

Drinking Water Quality Report

January 2013 – December 2013

Dated: June 2014

2013 Drinking Water Quality Report

The City of Stockton is pleased to present its annual Drinking Water Quality Report to inform you about the quality of your drinking water delivered each and every day. We are dedicated to providing you with the highest quality water available while meeting all State and Federal drinking water standards. This Report includes a detailed water quality summary, including monitoring and testing, as well as information regarding the steps we take to protect your health and safety.

While we are required to provide this information by law, the City has also included additional information we think you will find useful and informative.

The Science of Water

All 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 United States Environmental Protection Agency (USEPA) Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap and bottled) 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 human activity. Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, 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 chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

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

The Stockton City Council serves as the governing board for the City of Stockton Water System. They meet twice per month on Tuesday night at 5:30 p.m. at 425 N. El Dorado Street.

About Your Water



To meet the needs of our customers, the City of Stockton uses a combination of the following sources:

Treated water purchased from the Stockton East Water District (SEWD) which is imported from the **New Melones (Stanislaus River) and New Hogan (Calaveras River) Reservoirs**

Water diverted from the **Sacramento San Joaquin Delta** and treated at the City's new Delta Water Treatment Plant (DWTP)

Water from the **Mokelumne River** purchased from Woodbridge Irrigation District and treated at the City's new Delta Water Treatment Plant

Local **groundwater** from wells owned and operated by the City

Did You Know?



In 2013, the City of Stockton delivered **11.9 billion gallons** of water to over **47,000 service connections** serving an estimated **population** of over **171,000**.



Drinking Water Safety and Your Health

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

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as those 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 (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are also available from the Safe Drinking Water Hotline (1-800-426-4791).

Lead in Water: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water comes primarily from materials and components associated with service lines and home plumbing. The water delivered by the City of Stockton to your meter meets all water quality standards, but your home plumbing can affect water quality. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking and cooking. If you are concerned about lead in your water, you may wish to have your water tested.

Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at www.epa.gov/safewater/lead.

Drinking Water Source Assessment & Protection Program (DWSAPP)

Drinking Water Source Assessments for the Water System were completed in 2001 and 2012. The sources are considered most vulnerable to the following activities associated with contaminants detected in the water supply: *urban stormwater; septic tanks and sewage spills; dredging; mining; construction; metal plating; electronics manufacturing; National Pollution Discharge Elimination System (NPDES) permitted discharges; dairy waste and agricultural operations.* The sources are considered most vulnerable to the following activities not associated with any detected contaminants: *illegal activities/dumping; recreation; lagoons; leaking underground storage tanks; vehicle fueling and maintenance and chemical/petroleum/plastics processing and storage.*

You may request assessment summaries by contacting Tahir Mansoor (CDPH) at (209) 948-7696.

Water is a Precious Resource. Use Wisely!

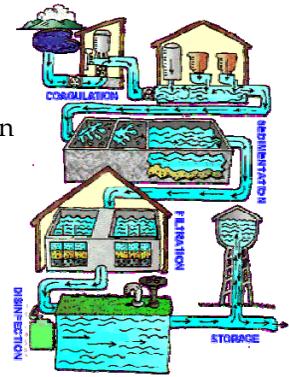


The City of Stockton is committed to conserving water, an important resource with limited supply. The Water Conservation Program works year-round to increase water conservation and raise awareness about programs and services available to customers within the City's water service area. Residential customers may be eligible for in-home water use surveys and businesses may be eligible for high efficiency toilets. For more information, call 1-866-STOKWTR (1-866-786-5987) or visit

www.stocktongov.com/mud.

How to Read the Water Quality Table

The City of Stockton tests your water for several regulated and unregulated contaminants. This table lists only those contaminants that were detected. In the table, water quality test results are divided into four main sections: **"Primary Drinking Water Standards," "Secondary Drinking Water Standards," "Unregulated Compounds,"** and **"Other Constituents."** Primary standards protect public health by limiting levels of certain constituents in drinking water. Secondary standards are set for substances that could affect the water's taste, odor or appearance. Unregulated compounds and other constituents are listed for your information. Data in the table represents sampling from 2011 through 2013, unless otherwise noted.



