

2020 Drinking Water Quality Report Update

Board of Public Utilities Meeting

June 17, 2021

Tony Llamas, Water Quality Supervisor



OUR FUTURE IN EVERY DRÖP

Compliance with the Safe Drinking Water Act (SDWA)

Federal Rules – Public drinking water quality:

- Total Coliform Rule
- Disinfectants/Disinfection By-Products Rule
- Lead and Copper Rule
- Groundwater Rule

State Regulations - Cross Connection Control

Annual Water Quality Report provides:

- Water system information
- Testing Information
- Definitions
- How to read Section
- Water Quality Results
- Water Saving Tips
- Rebuild Updates



Water Quality Report Distribution

- Press Democrat Ads
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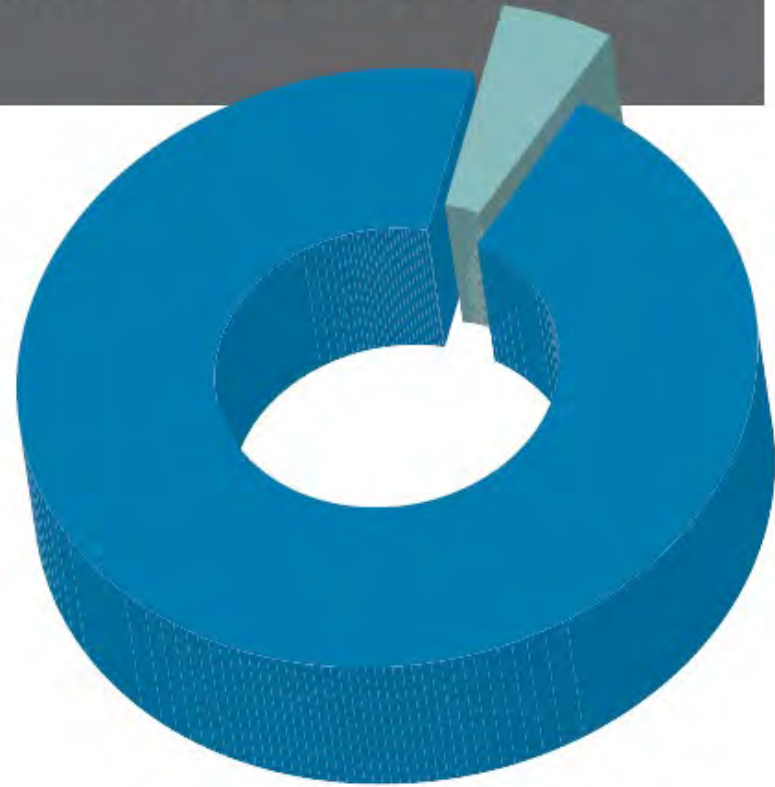
OUR FUTURE IN EVERY DRÖP

