

LEAD AND COPPER EDUCATION

The Big Bend Water District actively monitors for lead and copper in accordance with state and EPA Lead and Copper Rule requirements. The following information is provided to help you assess risks in your tap water. If present at elevated levels, 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 Big Bend Water District is responsible for providing high-quality drinking water up to your meter 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 two 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 private laboratory. For more information, call the EPA Safe Drinking Water Hotline, **800-426-4791**, or visit epa.gov.

ADDITIONAL HEALTH INFORMATION

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

INPUT AND INFORMATION

For water-quality information, please call the Big Bend Water District at **702-298-3113**. Submit questions via the "Contact Us" form on lvvwd.com or by mail: Big Bend Water District, 1520 Thomas Edison Drive, Laughlin, NV 89029-1600. For the EPA Safe Drinking Water Hotline, call **800-426-4791**; for the Nevada Division of Environmental Protection's Bureau of Safe Drinking Water, call **775-687-9520** or visit ndep.nv.gov/bsdw.

Visit the Big Bend system pages on lvvwd.com for information on scheduled meetings of the Big Bend Water District Board of Trustees. Meetings are open to the public.

BIG BEND WATER DISTRICT BOARD OF TRUSTEES

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NOTICIA EN ESPAÑOL

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

BIG BEND WATER DISTRICT

2017 Water Quality Report

ABOUT YOUR SOURCE WATER

All of the Big Bend Water District's drinking water comes from the Colorado River. Virtually all of that water begins as snowmelt in the Rocky Mountains. Big Bend operates an intake in the Colorado River below Davis Dam. Potential sources of contamination for rivers include urban chemicals such as fertilizers and pesticides, industrial activities and wildlife. The presence of relatively little agriculture upstream along the Colorado River limits exposure to farming-related contaminants.

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 Big Bend Water District's susceptibility to potential sources of contamination was initially provided by the state of Nevada in 2004. The summary of this source water assessment was first included in the Big Bend 2005 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-Friday, by appointment, at the Big Bend Water District, 1520 Thomas Edison Drive, in Laughlin. Please call **702-298-3113** for an appointment, or with any questions you may have. Additional information about the Nevada Source Water Assessment Program may be found at ndep.nv.gov/bsdw.

TREATMENT AND TESTING

The Big Bend Water District has an advanced water treatment facility designed to do one thing—provide drinking water that meets all Safe Drinking Water Act standards.

Water drawn from the Colorado River is sent to the Big Bend Water Treatment Facility. As it arrives, the water is treated with ozone to kill any potentially harmful microscopic organisms. A multistage filtration system then is used to remove particles from the water, followed by an ultraviolet disinfection system. Near the end of the treatment process, an additional disinfectant (sodium hypochlorite) is added to protect water on the way to customers' taps. Additional corrosion-control efforts help maintain water quality through the water distribution system.

Every month, water samples from the Big Bend Water District's water system are collected and analyzed. In fact, tests are performed even more frequently and extensively than the Safe Drinking Water Act requires.

Water delivered by the Big Bend Water District meets or surpasses all state of Nevada and federal drinking-water standards. Learn more in this report.

The Big Bend Water District is operated by the Las Vegas Valley Water District (LVVWD)

