

A Message from the EPA and the California Department of Health Services

A Note About Drinking Water

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. These contaminants enter water as it travels over the surface of the land or through the ground, dissolving substances that are naturally present in the environment or picking up substances resulting from the presence of animals or 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. To make sure that this water is safe to drink, the U.S. Environmental Protection Agency (EPA) and the California Department of Health Services (CDHS) prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. CDHS regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. CDHS regulations are in many cases more stringent than federal ones. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

A Note to 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. USEPA/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).

Drinking Water Source Assessment

Drinking Water Source Assessments are conducted to determine how vulnerable drinking water sources are to contamination so that water agencies can take steps to protect your water from potentially contaminating activities. Assessments have been completed for all of ACWD's water sources, including the South Bay Aqueduct (SBA), the San Francisco Public Utilities Commission (SFPUC) Hetch Hetchy supply, and the local groundwater basin.

The SFPUC, which administers 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.



Drinking Water Source Assessments have been completed for all of ACWD's water sources, including Lake Del Valle.

The SBA source assessment was completed in 2002. It was determined that this source is most vulnerable to the following Sacramento-San Joaquin Delta activities: agricultural drainage, wastewater treatment plant discharges, urban runoff, and recreational usage of the water in the Central Valley watershed. In addition, seawater intrusion contributes salt and bromide to the water supply. The SBA source is also vulnerable to cattle grazing in the watersheds of Bethany Reservoir, Lake Del Valle and along the open canal sections of the aqueduct.

ACWD's assessment of local groundwater sources was also completed in 2002. It was determined that these sources are most vulnerable to: existing and historic gas stations, known contaminant plumes, confirmed leaking underground storage tanks, dry cleaners, metal plating/finishing/fabricating, and sewer collection.

Although ACWD water sources are vulnerable to various potentially contaminating activities, rest assured that our treatment and blending facilities purify your tap water to the strict standards set by federal and state regulatory agencies. 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, contact Laura Hidas at (510) 668-6516.

Groundwater Desalination Facility is Dedicated

In a ceremony attended by more than 100 local and state officials and citizens, ACWD, on September 19, 2003, dedicated the first brackish water desalination facility in northern California.

The Newark Desalination Facility uses reverse osmosis (RO) to remove salts and other minerals from brackish (slightly salty) groundwater. The groundwater is first pre-treated with chemicals to prevent the crystallization of salts on the RO membranes. Next, filters remove trace amounts of silt and particulate matter from the water. High pressure pumps then force the water through the RO membranes. These semi-permeable membranes allow water molecules and gasses to pass through. Salts are left behind. Water leaving the RO membranes flows through a decarbonator where excess carbon dioxide is removed. This reduces the water's ability to corrode pipes. Finally, the water flows into the clearwell where it is blended with well water to give the finished water a balanced mineral content and enhance its taste.



Reverse osmosis membranes remove salts and other minerals from brackish groundwater at the Newark Desalination Facility.

The Newark Desalination Facility will supply about 10 percent of the Tri-City area's water needs. A second phase, slated for completion in 2016, will increase the capacity of the facility from 5 million gallons per day (mgd) to 10 mgd. The ultra-soft water produced at the facility will allow the District to maintain a more uniform water hardness throughout the year and throughout our service area.

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 water treatment plants 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 USEPA and the CDHS. Water from the local reservoirs is treated at a water treatment plant. Water from the San Francisco system is delivered through a central Hetch Hetchy Aqueduct connection in Fremont. Additional connections in Fremont and Newark are opened occasionally for emergency use and to meet peak summer water demands.

