2020 CONSUMER CONFIDENCE REPORT

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A NEW WAY OF LIFE

CITY OF SOLVANG 1644 OAK STREET SOLVANG, CA 93463 (805) 688-5575
https://www.cityofsolvang.com/ccr2020

2020 Consumer Confidence Report

Water System Name: **CITY OF SOLVANG** Report Date: JUNE 2020

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2020 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.

Type of water source(s) in use: Ground Water (Solvang Wells & ID#1 Wells) & Surface Water (CCWA)

Name & general location of source(s): Wells 3 & 7A River Wells; Well 4, 21, 22, & HCA South Upland Wells; Santa Ynez River Water Conservation District, Improvement District No. 1 (ID#1) & Central Coast Water Authority (CCWA)

Drinking Water Source Assessment information: Source Assessments for the City's wells were completed September 2002

Time and place of regularly scheduled board meetings for public participation: Second & Fourth Monday of each Month at 1644 Oak Street, Solvang, CA @ 6:30 P.M.

For more information, contact: Mike Mathews Phone: (805) 688-5575

TERMS USED IN THIS REPORT

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 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 (U.S. EPA).

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 Residual Disinfectant Level (MRDL): 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.

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 Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

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.

Variances and Exemptions: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (µg/L)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

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 byproducts 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. EPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old. Any violation of an AL, MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	0	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or *E. coli*	0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or *E. coli*	0	Human and animal fecal waste
E. coli	0	0	A routine sample and a repeat sample detect total coliform and either sample also detects *E. coli*	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper	Sample Date	No. of Samples Collected	90th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	8/10/20	20	8.7	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppb)	8/10/20	20	620	0	1300	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Sodium (ppm)	2018-2020	55	52-72	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2018-2020	603	433-713	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
Fluoride (ppm)	2018-2020	0.21	<0.1-0.3	2	1	Erosion of Natural deposits; water additive which promotes strong teeth
Nitrate (ppm) (as N03)	2018-2020	8.23	<2.0-17.0	45	45	Runoff & leaching from fertilizer use; sewage; erosion of natural deposits
Nitrate and Nitrite (as N) (ppm)	2018-2020	1.86	<0.5-3.9	10	10	Runoff & leaching from fertilizer use; sewage; erosion of natural deposits
Hexavalent Chromium (ppb)	2018-2020	<.1	<1-1	10	.02	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits.
Tetrachloroethylene (PCE) (ppb)	2018-2020	.14	0-0.7	1	N/A	Leaching from PVC pipes: discharge from factories, dry cleaners and auto shops (metal degreasers)
Gross Alpha Activity (pCi/L)	2018-2020	6.34	1.3-16	15	N/A	Erosion of natural deposits
Uranium (pCi/L)	2016-2019	8.24	1.3-16.5	20	.5	Erosion of natural deposits
Trihalomethane (TTHM) (ppb)	1/20-10/20	34.8	16-48	80	N/A	Byproduct of drinking water chlorination
Haloacetic Acid (HA A5) (ppb)	1/20-10/20	18	6-33	60	N/A	Byproduct of drinking water chlorination
Selenium (ppb)	2018-2020	11.2	<1-23	50	50	Erosion of natural deposits; discharge chemical manufacturers and runoff from livestock lot.

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Chloride (ppm)	2018-2020	76.66	51-117	500	N/A	Runoff/leaching from natural deposits; seawater influence
Odor (units)	2018-2020	0	0	3	N/A	Natural occurring materials
Specific conductance (Umhos/cm)	2018-2020	1355	1130-1590	**2	1	Substance that forms ions when in water; seawater influence
Sulfate (ppm)	2018-2020	269	145-337	*2	N/A	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2018-2020	917	710-1090	***2	N/A	Runoff/leaching from natural deposits

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS					
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**Notification Level**	**Health Effects Language**
Boron (ppb)	2018-2020	250	200-300	---	Some men who drink water containing boron in excess of the action level over many years may experience reproductive effects based on studies in dogs.
Vanadium (ppb)	2018-2020	7.2	<1.0-10	---	The babies of some pregnant women who drink water containing vanadium in excess of the action level may have an increased risk of developmental effects, based on studies in laboratory animals

**Any violation of an MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.*

Additional General Information on Drinking Water

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 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).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons 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. U.S. EPA/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 (1-800-426-4791).

