



Important health information

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 at 1-800-426-4791.

Nitrate in drinking water at levels above 45 mg/L (ppm) is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

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 District 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>.

Source water assessments

In 2002, the District completed its source water assessments of fifteen wells. These assessments identify activities that could potentially contaminate a drinking water well. The source water assessment for a sixteenth well was completed in 2011. Aromas Red Sands Aquifer supplies are considered to be the most vulnerable to on-site residential septic systems and potential leakage from sewer lines. Aptos Junior High well is also vulnerable to contamination from nearby parks and chemicals used at its drinking water treatment plant. Purisima Formation supplies are considered to be the most vulnerable to contamination from dry cleaners, historic and active automobile stations, sewer collection systems, home manufacturing, grazing, known contaminant plumes, photo processing/printing establishments, and utility stations/maintenance areas.

Copies of each assessment or the Executive Summaries are available on the District's website at www.soquelcreekwater.org and the full reports are available at the District office at 5180 Soquel Drive, Soquel, CA.

For more information

The presence and level of constituents varies throughout the District. If you have questions, suggestions or comments regarding this report, or questions regarding the specific water quality for your neighborhood, please contact Christine Mead, the District's Water Quality Program Coordinator, at (831) 475-8500.

There is also a wealth of information on the Internet about Drinking Water Quality and water issues in general. Two good sites include:

California Department of Public Health, Division of Drinking Water and Environmental Management
www.cdph.ca.gov/certlic/drinkingwater/Pages/default.aspx

U.S. Environmental Protection Agency
<http://water.epa.gov/drink/index.cfm>

Getting involved in decisions that affect your drinking water: The District encourages public participation in its decision-making process. The District is governed by a five-person, publicly elected Board of Directors. The Board meets the first and third Tuesday of each month at 7:00 pm at 5180 Soquel Drive in Soquel.

If you are a landlord or manage a multi-unit dwelling, please contact us to order as many additional copies of the report as you need to ensure your tenants receive this important information.



Información muy importante: este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien, o llámenos a (831) 475-8500.



What's On Tap

at the Soquel Creek Water District

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What's On Tap is an in-house publication printed bi-monthly for the customers of our District.

2011 Consumer Confidence/Water Quality Report

The Soquel Creek Water District (SqCWD) is proud to report that in 2011 the District's water met all established drinking water health standards set by the U.S. Environmental Protection Agency (USEPA) and the California Department of Public Health (CDPH).

The annual Consumer Confidence/Water Quality Report presents the results of test data from all of our groundwater wells that pump water from the Purisima and Aromas Red Sands Formations. All test samples are collected and reported in accordance with standards and requirements established by the USEPA and CDPH. This year's report covers calendar year 2011 testing.

Important information regarding your water

Drinking water standards are established by the USEPA and CDPH. In order to be called safe, water supplies must stay within USEPA and State maximums when measured for certain constituents. This Water Quality Report communicates whether there is a detectable presence and the levels of each of the tested constituents in our water supply.

During the past year, the District tested for 136 constituents in order to ensure your water meets State and Federal drinking water standards. You can review the data for each of the service areas in the table provided in this report. These test results reflect all of our groundwater wells and purchased water. Only those regulated constituents that had detected levels are shown.

While SqCWD receives only groundwater from wells, other sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, and springs. 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.

In order to ensure that tap water is safe to drink, the USEPA and the CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. 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 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 at 1-800-426-4791.

Contaminants that may be present in source water include:	Possible Sources:
Microbial contaminants, such as viruses and bacteria	Sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
Inorganic compounds, such as salts and metals	Naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.
Radioactive contaminants	Can be naturally occurring or be the result of oil and gas production or mining activities.
Pesticides and herbicides	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	By-products of industrial processes and petroleum production, and can also come from gasoline stations, urban stormwater runoff, agricultural application, and septic systems.

What are water quality goals?

In addition to mandatory water quality standards, USEPA and CDPH have set voluntary water quality goals for some contaminants. Water quality goals are often set at such low levels that they are not achievable in practice and are not directly measurable. Nevertheless, these goals provide useful guideposts and direction for water management practices. The chart includes three types of water quality goals:

- ◆ **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 USEPA.
- ◆ **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.
- ◆ **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 EPA.

