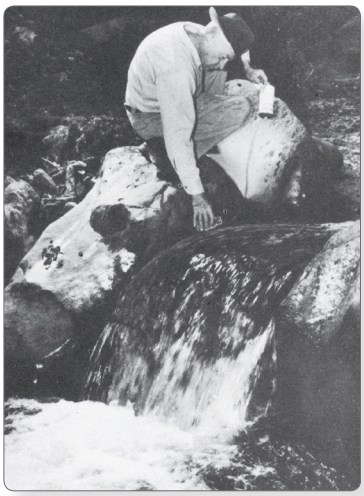
San Jose Water Company

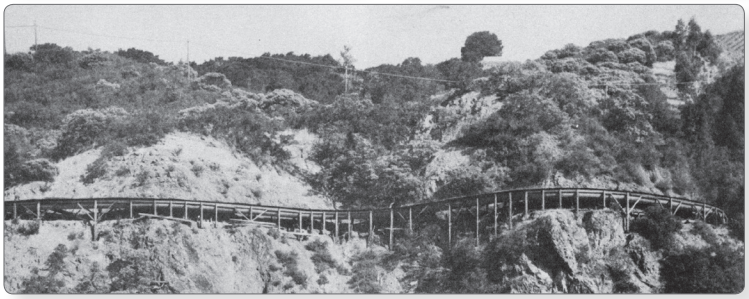
2014 ANNUAL WATER QUALITY REPORT

Proudly serving you since 1866

How the Drought Impacts Water Quality

As San Jose Water Company (SJWC) approaches its 150th anniversary of providing high quality water to its customers, California is in its fourth year of a drought. The changing water supplies available during the drought present new challenges to maintaining water quality and require the company to make adjustments in the operation of its water system. These adjustments include more frequent monitoring of the distribution system, mitigating disinfection byproducts, and boosting of disinfectant residuals where needed.





As a result of SJWC's participation in the Distribution Partnership for Safe Water Program, we are well prepared to respond. Our response includes the adoption of goals and the implementation of programs that improve overall system reliability and operational flexibility resulting in exceptional customer service.

To ensure safe disinfectant residuals, SJWC is going above and beyond what is required by collecting and analyzing over 800 samples monthly throughout its distribution system. This additional effort provides a timely and accurate representation of the disinfection residuals, nitrite, and ammonia in the water supply. It also allows SJWC to detect small changes in water quality that allow SJWC to carefully manage operations to ensure that water quality is continuously maintained. Other efforts undertaken by SJWC to maintain water quality include:

- Installing automated disinfectant boosting devices at remote sites in the distribution system
- Performing studies to optimize the cleaning methods and frequency of cleaning of its tanks
- Deploying a zero waste water main flushing system
- Enhancing the maintenance of its watershed while protecting the environment
- Employing a Trihalomethanes Reduction System at a key water supply reservoir

Together, these initiatives ensure that SJWC will continue to be an industry leader in managing and providing water that not only meets but also surpasses all water quality regulatory requirements.

As the drought continues to impact the traditional supplies of water available for treatment and distribution, customers may notice changes in the water that include higher mineral content and a more pronounced chlorine or metallic taste. While noticeable, these changes are aesthetic in nature and do not represent a health risk. The water remains safe for all uses and meets all Federal and State regulatory requirements.

SJWC remains committed to ensuring high quality water is delivered to its customers and will continue to pursue continuous improvements in the ways we manage this precious commodity.

Water Quality Guidance

Source Water Assessment

An assessment of the drinking water sources for SJWC's water system was completed in December 2002. SJWC's wells are considered most vulnerable to one or more of the following activities, which have not been associated with any contaminants detected in the water supply: dry cleaners, automobile gas stations and repair shops, and underground storage tanks. Some of SJWC's wells are also considered vulnerable to metal plating and finishing, photo processing/printing, electrical/electronics manufacturing, chemical/petroleum processing/storage, known contaminant plumes, and plastics/synthetics producers. SJWC's surface supplies are considered most vulnerable to low density septic systems. Imported surface water purchased from Santa Clara Valley Water District (SCVWD) is considered most vulnerable to a variety of land use practices, such as agricultural and urban runoff, recreational activities, livestock grazing, as well as residential and industrial development. In addition, local sources are vulnerable to potential contamination from commercial stables and historic mining practices. Although these activities exist in areas near one or more of SJWC's or SCVWD's sources, physical barriers, treatment systems, and monitoring programs are in place to ensure that water supplied to our customers is not adversely affected. Customers seeking additional information may view a copy of the assessment during normal business hours at SJWC's offices at 110 West Taylor Street, San Jose.

