2013
CONSUMER CONFIDENCE REPORT

CITY OF SOLVANG
1644 OAK STREET
SOLVANG, CA 93463
(805) 688-5575
http://www.cityofsolvang.com/ccr2013.pdf

2013 Consumer Confidence Report

Water System Name: **CITY OF SOLVANG** Report Date: June 2014

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, 2013 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 and CCWA)

Name & general 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 September 2002.

Time and place of regularly scheduled board meetings for public participation: Second and Fourth Monday of each Month at 1644 Oak Street, Solvang, CA @ 6:30 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, 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	1	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or *E. coli*	(In the year) 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

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)	**Sample Date**	**No. of samples collected**	**90th percentile level detected**	**No. sites exceeding AL**	**AL**	**PHG**	**Typical Source of Contaminant**
Lead (ppb)	July 2011	20	6	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	July 2011	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)	April 2013	66	56-76	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	April 2013	625	578-672	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)	April 2013	.15	0.1-0.2	2	1	Erosion of natural deposits; water additive which promotes strong teeth
Nitrate (ppm) (as NO3)	March 2013	10.35	3.8-16.9	45	45	Runoff & leaching from fertilizer use; sewage; erosion of natural deposits
Nitrate and Nitrite (as N) (ppm)	April 2013	2.2	0.9-3.5	10	10	Runoff & leaching from fertilizer use; sewage; erosion of natural deposits
Tetrachloroethylene (PCE)* (ppb)	July 2013	0.8	0.8	5	N/A	Leaching from PVC pipes; discharge from factories, dry cleaners and auto shops (metal degreaser)
Gross Alpha Activity (pCi/L)	July 2013	9.34	5.07-13.6	15	N/A	Erosion of natural deposits
Uranium (pCi/L)	July 2013	6.78	3.66-9.89	20	0.5	Erosion of natural deposits
Trihalomethane (TTHM) (ppb)	October 2013	44.4	7.9-50.7	80	N/A	Byproduct of drinking water chlorination
Haloacetic Acid (HAA5) (ppb)	October 2013	5.3	0-14	60	N/A	Byproduct of drinking water disinfection.
Selenium (ppb)	April 2013	9	2.0-16.0	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)	April 2013	87.5	79-88	500	N/A	Runoff/leaching from natural deposits; seawater influence
Odor (units)	April 2013	<1	<1	3 units	N/A	Natural occurring materials
Specific conductance (Umhos/cm)	April 2013	1490	1360-1620	1600	N/A	Substance that forms ions when in water; seawater influence
Sulfate (ppm)	April 2013	238	196-280	500	N/A	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	April 2013	945	900-1010	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)	April 2013	150	100-200	1000	Some men who drink water-containing boron in excess of the notification level over many years may experience reproductive effects based on studies in dogs.
Vanadium (ppb)	April 2013	6.5	3-10	50	The babies of some pregnant women who drink water containing vanadium in excess of the notification 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 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.

Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**
Groundwater Rule – Trigger Source water monitoring	We failed to collect triggered source water samples from the representative ground water sources.	Once, on December 23, 2013	Three repeat samples and groundwater sources will be tested in the future.	NONE

Our water system failed to monitor as required for drinking water standards during the past year and, therefore, was in violation of the regulations. Even though this failure was not an emergency, as our customers, you have a right to know what you should do, what happened, and what we did to correct this situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During December 2013, we failed to collect triggered source water samples from the representative ground water sources and therefore, cannot be sure of the quality of our drinking water during that time.

What should I do?

- There is nothing you need to do at this time.

What happened? What is being done?

- On December 23, 2013 we had a routine coliform sample come up positive. We took repeat samples which all came back negative. We failed to include our drinking water wells in the repeat sampling, which is in violation of the Groundwater Rule.

For more information, please contact Craig Martin, Water Division Supervisor, at (805) 688-5575.