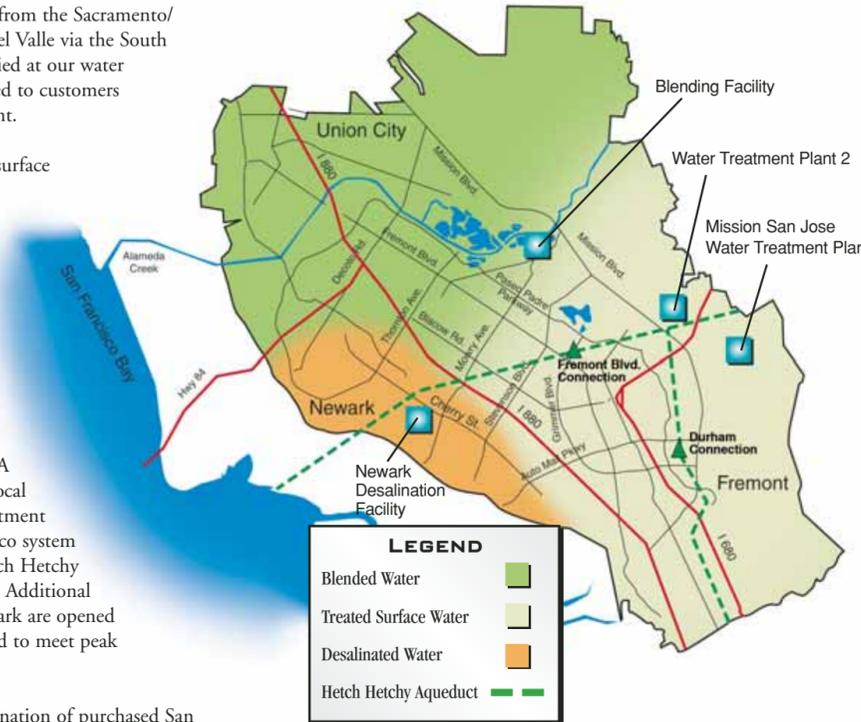
Blended water consists of a combination of purchased San Francisco water and local groundwater. Our groundwater supply comes from the Niles Cone Groundwater Basin which underlies the Tri-City area and is replenished through infiltration from local rainwater, runoff from the Alameda Creek watershed, and water from the South Bay Aqueduct. Blended water from our Blending Facility is delivered to customers living in north Fremont, Newark, and Union City.

Desalted or desalinated water is produced at the Newark Desalination Facility (NDF) from brackish (slightly salty) local groundwater. The water produced by the NDF is also blended 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.



Este reporte contiene información muy importante de su salud y el agua que toma. Tradúzcalo por favor ó hable con alguien que lo entienda bien.

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

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

Dieser Report enthält wichtige Informationen über Ihr Trinkwasser. Übersetzen Sie ihn bitte oder sprechen Sie mit jemand, das ihn versteht.

Ce rapport contient de l'information importante concernant votre eau potable. Veuillez le traduire, ou parlez-en avec quelqu'un qui le comprend.

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。

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

यह सूचना महत्वपूर्ण है। कृपा करके किसी से इसका अनुवाद करायें।

このレポートはあなたの飲料水に関する重要な情報が含まれています。翻訳するか、レポートの内容を理解できる方に説明してもらってください。

이 안내는 매우 중요합니다. 본인을 위해 번역인을 사용하십시오.

Данный рапорт содержит важную информацию о вашей питьевой воде. Переведите его или проконсультируйтесь с тем, кто его понимает.

این اطلاعیه شامل اطلاعات مهمی راجع به آب آشامیدنی است. اگر نمی‌توانید این اطلاعات را به زبان انگلیسی بخوانید لطفاً از کسی که می‌تواند پارسی بگوید به شما مطالب را برای شما به فارسی ترجمه کند.

”هذا التقرير يحتوي على معلومات مهمة تتعلق بمياه الشفة (أو الشرب).

ترجم التقرير, أو تكلم مع شخص يستطيع أن يفهم التقرير.“

ਇਸ ਰਿਪੋਰਟ ਵਿਚ ਤੁਹਾਡੇ ਪੀਣ ਵਾਲੇ ਪਾਣੀ ਵਾਰੇ ਬਹੁਤ ਜ਼ਰੂਰੀ ਸੂਚਨਾ ਹੈ। ਇਸ ਨੂੰ ਪੜ੍ਹੋ ਜਾਂ ਜੇ ਸਮਝ ਨਹੀਂ ਸਕਦੇ ਹਨ, ਉਸ ਵੇਲੇ ਸਮਝੋ।



43885 South Grimmer Blvd. Fremont, CA 94538

Water Quality Report 2003

Dear ACWD Customer:

This year marks the 90th anniversary of the formation of the Alameda County Water District. And while it's true that much has changed over the past 90 years, one thing has remained constant here at ACWD – our commitment to supplying you with the highest quality water possible.

To demonstrate my point, I invite you to take a look through our 2003 Water Quality Report. In it you will be introduced to some of the innovative solutions we have employed to meet the stringent water quality regulations of the 21st century. You will also find a summary of the quality of water provided to you during the past calendar year by ACWD. During that time we met or surpassed all federal and state drinking water standards. This is an accomplishment we have repeated year after year and pledge to strive to repeat for years to come.

