



**2012 CONSUMER CONFIDENCE REPORT
CITY OF RIO RANCHO**





From Mayor Swisstack About Your Drinking Water

In 1996, Congress amended the Safe Drinking Water Act (SDWA) to add a provision requiring all community water systems to deliver an annual water quality report to their customers. This Consumer Confidence Report summarizes the information that Rio Rancho Water and Wastewater collects to comply with safe drinking water regulations.

Please take time to read this important report about the quality of Rio Rancho's drinking water during 2012. The city provides this report each year to help citizens learn more about the city's role in supplying and maintaining safe and healthy drinking water supplies.

As mayor, I encourage citizens to be active participants in the water management initiatives that shape our water future. Together we can Conserve Today - Preserve Tomorrow.

For questions about Rio Rancho's water testing, call (505) 896-8813.

Thomas E. Swisstack
Mayor of Rio Rancho

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Note: All text preceded by a ■ contains information required by the U.S. Environmental Protection Agency (EPA).

QUALITY DRINKING WATER BEGINS HERE!

■ To ensure tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulates bottled water, which must provide the same protection of public health.



■ **The following definitions are used in this water quality report:**

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

MCL: Maximum Contaminant Level – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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 allow for a margin of safety.

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.

N/A: Not applicable.

ND: Not detected.

pCi/L: Picocuries per liter – A measure of radioactivity.

ppb: Parts per billion or micrograms per liter – Approximately equal to 3 seconds out of a century.

ppm: Parts per million or milligrams per liter – Approximately equal to 32 seconds out of a year.

Range of detection: Highest & lowest levels of substance found in treated 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.

