



2012 ANNUAL  
WATER QUALITY REPORT

*Proudly serving you since 1866*

## Take Back the Tap!

San Jose Water Company (SJWC) is pleased to deliver its first electronic Consumer Confidence Report (CCR). Late last year the US Environmental Protection Agency issued guidelines to authorize the electronic delivery of the CCR. SJWC adopted the guidelines because they are more environmentally friendly and over time will provide for a more engaging and effective tool to provide you important information about your water quality. Please note that you may request a printed copy of the CCR by calling (408) 279-7900.

This year's CCR theme, "Take Back the Tap" focuses on the healthy and environmentally friendly alternative that tap water provides to bottled water and sugary drinks. The theme is designed to highlight a resource that is available to all and can have significant cost and health benefits over purchased drinks. Tap water costs on average 2,000 times less than bottled water, reduces the risk of obesity when substituted for drinks containing sugar, and improves overall health. It is a local resource that provides for public health protection, firefighting capability, and the economic health of the communities where we live, work, and play.

SJWC's main goal is to deliver the best water possible to our customers at a reasonable cost. This passion for quality and service is exemplified by many of our daily activities that are designed to ensure that every drop of the water we deliver to you is safe and of high quality. These activities include not only making necessary



investments to modernize and replace infrastructure but also the continuous monitoring of the water quality throughout SJWC's water distribution system. Over 400 samples are taken every month and are analyzed for Coliform bacteria (a sanitary quality indicator organism), chlorine residuals, and other analytes as required by regulatory or operational needs. In addition to this routine monitoring, SJWC has embarked on several water quality initiatives. These initiatives include an American Water Works Association (AWWA) sponsored self-assessment of the distribution system, an AWWA Research Foundation study of naturally occurring low level hexavalent chromium in groundwater, and research studies to balance the use of chlorine as a disinfectant while minimizing the formation of disinfection by-products.

Tap water is often taken for granted. It is always there when needed 24/7, 365 days of the year. At less than a penny per gallon, it is not only affordable but also one of the best deals around. Making sure that our customers have safe drinking water available when they need it is what SJWC is all about. Our dedicated team of professionals works every day to ensure that our customers don't have to think about where their next glass of water will come from or whether or not that drink is safe. Every drop of water that is delivered to you has been treated and tested to ensure that it meets or surpasses all drinking water regulations and is safe and refreshing to drink.

**Take back the tap and to your health!**

## 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 (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 2012, 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](http://www.sjwater.com)

## 2012 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 below, 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 2012.

### Primary Standards — Mandatory Health-Related Standards

Parameter	Units	MCL	PHG or MCLG	Groundwater		Imported Surface		Mountain Surface Water		Typical Sources**	
				Average	Range	Average	Range	Average	Range		
<b>Inorganic Chemicals</b>											
Aluminum	ppm	1	0.6	0.08	ND - 0.20	ND	ND - 0.08	ND	ND - 0.11	1,4	
Barium	ppm	1	2	0.14	ND - 0.22	ND	ND	ND	ND	1	
Fluoride	ppm	2	1	0.17	ND - 0.56	ND	ND - 0.1	0.17	0.15 - 0.21	1	
Nitrate (as NO3)	ppm	45	45	16	ND - 33	ND	ND - 3.7	ND	ND	1, 2	
<b>Radionuclides</b>											
Gross Alpha Activity	pCi/L	15	15	ND	ND - 5.82	ND	ND	ND	ND	1	
Combined Radium	pCi/L	5	0	ND	ND - 1.0	ND	ND	ND	ND	1	
<b>Volatile Organic</b>											
1,1- Dichlorethylene	ppb	6	10	ND	ND - 5.2	ND	ND	ND	ND	7	
1,1,1-Trichlorethane	ppb	200	1000	ND	ND - 3.3	ND	ND	ND	ND	8	
<b>Clarity</b>											
Turbidity	NTU	TT = 1 NTU	none	NA	NA	Level Found		Level Found		11	
	NTU	TT= 95% of samples ≤ 0.3 NTU	none	NA	NA	100%		100%			
<b>Microbiological</b>											
				SJWC Distribution System							
				Range			Highest Level Detected				
Coliform Bacteria	%	> 5% of monthly samples positive	0	0 - 0.69%			0.69%				10
<b>Lead and Copper</b>											
		AL	PHG	SJWC at the tap Sampling (2011)							
				90 <sup>th</sup> 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
<b>Disinfection Byproducts</b>											
		MCL	PHG or MCLG	Compliance Level			Range				
Total Trihalomethanes	ppb	80	none	70.7			ND - 80				9
Haloacetic Acids	ppb	60	none	51.4			ND - 79.8				9
<b>Disinfection</b>											
		MRDL	MRDLG	SJWC Distribution System Running Annual Average							
Total Chlorine	ppm	4.0 as Cl <sub>2</sub>	4 as Cl <sub>2</sub>	1.1 ppm							

## 2012 SJWC Annual Water Quality Report (continued)

### 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 <sub>3</sub> )	ppm	none	none	277	192 - 364	103	67 - 127	181	169 - 193	1
Chloride	ppm	500	none	46	ND - 68	78	54 - 85	20	18 - 22	3, 6
Iron	ppb	300	none	120	ND - 450*	ND	ND	ND	ND	3, 5
Manganese	ppb	50	none	ND	ND - 29	ND	ND	ND	ND	3
Sodium	ppm	none	none	28	15 - 60	51	42 - 62	22	20 - 24	1
Sulfate	ppm	500	none	46	4 - 68	47	24 - 66	36	34 - 39	3, 5
Total Dissolved Solids	ppm	1000	none	422	290 - 720	279	184 - 364	220	210 - 230	3
Conductivity	umho/cm	1600	none	642	ND - 770	489	337 - 583	392	358 - 430	6, 13

\* Single sample concentration. MCL compliance based on 4 quarter average.

#### \*\*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

### 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.

