A Message from the Director:

The City of Santa Rosa Water Utilities is responsible for ensuring high-quality and reliable potable water, wastewater and recycled water service. This includes protecting public health by managing our water resources, maintaining our water infrastructure, and protecting the environment. These essential services are made possible by our community's continued investment in our water system, the leadership of our City Council and Board of Public Utilities, and our dedicated and highly skilled staff.

In 2013, Santa Rosa provided potable water service to approximately 52,000 homes and businesses. The water delivery infrastructure is closely monitored and maintained, which includes regular testing to ensure it meets the U.S. Environmental Protection Agency's safe drinking water requirements.

Santa Rosa continues to meet high-quality standards but is facing supply challenges due to the prolonged drought and below-normal storage in our local reservoir, Lake Sonoma. Santa Rosa is working closely with local water providers, including the Sonoma County Water Agency, through the Sonoma-Marin Saving Water Partnership (**wateroff.org**) to ensure water reliability.

I would like to thank all of our customers who have implemented water-conserving measures and ask that you continue your efforts. Your actions are helping us meet our community-wide goal of reducing water use by 20%. As we head into the summer months, I encourage you to continue to eliminate water waste and help educate others.

I would also like to thank you for taking the time to read our 2013 Annual Water Quality Report, which confirms our commitment to quality and customer service. Please feel free to contact us with comments or questions: 707.543.3965 or **waterquality@srcity.org.**

Sincerely,

David Guhin
Director of Santa Rosa Water Utilities

PHOTO: CC BY 2.0 INGRID TAYLAR

City of Santa Rosa

2013 WATER QUALITY REPORT

CONTENTS

BOARD of PUBLIC UTILITIES

Appointed by the City Council, this seven-member Board has authority and direction over the management and operation of the City of Santa Rosa's water and sewer utilities:

Bill Arnone
Richard Dowd
Stephen Gale
Dan Galvin, Chair
Leonard Holt
Megan Kaun
George Steffensen

NOTICE FROM THE EPA

Drinking Water and Your Health

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- **Microbial contaminants** such as viruses and bacteria that may come from wastewater 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides** that may come from a variety of sources such as agriculture, urban storm water 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 storm water 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, U.S. Environmental Protection Agency (EPA) 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.

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 U.S. EPA's Safe Drinking Water Hotline: **800-426-4791.**

Drinking water standards are established by both the Department and by the U.S. EPA. Primary standards are set to protect public health from substances in water that may be immediately harmful to humans or affect their health if consumed for long periods of time. The primary drinking water standards are defined by maximum contaminant levels (MCLs) for contaminants that affect health along with their monitoring and reporting requirements and surface water treatment requirements.

Secondary standards govern aesthetic qualities of water such as taste, mineral content, odor, or clarity. These standards specify limits for substances that may influence consumer acceptance of the water and are not harmful to public health.

HEALTH

HEALTH-RELATED NOTICE

Precautions for Vulnerable Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer and undergoing chemotherapy, persons that 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. U.S. EPA/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the U. S. EPA's Safe Drinking Water Hotline or website: 800-426-4791 or **epa.gov/safewater/.**

PHOTO: CC BY 2.0

Monitoring Water Quality

The United States Environmental Protection Agency (U.S. EPA) and California Department of Public Health (agencies that oversee California's drinking water programs) require water providers to routinely monitor their water supplies and report test results annually. In addition to the Sonoma County Water Agency's sampling of over 100 different contaminants, the City conducts its own contaminant testing on local supply and monthly routine water samples are collected throughout the water distribution system.

Sampling frequency is based on our population and the number of services connected to the water system. The City of Santa Rosa takes over 200 water system samples per month. These samples are tested for coliform bacteria (an indicator of contamination) and chlorine residuals (level of disinfection).

The City also takes pH samples every sampling day. The results of the samples are sent to the California Department of Public Health at the end of each month.

Certain sampling is required periodically by the U.S. EPA based on specific rules. Annually, the City takes trihalomethane and haloacetic acid samples based on the disinfection by-products rule. Every three years, it samples 50 residences for compliance with the lead and copper rule.

In 2013, the City began sampling under the Unregulated Contaminant Monitoring Rule 3, which indentified 28 contaminants to monitor. These monitoring results will be reported in future Water Quality Reports.