Paul Piraino
General Manager

Your Views Are Welcome

Meetings of ACWD's Board of Directors begin at 6:00 p.m. on the second and fourth Thursdays 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.

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. Michael Lanier, our Water Quality Supervisor, can be reached at (510) 668-6520. For current water quality information, check the ACWD Water Quality Website at: www.acwd.org/waterqual-show.cgi.



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Changing with the Times



Comprehensive Water Quality Monitoring

ACWD works diligently to ensure that your water meets or surpasses all state and federal drinking water standards. This is an extensive task and 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, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

- Inorganics, such as salts and metals, which 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, which 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, and septic systems.

- Radioactive constituents, which can be naturally occurring or be the result of oil and gas production and mining activities.

We are proud to announce that very few of the more than 180 substances we tested for were found in our water and that in all cases we were in compliance with federal and state standards.

Voluntary Monitoring

To help ensure the safety of your drinking water, ACWD voluntarily monitors for contaminants that are not yet regulated. You will find the results of this monitoring below.

Cryptosporidium is a microscopic organism that, when ingested, can result in fever, diarrhea, and other gastrointestinal symptoms. It is found in all of California's rivers and streams and comes from animal and human wastes. Although testing done in 1998 and 1999 revealed that it was occasionally present in source water from Hetch Hetchy Reservoir and the South Bay Aqueduct before treatment, **no Cryptosporidium was detected in the water delivered to our customers.**

Radon is a naturally occurring radioactive gas that enters air and water from underground rock formations and is found throughout the U.S. If drinking water contains high levels of radon it may cause increased risk of stomach cancer. Breathing radon gas may lead to lung cancer. The radon released when you use tap water contributes very little to the amount of radon inside your home. The EPA is recommending that drinking water should contain less than 4,000 pCi/L of radon as part of a proposed mitigation program. In 2003, we conducted monitoring for radon in all our source waters and detected it only in our groundwater supply. Our groundwater is blended with purchased San Francisco water. This blended water produced a radon level of no more than 220 pCi/L.



ACWD chemist and technician perform approximately 70,000 water quality analyses on your drinking water each year.

2003 Water Quality Information

The chemists and technicians in ACWD's state certified laboratory performed approximately 70,000 chemical and bacteriological analyses on your water during 2003. The results revealed that very few of the more than 180 substances we tested for were found in your water. In all cases, we were in compliance with federal and state standards. There are two types of standards we are 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 2003 is presented in the adjacent charts. Technical terms and abbreviations used in the charts 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 or 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 level of disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of disinfectant added for water treatment below which there is no known or expected risk to health. MRDLs 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 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 which a water system must follow.

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

Variance and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Abbreviations

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).

pCi/L: Picocuries per liter (a measure of radioactivity).

ND: The substance could not be found at the minimum amount that can be detected.

NA: Non-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	Range	Average	Range	Average	
Barium	ppm	1	(2)	ND		ND		ND - 0.11	ND	ND		Erosion of natural deposits
Fluoride (naturally occurring) ⁽²⁾	ppm	2	(1)	ND - 0.1	ND	ND		ND - 0.3	0.2	ND - 0.2	0.1	Erosion of natural deposits
Fluoride (Treated water) ⁽²⁾	ppm	2	(1)	Average = 0.95 (Range 0.2 - 1.3)								Water additive that promotes strong teeth
Combined Radium ⁽³⁾	pCi/L	5	NA	1.2 - 1.6	1.3	ND - 1.2	ND	ND - 1.3	ND	NA ⁽⁴⁾		Erosion of natural deposits
Bromate	ppb	10	(0)	ND - 6.2	ND	NA		NA		NA		Disinfection by-product
Disinfectant Residual ⁽⁵⁾	ppm	[4]	[4]	Annual Average ⁽⁶⁾ = 1.7 (Range of individual detections: 0 - 2.9)								Disinfectant residual
5 Haloacetic Acids (HAA5s) ⁽⁷⁾	ppb	60	NA	Highest Running Annual Average ⁽⁶⁾ = 17 (Range of individual detections: 2.5 - 48)								Disinfection by-product
Nitrate (as NO ₃)	ppm	45	(45)	ND - 2.5	ND	ND		2.8 - 3.1	3.0	9.24 ⁽⁸⁾		Runoff from fertilizer use, erosion of natural deposits
Total Trihalomethanes (TTHMs) ⁽⁹⁾	ppb	80	NA	Highest Running Annual Average ⁽⁶⁾ = 41 (Range of individual detections: 8 - 129)								Disinfection by-product
Turbidity ⁽¹⁰⁾	NTU	TT = 0.3 ⁽¹¹⁾	—	0.04 - 0.1	0.05	NA	NA	Not subject to the turbidity monitoring requirement				Soil Runoff
		TT = 5.0 ⁽¹²⁾	—	NA	NA	0.05-1.92	0.67					

