

ALAMEDA COUNTY WATER DISTRICT

2021 Water Quality Report



Dear ACWD Customer:

This past year, the COVID-19 pandemic presented challenges and uncertainties for the entire community. I am proud that through it all, ACWD employees continued to deliver on our mission and promise to provide safe drinking water to you, our customers. ACWD staff adjusted our operations to protect our employees while ensuring seamless service and the 24/7 operation of water treatment, supply, and delivery systems as well as continuing maintenance and repairs. I thank our team and you, our customers, for your understanding during these challenging and unprecedented times.

Now, more than ever, I am proud to present you with the results of thousands of analyses conducted on your drinking water in 2021. Your water consistently met or surpassed all federal and state drinking water standards. I invite you to read this report to learn more about where your water comes from and how it is regularly monitored to ensure its safety.

Ed Stevenson, General Manager

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.

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

”هذا التقرير يحتوي على معلومات مهمة تتعلق بمياه الشفة (أو الشرب).
ترجم التقرير، أو تكلم مع شخص يستطيع أن يفهم التقرير.“

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

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、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。

이 안내는 매우 중요합니다.
본인을 위해 번역인을 사용하십시오.

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.

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

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

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 ہیں۔
اسے ترجمہ کریں یا کسی ایسے فرد سے بات کریں جو اسے سمجھ سکیں۔

این اطلاعیه شامل اطلاعات مهمی راجع به آب آشامیدنی است. اگر تمیتوانید این اطلاعات را به زبان انگلیسی بخوانید لطفاً کسی که میتواند تباری بگیرد تا مطالب را برای شما به فارسی ترجمه کند.



A Message from the U.S. EPA

and the State Water Resources Control Board,
Division of Drinking Water



Comprehensive Water Quality Monitoring

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).

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.



Where Our Water Comes From

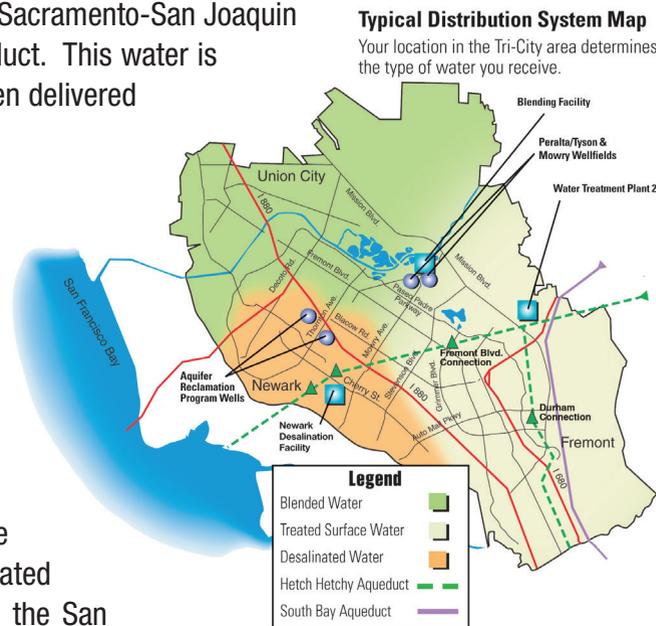
ACWD supplies water to the Tri-City area from four sources



Drinking Water Source Assessment

- **Treated surface water** supply 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.



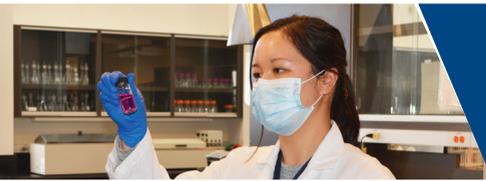
- **Blended water** consists of a combination of purchased San Francisco water and local groundwater. The groundwater supply comes from the Niles Cone Groundwater Basin which underlies the Tri-City area and is replenished through infiltration from local rainwater, runoff from the Alameda Creek watershed, 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 our Newark Desalination Facility (NDF) from brackish (slightly salty) local groundwater. The desalinated water produced by the NDF is blended with local groundwater to achieve a more balanced mineral content before being delivered to customers living in Newark.

ACWD drinking water sources include local groundwater, surface water and purchased San Francisco water. 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) conducts watershed sanitary surveys for the Hetch Hetchy source annually and local water sources as well as upcountry non-Hetch Hetchy Sources (UNHHS) every five years. The latest sanitary surveys for the local watersheds and the UNHHS watershed were completed in 2021 for the period of 2016 - 2020. The purposes of the surveys are to evaluate the sanitary conditions and water quality of the watersheds and to review results of watershed management activities conducted in the preceding years. Wildfire, wildlife, livestock, and human activities continue to be the potential contamination sources.
- The latest sanitary survey for the Delta and the State Water Project was completed in June 2017. Surface water is most vulnerable to contaminants as it travels through the Sacramento and San Joaquin watersheds and the Delta. After leaving the Delta, water is transported to ACWD via the South Bay Aqueduct (SBA). SBA water quality may also be vulnerable to pollution from local cattle grazing, wildlife activities, and recreational activities in the watersheds of the Bethany and Del Valle reservoirs.
- A Drinking Water Source Assessment on ACWD's local groundwater sources was 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. The latest Sanitary Survey of ACWD's water system was completed in 2018 by the State Board.