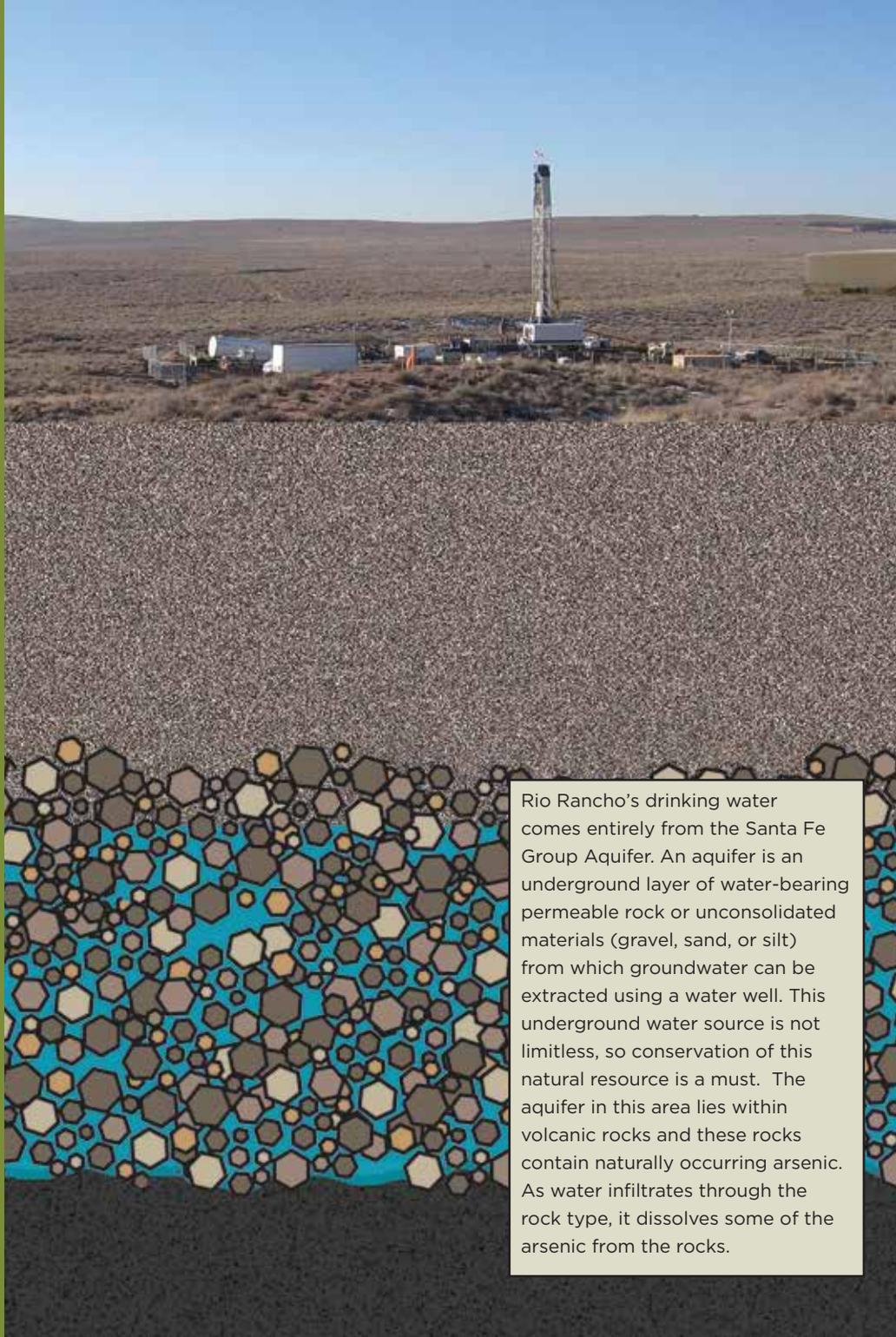
**ENVIRONMENTAL
PROTECTION AGENCY
SAFE DRINKING WATER
HOTLINE:
1-800-426-4791**

**RIO RANCHO
WATER PRODUCTION
MANAGER:
896-8813**



■ The EPA Center for Disease Control guidelines on appropriate ways to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Cryptosporidium is generally a microbial contaminant associated with drinking water coming from surface water sources. The City of Rio Rancho tested three sites for *Cryptosporidium* and *Giardia* on January 4, 2012. All three samples were non-detected for these microbes.



Surface

Sand/Clay

Aquifer

Bedrock

Rio Rancho's drinking water comes entirely from the Santa Fe Group Aquifer. An aquifer is an underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, or silt) from which groundwater can be extracted using a water well. This underground water source is not limitless, so conservation of this natural resource is a must. The aquifer in this area lies within volcanic rocks and these rocks contain naturally occurring arsenic. As water infiltrates through the rock type, it dissolves some of the arsenic from the rocks.

Digging the Well; Pumping the Water

The city's production wells are drilled 1,000 to 3,000 feet deep. At today's prices, a production well would cost about \$9 million to drill and equip.

Water Treatment

ARSENIC REMOVAL: Once the groundwater is pumped from the aquifer, it is piped to an Arsenic Removal facility. There, the naturally-occurring arsenic is removed.

Depending on the amount and type of arsenic present in a combination of coagulation-filtration or adsorption-filtration is used to remove the arsenic.



■ While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Substance	MCL	MCLG	Our Water	Range of Detection	Sample Year	Violation	Typical Source of Contamination
Arsenic (ppb)	10	0	6	N/A	2012	No	Erosion of natural deposits

Substance	MCL	MCLG	Our Water	Range of Detection	Sample Year	Violation	Typical Source of Contamination
Chromium (ppb)	100	100	8	N/A	2012	No	Erosion of natural deposits
Fluoride (ppm)	4	4	0.82	N/A	2012	No	Erosion of natural deposits
Nitrate as Nitrogen (ppm)	10	10	4.05	ND-4.05	2012	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits



Since 2006, the city of Rio Rancho has invested more than \$46 million in building and equipping arsenic removal facilities.

The price for the chemicals to remove the arsenic is above this cost and ongoing.

A recent science fair project by Jessica Cleal (Cleveland High School) won the Water Conservation Office's coveted Every Drop Counts award and \$50. Ms. Cleal's project, titled "Growing Capabilities of Grey Water," explored the effect of grey water on plants. Grey water is defined as household used water coming from sinks, showers and clothes washers. Grey water collection and use are regulated by the New Mexico Environment Department.

The Every Drop Counts award is given annually to a student whose project deals with water conservation or water quality.

City of Rio Rancho Aquifer Recharge Program

One of the city's approaches to serve its growing population is to expand its water reuse program to maximize the beneficial use of all available water sources. Reclaimed wastewater is a reliable, drought-proof water source that can be tailored to meet the needs of specific end uses ranging from irrigation to



indirect potable use. When the demand for reuse water is low, the purified water source can be stored in surface reservoirs or subsurface aquifers. Aquifer storage offers the advantage of

preservation of the quality of the purified water source, and elimination of water losses associated with evaporation from open surface reservoirs.