Lead and Copper Sampling Program	Units	Action Level (AL) ⁽¹³⁾	Public Health Goal	Range	90th Percentile	Number of Samples Collected	Number of Samples above AL	Typical Sources in Drinking Water
Copper	ppm	1.3	0.17	ND - 1.10	0.94	64	0	Corrosion of household plumbing systems
Lead	ppb	15	2	ND - 20	7.4	64	2	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	Detected Level ⁽⁸⁾	
Chloride	ppm	500	24 - 129	70	4-8	5	49 - 65	56	115	Runoff/leaching from natural deposits; seawater influence
Threshold Odor Number (TON)	TON	3	1	1	1	1	1	1	1	Naturally occurring organic materials
Specific Conductance	µmhos / cm	1600	227 - 639	426	50 - 131	78	505 - 715	588	745	Substances that form ions when in water, seawater influence
Total Dissolved Solids	ppm	1000	128 - 360	235	29 - 58	41	302 - 390	341	376	Naturally occurring minerals and metals
Sulfate	ppm	500	11 - 26	20	2 - 12	6	35 - 54	44	37	Naturally occurring minerals

OTHER WATER QUALITY PARAMETERS

Parameters	Units	Treated Surface Water		Purchased San Francisco Water		Blended Water		Desalinated Water	Major Sources
		Range	Average	Range	Average	Range	Average	Detected Level ⁽⁸⁾	
Alkalinity	ppm as CaCO ₃	70 - 110	86	24 - 140	68	144 - 186	168	144	Naturally occurring mineral
Boron ⁽¹⁴⁾	ppb	ND - 260	138	ND - 100	ND	360-520	453	570	Naturally occurring mineral
Calcium	ppm	12 - 26	18	5 - 11	7	39 - 56	46	30	Naturally occurring mineral
Hardness	ppm as CaCO ₃	55 - 107	83	10 - 36	21	163 - 209	182	144	Naturally occurring mineral
Magnesium	ppm	6 - 15	11	0.6 - 3	1.4	15 - 23	19	16	Naturally occurring mineral
pH	units	8.3 - 9	8.7	8.1 - 9.0	8.7	7.8 - 8.1	7.9	8.1	Naturally occurring mineral
Potassium	ppm	1.4 - 3.2	2.3	ND - 0.7	0.4	1.4 - 1.9	1.6	1.0	Naturally occurring mineral
Sodium	ppm	26 - 89	53	3.2 - 8.5	5.0	39 - 59	49	97	Naturally occurring mineral

(1) Refer to the "Distribution System Map" (back page) to determine the type of water you receive based on your location.

(2) 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 0.8 - 1.4 ppm, as required by State regulations.

(3) Combined Radium was reported as ND by the laboratory at a higher detection limit than the Detection Limit for Purposes of Reporting (DLR), due to analytical limitations. Combined Radium samples were collected by ACWD in 2002.

(4) Compliance for Combined Radium is based on 4 quarters of data. Only one quarter of data was available for the 2003 CCR report.

(5) Disinfectant residual in the distribution system consists of free chlorine and combined chlorine (chloramines).

(6) Compliance is based on a running annual average (RAA) of distribution system samples collected in 4 quarters. For disinfectant residual the annual average for 2003 is reported.

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

(8) Single sample collected for this location. The Newark Desalination Facility began operation on November 19, 2003.

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

(10) Turbidity is regulated for surface water because it can provide a medium for bacteria growth. Turbidity is measured in NTUs (nephelometric turbidity units).

(11) Treatment Technique performance standard: 0.3 NTU for filtered water in 95% of the measurements taken each month and shall not exceed 1.0 NTU at any time. The treated surface water met this standard 100% of the time.

(12) Treatment Technique performance standard: 5 NTU for unfiltered water

(13) Compliance based on 90th percentile values less than ALs during the annual sampling round.

(14) Unregulated Contaminant Monitoring Rule samples collected by ACWD in 2003.