This Water Quality Report shows your water supply is carefully managed and your tap water meets or exceeds all health-based standards established by the U.S. EPA for safe drinking water.

Your Water's Characteristics

Sodium: There is currently no drinking water standard for sodium. Santa Rosa's sodium averages 8.8 ppm based on weighted flow sample results, a level unlikely to contribute to adverse health effects.

Fluoride: Santa Rosa does not add fluoride to the water supply. The City's average naturally-occurring fluoride level of 0.13 ppm is considered to be too low to help prevent dental decay. The optimal fluoride level is 0.7 ppm. You may want to consult your dentist about ways to prevent tooth decay. For more information about fluoridation, oral health, and current issues, visit the website for the County of Sonoma, Department of Health Services: **sonoma-county.org/health/topics/fluoridation.asp.**

QUALITY

Hardness: Water in the City of Santa Rosa is considered to be moderately hard at an average level detected of 102.9 ppm or 6.0 grains per gallon. Water that is too soft (below 30 ppm) can be corrosive to plumbing pipes, and water that is too hard (above 300 ppm) causes scale to form on plumbing fixtures and cooking utensils. Hard water is found in over 85 percent of the United States water supplies.

WATER HARDNESS SCALE

Grains Per Gallon	Parts Per Million (ppm)	Classification
Less than 1.0	Less than 17.1	Soft
1.0 – 3.5	17.1 – 60	Slightly Hard
3.5 – 7.0	60 – 120	Moderately Hard
7.0 – 10.5	120 – 180	Hard
Over 10.5	Over 180	Very Hard

Water Cloudiness: During certain periods, the City of Santa Rosa Utilities Department receives many calls about milky white water (also commonly described as cloudy, hazy, soapy, or foamy), which is usually caused by air in the water. One of the many properties of water is its ability to dissolve gases, including air. Sometimes the air comes back out of the water in the form of many tiny bubbles, giving the water a temporary milky white appearance. To determine if the white color in the water is due to air, fill a clear glass with water and set it on the counter. Observe the glass of water for two to three minutes. If the white color is due to air, the water will begin to clear at the bottom of the glass first and then gradually clear all the way to the top. This is a natural phenomenon and is completely normal; the water is safe to use.

Air bubbles dissipate from the bottom of the glass to the top in just a minute or two.

How to Read this Table in Your Water Quality Report

The Water Quality Report, also called the Consumer Confidence Report, lets you know what constituents, if any, are in your drinking water and how these constituents may affect your health. It lists all the regulated constituents that were detected.

Year tests were conducted.

Below this level, a constituent has no known or expected health risk.

Highest amount of a contaminant EPA allows in drinking water.

Santa Rosa purchased between 90-95% of the drinking water from the Sonoma County Water Agency and we produce the remainder from our own groundwater wells. The two sets of columns identify the detected constituents of each source.

The source of our drinking water comes entirely from groundwater. Only chlorine is added for disinfection and sodium hydroxide for pH adjustment.

TABLE OF DETECTED CHEMICALS OR CONSTITUENTS IN 2013

Substance (Parameter)	Public Health Goal (MCLG)	Maximum Contaminant Level	WATER AGENCY Range Detected	WATER AGENCY Reporting Value	SANTA ROSA Range Detected	SANTA ROSA Reporting Value	Major Source in Drinking Water
PRIMARY STANDARDS Regulated contaminants with primary MCLs or MRDLs							
CATEGORY							
Substance A (ppm)	1	2	0.11 – 0.15	0.13	0.19 – 0.21	0.2	Erosion of natural deposits
Substance B (ppb)	0.2	15 (AL)	NA	NA	4.1 – 10.4	6.84	Run-off/leaching from natural deposits

Parts per million – One **ppm** is equal to 1 teaspoon in 1,300 gallons.

Parts per billion – One **ppb** is equal to 1 teaspoon in 1.3 million gallons.

The concentration of a constituent, which, if exceeded, triggers treatment or other requirements.

The amount from lowest to highest of a detected constituent in the drinking water.

The average amount of a constituent detected in the drinking water.

This describes the most likely ways a constituent enters the drinking water. Wording is provided by the EPA.