The city's aquifer recharge site consists of one injection well surrounded by an extensive groundwater monitoring network on approximately

2.5 acres of fenced city land near Loma Colorado. Once fully operational, the direct injection facility will be able to replenish the groundwater system at a rate of 1 million gallons per day, based on initial testing of the injection well.

Reclaimed water will undergo an on-site advanced water treatment (AWT) process prior to direct injection to ensure that the groundwater supply is not impaired by chemicals or pathogens. The city has fully evaluated treatment options to protect public health and the water resource. Screening of treatment technologies has ranged from physical separation through reverse osmosis (RO) membranes, advanced oxidation processes using ozone and hydrogen peroxide, adsorption processes (granular activated carbon [GAC] and biologically activated carbon [BAC]), and final disinfection. The AWT facility will use an ozone-based advanced oxidation process followed by a BAC-GAC step prior to direct injection. This process has been used extensively for drinking water treatment. Construction and testing of the facility is an ongoing process.



Jessica Cleal (Cleveland High School), 2012 winner of the fifth annual Every Drop Counts award competition.

If you have a student who needs assistance with science expo projects, call (505) 896-8715 for help.



Left: Drilling the injection well at the aquifer recharge site near Loma Colorado. **Top right:** Granular activated carbon (GAC) cylinders at the on-site advanced water treatment facility. Re-use water will undergo this advanced treatment prior to aquifer injection. **Bottom right:** The advanced water treatment process uses cutting-edge equipment (housed in the building shown) plus the two backwash tanks.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Rio Rancho's water system recently violated a drinking water sampling standard. Although this is not an emergency, as our water customers, you have a right to know what happened.

In 2011 and 2012, the water system violated a drinking water sampling standard for TTHMs and HAA5. The Rio Rancho water system was required to collect eight sets of samples during these monitoring periods, however only six sets were collected.

In response to the missed sampling events, in late 2012 the water system returned to compliance by sampling at the eight sample locations approved by the New Mexico Environment Department (NMED).

All samples taken for TTHMs and HAA5 were well below the Environmental Protection Agency's maximum contaminant level. For questions about Rio Rancho's water testing or this sampling violation, call (505) 896-8813.

There is nothing you, the water customer, need to do at this time.

DISINFECTION: Once the groundwater is treated for arsenic, it is then disinfected and sent through a large, complex set of water pipes throughout the city to deliver the drinking water to homes, businesses, schools, etc. Disinfection products (chlorine) are added to water to kill any bacteria or microbes that may be a health hazard. There are two organic groups of chemicals that are monitored for water delivery: Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5).

Haloacetic Acids (HAA5) are a group of chemicals that are formed along with other disinfection byproducts when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water. Total Trihalomethanes (TTHMs) are a byproduct of chlorinating water that contains natural organics. These organics are derived from decaying plant material.

Substance	MCL	MCLG	Our Water	Range of Detection	Sample Year	Violation	Typical Source of Contamination
TTHMs (ppb)	80	N/A	28.9	ND-28.9	2012	No	By-product of drinking water disinfection
HAA5 (ppb)	60	N/A	3.9	ND-3.9	2012	No	By-product of drinking water disinfection
Chlorine (ppm)	4	4	0.5	N/A	2012	No	Water additive to control microbes

■ **Radioactive Contaminants** can be naturally-occurring or be the result of oil and gas production and mining activities.

Substance	MCL	MCLG	Our Water	Range of Detection	Sample Year	Violation	Typical Source of Contamination
Alpha emitters (pCi/L)	15	0	6.9	0.1-6.9	2011	No	Erosion of natural deposits
Beta/ photon emitters (pCi/L)	50	0	10.3	2.5-10.3	2011	No	Decay of natural and man-made deposits
Radium combined 226/228 (pCi/L)	5	0	0.46	0.04-0.46	2011	No	Erosion of natural deposits
Uranium (ppb)	30	0	7	1-7	2011	No	Erosion of natural deposits

■ **Microbial**

Contaminants: Viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

■ **Contaminants that may be present in source water include:**

Inorganic Contaminants: Salts and metals which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Organic Chemical Contaminants: Synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Pesticides and Herbicides: May come from a variety of sources such as agriculture, storm water runoff, and residential uses.

As the water flows through the distribution system from the wells to the homes and businesses, it may pick up other contaminants. The city tests 90 samples per month for Total Coliform Bacteria, a common bacteria group that can be introduced by human interaction with the water. In 2012, all 1,080 samples were non-detected for Total Coliform Bacteria. The Total Coliform Bacteria test is used as an indicator test for other microbial contaminants that are more harmful.

