Water Quality Report 2006

Environmental Utilities-Water

CITY OF ROSEVILLE CALIFORNIA

Always Amazing.

Drinking Water

Peak daily water production in 2006 reached an all time high during July. At peak demands, the plant produced 60 million gallons of water.

The City of Roseville is pleased to present you with this annual report on City provided drinking water. As in past years, compliance with all state and federal regulations regarding water quality have been met or exceeded by the water provided. The safety and protection of the water system also continues as a top priority, with vulnerability assessment and security measures being implemented on an ongoing basis.

Under the guidelines provided by the U.S. Environmental Protection Agency (EPA) and the California Department of Health Services (State), the City of Roseville monitors and tests the drinking water from source to tap. The information provided in this report is for the water provided January through December 2006, and includes details about where your water comes from, what it contains, and how it compares to the standards set by the regulatory agencies.

We hope this report will provide the answers to any questions you may have about the drinking water supplied by the City of Roseville. Additional information may be obtained by contacting the Roseville Water Treatment Plant at 916-791-4586, or through the city website at **www.roseville.ca.us/eu**.

Water Source

Roseville treats snow melt water that originate in the Sierra Nevada Mountains. The melting snow flows into the north, middle and south forks of the American River and is ultimately stored in Folsom Lake.

The water distribution system contains over 525 miles of pipeline and 37,000 service connections.

Water Treatment Process

The Folsom Lake water is conveyed to and treated at Roseville's 60 million gallon per day water treatment plant. The treatment process consists of coagulation, sedimentation, filtration and disinfection. The pH of the water is increased to control corrosion in the distribution system and fluoride is added to help prevent tooth decay in consumers. Fluoridation has been a part of the water supply in Roseville since the 1950's.

Roseville maintains a water distribution system covering the entire city with pipelines ranging in size from four inches to over five feet in diameter. Water samples are collected throughout the system and tested on a weekly basis to ensure quality maintained during delivery to customers.

In 2007, the City of Roseville was the first in the region to activate an Aquifer Storage and Recovery (ASR) Well in north Roseville. The ASR well will act as a water "savings account" by pumping water into the ground during times of plenty and extracting water during drought conditiions. This system will provided added water supply reliabilty in the years to come.

In February 2006, ground was broken on the final expansion of the Water Treatment Plant. Project construction will include facilities required to treat plant flows up to 100 million gallons per day. This is the amount estimated to meet the water needs of the community through currently planned build out. In addition to construction, design is underway on three storage reservoir projects within the distribution system. These facilities are required to effectively deliver this treated water to our customers and provide emergency storage needs in event of catastrophic events.

Source Water Assessment

In March 2002, the City of Roseville completed a source water assessment on our water supply from Folsom Lake to determine if there were any potentially contaminating activities present. The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply: Folsom Lake State Recreation Area facilities (marina, restrooms, recreational areas, parking lots, and storm drains) and residential sewer and septic systems.

The source is also considered vulnerable to the following activities not associated with any detected contaminants: illegal activities and dumping, fertilizer, pesticide, and herbicide application, and high-density housing developments.

A copy of the complete source water assessment may be viewed at the Department of Health Services, 1616 Capitol Avenue, Sacramento, CA 95899-7413.

You may request that a summary of the assessment be sent to you by contacting the Roseville Water Division at 916-774-5750.

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

Public Participation

The Environmental Utilities Department routinely reports at the City of Roseville Public Utility Commission meetings held on the fourth Tuesday of each month at 7 p.m. in the City of Roseville Council Chambers. The public is welcome to attend.

For additional information about the City of Roseville, please visit our Website www.roseville.ca.us/eu. If you would like to have more information on items related to water quality issues visit the EPA Website (www.epa.gov/safewater/hfacts.html) or the California Department of Health Website (www.dhs.ca.gov/ps/ddwem/default.htm).

Did You Know...

Environmental Utilities offers the following water saving services for **free**!

Water-Wise House Calls

Call us to schedule a weekday appointment for one of our water-use specialists to come to your home and analyze your indoor and outdoor water use. Our trained specialist will provide suggestions, rebate information, low-flow devices (if needed) and an irrigation schedule for your lawn. Call 774-5761 to schedule your appointment today.

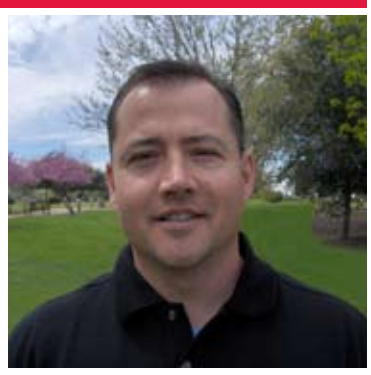
Ultra Low-Flush Toilet (ULFT) Rebates

Receive up to $125 for replacing your older (pre-1992), non-conserving toilet with a new 1.6 gallon or high-efficiency model. Visit **www.roseville.ca.us/savewater** to view the maximum performance testing (MaP) results on more than 200 toilet fixture models and to download your application today.

For more free water saving programs and rebates go to **www.roseville.ca.us/savewater** or give us a call at 774-5761.

Count on us ...

Shawn Barnes is the Chief Operator of the City's Water Treatment Plant. His job is to ensure that Roseville's customers get high quality drinking water and reliable water service.



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CITY OF ROSEVILLE CALIFORNIA
Environmental Utilities
2005 Hilltop Circle
Roseville, CA 95747

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What Is In The Water?

As in years past, the City of Roseville drinking water met or exceeded all EPA and State drinking water health standards during 2006. Roseville has an ongoing water monitoring program to ensure the quality and safety of the drinking water. Water samples are routinely analyzed for bacteria, turbidity, organic and inorganic contaminants, lead and copper, nitrate, and trihalomethanes. Most of the substances tested for were not detected and are not listed in this report. For your information, the substances that were detected in the drinking water are listed below.

