

Where Does Your Water Come From?

In 2019, about 3.56 million gallons of water were pumped each day from a combination of ten (10) of the City's active wells. This pumped water comes from underground storage areas (called "aquifers") located within the City and along the Mojave River. These aquifers are recharged by rainfall, snowmelt, and (artificially) by the State Water Project. Adelanto also has an emergency source connection with the City of Victorville for backup or emergency needs.

Is My Water Clean and Safe?

Before the water reaches your tap, samples from wells and 36 individual locations throughout the City have been collected and tested in State certified laboratories. In this report, we summarize the extensive certified third-party laboratory data and test results in a simple manner to inform you of the high quality drinking water provided for the City of Adelanto.

In 2001, the California Department of Public Health (CDPH) conducted a source water assessment of all 15 of the City's water wells. The purpose of this assessment was to determine the vulnerability of the wells to "possible contaminating activities." A copy of the complete assessment may be viewed at the City of Adelanto Water Department or at the CDPHS San Bernardino District Office, 464 W. Street, Suite 437, San Bernardino, CA 92401.



Important Vocabulary in This Report

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically & technologically feasible. Secondary MCLs are set to protect the odor, taste, & appearance of drinking water.

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 (EPA).

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk of health. PHGs are set by the California EPA.

Maximum Residual Disinfectant Level (MRDL): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. EPA.

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

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

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

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

Variations & Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit.

ppm: parts per million or milligrams per liter (mg/L).

ppb: parts per billion or micrograms per liter (ug/L)

ppt: parts per trillion or nanograms per liter (ng/L).

pCi/L: picocuries per liter (a measure of radiation).

MFL: million fibers per liter. MCL for fibers exceeding μm in length.

N/A: Not Applicable.

Notification Level (NL): Notification levels are health-based advisory levels established by CDPH for chemicals in drinking water that lack maximum contaminant levels (MCLs).

μmho : Microohms.

Understanding Your Water

Information the U.S. Environmental Protection Agency Would Like You to Know

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.**

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.

❖ **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

❖ **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, agricultural application, and septic systems.

❖ **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, the U.S. Environmental Protection Agency (USEPA) and the

California Department of Health Services (Department) prescribe **regulations** that limit the levels 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.

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 USEPA's Safe Drinking Water Hotline (1-800-426-4791).** 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. USEPA/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 Drinking Water Hotline (1-800-426-4791).



**Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.**

Adelanto Water Quality Data



This section of the Report contains summary information for contaminants exceeding an MCL, MRDL, or AL, or a violation of any treatment technique or monitoring reporting requirement. We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether our drinking water meets health standards.

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of this contaminant. 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. Throughout 2019, water in Adelanto was tested to have, on average, very low levels of Arsenic.

Filtration treatment is required for Iron and Manganese for wells 1G, 3G2, 4G, and 8G2 and is performed at the city's water treatment plant on Turner Road.

City of Adelanto Water Quality Data and Sample Results

During the months of **July-November of 2019**, the City of Adelanto **imported water from Victorville** due to a shortage of water supply from its active wells. **Victorville imports its water from the Mojave Water Agency**. The next few pages will display sample results from the distribution system and source water supply, including water imported from Victorville and Mojave Water Agency.



Inorganic Contaminants Primary Drinking water Standards

Contaminant	Average	Range	MCL	Violation	Sample Date	Sources
Arsenic	2.02	0-5.5	10	No	2019	Erosion of natural deposits (post treatment)
Fluoride	0.42	.41-.42	2	No	2019	Naturally present in the environment (post treatment)
Gross Alpha	4	0-6.3	15	No	2019	Erosion of natural deposits (pre treatment)
Nitrate (ppm)	0.11	0-.63	10	No	2019	Runoff and leaching from: fertilizer use, septic tanks, sewage, erosion of natural deposits
Total Chromium	0	0	50	No	2019	Discharge from steel and pulp mill, chrome plating, erosion of natural deposits

