ALAMEDA COUNTY WATER DISTRICT

2018 Water Quality Report

Dear ACWD Customer:

This report summarizes the results of the thousands of analyses conducted on your drinking water during 2018. I'm pleased to report that your water consistently met or surpassed all federal and state drinking water standards for public health and safety over the course of the year. To learn more about the quality of your drinking water, turn to the following pages:

Robert Shaver, General Manager

ACWD
ALAMEDA COUNTY WATER DISTRICT

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

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

આ રીપોર્ટ તમારા પાણી પીવા વિશે મહત્વની જાણકારી સમાવે છે.
તેનું અનુવાદ કરો, અથવા તેને જે સમજતા હોય તેવા કોઈ સાથે વાત કરો.

اس رپورٹ میں آپ کے پینے والے پانی کے بارے میں اہم معلومات دی گئی ہے۔
اسے ترجمہ کریں یا کسی ایسے فرد سے بات کریں جو اسے سمجھ سکے۔

این اطلاعیه شامل اطلاعات مهمی راجع به آب آشامیدنی است. اگر نمیتوانید این اطلاعات را بزبان انگلیسی
بخوانید لطفاً از کسی که میتواند یاری بگیرید تا مطالب را برای شما به فارسی ترجمه کند.

Этот отчет содержит важную информацию
о вашей питьевой воды.
Переведите его или поговорите с тем, кто это понимает.

Chi tiết này thật quan trọng. Xin nhờ người dịch cho quý vị.

"هذا ألتقرير يحتوي على معلوماً ت مهمّة تتعلق بمياه ألشفة (أو ألشرب).
ترجم ألتقرير , أو تكلم مع شخص يستطيع أن يفهم ألتقرير."

この報告書には上水道に関する重要な情報が記されて
おります。翻訳を御依頼なされるか、内容をご理解なさっ
ておられる方にお尋ね下さい。

此份有關你的食水報告,內有重要資料和訊息,請找
他人為你翻譯及解釋清楚。

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

यह सूचना महत्वपूर्ण है ।
कृपा करके किसी से :सका अनुवाद करायें ।

이 안내는 매우 중요합니다.
본인을 위해 번역인을 사용하십시요.

Este relatório contém informações importantes sobre sua água potável. Por favor traduza-o ou fale com alguém que entenda o que está escrito.

A Message from the U.S. EPA and the State Water Resources Control Board, Division of Drinking Water

A NOTE ABOUT DRINKING WATER

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. 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. The presence of contaminants does not necessarily indicate that water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U. S. EPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U. S. Food and Drug Administration regulations and California law also establish limits for bottled water that provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the U. S. EPA's Safe Drinking Water Hotline (800-426-4791).

INFORMATION FOR THE IMMUNO-COMPROMISED

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. U. S. EPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Comprehensive Water Quality Monitoring

ACWD works diligently to ensure that your water complies with all state and federal drinking water standards. This is a comprehensive effort that includes monitoring and testing for many types of contaminants that may be present in source water (i.e., water before treatment), including:

- **Microbials**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganics**, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemicals**, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, or that may come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- **Radioactive contaminants**, that can be naturally occurring or be the result of oil and gas production and mining activities.

Highly trained analysts and certified water treatment plant operators in our state-certified laboratory and satellite laboratories are committed to conducting these tests under a stringent Quality Assurance/Quality Control (QA/QC) program. Through written procedures, analytical proficiency testing, and detailed record maintenance, the QA/QC program ensures the quality of the analytical data produced by our laboratories. ACWD staff members collect samples daily from the water sources, treatment facilities, and distribution system to ensure only high quality water is delivered to our customers.

Drinking Water Source Assessment

In response to 1996 federal Safe Drinking Water Act amendments, California was required to implement a Source Water Assessment program. Drinking Water Source Assessments are conducted to determine how vulnerable drinking water sources are to contamination. Assessments have been completed for all of ACWD's water sources.

