Consumer Confidence Report

City Of
Rio Rancho
2014

RioRancho
City of Vision

City of Rio Rancho
Water Conservation Office
Conserve Today. Preserve Tomorrow.

QUALITY DRINKING WATER BEGINS HERE!

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Note: All text preceded by a ○ contains information required by the EPA.

○ 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. **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 our area lies within volcanic rocks that contain naturally occurring arsenic. As water flows through the rock it dissolves some of the arsenic from the rocks.

○ 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 **(877) 654-8720** *for questions.*

GET INVOLVED IN CITY WATER MATTERS

The Utilities Commission is a group appointed by the mayor and city council; one person per city council district plus an at-large position. The Utilities Commission guides the City's 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 **(505) 896-8715** or go to **www.ci.rio-rancho.nm.us**.

Billy Jaquez, laboratory manager (front left) and Robert Apodaca, laboratory technician, conduct wastewater sampling analyses and tests. Both men work for Water and Wastewater Services in the Utilities Division.

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.

MRL: Minimum Reporting Levels – the smallest measured concentration of a substance that can be reliably measured by using a given analytical method

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.

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	12*	3-12	2014	No	Erosion of natural deposits

**An arsenic sample that was collected by the City of Rio Rancho in February 2014 indicated an exceedance of the MCL for arsenic of 10 ppb. A confirmation sample was taken at that location which indicated that arsenic was below the MCL. The City of Rio Rancho is not in violation since compliance is based on the running annual average for arsenic. The City of Rio Rancho is required to increase monitoring frequency for this contaminant to quarterly sampling starting the first quarter of 2015 and will continue for four quarters.*

LEAD/COPPER

Lead and copper 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.

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.

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	0.46 (90th percentile)	0	2014	No	Corrosion of household plumbing systems
Lead (ppb)	15	0	2 (90th percentile)	0	2014	No	Corrosion of household plumbing systems

Substance	MCL	MCLG	Our Water	Range of Detection	Sample Year	Violation	Typical Source of Contamination
Chromium (ppb)	100	100	11	0.001-11	2014	No	Erosion of natural deposits
Fluoride (ppm)	4	4	1.07	0.38-1.07	2014	No	Erosion of natural deposits
Nitrate as Nitrogen (ppm)	10	10	3.33	0.12-3.33	2014	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

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 **(800) 426-4791** or at **www.epa.gov/safewater/lead.**

MICROBIAL CONTAMINANTS

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

Substance	MCL	MCLG	Highest Monthly Percentage In Our Water	Sample Year	Violation	Typical Source of Contamination
Total Coliform Bacteria	5†	0	0.004%* **From the 1107 samples taken in 2014, 4 samples were positive. All repeat samples were negative for Total Coliform.*	2014	No	Naturally present in the environment

†5% of monthly samples are positive.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE DRINKING 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.

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
Xylenes (ppm)	10	10	0.00069	ND-0.00069	2014	No	Discharge from petroleum or chemical factories
Ethylbenzene (ppb)	700	700	0.13	ND-0.13	2014	No	Discharge from petroleum refineries

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.

Substance	MCL	MCLG	Our Water	Range of Detection	Sample Year	Violation	Typical Source of Contamination
Alpha emitters (pCi/L)	15	0	8.4	0.3-8.4	2014	No	Erosion of natural deposits
Beta/photon emitters (pCi/L)	50	0	8.7	2.5-8.7	2014	No	Decay of natural and man-made deposits
Radium combined 226/228 (pCi/L)	5	0	0.2	ND-0.2	2014	No	Erosion of natural deposits
Uranium (ppb)	30	0	7	ND-7	2014	No	Erosion of natural deposits

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
TTHMs (ppb)	80	N/A	19.5	ND-24	2014	No	By-product of drinking water disinfection
HAA5 (ppb)	60	N/A	2.65	0.87-3.2	2014	No	By-product of drinking water disinfection
Chlorine (ppm)	MRDL 4	MRDLG 4	1	0.5-1	2014	No	Water additive to control microbes

