

2010 WATER QUALITY REPORT | Las Vegas Valley Water District



Your water sources, your water safety

CUSTOMERS WANT TO UNDERSTAND THE SOURCES OF OUR WATER SUPPLY AND HOW THE DISTRICT ENSURES WATER QUALITY. ANSWERS TO SOME OF THE QUESTIONS WE RECEIVE MOST FREQUENTLY ARE HERE; LEARN MORE ON PAGES 9-10.

● WHERE DOES MY WATER COME FROM?

Clean water begins at the source:

Nearly 90 percent of the water supplied to Las Vegas Valley Water District customers comes from Lake Mead, and virtually all (97%) of the water in Lake Mead originates as snowmelt in the Rocky Mountains that flows down the Colorado River.

The remainder of water supplied to customers—about 10 percent—comes from wells that tap a deep groundwater aquifer beneath the valley. Groundwater is used primarily between May 1 and Oct. 1 annually to meet peak water demand. During these months, those who live or work within several miles of the LVVWD's offices at Charleston and Valley View boulevards, as well as residents in the west and northwest parts of the valley, have the potential to receive a blend of treated Lake Mead water and groundwater.

Groundwater in the Las Vegas Valley aquifer is naturally recharged from precipitation in the Spring Mountains and the Sheep Range; treated water from Lake Mead also is used to supplement the natural recharge and keep water levels stable in the aquifer.

● IF TAP WATER MEETS HEALTH-BASED STANDARDS, WHY DO I STILL HEAR SO MUCH ABOUT WATER QUALITY IN THE MEDIA?

Advances in technology have led to changes in the way customers define "water quality." The standards set by the Safe Drinking Water Act and improved treatment methods such as ozonation have dramatically reduced water-related illnesses in the past half-century. Pollution controls have become increasingly stringent during the past three decades, reducing the amount of contaminants that make their way into water supplies. In addition, scientists now can detect contaminants at remarkably low concentrations—in some cases down to a few parts per trillion.

All sources of drinking water, even bottled water, contain some level of contaminants. At low levels, these contaminants generally are not harmful in drinking water. Removing all contaminants would be extremely costly, and in most cases, would not provide increased protection of public health.

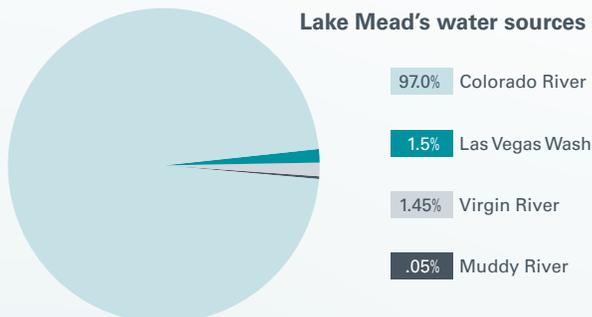
● HOW DO I KNOW IF MY TAP WATER IS SAFE TO DRINK?

Both the U.S. EPA and the State of Nevada have established health-based quality standards for tap water to protect public health. Tap water delivered by the Las Vegas Valley Water District meets or surpasses all standards. The Alfred Merritt Smith Water Treatment Facility has been recognized by the National Partnership for Safe Water for more than a decade for its efforts to ensure that Southern Nevada's municipal water meets or surpasses all standards (partnershipforsafewater.org).

● ARE THERE ANY HEALTH PRECAUTIONS FOR THE PUBLIC?

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

Lake Mead's water sources include:



Water at a glance: Understanding test results

WHEN YOU TURN THE PAGE, YOU'LL SEE RESULTS OF WATER-QUALITY MONITORING PERFORMED BY THE LAS VEGAS VALLEY WATER DISTRICT IN 2009. HERE ARE ADDITIONAL FACTS:

The EPA requires water agencies to monitor for 91 regulated contaminants. Of these, 76 contaminants have "primary" standards (maximum contaminant levels), and must be listed in this report if they are detected in the LVVWD's water supply—including how they are measured (unit), their detected quantities, regulatory limits and possible sources. Primary standards are mandatory and enforceable, and are established to protect the public against consumption of drinking-water contaminants that present a risk to human health.

