



ANNUAL
WATER REPORT

*Water testing
performed in 2010*



Presented By
City of Gallup

PWS ID#: 3508317

Quality First

Once again we present our annual water quality report covering testing performed between January 1 and December 31, 2010. We are committed to delivering the best-quality drinking water possible. We remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users.



Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

Questions?

For more information about this report, or for any questions or comments relating to your drinking water, please call Ernest Thompson, Water/Wastewater Superintendent, at (505) 863-1207.

Gallup Water-Saving Rebate Program

Help save our most precious resource and money on your Gallup Joint Utility bill:

TOILET (HET) and SHOWER HEAD REBATE: The goal is to replace water-wasting toilets of 3.5 gallons or more per flush. Only new, High-Efficiency Toilets (HET) labeled EPA WaterSense (1.28 gallons per flush) will qualify for the rebate to be credited to the City of Gallup utility customer rebate credit. Credit amounts: \$100 rebate for first residential retrofit, \$75 for second toilet, and \$75 for each commercial retrofit. In the average home, the toilet accounts for 28% of water use.

CLOTHES WASHER (HEW) RESIDENTIAL REBATE: The City of Gallup offers a \$100 rebate to install new High-Efficiency Clothes Washing (HEW) Machines from the Consortium of Energy Efficiency (CEE) product list for converting old water- and energy-wasting washing machines to water- and energy-conserving, TIER 3, high-efficiency models.

RAIN BARREL REBATE: Earn a \$25 to \$30 maximum Rain Barrel Rebate on newly installed rain barrels upon installation and with proof of a receipt.

XERISCAPE REBATE: The City offers a rebate to change out green irrigated grass to a Xeriscape (low-water-using plant) landscape. Amount: \$25 per each qualifying 100 square feet.

A Message from the Gallup Water Board

Assuring Gallup's Water Future — Perspectives and Recommendations of the Gallup Water Board

Gallup is entirely reliant on groundwater for our water supply. We are mining fossil groundwater which infiltrated into the Earth in the ancient past, tens of thousands of years ago, when the climate and surface conditions were very different. Currently, climate and geologic conditions for the Gallup groundwater aquifers allow for very little recharge from rain and snow melt. What took thousands of years to deposit is being depleted in decades. Although the exact quantity of water that remains to be withdrawn from these aquifers is unknown, experts agree that they will not sustain our increasing needs.

The City and the Water Board have studied various options to assure the future water supply. Among other challenges, all of the options are expensive; it is not clear how Gallup will afford them.

Even as it continues to clear legislative hurdles, the Navajo-Gallup Water Supply Project (NGWSP) is still many years away from delivering water. Gallup's costs could easily top \$50 million for construction alone. There are additional costs of water, operations, and replacement as well. Development of the G-22 well field is phase-able and less expensive. However, it requires a lengthy Hearing Process through the office of the State Engineer, and approval is uncertain.

Securing money to finance these projects is even more difficult during hard economic times. On-going operation and maintenance costs of the aging existing water system continue to increase. It is certain, regardless of which options are pursued, that the City of Gallup faces significantly increased costs to provide water for its residents and businesses.

In this context of decreasing supply and rising costs, steps must be taken now to assure an affordable and sustainable water future for Gallup. The Water Board is convinced that what is needed is a renewed and specific program of water conservation; a cost-effective and immediate route to increasing our water supply by making it last longer; a process for water allocation to assure sustainable access for residents and businesses; and a commitment to water protection to keep our current water supply drinkable.

Community Participation

Gallup Joint Utilities - Water Systems Department encourages you to participate in decisions affecting drinking water. You are invited to attend regular City Council meetings on the second and fourth Tuesday of every month to voice your concerns about your drinking water. City Council work sessions begin at 6:00 p.m. and the regular meetings begin at 7:00 p.m. at City Hall, 110 West Aztec Avenue, Gallup, New Mexico. Meeting dates and times are published in local newspapers, and agendas may be obtained from the City Clerk's office.

The City of Gallup Water Board meets on the first Wednesday of every month at 3:00 p.m. to discuss current water issues and make recommendations to the City Council. These meetings are open to the public.

To find out more about the City of Gallup, visit our Web page at www.ci.gallup.nm.us. You may also find information on the U.S. Environmental Protection Agency (U.S. EPA) water information Web site at <http://water.epa.gov/drink/>.

About Our Violation

In November of 2010, the City had a positive sample which was taken at one of our approved Bacteriological sampling sites. Resamples were taken at the location of the positive sample and both upstream and downstream of the location. All resamples were reported back as negative for contaminants. Under the Source Water Monitoring Requirements of the New Mexico Environment Department, the City was required to sample source water locations for any contaminants within 24 hours of notification of the positive sample. The City failed to take these source samples within the 24-hour time frame and therefore was in violation. We do not believe that missing this monitoring requirement had any impact on public health and safety. We have already taken the steps to ensure that adequate monitoring and reporting will be performed in the future so that this oversight will not be repeated.

Source Water Assessment

In 2008, the New Mexico Environment Department (NMED) completed Sanitary Survey and Source Water Assessments for the Gallup Joint Utilities Water System, quantifying the risk of contamination to these drinking water sources. The Susceptibility Analysis of the City of Gallup Water System reveals that the utility is well-maintained and operated, and the sources of drinking water are generally protected from potential sources of contamination based on well construction, hydrogeologic settings, and system operations and management. The susceptibility rank of the entire water system is Moderate.

To view a copy of the Source Water Assessment, feel free to contact the office during regular business hours.