CRYPTOSPORIDIUM

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.**

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

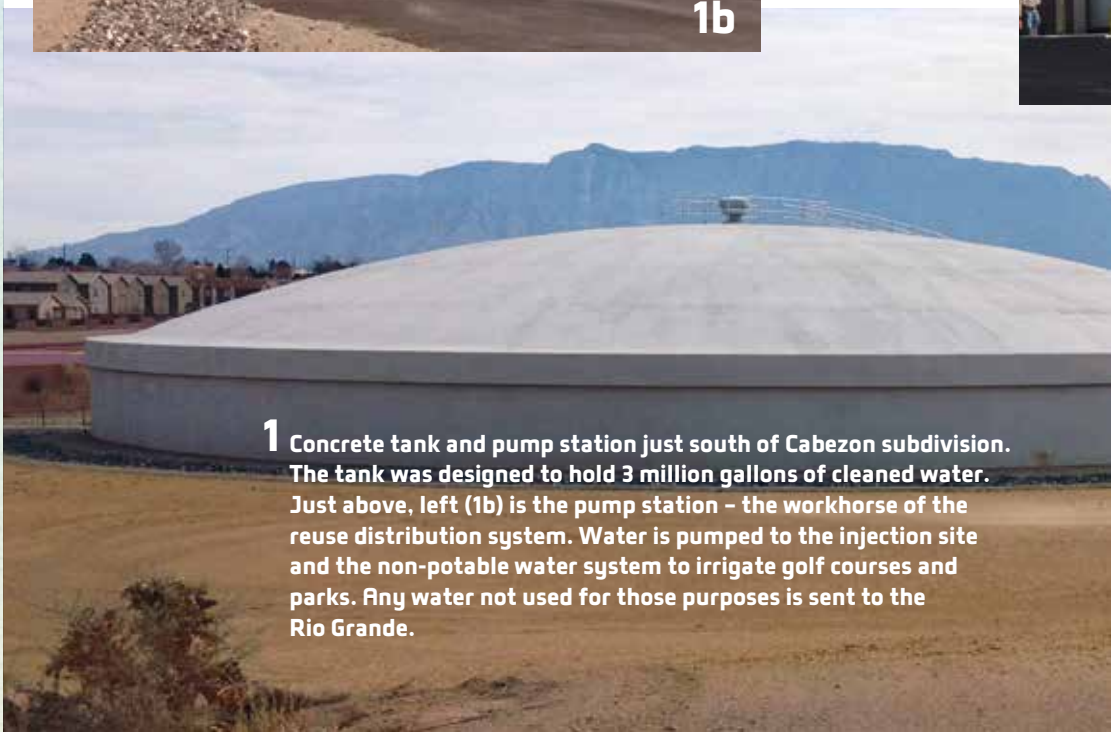
Update

Aquifer Injection and Purified Water Project Moving Forward

The City is continuing with the Aquifer Injection and Replenishment Project by applying for two state grants. One application is for a new three million gallon (3 MG) ground storage reservoir to be located in the aquifer injection site near Northern Boulevard and Moccasin Avenue. The site can gravity feed the entire recycled water system including turf irrigation and aquifer replenishment applications.

The City designed and developed a direct injection facility consisting of one deep injection well (16-inch casing to 1,700 feet), an extensive groundwater monitoring network, and the advanced water treatment (AWT) building and associated process tanks. The facility is capable of replenishing the underlying aquifer at a rate of one million gallons per day.

The second grant application requests funding to complete equipping the AWT facility with a) an advanced oxidation process (AOP) using ozone/hydrogen peroxide for maximum water purification; b) installing granular activated carbon within the onsite vessels; c) installing degasser and final disinfection process; d) retrofitting the injection well for routine backwash operations; and, e) completing associated site improvements for operation of the facility.