Fifteen additional contaminants have "secondary" standards. The EPA has established non-enforceable water-quality standards for these contaminants to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants, while regulated, are not considered to present a risk to human health.

Primary regulated contaminants found in the LVVWD's water supply are listed on the next two pages. A complete analysis report also showing detected contaminants that have secondary monitoring standards is posted on lvvwd.com and also is available through our Water Quality Division at **258-3215**.

Federal standards usually measure contaminant levels in extremely tiny quantities such as parts per million or parts per billion, since even small concentrations of certain constituents can be a health concern. EPA requirements for monitoring vary. The LVVWD monitors for each contaminant at required sites (treatment facilities, distribution system and/or groundwater wells) and reports those results.

WHAT ABOUT CONTAMINANTS THAT AREN'T YET REGULATED?

The EPA monitors many unregulated contaminants to determine if future standards may be appropriate. The EPA prioritizes contaminants for potential regulation based on risk and how often they occur in water supplies. To aid in this effort, certain water systems—including the Las Vegas Valley Water District—monitor for the presence of contaminants for which no national standards currently exist and collect information on their occurrence.

Monitoring and remediation can make a difference. Local levels of the unregulated contaminant perchlorate—a chemical consisting of chloride and oxygen that has been detected in Lake Mead since 1997—have been significantly reduced, as Southern Nevada's water agencies closely monitor continuing efforts by the Nevada Division of Environmental Protection and the private sector to intercept and remove perchlorate at its source. For more information and perchlorate monitoring results, visit lvvwd.com.



Key terms

SOME OF THE TERMS AND ABBREVIATIONS USED TO REPORT WATER-QUALITY TEST RESULTS ON PAGES 5-6 ARE UNIQUE TO THE WATER INDUSTRY AND MIGHT NOT BE FAMILIAR TO ALL CUSTOMERS. AN ALPHABETICAL LIST OF THESE TERMS HAS BEEN PROVIDED.

A-L

ACTION LEVEL

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

AMSWTF

Alfred Merritt Smith Water Treatment Facility

DISINFECTION BY-PRODUCT (DBP)

A substance created by the chemicals or processes used to destroy potentially harmful microorganisms.

M

MAXIMUM CONTAMINANT LEVEL (MCL)

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MAXIMUM CONTAMINANT LEVEL GOAL (MCLG)

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.

MAXIMUM RESIDUAL DISINFECTANT LEVEL (MRDL)

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.

MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL (MRDLG)

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 contamination.

MILLIREM (MREM)

One-thousandth of a rem (roentgen-equivalent-man), which is a unit of absorbed radiation dose that is adjusted for the biological effects equal to one rad of 250 kilovolt roentgen rays (dental roentgen rays require less than 100 kilovolts).

N-O

N/A

Not applicable

N/D

Not detected. Does not equate to zero, but refers to an amount below analytical reporting limits.

NEPHELOMETRIC TURBIDITY UNIT (NTU)

A measurement of water's clarity.

P-Q

PART PER BILLION (PPB)

A unit used to describe the levels of detected contaminants. Equivalent to 1 cent in \$10 million.

PART PER MILLION (PPM)

A unit used to describe the levels of detected contaminants. Equivalent to 1 cent in \$10,000.

PICOCURIES PER LITER (PCI/L)

A measure of the radioactivity in water. Low levels of radiation occur naturally in many water systems, including the Colorado River.

R-S

RMWTF

River Mountains Water Treatment Facility

RUNNING ANNUAL AVERAGE

Based on the monitoring requirements, the average of 12 consecutive monthly averages or the average of four consecutive quarters.

T-Z

TREATMENT TECHNIQUE

A required process intended to reduce the level of a contaminant in drinking water.

TURBIDITY

A measure of water clarity, which serves as an indicator of the treatment facility's performance.

Understanding water quality

Amid claims made by people selling water-treatment devices and news reports about environmental issues, it's important for consumers to understand the facts about their water quality. Water delivered by the Las Vegas Valley Water District undergoes a multistage treatment process and is rigorously tested to ensure it meets the strict standards of the Safe Drinking Water Act.