In 2010, the New Mexico Rural Water Association (NMRWA), in coordination with the U.S. Department of Agriculture – Farm Service Agency (USDA-FSA), Gallup Joint Utilities Water System in McKinley County, and the New Mexico Environment Department Drinking Water Bureau (NMED-DWB) discussed specific actions that could address drinking water contamination prevention and the creation of a Source Water Protection Plan. The specific actions that the planning team developed will address potential sources of contamination adjacent to supply wells with the ultimate goal of lowering the susceptibility to contamination rankings and protecting the drinking water supply for future generations.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Advances Made in Field Operations

In 2010, the Gallup Joint Utilities Engineering Staff and the Water and Wastewater Operations Departments implemented a new in-vehicle computerized system that allows the field personnel direct access to the Utility GIS (Geographic Information System) mapping system, construction project history, meter installation, and workorder historical data. The operators can access aerial mapping, utility overlay maps, standard drawings and specifications, and can initiate workorders and reports from their vehicles, eliminating the need to return to the office to perform paperwork. The GIS mapping system gives operators information on existing lines such as pipe size and material which can help them prepare when responding to line breaks. The operators can also make field corrections to existing maps and as-built drawings electronically and provide direct feedback to Engineering Staff and Management as well as provide workorder and meter information to the Customer Service Department. This implementation has also enhanced the infrastructure knowledge of our operators and staff.

A huge portion of the hard-copy reporting and workorder system has been eliminated, and communication and information exchange between the Field Crews and Customer Service is now sent more efficiently by electronic means. The Gallup Joint Utilities Division will continue to make improvements to this system, making it more cost effective.



Where Does My Water Come From?

Gallup's water is produced from 16 wells tapping underground supplies from two main underground aquifers, the Gallup Sandstone and the Dakota-Westwater. The Dakota-Westwater Aquifer is separated from the Gallup Sandstone by a massive shale layer known as the Mancos Shale. The Gallup Sandstone is the shallower of the two and is several hundred feet thick. The wells are located up to 10 miles from the city center. They range from 300 to 3,500 feet deep. They receive no recharge from surface sources (such as rain or snow) immediately above the well site. Being confined and not being in immediate contact with surface water, these aquifers are well protected from contamination from surface sources in the vicinity of the well sites. Water is collected from these natural underground supplies and then pumped to 8 storage tanks. Gravity and pumps move the water to our homes and businesses. Many of the water system's components — wells, pipes, storage tanks, and pumps — are old and deteriorating, so a great deal of resources are used to keep water flowing.

Our underground water is being used up. It is not being replaced from natural sources. City water shortages in the not-too-distant future are predicted by experts. Our limited and uncertain water supply limits possibilities for growth, economic development, and new jobs. The City has worked to find new sources of water since early in our history. In recent years, water conservation has been recognized as the most cost-effective new "source" of water.

A Water Conservation Program is administered by the Water Conservation Coordinator at Gallup Joint Utilities. This person administers a number of water-saving programs that have helped to replace high-flow toilets, shower heads, clothes washers, and restaurant dish-washing equipment. Another program encourages replacement of private and public lawns and high-water-use type of landscaping, and the use of rain and snow water for landscaping and gardening. The Coordinator also works with schools, businesses, and community groups to make people aware of our water problems and to suggest solutions. The Coordinator will inspect businesses and make suggestions for improvements to equipment and landscaping that will reduce water use and cost. These programs are believed to aid in the water consumption reduction and have lowered the City's cost to pump and distribute water as well as saving water for future use.

Gallup Joint Utilities is using technology to understand and operate the water system effectively. A computerized control system using sensing equipment and radio communications continuously tracks the operating conditions at wells, pumps, water tanks, and other equipment, allowing utility personnel to operate the water system efficiently and to identify problems like water line breaks or developing pump problems. A computerized mapping system is also being developed.

Lead and Drinking Water

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. Gallup Joint Utilities is responsible for providing high-quality drinking water, but we 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 during the next testing period. 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.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2005	15	0	4.4	0.517–4.4	No	Erosion of natural deposits
Arsenic (ppb)	2008	10	0	2	0.517–4.4	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Beta/Photon Emitters ¹ (pCi/L)	2008	50	0	1.18	ND–1.18	No	Decay of natural and man-made deposits
Chlorine (ppm)	2010	[4]	[4]	0.87	NA	No	Water additive used to control microbes
Chromium (ppb)	2008	100	100	2	0.01–2	No	Discharge from steel and pulp mills; Erosion of natural deposits
Combined Radium (pCi/L)	2005	5	0	1.55	1.035–1.55	No	Erosion of natural deposits
Haloacetic Acids [HAAs] (ppb)	2010	60	NA	2.1	ND–2.1	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2010	80	NA	12.7	ND–12.7	No	By-product of drinking water disinfection
Uranium (ppb)	2005	30	0	1.1	0.01–1.1	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2009	1.3	1.3	0.14	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2009	15	0	4	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Fluoride (ppm)	2008	2.0	NA	1.33	0.55–1.33	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2010	2.6	ND–2.6	By-product of drinking water disinfection
Bromoform (ppb)	2010	4.1	0.7–4.1	By-product of drinking water disinfection
Chloroform (ppb)	2010	0.9	ND–0.9	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2010	5.1	0.02–5.1	By-product of drinking water disinfection

Definitions

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. Secondary MCLs (SMCL) are set for the control of taste and odor.

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.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

¹The MCL for Beta Particles is 4 mrem/year. The U.S. EPA considers 50 pCi/L to be the level of concern for Beta Particles.