

2013 Consumer Confidence Report

Water System Name: CITY OF RIO VISTA

Report Date: June 2014

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2013

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

Type of water sources(s) in use: According to CDPH records, Wells 07, 08, 09, 10, 11, and 12 are Groundwater. This Assessment was done using the Default Groundwater System Method. This info is not available for Wells 13, 14, 15, and Booster Station, as they do not have a completed assessment on file. Please see the Drinking Water Source Assessment Information section located at the end of this report for more details.

Your water comes from 9 sources: Booster Station, Well 07, Well 08, Well 09, Well 10, Well 11, Well 12, Well 13, Well 14 and Well 15. Total gallons pumped 831 million gallons (MG).

For more information about this report, or for any questions relating to your drinking water, please call the Public Works department at (707) 374-6451 or visit our website at www.rio-vista-ca.com

TERMS USED IN THIS REPORT:

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.

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.

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.

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

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

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

Variations and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter ($\mu\text{g/L}$)

umhos/cm: micromhos per centimeter (a measure of conductivity)

TON: threshold odor numbers (a measure of odor)

pCi/l: picocuries per liter (a measure of radioactivity)

The sources of drinking water(both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, spring, 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.

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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, which 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.
- *Radioactive contaminants*, which can be naturally occurring or the result of oil production and mining activities.
- *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, and septic systems.

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 prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Tables 1,2,3,4,5 and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituents. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The Department allows us to monitor for certain 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.

TABLE 1 - SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER						
Lead and Copper (complete if lead or copper detected in the last sample set)	No. of Samples Collected	90th Percentile Level	No. Site Exceeding AL	AL	PHG	Typical Sources of Contaminant
Lead (ppb)	20 (2013)	0.60	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers, erosion of natural deposits
Copper (ppm)	20 (2013)	0.035	0	1.3	.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 2 - SAMPLING RESULTS FOR SODIUM AND HARDNESS						
Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL (MRDL)	PHG (MCLG)	Typical Sources of Contaminant
Sodium (ppm)	(2007 - 2013)	163	118 - 195	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	(2007 - 2013)	89.3	25 - 239	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

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TABLE 3 - DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL (MRDL)	PHG (MCLG) [MRDLG]	Typical Sources of Contaminant
Arsenic (ppb)	(2008 - 2013)	9.8	5 - 19	10	n/a	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes
Barium (ppm)	(2008 - 2013)	0.03	ND - 0.1	1	2	Discharge from oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride (ppm)	(2007 - 2013)	0.29	ND - 0.5	2	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (ppm)	(2006 - 2013)	9.7	ND - 33	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate + Nitrite as N (ppm)	(2013)	1.73	ND - 3.2	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium (ppb)	(2008 - 2013)	2.5	ND - 10	50	30	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots(feed additive)
Gross Alpha (pCi/L)	(2010)	1.5	1 - 2	15	(0)	Erosion of natural deposits.
Total Radium 228 (pCi/L)	(2005 - 2010)	0.06	ND - 0.9	5	n/a	Erosion of natural deposits

Any violation of MCL,AL or MRDL is shaded. Additional information regarding the violation is provided later in this report.

TABLE 4 - DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL (MRDL)	PHG (MCLG)	Typical Sources of Contaminant
Chloride (ppm)	(2007 - 2013)	66	5 - 91	500	n/a	Runoff/leaching from natural deposits; seawater influence
Iron (ppb)	(2007 - 2013)	54	ND - 270	300	n/a	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	(2007 - 2013)	111	ND - 300	50	n/a	Leaching from natural deposits
Specific Conductance (umhos/cm)	(2007 - 2013)	775	647 - 1350	1600	n/a	Substances that form ions when in water; seawater influence

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TABLE 4 - DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL (MRDL)	PHG (MCLG)	Typical Sources of Contaminant
Sulfate (ppm)	(2007 - 2013)	37.1	4.0 - 57	500	n/a	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	(2007 - 2013)	455	390 - 750	1000	n/a	Runoff/leaching from natural deposits

Any violation of MCL,AL or MRDL is shaded. Additional information regarding the violation is provided later in this report.