Disinfection By-Products

Haloacetic Acid (HAA5) (ug/l)	2	0-4.3	60	No	2019	By-product of disinfecting drinking water
Total Trihalomethanes (TTHM) (ug/l)	25.5	7-44.0	80	No	2019	By-product of disinfecting drinking water

Radioactive Contaminants

Gross Alpha (pCi/L)	4	0-8.3	15	No	2019	Erosion of natural deposits
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Regulated Contaminants with Secondary MC

Chloride (ppm)	49	0-100	500	No	2019	Runoff/leaching from natural deposits; seawater influence
Iron (ug/l)	0	0	300	No	2019	Naturally present; industrial waste (post treatment)
Manganese (ug/l)	0	0	50	No	2019	Naturally present in the environment (post treatment)
Odor (units)	1	0-1	3	No	2019	Naturally present in the environment
Specific Conductance	678	460-1100	1600	No	2019	Naturally present in the environment
Sulfate	148	49-400	500	No	2019	Naturally present in the environment
Total Dissolved Solids	435	290-680	1000	No	2019	Naturally present in the environment
Turbidity	0.3	0-1.1	5	No	2019	Naturally present in the environment

Lead and Copper

Contaminant	Number of samples	90th Percentile	Level Detected	Action Level	Sites Over AL	PHG	Sources
Lead (ug/l)	30	None	ND	1.3	None	0.03	Customer household plumbing
Copper (ug/l)	30	None	ND	0.015	None	0.0002	Customer household plumbing

Microbial Contaminants

	Number of Detections	Months in Violation	MCL	MCLG	Source
Total Coliform	0	0	More than 5% of Monthly samples are positive	0	Naturally present in the environment
Fecal Coliform or E. Coli	0	0	Routine or repeat sample detects coliform and E. Coli	0	Human and animal fecal waste

2019 CCR Data

Inorganic Contaminants

	VVWD Average	VVWD Range	MCL	PHG (MCLG)	Violation	Major Sources in Drinking Water
Arsenic* (ppb)	7.9	0-10	10	0.004	NO	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Total Chromium (ppb)	6.2	0- 19	50	100	NO	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Chromium 6 (ppb)	5.6	0- 22	50	.02	NO	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, textile manufacturing facilities, erosion of natural deposits
Fluoride (ppm)	0.58	0-.70	2.0	1	NO	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as No3) (ppm)	0.99	0 - 2.3	10	10	NO	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

Disinfection Byproducts

	VVWD Average	VVWD Range	MCL	PHG (MCLG)	Violation	Major Sources in Drinking Water
Total Trihalomethanes (TTHMs) (ppb)	2.9	0 - 13	80	n/a	No	By-product of drinking water chlorination
Total Haloacetic Acid (HAA5) (ppb)	1.3	0 - 2.0	60	n/a	No	By-product of drinking water chlorination

Disinfectants

	VVWD Average	VVWD Range	MRDL	MRDLG	Violation	
Chlorine (ppm)	0.78	.44 - 1.04	4	4	NO	Drinking water disinfectant added for treatment

Lead and Copper

	# of Samples	90th Percentile Level Detected	Sites over AL	AL	PHG	Major Sources in Drinking water
Lead (total) (ppb)	34	none	N/D	N/D	1.3	Customer Household Plumbing
Copper (total) (ppb)	34	none	N/D	N/D	0.015	0.0002 Customer Household Plumbing

Regulated Contaminants with Secondary MCLs

	VVWD Average	VVWD Range	Secondary MCL	Violation	Typical Source of Contaminant
Chloride (ppm)	11.07	.3- 55	500	NO	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (Micromhos)	259.2	180-620	1600	NO	Substances that form ions when in water; seawater influence
Sulfate (ppm)	25.63	5.1 - 140	500	NO	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	160	110-360	1000	NO	Runoff/leaching from natural deposits
Turbidity (NTU)	1.1	0-4.2	5	NO	Soil runoff