Although ACWD's water sources are vulnerable to potentially contaminating activities, our treatment and blending facilities purify your tap water to ensure compliance with the strict standards set by federal and state regulatory agencies. In addition, ACWD cooperates with other agencies and partners to protect imported water supplies and manages a number of groundwater protection programs to ensure the protection and reliability of local groundwater resources within the service area. 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.

2021 Water Quality Information



In 2021, 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 2021 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.

Notification Level (NL): State Board health-based advisory levels established for chemicals in drinking water that lack MCLs. When chemicals are found at concentrations greater than their NLs, certain requirements and recommendations apply.

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.

Response Level (RL): An advisory level at which the State Board recommends the source be taken out of service.

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

ABBREVIATIONS

CaCO₃: 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)
ppt: Parts per trillion (which is equal to nanograms 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.

FOOTNOTES

(1) Refer to the "Distribution System Map" (page 3) 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) When disinfectant residual cannot be detected, the sample is further analyzed with heterotrophic plate count (HPC) to ensure that water quality is in compliance with regulations.

(5) Fluoride in purchased San Francisco water includes both naturally-occurring fluoride and fluoride added by SFPUC to the regional supply upstream of ACWD.

(6) 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.

(7) Five Haloacetic Acids is the sum of monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid.

(8) Compliance is based on locational running annual average (LRAA) of distribution samples collected in 4 quarters.

(9) Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform.

(10) 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).

(11) 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 2021.

(12) Treatment Technique (TT) performance standard: 5 NTU for unfiltered water. The purchased SFPUC water met this standard 100% of the time during 2021.

(13) Purchased SFPUC water turbidity is measured every 4 hours. These are monthly average turbidity values.

(14) 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

(15) Compliance is based on 90th percentile values, which should be less than the Action Level (AL).

(16) 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 2021.

(17) In 2021, ACWD completed four rounds of voluntary monitoring for the presence of PFAS in groundwater and purchased San Francisco water, and the treated water being provided to our customers. Raw surface water and treated surface water is sampled annually.

(18) ND indicates no detection at or above the Consumer Confidence Report Detection Level (CCRD) which is 4 ppt for PFOS.

(19) For customers who want to know their hardness value in grains per gallon (gpg), divide the provided hardness value by 17.1.

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	
Bromate	ppb	10	{0.1}	Highest RAA ⁽²⁾ = 2.2 (Range of individual detections: ND - 5.8)								Disinfection by-product
Disinfectant Residual (as Cl ₂) ⁽³⁾	ppm	[4]	[4]	Annual Average = 1.9 (Range of individual detections: ND - 3.7) ⁽⁴⁾								Disinfectant residual
Fluoride (naturally-occurring)	ppm	2	{1}	0.14		0.71 - 0.86 ⁽⁵⁾	0.72 ⁽⁵⁾	0.12 - 0.28	0.22	ND		Erosion of natural deposits
Fluoride (treated water) ⁽⁶⁾	ppm	2	{1}	Average = 0.77 (Range: ND - 0.92)								Water additive that promotes strong teeth
5 Haloacetic Acids (HAA5) ⁽⁷⁾	ppb	60	NA	Highest LRAA = 23 (Range of individual detections: ND - 32) ⁽⁸⁾								Disinfection by-products
Nitrate (as N)	ppm	10	{10}	ND - 0.83	ND	ND		ND - 0.52	ND	0.55 - 0.60	0.59	Runoff from fertilizer use; erosion of natural deposits
Nitrate + Nitrite (as N)	ppm	10	{10}	ND - 0.83	ND	ND		ND - 0.52	ND	0.55 - 0.60	0.59	Runoff from fertilizer use; erosion of natural deposits
Total Trihalomethanes (TTHMs) ⁽⁹⁾	ppb	80	NA	Highest LRAA = 34 (Range of individual detections: ND - 45) ⁽⁸⁾								Disinfection by-products
Turbidity ⁽¹⁰⁾	NTU	TT = 0.3 ⁽¹¹⁾	NA	0.019 - 0.18	0.04	N/A		Not subject to the turbidity monitoring requirement				Soil runoff
		TT = 5 ⁽¹²⁾	NA	NA		0.2 - 0.4 ⁽¹³⁾	[3.3]					

