

**Providing a High Quality Supply of Water and
Reliable Service to All Customers at a Fair and
Reasonable Rate.**



2018 ANNUAL DRINKING WATER QUALITY REPORT

About This Report

Bighorn-Desert View Water Agency (BDVWA) is pleased to present you with the Annual Consumer Confidence Report for the Year Ending 2018. Also considered the Drinking Water Quality Report, you will be happy to learn that in 2018, your water met all US Environmental Protection Agency and California Division of Drinking Water (DDW) Health Standards.

This report may seem complicated. Please call us at our office should you have any specific questions.

No habla inglés? Este informe contiene información muy importante sobre su agua potable. Tradúscalo o hable con alguien que lo entienda bien. Llame 760-364-2315.

How to Contact Us

General and Billing Information..... 760-364-2315
Agency Email.....info@bdvwa.org
Agency Website.....http://www.bdvwa.org

Information Websites

Bighorn-Desert View Water Agency..... bdvwa.org
CA Division of Drinking Water.....waterboards.ca.gov
U.S. EPA water.epa.gov/drink/index.cfm
Mojave Water Agency..... mojavewater.org
AWAC hdawac.org
(Alliance for Water Awareness and Conservation)

TABLE OF CONTENTS

About This Report	2
Our Water Supply	3
Diversifying Our Water Supply	4
Quality Analysis Results	5
Important Health Information	6
How to Read the Tables	7
Which Water System is Yours?	8
CCR Report Tables	
Flamingo Heights & West Landers	9
Goat Mountain (“East” Landers)	12
Johnson Valley	15
Protect Your Groundwater	18
Source Water Assessment	19
Board Meetings	19
Office Location	19



Photo courtesy of Ruth Rieman

Our Water Supply

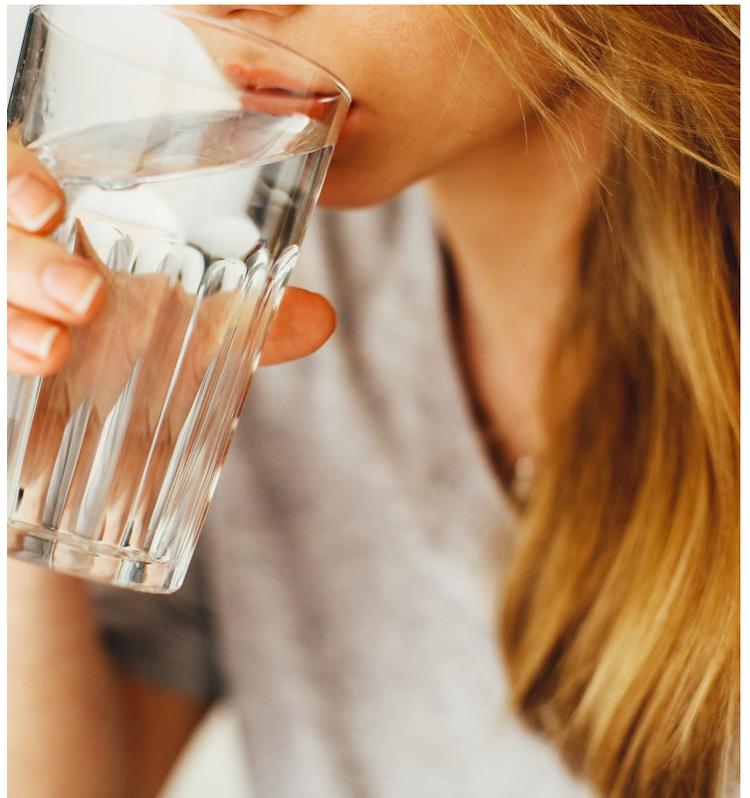
IS THERE ANYTHING IN MY WATER?

The sources of all drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, groundwater aquifers, 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 human activity. Your water source is groundwater aquifers.

Contaminants that may be present in source water include:

- 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, that can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
-
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production. Contaminants can also come from gas stations, urban storm water runoff, and septic systems.
 - Radioactive contaminants that can be naturally occurring or the result of oil and gas production and mining activities.
 - Pesticides and herbicides that may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

In order to ensure that tap water is safe to drink, U.S. Environmental Protection Agency (USEPA) and the California Department of Public Health prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.



DIVERSIFYING OUR WATER SUPPLY

Water supply diversification is a mechanism used in water management to avoid the unnecessary depletion of natural resources in order to maintain balance of all resources. In the case of your water agency, diversification allows us to utilize a water source from outside the service area to supplement native groundwater supplies.