- The San Francisco Public Utilities Commission (SFPUC), which operates the Hetch Hetchy system, completed its assessment in 2000. It was found that SFPUC watersheds are vulnerable to contaminants associated with wildlife and, to a limited extent, human recreational activity. Historically, the levels of contaminants have been very low in the watersheds.
- The South Bay Aqueduct (SBA) source assessment was completed in 2002. This source is most vulnerable to agricultural drainage, wastewater treatment plant discharges, urban runoff, recreational activity, and cattle grazing. In addition, seawater intrusion contributes salt and bromide to the water supply.
- ACWD's assessment of local groundwater sources was also completed in 2002. These sources are most vulnerable to existing and historic gas stations, known contaminant plumes, leaking underground storage tanks, dry cleaners, metal plating/finishing/fabricating, and sewer collection.

Although ACWD water sources are vulnerable to potentially contaminating activities, our treatment and blending facilities purify your tap water to ensure that the strict standards set by federal and state regulatory agencies are met. Complete assessments may be reviewed at ACWD headquarters located at 43885 South Grimmer Boulevard in Fremont. To have a summary of the assessments sent to you, please call Mike Wickham, Water Production Manager, at (510) 668-6516.

2018 Water Quality Information

In 2018, the laboratory analysts and water treatment plant operators in ACWD's state certified laboratories and satellite laboratories analyzed for more than 180 substances in ACWD treated water and found very few of them in your water. In all cases, the water was in compliance with federal and state standards for public health and safety. There are two types of standards ACWD is required to meet:

Primary Drinking Water Standards set limits for substances in water that may be harmful to humans if consumed in excess. They include MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards deal with aesthetic qualities such as taste and odor which relate to consumer acceptance rather than health factors.

A summary of key results for 2018 is presented in the following tables. Technical terms and abbreviations used in the tables are explained below.

DEFINITIONS

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.
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.
Public Health Goal (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.
Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

ABBREVIATIONS

$CaCO_3$: Calcium Carbonate
mg/L: Milligrams per liter (which is equal to parts per million).
µg/L: Micrograms per liter (which is equal to parts per billion).
ppm: Parts per million (which is equal to milligrams per liter).
ppb: Parts per billion (which is equal to micrograms per liter).
µmhos/cm: Micromhos/centimeter.
NTU: Nephelometric turbidity units.
ND: The substance could not be found at the minimum amount that can be detected.
NA: Not Applicable.

PRIMARY DRINKING WATER STANDARDS

Parameters	Units	Primary MCL or [MRDL]	{PHG} (MCLG) or [MRDLG]	Treated Surface Water [1]		Purchased San Francisco Water [1]		Blended Water [1]		Desalinated Water [1]		Major Sources
				Range	Average	Range	Average or [Max.]	Range	Average	Range	Average	
Aluminum	ppm	1	{0.6}	ND		ND - 0.06	ND	ND		ND		Erosion of natural deposits
Bromate	ppb	10	{0.1}	Highest RAA [2] = 1.04 (Range of individual detections: ND - 2.2)								Disinfection by-product
Disinfectant Residual (as Cl_2) [3]	ppm	[4]	[4]	Annual Average = 2.0 (Range of individual detections: 0.18 - 3.3)								Disinfectant residual
Fluoride (naturally-occurring)	ppm	2	{1}	ND		0.70 - 0.73 [4]	0.72 [4]	0.12 - 0.25	0.20	ND		Erosion of natural deposits
Fluoride (treated water) [5]	ppm	2	{1}	Average = 0.8 (Range: 0.7 - 1.1)								Water additive that promotes strong teeth
5 Haloacetic Acids (HAA5) [6]	ppb	60	NA	Highest LRAA = 34 (Range of individual detections: ND - 36) [7]								Disinfection by-products
Nitrate (as N)	ppm	10	{10}	ND - 1.16	0.43	ND		ND - 0.85	0.48	0.63 - 0.93	0.71	Runoff from fertilizer use; erosion of natural deposits
Nitrate + Nitrite (as N)	ppm	10	{10}	ND - 1.16	0.43	ND		ND - 0.85	0.48	0.63 - 0.93	0.71	Runoff from fertilizer use; erosion of natural deposits
Total Trihalomethanes (TTHMs) [8]	ppb	80	NA	Highest LRAA = 49 (Range of individual detections: ND - 56) [7]								Disinfection by-products
Turbidity [9]	NTU	TT = 0.3 [10]	NA	0.001 - 0.27	0.05	NA		Not subject to the turbidity monitoring requirement				Soil runoff
		TT = 5.0 [11]	NA	NA		0.3 - 0.8 [12]	[1.8]					