DEFINITIONS

These terms are used throughout this report and in the Table on the following page.

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

MCL: Maximum Contaminant Level. The highest level of 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. EPA.

MRDL: Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the 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.

NA: Not applicable.

ND: Not detected. Constituent was not detected at the reporting level.

NS: No standard. Officials have not developed a Public Health Goal or MCLG standard.

NTU: Nephelometric Turbidity Units. A measure of the clarity of water. Turbidity of 5 NTU is just noticeable to the average person.

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

PHG: Public Health Goal. The level of contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

MFL: million fibers per liter

pCi/L: picocuries per liter

ppm: parts per million (or milligrams per liter)

ppb: parts per billion (or micrograms per liter)

ppt: parts per trillion (or nanograms per liter)

TABLE OF DETECTED CHEMICALS OR CONSTITUENTS IN 2013

Substance (Parameter)	Public Health Goal (MCLG)	Maximum Contaminant Level	WATER AGENCY Range Detected	WATER AGENCY Reporting Value	SANTA ROSA[1] Range Detected	SANTA ROSA[1] Reporting Value	Major Source in Drinking Water
PRIMARY STANDARDS Regulated contaminants with primary MCLs or MRDLs							
MICROBIOLOGICAL CONTAMINANTS							
Total Coliform Bacteria from Santa Rosa Distribution System	0	5% of monthly samples	NA	NA	0% – 0%	0%	Naturally present in the environment
INORGANIC CONTAMINANTS							
Fluoride (ppm)[2]	1	4.0	ND – 0.15	0.11	0.24 – 0.25	0.245	Erosion of natural deposits
DISINFECTION BY-PRODUCTS, RESIDUALS AND BY-PRODUCT PRECURSORS IN SANTA ROSA SYSTEM							
Total Trihalomethanes (ppb)	NS	80	NA	NA	12.4 – 30.5	20.3	By-product of drinking water chlorination
Haloacetic acids (ppb)	NS	60	NA	NA	4.1 – 10.4	6.84	By-product of drinking water chlorination
Disinfectant-Free Chlorine (Cl_2) Residual (ppm)	MRDLG as Cl_2 4.0	MRDL as Cl_2 4.0	NA	NA	0.09 – 1.29	0.80	Disinfectant to control microbes
pH (units) prior to pH adjustment	NS	NS	7.31 – 8.56	7.57	7.7 – 7.7	7.7	Average after pH adjustment: 8.17
RADIONUCLIDES							
Gross Alpha (pCi/L)	{0}	15	0.00 – 3.49	0.25	ND	ND	Erosion of natural deposits
LEAD/COPPER RULE 2013 DATA NEXT ROUND OF SAMPLES: 2016	*Monitored at customer's tap in Santa Rosa. Number of sites exceeded Action Level = 0 Number of samples collected = 50*						
Copper (ppm)	0.3	1.3 (AL)	ND	ND	ND – 0.255	0.060*	Internal corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	0.2	15 (AL)	ND	ND	ND – 13.7	1.50*	
SECONDARY STANDARDS Aesthetic Standards Established by the State of California, Department of Public Health							
REGULATED CONTAMINANTS WITH SECONDARY MCLs	*There are no adverse health effects from exceeding the secondary (aesthetic) standards.*						
Groundwater Turbidity (NTU)	NS	5	0.01 – 1.42	0.15	0.25 – .040	0.33	Natural river sediment; soil run-off
Threshold Odor Number (TON) at 60°C	NS	3	ND – 160[3]	12.8	ND	ND	Naturally-occurring organic materials
Chloride (ppm)	NS	500	5.1 – 24	8.2	17.7 – 26.9	22.3	Run-off/leaching from natural deposits
Sulfate (ppm)	NS	500	2.4 – 16	10.3	ND	ND	Run-off/leaching from natural deposits
Specific Conductance (umhas/cm)	NS	1600	190 – 310	244	470 – 520	495	Substances that form ions when in water
Total Dissolved Solids (ppm)	NS	1000	130 – 210	158	330 – 360	345	Run-off/leaching from natural deposits
Color (units)	NS	15	No Range	<3	ND	ND	Naturally-occurring organic materials
Manganese (ppb)	NS	50	ND – 77	5.9	4.0 – 15.1	7.77	Run-off/leaching from natural deposits
ADDITIONAL CONSTITUENTS							
Sodium (ppm)	NS	NS	8.0 – 39	15.0	51.3 – 56.5	53.9	Sodium refers to salt present in water and is generally naturally occurring
Total Hardness $CaCO_3$ (ppm)	NS	NS	38 – 148	97.2	139 – 146	142.5	Erosion of natural deposits
Total Alkalinity as $CaCO_3$ (ppm)	NS	NS	93 – 130	103.6	220 – 230	225	Erosion of natural deposits
Calcium (ppm)	NS	NS	12 – 25	19.8	27.3 – 28.9	28.1	Erosion of natural deposits
Total Radon 222 (pCi/L)[4]	NS	NS	107 – 479	196	445 – 455	450	Found in the ground throughout the US
Temperature °C (°F)	NS	NS	NA	NA	11 (52)-28 (83)	18.7 (66)	Water temperature in distribution system