Special Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791. Additional information is available from the California Department of Public Health (CDPH) Division of Communicable Disease Control at (510) 540-2566 or the Santa Clara County Department of Environmental Health at (408) 918-3400.

Drinking Water Regulation

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at 1-800-426-4791. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban 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 chemical contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also 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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the California Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Turbidity

Turbidity is a measure of cloudiness in the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Nitrate

Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider. Nitrate levels in SJWC water sources are shown in the enclosed table. In 2014, SJWC did not detect nitrate at or above 45 mg/L in any sources.

Fluoride

For information on fluoride in your drinking water please visit our website at www.sjwater.com

2014 SJWC Annual Water Quality Report

SJWC tests your water supplies for over 200 possible contaminants. Only those contaminants that were detected in any of our water sources appear in this table. Primary standards relate to public health, while secondary standards relate to aesthetic qualities such as taste, odor, and color. CDPH allows us to monitor for some contaminants less than once per year because the concentrations do not change frequently. Some of the data reported, although representative, are more than one year old. Data for radionuclides, microbiological, turbidity, secondary standards, and inorganic and organic chemicals are all from testing performed in 2014.

Primary Standards — Mandatory Health-Related Standards

PARAMETER	UNITS	MCL	PHG or (MCLG)	GROUNDWATER		IMPORTED SURFACE WATER		MOUNTAIN SURFACE WATER		TYPICAL SOURCES*
				AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	
INORGANIC MATERIALS										
Aluminum	ppm	1	0.6	ND	ND - 0.16	ND	ND - 0.85	ND	ND - 0.17	1,4
Barium	ppm	1	2	0.10	ND - 0.30	ND	ND	ND	ND	8, 10
Chromium	ppb	50	(100)	0.35	ND - 11	ND	ND	ND	ND	1
Fluoride	ppm	2	1	ND	ND - 0.17	ND	ND - 0.10	ND	ND	1
Hexavalent Chromium	ppb	10	0.02	1.92	ND - 3.1	ND	ND	ND	ND	8, 10
Nitrate (as NO_3)	ppm	45	45	13	2.3 - 31	ND	ND - 5.0	2.0	ND - 7.0	1, 2
RADIONUCLIDES										
Gross Alpha Activity	pCi/L	15	15	1.7	ND - 6.1	ND	ND	ND	ND - 0.09	1
Combined Radium	pCi/L	5	0	0.24	ND - 0.94	ND	ND	ND	ND	1
VOLATILE ORGANIC CHEMICALS										
1,1- Dichlorethylene	ppb	6	10	ND	ND -0.76	ND	ND	ND	ND	7
1,1,1-Trichlorethane	ppb	200	1000	ND	ND - 1.6	ND	ND	ND	ND	8
CLARITY						LEVEL FOUND		LEVEL FOUND		
Turbidity	NTU	TT = 1 NTU	none	NA		0.21		0.22		11
	NTU	TT= 95% of samples ≤ 0.3 NTU	none	NA		100%		100%		
MICROBIOLOGICAL				SJWC DISTRIBUTION SYSTEM						
				RANGE		HIGHEST LEVEL DETECTED				
Coliform Bacteria	%	> 5% positive of monthly samples	(0)	0 - 0.27%		0.27%				10
				UNTREATED IMPORTED SURFACE WATER						
				AVERAGE		RANGE				
Cryptosporidium	L	TT	(0)		ND		ND - 0.1			11
LEAD AND COPPER		AL	PHG	SJWC AT THE TAP SAMPLING (2014)						
				90th PERCENTILE LEVEL		# OF SITES ABOVE AL				
Lead	ppb	15	0.2	4.5		0 of 51				1, 14
Copper	ppm	1.3	0.3	0.46		0 of 51				1, 14
DISINFECTION BYPRODUCTS		MCL	MCLG	COMPLIANCE LEVEL		RANGE				
Total Trihalomethanes	ppb	80	none	62.3		1.4 - 100.6				9
Haloacetic Acids	ppb	60	none	44.6		0.0 - 66.1				9
DISINFECTION		MRDL	MRDLG	SJWC DISTRIBUTION SYSTEM RUNNING ANNUAL AVERAGE						
Total Chlorine	ppm	4.0 as Cl_2	4 as Cl_2	0.84 ppm						

Secondary Standards — Aesthetic Standards

PARAMETER	UNITS	MCL	PHG or MCLG	GROUNDWATER		IMPORTED SURFACE WATER		MOUNTAIN SURFACE WATER		TYPICAL SOURCES*
				AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE**	RANGE	
Color	Units	15	none	ND	ND - 5	ND	ND	ND	ND	11,12
Odor—Threshold	TON	3	none	ND	ND - 2	1	1 - 2	ND	ND	12
Hardness(as $CaCO_3$)	ppm	none	none	307	172 - 506	141	109 -178	162	162 - 162	1
Chloride	ppm	500	none	47	21 - 81	100	69 - 167	32	32 - 32	3, 6
Iron	ppb	300	none	ND	ND - 230	ND	ND	ND	ND	3, 5
Manganese	ppb	50	none	ND	ND - 33	ND	ND	ND	ND	3
Sodium	ppm	none	none	33	15-73	53	ND - 121	25	25 - 25	1
Sulfate	ppm	500	none	57	34 -86	63	50.7- 112	47	47 - 47	3, 5
Total Dissolved Solids	ppm	1000	none	460	270 - 780	387	312 - 540	300	300 - 300	3
Conductivity	umho/cm	1600	none	703	460 - 1000	694	552 - 964	500	500 - 500	6, 13

***Typical Sources of Chemical Constituents**

1. Erosion of natural deposits 2. Runoff and leaching from fertilizer use 3. Runoff and leaching of natural deposits 4. Residue from some surface water treatment processes 5. Industrial waste 6. Seawater influence 7. Discharge from industrial chemical factories 8. Discharge from metal degreasing sites and other factories 9. By-product of drinking water disinfection 10. Naturally present in the environment 11. Soil erosion and stream sediments 12. Naturally occurring organic materials 13. Substances that form ions when in water 14. Internal corrosion of household plumbing systems

**Single measurement performed in 2014

Unregulated Contaminant Monitoring Rule 3

PARAMETER	UNITS	GROUNDWATER		IMPORTED SURFACE WATER		MOUNTAIN SURFACE WATER	
		AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE
1,4-Dioxane	ppb	ND	ND - 0.12	ND	ND - 2.0	ND	ND
Chlorodifluoromethane	ppb	ND	ND - 0.12	ND	ND	ND	ND
Chromium VI	ppb	1.1	0.37 - 1.7	ND	ND	0.46	0.38 - 0.54
Molybdenum	ppb	1.0	1.0 - 1.0	ND	ND - 2.0	ND	ND
Strontium	ppb	432	300 - 480	ND	ND	205	150 - 280
Vanadium	ppb	2.4	2.0 - 3.3	ND	ND - 4.0	1.5	1.4 - 1.6

Unregulated contaminants do not have a drinking water standard set by USEPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard.

Important Definitions

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.

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 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 Residual Disinfectant Level (MRDL): The level of a disinfectant added for water treatment that may not be exceeded at consumer's tap.

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.

Primary Drinking Water Standard (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

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

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

One part per million (ppm): is the same as one milligram per liter (mg/L). One ppm corresponds to a single penny in $10,000 or one minute in two years.

One part per billion (ppb): is the same as one microgram per liter (ug/L). One ppb corresponds to a single penny in $10,000,000 or one minute in two thousand years.

Detection Limit for Purposes of Reporting (DLR): The lowest level of a constituent that the Department of Public Health requires to be reported.

Nephelometric Turbidity Units (NTU): This is a measure of the cloudiness of the water.

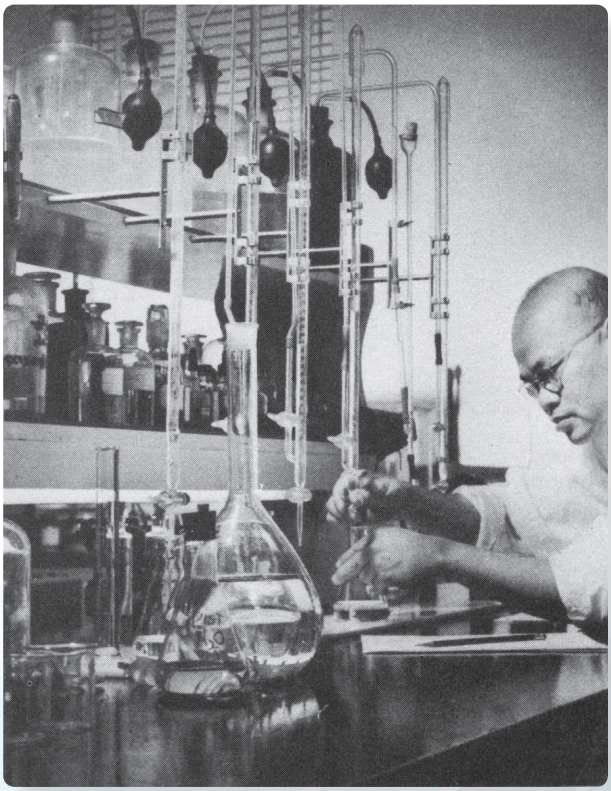
Not Detected (ND): If a constituent is not measured at or above a DLR, it is reported as ND.

Not Analyzed (NA): Source designated non-vulnerable or testing not required.

TON: Threshold Odor Number, a measure of odor.

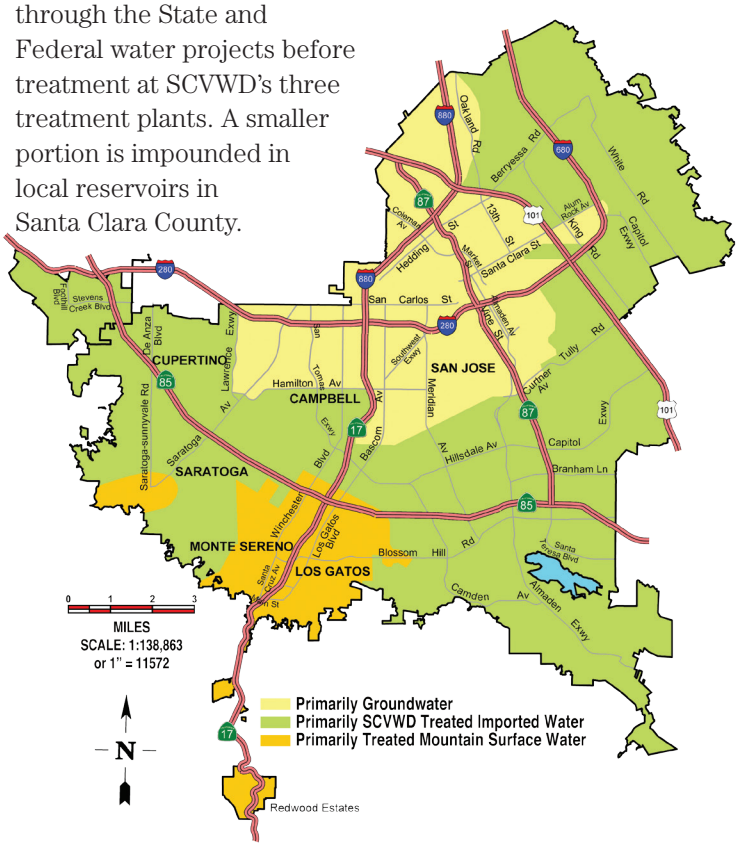
umho/cm: micromho per centimeter, a measure of electrical conductivity.

