

Drinking Water Quality Report

January 2021 – December 2021

Dated: May 2022

2021 Drinking Water Quality Report

The City of Stockton has prepared its annual Drinking Water Quality Report to inform our customers and the community about the quality of drinking water delivered every day to the City of Stockton water service customers. We provide the highest quality water available, while meeting all State and Federal drinking water standards. This report includes a detailed water quality summary, monitoring and testing results, as well as the steps we take to protect health and safety. In addition to providing information required by law, the report includes useful and informative data.



The Science of Water

Our area watersheds and groundwater wells provide raw water supplies to the City. As water flows over the land or through the groundwater aquifer, naturally occurring minerals can dissolve in it and, in some cases, contaminant materials can also be picked up from animal or human activities. Some contaminants that may be present in raw water can include:

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

Inorganic contaminants such as mineral salts and metals 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 may come from a variety of sources, such as agriculture, urban stormwater runoff and residential use.

Organic chemical contaminants may come from synthetic and volatile chemicals that are byproducts of industrial processes and petroleum production or from gas stations, vehicles, urban stormwater runoff, agricultural application, and septic systems.

Radioactive contaminants may come from naturally occurring materials or result from oil and gas production and mining activities.

About Your Water



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

Water from the **Sacramento-San Joaquin Delta** and **Mokelumne River** treated at the City's Delta Water Treatment Plant

Water from the **Stanislaus River** via New Melones Reservoir and the **Calaveras River** via New Hogan Reservoir which is treated and delivered by Stockton East Water District

and

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

Did You Know?



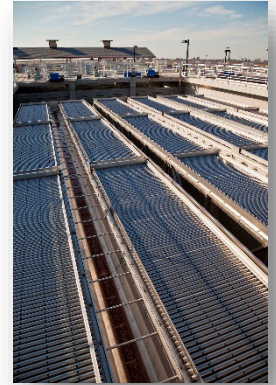
In 2021, the City of Stockton delivered **8 billion gallons** of treated water to approximately **49,500** service connections serving an estimated population of over **184,000**.



California State Water Resources Control Board¹ (State Board) regulations establish water quality limits for contaminants in drinking water that provide protection for public health. Drinking water and some bottled water can contain small amounts of some contaminant compounds. The presence of a compound does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

Drinking Water Safety and Your Health

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health. For additional bottled water information, visit the California Department of Public Health website: <https://www.cdph.ca.gov/Programs/CEH/DFDCS/Pages/FDBPrograms/FoodSafetyProgram/Water.aspx>



Some people may be more susceptible to contaminants in drinking water than the general population. Immuno-compromised persons such as cancer patients undergoing chemotherapy, individuals who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk. These people should seek drinking water advice from their health care providers.

U.S. EPA 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 (1-800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water derives primarily from materials and components associated with service lines and home plumbing. The City of Stockton is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. 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 2 minutes before using water for drinking or cooking. If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose such as watering plants. If you are concerned about lead in your water, you may wish to have it tested. Information about lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/lead>.

Drinking Water Source Assessment & Protection Program

Drinking Water Source Assessments for the City's water system were completed in 2001 and 2012. The water sources were considered most vulnerable to activities which were associated with contaminants found in the water supply, including urban stormwater, septic tanks and sewage spills, mining, construction, metal plating, electronics manufacturing, National Pollution Discharge Elimination System permitted discharges, dairy waste, and agricultural operations. The water sources were considered most vulnerable to the following activities, which were not associated with contaminants detected in the water supply: illegal activities/dumping, recreation, leaking underground storage tanks, vehicle fueling and maintenance and chemical/petroleum/plastics processing and storage. You may request assessment summaries by contacting Tahir Mansoor at the State Water Resources Control Board at (209) 948-3879.

How to Read the Water Quality Table

The City of Stockton tests your drinking water for several regulated and unregulated contaminants. The table below lists only those contaminants that were detected. In the table, water quality test results are divided into three main sections: **1) Primary Drinking Water Standards**, **2) Secondary Drinking Water Standards** and **3) Unregulated Compounds**. Primary standards protect public health by limiting levels of certain constituents in drinking water. Secondary standards are set for substances that could affect drinking water taste, odor, or clarity. Unregulated substances are listed for your information. Data in the table represents sampling from 2021, unless otherwise noted.

