Utilities
Santa Rosa Water June 2012
Connections

Water System #4910009

Water Quality Report

A Message from the Director of Utilities, Miles Ferris

In 1985, I was hired as the first Director of the newly formed City of Santa Rosa Utilities Department. The City separated the water and sewer divisions from the Public Works Department to form a unique "Utilities Department" in order to focus on the core duties of providing high quality drinking water and environmentally responsible wastewater collection and treatment. There have been many changes in the water and wastewater industries over these last 27 years – creating both challenges and opportunities. Our City has responded with a concentration on high quality customer service and a commitment to sustainability of our water and wastewater systems and infrastructure.

During the economic challenges of the last few years, the Utilities Department has felt the same negative economic impacts that our customers and most other industries did. All of our sources of revenue declined, limiting the department's ability to provide services and maintain and replace infrastructure, and drawing down our water enterprise fund reserves. Through the efforts of the department's dedicated staff and the guidance of the Board of Public Utilities (BPU), operational expenditures and staff were reduced.

I strongly believe in replacing our water and sewer infrastructure on a regular basis rather than waiting for a catastrophic event that wastes resources and endangers the public. Investment in infrastructure is a requirement of any well run utility and is our responsibility to our ratepayers. Repair and replacement of underground pipes and retrofit of Utilities facilities for earthquake preparedness is costly and requires thoughtful planning to ensure revenues are in place to support our Capital Improvement Projects (CIP) program.

Last year, Utilities staff, the BPU and the City Council began to adjust the ratio of fixed charges to water usage charges to increase the percentage of funds received from these fixed charges and create a more stable and balanced revenue stream. This year, we are beginning to restore our reserve funds as well as begin to ramp back up our infrastructure replacement funding.

The Utilities Department recently completed an internal audit to review and analyze its functions to ensure that we are operating as efficiently and effectively as possible. The information developed from this effort is being used to guide

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Why You Receive This Report

The federal Environmental Protection Agency (EPA) sets regulations on water quality and ensures you are informed about your community's water quality through this required annual report. We are mandated to provide certain basic information but we also use the opportunity to share other important information about your water.

The EPA is performing a Retrospective Review of Existing Regulations which may allow electronic delivery of this Water Quality Report. EPA plans to release a draft alternative delivery guidance in late summer 2012, and conduct an in-person meeting in fall 2012 to obtain feedback from states, utilities and consumers on the draft guidance, and then release the final guidance in early 2013. If EPA determines electronic delivery alternative is allowable, you will no longer receive a mailed copy of the Water Quality Report. Electronic delivery of the report will be available for those who are interested. An electronic version is also available on our website, srcity.org/waterquality.

Drinking Water and Your Health

Notice from the EPA

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. EPA and the State Department of Public Health 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 United States EPA's Safe Drinking Water Hotline at 800-426-4791.

Drinking water standards are established by both the state of California Department of Public Health and by the United States 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 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 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 (800-426-4791) or at their web site at: epa.gov/safewater/.

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 their own contaminant testing on our 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 120 representative 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, we take trihalomethane and haloacetic acid samples based on the disinfection by-products rule and every three years we sample 50 residences for compliance with the lead and copper rule.

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 16.28 ppm, 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 0.14 ppm is considered to be too low to help prevent dental decay. You may want to consult your dentist about ways to prevent tooth decay. For more information about fluoridation, oral health, and current issues, here is the Department of Public Health's website: www.cdph.ca.gov/certlic/drinkingwater/Pages/Fluoridation.aspx.

Hardness: Water in the City of Santa Rosa is considered to be moderately hard at an average level detected of 100.5 ppm or 5.9 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% 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.

To 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 1:30PM:

City of Santa Rosa BPU
City Hall Council Chambers
100 Santa Rosa Ave
Santa Rosa, CA 95404
(707) 543-4200
(707) 543-3031 TDD

For meeting dates and agenda call: (707) 543-3397 or visit 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 8:30AM in conjunction with the Sonoma County Board of Supervisors:

Special Districts Supervisors' Chambers
Sonoma Cty. Administration Bldg.
575 Administration Drive, #102A
Santa Rosa, CA 95403-2887
(707) 565-2241

Web access with meeting dates and agenda: sonoma-county.org/board/.

