

# 2013 ANNUAL WATER QUALITY REPORT

# Santa Ynez River Water Conservation District, Improvement District No. 1

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Division 1 - Los Olivos	Harlan Burchardi
Division 2 - Solvang	Dennis Beebe
Division 3 - Solvang	Kevin Walsh
Division 4 - Santa Ynez	Harry Poor
At-Large	Karen Carroll

Office Location: 3622 Sagunto Street Santa Ynez, CA 93460 Mailing Address: P.O. Box 157 Santa Ynez, CA 93460

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# Santa Ynez River Water Conservation District, Improvement District No. 1

<u>Our Mission Statement</u>: To provide the residential and agricultural customers in the Santa Ynez River Water Conservation District, Improvement District No.1 (District) service area with a reasonably priced, reliable, high quality water supply, and efficient and economical public services.

The Federal Safe Drinking Water Act (SDWA) of 1976 (as amended in 1986 and 1996) provides the regulatory framework for the protection of drinking water quality provided to the public. The SDWA allows state governments to take responsibility for the enforcement of drinking water regulations within their own state. The California Department of Public Health (DPH), Division of Drinking Water and Environmental Management, is the agency responsible for the regulation and enforcement of drinking water quality standards in California. This responsibility is shared with the Office of Environmental Health and Hazard Assessment (OEHHA) who develop Public Health Goals (PHGs) for potential water supply contaminants that pose a risk to public health.

The Santa Ynez River Water Conservation District, Improvement District No.1 (District), as a public water purveyor operating under a permit issued by DPH, serves the communities of Santa Ynez, Los Olivos, Ballard, the City of Solvang, and the Santa Ynez Band of Chumash Indians. In accordance with this Water Supply Permit and California Safe Drinking Water regulations, the District routinely tests all ground water sources for a complete suite of water quality parameters and potential contaminants. The State Water Project supply is similarly tested by the Central Coast Water Authority (CCWA), following conventional treatment at its Polonio Pass Water Treatment plant, to assure that all water served meets Federal and State drinking water standards. Representative of the water delivered daily to you through your water service connection, the results of these sampling and monitoring efforts for the 2013 calendar year are included in this report.

#### District water sources available for use in 2013:

#### 1) Ground Water – 19 active supply wells

In 2013, the District operated eight active supply wells pumping ground water from the Santa Ynez Upland ground water basin. This wedge-shaped area encompasses approximately 130 square-miles, is bounded by the foothills of the San Rafael Mountains to the north, parallels the Santa Ynez River to the south, and narrows east to Red Rock Canyon. District wells in the Upland Basin range in depth from less than 500 feet to over 1,300 feet. The production rates (i.e., flow rate) of these "Upland" wells range from 270 to over 1,250 gpm (gallons per minute).

Separated from the southern margin of the Upland Basin by a barrier of impermeable rocks are the water-bearing sand and gravel deposits of the Santa Ynez River. During 2013, the District utilized seven of the eleven active supply wells constructed in these alluvial deposits. The production rates of these "River" wells range from 125 to 600 gpm.

# 2) Surface Water – State Water Project

While the District still maintains an annual entitlement to water from Cachuma Lake, the only source of surface water served by the District comes from the State Water Project. The District's entitlement from the Cachuma Project is exchanged for an equal amount of State Water under an Exchange Agreement with water agencies on the south coast of Santa Barbara County. In addition to the Cachuma exchanged water, the District also receives State Water directly by entitlement. Surface water from the California Aqueduct is treated at the Polonio Pass Water Treatment plant in Kern County prior to entering the 143-mile long pipeline en route to the District's Mesa Verde Pumping Plant in Santa Ynez. Combined State Water supplies made up approximately 43 percent of the District's total supply in 2013.

The District retained eight inactive wells during the 2013 calendar year: four wells located in the Upland Basin; and four wells located adjacent to the active Santa Ynez River channel. Wells are designated inactive for reasons including regulatory requirements and water quality compliance restrictions. One active Upland Basin well was

only in use for two days in 2013 due to water use priorities. Four active River wells were not used in 2013 due to infrastructure requirements and water quality compliance considerations.

#### 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 make drinking water aesthetically pleasing (i.e., protect the odor, taste, and appearance of the water).

