

Rubidoux Community Services District

ANNUAL CONSUMER CONFIDENCE REPORT

Established 1952

Spring 2012

We are pleased to present to you this year's Annual Consumer Confidence Report. This report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources. We are committed to ensuring the quality of your water. This report shows the quality of your water and what it means. We are pleased to report that your drinking water meets all federal and state requirements.

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

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 sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts or 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 that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, 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, the U.S. Environmental Protection Agency (USEPA) 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 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (800-426-4791), or the National Radon Hotline (800-55-RADON).

The water Rubidoux Community Services District delivers to you comes from groundwater, which we currently pump from six active drinking water wells (Wells 2, 4, 6, 8, 17, and 18). All of our wells are located within the Rubidoux Community Services District boundaries and draw from the Riverside South Groundwater Basin. Water from Wells 4 and 6 is treated at the District's Anita B. Smith Nitrate Removal Facility to reduce the concentration of nitrate before it enters the distribution system. To reduce the concentration of manganese in the water delivered to customers, water from Wells 17 and 18 is treated at the District's LaVerne J. Mahnke Manganese Removal Facility and blended with water from Wells 2 and 8 before it enters the distribution system.

We routinely monitor for contaminants in your drinking water according to Federal and State laws. Tables 1 through 7 list all of the drinking water contaminants that were detected during the period of January 1st to December 31st, 2011. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. 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 the data, though representative of the water quality, are more than one year old.

In this report are terms and abbreviations you might not be familiar with. To help you better understand these terms, we have provided the following definitions:

Parts per million (ppm) or milligrams per liter (mg/L) – a measure of concentration in water. One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or micrograms per liter (µg/L) – a measure of concentration in water. One part per billion corresponds to one second in 11.5 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - a measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Regulatory Action Level (AL) or Notification Level (NL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

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

Maximum Contaminant Level Goal (MCLG) - the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL) - the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Public Health Goal (PHG) – the level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency. *Note: PHGs do not take into account economic or technological feasibility.*

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

Secondary Drinking Water Standard (SDWS) – MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect health at the MCL levels.

No violations of the nitrate MCL (45 ppm) occurred at any time during 2010. As shown in Table 2, nitrate is present in detectable quantities in the water at an average concentration of 22 ppm. Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should seek advice from your health care provider. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

Perchlorate has been shown to interfere with uptake of iodide by the thyroid gland, and to thereby reduce the production of thyroid hormones, leading to adverse effects associated with inadequate hormone levels. Thyroid hormones are needed for normal prenatal growth and development of the fetus, as well as for normal growth and development in the infant and child. In adults, thyroid hormones are needed for normal metabolism and mental function.

Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms can include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

The California Department of Public Health (CDPH) sets drinking water standards and has determined that chlorine is a health concern at certain levels of exposure. Chlorine is added to drinking water as a disinfectant to kill bacteria and other disease-causing microorganisms and is also added to provide continuous disinfection throughout the distribution system. Disinfection is required for surface water systems. However, at high doses for extended periods of time, chlorine has been shown to affect blood and the liver in laboratory animals. CDPH has set a drinking water standard for chlorine to protect against the risk of these adverse effects. Drinking water which meets this CDPH standard is associated with little to none of this risk and should be considered safe with respect to chlorine.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

If you have any questions about this report or concerning your water utility, please contact Steven W. Appel, District Engineer, at the District office, (951) 684-7580. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the first and third Thursdays of each month at 4:00 p.m. at 3590 Rubidoux Blvd., Jurupa Valley, CA 92509.

TABLE 1 – SAMPLING RESULTS SHOWING DETECTION OF COLIFORM BACTERIA						
Microbiological Contaminant	Highest Percentage of Detections (in a month)	No. of Months in Violation	MCL	PHG (MCLG)	Typical Source of Bacteria	
Total Coliform Bacteria	0%	0	Detections in 5% of monthly samples	0	Naturally present in the environment	

TABLE 2 – DETECTION OF INORGANIC CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD						
Chemical or Constituent	Units	Average Level Detected	Range of Detection	MCL	PHG (MCLG)	Typical Source of Contaminant
Chlorine	ppm	0.84 ^(a)	0.4 – 2.5	4.0	4.0	Drinking water disinfectant added for treatment
Fluoride	ppm	0.34	0.2-0.5	2	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	ppm	22	7 – 30	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

TABLE 3 – DETECTION OF ORGANIC CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD						
Chemical or Constituent	Units	Average Level Detected	Range of Detection	MCL or MRDL	PHG (MCLG or MRDLG)	Typical Source of Contaminant
TTHMs [Total Trihalomethanes]	ppb	16.5 ^(a)	13 – 24	80	None established	Byproduct of drinking water disinfection
HAA [Haloacetic Acids]	ppb	2.2 ^(a)	No detections	60	None established	Byproduct of drinking water disinfection
Perchlorate	ppb	<4.0	<4.0 – 5.0	6	6	Discharge from aerospace and other industrial facilities

TABLE 4 – SAMPLING RESULTS FOR RADIOACTIVITY						
Chemical or Constituent	Units	Average Level Detected	Range of Detection	MCL	PHG (MCLG)	Typical Source of Contaminant
Alpha Activity, Gross	pCi/L	4.73	3.19 – 5.82	15	0	Erosion of natural deposits
Uranium	pCi/L	4.64	3.42 – 5.30	20	0.43	Erosion of natural deposits

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent	Units	Average Level Detected	Range of Detection	MCL	PHG ^(b) (MCLG)	Typical Source of Contaminant
Chloride	ppm	53	16 - 66	500	None established	Runoff/leaching from natural deposits; seawater influence
Color	Color units	<3	<3 – 5	15	None established	Naturally-occurring organic materials
Manganese	ppb	<20	<20 – 21	50	None established	Leaching from natural deposits
pH	pH Units	7.4	7.3 - 7.6	None established	None established	Erosion of natural deposits
Specific Conductance	µS/cm	788	680 - 800	1600	None established	Substances that form ions when in water; seawater influence
Sulfate	ppm	77	63 - 82	500	None established	Erosion of natural deposits; industrial wastes
Total Dissolved Solids	ppm	495	380 - 530	1000	None established	Erosion of natural deposits
Turbidity	NTU	0.69	<0.2 – 11 ^(c)	5	None established	Soil runoff

TABLE 6 – SAMPLING RESULTS FOR LEAD ^(d) AND COPPER						
Chemical or Constituent and Reporting Units	No. of Samples Collected	90 th Percentile Level Detected	No. of Sites Exceeding AL	Action Level	PHG (MCLG)	Typical Source of Contaminant
Copper (ppm)	31	0.63	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) ^(d)	31	0	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

TABLE 7 – SAMPLING RESULTS FOR UNREGULATED CONTAMINANTS						
Chemical or Constituent	Units	Average Level Detected	Range of Detection	MCL or NL	PHG (MCLG)	Typical Source of Contaminant
Boron	ppb	180	<100 - 270	NL=1000	None established	Erosion of natural deposits
Sodium	ppm	58	30 – 67	None established	None established	Erosion of natural deposits
Hardness	ppm	256	230 - 290	None established	None established	Erosion of natural deposits

(a) Highest running annual average during 2011.

(b) There are no PHGs, MCLGs, or mandatory standard health effects language for these constituents because Secondary MCLs are set on the basis of aesthetics.

(c) Out of 156 system samples taken in 2011, there were four detections of turbidity levels exceeding the Secondary MCL of 5 Nephelometric Turbidity Units (NTU).

(d) 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. Rubidoux Community Services District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at <http://www.epa.gov/safewater/lead>.