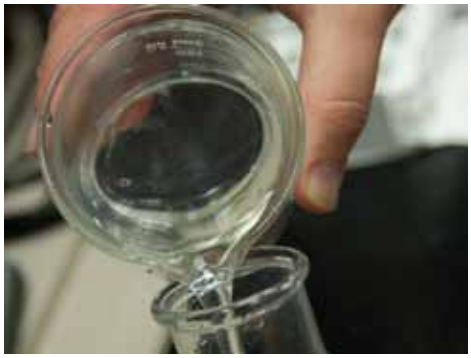
Should you have questions regarding this report, or for information concerning your water supply, please contact Peter Fulkerson, Water Quality Supervisor, at (707) 543-3965 or (707) 543-3968 (TDD Public Works (707) 543-3827), or fax (707) 543-3937. If you would like additional copies of this report, please contact us. We encourage business owners to provide this information to their employees.

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

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 following tables are from January 1 to December 31, 2011, 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 contaminates 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 posted 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: http://www.greenerchoices.org/products.cfm?product=waterfilter.



Lead and Copper Notice from the Environmental Protection Agency

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 limiting 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 800-426-4791 or at http://www.epa.gov/safewater/lead.

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.

MFL: million fibers per liter

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.

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. PHG's are set by the California EPA.

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 2011

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							
Microbiological Contaminants							
Total Coliform Bacteria from Santa Rosa Distribution System	0	5% of monthly samples	NA	NA	0% - 0.76%	0%	Naturally present in the environment
Inorganic Contaminants							
Aluminum (ppb) [1]	600	1000	0-57	8.46	No Range	ND	Erosion of natural deposits
Fluoride (ppm) [2]	1	2.0	0.11 – 0.15	0.13	No Range	0.2	Erosion of natural deposits
Disinfection By-products, Residuals, and By-product Precursors in Santa Rosa System		Running Average					
Total Trihalomethanes (ppb)	NS	80	NA	NA	20.2 – 22.0	21.1	By-product of drinking water chlorination
Haloacetic acids (ppb)	NS	60	NA	NA	3.6 – 4.4	4.0	By-product of water disinfection
Disinfectant-Free Chlorine (Cl_2) Residual (ppm)	MRDLG as Cl_2 4.0	MRDLG as Cl_2 4.0	NA	NA	0.01 – 1.37	0.75	Disinfectant to control microbes
pH (units) *prior to pH adjustment*	NS	NS	6.99 – 8.23	7.41	No Range	7.8	***Average after pH adjustment: 8.29***
Radionuclide							
Gross Alpha (pCi/L)	{0}	15	0.00 – 3.49	0.25	ND	ND	Erosion of natural deposits
Lead/Copper Rule 2010 data Next round of samples: 2013							
Monitored at the Customer's Tap in Santa Rosa Number of sites exceeded Action Level = 1 Number of samples collected: 50						90th percentile detected	
Copper (ppm)	0.3	1.3 (AL))	NA	NA	0.01 – 0.49	0.088	Internal corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	0.2	15 (AL)	NA	NA	ND – 36	3.6	
SECONDARY STANDARDS	Aesthetic Standards Established By the State of California, Department of Public Health.						
Regulated Contaminants with Secondary MCLs	No adverse health effects from exceeding of standards.						
Aluminum (ppb)	600	200	0-57	8.46	No Range	ND	Erosion of natural deposits
Groundwater Turbidity (NTU)	NS	5	0.0 – 4.8	0.56	No Range	<0.10	Natural river sediment; soil run-off
Threshold Odor Number at 60°C	NS	3	ND – 6.3	0.58	No Range	ND	Naturally-occurring organic materials
Chloride (ppm)	NS	500	5.5 – 25	8.5	No Range	24.3	Run-off/leaching from natural deposits
Sulfate (ppm)	NS	500	2.1 – 16	11.5	No Range	0.6	Run-off/leaching from natural deposits
Specific Conductance (umhas/cm)	NS	1600	240 – 270	257	No Range	500	Substances that form ions when in water
Total Dissolved Solids (ppm)	NS	1000	130 – 180	152	No Range	360	Run-off/leaching from natural deposits
Color (units)	NS	15	No Range	<3	No Range	<1	Naturally-occurring organic materials
Iron (ppb)	NS	300	ND - 380 [3]	42.3	No Range	ND	Run-off/leaching from natural deposits
Manganese (ppb)	NS	50	ND – 75	5.8	No Range	2.4	Run-off/leaching from natural deposits
Additional Constituents							
Sodium (ppm)	NS	NS	6.7 – 37	13.4	No Range	53.3	Erosion of natural deposits
Total Hardness $CaCO_3$ (ppm)	NS	NS	38 – 126	97.2	No Range	144	Erosion of natural deposits
Total Alkalinity as $CaCO_3$ (ppm)	NS	NS	94 – 120	108	No Range	250	Erosion of natural deposits
Calcium (ppm)	NS	NS	12 – 26	20.0	No Range	28.6	Erosion of natural deposits
Total Radon 222 (pCi/L) [4]	NS	NS	131 – 428	189.5	445 - 455	450	Found in the ground throughout the U.S
Temperature °C (°F)	NS	NS	NA	NA	12(53)-27(80)	18.2 (65)	Water temperature in distribution system