What are water quality standards?

Drinking water standards established by USEPA and CDPH set limits for substances that may affect consumer health or aesthetic qualities of drinking water. The chart in this report shows the following types of water quality standards:

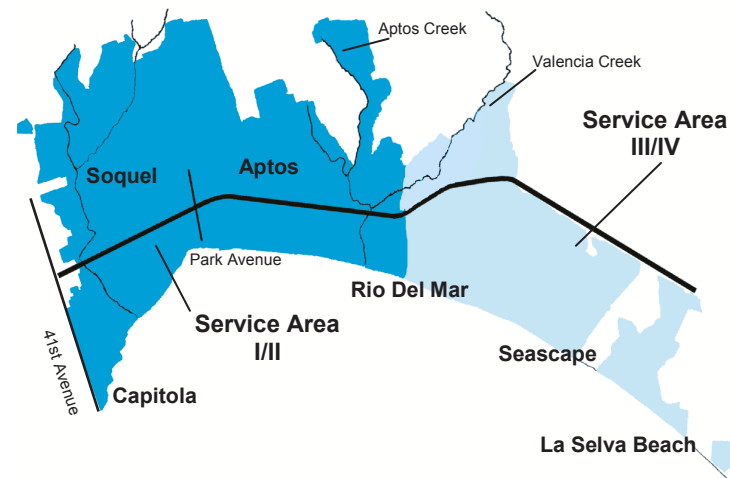
- ◆ **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible.
- ◆ **Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- ◆ **Secondary MCLs:** Are set to protect the odor, taste and appearance of drinking water.
- ◆ **Primary Drinking Water Standards:** MCLs and MRDLs (see definitions above) for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.
- ◆ **Regulatory Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Where your water comes from

In 2011, District customers received water from 15 wells pumping from underground aquifers in two geologic formations, the Purisima and the Aromas Red Sands. Delivered water from both sources meet all current drinking water health standards.

Delivered water represents a blend from several wells in each of two regions in the District, Service Area I/II and Service Area III/IV. In general, the average amounts of contaminants shown in the analysis table are the most representative of the water quality received by customers in each of the two areas. The map below depicts the locations of the two service areas.

Customers in Service Area I/II (Capitola, Soquel and parts of Aptos) receive water from the Purisima Formation. Because this water is high in iron and manganese, it is treated to reduce these elements. In Service Area III/IV (parts of Aptos, Rio Del Mar, Seascapes and La Selva Beach) approximately 80% of the water is provided by the Aromas Red Sands Aquifer and the remaining 20% of the water is provided by the Purisima Formation.



How are contaminants measured?

Water is sampled and tested throughout the year.

Detected constituents are measured in:

- Parts per million (ppm) or milligrams per liter (mg/L)
- Parts per billion (ppb) or micrograms per liter (ug/L)
- Parts per trillion (ppt) or nanograms per liter (ng/L)

Think about these comparisons:

- Parts per million = 1 drop in 14 gallons
- Parts per billion = 1 drop in 14,000 gallons
- Parts per trillion = 1 drop in 14,000,000 gallons