¹ In a previous rulemaking, "Department" was inadvertently changed to "State Board." The mandatory language will be updated as follows in a future rulemaking, and water systems may use this language in their CCRs in the interim: "The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health." Additional information on bottled water is available on the California Department of Public Health website (<https://www.cdph.ca.gov/Programs/CEH/DFDCS/Pages/FDBPrograms/FoodSafetyProgram/Water.aspx>).

Drinking Water Quality Table

Primary Drinking Water Standards				Groundwater		Surface Water		Meets Regulation?	Source of Constituent
Constituent	Units	Primary MCL	PHG (MCLG)	Range	Average	DWTP Average	SEWD Average		
Aluminum	mg/L	1	0.6	<50	<50	<50	<50	Yes	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic	µg/L	10	0.004	<2.0 – 6.7	4.3	<2	<2	Yes	Erosion of natural deposits; runoff from orchards, and glass and electronics production wastes
Barium	mg/L	1	2	<0.1 – 0.25	0.16	<0.1	<0.1	Yes	Discharges of oil and drilling wastes and metal refineries; erosion of natural deposits
Chromium, Total	ug/L	10	50	<10-10	1.1	<10	<10	Yes	Discharge from electroplating facilities; erosion of natural deposits
Fluoride	mg/L	2.0	1	<0.1	<0.1	<0.1	<0.1	Yes	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate (as N)	mg/L	10	10	0.75- 4.9	3.04	<0.4	<0.4	Yes	Runoff/leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Alpha Activity, Gross ⁽¹⁾	pCi/L	15 ⁽²⁾	(0)	1.50 – 7.11	4.16	NR	NR	N/A	Erosion of natural deposits
Radium 228 ^(1,3)	pCi/L	⁽⁴⁾	0.019	< 1.0 – 1.71	0.29	NR	NR	N/A	Erosion of natural deposits
Uranium ⁽¹⁾	pCi/L	20 ⁽²⁾	0.43	1.03 – 5.80	3.47	NR	NR	N/A	Erosion of natural deposits
	Units	MCL	PHG (MCLG)	Highest Level	Lowest Monthly % ⁽⁵⁾	Highest Level	Lowest Monthly % ⁽⁶⁾	Meets Regulation?	Source of Constituent
Turbidity	NTU	TT	N/A	0.90	99.8	0.32	14.0	Yes	Soil runoff
				Distribution System				Meets Regulation?	Source of Constituent
	Units	MCL (MRDL)	MCLG (MRDLG)	Range	Average				
Total Coliform Bacteria	% positive samples	5% ⁽⁷⁾	0	0 – 1.38	0.12		Y	Naturally present in the environment	
Chlorine as Cl ₂	mg/L	(4.0)	(4.0)	0.04 – 7.93	1.13		Y	Drinking water disinfectant added for treatment	
Total Trihalomethanes (TTHM) ⁽⁸⁾	µg/L	80	N/A	0 – 123.85	37.60		Y	By-product of drinking water disinfection	
Haloacetic Acids 5 (HAA5) ⁽⁸⁾	µg/L	60	N/A	0 – 87.60	21.93		Y	By-product of drinking water disinfection	
	Units	Action Level (AL)	PHG	Level Detected at the 90 th percentile	Samples exceeding the AL		Meets Regulation?	Source of Constituent	
Copper ⁽⁹⁾	mg/L	1.3	0.3	0.000	0 of 50		Yes	Internal corrosion of household plumbing systems	
Lead ⁽⁹⁾	µg/L	15	0.2	0.130	0 of 50		Yes	Internal corrosion of household plumbing systems	

- (1) The compliance cycle for monitoring this constituent can vary from three to nine years; some data may be from before 2010.
- (2) Compliance may be based on average values for four quarters.
- (3) Radium 228 testing was conducted for initial monitoring required by new regulations.
- (4) 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.

- (5) 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.
- (6) 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.
- (7) Presence of coliform bacteria in no more than 5% of monthly samples.
- (8) Compliance is based on the quarterly Running Annual Average. The highest level reported in the range is the result of an individual sample.
- (9) Lead and Copper are required to be monitored every three years. This data is from 2020.

