CITY OF SANTA CRUZ WATER DEPARTMENT
CONSUMER CONFIDENCE REPORT
2013

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

此份有關你的食水報告,內有重要資料和訊息,請找他人為你翻譯及解釋清楚。

WHAT IS THIS REPORT?

This annual Consumer Confidence Report provides a summary of last year's water quality in 2013 and has been prepared to inform the City of Santa Cruz Water Department customers about their drinking water. Included are details about where your water comes from, what it contains and how it compares to State and Federal drinking water standards. The City of Santa Cruz Water Department vigilantly safeguards its water supplies and provides thorough treatment to ensure that our customers receive high quality drinking water. We are committed to providing our customers with accurate information about their water. Once again we are proud to assure our customers they can have confidence that their drinking water is of the highest possible quality.

In 2013, your tap water met all United States Environmental Protection Agency (US-EPA) and California drinking water health standards.

WHERE DOES OUR WATER COME FROM?

To provide water for our service area, the City of Santa Cruz depends on supplies from four locales: the North Coast sources, the San Lorenzo River, Loch Lomond Reservoir and the Live Oak Wells. Except for groundwater from the Live Oak Wells, these are all surface water sources dependent on rainfall and runoff. No water is purchased from State or Federal sources or imported to the region from outside the Santa Cruz area.

The North Coast sources consist of surface diversions from two coastal streams and one natural spring. Due to the excellent water quality and the lowest production cost, the North Coast sources are used to the greatest extent possible. These source waters are conveyed to the City's Graham Hill Water Treatment Plant for purification, the use of these sources by the City dates back to 1890.

San Lorenzo River flows are diverted to the City's Graham Hill Water Treatment Plant for treatment. Two wells located beside the San Lorenzo River and hydraulically connected are included in the City water right. Additionally, the City diverts water from higher in the San Lorenzo River to Loch Lomond Reservoir. This water is used to supplement storage in the reservoir during dry years when natural inflow from Newell Creek is low.

Loch Lomond Reservoir, constructed in 1960, provides surface water storage on Newell Creek. Water from the reservoir is treated at the Graham Hill Water Treatment Plant. Additionally, the reservoir and surrounding watershed are used for public recreation purposes, including fishing, boating, hiking and picnicking.

The Live Oak well system consists of three groundwater wells and a small treatment plant located in the southeast portion of the City's service area. These wells draw from the Purisima Aquifer. During the spring and summer seasons, when surface flows are inadequate to meet the daily demand, supplemental water is brought in from the Live Oak Wells, treated at the Live Oak Treatment Plant and distributed to customers in the southeast service area.

IS OUR WATER VULNERABLE TO CONTAMINATION?

In 2002, water suppliers were required to conduct assessments of their water sources. These assessments included delineations of areas around sources from which contamination might reach the source. Further, these assessments included an inventory of activities with the potential to release contaminants within the delineated areas. There are potentially contaminating activities in the areas of the Santa Cruz sources, such as automobile service facilities, septic systems, confined animal facilities, construction, timber harvest, road maintenance, "legacy" land disturbance including historic logging roads and isolated industrial operations resulting in contaminant plumes, as well as other activities. However, the City currently manages its water sources by prioritizing use of the purest source water during times when the drinking water system is most vulnerable (i.e. during storm runoff periods), so that we can produce the highest quality drinking water possible. In 2013, the Water Resources Section completed an update of the 2007 Drinking Water Sanitary Survey of the San Lorenzo Valley and North Coast Watersheds. The 2013 Sanitary Survey can be viewed at www.cityofsantacruz.com/sanitarysurvey2013 or by contacting the City's Watershed Compliance Manager at (831) 420-5483 or by email at WaterResources@cityofsantacruz.com

WHY ARE THERE CONTAMINANTS IN 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 EPA Safe Drinking Water Hotline (800) 426-4791 or EPA website http://water.epa.gov/drink/hotline

The sources of drinking water (both tap 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, which 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, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

In order to ensure that tap water is safe to drink, U.S. Environmental Protection Agency (EPA) and the California Department of Public Health (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.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons 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. EPA/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 (800) 426-4791.