Water Supply Portfolio

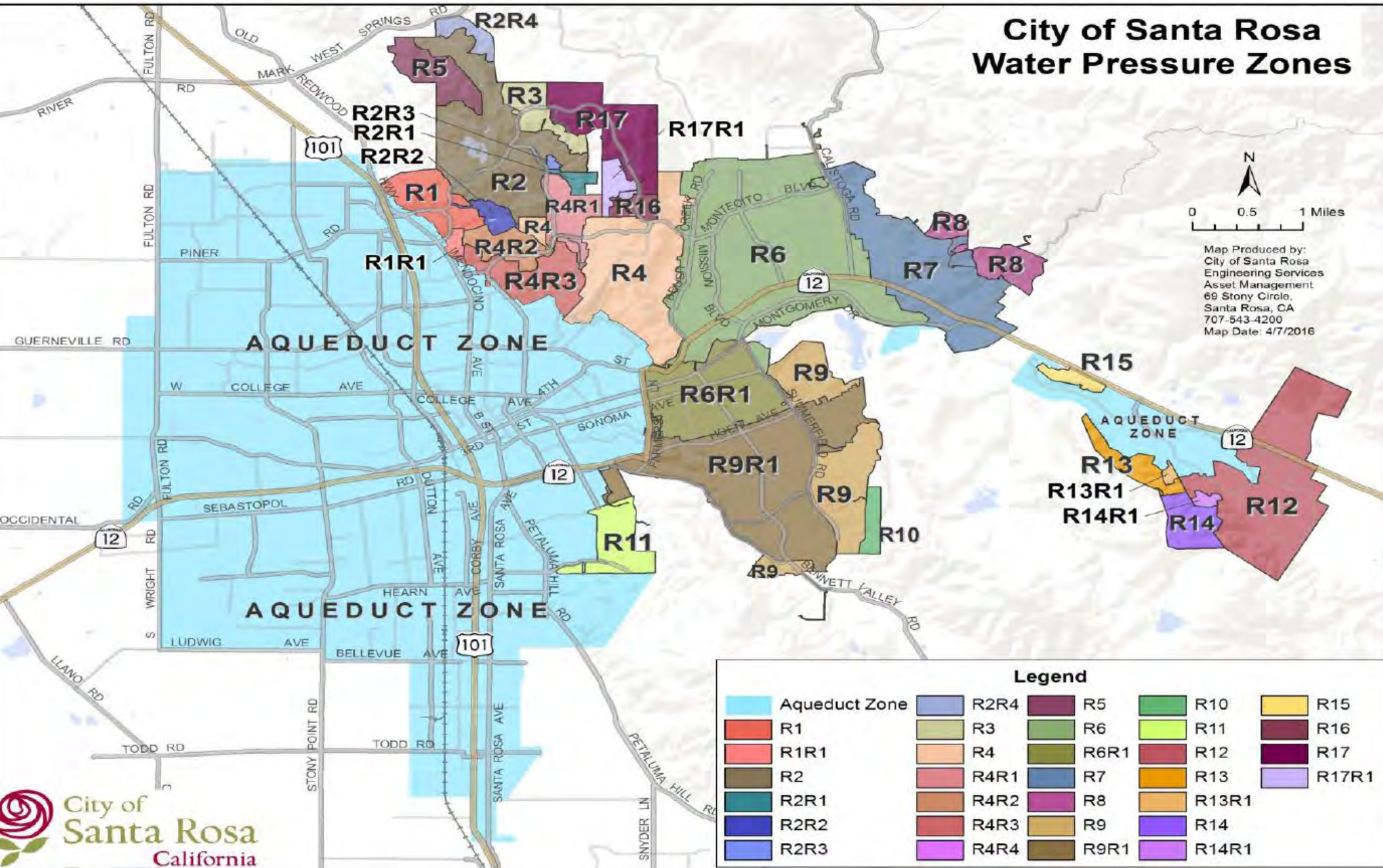
As a Santa Rosa Water customer you are connected to Santa Rosa's public water system. The water supplied to homes and businesses is a combination of surface water from the Russian River and local groundwater.

95% Water Agency
(Russian river)