**Primary Drinking Water Standards (PDWS)**: MCLs for contaminants that affect health along with their monitoring, reporting, 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 health at the established MCL.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

**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 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).

**Regulatory Action Level (AL)**: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Detection Limit for the Purposes of Reporting (DLRs):** The minimum concentration a certified laboratory must detect for a given analytical parameter to comply with State regulations.

**Treatment Technique (TT)**: A required process intended to reduce the level of a contaminant in drinking water.

#### **Potential Contaminants in Source Water**

Federal regulation requires the following information to be included in this report. Because it is general information, it does not necessarily apply to the drinking water provided by the District. Please refer to the summary tables on pages 4-5 below for information specific to your drinking water.

In general, sources of 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 could be present in source water include the following:

- *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*, which 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,
  and septic systems.
- *Radioactive contaminants*, which 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. Environmental Protection Agency (USEPA) and the State Department of Public Health (DPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. DPH regulations also establish limits for contaminants in bottled water that require the same level of protection for public health.

#### **EPA Safe Drinking Water Hotline**

All 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 in drinking water is available on-line at the U.S. Environmental Protection Agency's (EPA) Safewater website at <a href="http://www.epa.gov/safewater">http://www.epa.gov/safewater</a> on the Internet or by calling the EPA Safe Drinking Water Hotline (1-800-426-4791).

SAMPLING RESULTS: ID#1 DISTRIBUTION SYSTEM MONITORING										
Microbiological Contaminants	No. of Samples Required <sup>1</sup>	No. of Samples Collected	Highest Number of detections	No. of months in violation		MCI		Typical Source of Bacteria		
Total Coliform Bacteria	159	212	(In a mo.)	0		More than 1 sample in a month with a detection	0	Naturally present in the environment		
Fecal Coliform or <i>E. coli</i>	159	212	(In the year)		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		
Lead and Copper <sup>2</sup>	No. of samples collected	90 <sup>th</sup> percentile level detected	No. Sites exceeding AL	AL	MCLG	Typical Source of Contaminan		aminant		
Lead (ppb)	20	ND	13	15	2	Internal corrosion of household water plumbin systems; discharges from industrial manufacturers; erosion of natural deposits.				
Copper (ppm)	20	0.086	0	1.3	0.17	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.				

- 1. Three bacteriological samples per week are required based on the number of District service connections, as specified in the California Code of Regulations (CCR), Chapter 15, Title 22 (Domestic Water Quality and Monitoring). The District optionally monitors bacteria at a fourth location weekly to assure representative sampling of the entire distribution system.
- 2. Sampling requirements are specified in the Lead and Copper Rule, CCR, Title 22 and are based on the population served. Samples are obtained from a representative sampling of customer's internal plumbing. Following initial sampling specified in CCR, Title 22, Chapter 17.5, representative sampling for lead and copper is required once every three years. The data summary displayed in the above table is from data obtained in August of 2012. The next scheduled sampling for lead and copper is in the summer of 2015.
- 3. Analytical results from a repeat sample taken at the one site that exceeded the Action Level were non-detect.

#### **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 for each source and constituent listed. As the table illustrates, your tap water met or exceeded all Federal and State drinking water standards. Chemicals and other constituents analyzed but not detected are not included in the report. Additionally, DPH 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.