Lead-Specific Language for Community Water Systems: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Solvang 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. [Optional: 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 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 https://www.epa.gov/lead

CENTRAL COAST WATER AUTHORITY
POLONIO PASS WATER TREATMENT PLANT
WATER QUALITY TABLE
COVERING THE REPORTING PERIOD OF JANUARY-DECEMBER 2020

Please see last page for key to abbreviations.

Parameter	Units	State MCL	PHG (MCLG)	State DLR	Range / Average	TREATED CCWA	SOURCE STATE WATER	Major Sources in Drinking Water
PRIMARY STANDARDS--Mandatory Health-Related Standards								
CLARITY (a)								
Combined Filter Effluent Turbidity (a)	NTU	TT=<1 NTU every 4 hours TT=95% of samples <0.3 NTU			Range %	0 - 0.12 100%	NA NA	Soil runoff
INORGANIC CHEMICALS								
Aluminum	mg/L	1 (b)	0.6	0.05	Range Average	ND - 0.091 0.058	ND - 0.091 0.044	Erosion of natural deposits; residual from some surface water treatment processes
Arsenic, Total	ug/L	10	0.004	2	Range Average	ND ND	2 2	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
RADIONUCLIDES								
Gross Alpha Particle	pCi/L	15	(0)	3	Range Average	ND ND	ND ND	Erosion of natural deposits
Gross Beta Particle	pCi/L	50 (g)	(0)	4	Range Average	ND ND	ND ND	Decay of natural and man-made deposits
DISTRIBUTION SYSTEM MONITORING								
Total Chlorine Residual	mg/L	MRDL = 4.0	MRDLG = 4.0	NA	Range Average	0.88 - 3.42 2.57	NA NA	Drinking water disinfectant added for treatment
Total Coliform Bacteria (c)	--	5.0% of monthly samples	(0)	--	Range Average Highest	0 0 0%	NA NA NA	Naturally present in the environment
Total Trihalomethanes (d)	ug/L	80	NA	(0.5)	Range Average Highest LRAA	26 - 57 40 42.5	NA NA NA	By-product of drinking water chlorination
Haloacetic Acids (d)	ug/L	60	NA	(1) (e)	Range Average Highest LRAA	7.4 - 22 13 15.8	NA NA NA	By-product of drinking water chlorination
SECONDARY STANDARDS--Aesthetic Standards								
Chloride	mg/L	500 (j)	NA	(1)	Range Average	0 - 124 73	0 - 120 70	Runoff/leaching from natural deposits; seawater influence
Color	ACU	15 (j)	NA	(3)	Range Average	ND ND	20 20	Naturally occuring organic materials
Corrosivity (Aggresivity Index) (i)	SU	non-corrosive	NA	(0.1)	Range Average	12 12	12 12	
Manganese, Total	ug/L	50 (j)	NA	(2)	Range Average	ND ND	59 59	
Odor Threshold	TON	3 (j)	NA	(1)	Range Average	1 - 8 6	1 - 8 6	Naturally occuring organic materials
Specific Conductance	uS/cm	1600 (j)	NA	NA	Range Average	337 - 621 503	287 - 594 458	Substances that form ions when in water; seawater influence
Sulfate	mg/L	500 (j)	NA	(0.5)	Range Average	63 63	38 38	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	mg/L	1000 (j)	NA	(10)	Range Average	280 280	240 240	Runoff/leaching from natural deposits
Turbidity (Monthly) (a)	NTU	5 (j)	NA	(0.1)	Range Average	ND - 0.16 0.06	ND - 9.7 1.52	Soil runoff

ADDITIONAL PARAMETERS (Unregulated)