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 Aluminum is listed in both the Primary (Inorganic Chemicals) and Secondary standards.

2 Fluoride is not required to be included because it is below the detection level for reporting. Fluoride, however, is of interest to many consumers. Fluoridation to fight tooth decay has not been implemented in Santa Rosa.

3 Iron at SCWA production well site 7 was resampled on 9/14/2011 showing Non Detect.

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, though representative, was sampled in 2009.

Rethink Your Drink - Take It From the Tap!

Water is a vital resource that is essential for our daily lives and health. But, how often do you consider the value of the water that is conveniently flowing through your faucet? How often do you choose tap water to drink? Before you take another sip of bottled water or a sugar sweetened beverage, consider all the value that tap water has to offer.

Local tap water provides a high-quality drinking supply at a fraction of the cost when compared to bottled water. On average, tap water is less than a penny per gallon, which is approximately 2,000 times less than the cost of bottled water. Tap water is rigorously regulated by the Environmental Protection Agency (EPA), which has far stricter regulations than the Food and Drug Administration (FDA) for bottled water. To meet these strict regulations, Santa Rosa tap water is put through over 2,000 laboratory tests a year to insure you are receiving a premium water supply that meets and/or exceeds public health standards.

Tap water also provides a healthy alternative to high calorie sugary drinks. Tap water has zero calories and helps in the fight against obesity, especially for children. Making a simple switch to tap water in place of other sugary drink alternatives can help lower the risk of childhood obesity, type-2 diabetes and heart disease. Staying hydrated helps your health, well-being and mental focus.

Drinking tap water from reusable bottles helps reduce waste and protect your health. In the United States, approximately 60 million single-use plastic bottles are disposed of every day. This adds over 1.5 billion tons of single-use plastic water bottles to our landfills, which takes over 300 years to breakdown. In addition, the transportation of bottled water increases greenhouse gas emissions which impacts air quality and increases our carbon footprint.

To help spread the word about all of the benefits of tap water, the Utilities Department launched the "Take It from the Tap!" program at the 2010 Earth Day Fair. During the event, surveys and a blind taste test were conducted. Santa Rosa tap water won as the favorite choice over bottled water. In addition, Santa Rosa has partnered with the North Coast Health Collaborative to go into classrooms and educate youth about the benefits of tap water. The interactive curriculum gets kids motivated to become environmental and health stewards by encouraging friends and family to make healthy choices that cost less and protect the environment.