# SAMPLING RESULTS: PRIMARY AND SECONDARY STANDARDS

Range

State

State

PHG

**Drinking Water Source** 

Ground

State

Parameter	Units	State MCL	PHG (MCLG)	State DLR	Range Average	State Water	Ground Water	Major Sources in Drinking Water
PRIMARY STANDA				•			110.101	majer countries in printing reason
KIMAKI OTAKDA	AINDO III	undatory i	icaitii ite	nated of	aridards			
CLARITY								
Combined Filter	NTU	TT=<1 N	ITU every 4	hours	Range	0.04 - 0.12	NA	Soil runoff
Effluent Turbiditv <sup>a</sup>	NIO	TT=95% o	f samples <	0.3 NTU	%	100%	NA	30111011
NORGANIC CHEMICAL	_S				Range	ND - 0.15	ND	Residue from water treatment process;
Aluminum <sup>b</sup>	ppb	1 (b)	0.6	0.05	Average	0.83	ND	Erosion of natural deposits
Arsenic	ppb	10	0.004	2.0	Range	ND		Erosion of natural deposits; runoff from orchard
AI Sellic	ррь	10	0.004	2.0	Average	ND	0.9	glass and electronic production waste
Barium	ppb	1000	2000	100	Range	ND ND		Erosion of natural deposits; oil drilling
			<del>                                     </del>		Average Range	ND ND	26 ND - 26	and metal refinery wastes  Erosion of natural deposits; steel,
Chromium (Total Cr)	ppb	50	(100)	10	Average	ND	7.9	pulp mills, and chrome plating wastes
				0.4	Range	ND	_	Erosion of natural deposits;
Fluoride	ppm	2	1	0.1	Average	ND	0.24	water additive for tooth health
Nickel	ppb	100	12	10	Range	ND	ND - 12	Erosion of natural deposits; runoff from orchard
TIONO	ррь	100	12	10	Average	ND	1.1	glass and electronic production waste
Niturata - Nituita (no NI)		40	40	0.4	Range	0.41	ND - 3.4	Runoff and leaching from fertilizer use; leaching
Nitrate + Nitrite (as N)	ppm	10	10	0.4	Average	0.41	1.6	from septic tanks and sewage; erosion of natural deposits
					Range	1.8	ND - 19	Runoff and leaching from fertilizer use; leaching
Nitrate (as NO <sub>3</sub> )	ppm	45	45	2				from septic tanks and sewage; erosion of natur
					Average	1.8	4.6	deposits
RADIONUCLIDES								
- С	0:/1	45			Range	ND - 3.9	ND - 11	Erosion of natural deposits
Gross Alpha <sup>c</sup>	pCi/L	15	NA	3	Average	2.0	3.9	
d	nC:/l	20	0.5	1	Range	ND	2.4 - 6.4	Erosion of natural deposits
Jranium <sup>d</sup>	pCi/L	20	0.5	'	Average	ND	3.8	
SECONDARY STA	NDARDS	SAestheti	c Standa	rds				
			<u> </u>	1	Danas	45 400	25 50	D tt// bin - tr bin tr bin bin bin bin bin bin
Chloride	ppm	500	NA		Range Average	45 - 136 90	35 - 56 42	Runoff/leaching from natural deposits; seawater influence
2 1 (4.011)	11.7				Range	ND	ND	
Color (ACU)		15	NA					Naturally-occurring organic materials
	Units	13	I IVA		Average	ND	ND	, , ,
Corrosivity		non-				ND non-	ND non-	Balance of hydrogen, carbon, & oxygen in
Corrosivity	SI		NA		Average Range Average	non- corrosive	non-	water, affected by temperature & other factors
•	SI	non-			Average Range Average Range	non- corrosive ND	non- corrosive ND - 300	water, affected by temperature & other factors Leaching from natural deposits;
•		non- corrosive	NA		Average Range Average Range Average	non- corrosive ND ND	non- corrosive ND - 300 23	water, affected by temperature & other factors
ron	SI	non- corrosive	NA		Average Range Average Range Average Range	non- corrosive ND ND ND - 1	non- corrosive ND - 300 23 1 - 4	water, affected by temperature & other factors Leaching from natural deposits;
ron Odor Threshold	SI ppb Units	non- corrosive 300	NA NA NA	100	Average Range Average Range Average Range Average Average	non- corrosive ND ND ND - 1	non- corrosive ND - 300 23 1 - 4 1.5	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes  Naturally-occurring organic materials
ron  Odor Threshold  Specific	SI ppb Units µmho/	non- corrosive	NA NA	100	Average Range Average Range Average Average Range Average Average Range	non- corrosive ND ND - 1 ND - 1 ND - 366 - 715	non- corrosive ND - 300 23 1 - 4 1.5 770 - 1100	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes  Naturally-occurring organic materials  Substances that form ions
ron  Odor Threshold  Specific  Conductance	SI ppb Units  µmho/ cm	non-corrosive 300 3 1600	NA NA NA	100	Average Range Average Range Average Range Average Average	non- corrosive ND ND ND - 1	non- corrosive ND - 300 23 1 - 4 1.5	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes  Naturally-occurring organic materials