Lead and Copper Sampling Program [13]	Units	AL[14]	{PHG}	Range	90th Percentile Value	Number of Samples Collected	Number of Samples above AL	Number of Schools Requesting Lead Sampling [15]	Typical Sources in Drinking Water
Copper [17]	ppm	1.3	{0.3}	ND - 0.6	0.3	66	0	8 [16]	Internal corrosion of household plumbing systems
Lead [17]	ppb	15	{0.2}	ND - 29.7	5.7	66	2		Internal corrosion of household plumbing systems

SECONDARY DRINKING WATER STANDARDS

Parameters	Units	Secondary MCL	Treated Surface Water		Purchased San Francisco Water		Blended Water		Desalinated Water		Major Sources
			Range	Average	Range	Average	Range	Average	Range	Average	
Aluminum	ppm	0.2	ND		ND - 0.06	ND	ND		ND		Erosion of natural deposits
Chloride	ppm	500	48 - 115	79	3.9 - 4.8	4.3	48 - 65	53	47 - 59	50	Runoff/leaching from natural deposits; seawater influence
Color	units	15	ND		ND - 5.0	ND	ND		ND		Naturally-occurring organic materials
Odor	units	3	ND		ND		ND - 1.6	ND	ND		Naturally-occurring organic materials
Specific Conductance	µmhos/cm	1,600	343 - 629	471	49 - 110	86	451 - 556	519	363 - 499	401	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	15 - 38	26	1.3 - 9.2	6.1	30 - 48	40	18 - 25	20	Naturally-occurring minerals
Total Dissolved Solids	ppm	1,000	190 - 350	255	30 - 61	48	250 - 310	293	190 - 260	210	Naturally-occurring minerals and metals

OTHER WATER QUALITY PARAMETERS

Parameters	Units	Other Regulatory Level	Treated Surface Water		Purchased San Francisco Water		Blended Water		Desalinated Water		Major Sources
			Range	Average	Range	Average	Range	Average	Range	Average	
Alkalinity	ppm as $CaCO_3$	NA	57 - 94	77	ND - 34	23	112 - 165	143	82 - 118	94	Naturally-occurring minerals
Calcium	ppm	NA	13 - 22	17	3.6 - 8.8	6.5	32 - 41	37	14 - 21	16	Naturally-occurring mineral
Hardness [18]	ppm as $CaCO_3$	NA	60 - 112	86	10 - 30	22	146 - 168	156	64 - 96	73	Naturally-occurring minerals
Magnesium	ppm	NA	6.7 - 14	11	0.25 - 2.2	1.3	13 - 17	15	7.0 - 10	7.8	Naturally-occurring mineral
pH	units	NA	7.5 - 8.4	8.1	8.5 - 9.2	8.9	7.6 - 7.9	7.8	8.0 - 8.5	8.3	Naturally-occurring minerals
Potassium	ppm	NA	1.6 - 3.5	2.5	ND		1.1 - 1.9	1.4	ND		Naturally-occurring mineral
Sodium	ppm	NA	42 - 83	58	5.7 - 10	8.3	31 - 55	48	49 - 64	53	Naturally-occurring mineral