2-Methylisoborneol	ng/L	NA	NA	(1)	Range	ND - 3.9	ND - 11	An organic compound mainly produced by blue-green algae (cyanobacteria)
					Average	0.6	3.9	
Alkalinity (Total) as CaCO3 equivalents	mg/L	NA	NA	(2)	Range	46 - 86	60 - 90	Runoff/leaching from natural deposits; seawater influence
					Average	68	74	
Calcium	mg/L	NA	NA	(1)	Range	20	20	Runoff/leaching from natural deposits; seawater influence
					Average	20	20	
Chromium, Hexavalent	ug/L	NA	0.02	NA	Range	0.078	0.067	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural
					Average	0.078	0.067	
Geosmin	ng/L	NA	NA	(1)	Range	ND - 3.9	1 - 30	An organic compound mainly produced by bacterial growth in surface water
					Average	0.6	5.6	
Hardness (Total) as CaCO3	mg/L	NA	NA	(3)	Range	64 - 126	64 - 130	Leaching from natural deposits
					Average	97	97	
Heterotrophic Plate Count (f)	CFU/mL	TT	NA	NA	Range	0 - 11	NA	Naturally present in the environment
					Average	1	NA	
Magnesium	mg/L	NA	NA	(0.1)	Range	12	12	Runoff/leaching from natural deposits; seawater influence
					Average	12	12	
pH	SU	NA	NA	(0.1)	Range	7.5 - 8.85	7.9 - 9.5	Runoff/leaching from natural deposits; seawater influence
					Average	8.4	8.6	
Potassium	mg/L	NA	NA	(1)	Range	2.8	2.7	Runoff/leaching from natural deposits; seawater influence
					Average	2.8	2.7	
Sodium	mg/L	NA	NA	(1)	Range	56	50	Runoff/leaching from natural deposits; seawater influence
					Average	56	50	
Total Organic Carbon (TOC) (g)	mg/L	TT	NA	(0.3)	Range	1.4 - 2.6	1.8 - 4	Various natural and man made sources
					Average	2.0	3.2	

ABBREVIATIONS AND NOTES

Footnotes:

(a) Turbidity (NTU) is a measure of the cloudiness of the water and it is a good indicator of the effectiveness of our filtration system. Monthly turbidity values are listed in the Secondary Standards section.
(b) Aluminum has a Secondary MCL of 0.2 ppm.
(c) Total coliform MCLs: Systems that collect ≥40 samples/month no more than 5.0% of the monthly samples may be Total Coliform positive. Systems that collect <40 samples per month no more than 1 positive sample per month may be Total Coliform positive. Fecal coliform/E. coli MCLs: The occurrence of 2 consecutive Total Coliform positive samples, one of which contains fecal coliform/E. coli, constitutes an acute MCL violation.
(d) Compliance based on the running quarterly annual average of distribution system samples.
(e) Monochloroacetic Acid (MCAA) has a DLR of 2.0 ug/L while the other four Haloacetic Acids have DLR's of 1.0 ug/L.
(f) Pour plate technique
(g) TOCs are taken at the treatment plant's combined filter effluent.
(h) State MCL is 45 mg/L as NO3, which equals 10 mg/L as N.
(i) AI ³ 12.0 = Non-aggressive water
AI (10.0 - 11.9) = Moderately aggressive water
AI £ 10.0 = Highly aggressive water
Reference: ANSI/AWWA Standard C400-93 (R98)
(j) Secondary MCL

Abbreviations

ACU = Apparent Color Units
CCWA = Central Coast Water Authority
CFU/ml = Colony Forming Units per milliliter
DLR = Detection Level for purposes of Reporting
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
MRDL = Maximum Residual Disinfectant Level
MRDLG = Maximum Residual Disinfectant Level Goal
NA = Not Applicable
ND = Non-detected above detection limit (DLR)
NTU = Nephelometric Turbidity Units
pCi/L = PicoCuries per liter
PHG = Public Health Goal
ppb = parts per billion, or micrograms per liter (µg/L)
ppm = parts per million, or milligrams per liter (mg/L)
TON = Threshold Odor Number
TT = Treatment Technique
LRAA = Locational Running Annual Average