ron  Odor Threshold  Specific  Conductance	SI ppb Units µmho/	non- corrosive 300	NA NA NA	 100	Average Range Average Range Average Range Average Range Average Average Average	non- corrosive ND ND - 1 ND - 1 ND 366 - 715	non- corrosive ND - 300 23 1 - 4 1.5 770 - 1100 878	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes  Naturally-occurring organic materials  Substances that form ions when in water; seawater influence
on Ddor Threshold Specific Conductance Sulfate	SI ppb Units  µmho/ cm ppm	non- corrosive 300 3 1600 500	NA NA NA NA	100 1 0.5	Average Range Average Range Average Range Average Average Range Average Range Average Range	non- corrosive ND ND - 1 ND - 1 ND 366 - 715 569 36	non- corrosive ND - 300 23 1 - 4 1.5 770 - 1100 878 13 - 240 132 440 - 730	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes  Naturally-occurring organic materials  Substances that form ions when in water; seawater influence Runoff/leaching from natural deposits; industrial wastes
ron  Odor Threshold  Specific  Conductance  Sulfate  Fotal Dissolved  Solids	SI ppb Units  µmho/ cm	non-corrosive 300 3 1600	NA NA NA	100	Average Range Average Range Average Range Average Range Average Average Range Average Average Average Average Average	non- corrosive ND ND - 1 ND - 366 - 715 569 36 36 218 - 423	non- corrosive ND - 300 23 1 - 4 1.5 770 - 1100 878 13 - 240 132 440 - 730 559	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes Naturally-occurring organic materials Substances that form ions when in water; seawater influence Runoff/leaching from natural deposits;
ron  Odor Threshold  Specific Conductance  Sulfate  Fotal Dissolved  Solids  Lab Turbidity (ID#1)	SI ppb Units  µmho/ cm ppm	non- corrosive 300 3 1600 500	NA NA NA NA	100 1 0.5	Average Range	non- corrosive ND ND ND - 1 ND 366 - 715 569 36 36 218 - 423 336 0.04 - 0.17	non- corrosive ND - 300 23 1 - 4 1.5 770 - 1100 878 13 - 240 132 440 - 730 559 ND - 1.5	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes  Naturally-occurring organic materials  Substances that form ions when in water; seawater influence Runoff/leaching from natural deposits; industrial wastes
Odor Threshold Specific Conductance Sulfate Total Dissolved Solids ab Turbidity (ID#1)	SI ppb Units  µmho/ cm ppm ppm	non-corrosive 300 3 1600 500	NA NA NA NA NA	100 1 0.5	Average Range Average Range Average Range Average Range Average Average Range Average Average Average Average Average	non- corrosive ND ND - 1 ND - 366 - 715 569 36 36 218 - 423	non- corrosive ND - 300 23 1 - 4 1.5 770 - 1100 878 13 - 240 132 440 - 730 559	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes Naturally-occurring organic materials Substances that form ions when in water; seawater influence Runoff/leaching from natural deposits; industrial wastes Runoff/leaching from natural deposits;
Dodor Threshold  Specific Conductance  Sulfate  Total Dissolved  Solids  Lab Turbidity (ID#1)  Turbidity (State Water)	SI ppb Units  µmho/ cm ppm ppm NTU	non- corrosive 300 3 1600 500 1000	NA NA NA NA NA NA	100 1 0.5	Average Range	non- corrosive ND ND ND - 1 ND 366 - 715 569 36 36 218 - 423 336 0.04 - 0.17	non- corrosive ND - 300 23 1 - 4 1.5 770 - 1100 878 13 - 240 132 440 - 730 559 ND - 1.5	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes Naturally-occurring organic materials Substances that form ions when in water; seawater influence Runoff/leaching from natural deposits; industrial wastes Runoff/leaching from natural deposits;
ron  Odor Threshold  Specific  Conductance  Sulfate  Fotal Dissolved  Solids  Lab Turbidity (ID#1)  Furbidity (State Water)	SI ppb Units  µmho/ cm ppm ppm NTU	non- corrosive 300 3 1600 500 1000	NA NA NA NA NA NA	100 1 0.5	Average Range	non- corrosive ND ND ND - 1 ND 366 - 715 569 36 36 218 - 423 336 0.04 - 0.17	non- corrosive ND - 300 23 1 - 4 1.5 770 - 1100 878 13 - 240 132 440 - 730 559 ND - 1.5	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes Naturally-occurring organic materials Substances that form ions when in water; seawater influence Runoff/leaching from natural deposits; industrial wastes Runoff/leaching from natural deposits;