(1) Refer to the "Distribution System Map" (page 5) to determine the type of water you typically receive based on your location.
(2) Compliance is based on a running annual average (RAA) of 12 monthly samples.
(3) Disinfectant residual in the distribution system consists of combined chlorine (chloramines); results are reported as Total Combined Chlorine.
(4) Fluoride in purchased San Francisco water includes both naturally-occurring fluoride and fluoride added by SFPUC to the regional supply upstream of ACWD.
(5) ACWD treats your water by adding fluoride to the naturally-occurring level in order to help prevent dental caries in consumers. The fluoride levels in treated water are maintained within a range of 0.6 - 1.2 ppm, as required by the State Board approved Fluoridation Monitoring and Operations Contingency plan.
(6) Five Haloacetic Acids is the sum of monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid.
(7) Compliance is based on locational running annual average (LRAA) of distribution samples collected in 4 quarters.
(8) Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform.
(9) Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness. Turbidity is measured in NTUs (nephelometric turbidity units).
(10) Treatment Technique (TT) performance standard: 0.3 NTU for filtered water in 95% of the measurements from WTP2 taken at 15-minute intervals each month and shall not exceed 1.0 NTU at any time. The treated surface water met these standards 100% of the time during 2018.
(11) Treatment Technique (TT) performance standard: 5 NTU for unfiltered water. The purchased SFPUC water met this standard 100% of the time during 2018.
(12) Purchased SFPUC water turbidity is measured every 4 hours. These are monthly average turbidity values.
(13) In compliance with federal Lead and Copper Program requirements, 1 liter samples are taken by eligible customers from within their homes after a 6 to 12 hour stagnation period.
(14) Compliance is based on 90th percentile values, which should be less than the Action Level (AL).
(15) These 8 schools requested testing in 2018 through a voluntary program; additional schools were tested in 2018 in accordance with Assembly Bill 746.
(16) Access information and data related to the Lead Sampling of Drinking Water in California Schools program. Lead Sampling of Drinking Water in California Schools Website
(17) Due to consistently low sampling results, the State Board approved reduced lead and copper monitoring frequency to once every 3 years. Results reported here were collected in 2018.
(18) For customers who want to know their hardness value in grains per gallon (gpg), divide the provided hardness value by 17.1.

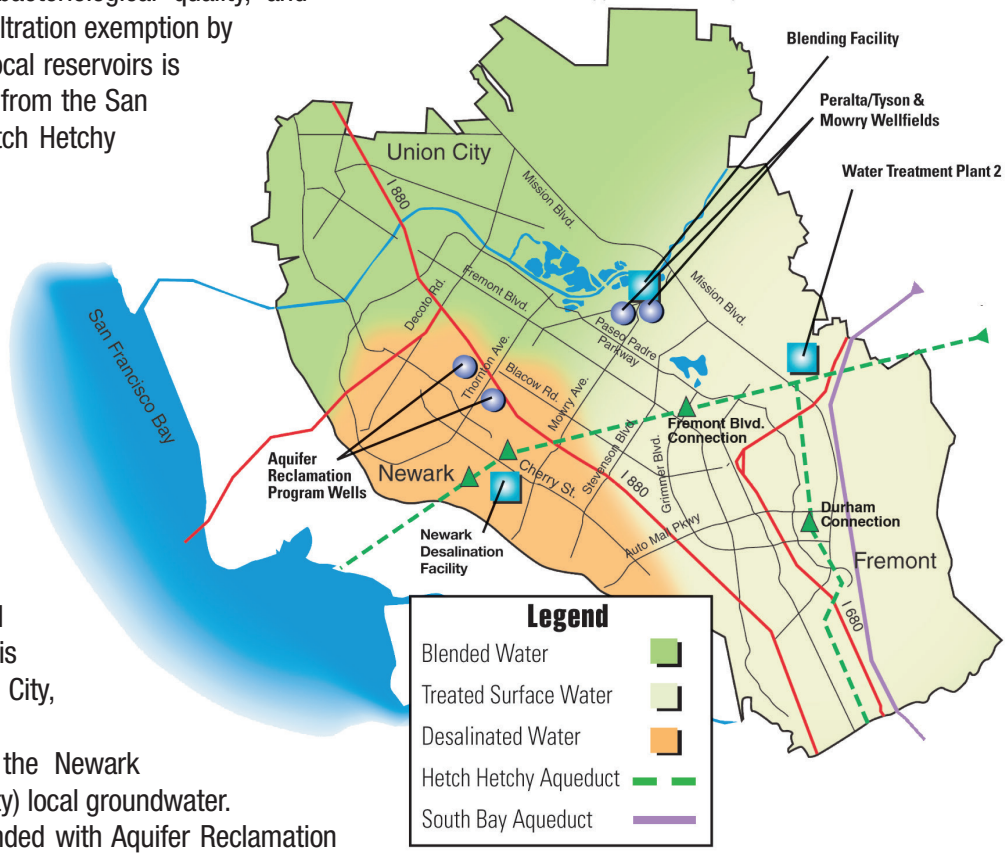
Where Our Water Comes From

ACWD supplies water to the Tri-City area from four sources.