Parameter	Units	State MCL	PHG (MCLG)	State DLR	Range / Average	Drinking Water Source: State Water	Drinking Water Source: Ground Water	Major Sources in Drinking Water
PRIMARY STANDARDS--Mandatory Health-Related Standards								
CLARITY								
Combined Filter Effluent Turbidity[a]	NTU	TT=<1 NTU every 4 hours TT=95% of samples <0.3 NTU			Range %	0 - 0.12 100%	NA NA	Soil runoff
INORGANIC CHEMICALS								
Aluminum	ppb	1000	600	50	Range Average	ND - 91 58	ND - **1200** 160	Residue from water treatment process; Erosion of natural deposits
Arsenic	ppb	10	0.004	2	Range Average	ND ND	ND - 3 1.1	Erosion of natural deposits; orchard runoff; from glass/electronics production wastes
Barium	ppm	1	2	0.1	Range Average	ND ND	ND - 0.1 0.01	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium (Total Cr)	ppb	50	(100)	10	Range Average	ND ND	ND - 18 3.6	Erosion of natural deposits; steel, pulp mills, and chrome plating wastes
Fluoride	ppm	2	1	0.1	Range Average	0.058 0.058	ND - 0.32 0.19	Erosion of natural deposits; water additive for tooth health
Nickel	ppb	100	12	10	Range Average	ND ND	ND - 19 3.3	Erosion of natural deposits; discharge from metal factories
Nitrate (as Nitrogen)	ppm	10	10	0.4	Range Average	ND ND	ND - 1.7 0.5	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural
Selenium	ppb	50	30	5	Range Average	ND ND	ND - 11 4.0	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural
RADIONUCLIDES								
Gross Alpha[b]	pCi/L	15	NA	3	Range Average	ND ND	ND - 8.9 2.8	Erosion of natural deposits
Uranium[c]	pCi/L	20	0.5	1	Range Average	NC NC	1.6 - 5.6 3.5	Erosion of natural deposits
Combined Radium[d]	pCi/L	5	NA	3	Range Average	NC NC	ND - 0.27 0.16	Erosion of natural deposits
SECONDARY STANDARDS--Aesthetic Standards								
Aluminum	ppb	200	NA	50	Range Average	ND - 91 58	ND - **1200** 160	Residue from water treatment process; Erosion of natural deposits
Chloride	ppm	500	NA	--	Range Average	0 - 124 73	30 - 54 39	Runoff/leaching from natural deposits; seawater influence
Color	ACU	15	NA	--	Range Average	ND ND	ND - 3 0.4	Naturally-occurring organic materials
Corrosivity (Aggresive Index)[e]	none	non-corrosive	NA	--	Range Average	12 12	11.9 - 12.4 12.3	Balance of hydrogen, carbon, & oxygen in water, affected by temperature & other factors
Iron	ppb	300	NA	100	Range Average	ND ND	ND - **1700** 270	Leaching from natural deposits; industrial wastes
Manganese	ppb	50	NA	20	Range Average	ND ND	ND - 35 6.4	Leaching from natural deposits
Odor Threshold	TON	3	NA	1	Range Average	2 - 8 5	1 - 3 1	Naturally-occurring organic materials
Specific Conductance	µmho/cm	1600	NA	--	Range Average	337 - 621 503	700 - 1100 881	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	NA	0.5	Range Average	63 63	30 - 270 166	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	ppm	1000	NA	--	Range Average	280 280	400 - 710 564	Runoff/leaching from natural deposits;
Lab Turbidity (ID#1) Turbidity (State Water)	NTU	5	NA	--	Range Average	ND - 0.16 0.06	ND - 1.12 0.44	Soil erosion/runoff
ADDITIONAL PARAMETERS (Unregulated)								
Alkalinity (Total) as $CaCO_3$ equivalents	ppm	NA	NA	--	Range Average	46 - 86 68	260 - 290 279	Runoff/leaching from natural deposits; seawater influence
Boron	ppb	NA	NL=1,000	100	Range Average	NC NC	110 - 320 206	Runoff/leaching from natural deposits; wastewater, and fertilizers/pesticides.
Calcium	ppm	NA	NA	--	Range Average	20 20	36 - 100 72	Runoff/leaching from natural deposits; seawater influence
Chromium, Hexavalent[f]	ppb	NA	0.02	1.0	Range Average	NC NC	ND - 13 4.6	Discharges from industrial manufacturers; erosion of natural deposits
Geosmin	ng/L	NA	NA	(1)	Range Average	ND - 3.9 0.6	NC NC	An organic compound mainly produced by blue-green algae (cyanobacteria)

2020 Annual Water Quality Report - Santa Ynez River Water Conservation District, ID No.1

						Drinking Water Source		
Parameter	**Units**	**State MCL**	**PHG (MCLG)**	**State DLR**	**Range Average**	**State Water**	**Ground Water**	**Major Sources in Drinking Water**
Hardness (Total) as $CaCO_3$	ppm	NA	NA	--	Range	64 - 126	300 - 490	Leaching from natural deposits
					Average	97	399	
Heterotrophic Plate Count[g]	CFU/mL	TT	NA	--	Range	0 - 11	NA	Naturally present in the environment
					Average	1	NA	
Magnesium	ppm	NA	NA	--	Range	12	49 - 58	Runoff/leaching from natural deposits; seawater influence
					Average	12	53	
2-Methylisoborneol (MIB)	ng/L	NA	NA	NA	Range	ND - 3.9	NC	An organic compound mainly produced by blue-green algae (cyanobacteria)
					Average	0.6	NC	
pH	pH Units	NA	NA	--	Range	7.5 - 8.85	7.46 - 7.88	Runoff/leaching from natural deposits; seawater influence
					Average	8.4	7.6	
Potassium	ppm	NA	NA	--	Range	2.8	2.0 - 2.5	Runoff/leaching from natural deposits; seawater influence
					Average	2.8	2.2	
Sodium	ppm	NA	NA	--	Range	56	38 - 52	Runoff/leaching from natural deposits; seawater influence
					Average	56	45	
Total Organic Carbon (TOC)[h]	ppm	TT	NA	0.30	Range	1.4 - 2.6	NA	Various natural and manmade sources.
					Average	2.0	NA	
Vanadium	ppb	NA	NL=50	3	Range	NC	3.3 - 25	Leaching from natural deposits; industrial wastes
					Average	NC	12	

