

2010 Consumer Confidence Report

Water System Name: CITY OF SOLVANG

Report Date: June 2011

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, 2010.

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 (Wells) & Surface water (ID #1 & CCWA)

Name & location of source(s): Wells 3 & 7a River Wells; Well #4 Upland, Santa Ynez River Water Conservation District, Improvement District No. 1 (SYRWCD.ID1) & Central Coast Water Authority (CCWA)

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

Time and place of regularly scheduled board meetings for public participation: Second and Fourth Monday of each month, 1644 Oak Street, Solvang, CA @ 7:00 PM

For more information, contact: Craig Martin 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 (USEPA).

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.

Variations and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

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

ppb: parts per billion or micrograms per liter (ug/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 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 USEPA and the state 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 provide the same protection for public health.

Tables 1, 2, 3, 4, and 5 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 Department 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.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA					
Microbiological Contaminants (complete if bacteria detected)	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	(In a mo.) 1	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	(In the year) 0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER						
Lead and Copper (complete if lead or copper detected in the last sample set)	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	See Violations					Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	See Violations					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)	7-10	61	59-63	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	7-10	745	670-820	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

*Any violation of an MC or AL is asterisked. Additional information regarding the violation is provided later in this report.

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	PHG (MCLG)	Typical Source of Contaminant
Fluoride ppm	7-10	0.32	0.3-0.33	2	1	Erosion of natural deposits; water additive which promotes strong teeth
Nitrate ppm (as NO ₃)	7-10	12.7	5.4-20	45	45	Runoff & leaching from fertilizer use; sewage; erosion of natural deposits
Nitrate and Nitrite (as N) ppm	7-10	2.7	1.2-4.1	10	10	Runoff & leaching from fertilizer use; sewage; erosion of natural dep
Tetrachloroethylene (PCE) ppb	7-10	0.53	ND-0.53	5	N/A	Leaching from PVC pipes; discharge from factories, dry cleaners and auto shops (metal degreaser)
Gross Alpha Activity PCi/L	7-10	4	3.5-4.5	15	N/A	Erosion of natural deposits
Trihalomethane (TTHM) ppb	7-10	41.4	22.8-51.9	80	N/A	Byproduct of drinking water chlorination
Haloacetic Acid (HAA5) ppb	7-10	11.6	4.5-19.5	60	N/A	Byproduct of drinking water disinfection
Selenium ppb	7-10	8.8	8.3-9.3	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	7-10	83.5	79-88	500	N/A	Runoff/leaching from natural deposits; seawater influence
Odor units	7-10	1.5	1-2	3 units	N/A	Natural-occurring materials
Specific conductance Umhos/cm	7-10	1450	1400-1500	1600	N/A	Substance that form ions when in water; seawater influence
Sulfate ppm	7-10	275	250-300	500	N/A	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids ppm	7-10	1140	980-1300	1000	N/A	Runoff/leaching from natural deposits;

TABLE 6 - DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Action Level	Health Effects Language
Boron ppb	7-10	170-240	1000	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	7-10	9.6-12	50	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

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 USEPA'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. 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 (1-800-426-4791).

- Tetrachloroethylene (PCE): Some people who use water-containing tetrachloroethylene in excess of the MCL over many years may experience liver problems, and may have an increased risk of getting cancer.

Summary Information for Contaminants Exceeding an MCL, MRDL, or AL or Violation of Any TT or Monitoring and Reporting Requirement

- The City of Solvang is in violation of the Lead and copper monitoring requirements for failing to collect samples during the sampling period for 2010. These samples will be collected in 2011.

Parameter	Units	State MCL	PHG (MCLG)	State DLR	Range Average	Drinking Water Source		Major Sources in Drinking Water
						State Water	Ground Water	

PRIMARY STANDARDS--Mandatory Health-Related Standards

CLARITY ^a									
Combined Filter Effluent Turbidity	NTU	TT=<1 NTU every 4 hours			Range	0.03 - 0.12	NA	Soil runoff	
		TT=95% of samples <0.3 NTU			%	100%	NA		

ORGANIC CHEMICALS								
Total Trihalomethanes ^b	ppb	80	0.8	0.5	Range	--	ND - 2.2	By-product of drinking water chlorination
					Average	--	0.3	