This is done through a process known as groundwater recharge. The Agency purchases water that falls as rain in the mountains of Northern California, transported through a system of canals, pipelines and pump stations (The State Water Project) to the Mojave Water Agency. It is then transported to Landers via the Morongo



Photo courtesy of Marina West

Natural Recharge Local Mountain Snowpack & Rain

Basin Pipeline where it is re-



Photo courtesy of Marina West

leased into an artificial pond. The water percolates and is safely stored underground to be retrieved as needed. To date the Agency has recharged a total of 380 Acre-Feet. For comparison our 2550 customers used about 0.3 acre-feet per year, per household (family of four). Last year the Agency served a total of 560 Acre-Feet (one acre-foot is 325,829 gallons).

Artificial Recharge at the Ames/Reche Groundwater Storage & Recovery Facility

Water Quality Analysis Results



The Bighorn-Desert View Water Agency operates three (isolated) separate water systems utilizing a total of 8 groundwater wells in the Ames-Means Valley Groundwater Basin (Flamingo heights & Landers) and one well in the Johnson Valley Groundwater Basin. The service area is 59-square miles. The tables on the following pages show a summary of the actual test results of your drinking water from each district water system and compares them with constituent level limits and goals set by the U.S. Environmental Protection Agency to ensure your tap water is safe. Over 1,500

water quality tests were completed in 2018. Some of the constituents in this report reflect those which have exceeded the Detection Level for Reporting Purposes but have not exceeded the Maximum Contaminant Level. Others such as Sodium and Hardness are listed for informational purposes only. Lastly, the State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old as indicated by the “sample year”.



Over 1,500 water quality tests were completed in 2018.



Important Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants and native trace elements. 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 U.S. Environmental Protection Agency's (USEPA) Safe Drinking Water Hotline at 1-800-426-4791. Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders and some elderly and infants can be particularly at-risk from infections. These people should seek advice about drinking water from their health care providers.

USEPA/Centers for Disease Control (CDC) guidelines on the 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).

Health Effects

Arsenic - While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency 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.

Nitrate - Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

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. [NAME OF UTILITY] 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. [Optional: If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.] 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/lead>.

How to read the tables

The tables on the following pages list parameters which DDW requires the Agency to monitor, which may be associated with primary (health), secondary (aesthetic), or no established standards. The tables summarize monitoring from January 2018 - December 2018, and may include earlier monitoring data. The tables list all parameters that were detected at or above DDW's Detection Limit for Purposes of Reporting (DLR) from over 1,500 analysis from water well and distribution system sampling points.

Abbreviations

- **AL** - Regulatory Action Level.
- **BDVWA** - Bighorn-Desert View Water Agency.
- **DDW** - State Water Resources Control Board Division of Drinking Water Programs.
- **DLR** - Detection Limit for Reporting.
- **DPH** - Department of Public Health.
- **CL2** - Free Chlorine Residual.
- **MCL** - Maximum Contaminant Level.
- **MCLG** - Maximum Contaminant Level Goal.
- **MRDL** - Maximum Residual Disinfectant Level.
- **MRDLG** - Maximum Residual Disinfectant Level Goal.
- **ND** - Not Detectable at Testing Limit.
- **N/A** - Not Applicable.
- **NL** - Notification Level
- **NTU** - Nephelometric Turbidity Unit.
- **OU** - Odor Unit.
- **pCi/L** - PicoCuries Per Liter (a measure of radiation).
- **PDWS** - Primary Drinking Water Standard.
- **PHG** - Public Health Goals.
- **ppb** - Parts Per Billion or Micrograms Per Liter (ug/L) - [1ppb= 0.001 ppm].
- **ppm** - Parts Per Million or Milligrams Per Liter (mg/L) - [1ppm=1,000 ppb]. Or One Drop in an Olympic Sized Swimming Pool.
- **SDWS**- Secondary Drinking Water Standards.
- **TTHM** - Total Trihalomethanes .

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the Public Health Goals (or MCLGs) as is economically and technologically feasible. The U.S. Environmental Protection Agency sets secondary MCLGs.

Secondary Drinking Water Standards (SDWS) - MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Public Health Goals (PHG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

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 are set by the U.S. Environmental Protection Agency.

Primary Drinking Water Standard (PDWS) - MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Regulatory Action Level (AL)- The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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 contaminants.

