Drinking Water Source Assessment

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 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.
- 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 usage of the water, 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, confirmed 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 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.

Frequently Asked Questions about Lead

Q. *Is there lead in my tap water?*

A. The water ACWD delivers to the Tri-City area contains no detectable lead. Our source waters contain no lead and no lead service lines are used in our service area. However, it is possible for lead to enter your tap water before you use it. Old lead-soldered copper pipes or brass fixtures within your home may leach trace amounts of lead into your water. Most brass faucets (even chrome-plated faucets are brass underneath) contain between 5% and 8% lead.

Q. *What can I do to reduce the leaching of lead from my plumbing fixtures?*

A. When replacing old fixtures, you should consider using "lead free" fixtures that are certified by the National Sanitation Foundation (NSF). To further reduce lead exposure from home plumbing and fixtures, use only cold water for cooking and drinking. Generally, you should allow the cold water tap to flush for one minute if the water has sat unused for several hours.

Q. *What has ACWD been doing to reduce my exposure to lead?*

A. 1) We instituted a corrosion control program in 1998.

2) We regularly sample for lead in the distribution system.

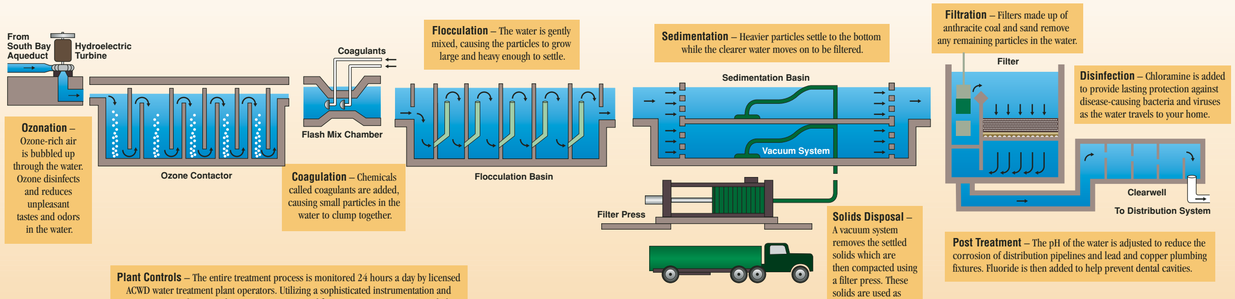
3) Although we have no control over the plumbing in your home, we sample a percentage of representative service area homes considered to be the most likely to have higher lead levels. Samples collected at-the-tap for lead in 2001, 2002, and 2003 were in compliance with current EPA and CDHS drinking water regulations.

Q. *How can I get more information about lead?*

A. Contact the ACWD laboratory at (510) 668-6520.

How Your Water is Purified

ACWD operates four treatment plants. Each one utilizes a unique treatment process to optimize purification of three unique water sources. The diagram below illustrates how surface water is purified at Water Treatment Plant 2.



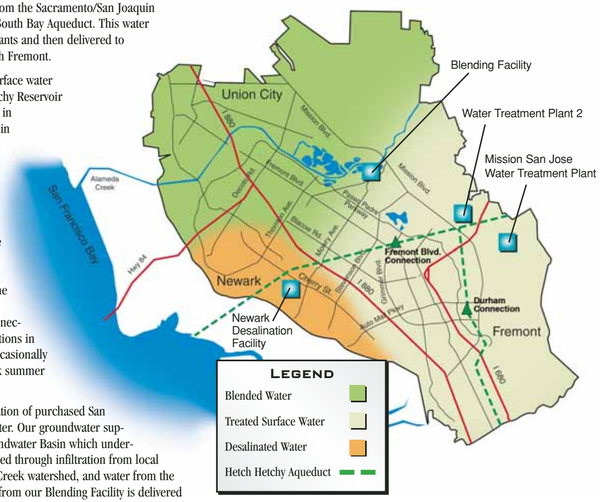
Where Our Water Comes From

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 Hetch Hetchy Aqueduct connections 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, 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 water produced by the NDF is 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.



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.html.

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 ou fale com alguém que entenda o que está escrito.

Mabalaga 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 :सका अनुवाद कराएं ।

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 사용하십시요.

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 بزبان انگلیسی بخوانید لطفاً از کسی که میتواند باری بگیرید تا مطالب را برای شما به فارسی ترجمه کند.