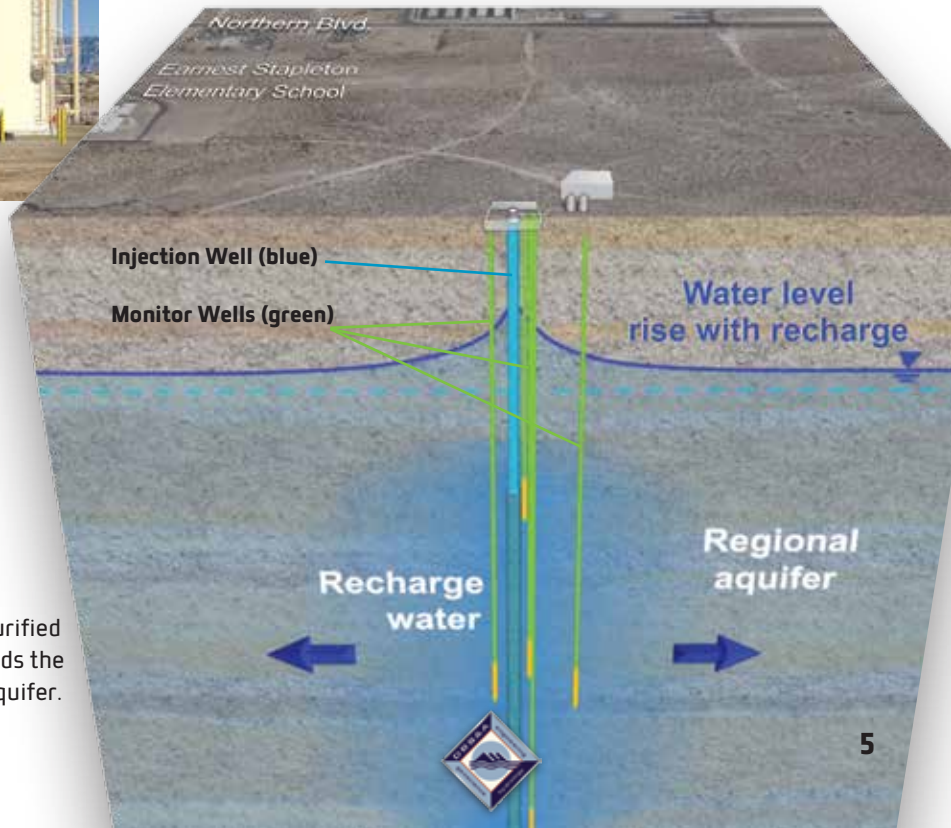
1b

1 **Concrete tank and pump station just south of Cabezon subdivision. The tank was designed to hold 3 million gallons of cleaned water. Just above, left (1b) is the pump station – the workhorse of the reuse distribution system. Water is pumped to the injection site and the non-potable water system to irrigate golf courses and parks. Any water not used for those purposes is sent to the Rio Grande.**

2 Some of the treated water stored in the concrete tank will be will be sent to the city's aquifer injection site off Northern Boulevard, where it will be treated again before being injected into the aquifer.

3 Granular activated carbon (GAC) tanks installed in the water treatment facility will clean and purify the water before the injection process.

4 Raw water comes into one tank and gets sent to the GAC tanks for polishing. Finished purified water is then held in the second tank prior to injection.



5 Recharge purified water extends the life of the aquifer.

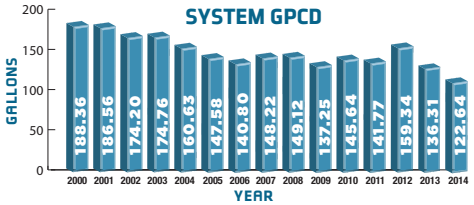
UNREGULATED CONTAMINANTS: Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted. A maximum contaminant level (MCL) for these substances has not been established by either state or federal regulations, nor has mandatory health effects language.

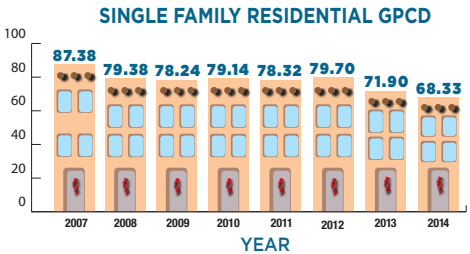
Substance	MRL	Average Amount Detected	Range		Sample Year
			Low	High	
Chromium-6 (hexavalent chromium) (ppb)	0.03	4.57	ND	10.63	2014
Chromium (total chromium) (ppb)	0.2	5.76	0.4	14.1	2014
Molybdenum (ppb)	1	5.25	ND	13.3	2014
Strontium (ppb)	0.3	675	114	1703	2014
Vanadium (ppb)	0.2	17.82	7.2	41	2014
Chlorate (ppb)	20	25	ND	110	2014

2014 Water Use Hits 14-year Low

Fourteen years ago, Rio Ranchoans used almost sixty-six gallons per person per day more than they do now. That's 24,090 gallons more a year per person!