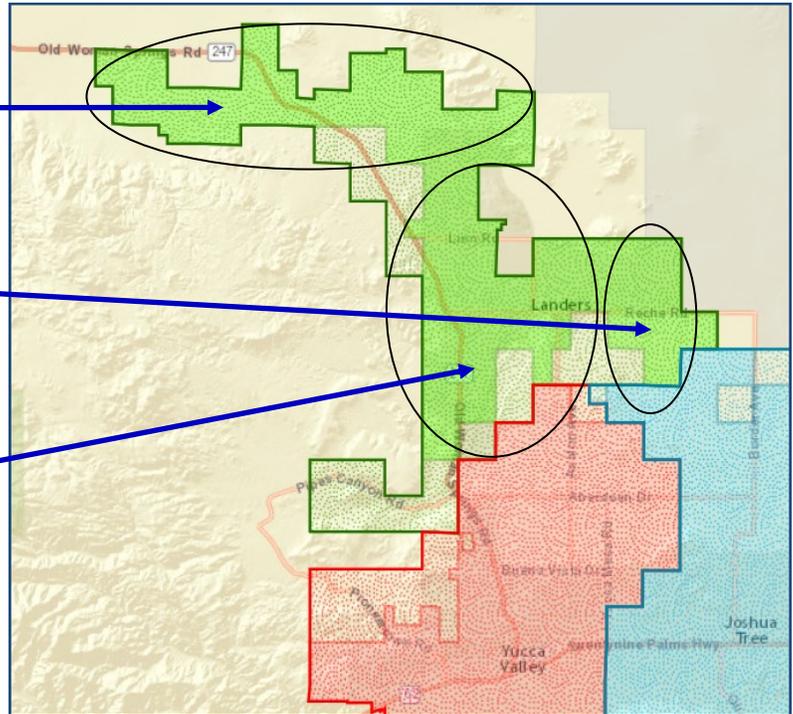
NL (Notification Level) - Notification levels have been established in response to an actual contamination or in anticipation of a possible contamination.



Three Water Systems

Which one is yours?

- Johnson Valley (pages 15-17), a bulk water hauling system summarizes the test results from Well 10. Located at Airport Rd/Quailbush.
- The Goat Mountain Service Area (pages 12-14) summarizes test results from Wells GMW1, GMW2 and GMW3.
- The Flamingo Heights and West Landers System (pages 9-11) summarizes test results from Wells 3, 6, 7, 8, and 9 (Well 2 and 4 are "inactive").

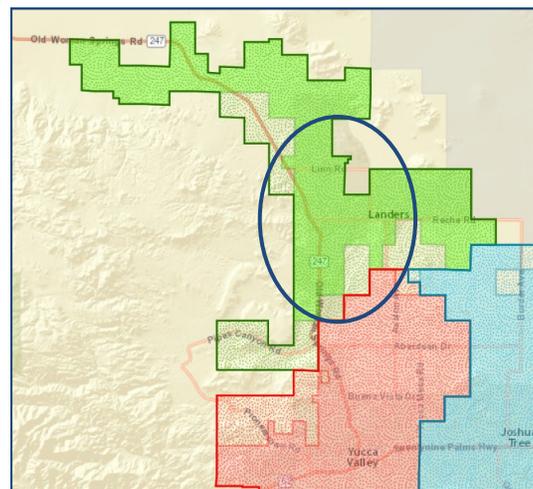


From January 1, 2018 to December 31, 2018 the Bighorn-Desert View Water Agency conducted over 1,500 water quality tests from samples taken at various locations throughout your water system in accord-

ance with state and federal laws. The following tables list only those contaminants that have been detected for the constituent as well as those required to be reported annually. The sample year indicates the latest year that one or more parameters were last tested. All sources are tested at least every 9 years, but not necessarily the same year. It is important to note that the presence of these constituents, as detected in water, does not necessarily indicate that the water poses a health risk. [BDVWA had no violations of a maximum contaminant level or secondary water quality standards in 2018.](#)



Bighorn-Desert View Water Agency Service Area Flamingo Heights and West Landers



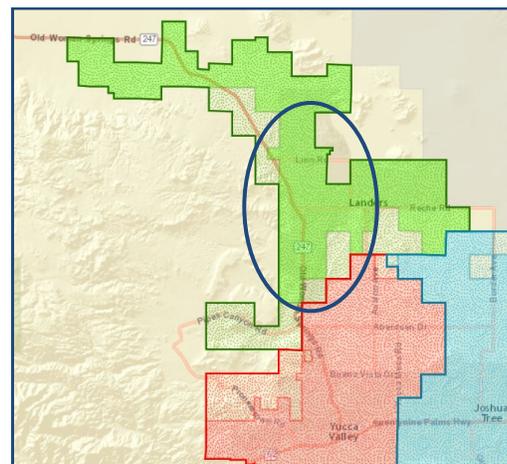
Primary Standards (Mandatory Health Related Standards)