Santa Rosa's drinking water meets or exceeds all State and Federal drinking water health standards. Your water is tested weekly and the water system is carefully managed to be dependable and safe.

Note: Listed in the table above are substances detected in the City's drinking water. A full listing of sample results is on our website.

1 Santa Rosa water data includes sampling taken in the distribution system and from source water wells. Our two drinking water wells are sampled separately. The Manganese reporting value is after treatment.

2 Fluoridation to fight tooth decay has not been implemented in Santa Rosa. The optimal dose of fluoride in water to fight tooth decay is 0.7 ppm.

3 A single site of the Water Agency's 13 sources had a 160 TON. That site, Occidental Well #2, provided little, if any, of Santa Rosa's water. Realistically, no customer should have noticed any odor from this source.

4 Radon is a radioactive gas that can get into indoor air when released from tap water from showering or running a faucet. Radon entering the home through tap water is a very small source of radon in indoor air. EPA is proposing to require community water suppliers to provide water with radon levels no higher than 4,000 pCi/L, which contributes about 0.4 pCi/L of radon to the air in your home.

More information is available at EPA website: http://www.epa.gov/radon/rnwater.html. The State allows us to monitor for some contaminants less than once per year. Our radon data for Santa Rosa's source, though representative, was sampled in 2009.

* 90th percentile detected

MONITORING Water Quality: Monitoring Results

The City of Santa Rosa routinely monitors for contaminants in your drinking water according to state and federal regulations. While most of the data in the preceding tables are from January 1 to December 31, 2013, some substances are monitored less than once per year because the levels do not frequently change. Although Santa Rosa's water supplies are tested for all regulated and many unregulated contaminants, only contaminants that have been detected based on EPA requirements are included in this report. Laboratory technology is improving continuously, which has the ability to detect contaminants in extremely small amounts. Our website has the full sampling results from our water sources.

If you are still concerned with tap water and purchase bottled water, please consider that bottled water is actually less regulated than municipal water supplies. Simple and effective point-of-use treatment devices can remove specific substances of concern. For more information on water treatment devices see: **greenerchoices.org/products.cfm?product=waterfilter.**

NOTICE FROM THE EPA

Lead and Copper

The "lead and copper rule" or LCR was introduced by the Environmental Protection Agency in 1991 to limit the concentration of lead and copper allowed in public drinking water at the consumer's tap as well as to limit the corrosivity due to the water itself. Our water supplier, the Sonoma County Water Agency, implemented the addition of sodium hydroxide to the drinking water in 1995 to increase the pH slightly. Higher pH levels reduce the corrosivity of the water thereby reducing significantly the copper and lead levels. Lead originates from the solder used to connect plumbing fittings inside the home, and copper is used widely in small diameter plumbing pipe. Lead and copper levels are consistently below the action level in Santa Rosa.

