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ANNUAL WATER QUALITY REPORT
2016

ADELANTO WATER AUTHORITY
Consumer Confidence Report
June 20, 2017

SOURCE OF DRINKING WATER SUPPLY

About 3.7 million gallons of water is pumped daily from a combination of ten (10) of the City's active wells. Wells include 1G, 3G2, 4, 5a, 4G, 6, 7, 8G2, 14A and 15. Water is pumped from underground storage areas called aquifers located within the City and along the Mojave River. These aquifers are recharged naturally by rainfall and snowmelt and artificially from the State Water Project; an emergency source connection with the City of Victorville exists for backup or emergency needs.

WATER QUALITY REGULATIONS

Water quality regulations are strictly enforced on a state and federal level. The State of California Department of Public Health (CDPH) (formerly California Department of Health Services (DHS) monitors all listed contaminates plus bacteriological samples taken on a weekly basis.

WATER QUALITY CONTROL

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 our customers of the exceptionally high quality drinking water we provide.

SOURCE WATER ASSESSMENTS

In the year 2001 the CDPH conducted a source water assessment of all 15 of the City's water wells. The purpose of the 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.

PUBLIC PARTICIPATION

As always the public is welcome to attend and encouraged to participate in water related discussions. 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. 760-246-2300

CONTACT INFORMATION

Questions concerning this report may be directed to Victor Reid, Water Analyst at (760) 987-4655.

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

EDUCATIONAL INFORMATION

Additional General Information on Drinking Water

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).

Terms used 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 and technologically feasible. Secondary MCLs are set to protect the odor, taste, and 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.
- **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 Environmental Protection Agency.
- **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. 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.
- **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.
- **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.
- **Variances and 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 *u*m 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

CITY OF ADELANTO 2017 WATER QUALITY REPORT

Primary Standards: Mandatory Health-Related Standards

CONTAMINANT	MCL	PHG	AVERAGE	RANGE	SOURCES IN DRINKING WATER	
Arsenic (ppb)	10	0.00004		ND-5.1	Erosion of natural deposits	Post Treatment
Fluoride (ppm)	2	1	0.46	.27-.57	Naturally Present in environment	Post Treatment
Gross Alpha (pCi/L)	15	NONE	10.67	ND-21	Erosion of natural deposits	Pre Treatment
Total Trihalomethanes "TTHMs" (ug/L)		.0008	29.58	ND-43.6	By-product of drinking water disinfection	Post Treatment
Haloacetic Acid "HAA5" (ug/L)	60	N/A	6.55	3.7-9.6	By-product of drinking water disinfection	"

Secondary Standards Aesthetic Standards

CONTAMINANT	MCL	AVERAGE	RANGE	SOURCES IN DRINKING WATER	
Bicarbonate Alkalinity (ppm)	N/A	118.6	69-220	Naturally present in environment	Pre Treatment
Calcium	N/A	36.2	24-64	Naturally present in environment	Pre Treatment
Chloride (ppm)	500.0	15.7	1.8-53	Naturally present in environment	Pre Treatment
Color (units)	15.0	18.33	ND-30	Naturally present in environment	Pre Treatment
Odor Threshold (units)	3.0	1.29	1-3	Naturally present in environment	Pre Treatment
Hardness (CaCO3)	N/A	111.8	76-200	Naturally present in environment	Pre Treatment
Iron (ppb)	300.0	450	ND-1300	Naturally present in environment; industrial waste	Post Treatment
Manganese (ppb)	50	57.2	ND-130	Naturally present in environment	"
ph Units	N/A	8.06	7.6-8.4	Naturally present in environment	Pre Treatment
Turbidity (NTU)	5.0	7.06	ND-8.5	Naturally present in environment	Pre Treatment
Sodium (ppm)	N/A	64.0	42-76	Naturally present in environment	Pre Treatment
Specific Conductance (µmho)	1600.0	500	370-650	Substances from ions in water	Pre Treatment
Sulfate (SO4) ppm)	500.0	120.6	35-180	Naturally present in environment	Pre Treatment
Zinc (ppb)	5000	N/D	N/D	Naturally present in environment	Pre Treatment

Lead and Copper

CONTAMINANT	Sample Date	No. of samples collected	90th percentile level detected	No. sites exceeding AL	AL	PHG	SOURCES IN DRINKING WATER
Copper (ppb)	9/01/2015	32	.71	0	1.3	0.3	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Lead (ppb)	9/01/2015	0	0	0	0.015	0.0002	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

Detection of Coliform Bacteria

MICROBIOLOGICAL CONTAMINANT	MCL	HIGHEST NO. OF DETECTIONS	MONTHS IN VIOLATION	SOURCES IN DRINKING WATER
*Total Coliform Bacteria < 40 Samples/Month (Present/Absent)	More than 1 sample in a month with a detection	1	2	Normally present in the environment

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. During November and December 2016, we did not complete all monitoring or testing for Total Coliform (TC) (repeat sampling).