Chemical or Constituent	Units	Sample Year	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Arsenic	ppb	2018	1.6	ND - 4.9	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes.
Fluoride	ppm	2018	0.88	0.59 - 1.2	2.0	1.0	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Gross Alpha (Net)	pCi/L	2018	2	0 - 4	15	(0.0)	Erosion of natural deposits.
Nitrate as N (NO3-N)	ppm	2018	1.9	1.4 - 2.3	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
Uranium	pCi/L	2018	9.1	5.2 - 13	20	0.43	Erosion of natural deposits.

Regarding Arsenic: While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency 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.

Microbiological Contaminants	Sample Year	Highest No. of Detections	No. of Months in Violation	MCL	PHG (MCLG)	Typical Source of Bacteria
Total Coliform Bacteria/State Total Coliform Rule	2018	0	0	More than 1 sample in a month with a detection.	(0)	Naturally present in the environment.

Bighorn-Desert View Water Agency Service Area Flamingo Heights and West Landers (Continued)



Primary Standards (Mandatory Health Related Standards)

Lead & Copper Study	Units	Sample Year	No. of Samples Collected	90th Percentile Level Detected	No. of Sites Exceeding AL	AL	PHG (MCLG)	Typical Source of Contaminant
Lead	ppb	2016	21	ND	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper	ppm	2016	21	0.110	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

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. Bighorn-Desert View Water Agency 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/lead> *** The next round of voluntary residential testing for Lead and Copper will take place between the months of June – September 2019. If you would like to be a participant in this free voluntary program please contact our office to determine if your residential plumbing materials make you vulnerable to lead and copper contamination .

Summary of Lead Testing at Schools within the Agency (* For source of contaminant please see page 19)

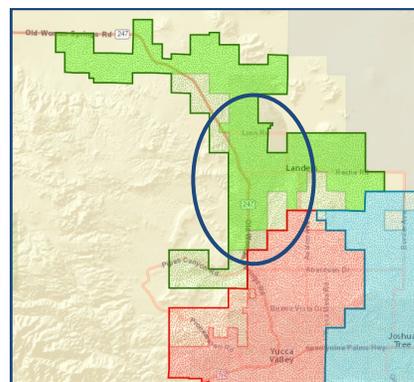
	Units	Sample Year	# of Schools in service area	# of Schools requesting testing	# of Samples	AVG.	Range	Violation
Lead	ppb	2017	1	1	5	ND	ND	No

Detected Disinfection By-Products, Disinfectant Residual & Disinfection By-Product Precursors

	Units	Sample Year	Average Level Detected	Range of Detections	MCL [MRDL]	PHG [MRDLG]	Typical Source of Contaminant
Free Chlorine Residual (as CL2)	ppm	2018	0.59	0.28 - 1.06	[4]	[4]	Drinking water disinfectant added for treatment.
Total Trihalomethanes (TTHM)	ppb	2018	6.6	6.6	80	n/a	By-product of drinking water chlorination.
Total Haloacetic Acid (HAA5)	ppb	2018	ND	ND	60	n/a	By-product of drinking water disinfection.

All drinking water must be disinfected to ensure that any potentially dangerous microbes are neutralized. In order to prevent growth of these microbes as drinking water travels from our reservoirs through the distribution system to your home or business, a disinfectant residual must be maintained. We perform frequent and comprehensive monitoring to ensure that disinfectant levels remain in the proper range throughout our distribution system.

Bighorn-Desert View Water Agency Service Area Flamingo Heights and West Landers *(Continued)*



Detected Regulated CCR Parameters with Secondary MCLs

Chemical or Constituent	Units	Sample Year	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of
Chloride	ppm	2018	23.7	17 - 31	500	n/a	Runoff/leaching from natural deposits; seawater influence.
Odor (Total Odor)	OU	2018	1	1	3	n/a	Naturally-occurring organic materials.
Sulfate	ppm	2018	44.3	34 - 52	500	n/a	Runoff/leaching from natural deposits; industrial wastes.
Total Dissolved Solids	ppm	2018	263	240 - 280	1000	n/a	Runoff/leaching from natural deposits.
Turbidity	NTU	2018	0.05	ND - 0.2	5.0	n/a	Soil runoff.

