

ANNUAL

WATER QUALITY REPORT

Water testing performed in 2008



CITY OF GALLUP

PWS ID#: 3508317

Meeting the Challenge

Gallup Joint Utilities (GJU) is once again proud to present to you our annual water quality report. This edition covers all testing completed from January 1, 2008 through December 31, 2008. Over the years, GJU has dedicated ourselves to producing drinking water that meets all state and federal drinking water standards. GJU continually strives to adopt new and better methods for delivering the best-quality drinking water to you. GJU continues to expand and improve water services to the city and the area. You, as our customers, have invested in equipping some of our wells and pumping facilities with new pumps, motors, and controls to improve the quality and reliability of our water system. GJU has provided new domestic water service to our growing community such as the new Chief Manuelito Middle School, subdivisions, and new apartment complexes. We are currently expanding our services in the planning and construction to address the Navajo/Gallup Regional Water System.

As new challenges to drinking water safety emerge, GJU remains vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please share with us your thoughts about the information in this report. After all, well-informed customers are our best allies. You may contact Ernest Thompson, Water/Wastewater Superintendent, at (505) 863-1207 or by e-mail at water@ci.gallup.nm.us.

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.



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.

Where Does My Water Come From?

The City of Gallup's water supply comes 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 City has 14 wells, which currently pump from zones below the ground's surface. Three of these wells and two others also produce water from the Dakota-Westwater Aquifer. These wells produce water from zones within the top layer of the Dakota-Westwater Aquifer, ranging from 1,900 to 3,000 feet below the ground's surface. Both the Gallup Sandstone and the Dakota-Westwater Aquifers are considered confined. 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 by surface sources in the vicinity of the well sites.

Community Participation

Gallup Joint Utilities - Water Systems 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. Meetings are held 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's Water Board meets on the first Wednesday of every month 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's (U.S. EPA) water information Web sites at www.epa.gov/safewater and www.waterdata.com.

Source Water Assessment

In October of 2002, the New Mexico Environment Department conducted a Source Water Assessment. The susceptibility analysis of the Gallup Joint Utilities Water System revealed that the utility is well maintained and operated. The sources of drinking water are generally protected from potential contamination based on well construction, hydrogeological settings, and system operations and management. The susceptibility rank of the entire system was moderate.

Although throughout the United States it is common to find potential sources of contamination located atop wellheads, continued regulatory oversight, wellhead protection plans, and other planning efforts continue to be primary methods of protecting and ensuring high-quality drinking water. A copy of the assessment is available for review at the Gallup Joint Utilities office during regular business hours.

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 your home's plumbing. Gallup Joint Utilities 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 two minutes before using the 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.



Water Conservation

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste from 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and appliances that use water. Then check the meter after 15 minutes. If it moved, you have a leak.

The City of Gallup offers these water rebate programs to help conserve water and save you money on your utility bill:

HIGH EFFICIENCY CLOTHES WASHER (HEW) RESIDENTIAL REBATE: The City of Gallup offers a \$100.00 rebate to install a new High Efficiency Clothes Washer (HEW) machine from the Consortium of Energy Efficiency (CEE) product list to exchange older washing machines to water-conserving high efficiency models.

RAIN BARREL REBATE: A \$25.00 to \$30.00 maximum Rain Barrel Rebate on newly installed rain barrels.

HIGH EFFICIENCY TOILET (HET) and SHOWER HEAD REBATE: This is for exchanging high-flow toilets to WaterSense labelled Water Efficiency toilets and for exchanging high-flow showerheads for more water conserving fixtures that use only 2.5 gallons of water per minute or less.

XERISCAPE REBATE: For changing out grass that needs to be constantly irrigated for a Xeric landscape. \$25 rebate per each qualifying 100 square feet.

For information on the rebate program, call the GJU Administration offices at (505) 863-1289.



Is it safe to drink water from a garden hose?

Substances used in vinyl garden hoses to keep them flexible can get into the water as it passes through the hose. These chemicals are not good for you nor are they good for your pets. Allow the water to run for a short time in order to flush the hose before drinking or filling your pets' drinking containers. There are hoses made with "food-grade" plastic that will not contaminate the water. Check your local hardware store for this type of hose.

What makes water Hard?

If substantial amounts of either calcium or magnesium, both nontoxic minerals, are present in drinking water, the water is said to be hard. Hard water does not dissolve soap readily, so making lather for washing and cleaning is difficult. Conversely, water containing little calcium or magnesium is called soft water.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council (NRDC), bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25% of bottled water is actually just bottled tap water (40% according to government estimates).

The U.S. Food and Drug Administration (FDA) is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70% of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion of the NRDC study results, check out their Web site at www.nrdc.org/water/drinking/bw/exesum.asp.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses about 100 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet, twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to www.h2oconserve.org or visit www.waterfootprint.org to see how the water footprints of other nations compare.



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 table below shows only those contaminants that were detected in the water. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

The state requires us to monitor for certain substances less 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	1	1.0–2.0	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2005	2	2	0.028	ND–0.028	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters (pCi/L)	2005	50	0	1.18	0.87–1.18	No	Decay of natural and man-made deposits
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
Fluoride (ppm)	2008	4	4	1.33	0.55–1.33	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2008	60	NA	1.96	ND–1.96	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2008	80	NA	23.6	ND–23.6	No	By-product of drinking water chlorination
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)	2006	1.3	1.3	0.55	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2006	15	0	6	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2008	4.4	ND–4.4	By-product of drinking water disinfection
Bromoform (ppb)	2008	8.6	0.7–8.6	By-product of drinking water disinfection
Chloroform (ppb)	2008	1.3	ND–1.3	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2008	9.3	0.02–9.3	By-product of drinking water disinfection
Sulfate (ppm)	2004	518	518–518	Naturally occurring

Definitions

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

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).