5% Groundwater

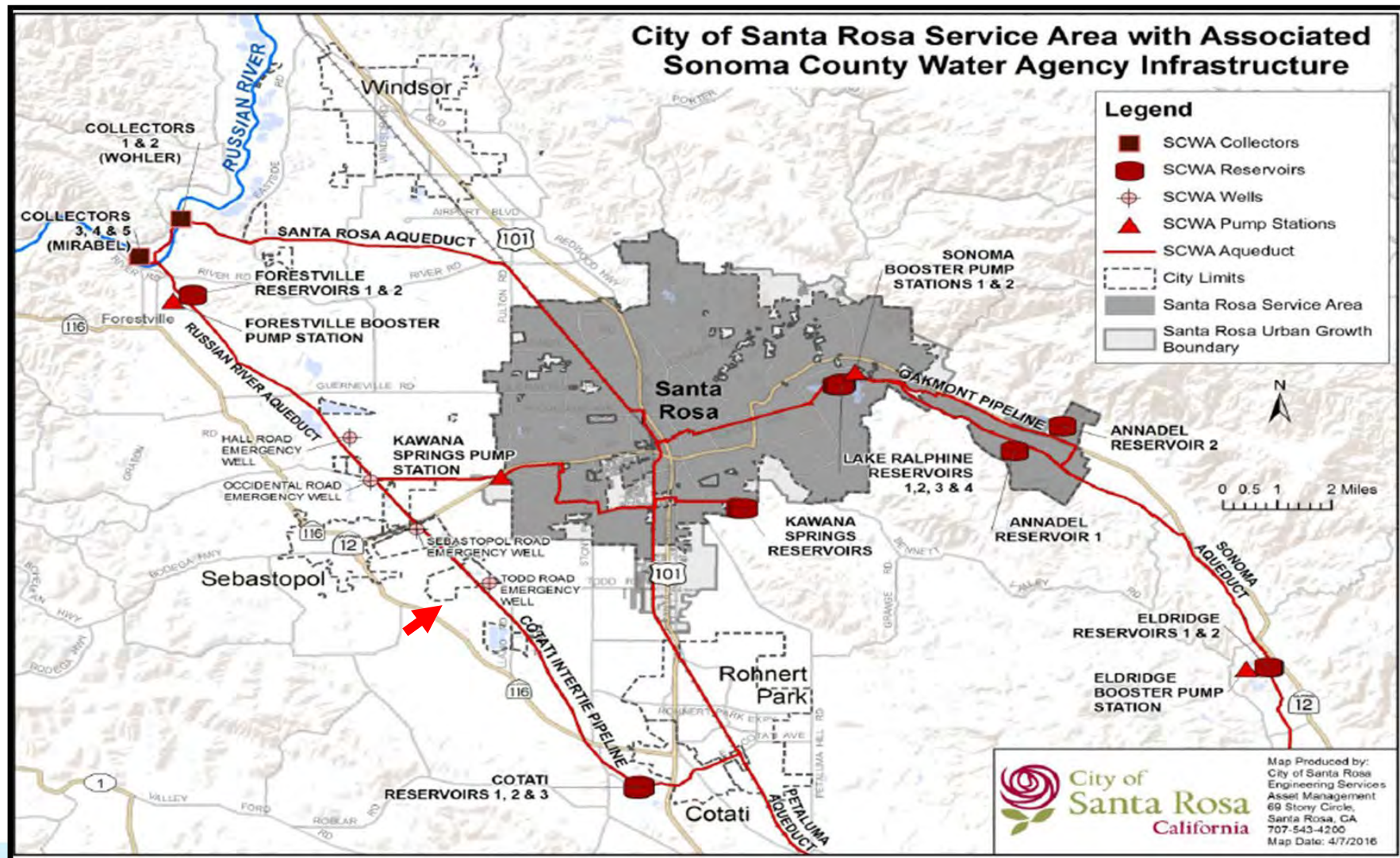


City of Santa Rosa Water Pressure Zones



Sonoma Water Transmission Lines

90 miles of pipelines from 12 to 54 inches



Field Sampling covers all areas of our water system



Farmers Lane Well - Water Treatment Plant Samples



OUR FUTURE IN EVERY DROP

Sonoma County Water Agency - Caissons 1 thru 6 - 2020 Water Quality Report

CLARITY OF WATER FROM GROUNDWATER SOURCES	MCL	Units	Sample Frequency	Caisson 1	Caisson 2	Caisson 3	Caisson 4	Caisson 5	Caisson 6
Turbidity ⁽¹⁾	5 ⁽¹⁾	NTU	continuous	average 0.035 range (0.013 - 2.0)	average 0.031 range (0.014 - 2.0)	average 0.031 range (0.017 - 2.0)	average 0.031 range (0.013 - 2.0)	average 0.039 range (0.025 - 2.0)	average 0.031 range (0.021 - 2.0)

	MCL	Units	# Samples	Distribution System Monitoring for 2020
MICROBIOLOGICAL - Coliform Bacteria	< 2 positive samples per month	coliforms/100ml	527	
DISINFECTANT - Total Chlorine Residual	> 95% per month	detectable residual	561	Detectable residual in 100% of samples taken
Total Trihalomethanes ⁽²⁾ - Tank Samples	0.080	mg/L	72	average = 0.0105 mg/L range = (0.0052 mg/L - 0.0188 mg/L)

