



**2013 ANNUAL
WATER QUALITY REPORT**

A Passion for Water Quality!

Will the current drought affect the nature of the water I receive from San Jose Water Company (SJWC)? The simple answer is yes. Many of our customers will notice aesthetic changes in the water we deliver as SJWC makes operational adjustments to meet customers' needs with available water sources.

SJWC customers receive water from three different sources including treated surface water from the Santa Clara Valley Water District, groundwater pumped from the Santa Clara Groundwater Subbasin, and local precipitation captured in the Santa Cruz Mountains and treated by SJWC. As the drought impacts the availability of treated surface water and local precipitation, additional groundwater is used to make up the difference. Customers in areas that typically do not receive groundwater may notice changes in the water characteristics coming from their taps. One of the most common signs is the appearance of mineral deposits or spots on dishes and household fixtures and appliances. The groundwater may also exhibit a more pronounced chlorine and/or metallic taste and odor due to changes in disinfectant residuals and mineral composition. These changes are aesthetic in nature and do not represent a health risk. The water remains safe for all potable uses.

SJWC continues to review its operations and treatment processes to yield increased efficiencies and enhancements in water quality. To assist in this continuous improvement process, SJWC became



a member of the Partnership for Safe Water program in 2011. This program requires participating utilities to assess and measure their performance in 85 operational categories, identify areas where improvements can be made, and complete the improvements.

Participation in the Partnership for Safe Water program allows the company to attain a higher level of performance surpassing the minimum standards prescribed by the regulatory requirements. While SJWC's water quality meets all Federal and State regulatory requirements, the program provides additional goals that build on those requirements as well as overall customer service and system reliability. For instance, the Partnership for Safe Water sets numerical targets and measurement requirements for chlorine residuals and distribution system water pressures that are more stringent than those specified by regulations.

After completing a rigorous and comprehensive assessment of its operations, SJWC was awarded the Distribution Program Directors Award in 2014. The company is only the fourth organization to receive this prestigious recognition.

SJWC remains committed to making continuous improvements, with customers and water quality as focal points, to ensure high quality and reliable water service.

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 2013, 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

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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 2013.

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 CHEMICALS											
Aluminum	ppm	1	0.6	ND	ND - 0.15	ND	ND - 0.76	ND	ND - 0.15	1,4	
Chromium	ppb	50	100	ND	ND - 29	ND	ND	ND	ND	1	
Fluoride	ppm	2	1	0.15	ND - 0.21	ND	ND - 0.2	0.13	0.10 - 0.16	1	
Nitrate (as NO ₃)	ppm	45	45	14	ND - 33	ND	ND - 3.7	ND	ND	1, 2	
RADIONUCLIDES											
Gross Alpha Activity	pCi/L	15	15	1.15	ND - 2.9	ND	ND	ND	ND	1	
Combined Radium	pCi/L	5	0	0.40	ND - 1.90	ND	ND	ND	ND	1	
VOLATILE ORGANIC CHEMICALS											
1,1-Dichloroethylene	ppb	6	10	ND	ND - 0.9	ND	ND	ND	ND	7	
1,1,1-Trichloroethane	ppb	200	1000	ND	ND - 4.2	ND	ND	ND	ND	8	
CLARITY											
Turbidity	NTU	TT = 1 NTU	none		NA	LEVEL FOUND		LEVEL FOUND		11	
	NTU	TT = 95% of samples ≤ 0.3 NTU	none		NA	0.12		0.24			
						100%		100%			
MICROBIOLOGICAL											
					SJWC DISTRIBUTION SYSTEM						
					RANGE		HIGHEST LEVEL DETECTED				
Coliform Bacteria	%	> 5% of monthly samples positive	0		0 - 0.65%		0.65%			10	
LEAD AND COPPER											
		AL	PHG		SJWC AT THE TAP SAMPLING (2011)						
					90TH PERCENTILE LEVEL		# OF SITES ABOVE AL				
Lead	ppb	15	0.2		ND		0 of 51			1, 14	
Copper	ppm	1.3	0.3		ND		0 of 51			1, 14	
DISINFECTION BYPRODUCTS											
		MCL	PHG or MCLG		COMPLIANCE LEVEL		RANGE				
Total Trihalomethanes	ppb	80	none		63.7		12.5 - 79.1			9	
Haloacetic Acids	ppb	60	none		48.0		5.6 - 55.9			9	
DISINFECTION											
		MRDL	MRDLG		SJWC DISTRIBUTION SYSTEM RUNNING ANNUAL AVERAGE						
Total Chlorine	ppm	4.0 as Cl ₂	4 as Cl ₂		1.09 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	
Odor—Threshold	TON	3	none	ND	ND	1	1 - 1	ND	ND	12
Hardness(as CaCO ₃)	ppm	NA	none	291	183 - 440	118	77-153	141	84 - 198	1
Chloride	ppm	500	none	51	32 - 140	83	17-96	15	14 - 17	3, 6
Iron	ppb	300	none	ND	ND - 280	ND	ND	ND	ND	3, 5
Manganese	ppb	50	none	ND	ND - 46	ND	ND	ND	ND	3
Sodium	ppm	NA	none	25	17 - 42	67	24 - 73	17	13 - 20	1
Sulfate	ppm	500	none	52	29 - 83	48	34 - 84	39	33 - 48	3, 5
Total Dissolved Solids	ppm	1000	none	430	290 - 650	307	184 - 358	250	220 - 280	3
Conductivity	umho/cm	1600	none	600	350-980	489	337 - 593	400	350 - 450	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

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(continued)

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	0.15	0.13 - 0.16
Molybdenum	ppb	1.0	1.0 - 1.0	ND	ND - 2.0	ND	ND
Strontium	ppb	432	300 - 480	ND	ND	150	150 - 150
Vanadium	ppb	2.4	2.0 - 3.3	ND	ND - 4.0	1.5	1.3 - 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