INORGANIC CHEMICALS								
Aluminum ^c	ppb	1000	600	50	Range	ND - 180	ND - 96	Residue from water treatment process; Erosion of natural deposits
					Average	90	8.9	
Arsenic	ppb	10	0.004	2.0	Range	ND	ND - 2.7	Erosion of natural deposits; runoff from orchards glass and electronic production waste
					Average	ND	0.8	
Barium	ppb	1000	2000	100	Range	ND	ND - 150	Erosion of natural deposits; oil drilling and metal refinery wastes
					Average	ND	20	
Chromium (Total Cr)	ppb	50	(100)	10	Range	ND	ND - 35	Erosion of natural deposits; steel, pulp mills, and chrome plating wastes
					Average	ND	8.2	
Fluoride	ppm	2	1	0.1	Range	ND	ND - 0.41	Erosion of natural deposits; water additive for tooth health
					Average	ND	0.3	
Nickel	ppb	100	12	10	Range	ND	ND - 10	Erosion of natural deposits; runoff from orchards glass and electronic production waste
					Average	ND	0.7	
Nitrate + Nitrite (as N)	ppm	10	10	0.4	Range	0.56	ND - 4	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
					Average	0.56	1.6	
Nitrate (as NO ₃)	ppm	45	45	4	Range	2.5	ND - 18	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
					Average	2.5	6.0	
Selenium	ppb	50	30	5	Range	ND	ND - 6.2	Petroleum, glass, and metal refinery discharge; erosion of natural deposits
					Average	ND	0.4	

RADIONUCLIDES								
Gross Alpha ^d	pCi/L	15	NA	1	Range	ND	ND - 13	Erosion of natural deposits
					Average	ND	6.9	
Uranium	pCi/L	20	0.5	1	Range	NC	2.4 - 4.6	Erosion of natural deposits
					Average	NC	3.5	

SECONDARY STANDARDS--Aesthetic Standards

Chloride	ppm	500	NA	--	Range	43 - 162	24 - 63	Runoff/leaching from natural deposits; seawater influence
					Average	83	43	
Color (ACU)	Units	15	NA	--	Range	ND	ND - 9.0	Naturally-occurring organic materials
					Average	ND	2.2	
Corrosivity	SI	non-corrosive	NA	--	Range	non-	non-	Balance of hydrogen, carbon, & oxygen in water, affected by temperature & other factors
					Average	corrosive	corrosive	
Iron	ppb	300	NA	100	Range	ND	ND - 660	Leaching from natural deposits; industrial wastes
					Average	ND	77	
Foaming Agents (MBAS)	ppb	500	NA	--	Range	NA	ND - 190	Municipal and industrial waste discharge
					Average	NA	2	
Odor Threshold	Units	3	NA	1	Range	1	1	Naturally-occurring organic materials
					Average	1	1	
Specific Conductance	µmho/cm	1600	NA	--	Range	319 - 1042	710 - 1100	Substances that form ions when in water; seawater influence
					Average	527	904	
Sulfate	ppm	500	NA	0.5	Range	93	13 - 240	Runoff/leaching from natural deposits; industrial wastes
					Average	93	205	
Total Dissolved Solids	ppm	1000	NA	--	Range	200 - 615	440 - 760	Runoff/leaching from natural deposits;
					Average	328	577	
Lab Turbidity (ID#1) Turbidity (State Water)	NTU	5	NA	--	Range	0.03 - 0.2	ND - 2.99	Soil runoff
					Average	0.06	0.5	

Parameter	Units	State MCL	PHG (MCLG)	State DLR	Range Average	Drinking Water Source		Major Sources in Drinking Water
						State Water	Ground Water	

ADDITIONAL PARAMETERS (Unregulated)

Alkalinity (Total) as CaCO ₃ equivalents	ppm	NA	NA	--	Range	56 - 100	240 - 360	Runoff/leaching from natural deposits; seawater influence
					Average	77	283	
Calcium	ppm	NA	NA	--	Range	34 - 76	41 - 110	Runoff/leaching from natural deposits; seawater influence
					Average	52	85	
Hardness (Total) as CaCO ₃	ppm	NA	NA	--	Range	70 - 170	300 - 490	Leaching from natural deposits
					Average	107	414	
Heterotrophic Plate Count ^e	CFU/mL	TT	NA	--	Range	0 - 2	NC	Naturally present in the environment
					Average	0.5	NC	
Magnesium	ppm	NA	NA	--	Range	17	46 - 91	Runoff/leaching from natural deposits; seawater influence
					Average	17	58	
pH	pH Units	NA	NA	--	Range	7.2 - 8.9	7.1 - 8.1	Runoff/leaching from natural deposits; seawater influence
					Average	8.2	7.7	
Potassium	ppm	NA	NA	--	Range	3.2	1.4 - 2.5	Runoff/leaching from natural deposits; seawater influence
					Average	3.2	2.2	
Sodium	ppm	NA	NA	--	Range	82	32 - 49	Runoff/leaching from natural deposits; seawater influence
					Average	82	44	
Total Organic Carbon (TOC) ^f	ppm	TT	NA	0.30	Range	1.7 - 3.6	--	Various natural and manmade sources.
					Average	2.1	--	