- **Treated surface water** is imported from the Sacramento-San Joaquin Delta and/or Lake Del Valle via the South Bay Aqueduct. This water is purified at our surface water treatment plant and then delivered to customers living in central and south Fremont.
- **Purchased San Francisco water** is surface water which originates in either Hetch Hetchy Reservoir in Yosemite National Park, or locally in Calaveras or San Antonio Reservoirs in the Alameda Creek watershed. Hetch Hetchy water meets all federal and state criteria for watershed protection, disinfection treatment, bacteriological quality, and operational standards and has thus been granted a filtration exemption by the U. S. EPA and the State Board. Water from the local reservoirs is treated by SFPUC at a water treatment plant. Water from the San Francisco system is normally delivered through Hetch Hetchy Aqueduct connections in Fremont. Additional connections in Fremont and Newark may be used to meet peak summer water demands and in times of emergency.
- **Blended water** consists of a combination of purchased San Francisco water and local groundwater. The groundwater supply comes from the Niles Cone Groundwater Basin which underlies the Tri-City area and is replenished through infiltration from local rainwater, runoff from the Alameda Creek watershed, and water from the South Bay Aqueduct. Purchased San Francisco water is blended with Peralta/Tyson and Mowry Wellfield water at our Blending Facility and is delivered to customers living in north Fremont, Union City, and parts of Newark.
- **Desalted or desalinated water** is produced at the Newark Desalination Facility (NDF) from brackish (slightly salty) local groundwater. The desalinated water produced by the NDF is blended with Aquifer Reclamation Program well water to achieve a more balanced mineral content before being delivered to customers living in Newark.

Typical Distribution System Map

Your location in the Tri-City area determines the type of water you receive.



Annual Water Main Cleaning in Effect

Each January, ACWD begins the annual main cleaning program to clear water mains of sediment and debris. The cleaning process, which involves high velocity water passing through mains, forces debris to clear and improves water quality. If cleaning occurs in your neighborhood you may temporarily notice reduced water pressure, discolored water or sediment in your water. This will pass shortly after the cleaning is complete, and your water remains safe to drink. However, it is suggested that you refrain from washing light-colored laundry if and when your street is scheduled for main cleaning, as the stirred up sediment may cause discoloration.

If you notice discoloration in your tap water, try running the cold faucet for 2-3 minutes, or until it runs clear. If it's still not clear, repeat the process after waiting an hour. And, since year-round conservation is important, capture that water and use it for plants or flushing toilets.

The main cleaning program continues through June so check if your street is included in this year's schedule. Visit **www.acwd.org/maincleaning** or call (510) 668-6500. Main cleaning occurs Monday through Friday between 7 a.m. to 4 p.m.

A Note about Lead from the U.S. Environmental Protection Agency

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. Alameda County Water District 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 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 (800-426-4791) or at **www.epa.gov/lead.**

Your Views Are Welcome

Meetings of ACWD's Board of Directors typically begin at 6 p.m. on the second Thursday of each month and are open to the public. Meetings are held in the ACWD Board Room at the District's headquarters at 43885 South Grimmer Boulevard in Fremont. Further information regarding the Board meeting schedule can be found on our website at **www.acwd.org**.

If you have any questions or need any more information about the quality of your water, please let us know. We would also appreciate any comments you have about this report. We can be reached by phone at (510) 668-4200, fax (510) 770-1793, on the Internet at www.acwd.org, or by mail at: Alameda County Water District, P.O. Box 5110, Fremont, CA 94537. Mike Wickham, Water Production Manager, can be reached at (510) 668-6516.

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A publication of the Alameda County Water District

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