"هذا التقرير يحتوي على معلوماً ت مهمّة تتعلق بمياه الشفة (أو الشرب). ترجم التقرير أو تكلم مع شخص يستطيع أن يفهم التقرير."

ਇਸ ਰਿਪੋਰਟ ਵਿਚ ਤੁਹਾਡੇ ਪੀਣ ਵਾਲੇ ਪਾਣੀ ਬਾਰੇ ਬਹੁਤ ਜ਼ਰੂਰੀ ਸੂਚਨਾ ਹੈ। ਇਸ ਨੂੰ ਪੜ੍ਹੋ ਜਾਂ ਜੋ ਸਮਨ ਇਸ ਨੂੰ ਸਮਝ ਸਕਦੇ ਹਨ, ਉਸ ਕੋਲੋਂ ਸਮਝੋ।

ACWD ALAMEDA COUNTY WATER DISTRICT
43885 South Grimmer Blvd.
Fremont, CA 94538

PRESORTED STANDARD
U.S. POSTAGE
PAID
PERMIT NO. 2342
OAKLAND CA

Water Quality Report 2004

Dear ACWD Customer:

I am proud to announce that during 2004, ACWD met or surpassed all federal and state drinking water standards for public health and safety. In other words, your tap water is even safer than government regulations require. For more information on the quality of your drinking water, look inside this report where you will find:

Paul Piraino
General Manager

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).

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.

To help ensure the safety of your drinking water, ACWD performs thousands of water quality analyses each year.

Very few of the more than 180 substances we tested for were found in our water and 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.

Frequently Asked Questions about Chloramine

Q. ***What is Chloramine?***

A. Chloramine is a disinfectant that helps to kill harmful bacteria, viruses, and other pathogens in your water. It has been safely used throughout the world for decades and in the ACWD service area since 1983.

Q. ***Why does ACWD use chloramine rather than chlorine?***

A. Chloramine is a more stable disinfectant and lasts longer in the distribution system than chlorine. It also reduces the formation of disinfection byproducts which may pose long-term health effects. These qualities ensure that ACWD will meet current and anticipated federal drinking water standards.

Q. ***Will chloramine harm my health?***

A. No, it is safe for human consumption. However, both chlorine and chloramine can be harmful to fish, reptiles, and amphibians and must be removed from the water they live in. Dialysis patients need to take special precautions during treatment in regards to chloramine and should consult with their health care provider.

2004 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 2004. 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 for public health and safety. 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 2004 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 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) Range	Treated Surface Water (1) Average	Purchased San Francisco Water (1) Range	Purchased San Francisco Water (1) Average	Blended Water (1) Range	Blended Water (1) Average	Desalinated Water (1) Range	Desalinated Water (1) Average	Major Sources
Aluminum	ppm	1	(0.6)	ND		ND - 0.05	ND	ND		ND		Erosion of natural deposits
Barium	ppm	1	(2)	ND - 0.12	ND	ND		0.12 - 0.22	0.16	ND		Erosion of natural deposits
Fluoride (naturally-occurring) (2)	ppm	2	(1)	ND - 0.2	ND	ND - 0.2	ND	0.1 - 0.3	0.2	ND - 0.2	0.2	Erosion of natural deposits
Fluoride (Treated water) (2)	ppm	2	(1)	Average = 0.86 (Range 0.1 - 1.2) (3)								Water additive that promotes strong teeth
Combined Radium (4)	pCi/L	5	NA	1.2 - 1.6	1.3	ND - 1.2	ND	ND - 1.3	ND	ND(5)		Erosion of natural deposits
Bromate	ppb	10	(0)	Highest RAA (6) = ND (Range of individual detections: ND - 10.5 ppb)		NA		NA		NA		Disinfection by-product
Disinfectant Residual (7)	ppm	[4]	[4]	Annual Average (8) = 2.0 (Range of individual detections: 0.0 - 3.3)								Disinfectant residual
5 Haloacetic Acids (HAA5s) (9)	ppb	60	NA	Highest RAA (8) = 19 (Range of individual detections: ND - 57)								Disinfection by-products
Nitrate (as NO_3)	ppm	45	(45)	ND - 4.0	ND	ND		ND	ND	ND - 8.8	2.9	Runoff from fertilizer use, erosion of natural deposits
Total Trihalomethanes (TTHMs) (10)	ppb	80	NA	Highest RAA (8) = 41 (Range of individual detections: ND - 78)								Disinfection by-products
Turbidity (11)	NTU	TT = 0.3 (12)	—	0.02 - 0.11	0.05	NA	NA	Not subject to the turbidity monitoring requirement				Soil Runoff
		TT = 5.0 (13)	—	NA	NA	0.05 - 0.72	0.29					