So, Rethink Your Drink and choose tap water first as your healthy drink of choice. Look for the City of Santa Rosa "Take it From the Tap!" team at local events in Santa Rosa and find out how you can get your very own re-usable water bottle. For more information on the City's "Take It from the Tap" program or to learn more about the value of tap water, please visit our web site at: srcity.org/tap. Take it from the Tap; it just makes cents.

Santa Rosa's Drinking Water Sources and Treatment

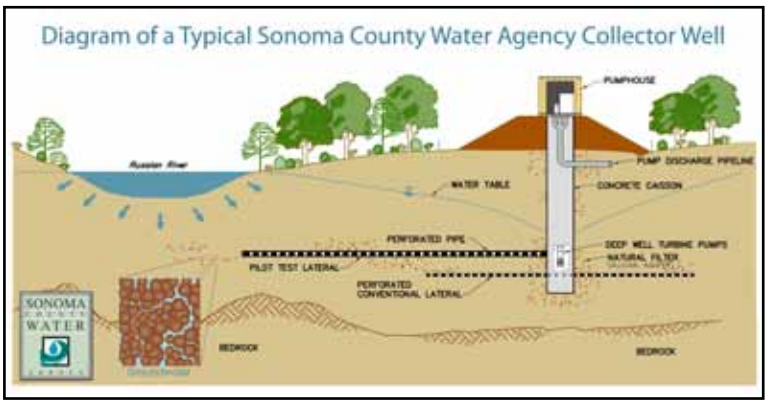
The City of Santa Rosa primarily receives water from the Sonoma County Water Agency (SCWA) through its wells near the Russian River and conveyed through their aqueduct system. The SCWA water supply is not drawn directly from the Russian River but through water wells and specialized wells commonly called "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. 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 SCWA has a water supply interactive map that explains the entire water system at: http://www.scwa.ca.gov/water-system/.

The City of Santa Rosa operates two drinking water wells in east Santa Rosa 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 wells are very deep and have an average temperature of 80°F. Manganese exceeds secondary standards so a filter vessel removes it before it is delivered to customers.

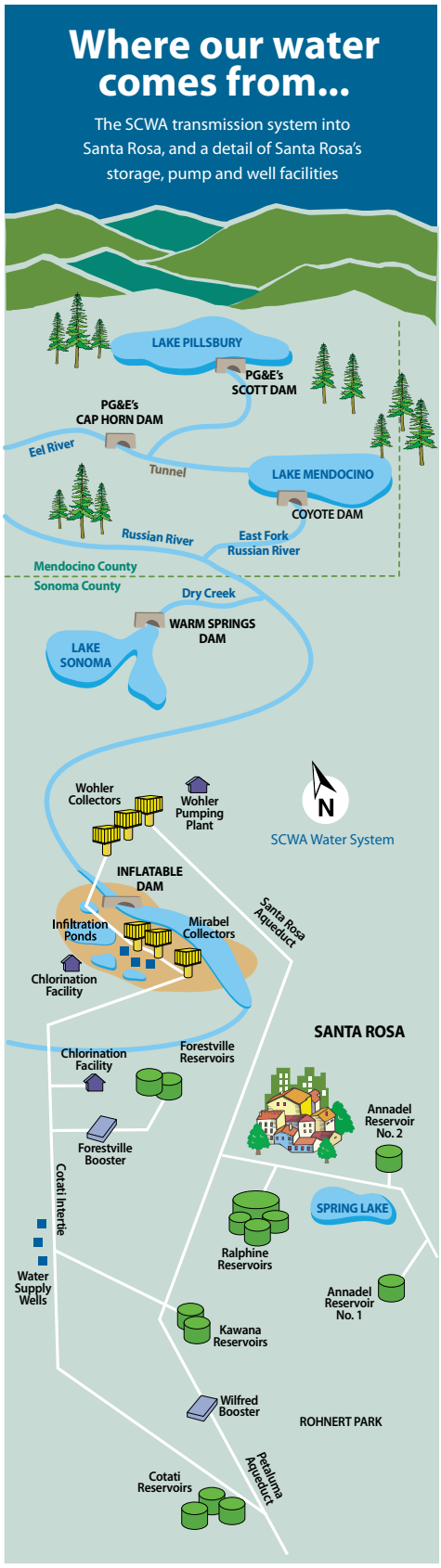
The Russian River watershed system has three main reservoirs, Lake Pillsbury, Lake Mendocino, and Lake Sonoma which replenishes the aquifer supplying the SCWA well systems located near Forestville. The natural filtration below the river removes organic material and turbidity leaving high quality drinking water for over 600,000 residents of Sonoma and Marin counties.