Detected Unregulated Parameters Requiring Monitoring

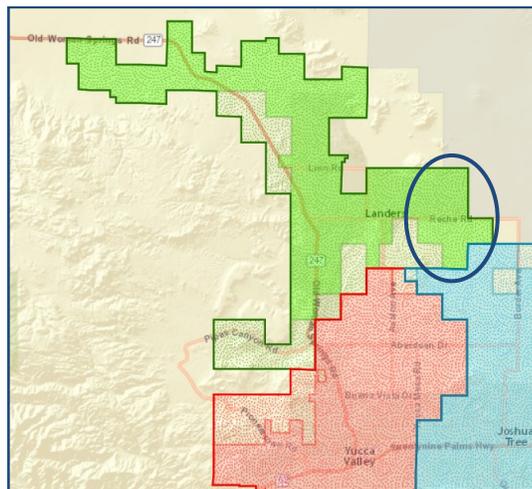
Chemical or Constituent	Units	Sample Year	Average Level Detected	Range of Detections	Notification Level	Health Effects Language	
Boron	ppb	2018	90	ND - 140	1000	The babies of some pregnant woman who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.	
Vanadium	ppb	2018	9.8	6.3 - 22	50	The babies of some pregnant woman who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.	
Hexavalent Chromium	ppb	2018	3.0	2.4 - 3.4	10	.02	Erosion of natural deposits; discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production and textile manufacturing facilities.

Regarding Hexavalent Chromium (ppb): Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer.

Other Parameters That May Be Of Interest

Chemical or Constituent	Units	Sample Year	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium	ppm	2018	58	47 - 74	n/a	n/a	Salt present in the water and is generally naturally occurring.
Hardness	ppm	2018	97	52-120	n/a	n/a	Sum of polyvalent cations present in the water, generally magnesium and calcium and are usually naturally occurring.

Bighorn-Desert View Water Agency Service Area Goat Mountain (previously CSA70)



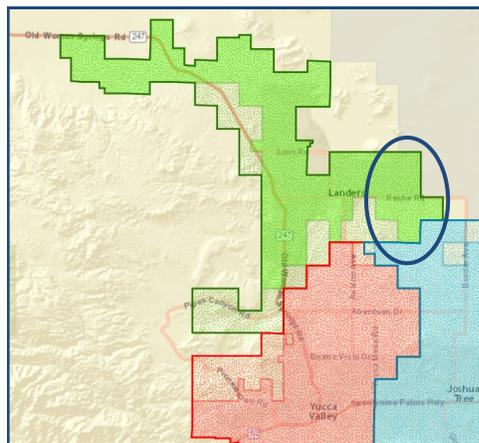
Primary Standards (Mandatory Health Related Standards)

Chemical or Constituent	Units	Sample Year	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Arsenic	ppb	2018	6.2	6.1 - 6.3	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes.
Fluoride	ppm	2018	0.42	0.40 - 0.45	2.0	1.0	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Gross Alpha	pCi/L	2017	1.7	0 - 3.3	15	(0.0)	Erosion of natural deposits.
Nitrate as N (NO3-N)	ppm	2018	1.4	1.3 - 1.5	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
Uranium	pCi/L	2017	2.4	0 - 4.5	20	0.43	Erosion of natural deposits.

Regarding Arsenic: While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic’s possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency 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.

Microbiological Contaminants	Sample Year	Highest No. of Detections	No. of Months in Violation	MCL	PHG (MCLG)	Typical Source of Bacteria
Total Coliform Bacteria/State Total Coliform Rule	2018	0	0	More than 1 sample in a month with a detection.	(0)	Naturally present in the environment.

Bighorn-Desert View Water Agency Service Area Goat Mtn. (Continued)



Primary Standards (Mandatory Health Related Standards)

Lead & Copper Study	Units	Sample Year	No. of Samples Collected	90th Percentile Level Detected	No. of Sites Exceeding AL	AL	PHG (MCLG)	Typical Source of Contaminant
Lead	ppb	2016	10	ND	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper	ppm	2016	10	0.098	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

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. Bighorn-Desert View Water Agency 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/lead> ** The next round of voluntary residential testing for Lead and Copper will take place between the months of June – September 2019. If you would like to be a participant in this free voluntary program please contact our office to determine if your residential plumbing materials make you vulnerable to lead and copper contamination