Drinking Water Quality Table

Primary Drinking Water Standards				Groundwater		Surface Water				Meets Regulation?	Source of Constituent
Constituent	Unit	MCL	PHG (MCLG)	Range	Average	DWTP Average		SEWD Average			
Aluminum	mg/L	1	0.6	< 0.05 – 0.11	<0.05	<0.05		<0.05		Yes	Erosion of natural deposits
Arsenic ⁽¹⁾	µg/L	10	0.004	2.9 – 7.4	4.8	< 2.0		< 2.0		Yes	Erosion of natural deposits; runoff from orchards, and electronics production wastes
Barium	mg/L	1	2	< 0.10 – 0.27	0.17	< 0.10		< 0.10		Yes	Erosion of natural deposits
Fluoride	mg/L	2.0	1	< 0.10 – 0.11	< 0.10	< 0.10		< 0.10		Yes	Erosion of natural deposits
Nickel	µg/L	100	12	< 10 – 32	< 10	< 10		< 10		Yes	Erosion of natural deposits; discharge from metal factories
Nitrate (as NO ₃) ⁽²⁾	mg/L	45	45	3.7 – 27	13	< 2.0		< 2.0		Yes	Runoff/leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium	µg/L	50	30	< 5.0 – 5.9	< 5.0	< 5.0		< 5.0		Yes	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories.
Alpha Activity, Gross ⁽³⁾	pCi/L	15 ⁽⁴⁾	(0)	< 3.0 – 7.33	3.27	NR		< 3.0		Yes	Erosion of natural deposits
Radium 228 ⁽⁵⁾	pCi/L	⁽⁶⁾	0.019	< 1.0 – 1.20	< 1.0	NR		NR		N/A	Erosion of natural deposits
Uranium ⁽³⁾	pCi/L	20 ⁽⁴⁾	0.43	2.02 – 7.58	5.05	NR		NR		Yes	Erosion of natural deposits
	Unit	MCL	PHG (MCLG)			Highest Level	Lowest Monthly % ⁽⁷⁾	Highest Level	Lowest Monthly % ⁽⁸⁾	Meets Regulation?	Source of Constituent
Turbidity	NTU	TT	N/A			0.08	100	0.14	100	Yes	Soil runoff
	Unit	MCL (MRDL)	MCLG (MRDL)	Distribution System						Meets Regulation?	Source of Constituent
				Range		Average					
Total Coliform Bacteria	positive samples	5% ⁽⁹⁾	0	0 – 0.7		0.1				Yes	Naturally present in the environment
Chlorine as Cl ₂	mg/L	(4.0)	(4.0)	0.07 – 1.51		0.65				Yes	Drinking water disinfectant added for treatment
Total Trihalomethanes (TTHM)	µg/L	80	N/A	<0.5 – 130 ⁽¹⁰⁾		95.5				No	By-product of drinking water disinfection
Haloacetic Acids 5 (HAA5)	µg/L	60	N/A	< 2.0 – 96.3 ⁽¹⁰⁾		42.9				Yes	By-product of drinking water disinfection
	Unit	Action Level (AL)	PHG	Detected at 90 th Percentile		Samples Exceeding AL				Meets Regulation?	Source of Constituent
Copper ⁽¹¹⁾	mg/L	1.3	0.3	0.070		0 of 50				Yes	Internal corrosion of household plumbing systems
Lead ⁽¹¹⁾	µg/L	15	0.2	< 5		0 of 50				Yes	Internal corrosion of household plumbing systems

(1) While your drinking water meets federal and state standards for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The USEPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