ron  Odor Threshold  Specific Conductance Sulfate  Total Dissolved Solids Lab Turbidity (ID#1)  Turbidity (State Water)  ADDITIONAL PARA  Alkalinity (Total) as	SI ppb Units µmho/ cm ppm ppm NTU	non-corrosive 300 3 1600 500 1000 5 S (Unregul	NA NA NA NA NA NA NA A NA NA NA	100 1 0.5	Average Range Average Range Average Range Average Range Average Range Average Range Average Average Range Average Range Average Range Average Range Average Range	non- corrosive ND ND ND - 1 ND 366 - 715 569 36 36 218 - 423 336 0.04 - 0.17 0.06	non- corrosive ND - 300 23 1 - 4 1.5 770 - 1100 878 13 - 240 132 440 - 730 559 ND - 1.5 0.3	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes Naturally-occurring organic materials Substances that form ions when in water; seawater influence Runoff/leaching from natural deposits; industrial wastes Runoff/leaching from natural deposits;
ron  Odor Threshold  Specific Conductance Sulfate  Total Dissolved Solids Lab Turbidity (ID#1)  Turbidity (State Water)  ADDITIONAL PARA  Alkalinity (Total) as	SI ppb Units  µmho/ cm ppm ppm NTU	non- corrosive 300 3 1600 500 1000	NA NA NA NA NA NA	 100 1  0.5	Average Range Average Average Range Average Average Average	non- corrosive ND ND ND - 1 ND 366 - 715 569 36 36 218 - 423 336 0.04 - 0.17 0.06	non- corrosive ND - 300 23 1 - 4 1.5 770 - 1100 878 13 - 240 132 440 - 730 559 ND - 1.5 0.3	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes Naturally-occurring organic materials Substances that form ions when in water; seawater influence Runoff/leaching from natural deposits; industrial wastes Runoff/leaching from natural deposits; Soil erosion/runoff Runoff/leaching from natural deposits; seawater influence
ron  Odor Threshold  Specific Conductance Sulfate  Total Dissolved Solids Lab Turbidity (ID#1) Turbidity (State Water)  ADDITIONAL PARA  Alkalinity (Total) as CaCO <sub>3</sub> equivalents	SI ppb Units µmho/ cm ppm ppm NTU	non-corrosive 300 3 1600 500 1000 5 S (Unregul	NA NA NA NA NA NA NA A NA NA NA	 100 1  0.5	Average Range Average Range Average Range Average Range Average Range Average Average Average Range Average Range Average Average Range Average Range Average Range Average	non- corrosive ND ND ND - 1 ND 366 - 715 569 36 36 218 - 423 336 0.04 - 0.17 0.06	non- corrosive ND - 300 23 1 - 4 1.5 770 - 1100 878 13 - 240 132 440 - 730 559 ND - 1.5 0.3	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes Naturally-occurring organic materials Substances that form ions when in water; seawater influence Runoff/leaching from natural deposits; industrial wastes Runoff/leaching from natural deposits; Soil erosion/runoff  Runoff/leaching from natural deposits; seawater influence Runoff/leaching from natural deposits;
Corrosivity  Iron  Odor Threshold  Specific  Conductance  Sulfate  Total Dissolved  Solids  Lab Turbidity (ID#1)  Turbidity (State Water)  ADDITIONAL PARA  Alkalinity (Total) as  CaCO <sub>3</sub> equivalents  Calcium	SI ppb Units  µmho/ cm ppm ppm NTU  AMI=TI=R	non- corrosive 300 3 1600 500 1000 5 S (Unregul	NA NA NA NA NA NA NA NA NA	 100 1  0.5	Average Range Average Average Average Average	non- corrosive ND ND ND - 1 ND 366 - 715 569 36 36 218 - 423 336 0.04 - 0.17 0.06	non- corrosive ND - 300 23 1 - 4 1.5 770 - 1100 878 13 - 240 132 440 - 730 559 ND - 1.5 0.3  260 - 310 294 51 - 110 75	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes Naturally-occurring organic materials Substances that form ions when in water; seawater influence Runoff/leaching from natural deposits; industrial wastes Runoff/leaching from natural deposits; Soil erosion/runoff Runoff/leaching from natural deposits; seawater influence
ron  Odor Threshold  Specific Conductance Sulfate  Total Dissolved Solids Lab Turbidity (ID#1) Turbidity (State Water)  ADDITIONAL PARA  Alkalinity (Total) as CaCO <sub>3</sub> equivalents	SI ppb Units  µmho/ cm ppm ppm NTU  AMI=TI=R	non- corrosive 300 3 1600 500 1000 5 S (Unregul	NA NA NA NA NA NA NA NA NA	 100 1  0.5	Average Range Average Range Average Range Average Range Average Range Average Average Average Range Average Range Average Average Range Average Range Average Range Average	non- corrosive ND ND ND - 1 ND 366 - 715 569 36 36 218 - 423 336 0.04 - 0.17 0.06	non- corrosive ND - 300 23 1 - 4 1.5 770 - 1100 878 13 - 240 132 440 - 730 559 ND - 1.5 0.3	water, affected by temperature & other factors Leaching from natural deposits; industrial wastes Naturally-occurring organic materials Substances that form ions when in water; seawater influence Runoff/leaching from natural deposits; industrial wastes Runoff/leaching from natural deposits; Soil erosion/runoff  Runoff/leaching from natural deposits; seawater influence Runoff/leaching from natural deposits;

#### 2013 Annual Water Quality Report - Santa Ynez River Water Conservation District, ID#1

			Drinking Water Source						
Parameter	Units	State MCL	PHG (MCLG)	State DLR	Range Average	State Water		Ground Water	Major Sources in Drinking Water
Heterotrophic Plate	0511/1		NIA		Range	0 - 2	П	NC	Not sell assessed and a second
Count <sup>e</sup>	CFU/mL	TT	NA		Average	0.4		NC	Naturally present in the environment
Magnesium	nnm	NA	NA		Range	10		49 - 84	Runoff/leaching from natural deposits;
Magnesium	ppm	INA	INA		Average	10		60	seawater influence
рH	pН	NA	NA		Range	7.4 - 8.6	lſ	7.5 - 8.1	Runoff/leaching from natural deposits;
ргт	Units	INA	INA		Average	8.3		7.6	seawater influence
Potassium	nnm	NA	NA		Range	2.4		1.6 - 2.7	Runoff/leaching from natural deposits;
Folassium	ppm	INA	INA		Average	2.4		2.2	seawater influence
Sodium	nnm	NA	NA		Range	42	lſ	34 - 51	Runoff/leaching from natural deposits;
Socium	ppm	INA	INA		Average	42		41	seawater influence
Total Organic Carbon	222	TT	NA	0.20	Range	1.7 - 3.2			Various not real and manmade accuracy
(TOC) <sup>f</sup>	ppm	TT	NA	0.30	Average	2.4			Various natural and manmade sources.

Constituents of Concern										
Boron ppb	nnh	NA	NL=1.000	100	Range	NC		ND - 290	Runoff/leaching from natural deposits;	
	INA	INL=1,000	100	Average	NC		148	wastewater, and fertilizers/pesticides.		
Chromium (+6)	nnh	NA	0.02	1	Range	NC	lſ	ND - 25	Leaching from natural deposits;	
	ppb				Average	NC		10.1	industrial wastes	
Vanadium	ppb	NA	NL=50	3	Range	NC	lГ	ND - 32	Leaching from natural deposits;	
					Average	NC		13	industrial wastes	

#### **Distribution System Water Quality**

#### **MICROBIOLOGICAL**

Total Coliform (TC)	5.0% of		Range	0 Positives		
Bacteria <sup>g</sup>	 monthly	0	 Average	0 Positives		Naturally present in the environment
CCWA Distribution	samples		Highest	0 Positives		
Total Coliform Bacteria	>1 positive	_	Highest #	-	0.5 '''	Not call account to the control of
ID#1 Distribution	per month	Ü	 pos / mo		0 Positive	Naturally present in the environment
Fecal Coliform			Range	0 Positives		
and <i>E. Coli</i>	 	0	 Average	0 Positives		Human and animal fecal waste
CCWA Distribution			Highest	0 Positives		
Fecal Coliform	1 positive;		Highest #			
and <i>E. Coli</i>	 with repeat	0	 pos / mo		0 Positive	Human and animal fecal waste
ID#1 Distribution	TC positive		w/ repeat	-		

#### **ORGANIC CHEMICALS**

h	nnh	80	NA	NA	Range	ND - 75	3.1 - 58.7	By-product of drinking water
Total Trihalomethanes'	ppb	00	INA	INA	Highest	52	45.6	chlorination
i	dqq	60	NA	, oh	Range	10 - 34	ND - 18.5	By-product of drinking water
Haloacetic Acids <sup>7</sup>	ppo	00	INA	1,2	Highest	18	13.7	chlorination

#### DISINFECTION

DIGINI ECTION							
Total chlorine residual		MRDL =	MRDLG =	Range	1.2 - 3.5		Measurement of the disinfectant
CCWA Distribution	ppm	4.0	4.0	 Average	2.2		used in the production of drinking water
Free/total chlorine residual		MRDL =	MRDLG =	Range		0.2 - 2.2	Measurement of the disinfectant
ID#1 Distribution	ppm	4.0	4.0	 Average		1.2	used in the production of drinking water

#### **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; 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.
- 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 ( $\mu$ g/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)

#### **Drinking Water Source Assessments**

The District has evaluated each of the well locations in the District following the guidelines provided under the Drinking Water Source Assessment and Protection (DWSAP) Program. This program was established as part of the 1996 Amendments to the Federal Safe Drinking Water Act to assess all sources of drinking water for vulnerability to contamination. To summarize the results of these assessments, potential contaminant sources in the Upland Basin include septic systems and agricultural drainage. Contaminant sources that have the potential to affect wells located within the Santa Ynez River floodplain include septic systems, other wells (active and abandoned), agricultural drainage, upstream contaminant sources, application of agricultural chemicals, and surface runoff from roads. All completed assessments are available for viewing at the District office.

For the 2013 reporting period, the only contaminant associated with these PCAs detected in any of the wells was nitrate. Nitrates were detected in seven of the eight active Upland Basin wells, with concentrations ranging from Non-Detect to 19 parts per million (ppm). Nitrate results for all of the active river wells in use were Non-Detect. Annual monitoring of all water supply wells for nitrate is required to assure that concentrations remain below the 45 ppm Maximum Contaminant Level (MCL). Should nitrate concentrations exceed one-half the MCL, more frequent (quarterly) monitoring would be required.

# **Recommendation for Customers with Special Water Needs**

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).

# **Additional Information Regarding Your Drinking Water**

# Hexavalent Chromium (Cr+6)

The State Department of Public Health is currently in the process of changing the acceptable levels of chromium in drinking water. Current Federal and State water quality standards for "total chromium" are set at 100 ppb and 50 ppb, respectively. These standards (MCLs) include two principal forms of chromium: trivalent chromium (Cr+3) – an essential dietary nutrient; and hexavalent chromium (Cr+6) – which can be toxic at high concentrations. While the total chromium MCL will remain at 50 ppb, DPH is now establishing the first-in-thenation MCL for Cr+6 at a concentration of 10 ppb, which becomes effective on July 1, 2014. With no grace period included in the regulation (i.e., time for water purveyors to evaluate, design, and/or obtain funding for potential mitigation efforts), the establishment of the new Cr+6 MCL by DPH will immediately affect the District's groundwater supply.

The occurrence of Cr+6 in the District's Upland Basin wells is due to the erosion of naturally occurring chromium-containing ore deposits (e.g., serpentine) found in the nearby San Rafael Mountains. Recharge to the wells from this watershed area has resulted in detected concentrations of Cr+6 in the District's active Upland Basin water supply wells ranging from Non-Detect to 25 ppb for samples obtained during the 2013 calendar year. The District has been proactive and continues its efforts in evaluating a broad range of options available to achieve compliance with this new regulation. Additional information regarding the new regulation and general information regarding Cr+6 can be obtained at the District website at: <a href="www.syrwd.org">www.syrwd.org</a> and at the DPH website at the following URL: <a href="http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chromium6.aspx">http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chromium6.aspx</a>. Additionally, the District will be scheduling a public workshop in the summer of 2014 to answer questions regarding Cr+6 and present the findings of the on-going study addressing compliance with the new regulation.

#### Chloramine Treatment

As a reminder, water from the State Water Project that is served throughout the District is disinfected with chloramines as the final step in the raw water treatment process. Chloramine treatment is an effective disinfectant and its use has resulted in reduced water quality (e.g., taste and odor) complaints. While chloramines do not pose

a health hazard to the general population, they can be dangerous to people undergoing kidney dialysis unless the chloramines are reduced to acceptable levels. Dialysis patients should already be aware of this concern and be taking the proper precautions when receiving dialysis treatment. Additionally, **chloraminated water is toxic to fish**. Local pet and fish suppliers should be contacted to obtain the necessary treatment for chloraminated water before its use in fish tanks or ponds to assure it is safe for fish.

