

Soquel Creek Water District

2013 CONSUMER CONFIDENCE / WATER QUALITY REPORT

Important information regarding your water

DRINKING WATER STANDARDS are established by the U.S. Environmental Protection Agency (USEPA) and the California Department of Public Health (CDPH). In order to be considered safe, water supplies must stay within USEPA and CDPH 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. This year's report covers calendar year 2013 testing.

Soquel Creek Water District (SqCWD) receives only groundwater from wells, but other sources of drinking water (both tap water



water quality testing

DURING THE PAST YEAR, the District tested for over 140 constituents in order to ensure your water meets State and Federal drinking water standards. All test samples are collected and reported in accordance with standards and requirements established by the USEPA and CDPH. 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. Only those regulated constituents that had detected levels are shown.

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

Cont' next page

The annual 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 Geologic Formations.

The Soquel Creek Water District is proud to report that in 2013 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).

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 U.S. Environmental Protection Agency (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.

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 Office of Environmental Health Hazard Assessment (OEHHA).

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.

2013 Soquel Creek Water District Water Quality Analysis Table

| PRIMARY HEALTH STANDARDS | MCL or [MRDL] | PHG, (MCLG) or [MRDLG] | Systemwide | | | | Typical Sources of Constituent | |
|---|-------------------|------------------------|---------------------------|---------------------|----------------|---------------------|---|---|
| | | | Year Tested | Range of Detections | Average Amount | | | |
| Disinfection Byproducts¹ | | | | | | | | |
| Total Trihalomethanes (TTHMs) (ppb) | 80 | N/A | 2013 | 3.3 - 45 | 12.6 | | By-product of drinking water disinfection | |
| 5 Haloacetic Acids (HAA5) (ppb) | 60 | N/A | 2013 | ND - 33 | 13.8 | | By-product of drinking water disinfection | |
| Disinfectant Residual¹ | | | | | | | | |
| Chlorine Residual (ppm) | [4.0] | [4.0] | 2013 | 0.02 - 1.13 | 0.51 | | Drinking water disinfectant added for treatment | |
| Service Area I/II | | | | | | | | |
| PRIMARY HEALTH STANDARDS | MCL | PHG or (MCLG) | Year Tested | Service Area I/II | | Service Area III/IV | | Typical Sources of Constituent |
| | | | | Range of Detections | Average Amount | Range of Detections | Average Amount | |
| Inorganic Constituents | | | | | | | | |
| Arsenic ² (ppb) | 10 | 0.004 | 2013 | ND - 3.1 | ND | ND | ND | Erosion of natural deposits |
| Chromium, total (ppb) | 50 | (100) | 2013 | ND | ND | ND - 24 | 11 | Erosion of natural deposits |
| Fluoride (ppm) | 2.0 | 1 | 2013 | ND - 0.42 | 0.22 | ND - 0.16 | 0.13 | Erosion of natural deposits |