November 2016; During routine monthly sampling throughout the water system, there was a TC positive lab result. As required repeat samples were taken, although 2 sample sites were not tested 1 being upstream and 1 downstream from the original sample site. The repeat samples from the original sample site and the source wells had negative test results.

December 2016; During routine monthly sampling throughout the water system, there was a TC positive lab result. As required repeat samples were taken, although 3 sample sites were not tested 1 being upstream and 1 downstream from the original sample site, also the source wells were not tested. The repeat samples taken at the original sample site had negative test results.

Arsenic levels in Well 4 were found to exceed the EPA maximum contaminant level of 10 ppb (0.010 ppm) in 2013; Well 4 water is being blended with well waters with low levels of Arsenic to produce finished water below the MCL for Arsenic. A blending plan for Arsenic was submitted to CDPH in 2013. Water blending is required for Fluoride adjustment from wells 4 and 5A. CDPH approved Fluoride blending in 2005. Neither well 4a or well 5 were used in 2016.

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.

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.

This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2016. All water systems are required to comply with the state Total Coliform Rule. Beginning April 1, 2016, all water systems are also required to comply with the federal Revised Total Coliform Rule. The new federal rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e., total coliform and E. coli bacteria). The U.S. EPA anticipates greater public health protection as the new rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system.

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. During the month of June, 2016 the city had to import water from Victorville, which is done when our water production runs low. Victorville does import water from the Mojave Water Agency. The following are the sampling results from these two imported water sources.

VICTORVILLE WATER DISTRICT: RESULTS OF 2016 DRINKING-WATER-QUALITY TESTS

The District tests for hundreds of substances. The tables on these pages list substances detected in your drinking water in 2016. As the charts show, very few substances could even be detected.

Inorganic Contaminants

	VWD Average	VWD Range	MCL	PHG (MCLG)	Violation	Major Sources In Drinking Water
Arsenic[1] (PPB)	7.7	0 - 19.3	10	0.004	No	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes
Total Chromium (PPB)	0.0	.0 - 0.0	50	(100)	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Chromium 6[2] (PPB)	6.4	0 - 9.8	10	0.02	No	Discharge from electro-plating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, textile manufacturing facilities, erosion of natural deposits
Fluoride (PPM)	0.42	0 - 1	2.0	1	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as No3) (PPM)	1.23	0 - 3	10	10	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

Disinfection Byproducts

	VWD Average	VWD Range	MRDL	MRDLG	Violation	Major Sources In Drinking Water
Total Trihalomethanes (TTHMs) (PPB)	5.22	0 - 8.9	80	N/A	No	By-product of drinking water chlorination
Total Haloacetic Acid (HAA5) (PPB)	2.01	2.0 - 2.4	60	N/A	No	By-product of drinking water chlorination

Disinfectants

	VWD Average	VWD Range	MRDL	MRDLG	Violation	Major Sources In Drinking Water
Chlorine (PPM)	0.81	.29 - 1.21	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)	31	none	ND	ND	1.3	0.3	Customer household plumbing
Copper (total) (PPM)	31	none	ND	ND	0.015	0.0002	Customer household plumbing

Regulated Contaminants with Secondary MCLs

	VWD Average	VWD Range	Secondary MCL	Violation	Typical Source of Contaminant
Chloride (PPM)	10.21	3 - 43	500	No	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (Micromhos)	258.5	180 - 510	1600	No	Substances that form ions when in water; seawater influence
Sulfate (PPM)	22.21	5 - 140	500	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (PPM)	163.7	120 - 280	1000	No	Runoff/leaching from natural deposits
Turbidity (NTU)	0.31	0 - 3.2	5	No	Soil runoff

Unregulated Parameters That May Be of Interest to Consumers

	VWD Average	VWD Range	MCL	PHG (MCLG)
Alkalinity (PPM)	87.6	55 - 130	N/S	N/S
Calcium (PPM)	11.99	3 - 59	N/S	N/S
Hardness (PPM)	35.16	6 - 150	N/S	N/S
Magnesium (PPM)	1.36	0 - 8	N/S	N/S
Potassium (PPM)	1.29	0 - 3	N/S	N/S
Sodium (PPM)	40.25	18 - 65	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 Coliform 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

[1]***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.*

[2]***Chromium 6 (Hexavalent Chromium).*** *Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have increased risk of getting cancer.*

Note: *All parameters were sampled in 2016 except for lead and copper, which were sampled in 2015.*