INORGANIC CONTAMINANTS WITH ACTION LEVELS

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 Santa Cruz Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in household 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. In 2012, tap water samples were collected from 31 Santa Cruz homes after their water sat unused overnight for 6 hours or more, and then analyzed for lead and copper. These specific homes were selected because they were all built and/or their plumbing was constructed between January 1983 and December 1987 with lead solder and copper pipe as required by the Lead and Copper Rule http://www.epa.gov/leadcopperrule. The City of Santa Cruz Water Department currently has a three year waiver for our required Lead and Copper monitoring frequency. The next Lead and Copper study will be conducted during the summer of 2015.

WATER QUALITY DATA TABLE

The Table of Detected Contaminants lists drinking water contaminants that were detected during the 2013 calendar year. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk.

To interpret the tables, you will need the following definitions:

MCL: Maximum Contaminant Level: 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.

MCLG: Maximum Contaminant Level Goal: 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.

MRDL: Maximum Residual Disinfectant Level: 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.

MRDLG: Maximum Residual Disinfectant Level Goal: 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.

N/A: Not Applicable

PDWS: Primary Drinking Water Standard: MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

PHG: Public Health Goal: 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.

LRAA: Locational Running Annual Average: The locational average of the most recent 12 months of data.

RAL: Regulatory Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

SDWS: Secondary Drinking Water Standards: MCLs for contaminants that may adversely affect the taste, odor or appearance of drinking water. These are aesthetic considerations that are not considered as health concerns.

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

Data Table Units:
NTU: Nephelometric Turbidity Units
pCi/L: picocuries per liter (a measurement of radioactivity)
ppm: parts per million or milligrams per liter (mg/L)
ppb: parts per billion or micrograms per liter (µg/L)
µmhos/cm: a measure of electrical conductivity

WATER QUALITY TABLE OF DETECTED CONTAMINANTS

Contaminants Regulated by Primary Drinking Water Standards

Contaminants (units)	PHG MCLG	PDWS MCL	Treated Water Average[2]	Source Water Range[1]		Sample Date	Violation	Typical Source of Contamination
				Low	High			
Aluminum (ppm)	0.6	1	0.02	<0.02	0.02	2013	No	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppb)	0.004	10	<1.0	<1.0	3.4	2013	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride (ppm)	1	2.0	0.2	<0.1	0.3	2013	No	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Gross Alpha particle activity (pCi/L)	0	15	<3.00	<3.00	4.00	2011	No	Erosion of natural deposits
Nitrate (ppm)	45	45	1.1	<0.1	3.1	2013	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

Additional Contaminants Regulated by Primary Drinking Water Standards

Contaminants (units)	PHG MCLG	PDWS MCL	Treated Water Average[2]	Treated Water Range[2]		Sample Date	Violation	Typical Source of Contamination
				Low	High			
Turbidity (NTU)	TT	Maximum 1 and 95% <0.3	0.08	0.04	0.72	2013	No	Soil runoff

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Microbiological Contaminants

Contaminants	PHG MCLG	PDWS MCL	Treated Water[2]	Source Water[1]	Sample Date	Violation	Typical Source of Contamination
Total Coliform Bacteria	0	less than 5% positive	0 positive		2013	No	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present
E. Coli	0	0	0 positive		2013	No	*E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes

Contaminants Regulated by MRDL

Contaminants (units)	PHG	PDWS MRDL	Treated Water Average[2]	Treated Water Range[2]		Sample Date	Violation	Typical Source of Contamination
				Low	High			
Chlorine (ppm)	4	4	0.81	<0.02	3.70	2013	No	Drinking water disinfectant added for treatment

Disinfection Byproduct Contaminants under Stage 2 DBP Rule

Contaminants (units)	PHG MCLG	MCL	Treated Water[2]	Treated Water Range[2]		Sample Date	Violation	Typical Source of Contamination
				Low	High			
TTHM [Total Trihalomethanes] (ppb)	N/A	80 (LRAA)	67 (LRAA)	29	81	2013	No	By-product of drinking water disinfection
HAA5 [Total Haloacetic Acids] (ppb)	N/A	60 (LRAA)	41 (LRAA)	<2	51	2013	No	By-product of drinking water disinfection

Inorganic Contaminants with Action Levels

Contaminants (units)	PHG	RAL	Tap Water 90th Percentile[3]	# of Samples Exceeding RAL[3]	Sample Date	Exceeds RAL	Typical Source of Contamination
Copper (ppm)	0.3	1.3	0.25	0	2012	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2	15	<2	0	2012	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

Contaminants with Secondary Drinking Water Standards (SDWS)						
Contaminants (units)	**SDWS MCL**	**Treated Water Average[2]**	**Treated Water Range[2]**		**Sample Date**	**Typical Source of Contamination**
			Low	**High**		
Iron (ppb)	300	<20	<20	220	2013	Leaching from natural deposits; industrial wastes
Chloride (ppm)	500	26	19	59	2013	Runoff/leaching from natural deposits; seawater influence
Manganese (ppb)	50	<2	<2	26	2013	Leaching from natural deposits
Specific Conductance (µmhos/cm)	1600	400	270	755	2013	Substances that form ions when in water; seawater influence
Sulfate (ppm)	500	77	67	143	2013	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	1000	280	255	500	2013	Runoff/leaching from natural deposits

Other Monitoring Results					
Other monitoring results are provided for consumer information.					
Constituents (units)	**Treated Water Average[2]**	**Treated Water Range[2]**		**Sample Date**	**Typical Source of Contamination**
		Low	**High**		
Hardness (ppm)	165	126	285	2013	A measure of the major cations, primarily calcium and magnesium
Sodium (ppm)	28	25	51	2013	Runoff/leaching from natural deposits; saltwater influence

Unregulated Contaminants – UCMR3				
Contaminants (units)	**Treated Water Average[2]**	**Treated Water Range[2]**		**Sample Date**
		Low	**High**	
Chlorate (ppb)	170	130	300	2013
Chromium-6 (ppb)	0.06	0.03	0.09	2013
Molybdenum (ppb)	2.3	2.0	2.6	2013
Strontium (ppb)	257	220	260	2013
Vanadium (ppb)	0.50	0.28	0.71	2013

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

[1]Untreated water from the source(s) [2]Treated water from the treatment plant or water mains [3]Water from 31 customers' household taps

We hope this Consumer Confidence Report is valuable to you. If you have questions or comments on your water, please contact one of the City of Santa Cruz staff listed below.

WATER ADMINISTRATION
Rosemary Menard, Water Director
212 Locust St, Suite A
Santa Cruz, CA 95060
Phone: (831) 420-5200
Fax: (831) 420-5201

WATER QUALITY LABORATORY
Hugh Dalton, Water Quality Manager
715 Graham Hill Road
Santa Cruz, CA 95060
Phone: (831) 420-5484
E-mail: WaterQuality@cityofsantacruz.com
CCR2013:www.cityofsantacruz.com/ccr2013

WATER RESOURCES
Chris Berry, Watershed Compliance Manager
715 Graham Hill Road
Santa Cruz, CA 95060
Phone: (831) 420-5483
E-mail: WaterResources@cityofsantacruz.com

You can also find other information on the Water Department and its activities at the City's website ww.cityofsantacruz.com. There you can find information on water conservation, the Loch Lomond Recreation Area, activities and projects of our Engineering Section, the Water Commission and more.

Meetings of the City Council and Water Commission provide excellent opportunities for you to get involved in issues related to drinking water. Their agendas are posted on the website listed above, at City Hall, or you can call the Water Department at (831) 420-5200 to find out more. We welcome your attendance and input.

SANTA CRUZ CITY COUNCIL
809 Center Street, Room 10
Santa Cruz, CA 95060
Phone: (831) 420-5020
E-mail: CityCouncil@cityofsantacruz.com

WATER COMMISSION
Contact the Water Commission through the Water Department (831) 420-5200
Water Commission meetings are scheduled for the first Monday of each month at 7:00 pm.

Other sources of information:

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER
Monterey District Office
(831) 655-6939
www.cdph.ca.gov/programs/Pages/DWP.aspx

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460
(202) 566-1729
http://water.epa.gov/drink/index.cfm