| Nitrate (as NO ₃) (ppm) | 45 | 45 | 2013 | ND | ND | ND - 19 | 7.2 | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |
| Organic Constituents | | | | | | | | |
| cis-1,2-Dichloroethylene (ppb) | 6 | 100 | 2011 & 2013 | ND | ND | ND - 0.51 | ND | Discharge from industrial sources; minor biodegradation byproduct of TCE and PCE groundwater contamination |
| Radioactive Constituents | | | | | | | | |
| Gross Alpha (pCi/L) | 15 | (0) | 2006 or 2010 ³ | ND | ND | ND - 5.6 | ND | Erosion of natural deposits |
| Radium 226 (pCi/L) | * | 0.05 | 2007 | *** | *** | ND | ND | Erosion of natural deposits |
| Radium 228 (pCi/L) | * | 0.019 | 2010 | ND | ND | ND - 1.2 | ND | Erosion of natural deposits |
| Combined Radium (Radium 226 & 228) (pCi/L) | 5 | ** | 2007 or 2010 ³ | ND | ND | ND - 1.2 | ND | Erosion of natural deposits |
| SECONDARY AESTHETIC STANDARDS | | | | | | | | |
| Chloride (ppm) | 500 | N/A | 2013 | 28 - 88 | 48 | 14 - 36 | 25 | Runoff/leaching from natural deposits; seawater influence |
| Color ² (units) | 15 | N/A | 2013 | ND - 8.0 | 3.0 | ND - 2.3 | 1.5 | Naturally occurring materials |
| Iron ² (ppb) | 300 | N/A | 2013 | ND - 300 | ND | ND | ND | Leaching from natural deposits |
| Manganese ² (ppb) | 50 | NL = 500 HA = 300 | 2013 | ND - 44 | ND | ND | ND | Leaching from natural deposits |
| pH (unitless) | 6.5 - 8.5 (USEPA) | N/A | 2013 | 7.1 - 8.2 | 7.6 | 7.1 - 7.6 | 7.5 | A measure of the acidity or alkalinity |
| Specific Conductance (microsiemens/centimeter) | 1,600 | N/A | 2013 | 425 - 791 | 540 | 206 - 469 | 368 | Substances that form ions when in water; seawater influence |
| Sulfate (ppm) | 500 | HA = 500 | 2013 | 44 - 180 | 85 | 4.2 - 40 | 23 | Runoff/leaching from natural deposits |
| Total Dissolved Solids (TDS) (ppm) | 1,000 | N/A | 2013 | 300 - 611 | 450 | 161 - 374 | 270 | Runoff/leaching from natural deposits |
| Turbidity ² [Nephelometric Turbidity Units (NTUs)] | 5 | N/A | 2013 | ND - 3.5 | 0.3 | ND - 0.4 | 0.2 | Runoff/leaching from natural deposits |
| UNREGULATED CONTAMINANT MONITORING⁴ | | | | | | | | |
| Chlorate (ppb) ^{5,6} | N/A | NL = 800 | 2013 | 84 - 1,400 | 274 | ND - 160 | 68 | By-product of drinking water disinfection |
| Chromium, hexavalent (Cr6) (ppb) ⁵ | N/A | 0.02 | 2013 | ND - 0.17 | 0.051 | 0.10 - 35 | 12 | Naturally occurring chromium-bearing minerals |
| Chromium, total (ppb) ⁵ | 50 | (100) | 2013 | ND - 7.6 | 1.0 | ND - 38 | 12 | Naturally occurring chromium-bearing minerals |
| 1,1-Dichloroethane (ppb) ⁷ | 5 | 3 | 2013 | ND | ND | ND - 0.097 | ND | Extraction and degreasing solvent; fumigant |
| 1,4-Dioxane (ppb) ⁷ | N/A | NL = 1 | 2013 | ND | ND | ND - 0.11 | ND | Extraction and degreasing solvent stabilizer |
| Molybdenum (ppb) ⁵ | N/A | HA = 40 | 2013 | ND - 3.1 | 2.2 | ND | ND | Leaching from natural deposits |
| Strontium (ppb) ⁵ | N/A | HA = 4,000 | 2013 | 140 - 550 | 382 | 86 - 180 | 128 | Leaching from natural deposits |
| 1,2,3-Trichloropropane (ppt) ^{7,8} | N/A | 0.7; NL=5 | 2011 & 2013 | ND | ND | ND - 15 | ND | Leaching of obsolete agricultural fumigants |
| Vanadium (ppb) ⁵ | N/A | NL = 50 | 2013 | ND | ND | 0.19 - 12 | 5.8 | Leaching from natural deposits |