A contaminant is any substance that is not H₂O. 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 water-quality regulations, contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at **(800) 426-4791** or the Nevada Division of Environmental Protection at **(775) 687-9520**.

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 minerals and—in some cases—radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source (untreated) water include:

MICROBIAL CONTAMINANTS, such as viruses and bacteria, which may come from urban runoff, septic systems, wildlife, agriculture and domestic wastewater discharges;

INORGANIC CONTAMINANTS, such as salts and metals, which can be naturally occurring or result from urban runoff, septic systems and industrial or domestic wastewater discharges;

PESTICIDES AND HERBICIDES, which may come from a variety of sources such as agriculture, urban runoff and residential uses;

ORGANIC CHEMICAL CONTAMINANTS, including synthetic or volatile organic chemicals, which are by-products of industrial processes and can come from gas stations, urban runoff and septic systems;

RADIOACTIVE CONTAMINANTS, which can be naturally occurring or the result of industrial activities.

To ensure tap-water safety, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide similar protection for public health. For more information on bottled-water quality, call the International Bottled Water Association at **(800) 928-3711**.

SOURCE WATER ASSESSMENT

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 Las Vegas Valley Water District's (LVVWD) susceptibility to potential sources of contamination was initially provided by the State of Nevada in 2003. The summary of this source water assessment was first included in the LVVWD 2004 Water Quality Report and now may be accessed online at lvvwd.com.

Detailed information pertaining to the findings of the source water assessment is available for viewing in person Monday–Thursday, by appointment, at the Las Vegas Valley Water District, 1001 S. Valley View Blvd. Please call **(702) 258-3215** for an appointment. Additional information about the Nevada Source Water Assessment Program may be found at ndep.nv.gov/bsdw.



Questions and answers

● HOW HARD IS OUR WATER?

Water is considered hard if the hardness is 100 parts per million (ppm) or more. That's equal to 5.85 grains of hardness per gallon. The average hardness of the Las Vegas Valley Water District's water is about 300 ppm (17.5 grains per gallon), comparable to many Western cities' water supplies. Our water's hardness is the result of dissolved calcium and magnesium from the Rocky Mountains, where most of our water begins as snowmelt. Addressing aesthetic issues such as hardness during treatment could be prohibitively expensive—especially since most water is used outdoors, where there is minimal benefit to reducing hardness levels.

● DO I NEED TO USE A WATER-TREATMENT SYSTEM OR DRINK BOTTLED WATER?

In general, not unless you want to change your tap water's taste or remove the minerals that cause it to be "hard." While many people prefer the taste of bottled water, tap water is subject to even more-stringent quality standards than bottled water and is tested more frequently. Pregnant women and people with medical conditions affecting their immune system should consult a physician to determine whether a supplemental treatment system is appropriate.

● SHOULD I BE CONCERNED ABOUT LEAD IN MY DRINKING WATER?

Recent revisions to the EPA's Lead and Copper Rule include requirements for additional monitoring, treatment and public education for these naturally occurring metals in drinking water. While the state of Nevada has not yet enacted these revisions, the Water District actively monitors for lead and copper and provides the following information to help you assess risks in your tap water.

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. The LVVWD 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 by a certified private laboratory. For more information, call the EPA Safe Drinking Water Hotline, **(800) 426-4791**, or visit [epa.gov/safewater/lead](https://www.epa.gov/safewater/lead).



WHAT ABOUT OTHER POTENTIAL WATER CONTAMINANTS THAT STILL HAVE NO REGULATORY LIMITS AT THE STATE OR FEDERAL LEVEL?

We monitor and report results for about 30 unregulated contaminants. While substances such as *Cryptosporidium* and many pharmaceutical compounds have no “limits” (or maximum contaminant levels) under the federal Safe Drinking Water Act, we include them in our testing and want customers to know the facts.

Cryptosporidium is a naturally occurring organism found in many U.S. source waters that can cause gastrointestinal distress. The EPA requires larger water systems that treat surface water to assure removal of *Cryptosporidium*. The Southern Nevada Water Authority tests for *Cryptosporidium* in its source and treated water supplies; *Cryptosporidium* was not detected in any 2009 monitoring. Ozonation, used at both our regional water treatment facilities, is highly effective at destroying microorganisms such as *Cryptosporidium*.