Lead and Copper Sampling Program ⁽¹⁴⁾	Units	AL ⁽¹⁵⁾	PHG	Range	90th Percentile Value	Number of Samples Collected	Number of Samples above AL	Typical Sources in Drinking Water
Copper ⁽¹⁶⁾	ppm	1.3	0.3	ND - 0.5	0.3	64	0	Internal corrosion of household plumbing systems
Lead ⁽¹⁶⁾	ppb	15	0.2	ND - 12.3	5.4	64	0	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	
Chloride	ppm	500	122 - 144	133	4.0 - 5.0	4.5	37 - 41	39	41 - 44	43	Runoff/leaching from natural deposits; seawater influence
Odor	units	3	ND - 2.0	ND	ND		ND		ND		Naturally-occurring organic materials
Color	units	15	ND - 5.0	1.3	ND - 5.0	1.3	ND		ND		Naturally-occurring organic materials
Specific Conductance	µmhos/cm	1,600	638 - 847	741	43 - 74	55	398 - 466	431	330 - 353	346	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	26 - 70	46	1.2 - 4.6	2.4	32 - 35	34	18 - 19	19	Naturally-occurring minerals
Total Dissolved Solids	ppm	1,000	340 - 410	385	ND - 33	22	220 - 260	243	170 - 180	173	Naturally-occurring minerals and metals
Manganese	ppb	50	ND - 29	ND	ND		ND		ND		Naturally-occurring minerals

PFAS (PER- AND POLYFLUOROALKYL SUBSTANCES) ⁽¹⁷⁾

Parameters	Units	Response Levels	Notification Levels	Treated Surface Water		Purchased San Francisco Water		Blended Water		Desalinated Water		Major Sources
				Range	Average	Range	Average	Range	Average	Range	Average	
Perfluorooctanesulfonic Acid (PFOS) ⁽¹⁸⁾	ppt	40	6.5	ND		ND		ND - 5.6	4.7	ND		Human-made substances that do not occur naturally in the environment.

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	84 - 120	106	ND - 20	5	104 - 146	121	80 - 84	82	Naturally-occurring minerals
Calcium	ppm	NA	17 - 29	24	2.8 - 4.9	3.9	26 - 33	29	13 - 14	14	Naturally-occurring mineral
Hardness ⁽¹⁹⁾	ppm as CaCO ₃	NA	108 - 152	133	10 - 18	14	116 - 140	127	64 - 76	67	Naturally-occurring minerals
Magnesium	ppm	NA	14 - 19	17	0.2 - 0.9	0.4	11 - 14	13	6.6 - 7.0	6.8	Naturally-occurring mineral
pH	units	NA	8.1 - 8.8	8.4	9.3 - 9.6	9.4	7.4 - 8.1	7.9	8.5 - 8.8	8.7	Naturally-occurring minerals
Potassium	ppm	NA	3.6 - 4.1	3.9	ND		ND - 1.1	0.3	ND		Naturally-occurring mineral
Sodium	ppm	NA	86 - 100	93	5.0 - 8.0	6.2	36 - 46	41	46 - 49	48	Naturally-occurring mineral



Drought Persists: Mandatory Water Use Restrictions and Challenges to Water Quality

California is in the midst of an unprecedented drought and the ACWD service area is on pace to experience its driest 3-year period on record. Current efforts to conserve water are missing the mark and we need your help to stretch water supplies during this climatic extreme. ACWD has declared a water shortage emergency in the Tri-City area and the State of California is considering adopting emergency regulations with further restrictions this summer. We would like to remind customers that mandatory water use restrictions to reduce water use by 15% across the Tri-City area are in effect. We are asking all customers to eliminate water waste, limit outdoor irrigation while maintaining landscape viability, and minimize other non-essential water use.

The following practices are prohibited:

- Runoff from irrigation or watering
- Leaks and breaks within the customers' plumbing that are not fixed within 72 hours after the leak is discovered
- Draining and subsequent refilling of swimming pools
- Use of decorative water fountains
- Using hoses without quick-acting positive shutoff nozzles
- Hosing off sidewalks, driveways, etc.
- Irrigation while it's raining

Lawns and other landscaping may be watered no more than one day every other week, November through February, one day per week from March through May, and two days per week June through September, when using overhead spray irrigation. Customers are encouraged to maintain and irrigate trees to ensure survival during extended dry periods.

The drought can adversely impact water quality in the Sacramento-San Joaquin Delta, which provides 40% of ACWD's total water supply through the State Water Project. As a result, ACWD customers may experience temporary changes in your tap water's taste, smell, color and hardness. However, these variations do not impact the safety of your water and meeting all state and federal water quality standards, as demonstrated in the Water Quality Data Table.

Thank you for your conservation efforts as we continue to provide high-quality drinking water during this critical drought.

To learn more about the drought, conservation tips, mandatory water use restrictions, and to view a list of frequently asked questions, please visit our Drought & Conservation Resource Center at www.acwd.org/drought or call 510.668.4218.



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.



Connect With Us

Meetings of ACWD's Board of Directors typically begin at 6:00 p.m. on the second Thursday of each month and are open to the public. Due to the COVID-19 pandemic and in accordance with Assembly Bill 361, which modifies government code section 54953, meetings will be conducted by webinar or teleconference. Board members and members of the public may also attend meetings in person at the District office located at 43885 South Grimmer Boulevard in Fremont. Further information regarding the Board meeting schedule and how to attend online meetings can be found on our website at www.acwd.org/AgendaCenter.

2021 Water Quality Report A publication of the Alameda County Water District

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