5% of the time which was ten 4 hour blocks.	12 blocks of 4 hours	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.	Staff sampled for disinfectant in the distribution system daily. All disinfectant residual requirements were met.

For more information please contact:

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