Pharmaceuticals and personal care products (or PPCPs) consist of human and veterinary drugs and consumer products, such as fragrances, lotions, sunscreens and house-cleaning products. These compounds have been detected in trace amounts in surface water, drinking water and wastewater effluent sampling—many at extremely low levels, typically single-digit parts per trillion (ppt). Drinking-water standards are typically set in the parts-per-billion range, which is 1,000 times higher. The fact that a substance is detectable in drinking water does not mean the substance is harmful to humans. To date, research throughout the world has not demonstrated an impact on human health from trace amounts of PPCPs in drinking water.

Water professionals, committed to protecting public health, are paying close attention to health-effects research for PPCPs, including research being conducted by the Southern Nevada Water Authority. For information about which compounds were detected in area water supplies and their concentrations, visit snwa.com or call **258-7183**.

Make an informed choice

We respect our customers’ rights to purchase home water-treatment systems or bottled water, and offer free information to help them make an informed choice—and perhaps even save money.

A variety of home-treatment systems can improve the flavor of tap water by filtering out the aftertaste of chlorine, an essential part of the water-treatment process. While we can’t recommend specific brands, the Southern Nevada Water Authority offers a free information packet that includes a Consumer Reports® filter buying guide and fact sheets on various home-treatment systems. Call **258-3930** or visit snwa.com to request yours.





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For more information

LAS VEGAS VALLEY WATER DISTRICT

Water Quality.....	258-3215
Public Information.....	258-3930
Customer Services.....	870-4194
Conservation (SNWA).....	258-SAVE (7283)
en español:.....	258-AGUA (2482)
LVVWD website.....	lvvwd.com

ENVIRONMENTAL PROTECTION AGENCY

Safe Drinking Water Hotline.....	(800) 426-4791
website.....	epa.gov/safewater

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

Bureau of Safe Drinking Water.....	(775) 687-9520
website.....	ndep.nv.gov/bsdw

HOME WATER-TREATMENT SYSTEM INFORMATION

NSF International Consumer Hotline.....	(800) 673-8010
website.....	nsf.org

Public notice of monitoring violation

The Las Vegas Valley Water District (LVVWD) recently informed the State of Nevada that a required testing procedure for water well 23A, was not administered correctly. LVVWD is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During 2007, we did not complete all monitoring or testing for mercury, and therefore cannot be sure of the quality of the drinking water from well 23A at that time. Specifically, one sample of water being analyzed for mercury was not tested within the required holding time of 28 days. However, it is important to understand that, on the basis of many other samples, water from that well has never had a detectable level of mercury. Subsequent to the violation, mercury was not detected in two additional samples collected from well 23A.

LVVWD Board of Directors

Rory Reid, **President**; Steve Sisolak, **Vice President**

Susan Brager, Larry Brown, Tom Collins, Chris Giunchigliani, Lawrence Weekly

Patricia Mulroy, **General Manager**

Getting involved

The Las Vegas Valley Water District Board of Directors meets at 9 a.m. on the first Tuesday of every month. Meetings are open to the public, offer a public-comment period and are held at the Clark County Government Center, 500 S. Grand Central Pkwy. In accordance with the Nevada Open Meeting Law, agendas for regular meetings are properly posted and available at least three days before each meeting on lvvwd.com.

Questions may be e-mailed to the district via lvvwd.com or mailed to:

Las Vegas Valley Water District
Public Information Division
1001 S. Valley View Blvd.
Mail stop 780
Las Vegas, NV 89153

The Southern Nevada Water Authority:

Meeting the needs of the region's water agencies

The agency responsible for drawing nearly all municipal water from Lake Mead, treating it to drinking-water standards and delivering it to the distribution systems of local water agencies is the Southern Nevada Water Authority (SNWA), of which the Las Vegas Valley Water District is a member. The SNWA also is responsible for long-term water planning, which includes developing new water sources and managing conservation efforts. Each SNWA member agency is responsible for enforcing watering restrictions within its service area. To learn more, visit snwa.com.

Noticia en español

Este reporte contiene información muy importante acerca de la calidad del agua. Para recibir una copia en español, llame al **258-3946**.

FSC