2012 CONSUMER CONFIDENCE REPORT

2012 CITY OF SOLVANG

CITY OF SOLVANG
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2012 Consumer Confidence Report available on website

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Water System Name: **CITY OF SOLVANG** Report Date: June 2013

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, 2012 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 (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.

Variances 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 (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 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 California 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, 5, 7, and 8 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 (None detected)	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria

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	90th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	20	6	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	20	.36	0	1.3	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)	3-12	59.3	57-65	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	3-12	623.3	598-672	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

**Any violation of an MCL 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 [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
Fluoride ppm	3-12	.1	0.1-0.2	2	1	Erosion of natural deposits; water additive which promotes strong teeth
Nitrate ppm (as NO3)	3-12	11	7.3-15.4	45	45	Runoff & leaching from fertilizer use; sewage; erosion of natural deposits
Nitrate and Nitrite (as N) ppm	3-12	3.2	2.3-4.1	10	10	Runoff & leaching from fertilizer use; sewage; erosion of natural deposits
*Tetrachloroethylene (PCE) ppb	3-11	0.55	0.55	5	N/A	Leaching from PVC pipes; discharge from factories, dry cleaners and auto shops (metal degreaser)
Gross Alpha Activity PCi/L	7-10	4.5	3.5-5.5	15	N/A	Erosion of natural deposits
Uranium PCi/L	7-10	9.4	4.9-9.5	20	0.5	Erosion of natural deposits
Trihalomethane (TTHM) ppb	10-12	48.1	29.1-67	80	N/A	Byproduct of drinking water chlorination
Haloacetic Acid (HAA5) ppb	10-12	6.3	2-17	60	N/A	Byproduct of drinking water disinfection
Selenium ppb	10-12	14.3	13-16	50	30	Erosion of natural deposits; discharge chemical manufacturers and runoff from livestock lot
Cadmium ppb	10-12	.1	ND-0.2	5	.04	Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from electroplating and; runoff from waste batteries and paints
Chromium ppb	10-12	1	ND-2	50	(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Nickel ppb	10-12	1	1-2	100	12	Erosion of natural deposits; discharge from metal factories

Bold dates indicates the last required testing period

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	10-12	87.7	74-99	500	N/A	Runoff/leaching from natural deposits; seawater influence
Specific conductance Umhos/cm	10-12	1490	1380-1620	1600	N/A	Substance that form ions when in water; seawater influence
Sulfate ppm	10-12	270	260-280	500	N/A	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids ppm	10-12	930	880-1010	1000	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	10-12	166	100-200	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	10-12	9	8-10	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

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

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

NONE

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).

- 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. 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 or at **http://www.epa.gov/safewater/lead**.

- 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.

CCR Going Paperless

In recent years, the City of Solvang has mailed its customers a printed copy of the CCR to comply with the Safe Drinking Water Act (SDWA). On February 21, 2013, the California Department of Public Health expanded its interpretation of the SDWA to allow for electronic delivery of the CCR. The electronic delivery method will reduce the consumption of paper, and minimize potential printing and mailing costs. Next year's CCR will not be mailed, and will be available on our City webpage http://www.cityofsolvang.com/index.php/departments/utilities/water-service. Hard copies will be located at City Hall. Hard copies will only be mailed upon request.

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
ADDITIONAL PARAMETERS (Unregulated)								
Alkalinity (Total) as $CaCO_3$ equivalents	ppm	NA	NA	--	Range	46 - 86	260 - 330	Runoff/leaching from natural deposits; seawater influence
					Average	67	291	
Calcium	ppm	NA	NA	--	Range	30 - 76	43 - 110	Runoff/leaching from natural deposits; seawater influence
					Average	49	78	
Hardness (Total) as $CaCO_3$	ppm	NA	NA	--	Range	64 - 156	280 - 490	Leaching from natural deposits
					Average	101	382	
Heterotrophic Plate Count[d]	CFU/mL	TT	NA	--	Range	0 - 4	NC	Naturally present in the environment
					Average	0.6	NC	
Magnesium	ppm	NA	NA	--	Range	13	49 - 84	Runoff/leaching from natural deposits; seawater influence
					Average	13	59	
pH	pH Units	NA	NA	--	Range	7.2 - 8.8	7.1 - 8.1	Runoff/leaching from natural deposits; seawater influence
					Average	8.3	7.6	
Potassium	ppm	NA	NA	--	Range	2.6	1.6 - 2.4	Runoff/leaching from natural deposits; seawater influence
					Average	2.6	2.1	
Sodium	ppm	NA	NA	--	Range	62	34 - 52	Runoff/leaching from natural deposits; seawater influence
					Average	62	41	
Total Organic Carbon (TOC)[e]	ppm	TT	NA	0.30	Range	1.4 - 2.4	--	Various natural and manmade sources.
					Average	1.8	--	
Constituents of Concern								
Boron	ppb	NA	NL=1,000	100	Range	NC	ND - 310	
					Average	NC	153	
Chromium (+6)	ppb	NA	0.02	1	Range	NC	ND - 32	
					Average	NC	8.8	
Vanadium	ppb	NA	NL=50	3	Range	NC	ND - 18	
					Average	NC	11.2	
Distribution System Water Quality								
MICROBIOLOGICAL								
Total Coliform (TC) Bacteria[f] CCWA Distribution	--	5.0% of monthly samples	0	--	Range	0 Positives	--	Naturally present in the environment
					Average	0 Positives	--	
					Highest	0 Positives	--	
Total Coliform Bacteria ID#1 Distribution		>1 positive per month	0	--	Highest # pos / mo	--	**2 Positive**	Naturally present in the environment
						--		
Fecal Coliform and *E. Coli* CCWA Distribution	--	--	0	--	Range	0 Positives	--	Human and animal fecal waste
					Average	0 Positives	--	
					Highest	0 Positives	--	
Fecal Coliform and *E. Coli* ID#1 Distribution	--	1 positive; with repeat TC positive	0	--	Highest # pos / mo w/ repeat	--	1 Positive 0 Positive, w/ TC +	Human and animal fecal waste
						--		
						--		
ORGANIC CHEMICALS								
Total Trihalomethanes[g]	ppb	80	NA	NA	Range	20 - 77	7.9 - 59.5	By-product of drinking water chlorination
					Highest	46	40.9	
Haloacetic Acids[g]	ppb	60	NA	1,2[h]	Range	5.4 - 17	1.6 - 21.5	By-product of drinking water chlorination
					Highest	11	13.7	
DISINFECTION								
Total chlorine residual CCWA Distribution	ppm	MRDL = 4.0	MRDLG = 4.0	--	Range	1.5 - 3.1	--	Measurement of the disinfectant used in the production of drinking water
					Average	2.2	--	
Free/total chlorine residual ID#1 Distribution	ppm	MRDL = 4.0	MRDLG = 4.0	--	Range	--	0.1 - 2.5	Measurement of the disinfectant used in the production of drinking water
					Average	--	1.4	