Water use dropped from 136.31 in 2013 to 122.64 in 2014, surpassing our City goal of reaching 135 GPCD by 2017. Keep up the good work!





Evaporative Cooling:

Use It Wisely for Optimal Water Use and Comfort

Evaporative cooling isn't a new concept. In fact, it's the oldest known method of cooling hot, summer air to make living spaces more comfortable. Ancient Egyptians hung wet material so the wind could blow through it to create a cooling effect. If you've ever been chilled when getting out of a swimming pool, you've experienced the effect of evaporative cooling.

How Much Water Do "Swamp Coolers" Use?

Water requirements for an evaporative cooler will vary with the size of the house, its orientation toward the sun, window area, type of landscaping, proximity to hard surfaces and other structures, lifestyle of the occupants, local climate, how many hours the cooler runs, and water quality. In an average weather year a 1,500 square-foot home in Santa Fe might use 2,980 gallons of evaporative cooling water (based on the evaporative cooler running 696 hours). The same sized home in Rio Rancho would use 7,261 gallons (1,130 cooling hours), while a similar house in Las Cruces would use 12,457 gallons (1,718 cooling hours).

In an unusually warm year, these water requirements would be significantly higher. Virtually all models of evaporative coolers now available recirculate the water that drips from the pads, resulting in an efficient use of water.

Spring Startup:
Evaporative Cooler Maintenance Made Simple

Spring maintenance is essential to make sure your evaporative cooler will do its job during the hot summer months. Most coolers can be maintained by do-it-yourselfers with common household tools.

1. **Remove external weatherproof covers, disconnect the water line and turn off the water supply.**

2. **Remove the cooler pad holders. Remove and discard the old cooler pads. Scrub the panels to remove any debris. Scrub out the water trough at the top of each panel, making sure that each hole in the trough is free of debris.**

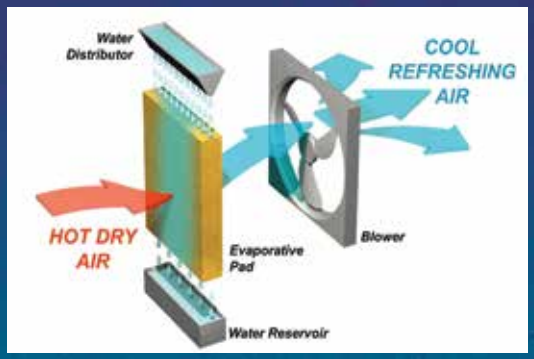
3. **Clean out debris in the water tray (at the bottom of the cooler). Check the water tray for rusted areas and cracks that may leak and coat the tray with submarine paint.**

4. **Install new cooler pads per manufacturer's directions. The cooling efficiency of your evaporative cooler is dependent upon the pads. Old pads get coated with mineral deposits and won't absorb as much water.**

5. **Connect the water line and turn on the water supply. Water should begin to fill the water pan.**

6. **When there is sufficient water in the pan, turn on the water pump and make sure the water flows freely through the tubing and onto the water trough at the top of each panel. Water should evenly saturate each pad.**

7. **Check the water level and adjust the float arm, if necessary.**



Excerpt taken from "A Waterwise Guide to Evaporative Coolers" from the New Mexico Office of the State Engineer, Water Use and Conservation Bureau.

Utilities Operators Receive Prestigious Awards

Two staff members representing Utilities Operations were honored with prestigious awards. Corey Terrell was awarded the **"Water Production Facility Operator of the Year"** and Louie Aguilar was presented with the **"Water Distribution Operator of the Year."** Winners of these awards, presented by New Mexico Water and Wastewater Association, were selected from the entire state's water and wastewater operators.

The New Mexico Water and Wastewater Association endeavors to assist in protecting the public health and the environment and preserving the investment of public funds in New Mexico by promoting proper design, construction, operation, performance evaluation, and management of water and wastewater utilities.

Left to right: Cory Terrell and Louie Aguilar, award recipients, with their supervisor Ted Chlastawa.

Following the Money

Your Rate Dollars at Work

Fixing Leaks, Line by Line

The Service Line Replacement Program was established to replace existing polyethylene water service lines (from the street to the water meter) with new copper water service lines, which have proven to wear better and last longer. The project will also replace Non-Automatic Reading Water Meters and Non-Standard Meter Boxes.