Summary of Lead Testing at Schools within the Agency (* For source of contaminant please see page 19)

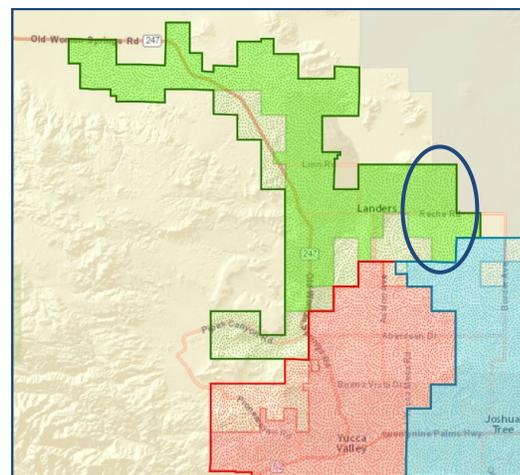
	Units	Sample Year	# of Schools in service area	# of Schools requesting testing	# of Samples	AVG.	Range	Violation
Lead	ppb	2017	0	0	2017	N/A	N/A	No

Detected Disinfection By-Products, Disinfectant Residual & Disinfection By-Product Precursors

	Units	Sample Year	Average Level Detected	Range of Detections	MCL [MRDL]	PHG [MRDLG]	Typical Source of Contaminant
Free Chlorine Residual (as CL2)	ppm	2018	0.57	0.31 - 0.93	[4]	[4]	Drinking water disinfectant added for treatment.
Total Trihalomethanes (TTHM)	ppb	2018	0.5	0 - 1.0	80	n/a	By-product of drinking water chlorination.
Total Haloacetic Acid (HAA5)	ppb	2018	ND	ND	60	n/a	By-product of drinking water disinfection.

All drinking water must be disinfected to ensure that any potentially dangerous microbes are neutralized. In order to prevent growth of these microbes as drinking water travels from our reservoirs through the distribution system to your home or business, a disinfectant residual must be maintained. We perform frequent and comprehensive monitoring to ensure that disinfectant levels remain in the proper range throughout our distribution system.

Bighorn-Desert View Water Agency Service Area Goat Mtn. (Continued)



Detected Regulated CCR Parameters with Secondary MCLs

Chemical or Constituent	Units	Sample Year	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of
Chloride	ppm	2018	15.5	15 - 16	500	N/A	Runoff/leaching from natural deposits; seawater influence.
Odor (Total Odor)	OU	2018	1	1	3	N/A	Naturally-occurring organic materials.
Sulfate	ppm	2018	26.5	26 - 27	500	N/A	Runoff/leaching from natural deposits; industrial wastes.
Total Dissolved Solids	ppm	2018	227	210 - 240	1000	N/A	Runoff/leaching from natural deposits.
Turbidity	NTU	2018	ND	ND	5.0	N/A	Soil runoff.

Detected Unregulated Parameters Requiring Monitoring

Chemical or Constituent	Units	Sample Year	Average Level Detected	Range of Detections	Notification Level	Health Effects Language
Vanadium	ppb	2018	9.7	9.4 - 10.0	50	The babies of some pregnant woman who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.
Hexavalent Chromium	ppb	2018	3.8	3.7 - 3.9	10	.02 Erosion of natural deposits; discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production and textile manufacturing facilities.

Regarding Hexavalent Chromium (ppb): Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer.

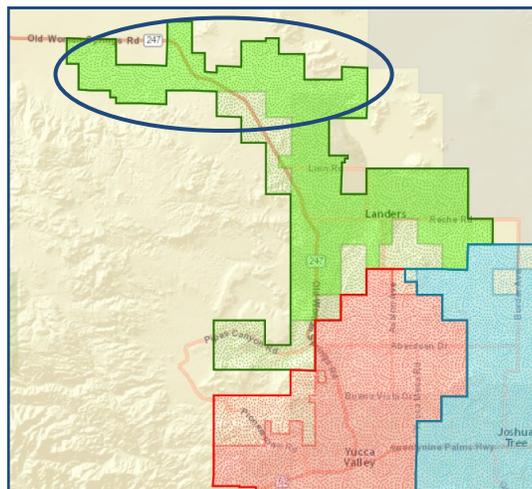
Other Parameters That May Be Of Interest

Chemical or Constituent	Units	Sample Year	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium	ppm	2018	43	42 - 44	n/a	n/a	Salt present in the water and is generally naturally occurring.
Hardness	ppm	2018	92.3	84 - 100	n/a	n/a	Sum of polyvalent cations present in the water, generally magnesium and calcium and are usually naturally occurring.