VOLATILE ORGANIC COMPOUNDS	Units	STATE MCL	DLR	PHG { MCLG }	Caisson 1 15-Sep-20	Caisson 2 15-Sep-20	Caisson 3 16-Sep-20	Caisson 4 16-Sep-20	Caisson 5 16-Sep-20	Caisson 6 15-Sep-20
Section 64444 - Table A										
Benzene	mg/L	0.001	0.0005	0.00015	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	mg/L	0.0005	0.0005	0.0001	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene (o-DCB)	mg/L	0.6	0.0005	0.6	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene (p-DCB)	mg/L	0.005	0.0005	0.006	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane (1,1-DCA)	mg/L	0.005	0.0005	0.003	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane (1,2-DCA)	mg/L	0.0005	0.0005	0.0004	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene (1,1-DCE)	mg/L	0.006	0.0005	0.01	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene (c-1,2-DCE)	mg/L	0.006	0.0005	0.013	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene (t-1,2-DCE)	mg/L	0.01	0.0005	0.05	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene Chloride)	mg/L	0.005	0.0005	0.004	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	mg/L	0.005	0.0005	0.0005	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane (Cis & Trans)	mg/L	0.0005	0.0005	0.0002	ND	ND	ND	ND	ND	ND
Ethylbenzene	mg/L	0.3	0.0005	0.3	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether (MTBE) ⁽⁴⁾	mg/L	0.013	0.003	0.013	ND	ND	ND	ND	ND	ND
Monochlorobenzene (Chlorobenzene)	mg/L	0.07	0.0005	0.07	ND	ND	ND	ND	ND	ND
Styrene	mg/L	0.1	0.0005	0.0005	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	mg/L	0.001	0.0005	0.0001	ND	ND	ND	ND	ND	ND
Tetrachloroethylene (PCE)	mg/L	0.005	0.0005	0.00006	ND	ND	ND	ND	ND	ND
Toluene	mg/L	0.15	0.0005	0.15	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	mg/L	0.005	0.0005	0.005	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane (1,1,1-TCA)	mg/L	0.2	0.0005	1.0	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane (1,1,2-TCA)	mg/L	0.005	0.0005	0.0003	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	mg/L	0.005	0.0005	0.0017	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane (Freon 11)	mg/L	0.15	0.005	1.3	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	mg/L	1.2	0.01	4	ND	ND	ND	ND	ND	ND
Vinyl Chloride (VC)	mg/L	0.0005	0.0005	0.00005	ND	ND	ND	ND	ND	ND
Xylenes (m,p, & o)	mg/L	1.75	0.0005	1.8	ND	ND	ND	ND	ND	ND

⁽¹⁾ Turbidity: **Annual average** is the mean of the monthly average values, weighted by hours of pump operation each month.

Range refers to the minimum and maximum Turbidity readings recorded by the online Turbidimeters at each site.

⁽²⁾ Total Trihalomethanes: 40 CFR Section 141.12 - is the sum of the concentrations of Bromodichloromethane, Dibromochloromethane, Bromoform, and Chloroform.

⁽³⁾ Secondary Standard.

⁽⁴⁾ Methyl tert-butyl ether (MTBE) is listed in both the Primary (Organic Chemicals - VOCs) and Secondary Standards.