Results of Monitoring for Primary Drinking Water Standards

Substance	MCL [MCLG]	PHG	City Average	Range (low – high)	Sample Date	Violation	Typical Source
Fluoride1 (ppm)	2.0	1.0	0.83	0.71 – 0.91	2006	No	Water additive that promotes strong teeth
Turbidity2 (ntu)	TT = 1 ntu	ns	0.03	0.02 – 0.20	2006	No	Soil runoff
Turbidity3 (ntu)	TT = % of samples less than 0.3 ntu	ns	-	100%	2006	No	Soil runoff
Total Coliform Bacteria4	More than 5% of monthly samples are positive	[0]	1.0	0 -1.0	2006	No	Naturally present in the environment

1 Fluoride is added in order to help prevent dental caries. The optimal fluoride level is 0.8 ppm.
2 For turbidity the lowest and highest single measurements are reported as the range. The average of the monthly turbidities is reported as the average.
3 All but one turbidity sample collected were below 0.3 ntu. Turbidity is a measurement of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.
4 For Total Coliform Bacteria, the highest percentage of positive samples collected in any month is reported as the average. Coliforms are bacteria naturallt present in the environment and are used as indicators that other potentially harmful, bacteria may be present.

Results of Monitoring for Secondary Drinking Water Standards

Substance	MCL	PHG	City Average	Range (low – high)	Sample Date	Violation	Typical Source
Odor (units)	3	ns	3	-	2006	No	Naturally occurring organic matter
Total Dissolved Solids (ppm)	1,000	ns	50	-	2006	No	Runoff/leaching from natural deposits
Specific Conductance (umho/cm)	1,600	ns	79	-	2006	No	Substances that form ions when in water
Chloride (ppm)	500	ns	3.1	-	2006	No	Runoff/leaching from natural deposits
Sulfate (ppm)	500	ns	6.1	-	2006	No	Runoff/leaching from natural deposits

Results of Monitoring for Lead and Copper from 62 Sample Sites

Substance	AL	PHG	90th Percentile	# of sites above the Action Level	Sample Date	Violation	Typical Source
Copper (ppm)	1.3	0.17	0.020	0	2005	No	Internal corrosion of household plumbing systems
Lead (ppb)	15	2	1.4	0	2005	No	Internal corrosion of household plumbing systems

Results of Monitoring for Disinfection Byproducts and Disinfectants

Substance	MCL or [MRDL] or {AL}	PHG or [MRDLG]	City Average	Range (low – high)	Sample Date	Violation	Typical Source
Total Trihalo-methanes 5 (ppb)	80	ns	61	31 - 63	2006	No	By-product of drinking water chlorination
Haloacetic Acids 5 (ppb)	60	ns	25	14 - 41	2006	No	By-product of drinking water chlorination
Chlorine 5 (ppm)	[4.0]	[4]	0.65	0.46 – 0.76	2006	No	Drinking water disinfectant added for treatment
Total Organic Carbon 6 (ppm)	{TT less than 2}	ns	1.5	1.5 – 1.6	2006	No	Various natural and man-made sources

5 For Total Trihalomethanes, Haloacetic Acids and Chlorine, the highest calculated quarterly running annual average is reported as the average. The highest and lowest detections are reported as the range.
6 For Total Organic Carbon (TOC) of the source water the lowest and highest calculated quarterly running annual average are reported as the range. The average of the monthly TOC is reported as the average.

Additional Monitoring Results

Substance	MCL	PHG	City Average	Range Date (low – high)	Sample	Violation	Typical Substance
Sodium (ppm)	ns	ns	3.6	–	2006	No	Runoff/leaching from natural deposits
Hardness (ppm)	ns	ns	28	-	2006	No	Runoff/leaching from natural deposits
MTBE (ppb)	13	13	nd	-	2006	No	Leakage from underground gasoline storage tanks
Hexavalent-Chromium (ppb)	ns	ns	nd	-	2004	No	Discharge from steel and pulp mills
Perchlorate (ppb)	ns	2 - 6	nd	-	2003	No	Solid propellant for rockets and fireworks
Arsenic (ppb)	50	ns	nd	-	2005	No	Erosion of natural deposits; runoff from orchards and electronics production
pH	ns	ns	8.6	8.3 – 9.0	2006	No	Runoff/leaching from natural deposits

What You Should Know About Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Terms & Abbreviations Used In This Report

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

MCL (Maximum Contamination Level): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

MCLG (Maximum Contamination Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health.

MRDL (Maximum Residual Disinfectant Level): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap. MRDLs are set by the U.S. EPA.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. EPA.

nd: not detected in testing.

ns: no standard has been set for these constituents by either the State or EPA.

ntu: Nephelometric Turbidity Units – a measurement of the clarity of water.

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.

ppb: parts per billion. A measurement of the concentration of a substance in the water. One penny in $10,000,000 would be 1 ppb.

ppm: parts per million. A measurement of the concentration of a substance in the water. One penny in $10,000 would be 1 ppm.

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

Secondary Drinking Water Standards: Limits for substances that may affect consumer acceptance of water, but are not otherwise harmful. Secondary MCLs are set to address the taste, odor, and appearance of drinking water.

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

umho/cm: micromhos per centimeter. A measurement of water's ability to conduct electrical current.

Things You Should Know About 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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).

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 that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

· Inorganic contaminants, such as salts and minerals, 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 that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

· Radioactive contaminants, which 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, USEPA and the California Department of Health Services prescribe regulations that limit the amount of certain contaminants in the water provided by public water systems. California State regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.