Bighorn-Desert View Water Agency

Service Area Johnson Valley

Well No. 10 Hauling Station



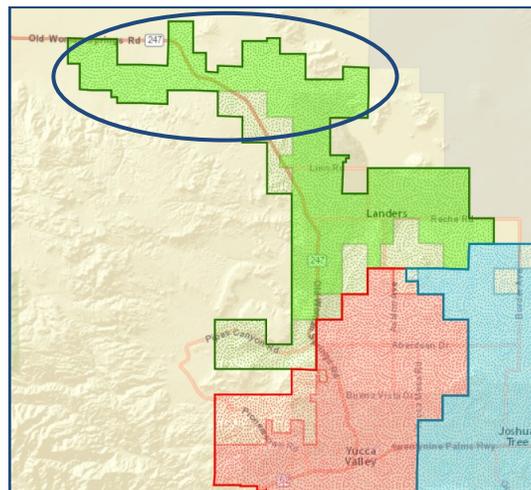
Primary Standards (Mandatory Health Related Standards)

Chemical or Constituent	Units	Sample Year	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Arsenic	ppb	2017	ND	ND	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes.
Fluoride	ppm	2017	0.72	0.69 - 0.75	2.0	1.0	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Gross Alpha	pCi/L	2016	13	13	15	(0.0)	Erosion of natural deposits.
Nitrate as N (NO3-N)	ppm	2018	1.5	1.5	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
Uranium	pCi/L	2016	4.5	4.5	20	0.43	Erosion of natural deposits.

Regarding Arsenic: While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency 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.

Microbiological Contaminants	Sample Year	Highest No. of Detections	No. of Months in Violation	MCL	PHG (MCLG)	Typical Source of Bacteria
Total Coliform Bacteria/State Total Coliform Rule	2018	0	0	More than 1 sample in a month with a detection.	(0)	Naturally present in the environment.

Bighorn-Desert View Water Agency
Service Area Johnson Valley
Well No. 10 Hauling Station
(Continued)



Detected Disinfection By-Products, Disinfectant Residual & Disinfection By-Product Precursors

	Units	Sample Year	Average Level Detected	Range of Detections	MCL [MRDL]	PHG [MRDLG]	Typical Source of Contaminant
Free Chlorine Residual (as CL ₂)	ppm	2018	0.73	0.44 - 0.93	[4]	[4]	Drinking water disinfectant added for treatment.
Total Trihalomethanes (TTHM)	ppb	2018	ND	ND	80	n/a	By-product of drinking water chlorination.
Total Haloacetic Acid (HAA5)	ppb	2018	ND	ND	60	n/a	By-product of drinking water disinfection.

All drinking water must be disinfected to ensure that any potentially dangerous microbes are neutralized. In order to prevent growth of these microbes as drinking water travels from our reservoirs through the distribution system to your home or business, a disinfectant residual must be maintained. We perform frequent and comprehensive monitoring to ensure that disinfectant levels remain in the proper range throughout our distribution system.

Detected Regulated CCR Parameters with Secondary MCLs

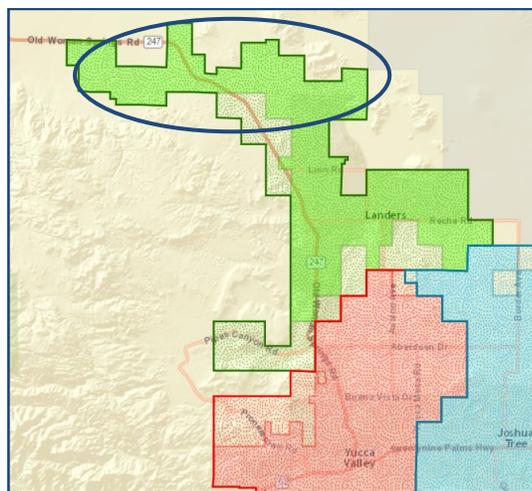
Chemical or Constituent	Units	Sample Year	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of
Chloride	ppm	2017	41.5	40 - 43	500	n/a	Runoff/leaching from natural deposits; seawater influence.
Odor (Total Odor)	OU	2017	2	2	3	n/a	Naturally-occurring organic materials.
Sulfate	ppm	2017	99.5	99 - 100	500	n/a	Runoff/leaching from natural deposits; industrial wastes.
Total Dissolved Solids	ppm	2017	340	340	1000	n/a	Runoff/leaching from natural deposits.
Turbidity	NTU	2017	1.6	0.2 - 3.1	5.0	n/a	Soil runoff.
Iron	ppb	2018	ND	ND	300	n/a	Leaching from natural deposits; industrial wastes.