Substance	MCL	MCLG	Highest Monthly Percentage In Our Water	Sample Year	Violation	Typical Source of Contamination
Total Coliform Bacteria	5% of monthly samples are positive	0	0	2012	No	Naturally present in the environment

Other common contaminants include lead and copper which can come from the plumbing system in homes and businesses. The city is required to test for lead and copper every three years from homes of a certain age range. Neither lead nor copper exceeded their respective action levels because the 90th percentile values were below the action levels.

Substance	Action Level (AL)	MCLG	Our Water	Number of Sites Exceeding AL	Sample Year	Violation	Typical Source of Contamination
Copper (ppm)	1.3	1.3	0.32 (90th percentile)	0	2011	No	Corrosion of household plumbing systems
Lead (ppb)	15	0	3.8 (90th percentile)	2	2011	No	Corrosion of household plumbing systems

The City of Rio Rancho does not have any regulated organic chemical contaminants or pesticides and herbicides detected in our water. We are required by the US Environmental Protection Agency to test and monitor for non-regulated organic contaminants and two substances are detected in our water.

Substance	MCL	MCLG	Our Water	Range of Detection	Sample Year	Violation	Typical Source of Contamination
2-Butanone (MEK) (ppb)	N/A	N/A	2.8	ND-2.8	2011	No	Discharge from solvents used for coatings, resins, and adhesives
Tetrahydrofuran (ppb)	N/A	N/A	0.8	ND-0.8	2011	No	Discharge from manufacturing of protective coatings, adhesives, magnetic strips, and printing inks

■ **LEAD**

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 Rio Rancho Utilities Division 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 drinking 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 www.epa.gov/safewater/lead.

PEOPLE WITH SENSITIVITIES

■ Some people may be more vulnerable to contaminants in drinking water than the general population. Please seek advice from your health care provider if you are:

- Immuno-compromised
- Undergoing chemotherapy
- A transplant recipient
- Living with HIV/AIDS or other immune system disorders
- Elderly or have a newborn that may be at risk from infection

Most of the infrastructure of a water and wastewater company seems to be invisible because it is underground. The city has about 400 miles of water mains running throughout the city to provide quality drinking water to the residents and businesses.

City utilities personnel use advanced technology to detect and locate underground leaks in aging infrastructure. Photos below show deployment of “loggers” that listen for leak noise and send a “flag” to staff indicating a possible leak. These flags are investigated and the leaks repaired.



SUSCEPTIBILITY ANALYSIS

The Susceptibility Analysis of the Rio Rancho water utility reveals that the utility is well maintained and operated, and the sources of drinking water are generally protected from potential sources of contamination. The susceptibility rank of the entire water system is MODERATELY LOW, a good rating. Call New Mexico Environment Department at 1-877-654-8720 for questions.

GET INVOLVED IN CITY WATER MATTERS

The Utilities Commission is a group appointed by the mayor and governing body; one person per city district plus an at-large position. The Utilities Commission guides the city Utilities Division with input and policy decision-making that impacts the entire city. The Utilities Commission meets on the third Tuesday of every month at 6:00 p.m. at City Hall, 3200 Civic Center Circle NE. These are open meetings, so come and voice any of your water or wastewater concerns. For more information on the Utilities Commission please call 896-8715 or go to: www.ci.rio-rancho.nm.us.



Utility Commissioners, left to right:

- Gordon Hawley District 1*
- Ron Hensley District 3*
- Kay Rogerson District 4*
- Bill White District 2*
(Chairman)
- Robert Bajek District 5*
(Secretary)
- James Cleveland . . . District 6*
(Vice Chair)
- Garry Lally At-Large*



City of Rio Rancho
Utilities Division
3200 Civic Center Circle NE
Rio Rancho, NM 87144

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IMPORTANT INFO

Administration 896-8715

Utilities Billing 891-5020

Report Leaks 891-5020

Water/Wastewater
Emergency 975-1581

Line Spots, NM One Call 811

Water Conservation 896-8715

Engineering 891-5016

Environmental
Programs 896-8737

Water Waste Hotline 896-8299

www.ci.rio-rancho.nm.us

***** ECRWSS *****

**Postal Customer
Rio Rancho, New Mexico**

**Este informe contiene información
importante acerca de su agua potable.
Haga que alguien lo traduzca para usted,
o hable con alguien que lo entienda.**