In the late 1970s and early 1980s, the price of copper was very high and copper pipes were expensive. Utilities across America were using "poly" pipes because it was reported that "poly" was better than and much less expensive than copper.

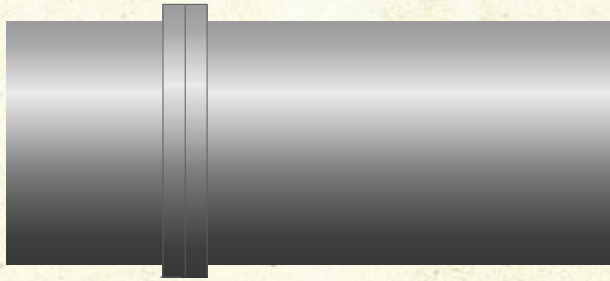
The chart to the right depicts the difference in water leaks from 2013 to 2014, primarily due to the start of the replacement program. The estimated water lost that is attributed to leaks includes main breaks in addition to service line leaks. The service line replacement programs began in 2014 with 1,086 polyethylene lines replaced with copper lines. A third phase is ongoing in 2015 with an estimated 1,150 service lines scheduled to be replaced.

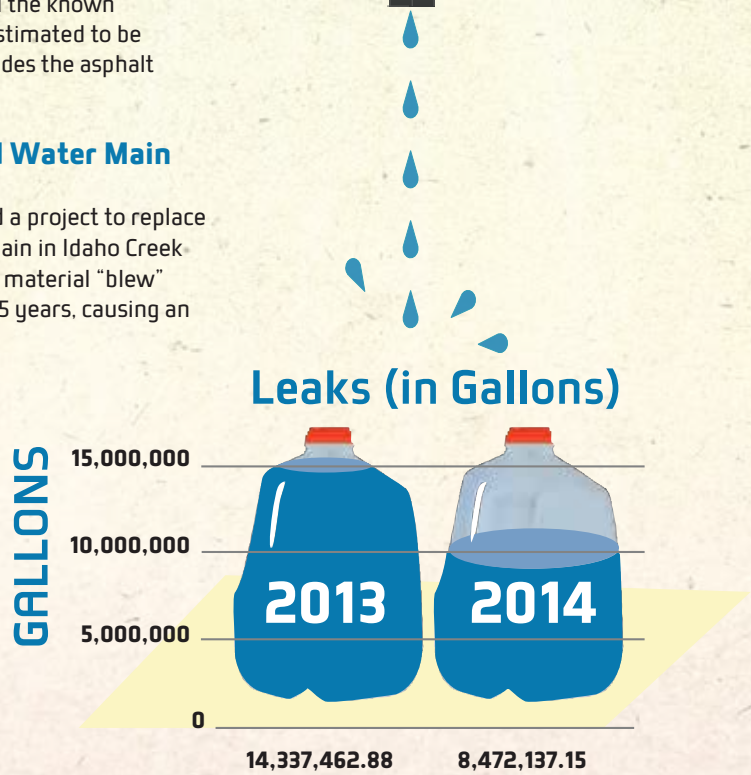
The City has planned and earmarked $1 million per year to replace the polyethylene water service lines. "Polyethylene was used for a period of time for the service lines in the City," said Larry Webb, City Utilities Operations Manager. "It is not if it will break, but when." Repairing the polyethylene service lines is the primary reason for the "patchwork" roads throughout the City.

The cost of replacing all the known polyethylene pipes is estimated to be $30 million, which includes the asphalt and street repairs.

Idaho Creek Road Water Main Replaced

The City has completed a project to replace the original 8" water main in Idaho Creek Road. The original pipe material "blew" 25 times over the past 5 years, causing an estimated loss of 22.5 million gallons of water. The polyethylene service lines to the homes were also replaced at the same time with copper pipes. This project cost $237,873.18 and was paid for by water and wastewater rate payers. The City will continue with upgrade and replacement projects such as this one to be good stewards and protect our groundwater resource, the source of our drinking water supply.