Bighorn-Desert View Water Agency

Service Area Johnson Valley

Well No. 10 Hauling Station

(Continued)



Detected Unregulated Parameters Requiring Monitoring

Chemical or Constituent	Units	Sample Year	Average Level Detected	Range of Detections	Notification Level	Health Effects Language	
Boron	ppb	2017	195	190 - 200	1000	The babies of some pregnant woman who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.	
Vanadium	ppb	2017	20	19 - 21	50	The babies of some pregnant woman who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.	
Hexavalent Chromium	ppb	2018	4.0	4.0	10	0.02	Erosion of natural deposits; discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production and textile manufacturing facilities.

Regarding Hexavalent Chromium (ppb): Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer.

Other Parameters That May Be Of Interest

Chemical or Constituent	Units	Sample Year	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium	ppm	2017	99.5	99 - 100	N/A	N/A	Salt present in the water and is generally naturally occurring.
Hardness	ppm	2017	67	67	N/A	N/A	Sum of polyvalent cations present in the water, generally magnesium and calcium and are usually naturally occurring.

Summary of Lead Testing at Schools within the Agency (* For source of contaminant please see page 19)

	Units	Sample Year	# of Schools in service area	# of Schools requesting testing	# of Samples	AVG.	Range	Violation
Lead	ppb	2017	0	0	2017	N/A	N/A	NO



Protect Your Groundwater!

Keep pollutants out of the Aquifer! Storm water often contains pollutants including chemicals, trash, and automobile fluids. To do your part in keeping our groundwater clean and safe, consider the following.....

- Your car can be a source of pollutants. Check your vehicle regularly for fluid leaks. Use a funnel to prevent spills. Use drip pans and drop cloths when making repairs and changing your oil dispose of oil properly.
- Dispose of construction waste and trash from around your yard. Yard waste has the potential to carry hazardous landscaping chemicals like pesticides.
- Items such as pharmaceuticals, solvents and drain cleaners can cause groundwater contamination and should never be flushed down the toilet or poured down the sink.

Source Water Assessment

A drinking water source assessment was completed for all wells in the Bighorn-Desert View Water Agency water system in December 2002. The report indicates that Wells 3, 6, 7, 8, 9, and 10 are considered susceptible to septic leachate and erosion of natural deposits. A drinking water source assessment was completed for all wells in the Imp. Dist. Goat Mtn. (formally CoSB CSA 70/W-1) water system in July 2012, prior to annexation to BDVWA effective July 1, 2015. The report indicates that wells GMW1 and GMW3 are considered susceptible to septic leachate, above ground storage tanks and wells. You may request a summary of the assessment be sent to you by contacting a Sanitary Engineer at the State Water Resources Control Board (Division of Drinking Water) at 909-383-4328. If you have questions about this report or want to learn more about the Agency, you may contact the Agency's General Manager, Marina D. West, PG at 760-364-2315. To learn more information about contaminants and potential health effects, call the USEPA's Safe Drinking Water Hotline at 1-800-426-4791 or visit their website at <http://www.epa.gov/ow/>.

Community Participation

Our Regular Board of Directors Meetings are held on the fourth (4th) Tuesday of each month at 6 PM at 1720 Cherokee Trail, Landers, CA 92285. Committees and Special Meetings occur throughout the year. The public is welcome and encouraged to attend. To confirm meeting dates, times, locations and agendas please **visit our website at www.bdvwa.org** or contact our **Customer Service Staff at 760-364-2315**. To join our notification list, email info@bdvwa.org

Office Location

Bighorn-Desert View Water Agency is located at 622 Jemez Trail, Yucca Valley, California 92284. Our office hours are 8:00 am to 4:30 pm Monday through Friday. The office phone number is 760-364-2315. Please use the same phone number for after hours emergencies. When calling after hours you will be prompted to press an extension for "emergencies" and asked to leave a voice mail. The on-call staff will return your call in a timely manner.

2018 Board of Directors

Michael McBride	President
Judy Corl-Lorono	Vice President
John R. Burkhart	Secretary
J. Larry Coulombe	Director
JoMarie McKenzie	Director

General Manager

Marina West, PG

* (From Pages 10, 13, 17) Typical source of lead contamination in drinking water are internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.