2011 Soquel Creek Water District Water Quality Analysis Table

Systemwide								
PRIMARY HEALTH STANDARDS	MCL or [MRDL]	PHG or [MRDLG]	Year Tested	Range of Detections	Average Amounts	Typical Sources of Constituent		
Disinfection By-products/Residuals*								
Total Trihalomethanes (TTHMs) (ppb)	80	N/A	2011	1.2 - 52	15	By-product of drinking water disinfection		
5 Haloacetic Acids (HAA5) (ppb)	60	N/A	2011	ND - 3.9	0.88	By-product of drinking water disinfection		
Chlorine Residual (ppm)	[4.0]	[4.0]	2011	0.03 - 1.08	0.56	Drinking water disinfectant added for treatment		
				Service Area I/II		Service Area III/IV		
PRIMARY HEALTH STANDARDS	MCL	PHG or (MCLG)	Year Tested	Range of Detections	Average Amounts	Range of Detections	Average Amounts	
Inorganic Constituents								
Arsenic** (ppb)	10	0.004	2011	ND - 3.0	ND	ND	ND	Erosion of natural deposits
Chromium, total (ppb)	50	(100)	2011	ND	ND	ND - 38	15	Erosion of natural deposits
Fluoride (ppm)	2.0	1	2011	ND - 0.53	0.30	ND - 0.15	0.12	Erosion of natural deposits
Nitrate (as NO ₃) (ppm)	45	45	2011	ND	ND	ND - 25	7.4	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radioactive Constituents								
Radium 228 (pCi/L)	5	0.019	2007***	ND	ND	ND - 1	ND	Erosion of natural deposits
SECONDARY AESTHETIC STANDARDS								
Chloride (ppm)	500	N/A	2011	21 - 72	47	13 - 79	27	Runoff/leaching from natural deposits; seawater influence
Color (units)**	15	N/A	2011	ND - 6.6	2.8	ND	ND	Naturally occurring materials
Copper (ppm)	1.0	N/A	2011	ND	ND	ND - 0.063	ND	Erosion of natural deposits
Iron** (ppb)	300	N/A	2011	ND - 300	ND	ND	ND	Leaching from natural deposits
Manganese** (ppb)	50	NL = 500 HA = 300	2011	ND - 34	ND	ND	ND	Leaching from natural deposits
pH (unitless)	6.5 - 8.5 (USEPA)	N/A	2011	7.3 - 8.0	7.6	7.3 - 7.9	7.6	A measure of the acidity or alkalinity
Specific Conductance (microsiemens/centimeter)	1,600	N/A	2011	472 - 879	699	236 - 533	413	Substances that form ions when in water; seawater influence
Sulfate (ppm)	500	HA = 500	2011	28 - 150	79	4.1 - 43	26	Runoff/leaching from natural deposits
Total Dissolved Solids (TDS) (ppm)	1,000	N/A	2011	285 - 591	432	85 - 339	236	Runoff/leaching from natural deposits
Turbidity** [Nephelometric Turbidity Units (NTUs)]	5	N/A	2011	0.1 - 0.9	0.3	0.1 - 0.7	0.4	Runoff/leaching from natural deposits
UNREGULATED CONSTITUENT MONITORING†								
Hexavalent Chromium (Cr6) (ppb)	N/A	0.02	2004*** for Service Area I/II and 2011 for Service Area III/IV	ND	ND	ND - 40	16	Naturally occurring chromium-bearing minerals
1,2,3-Trichloropropane (ppt)††	N/A	0.7; NL=5	2011	ND	ND	ND - 15	ND	Leaching of obsolete agricultural fumigants
OTHER MONITORING RESULTS								
Hardness (as CaCO ₃) (ppm)	N/A	N/A	2011	160 - 400	256	97 - 240	179	Sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring.
Sodium‡ (ppm)	N/A	HA = 20	2011	37 - 93	62	11 - 27	20	Salt present in water; generally naturally occurring

RESIDENTIAL TAP MONITORING FOR COPPER						
	Action Level (AL)	PHG	Year Tested	90th Percentile Value	Sites Exceeding AL/Number of Sites	Typical Sources of Constituent
Copper (ppm)	1.3	0.3	2010***	0.41	0/30	Internal corrosion of household plumbing systems; erosion of natural deposits

N/A = Not Applicable

ND = Not Detected at or above the State Detection Limit for Purposes of Reporting

NL = Notification Level; a health-based advisory level established by CDPH for constituents in drinking water that lack MCLs

HA = USEPA Drinking Water Health Advisory

pCi/L = Picocuries per liter (a measure of radioactivity)

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)

* = Sampled within the distribution system; ** = Sampled immediately after treatment where treated; *** = The State allows monitoring for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative, are more than one year old.

†Unregulated contaminant monitoring helps the USEPA and CDPH to determine where certain contaminants occur and whether the contaminants need to be regulated.

††1,2,3-Trichloropropane (TCP) is currently listed as an "unregulated" compound. TCP is found only in the District's Country Club Well. Some people who use water containing TCP in excess of the notification level over many years may have an increased risk of getting cancer, based on studies in laboratory animals.

‡ The 20 ppm USEPA health advisory is for individuals on a 500 mg/day restricted sodium diet.