# **Surface Water Supply – The State Water Project**

As stated above, the surface water from State Water Project (SWP) made up approximately 43 percent of the District's water supply for 2013. Runoff from the Sierra Nevada watershed travels more than 500 miles through the rivers, pipelines, and aqueducts that make up the SWP before reaching the District's Mesa Verde Pumping Station. This "State" water is treated at the Polonio Pass Water Treatment Plant (PPWTP), a 43 million-gallon per day conventional water treatment facility, designed and constructed to treat and purify all SWP water served to San Luis Obispo and Santa Barbara Counties. The operation of the plant is the responsibility of the Central Coast Water Authority (CCWA), an agency formed in 1991 to finance, construct, and operate State water treatment and delivery facilities on behalf of all Santa Barbara County participants in the State Water Project. CCWA conducts weekly testing of the treated State water at numerous locations along its 143-mile pipeline en route to Santa Ynez to assure the delivery of the highest quality treated water to their (and our) customers. For more information about the treatment and delivery of State water, please visit the CCWA web site at the following internet address: www.ccwa.com.

#### **Cross-Connection Control Program**

The term <u>cross-connection</u> is defined as "any unprotected <u>actual</u> or <u>potential</u> connection between a potable water system and any other water system or source through which it is possible to introduce any used water, industrial fluid, gas, or other contaminant into the potable system." Cross-connections jeopardize the water quality of the District's distribution system due to the potential for backflow of contaminated water to the distribution system by way of: 1) backpressure, or 2) backsiphonage. A backpressure condition occurs when water pressure in the downstream (customer) piping is greater than the supply system pressure, potentially causing a reversal of the normal direction of flow. Backsiphonage is a form of backflow caused by a sudden reduction in supply system pressure (e.g., fire hydrant flow, water main break, undersized water supply piping, etc.) that can cause a suction affect at the customer service connection.

As many of our residential and commercial customers know, the District has an active program requiring the installation and maintenance of backflow prevention devices, where "an actual or potential cross-connection" exists, to protect and ensure safe water quality within our distribution system. Resolution No. 482 establishes the District's Cross-Connection Control Program to assure compliance with California Department of Health Services regulatory requirements (17 CCR, Section 7584) and to prevent the contamination of our distribution system. For additional information regarding this program, pick up a copy of our free color cross-connection control brochure or the District's Cross-Connection Control policy at the District office, located in Santa Ynez at 3622 Sagunto Street.

#### **Attention Landlords and Other Property Managers:**

We recommend that landlords and other property managers display this report in a public location such as a lobby, laundry room, or community room. If you would like to receive additional copies of this report, please contact the District office at (805) 688-6015.

# **Public Participation**

If you are interested in learning more about your water supply, District customers and other members of the public are invited to attend the regularly scheduled meetings of the Board of Trustees on the **third Tuesday of each month**, 5:30 P.M., at the District Office, 3622 Sagunto Street, Santa Ynez.

Knowing that water quality is important to our customers, District personnel appreciate this opportunity to communicate our efforts and successes in delivering a reliable, high quality drinking water. We are interested in hearing from you regarding any concerns or suggestions you may have pertaining to this report or any other water

quality or supply issues. For additional information or comments regarding your water quality, please contact Eric Tambini, Assistant General Manager, at the District office [(805) 688-6015].

## Source Water Protection Tips for our Customers

Each individual living within the watersheds of the Santa Ynez River and the Upland Groundwater Basin shares in the responsibility for the protection of local drinking water supplies. Ways for you to help protect your community's drinking water sources include the following:

- Eliminate excess use of lawn and garden fertilizers and pesticides they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching into the shallow aquifer.
- Dispose of used and waste chemicals properly. For example, take used motor oil to a recycling center.

# Water Conservation Tips for our Customers

Statistics show that the average U.S. household uses approximately 400 gallons of water per day. Fortunately, there are many low-cost ways to conserve water. Small changes in water usage can make a significant difference in your water consumption (and water bill) over time. Some water conservation measures you can use include, but are not limited to, the following:

- Take short showers a 5 minutes shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They are inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaking toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit <a href="http://www.waterwisesb.org/">www.epa.gov/watersense</a> and <a href="http://www.waterwisesb.org/">http://www.waterwisesb.org/</a> for more information.

#### Atención, consumidores que hablan espanol:

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