pCi/L: picocuries per liter, a measure of radioactivity



SJWC Service Area and Water Supply Sources

SJWC provides water from three major sources. The first source is groundwater, which is pumped from over 100 wells that draw water from the Santa Clara Groundwater Subbasin. The second source is local mountain surface water, which is collected in our watershed in the Santa Cruz Mountains and treated at our two treatment plants. The third source, imported surface water, is provided by the Santa Clara Valley Water District (SCVWD), our wholesale supplier. A majority of imported water originates as Sierra snowmelt and travels through the State and Federal water projects before treatment at SCVWD's three treatment plants. A smaller portion is impounded in local reservoirs in Santa Clara County.



Reminder for Dialysis Patients and Aquarium Owners

Chloramine and chlorine may be present in the water provided by SJWC. These chemicals are used to protect public health by destroying disease-causing organisms. Except for a slight chlorinous taste or odor, these disinfectants will not cause any problems for the general public. However, home dialysis patients and aquarium owners must take special precautions before the water can be used in kidney dialysis machines or aquariums. Please consult your doctor or dialysis technician to be sure your home equipment is adequate and proper tests are being performed every time it is used. Before filling an aquarium or fish pond, the disinfectant must be removed. Your local tropical fish store can help determine the best water treatment for your fish.

Your drinking water is continually tested to ensure compliance with state and federal standards for quality and safety. This annual report summarizes the results of more than 17,000 water quality tests conducted throughout the year. If you have any questions about your water quality, service, or the information contained in this report, please call us at (408) 279-7900 during normal business hours (Monday through Friday between 8:00 a.m. and 5:30 p.m.). Or, you may contact the USEPA Safe Drinking Water Hotline at 1-800-426-4791 for additional public information about the SafeDrinking Water Act or USEPA's drinking water regulatory programs.

To Learn More about the Quality of Your Water

Drinking Water Information on the Internet

Detailed information about specific drinking water topics is available on the Internet. Visit our web site or any other of those listed below to find out more about water treatment, quality, and current regulations.

San Jose Water Company: www.sjwater.com

Santa Clara Valley Water District: www.valleywater.org

American Water Works Association: www.awwa.org

SWRCB Division of Drinking Water:

http://www.waterboards.ca.gov/drinking_water/programs/index.shtml

United States Environmental Protection Agency:

http://water.epa.gov/drink/

This brochure provides a snapshot of last year's water quality data for SJWC. Included are details about where your water comes from and how your water quality compares to State standards. As you can see, in 2014, as in years past, your tap water met all USEPA and State primary drinking water health standards.

Se le está enviando este informe en conformidad con la Ley de Agua Potable Segura. Se alienta a los propietarios, negocios y escuelas a compartir este informe con los usuarios a los que no se cobra el agua en sus centros. Llame a nuestra oficina para obtener más copias sin costo.

Báo cáo này được gửi đến quý vị chiếu theo quy định của Đạo Luật Nước Uống An Toàn. Những người cho thuê nhà, chủ doanh nghiệp và nhà trường được khuyến khích chia sẻ bản báo cáo này với những người sử dụng nước tại chỗ nhưng không nhận hóa đơn. Quý vị có thể xin thêm miễn phí bản sao của báo cáo này bằng cách gọi văn phòng chúng tôi.

這份報告根據《安全飲用水法案》的規定寄發給您。請房東、企業業主以及學校當局將此報告內容與其所在地點不會收到水費帳單的自來水用戶分享。如需更多的免費報告副本，請致電本辦公室。

This report is being sent to you in compliance with the Safe Drinking Water Act. Landlords, businesses and schools are encouraged to share this report with nonbilled water users at their locations. Additional copies are available free of charge by calling our office.

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Se Habla Español
At your service since 1866