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, 50 D Street, Suite 200, Santa Rosa, CA 95404 or at their website: http://www.cdph.ca.gov/certlic/drinkingwater/Pages/DWSAP.aspx.



The map below shows the City of Santa Rosa's water system indicating aqueducts, pump stations and reservoirs.



CITY OF SANTA ROSA
Utilities Department
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Santa Rosa, CA 95401

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Postal Customer

Water Quality Report continued from page 1

the department in its plans to secure water resources, respond to regulations and operate the water and wastewater systems in a way that ensures they are sustainable for current customers and future generations while providing the best possible customer service.

The Water Quality report included in this issue of Connections covers all drinking water testing completed from January through December 2011. If you have any questions about our water quality, feel free to contact the Utilities Department at (707) 543-3965.

Contact Information

CITY OF SANTA ROSA
Utilities Department
69 Stony Circle
Santa Rosa, CA 95401-9506

TEL (707) 543-3965 or (707) 543-3968
FAX (707) 543-3937
TDD (707) 543-3827 - Public Works

Evenings, weekends and furlough Fridays please call
(707) 543-3805 or
(707) 528-5276 - TDD Police Dept.

Web access at: srcity.org/ut

Chlorine Smell?

Chlorine is the disinfectant of choice for Santa Rosa because of its effectiveness, efficiency, convenience, and the persistence of a residual. The Sonoma County Water Agency (SCWA) uses gas chlorine to disinfect their groundwater supplies while the City of Santa Rosa uses sodium hypochlorite (liquid chlorine) to disinfect locally derived well water. Groundwater sources generally do not contain organic substances like leaves or other decaying vegetation that can lead to disinfection byproducts. These disinfection byproducts are formed from the reaction of chlorine and organic substances. Santa Rosa's sampling results for disinfection byproducts are consistently well below maximum levels set by the United States Environmental Protection Agency.

Chlorine is added to disinfect the water supply and provide a small residual to continue the disinfection process until it reaches the farthest reaches of the water supply system. Santa Rosa is the largest user of water from the SCWA and the first large city on their aqueduct system. Since the SCWA needs to maintain a chlorine residual all the way to Sonoma to the east and North Marin to the south, our chlorine is a bit more noticeable. Chlorine slowly dissipates over time and loses its effectiveness. Eventually, given enough time, all the chlorine will dissipate and then biofilm may start to grow and cause taste and odor problems. Santa Rosa and the SCWA have sophisticated monitoring systems to identify when chlorine is declining to unacceptable levels

Seasonal changes are also a factor in chlorine levels. During the high use summer months, water is cycled through the water supply system much faster because of heavy irrigation use and chlorine levels do not need to be as high. However, during the lower usage winter months when water use is much lower, chlorine needs to be at a higher level because the water stays in the water supply system longer.

Chlorine has the ability to kill many different microorganisms and is able to persist in the water distribution system providing continued protection against microbial re-growth. Our chlorine residual throughout our water supply system averages 0.75 mg/L which is far below the maximum allowable of 4.0 mg/L. We strive to maintain the lowest effective dose while understanding some are sensitive to the odor chlorine imparts. Simple, effective and inexpensive charcoal countertop filters can eliminate the chlorine from the drinking water. Greenerchoices.org website has an evaluation of several types of water filters for the whole house to only the kitchen faucet.