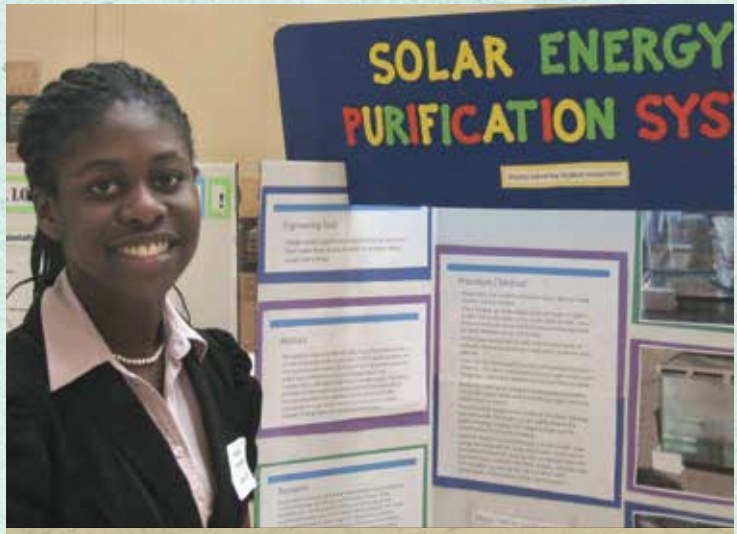




Above: The Service Line Replacement Program contributed to the reduction of the amount of water lost to line leaks from 14,337,462.88 gallons in 2013 to 8,472,137.15 in 2014, when the program began. Phase III is on-going with an estimated 1,150 service lines scheduled to be replaced by the end of 2015. Left: crews replace the original 8" water main line and service lines on Idaho Creek Road.

Matuke Fomukong Wins 2015 "Every Drop Counts" Award for Solar Energy Purification System project

This year's winner for the Science Fair and Expo's Every Drop Counts award is Matuke Fomukong from Rio Rancho High School. In her project *Solar Energy Purification System*, Ms. Fomukong writes, "While potable water is taken for granted in developed nations, communities in underdeveloped countries can hardly afford clean drinking water. The lack of potable water in underdeveloped countries results in outbreaks of waterborne diseases like diarrhea. Diarrhea causes over 2 million deaths in underdeveloped countries worldwide, especially with children. To reduce deaths due to a lack of potable water, the need for cost effective and efficient ways to purify brackish water is of critical importance for use in third world countries." Using sunlight as a cheap and free energy source, Ms. Fomukong successfully purified brackish water by a process of evaporation and condensation. Her results showed that a consistent amount of clean water could be produced over periods of time, proving that this method is predictable and reliable. To produce large volumes of water to satisfy the needs of a community, large scale designs of the system would need to be used.



Matuke Fomukong, winner of the 2015 "Every Drop Counts" award.

The City of Rio Rancho Department of Public Works has updated their webpages to better assist the public. The webpages have a few new features: common links on the bottom of every page, a forms section with all of the forms that the department uses, a Frequently Asked Questions section, map application gallery, xeriscaping guide, and more. Go to the city website **(http://www.ci.rio-rancho.nm.us)** and go to the bottom left hand corner and click on Public Works to visit the new pages.

Youth and Student Outreach

Kayla Alarcon is a 12th grade student at Rio Rancho High School. Assisted by Marian Wrage, City Environmental Programs Manager and Eddie De Lara, City Wastewater Manager with CH2M Hill, Ms. Alarcon sampled water at Harvey Jones Channel (WWTP #2 outfall) in Corrales for her science fair project. The purpose of her project, which was selected for the regional competition in March, was to measure the health of the Rio Grande ecosystem in Rio Rancho. This was assessed by examining the chemistry and macro-invertebrate population characteristics of the river.

Top: Kayla Alarcon collects samples for her science fair project. Bottom left and right: Testing Dissolved Oxygen and pH levels helps measure the health of the Rio Grande ecosystem in Rio Rancho.

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

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IMPORTANT INFO

All phone numbers have a (505) area code.

Utilities Administration	896-8715
Utilities Billing	891-5020
Report Leaks	891-5020
Water/Wastewater Emergency (After Hours)	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

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) SAFE DRINKING WATER HOTLINE:

(800) 426-4791

RIO RANCHO WATER PRODUCTION:

(505) 891-5221

********* 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.

RioRancho City of Vision

Utilities Division · City of Rio Rancho

City of Rio Rancho Water Conservation Office
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