Secondary Drinking Water Standards			Groundwater		Surface Water				Source of Constituent
			Range	Average	DWTP		SEWD		
Constituent	Units	MCL	Range	Average	Range	Average	Range	Average	
Chloride	mg/L	500	5.9 - 95	27.8	-	22	-	3	Runoff/leaching from natural deposits; seawater influence
Manganese	µg/L	50	0 - 34	6.3	<20 -	<20	-	<20	Leaching from natural deposits
Odor	units	3	0 - 2	0.22	<1.0 - 1	<1.0	<1.0 -	<1.0	Naturally occurring organic materials
Specific Conductance	µS/cm	1,600	260 - 730	482	64 - 628	397	80 - 263	137	Substances that form ions when in water; seawater influence
Sulfate	mg/L	500	13 - 49	30	-	11	-	10.1	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	mg/L	1,000	160 - 500	314	34 - 370	220	50 - 160	89	Runoff/leaching from natural deposits
Unregulated Compounds			Groundwater		Surface Water				
Constituent	Units		Range	Average	DWTP Average		SEWD Average		
Total Hardness (as CaCO ₃) ⁽¹⁾	mg/L		112 - 299	216	57		23.2		
Boron	µg/L		<100 - 130	<100	<100		<100		
Sodium	mg/L		4.9 - 36	18.8	21		6		
Vanadium	µg/L		16 - 27	23	<3.0		<3.0		
Other Compounds			Groundwater		Surface Water				
Constituent	Units		Range	Average	DWTP Average		SEWD Average		
Total Alkalinity	mg/L		110 - 210	170	48		30		
Calcium	mg/L		23 - 68	48.9	17		6		
Magnesium	mg/L		13 - 31	22.6	3.8		2		
Potassium	mg/L		4.3 - 17	6.1	1.8		<1.0		

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

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 – Testing not required

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Unregulated Contaminant Monitoring Rule (UCMR3) Contaminants Monitored in 2015 ^{(1), (2)}		Groundwater		Surface Water - DWTP	
Constituent	Units	Range	Average	Range	Average
Chlorate	µg/L	< 20 – 310	31	94 – 440	223
Chromium, Total	µg/L	< 0.20 – 6.3	4.4	< 0.20 – 3.2	0.85
Hexavalent Chromium	µg/L	0.049 – 6.6	4.4	< 0.030 – 0.061	0.043
Molybdenum	µg/L	< 1.0 – 1.2	< 1.0	< 1.0 – 1.6	1.0
Strontium	µg/L	160 – 590	452	48 – 260	167
Vanadium	µg/L	2.9 – 29	23	0.60 – 2.8	1.7

Unregulated Contaminant Monitoring Rule (UCMR4) Contaminants Monitored in 2019 ^{(1), (3)}									
Constituent	Units	Groundwater		Surface Water - DWTP		Distribution System		DWTP Sources	
		Range	Average	Range	Average	Range	Average	Range	Average
Manganese	µg/L	< 0.40 – 77	12	1.6 – 15	6.1				
HAA-6	µg/L					<2.0 – 34.0	11.5		
HAA-9	µg/L					2.8 – 79.3	39.5		
Bromide	µg/L							< 20 – 150	37
TOC	µg/L							1500 – 5300	2375

FOOTNOTES

- (1) Once every five years, the U.S. Environmental Protection Agency (EPA) issues a list of *unregulated* contaminants to be monitored by public water systems. The UCMR provides the EPA and other interested parties with scientifically valid data on the occurrence of certain contaminants in drinking water. An MCL for these contaminants listed above does not exist. The UCMR program examines what is in the drinking water, but additional health information is needed to know whether these contaminants pose a health risk. Further information on UCMR3 can be found at <https://www.epa.gov/dwucmr/fact-sheets-about-third-unregulated-contaminant-monitoring-rule-ucmr-3>, or contact the Safe Drinking Water Hotline (1-800-426-4791).
- (2) Of the 30 unregulated contaminants tested for in UCMR3, only 6 were detected in the drinking water produced in 2015.
- (3) Of the 30 unregulated contaminants tested for in UCMR4, only one chemical analyte was detected. Within the HAA-6 and HAA-9 groups, 9 of the 30 analytes were detected. No cyanotoxins were detected in the drinking water produced in 2019.

Definitions

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

(MCL) – Maximum Contaminant Level: 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.

(MCLG) – Maximum Contaminant Level Goal: 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.

(MRDL) – Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

(MRDLG) – Maximum Residual Disinfectant Level Goal: 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.

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

(PHG) – Public Health Goal: 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.

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

For additional questions regarding this Report, please contact: Eric Houston, Chief Plant Operator at (209) 937-7455 or eric.houston@stocktonca.gov

For additional paper copies, please call (209) 937-7031 • To view electronically, visit www.stocktongov.com/files/ccr.pdf



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. Residential customers may be eligible for free water use surveys. For more information, call 1-866-STOKWTR (1-866-786-5987) or visit www.stocktongov.com/mud.