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- (2) 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.
- (3) The compliance cycle for monitoring this constituent can vary from three to nine years; some data may be from before 2011.
- (4) Compliance may be based on average values for four quarters.
- (5) Radium 228 testing was conducted for initial monitoring required by new regulations.
- (6) The MCL is based on Combined Radium (Radium 226 + Radium 228). Radium 226 and Radium 228 do not have individual MCLs. The MCL for Combined Radium is 5 pCi/L. Radium 226 was not detected.
- (7) For surface water systems, the Treatment Technique requires that each month the turbidity level of the filtered water for membrane filtration facilities is less than or equal to 0.1 NTU in 95% of the measurements and shall not exceed 1.0 NTU at any time. Turbidity is a measure of the cloudiness of the water. It is monitored as a good indicator of the effectiveness of the filtration system.
- (8) For surface water systems, the Treatment Technique requires that each month the turbidity level of the filtered water is less than or equal to 0.3 NTU in 95% of the measurements and shall not exceed 1.0 NTU at any time. Turbidity is a measure of the cloudiness of the water. It is monitored as a good indicator of the effectiveness of the filtration system.
- (9) Presence of coliform bacteria in no more than 5% of monthly samples.
- (10) Compliance is based on the quarterly Locational Running Annual Average (LRAA). The highest level reported in the range is the result of an individual sample. TTHM LRAA exceedances were as follows: (4046 Pine Lake Circle, 96 ug/l; 5376 Feather River Dr., 90 ug/l; 750 French Camp Rd., 82 ug/l; 1050 Diamond St., 82 ug/l). Following this violation, the City provided notification to all customers in a letter dated March 15, 2013 that some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney or central nervous system problems and may have an increased risk of getting cancer. Since that date the water system has been in compliance with the disinfection by-product regulation.
- (11) Lead and Copper are required to be monitored every three years. This data is from 2012.

Key



< = less than
mg/L = milligrams
per liter
µg/L = micrograms
per liter
µS/cm = micro-siemens per
centimeter
ng/L = nanograms per liter
pCi/L = picocuries per liter
NTU = nephelometric
turbidity unit
N/A = not applicable
NR = not required

Secondary Drinking Water Standards			Groundwater		Surface Water				Source of Constituent
Constituent	Unit	MCL	Range	Average	DWTP		SEWD		
					Range	Average	Range	Average	
Aluminum	µg/L	200	< 50 – 110	< 50		< 50		< 50	Erosion of natural deposits
Chloride	mg/L	500	7.0 – 120	36		4.8		2	Runoff/leaching from natural deposits; seawater influence
Manganese	µg/L	50	< 20 – 24	< 20		< 20		< 20	Leaching from natural deposits
Odor	units	3	ALL <1	< 1	< 1 – 2	< 1		4	Naturally-occurring organic materials
Specific Conductance	µS/cm	1,600	301 – 840	526	57 – 443	223	45 – 97	55	Substances that form ions when in water; seawater influence
Sulfate	mg/L	500	13 – 62	33		1.8		7	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	mg/L	1,000	210 – 580	349	36 – 230	125	72 – 170	83	Runoff/leaching from natural deposits
Unregulated Compounds			Groundwater		Surface Water				Source of Constituent
Constituent	Unit		Range	Average	DWTP		SEWD		
					Average	Average	Average	Average	
Total Hardness (as CaCO ₃) ⁽¹⁾	mg/L		120 – 350	226		15		23	
Boron	µg/L		< 100 – 170	< 100		< 100		< 100	
Sodium	mg/L		15 – 32	20		5.4		6	
Vanadium	µg/L		18 – 33	25		< 3.0		< 3.0	
Other Constituents			Groundwater		Surface Water				Source of Constituent
Constituent	Unit		Range	Average	DWTP		SEWD		
					Average	Average	Average	Average	
Total Alkalinity	mg/L		110 – 210	167		19		30	
Calcium	mg/L		25 – 81	51		4		6	
Magnesium	mg/L		13 – 35	24		1.3		2	
Potassium	mg/L		3.6 – 6.9	5.1		< 1		1	

(1) Conversion: Hardness (grains per gallon) = Hardness as CaCO₃ (mg/L) multiplied by 0.0584.

For additional questions regarding this report, please contact: Robert Granberg (209) 937-8779 or robert.granberg@stocktongov.com
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