Unregulated Parameters That May be of Interest to Consumers

	VVWD Average	VVWD Range	MCL	PHG (MCLG) Notification Level
Alkalinity (ppm)		64-160	N/S	N/S
Calcium (ppm)		1.8-67	N/S	N/S
Hardness (ppm)		5.4-210	N/S	N/S
Magnesium (ppm)		1.2-11	N/S	N/S
Potassium (ppm)		1.0-3	N/S	N/S
Sodium (ppm)		21-67	N/S	N/S

Microbiological Contaminants

	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	0	0	More than 5% of Monthly Samples are Positive	0	Naturally present in the Environment
Fecal Cliform or E. Coli	0	0	A routine Sample and a repeat sample detect total coliform and either sample also detects fecal coliform or E. Coli.	0	Human and Animal fecal waste

Arsenic Required Language:

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.

Definitions:

MCL	The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.
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.
MRDL	Maximum Residual Disinfectant Level (MRDL): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.
MRDLG	Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.
N/S	No Standard.
NTU	Nephelometric turbidity unit.
pCi/L	Pico curies per liter, a measure of radiation.
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.
ppb	Parts per billion, or micrograms per liter. 1 ppb is equal to about one drop in 17,000 gallons of water.
ppm	Parts per million, or milligrams per liter. 1 ppm is equal to about one drop in 17 gallons of water.
Regulatory Action Level	Regulatory Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Results of our 2019 Drinking Water Quality Tests

This report includes results from several tests for various constituents. Mojave Water Agency routinely monitors for constituents in the Agency's drinking water in accordance with Federal and State laws. *Substances that are not detected (ND) are not listed.* Values accompanied by < indicate a result less than the detection limit. The results below represent drinking water quality tests performed by Mojave Water Agency on the R³ wholesale water system and represents water produced from Wells 1, 2, 3, 4, & 5. These wells provide high quality drinking water through service connections to the cities of Victorville and Hesperia upon request. **Contact your local water provider for detailed information on your water quality and where your water comes from.**

Inorganic w/ Primary Drinking Water Standards							Wells 1, 2, 3, 4, & 5
Contaminants	Average	Sample Range	MCL	PHG	Sample Date	Violation	Major Sources in Drinking Water
Fluoride (mg/L) (Naturally Occurring)	0.28	0.25 - 0.32	2	1	2019	NO	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate as N (mg/L) (NO ₃ -N)	0.54	0.46 - 0.65	10	10	2019	NO	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate + Nitrite (mg/L) (as N)	0.54	0.46 - 0.65	10	10	2019	NO	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radioactive Contaminants							Wells 1, 2, 3, 4, & 5
Uranium (pCi/L)	0.72	<1.0 - 1.3	20	0.43	2019	NO	Erosion of natural deposits
Radium 226 + 228 (pCi/L)	<1.0	<1.0 - 1.8	5	0	2019	NO	Erosion of natural deposits
Disinfectant Byproducts							Sample results are from the distribution system from Wells 1, 2, 3, 4, & 5
Haloacetic Acids (ug/L) (HAA5)	<1.0	<1.0 - 1.8	60	N/A	2019	NO	Byproduct of drinking water disinfection
Total Trihalomethanes (ug/L) (TTHM)	8.5	<1.0 - 30.3	80	N/A	2019	NO	Byproduct of drinking water disinfection
Regulated Contaminants with Secondary Maximum Contaminant Levels							Wells 1, 2, 3, 4, & 5
Contaminants	Average	Sample Range	Secondary MCL	Sample Date	Violation	Major Sources in Drinking Water	
Chloride (mg/L)	22	18 - 25	500	2019	NO	Runoff/leaching from natural deposits; seawater influence	
Odor (units)	1	1	3	2019	NO	Naturally occurring organic materials	
Specific Conductance (µS/cm)	240	220 - 250	1600	2019	NO	Substances that form ions when in water; seawater influence	
Sulfate (mg/L)	15	13 - 17	500	2019	NO	Runoff/leaching from natural deposits; industrial wastes	
Total Dissolved Solids (mg/L)	146	130 - 170	1000	2019	NO	Runoff/leaching from natural deposits	
Turbidity (NTU)	<0.10	<0.10 - 0.60	5	2019	NO	Soil runoff	
Disinfection Residuals							Sample results are from the distribution system from Wells 1, 2, 3, 4, & 5
Constituent	Average	Sample Range	MCL	PHG (MCLG)	Sample Date	Major Sources in Drinking Water	
Chlorine (mg/L)	0.49	0.12 - 1.23	4	4	Weekly	Drinking water disinfectant added for treatment	
Unregulated Contaminants							Wells 1, 2, 3, 4, & 5
Contaminants	Average	Sample Range	MCL	PHG (MCLG)	NL	Sample Date	Major Sources in Drinking Water
Vanadium (ug/L)	<3.0	<3.0 - 3.2	None	None	50	2019	Vanadium is a naturally occurring "rare earth" element that is found in the earth's crust
Constituents that may be of interest to consumers							Wells 1, 2, 3, 4, & 5
Constituents	Average	Range	Sample Date	Note			
Bicarbonate (mg/L)	86	81 - 89	2019	No PHG or MCL's available			
Calcium (mg/L)	27	24 - 30	2019	No PHG or MCL's available			
Magnesium (mg/L)	4.2	3.5 - 4.9	2019	No PHG or MCL's available			
pH	7.5	7.4 - 7.7	2019	No PHG or MCL's available			
Potassium (mg/L)	1.5	1.3 - 1.6	2019	No PHG or MCL's available			
Sodium (mg/L)	15	14 - 16	2019	No PHG or MCL's available			
Total Alkalinity (as CaCO ₃) (mg/L)	70	67 - 73	2019	No PHG or MCL's available			
Total Hardness (as CaCO ₃) (mg/L)	86	73 - 96	2019	No PHG or MCL's available			
Aggressive Index	11.21	11.09 - 11.34	2019	No PHG or MCL's available			