Lead and Copper Sampling Program	Units	Action Level (AL) (14)	Public Health Goal	Range	90th Percentile Value	Number of Samples Collected	Number of Samples above AL	Typical Sources in Drinking Water
Copper (15)	ppm	1.3	0.17	ND - 1.10	0.94	64	0	Corrosion of household plumbing systems
Lead (15)	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 Range	Treated Surface Water Average	Purchased San Francisco Water Range	Purchased San Francisco Water Average	Blended Water Range	Blended Water Average	Desalinated Water Range	Desalinated Water Average	Major Sources
Aluminum	ppb	200	ND		ND - 56	ND	ND		ND		Erosion of natural deposits
Chloride	ppm	500	41 - 58	52	2 - 8	5	46 - 80	66	95 - 106	100	Runoff/leaching from natural deposits; seawater influence
Iron	ppb	300	ND		ND - 110	ND	ND		ND		Leaching from natural deposits; industrial wastes
Manganese	ppb	50	ND		ND		ND		ND - 36	ND	Leaching from natural deposits
Threshold Odor Number (TON)	TON	3	1	1	1	1	1	1	1	1	Naturally occurring organic materials
Specific conductance	µmhos / cm	1600	396 - 537	461	37 - 42	40	488 - 703	601	664 - 731	697	Substances that form ions when in water, seawater influence
Total Dissolved Solids	ppm	1000	221 - 286	247	24 - 32	29	277 - 401	340	341 - 392	366	Naturally occurring minerals and metals
Sulfate	ppm	500	20 - 33	27	0.8 - 1.1	0.9	38 - 50	45	32 - 42	37	Naturally occurring minerals

Other Water Quality Parameters

Parameters	Units	Treated Surface Water Range	Treated Surface Water Average	Purchased San Francisco Water Range	Purchased San Francisco Water Average	Blended Water Range	Blended Water Average	Desalinated Water Range	Desalinated Water Average	Major Sources
Alkalinity	ppm as $CaCO_3$	72 - 160	112	18 - 22	20	130 - 198	173	134-150	143	Naturally occurring minerals
Boron (16)	ppb	110 - 140	125	—	ND (17)	—	410 (17)	—	590 (17)	Naturally occurring mineral
Calcium	ppm	18 - 33	25	3 - 3	3	34 - 57	46	26-30	28	Naturally occurring mineral
Hardness	ppm as $CaCO_3$	79 - 139	109	4 - 9	6	176 - 210	191	107-137	120	Naturally occurring minerals
Magnesium	ppm	11 - 21	15	0.2 - 0.3	0.2	15 - 22	19	14-17	15	Naturally occurring mineral
pH	units	8.0 - 8.9	8.4	9.3 - 9.4	9.3	7.6 - 8.1	7.8	8.2-8.3	8.2	Naturally occurring minerals
Potassium	ppm	2.2 - 2.7	2.5	0.2 - 0.3	0.3	1.6 - 1.7	1.7	0.8-0.9	0.9	Naturally occurring mineral
Sodium	ppm	46 - 59	51	3.4 - 5.0	4.0	46 - 61	56	93-100	97	Naturally occurring mineral

(1) Refer to the "Distribution System Map" on page 6 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) ACWD recorded several low fluoride values during 2004 due to fluoride tank repairs and fluoride equipment testing.

(4) 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.

(5) First year compliance data for desalinated water was collected from the 4th quarter of 2003 through the third quarter of 2004.

(6) Compliance is based on quarterly running annual average (RAA) of treatment plant samples collected monthly. Range of individual detections: ND - 10.5 ppb

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

(8) Compliance is based on a running annual average (RAA) of distribution system samples collected in 4 quarters.

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

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

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

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

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

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

(15) Due to favorable sampling results, the CDHS approved reduced lead and copper monitoring (every 3 years). Results reported here were collected by ACWD in 2003, next sampling round is scheduled for 2006.

(16) Unregulated Contaminant Monitoring Rule samples collected by ACWD in 2004.

(17) Single sample collected from this location.