2016 - IMPORTED WATER FROM MOJAVE WATER AGENCY

PARAMETER	MWA	MWA AVERAGE	REPORTING RANGE	MCL LIMIT	PHG (MCLG)	VIOLATION	MAJOR SOURCES IN DRINKING WATER
Inorganic Contaminants							
Arsenic (PPB)	ND	ND	2	10	0.004	No	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes
Chromium 6 (PPB)	ND	ND - 1.1	1	10	0.02	No	Discharge from electro-plating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, textile manufacturing facilities, erosion of natural deposits
Fluoride (PPM)	0.37	0.26 - 0.37	0.1	2	1	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate + Nitrite (asN) (PPM)	0.5	0.45 - 0.59	0.4	10	10	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate as N (NO3-N) (PPM)	0.52	0.45 - 0.59	0.4	10	10	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Disinfection Byproducts							
Total Trihalomethanes (TTHM) (PPB)	4.5	ND - 10.1	1	80	N/A	No	By-product of drinking water chlorination
Total Haloacetic (HAAS) (PPB)	ND	ND	1	60	N/A	No	By-product of drinking water chlorination
Regulated Contaminants with Secondary MCLs							
Chloride (PPM)	18	16 - 23	1	500	None	No	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (Micromhos)	236	220 - 260	2	1600	None	No	Substances that form ions when in water; seawater influence
Sulfate (PPM)	13.3	12 - 16	0.5	500	None	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS) (PPM)	150	140 - 160	5	1000	None	No	Runoff/leaching from natural deposits industrial wastes
Turbidity (NTU)	ND	ND - 0.2	0.1	5	None	No	Soil runoff
Physical							
PH (St. Units)	7.5	7.2 - 7.7	N/A	None	None	No	
Color (Units)	ND	ND	3	15	None	No	
Odor (Units)	1	1	0.1	5	None	No	
Unregulated Parameter That May Be of Interest to Consumers							
Alkalinity (PPM)	70	69 - 74	5	None	None	No	
Bicarbonate (PPM)	85.6	84 - 90	5	None	None	No	
Barium (PPB)	ND	ND	100	1000	2000	No	
Calcium (PPM)	25.3	24 - 27	1	None	None	No	
Copper (PPB)	ND	ND	50	1000	300	No	
Hardness (PPM)	65.7	72 - 85	N/A	None	None	No	
Magnesium (PPM)	4	3.2 - 4.5	1.0	None	None	No	
Manganese (PPB)	4.8	ND - 29	20.0	50	None	No	
Potassium (PPM)	1.6	1.6 - 1.7	1	None	None	No	
Sodium (PPM)	14.8	14 - 17	1	None	None	No	
Vanadium (PPB)	2.8	ND - 5.6	3	None	None	No	
Zinc (PPB)	ND	ND	50	5000	None	No	
Radiochemistry Analysis							
Gross Alpha (pCi/L)	3.2	ND - 11	3	15	15	No	

Note: *All parameters were sampled in 2016.*

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

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

Monitoring Requirements Not Met for City of Adelanto During November and December 2016

Our water system failed to monitor as required for drinking water standards during the past year and, therefore, was in violation of the regulations. Even though this failure was not an emergency, as our customers, you have a right to know what you should do, what happened, and what we did to correct this situation.

What happened?

November 2016;
During routine monthly sampling throughout the water system, there was a TC positive lab result. As required repeat samples were taken, although 2 sample sites were not tested 1 being upstream and 1 downstream from the original sample site. The repeat samples from the original sample site and the source wells had negative test results.

December 2016;
During routine monthly sampling throughout the water system, there was a TC positive lab result. As required repeat samples were taken, although 3 sample sites were not tested 1 being upstream and 1 downstream from the original sample site, also the source wells were not tested. The repeat samples taken at the original sample site had negative test results,

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During November and December 2016, we did not complete all monitoring or testing for Total Coliform (TC) (repeat sampling) and therefore, cannot be sure of the quality of our drinking water during that time.

What should I do?

- **There is nothing you need to do at this time.**
- The table below lists the contaminant(s) we did not properly test for during the last year, how many samples we are required to take and how often, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

Contaminant	*Required Sampling Frequency*	*Number of Samples Taken*	*When All Samples Should Have Been Taken*	*When Samples Were or Will Be Taken*
Total Coliform	4 repeat samples, after initial TC positive test result	2	Within 24 hours after lab notification of TC positive result	November 2, 2016
Total Coliform	4 repeat samples, after initial TC positive test result	1	Within 24 hours after lab notification of TC positive result	December 13, 2016

- If you have health issues concerning the consumption of this water, you may wish to consult your doctor.

What is being done?

Upon investigation of these events it was found that there was no risk to public health.

For more information, please contact Victor Reid at 760-987-4655 or mail to me at 11780 Air Expressway, Adelanto, CA 92301

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail.

Secondary Notification Requirements

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days [Health and Safety Code Section 116450(g)]:

- SCHOOLS: Must notify school employees, students, and parents (if the students are minors).
- RESIDENTIAL RENTAL PROPERTY OWNERS OR MANAGERS (including nursing homes and care facilities): Must notify tenants.
- BUSINESS PROPERTY OWNERS, MANAGERS, OR OPERATORS: Must notify employees of businesses located on the property.

This notice is being sent to you by City of Adelanto. State Water System ID#: CA 3610001.

Date distributed: In four billing cycles, February 21, February 28, March 7 and March 14, 2017.