Who Regulates Drinking Water in California?

Water quality regulations are strictly enforced on a state and federal level. The California State Water Resources Control board (SWRCB) monitors all listed contaminants plus bacteriological samples taken on a **weekly** basis.

Who Should I Contact with My Questions?

As always, the Public is welcome to attend and participate in water related discussions in Adelanto. **City Council meetings** are held on the 2nd and 4th Wednesdays of each month at 7:00 p.m. at **City Hall, 11600 Air Expressway**.

Furthermore, **Daniel Best** is the **Water Superintendent** in the City of Adelanto. He has extensive knowledge regarding the City's water treatment system, quality, and production. His top priority is the **quality of your water** and is happy to answer any questions regarding this report. You may contact him at: dbest@percwater.com.



How Can I Do My Part and Conserve?

Did you know that almost **20% of electricity** and more than **30% of natural gas** in California is used to treat, transport and use water? It's a win-win situation - when you save water, you save energy too! That's good for the earth and good for your energy bill.

Below are some tips for you and your family to save water, energy and money. By working together, we can do our part to minimize the effects of drought in CA.

- ❖ **Take shorter showers:** reduce your shower by 1-2 mins. and save 5 gallons.
- ❖ **Turn the water off while brushing your teeth:** Save 3 gallons each time.
- ❖ **Fix leaky faucets:** Save 15 to 50 gallons per day.
- ❖ **Water your lawn before 8 am:** Reduce evaporation and save about 25 gallons each time.
- ❖ **Mow your lawn with the blade set at 2-3 inches:** Longer grass shades the soil, reduces evaporation and encourages deeper roots to develop. This helps grass survive drought, tolerate insect damage and fend off disease.
- ❖ **While shaving, plug the sink instead of letting the water run:** Save 300 gallons per month.
- ❖ **Always use a broom to clean walkways, driveways, decks and porches, rather than hosing off these areas:** You can save as much as 100 gallons of water cleaning your driveway and yard by sweeping instead of using the hose. Plus, it's good exercise!
- ❖ **Replace your grass with turf or drought-resistant plants:** Outdoor water use accounts for 50%-70% of all household water use. Making the switch will save water and cash.