2020 Water Quality Sampling Results

TABLE OF DETECTED CHEMICALS OR CONSTITUENTS IN 2020

				SONOMA WATER ¹		SANTA ROSA ²			
Substance (Parameter)	Public Health Goal (PHG)	DGR	Maximum Contaminant Level	Range Detected	Reporting Value	Range Detected	Reporting Value	Major Source in Drinking Water	
PRIMARY STANDARDS: Detected Regulated Contaminants with Primary MCLs or MCLGs									
INORGANIC CONTAMINANTS									
Fluoride (ppm) ¹	1	0.1	2.0	ND	ND	0.19-0.22	0.2	Erosion of natural deposits	
Nitrate (as N) (ppm)	10	0.4	10	ND	ND	ND	ND	Runoff/leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits	
DISTRIBUTION SYSTEM DETECTIONS 2020									
MICROBIOLOGICAL CONTAMINANTS									
Total Coliform Bacteria from Santa Rosa Distribution System	0		5% of monthly samples	NA	NA	0%	0%	Naturally present in the environment	
Total Trihalomethanes (ppm)	NS		80	NA	NA	20.5-28.6	25.5	By-product of drinking water chlorination	
Halocetic Acids (ppm)	NS		60	NA	NA	3.9-11.1	7.5	By-product of drinking water chlorination	
Disinfectant-Free Chlorine (CL ₂) Residual (ppm)	MROLC as CL ₂ 4.0		MROLC as CL ₂ 4.0	NA	NA	0.08-1.98	1.17	Disinfectant to control microbes	
pH (measured prior to pH adjustment)	NS		NS	7.25-7.57	7.4	7.5-8.5	8.0	Sodium Hydroxide addition	
Residual Chlorine (ppm)	0.15	0.5	1	ND	ND	ND	ND	Disinfection from plastics, dyes and nylon factories; leaching from gas storage tanks and landfills	
HEAVY METALS									
Copper (ppm)	0.3	0.05	1.3 (ALL)	<0.05	<0.05	0.011-0.171	0.105*	Internal corrosion of household plumbing; erosion of natural deposits	
Lead (ppm)	0.2	5	15 (ALL)	<5.0	<5.0	0.2-5.3	1.6*		
CLAR SAMPLING RESULTS									
	# of sites exceeding action level = 0		# of sites exceeding action level = 0		# of samples collected = 50		# of schools sampled = 0		
SECONDARY STANDARDS: Aesthetic Standards Established by the State Water Resources Control Board's Division of Drinking Water									
There are no adverse health effects from exceeding the secondary (aesthetic) standards.									
REGULATED CONTAMINANTS WITH SECONDARY MCLs									
Threshold Odor Number (TON) at 60°C	NS	1	3	<1.0	<1.0	ND ⁴	ND	Naturally occurring organic materials	
Chloride (ppm)	NS		500	5.1-5.4	5.2	17.6-73.8 ⁵	28.7	Rain-attaching from natural deposits	
Sulfate (ppm)	NS	0.5	500	11-13	11.7	ND-1.3 ⁶	0.55	Rain-attaching from natural deposits	
Specific Conductance (microhm/cm)	NS		1600	230-260	240	440-520 ⁶	480	Substances that leave ions when in water	
Total Dissolved Solids (ppm)	NS		1000	120-150	133	340-360 ⁶	350	Rain-attaching from natural deposits	
Color (units)	NS		15	4.0-9.0	5.0	ND ⁴	ND	Naturally occurring organic materials	
Manganese (ppm)	NS	20	50	<20	<20	1.0-7.2	3.8	Rain-attaching from natural deposits	
MINERAL CONSTITUENTS									
Sodium (ppm)	NS		NS	7.5-8.1	8.3	51.1-53.5 ⁵	52.3	Sodium refers to the salt present in water. It is naturally occurring.	
Total Hardness CaCO ₃ (ppm)	NS		NS	101-123	111	140-143 ⁵	141.5	Erosion of natural deposits	
Total Alkalinity CaCO ₃ (ppm)	NS		NS	85-110	100	220-230 ⁵	225	Erosion of natural deposits	
Calcium (ppm)	NS		NS	20-24	22	26.9-28.2 ⁵	27.5	Erosion of natural deposits	
Total Hardness 222 (ppm) ⁴	NS	100	NS	82.4-114	103	441-530 ⁵	480	Found in the soil throughout the U.S.	
Temperature °C (°F)	NS		NS	NA	NA	8.0 (46)-28 (82)	10 (50)	Water temp. in Distribution System	
UNREGULATED SUBSTANCES: EPA and the Division of Drinking Water determine where contaminants occur and if regulation is required.									
Disinfection By-Products (DBPs)	NS		NS			ND-2.85	1.2	By-product of drinking water chlorination	
Halocetic Acids (ppm)	NS		NS			ND-3.6	1.6	By-product of drinking water chlorination	
Residual Chlorine (ppm)	NS		NS			ND	ND	Naturally occurring chemical found in surface and groundwater	
* 0.05 mg per carboy detected									
Santa Rosa's drinking water meets or exceeds all State and Federal drinking water health standards. Your water is tested weekly and the water system is carefully managed to be dependable and safe.									
SACTY.ORG/WATERQUALITYREPORTS JUNE 2020									

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² ND: Not Detected

Questions?