TABLE 5 - DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language
Boron (ppm)	(2007 - 2013)	1	0.6 - 2	1	The babies of some pregnant women who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.
Vanadium (ppm)	(2008 - 2013)	0.005	ND - 0.01	0.05	The babies of some pregnant women who drink water containing vanadium in excess of the action level may have an increased risk of developmental effects, based on studies in laboratory animals.

TABLE 6 - DETECTION OF FEDERAL DISINFECTANT/DISINFECTANT BYPRODUCT RULE

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL (MRDL)	PHG (MCLG)	Typical Sources of Contaminant
Total Trihalomethanes (TTHMs) (ppb)	2013	7.1	ND - 14	80	n/a	By-product of drinking water disinfection
Haloacetic Acids (five) (ppb)	(2013)	0.8	ND - 3	60	n/a	By-product of drinking water disinfection

Additional General Information on 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 USEPA's Safe Drinking Water Hotline (800-426-4791).

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 provider. 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 (800-426-4791)

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For Lead (Pb), 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. *CITY OF RIO VISTA* 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 at <http://www.epa.gov/safewater/lead>.

Summary Information for Contaminants Exceeding an MCL, MRDL, or AL, or a violation of Any Treatment Technique or Monitoring and Reporting Requirement

About our Arsenic: Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

About our Nitrate: Nitrate in drinking water at level 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 ask advice from your health care provider.

About our Manganese: Manganese was found at levels that exceed the secondary MCL. The Manganese MCL was set to protect you against unpleasant aesthetic affects such as color, taste, odor and the staining of plumbing fixtures (e.g., tubs and sinks), and clothing while washing. Violating this MCL does not pose a risk to public health.

Drinking Water Source Assessment Information

Assessment Info

A source water assessment was conducted for the WELL 07, WELL 08, WELL 09, WELL 10, WELL 11, and WELL 12 of the CITY OF RIO VISTA water system in December, 2002. According to the Drinking Water Source Assessment and Protection Program's Source Water Assessments Public Access web page, the Public Water Sources WELL 13, WELL 14, and WELL 15 of the CITY OF RIO VISTA water system number 4810004, do not have a completed Source Water Assessment on file.

Well 07 - The source is considered most vulnerable to the following activities not associated with any detected contaminants:

- Historic gas stations
- Known Contaminant Plumes

Well 08 - The source is considered most vulnerable to the following activities not associated with any detected contaminants:

- Grazing [> 5 large animals or equivalent per acre]
- Sewer collection systems
- Utility stations - maintenance areas
- Airports - Maintenance/fueling areas

Well 09 - The source is considered most vulnerable to the following activities not associated with any detected contaminants:

- Sewer collection systems
- Wells - Oil, Gas, Geothermal

Well 10 - The source is considered most vulnerable to the following activities not associated with any detected contaminants:

- Septic systems - high density [>1 /acre]

Well 11 - The source is considered most vulnerable to the following activities not associated with any detected contaminants:

- Golf courses
- Housing - high density [>1 house/0.5 acres]
- Wells - Water supply

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Well 12 - The source is considered most vulnerable to the following activities not associated with any detected contaminants:

- Golf courses
- Housing - high density [>1 house/0.5 acres]
- Wastewater treatment plants

Well 13 - No completed TurboSWAP Assessment on file.

Well 14 - No source code, State ID pending. No completed TurboSWAP Assessment on file.

Well 15 - No source code, State ID pending. No completed TurboSWAP Assessment on file.

Booster Station - No source code. No completed TurboSWAP Assessment on file.

Discussion of Vulnerability

All wells in the City of Rio Vista water system are currently on line. Assessment summaries are not available for some sources.

This is because:

- The Assessment has not been completed. Contact the local Department of Health Services (DHS) Drinking Water field office or the water system to find out when the Assessment is scheduled to be done.
- The source is not active. It may be out of service, or new and not yet in service.
- The Assessment was not submitted electronically. The site used to obtain Assessments only provides access to Assessment summaries submitted electronically.

Acquiring Info

A copy of the complete assessment may be viewed at:

City of Rio Vista, Department of Public Works
789 St. Francis Way
Rio Vista, Ca 94571

You may request a summary of the assessment be sent to you by contacting:

Dave Melilli
Director of Public Works
(707) 374-6451

For more info you may visit <http://swap.ice.ucdavis.edu/TSinfo/TSintro.asp> or contact the health department in the county to which the water system belongs.