2017 Water Quality Report

1520 Thomas Edison Drive
Laughlin, NV 89029-1600

CLARK COUNTY NEVADA
BIG BEND
Water District



BIG BEND WATER DISTRICT

Water Quality Test Results

REGULATED CONTAMINANTS	UNIT	MCL (EPA LIMIT)	MCLG (EPA GOAL)	BIG BEND DISTRIBUTION SYSTEM ⁽¹⁾			BIG BEND WATER TREATMENT FACILITY ⁽¹⁾			POSSIBLE SOURCES OF CONTAMINATION	KEY TERMS
				MINIMUM	MAXIMUM	AVERAGE	MINIMUM	MAXIMUM	AVERAGE		
Alpha Particles	pCi/L	15	0	Entry Point Monitoring Only			3	3	N/A	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation	<p>Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.</p> <p>Disinfection by-product: A substance created by the chemicals or processes used to destroy potentially harmful microorganisms.</p> <p>Locational running annual average: The average of sample results taken at a particular monitoring location for the previous four consecutive quarters..</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>N/A: Not applicable</p> <p>N/D: Not detected. Does not equate to zero, but refers to an amount below analytical reporting limits.</p> <p>Nephelometric Turbidity Unit (NTU): A measurement of water's clarity.</p> <p>Part per billion (ppb): A unit used to describe the levels of detected contaminants. Equivalent to 1 cent in \$10 million.</p> <p>Part per million (ppm): A unit used to describe the levels of detected contaminants. Equivalent to 1 cent in \$10,000.</p> <p>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.</p> <p>Running annual average (RAA): The average of sample results for 12 consecutive months or four consecutive quarters, based on the monitoring requirements.</p> <p>Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.</p> <p>Turbidity: A measure of water clarity, which serves as an indicator of the treatment facility's performance.</p>
Arsenic	ppb	10	0	Entry Point Monitoring Only			1	3	1	Erosion of natural deposits	
Barium	ppm	2	2	Entry Point Monitoring Only			0.1	0.1	0.1	Erosion of natural deposits; discharge from metal refineries; discharge of drilling wastes	
Bromate	ppb	10	0	Entry Point Monitoring Only			N/D	13	6 ⁽²⁾	By-product of drinking-water disinfection with ozone	
Copper ⁽³⁾	ppm	1.3 ⁽⁴⁾ (Action Level)	1.3	N/D	0.7	0.5 (90th% value)	Distribution System Monitoring Only			Corrosion of household plumbing systems; erosion of natural deposits	
Fluoride	ppm	4.0	4.0	Entry Point Monitoring Only			0.3	0.4	0.3	Erosion of natural deposits	
Haloacetic Acids	ppb	60	N/A ⁽⁵⁾	14	17	23 ⁽⁶⁾	Distribution System Monitoring Only			By-product of drinking-water disinfection	
Lead ⁽³⁾	ppb	15 ⁽⁴⁾ (Action Level)	0	N/D	5	2 (90th% value)	Distribution System Monitoring Only			Corrosion of household plumbing systems; erosion of natural deposits	
Nitrate (as Nitrogen)	ppm	10	10	Entry Point Monitoring Only			0.3	0.5	0.4	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Radium 226 and 228 (combined)	pCi/L	5	0	Entry Point Monitoring Only			1	1	N/A	Erosion of natural deposits	
Selenium	ppb	50	50	Entry Point Monitoring Only			2	3	3	Erosion of natural deposits; discharge from mines; component of petroleum	
Total Trihalomethanes	ppb	80	N/A ⁽⁵⁾	49	78	70 ⁽⁶⁾	Distribution System Monitoring Only			By-product of drinking-water disinfection	
Turbidity	NTU	95% of samples <0.3 NTU ⁽⁷⁾	N/A	Treatment Facility Monitoring Only			100% of samples were below 0.3 NTU. Maximum NTU was 0.21 on July 30, 2016.			Soil runoff	
Uranium	ppb	30	0	Entry Point Monitoring Only			4	5	4	Erosion of natural deposits	

These results represent levels in the treated water supply, based on 2016 data, except where noted.

TREATMENT TECHNIQUE	UNIT	MRDL	MRDLG	MINIMUM	MAXIMUM	AVERAGE	VIOLATION	HEALTH EFFECTS
Free Chlorine Residual ⁽⁸⁾	ppm	4.0	4.0	N/D (in a sample in June and July)	1.4	0.7 ⁽⁹⁾	Yes ⁽¹⁰⁾	Chlorine residuals help ensure proper water-supply disinfection. 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.

FOOTNOTES: **(1)** Some Safe Drinking Water Act (SDWA) regulations require monitoring in the distribution system, while other SDWA regulations require monitoring at the entry point to the distribution system (Big Bend Water Treatment Facility). **(2)** This value is the highest running annual average (RAA) reported in 2016. Reports are filed quarterly. Maximum levels greater than the MCL are allowable as long as the RAA does not exceed the MCL. **(3)** Samples are from Big Bend customers' taps. **(4)** Lead and copper are regulated by a Treatment Technique (TT) that requires systems to control the corrosiveness of their water. If more than 10% of tap-water samples exceed the Action Level, water systems must take additional steps. For copper the Action Level is 1.3 ppm, and for lead it is 15 ppb. **(5)** No collective MCLG but there are MCLGs for some of the individual contaminants. Haloacetic Acids: dichloroacetic acid (0), trichloroacetic acid (300 ppb); Trihalomethanes: bromodichloromethane (0), bromoform (0), dibromochloromethane (60 ppb). **(6)** This value is the highest locational running annual average reported in 2016. Reports are filed quarterly. **(7)** Turbidity is regulated by a Treatment Technique requirement: 95% of all samples taken after filtration each month must be less than 0.3 NTU. Maximum turbidity levels cannot exceed 1.0 NTU. **(8)** Chlorine is regulated by a Treatment Technique requirement. **(9)** This value is the highest RAA reported in 2016. Reports are filed quarterly. **(10)** During the months of June and July 2016, the chlorine residual was undetectable at one sampling location within the Big Bend Water District's distribution system. The lack of chlorine in these samples was a violation of the minimum disinfection standards required by this treatment technique, which require that disinfectant cannot be undetectable at any location for two consecutive months. Although test results indicated there was no chlorine in the samples, they still met all Total Coliform Rule (TCR) requirements and were absent of any coliform organisms. In fact, there were no total coliform detections in any samples collected from the Big Bend distribution system in June or July, and the system remained in compliance with the TCR for all of 2016. The Big Bend Water District has made infrastructure and operational adjustments to ensure chlorine residual standards are maintained throughout the distribution system.

UNDERSTANDING TEST RESULTS

The Big Bend Water District tests for more than 100 regulated and unregulated substances. As required by the Safe Drinking Water Act, the test results provided for Big Bend list those regulated contaminants with primary standards that were detected. A complete analysis report is available through the Water District at lvvwd.com.

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 Safe Drinking Water Hotline at **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, other contaminants, 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 is safe to drink, 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.