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

SAMPLING RESULTS: PRIMARY AND SECONDARY STANDARDS

						Drinking Water Source		
Parameter	**Units**	**State MCL**	**PHG (MCLG)**	**State DLR**	**Range / Average**	**State Water**	**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 %	0.04 - 0.12 100%	NA NA	Soil runoff
INORGANIC CHEMICALS								
Aluminum[b]	ppb	1 (b)	0.6	0.05	Range Average	ND - 0.15 0.83	ND ND	Residue from water treatment process; Erosion of natural deposits
Arsenic	ppb	10	0.004	2.0	Range Average	ND ND	ND - 2.3 0.9	Erosion of natural deposits; runoff from orchards glass and electronic production waste
Barium	ppb	1000	2000	100	Range Average	ND ND	ND - 170 26	Erosion of natural deposits; oil drilling and metal refinery wastes
Chromium (Total Cr)	ppb	50	(100)	10	Range Average	ND ND	ND - 26 7.9	Erosion of natural deposits; steel, pulp mills, and chrome plating wastes
Fluoride	ppm	2	1	0.1	Range Average	ND ND	ND - 0.36 0.24	Erosion of natural deposits; water additive for tooth health
Nickel	ppb	100	12	10	Range Average	ND ND	ND - 12 1.1	Erosion of natural deposits; runoff from orchards glass and electronic production waste
Nitrate + Nitrite (as N)	ppm	10	10	0.4	Range Average	.41 .41	ND - 3.4 1.6	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	1.8 1.8	ND - 19 4.6	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 - 3.9 2.0	ND - 11 3.9	Erosion of natural deposits
Uranium[d]	pCi/L	20	0.5	1	Range Average	ND ND	2.4 - 6.4 3.8	Erosion of natural deposits
SECONDARY STANDARDS--Aesthetic Standards								
Chloride	ppm	500	NA	--	Range Average	45 - 136 90	35 - 56 42	Runoff/leaching from natural deposits; seawater influence
Color (ACU)	Units	15	NA	--	Range Average	ND ND	ND ND	Naturally-occurring organic materials
Corrosivity	SI	non-corrosive	NA	--	Range Average	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 - 300 23	Leaching from natural deposits; industrial wastes
Odor Threshold	Units	3	NA	1	Range Average	ND - 1 ND	1 - 4 1.5	Naturally-occurring organic materials
Specific Conductance	µmho/cm	1600	NA	--	Range Average	366 - 715 569	770 - 1100 878	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	NA	0.5	Range Average	36 36	13 - 240 132	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1000	NA	--	Range Average	218 - 423 336	440 - 730 559	Runoff/leaching from natural deposits;
Lab Turbidity (ID#1) Turbidity (State Water)	NTU	5	NA	--	Range Average	0.04 - 0.17 0.06	ND - 1.5 0.3	Soil erosion/runoff

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	4 0- 90	260 - 310	Runoff/leaching from natural deposits;
					Average	72	294	seawater influence
Calcium	ppm	NA	NA	--	Range	34 - 78	51 - 110	Runoff/leaching from natural deposits;
					Average	54	75	seawater influence
Hardness (Total) as $CaCO_3$	ppm	NA	NA	--	Range	76 - 150	280 - 480	Leaching from natural deposits
					Average	111	379	
Heterotrophic Plate Count[e]	CFU/mL	TT	NA	--	Range	0 - 2	NC	Naturally present in the environment
					Average	0.4	NC	
Magnesium	ppm	NA	NA	--	Range	10	49 - 84	Runoff/leaching from natural deposits;
					Average	10	60	seawater influence
pH	pH Units	NA	NA	--	Range	7.4 - 8.6	7.5 - 8.1	Runoff/leaching from natural deposits;
					Average	8.3	7.6	seawater influence
Potassium	ppm	NA	NA	--	Range	2.4	1.6 - 2.7	Runoff/leaching from natural deposits;
					Average	2.4	2.2	seawater influence
Sodium	ppm	NA	NA	--	Range	42	34 - 51	Runoff/leaching from natural deposits;
					Average	42	41	seawater influence
Total Organic Carbon (TOC)[f]	ppm	TT	NA	0.30	Range	1.7 - 3.2	--	Various natural and manmade sources.
					Average	2.4	--	
Constituents of Concern								
Boron	ppb	NA	NL=1,000	100	Range	NC	ND - 290	Runoff/leaching from natural deposits;
					Average	NC	148	wastewater, and fertilizers/pesticides.
Chromium (+6)	ppb	NA	0.02	1	Range	NC	ND - 25	Leaching from natural deposits;
					Average	NC	10.1	industrial wastes
Vanadium	ppb	NA	NL=50	3	Range	NC	ND - 32	Leaching from natural deposits;
					Average	NC	13	industrial wastes
Distribution System Water Quality								
MICROBIOLOGICAL								
Total Coliform (TC) Bacteria[g] 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	--	0 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	--	0 Positive	Human and animal fecal waste
						--		
						--		
ORGANIC CHEMICALS								
Total Trihalomethanes[h]	ppb	80	NA	NA	Range	ND - 75	3.1 - 58.7	By-product of drinking water
					Highest	52	45.6	chlorination
Haloacetic Acids[j]	ppb	60	NA	1,2[h]	Range	10 - 34	ND - 18.5	By-product of drinking water
					Highest	18	13.7	chlorination
DISINFECTION								
Total chlorine residual CCWA Distribution	ppm	MRDL = 4.0	MRDLG = 4.0	--	Range	1.2 - 3.5	--	Measurement of the disinfectant
					Average	2.2	--	used in the production of drinking water
Free/total chlorine residual ID#1 Distribution	ppm	MRDL = 4.0	MRDLG = 4.0	--	Range	--	0.2 - 2.2	Measurement of the disinfectant
					Average	--	1.2	used in the production of drinking water

Did You Know ???

- 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 55/gallons per person per day.
- For a family of four, 55/gallons per person per day = 9.1 Units/month.
- For a typical residence (home) in Solvang, the average water use for January 2013 was 8.3 Units, and the average use for August 2013 was 20.5 Units. This means the exterior water use in August was 12.2 Units, or 1.5 times the interior use.
- Installing low-flow aerators on your faucets throughout your home will reduce water usage by 10% to 13% per person.
- See: h2ouse.org for more water saving ideas.

CITY OF SOLVANG

RESIDENTIAL CUSTOMER

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.

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)
SI = saturation index
µmho/cm = micromhos per centimeter, (unit of specific conductance of water)