Distribution System Water Quality

ORGANIC CHEMICALS

Total Trihalomethanes[i]	ppb	80	NA	NA	Range	26 - 57	3.0 - 41.4	By-product of drinking water chlorination
					Highest LRAA	42.5	32.3	
Haloacetic Acids	ppb	60	NA	1,2[j]	Range	7.4 - 22	ND - 15.4	By-product of drinking water chlorination
					Highest LRAA	15.8	12.5	

DISINFECTION

Total chlorine residual CCWA Distribution	ppm	MRDL = 4.0	MRDLG = 4.0	--	Range	0.88 - 3.42	--	Measurement of the disinfectant used in the production of drinking water
					Average	2.57	--	
Free/total chlorine residual ID No.1 Distribution	ppm	MRDL = 4.0	MRDLG = 4.0	--	Range	--	0.17 - 2.72	Measurement of the disinfectant used in the production of drinking water
					Average	--	1.56	

Abbrevations and Notes

Footnotes:

(a) Turbidity (NTU) is a good indicator of the effectiveness of a filtration system. Monthly turbidity values for State Water are listed in the Secondary Standards section.

(b) Gross alpha particle activity monitoring required every nine years for State Water; more frequent monitoring is required for some groundwater based on detected levels. Reported average and range are from most recent sampling of all supply wells.

(c) Uranium monitoring is dependent on measured gross alpha particle activity.

(d) The MCL for radium is based on a combined total of radium 226 and radium 228.

(e) The District's Water Supply Permit, issued by DDW (formerly DPH), requires monitoring of the distribution system in areas that contain asbestos cement pipes whenever the aggressive index (AI) of the water served to the public is below 11.5.

(f) There is currently no MCL for Hexavalent Chromium. The previous MCL of 10.0 ppb was withdrawn on September 11, 2017.

(g) Pour plate technique -- monthly averages.

(h) TOCs are taken at the State Water treatment plant's combined filter effluent.

(i) Compliance based on the LRAA of distribution system samples. Values reported are the range of all 2020 sample results and highest locational running annual average.

(j) Monochloroacetic Acid (MCAA) has a DLR of 2.0 ug/L while the other four Haloacetic Acids have DLR's of 1.0 ug/L.

Abbreviations

ACU = Apparent Color Units
CCWA = Central Coast Water Authority
CFU/ml = Colony Forming Units per milliliter
DLR = Detection Limit for the Purpose of Reporting
ID No.1 = Santa Ynez River Water Conservation District, Improvement District No.1
LRAA - Locational Running Annual Average
NA = Not Applicable
NC = Not Collected
ND = Non-detect
ng/L = nanograms per liter
NL = Notification Level
NTU = Nephelometric Turbidity Units
pCi/L = PicoCuries per liter
ppb = parts per billion, or micrograms per liter (µg/L)
ppm = parts per million, or milligrams per liter (mg/L)
SI = saturation index
TON = Threshold Odor Number
µmho/cm = micromhos per centimeter

Analytical Results

The following summary table of analytical results lists the range and average concentrations of the drinking water contaminants (as well as other water quality constituents) that were detected during the most recently required sampling applicable to the 2020 reporting period for each source and constituent listed. Also listed are results of the District's required distribution system sampling. It is worth noting that constituents not detected, although analyzed, are not included in the report. Additionally, DDW sampling requirements allow for source monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year. Therefore, some of the data listed in the tables, though representative of the source water quality, are more than a year old.

[2020 Analytical Data Table]

Exceedance of Regulatory Standards

The summary table of analytical results confirms that water served by the District met all primary drinking water standards during the 2020 reporting period with one possible exception. A required triennial sample taken from Well 27 in December of 2018 showed an aluminum value of 1200 ppb. Although this value exceeded the primary drinking water standard of 1000 ppb, the well was not put into operation throughout the 2019 year and subsequently was not used until June 2020. Importantly, since the construction of this well in 2006, all analytical sampling results have been non-detect for aluminum. The same December 2018 sampling results also showed values for turbidity (15.2 NTU) and iron (1700 ppb) in excess of secondary drinking water standards and contrary to normal values for the well. These anomalous sampling results for turbidity, iron, and aluminum indicate that the well was not adequately flushed before the December 2018 sample was taken. In fact, a general physical sample taken one month later (January 2019) at Well 27 after a complete flushing yielded a turbidity of 0.41 NTU. Regular flushing and bacteriological sampling of the well was conducted throughout the 2019 calendar year, and as noted above, the well was not used in 2019. In calendar year 2020, the well was used from June through October. Follow-up confirmation samples taken from this well in May of 2021 showed non-detect for aluminum and iron.

Separately, a triennial sample taken from Well 17 in December of 2018 showed values for iron (590 ppb) and aluminum (230 ppb) in excess of secondary drinking water standards. Flow monitoring data show that these sampling results also may have been the result of irregular flushing when the December 2018 sample was taken. Notably, the well was not used throughout the 2019 year. In calendar year 2020, following complete flushing and bacteriological sampling, the well was used from October through December. Follow-up confirmation samples taken from this well in May of 2021 showed non-detect for aluminum and iron.

The primary standard (MCL) for aluminum (1000 ppb) has been established because some people who drink water in excess of the MCL over many years may experience short-term gastrointestinal tract effects. The secondary standards for iron (300 ppb) and aluminum (200 ppb) are designed to protect consumers against unpleasant aesthetic affects such as color, taste, odor, or the staining of plumbing fixtures or clothing. Based on the information above, the District does not believe that water supplies distributed during the 2020 reporting period (or any other reporting period) contained aluminum or iron values above the water quality thresholds. Please also note that water actually delivered to District customers generally has lower constituent levels than sampled water from wells due to blending with other water sources and dilution within the distribution system.

City of Solvang Conservation Efforts
The City of Solvang is currently under Stage 1 Drought Regulations.
For a full list of the regulations, please see: www.cityofsolvang.com

Conservation Programs

- Landscape Rebate

For more information on these programs, please contact the City of Solvang at 805-688-5575 X 202

Water Wise Facts

- 1 Unit of water on your water bill = One Hundred Cubic Feet (1 HCF)
- 1 Unit = 1 HCF = 100 Cubic Feet = 748 gallons
- The State of California Department of Water Resources has determined the minimum quantity of water for health & safety purposes is 50/gallons per person per day.
- For a family of four, 50/gallons per person per day = 8.3 Units/month.

Additional Resources
Waterwise Santa Barbara, www.waterwisesb.org

ABBREVIATIONS AND NOTES

Footnotes:
(a) Turbidity (NTU) is a measure of the cloudiness of the water and is a good indicator of the effectiveness of a filtration system. Monthly turbidity values for State Water are listed in the Secondary Standards section.
(b) Aluminum has a Secondary MCL of 200 ppb.
(c) Gross alpha particle activity monitoring required every nine years for State Water; more frequent monitoring is required for some groundwater based on detected levels. Reported average represents highest running source average.
(d) Uranium monitoring is dependent on measured gross alpha particle activity.
(e) Pour plate technique -- monthly averages.
(f) TOCs are taken at the State Water treatment plant's combined filter effluent.
(g) Total coliform MCLs: No more than 5.0% (State Water) or 1 sample (ID#1) of the monthly samples may be Total Coliform positive. All required follow-up and confirmation samples collected in response to each of the positive Total Coliform samples were absent for Total Coliform.
(h) Compliance based on the running quarterly annual average of distribution system samples. Values reported are range of all sample results and highest running annual average.
(j) Monochloroacetic Acid (MCAA) has a DLR of 2.0 ug/L while the other four Haloacetic Acids have DLR's of 1.0 ug/L.

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ppb = parts per billion, or micrograms per liter (µg/L)
ppm = parts per million, or milligrams per liter (mg/L)
SI = saturation index
µmho/cm = micromhos per centimeter, (unit of specific conductance of water)

Think About It
Don't Waste Water