Constituents of Concern

Boron	ppb	NA	NL=1,000	100	Range	NC	ND - 310
					Average	NC	192
Vanadium	ppb	NA	NL=50	3	Range	NC	ND - 18
					Average	NC	8.4

Distribution System Water Quality (c)

MICROBIOLOGICAL

Total Coliform (TC) Bacteria ^g CCWA Distribution	--	5.0% of monthly samples	0	--	Range	0 - 2.5%	--	Naturally present in the environment
					Average	0.2%	--	
					Highest	2.5%	--	
Total Coliform (TC) Bacteria ^g ID#1 Distribution	--	> 1 positive sample per month	0	--	Range	--	0 - 1	Naturally present in the environment
					Average	--	<0.5%	
					Highest	--	1	
Fecal Coliform and <i>E. Coli</i> CCWA Distribution	--	--	0	--	Range	0 Positives	--	Human and animal fecal waste
					Average	0 Positives	--	
					Highest	0 Positives	--	
Fecal Coliform and <i>E. Coli</i> ID#1 Distribution	--	1 positive; with repeat TC positive	0	--	Range	--	0 Positives	Human and animal fecal waste
					Average	--	0 Positives	
					Highest	--	0 Positives	

ORGANIC CHEMICALS

Total Trihalomethanes ^h	ppb	80	NA	NA	Range	37 - 76	19.5 - 64.5	By-product of drinking water chlorination
					Average	51	42.7	
Haloacetic Acids ^h	ppb	60	NA	1,2 ⁱ	Range	8.2 - 24	2.7 - 16.4	By-product of drinking water chlorination
					Average	13	11.3	

DISINFECTION

Total chlorine residual CCWA Distribution	ppm	MRDL = 4.0	MRDLG = 4.0	--	Range	0.82 - 3.0	--	Measurement of the disinfectant used in the production of drinking water
					Average	2.0	--	
Free/total chlorine residual ID#1 Distribution	ppm	MRDL = 4.0	MRDLG = 4.0	--	Range	--	0.1 - 2.0	Measurement of the disinfectant used in the production of drinking water
					Average	--	0.85	

Abbreviations and Notes

Footnotes:

- Turbidity (NTU) is a measure of the cloudiness of the water and it is a good indicator of the effectiveness of a filtration system. Monthly turbidity values for State Water are listed in the Secondary Standards section.
- Source sampling of ground water only. Distribution sample results listed below.
- Aluminum has a Secondary MCL of 200 ppb.
- Gross alpha particle activity monitoring required every nine years. Reported average represents highest running source average.
- Pour plate technique -- monthly averages.
- TOCs are taken at the State Water treatment plant's combined filter effluent.
- Total coliform MCLs: No more than 5.0% (State Water) or 1 sample (ID#1) of the monthly samples may be Total Coliform positive. This MCL was not violated in 2010. All required follow-up and confirmation samples collected in response to each of the positive Total Coliform samples were absent for Total Coliform.
- Compliance based on the running quarterly annual average of distribution system samples.
- 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
 ID#1 = Santa Ynez River Water Conservation District, Improvement District No. 1
 NA = Not Applicable
 NC = Not Collected
 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)
 TOC = Total Organic Carbon
 µmho/cm = micromhos per centimeter
 (unit of specific conductance of water)



California's main water sources have been severely impacted by record dry conditions. And we're already using our reserves to supply our everyday water. Our water situation is serious.

Here's How You Can Help

Indoor

Turn off the water when you brush your teeth and save 3 gallons per day

Shorten your showers by one or two minutes and save 5 gallons per day

Fix leaky faucets and save 20 gallons per day

Wash only full loads of laundry and save 15 to 50 gallons per load



Outdoor

Water your yard only before 8 a.m. to reduce evaporation and interference from wind and save 25 gallons per day

Install a smart sprinkler controller and save 40 gallons per day

Use a broom instead of a hose to clean driveways and sidewalks and save 150 gallons each time

Check your sprinkler system for leaks, overspray, and broken sprinkler heads and save 500 gallons a month

Mulch! Save hundreds of gallons a year by using organic mulch around plants to reduce evaporation