SANTA YNEZ RIVER WATER CONSERVATION DISTRICT - IMPROVEMENT DISTRICT NO. 1

SAMPLING RESULTS: PRIMARY AND SECONDARY STANDARDS

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[a]								
Combined Filter Effluent Turbidity	NTU	TT=<1 NTU every 4 hours TT=95% of samples <0.3 NTU			Range %	0.04 - 0.13 100%	NA NA	Soil runoff
INORGANIC CHEMICALS								
Aluminum[b]	ppb	1000	600	50	Range Average	ND - 120 69	ND ND	Residue from water treatment process; Erosion of natural deposits
Arsenic	ppb	10	0.004	2.0	Range Average	ND ND	ND - 2.4 0.5	Erosion of natural deposits; runoff from orchards glass and electronic production waste
Barium	ppb	1000	2000	100	Range Average	ND ND	ND - 170 29.0	Erosion of natural deposits; oil drilling and metal refinery wastes
Chromium (Total Cr)	ppb	50	(100)	10	Range Average	ND ND	ND - 27 8.9	Erosion of natural deposits; steel, pulp mills, and chrome plating wastes
Fluoride	ppm	2	1	0.1	Range Average	ND ND	ND - 0.34 0.25	Erosion of natural deposits; water additive for tooth health
Nickel	ppb	100	12	10	Range Average	ND ND	ND - 12 1.2	Erosion of natural deposits; runoff from orchards glass and electronic production waste
Nitrate + Nitrite (as N)	ppm	10	10	0.4	Range Average	0.49 0.49	ND - 4.1 1.9	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate (as NO_3)	ppm	45	45	2	Range Average	2.2 2.2	ND - 15 5.1	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
RADIONUCLIDES								
Gross Alpha[c]	pCi/L	15	NA	3	Range Average	ND ND	ND - 7.3 3.1	Erosion of natural deposits
Uranium	pCi/L	20	0.5	1	Range Average	NC NC	2.8 2.8	Erosion of natural deposits
SECONDARY STANDARDS--Aesthetic Standards								
Chloride	ppm	500	NA	--	Range Average	46 - 146 86	35 - 66 46	Runoff/leaching from natural deposits; seawater influence
Color (ACU)	Units	15	NA	--	Range Average	ND ND	ND - 9 1.0	Naturally-occurring organic materials
Corrosivity	SI	non-corrosive	NA	--	Range Average	non-corrosive non-corrosive	non-corrosive non-corrosive	Balance of hydrogen, carbon, & oxygen in water, affected by temperature & other factors
Iron	ppb	300	NA	100	Range Average	ND ND	ND - 270 100	Leaching from natural deposits; industrial wastes
Foaming Agents (MBAS)	ppb	500	NA	--	Range Average	NA NA	ND - 120 12	Municipal and industrial waste discharge
Odor Threshold	Units	3	NA	1	Range Average	ND ND	ND - 1 0.6	Naturally-occurring organic materials
Specific Conductance	µmho/cm	1600	NA	--	Range Average	344 - 706 522	760 - 1100 880	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	NA	0.5	Range Average	71 71	13 - 240 120	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1000	NA	--	Range Average	202 - 417 308	440 - 760 554	Runoff/leaching from natural deposits;
Lab Turbidity (ID#1) Turbidity (State Water)	NTU	5	NA	--	Range Average	0.04 - 0.1 0.05	ND - 1.03 0.35	Soil runoff

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Solvang, CA 93463

ECRWSS

Residential Customer

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

Abbrevations 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. Reported average represents highest running source average.

(d) Pour plate technique -- monthly averages.

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

(f) 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.

(g) 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.

(h) 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)