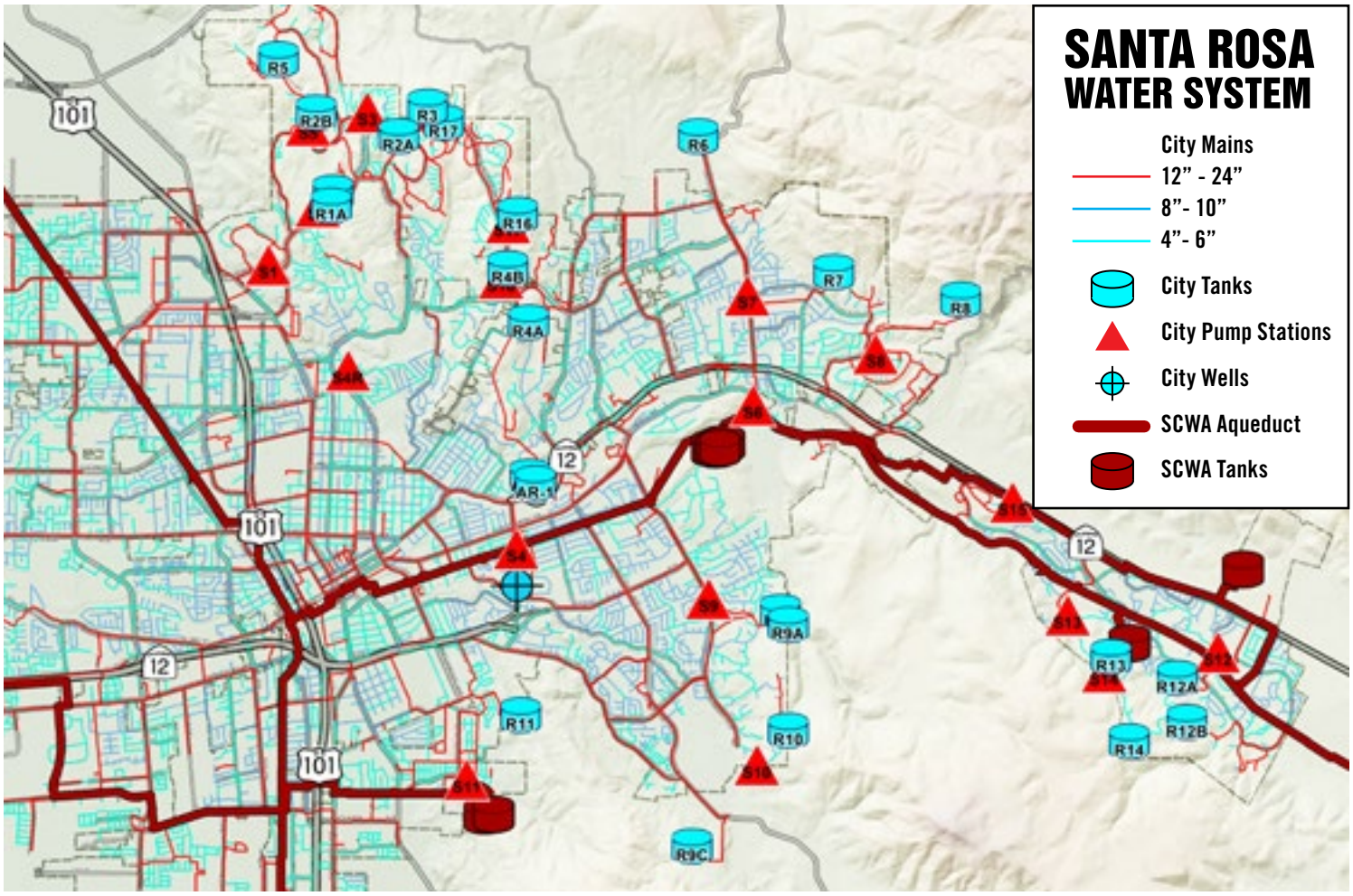
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Santa Rosa Utilities Department is responsible for providing 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 website: **800-426-4791** or **epa.gov/safewater/lead.**

SOURCES

The City of Santa Rosa's water supply generally comes from the Russian River watershed system which has three main reservoirs, Lake Pillsbury, Lake Mendocino, and Lake Sonoma. Lake Sonoma primarily replenishes the aquifer supplying our wholesale water supplier, the Sonoma County Water Agency (SCWA), through its wells near the Russian River at Forestville.