N/A = Not Applicable

ND = Not Detected at or above the CDPH 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)

¹ Sampled within the distribution system

² Sampled immediately after treatment where treated.

³ CDPH allows monitoring for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, although representative, are more than one year old.

⁴ Unregulated contaminant monitoring helps the USEPA and CDPH to determine where certain contaminants occur and whether the contaminants need to be regulated. This also includes the Unregulated Contaminant Monitoring Rule 3 results.

⁵ Sampled at all entry points to the distribution system and points within the distribution system.

⁶ Chlorate is an "unregulated" compound. The sole detection above the NL was determined by CDPH not to be an NL exceedance based upon follow-up testing.

⁷ Sampled at all entry points to the distribution system.

⁸ 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.

* Radium 226 and Radium 228 do not have individual MCLs; MCL is for Combined Radium (Radium 226 and Radium 228).

** Combined Radium (Radium 226 and Radium 228) does not have its own PHG. PHGs are listed for individual constituents.

*** Radium 226 testing has been waived by CDPH for all wells. Two Service Area 3 wells were voluntarily tested in 2007 or 2010.

2013 Soquel Creek Water District Water Quality Analysis Table Con't

| OTHER MONITORING RESULTS | MCL | PHG or (MCLG) | Year Tested | Range of Detections | Average Amount | Range of Detections | Average Amount | Typical Sources of Constituent |
|--|-------------------|---------------|-------------|-----------------------|-------------------------------------|---|----------------|---|
| Hardness (as CaCO ₃) (ppm) | N/A | N/A | 2013 | 146 - 360 | 222 | 75 - 240 | 181 | Sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring. |
| Sodium ⁹ (ppm) | N/A | HA = 20 | 2013 | 27 - 90 | 58 | 11 - 26 | 21 | Salt present in water; generally naturally occurring |
| RESIDENTIAL TAP MONITORING FOR LEAD AND COPPER | Action Level (AL) | PHG or (MCLG) | Year Tested | 90th Percentile Value | Sites Exceeding AL/ Number of Sites | Typical Sources of Constituent | | |
| | | | | Systemwide | | | | |
| Lead (ppb) | 15 | 0.2 | 2013 | ND | 0/32 | Internal corrosion of household plumbing systems; erosion of natural deposits | | |
| Copper (ppm) | 1.3 | 0.3 | 2013 | 0.34 | 0/32 | Internal corrosion of household plumbing systems; erosion of natural deposits | | |

N/A = Not Applicable

ND = Not Detected at or above the CDPH 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

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)

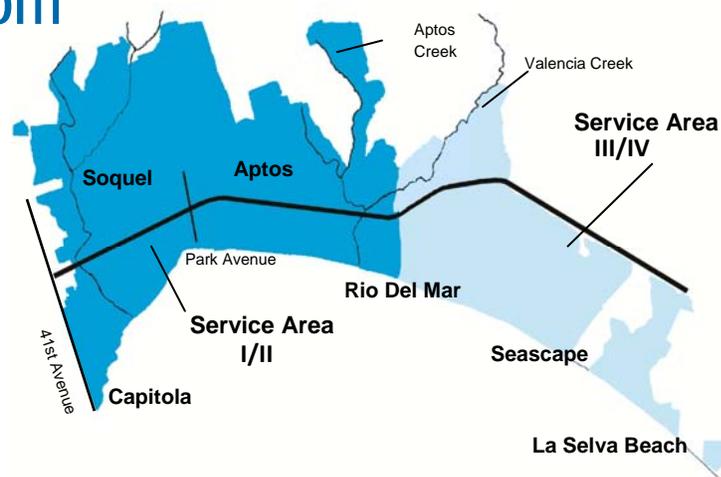
⁹ The 20 ppm USEPA Health Advisory is for individuals on a 500 mg/day restricted sodium diet.

Where your water comes from

IN 2013, DISTRICT CUSTOMERS received water from 16 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 to the right 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)
1 drop in 14 gallons

Parts per billion (ppb) or micrograms per liter (ug/L)
1 drop in 14,000 gallons

Parts per trillion (ppt) or nanograms per liter (ng/L)
1 drop in 14,000,000 gallons

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 (1-800-426-4791).

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>. Year-round water conservation is an important way to help protect our local water supply. Please consider capturing the water used to flush your plumbing and re-use it for non-potable purposes such as watering plants or household cleaning.

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 assessments for two additional wells were 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. The Aptos Junior High and Polo Grounds wells are also vulnerable to contamination from nearby parks, irrigated crops, fertilizer/pesticide/herbicide applications, and/or chemicals used at their drinking water treatment plants. 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 by contacting the District's office.



For more information

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.

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 Carla James, the District's Water Quality Program

Coordinator, at 831-475-8501 ext. 138.

NEW THIS YEAR: The District's annual Water Quality Report is now electronically delivered. If you wish to obtain a print copy, please call the District office at 831-475-8500.

Please 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.

Board of Directors

*Dr. Thomas LaHue,
President*

*Bruce Daniels,
Vice President*

Dr. Bruce Jaffe

*Dr. Don
Hoernschemeyer*

Richard Meyer

*Kim Adamson,
General Manager*



**5180 Soquel Drive
P.O. Box 1550
Capitola, CA 95010**

**Phone: 831-475-8500
Fax: 831-475-4291
Email: custserv@soquelcreekwater.org**

www.soquelcreekwater.org

other ways to connect with us!



get 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. Check the District's website for meeting locations.

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>