(continued on page 7)

TREATMENT Drinking Water Sources & Treatment



(continued from page 6)

The SCWA water supply is not drawn directly from the Russian River but through water wells and specialized wells commonly called "radial collectors" near the river. These wells are able to draw large amounts of water from the loose gravel under the river to provide high-quality filtered water to residents in Sonoma and Marin Counties. Even during drought conditions, the SCWA's diversion dam is able to provide the collectors with the required saturation to maintain water quality. The SCWA treats the water with gas chlorine for bacterial disinfection and sodium hydroxide (also known as caustic soda) to adjust the pH before it is delivered to Santa Rosa. The pH treatment is necessary to comply with Environmental Protection Agency (EPA) regulations on the copper content in drinking water. Raising the pH helps minimize the leaching of copper and other metals from the distribution pipe into the drinking water. The natural filtration below the river removes organic material and turbidity leaving high-quality drinking water for over 600,000 residents of Sonoma and Marin counties. The SCWA has a water supply interactive map that explains the entire water system: **scwa.ca.gov/water-system/.**

The City of Santa Rosa's other sources of water are two drinking water wells in east Santa Rosa that are operated during the high-use summer and fall periods. The two wells have a combined output of 2.5 million gallons-per-day. Sodium hypochlorite or common bleach is added to Santa Rosa's well supply for disinfection. The groundwater supply contains the element manganese that exceeds secondary water standards so a filter vessel removes the manganese before it is delivered to customers.

A source water assessment of the drinking water for SCWA and Santa Rosa were completed in January 2001. Specifically, the water source is considered most vulnerable to mining operations, recreational areas (surface water), septic systems, agricultural operations, and wastewater treatment and disposal. Proper filtration and treatment of the raw water is performed prior to delivery to customers. A copy of the complete assessment is available at the California Department of Public Health office or website:50 D Street, Suite 200, Santa Rosa, CA 95404 or **cdph.ca.gov/certlic/drinkingwater/Pages/DWSAP.aspx.**

You can participate in decisions about your water . . .

For more information regarding the City of Santa Rosa water utility, you may attend the City of Santa Rosa Board of Public Utilities meetings which are held every 1st and 3rd Thursdays of the month at 1:30 PM:

City of Santa Rosa, Board of Public Utilities
Santa Rosa City Hall Council Chambers
100 Santa Rosa Avenue, Santa Rosa, CA 95404
(707) 543-4200 | (707) 543-3031 TDD

For meeting dates and agenda: **(707) 543-3397** or **srcity.org/bpu**

For more information regarding the Sonoma County Water Agency (SCWA), you may attend the SCWA Board meetings, which are held every Tuesday at 8:30 AM in conjunction with the Sonoma County Board of Supervisors:

Special Districts Supervisors' Chambers
Sonoma County Administration Building
575 Administration Drive, Room #102A, Santa Rosa, CA 95403-2887
(707) 565-2241
Web access with meeting dates and agenda: **sonoma-county.org/board**

Should you have questions regarding this report or if you need information concerning your water supply, please contact Peter Fulkerson, Water Quality Supervisor: **(707) 543-3965** or **(707) 543-4586** (TDD Public Works (707) 543-3827) or fax (707) 543-3937.

Or email: **waterquality@srcity.org.**

If you would like additional copies of this report, please contact us. We encourage business owners to provide this information to their employees.

En Español

Este folleto contiene información importante acerca de la calidad de su agua de beber. Si usted apreciaría hablar con alguien en español llame al **(707) 543-3991.**

CONTACT INFORMATION

City of Santa Rosa, Utilities Department

35 Stony Point Road, Santa Rosa, CA 95401-4446
TEL (707) 543-3965 or (707) 543-4586
FAX (707) 543-3937
TDD (707) 543-3827-Public Works
Evenings, weekends and alternate Fridays, please call
(707) 543-3805 or (707) 528-5276 (TDD Police Department)
Web access: **srcity.org/ut**

Fluoride is not added to Santa Rosa's water supply

We have small amounts of naturally-occurring fluoride from our groundwater source but it is too small to gain any dental benefit. For more information, see our table on page 5.

CC BY 2.0 SUZIE QUIBAN

What do the numbers mean on a fire hydrant?

When fire hydrants are maintained, the crew takes a static pressure and imprints that number on the side of the hydrant. If you want to know what the water pressure is in your neighborhood, just look for a fire hydrant!

The static pressure on this hydrant is 54 pounds per square inch (PSI)

Get social with us...
Find us at **SRWater**: