

Annual Drinking Water Quality Report *Calendar Year 2010*

Entranosa Water & Wastewater Association

(a cooperative association)

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Consumer Confidence Report

As required by the Environmental Protection Agency and
the Environment Department of the State of New Mexico

June 2011

Annual Report on Drinking Water Quality – 2010

Entranosa Water & Wastewater Association

June 10, 2011

We are pleased to provide you with our report on drinking water quality, also known as the “Consumer Confidence Report (CCR)”. We provide this report every year, pursuant to federal law, in an effort to keep you informed about the water and services we delivered during the previous year. This report shows that we are achieving our goal - to provide you with a safe and reliable supply of drinking water.

Is the water safe?

In calendar year 2010 your tap water met the primary standards set by the U.S. Environmental Protection Agency (EPA) and the drinking water quality standards of the State of New Mexico (NMED). This past year, we conducted routine and random bacteriological testing, and assisted the NMED in obtaining water samples to test for the contaminants covered by the Safe Drinking Water Act (SDWA). Although some of the tests reflected the presence of a contaminant, that is ‘normal’ and none of the tests results exceeded those the levels authorized by EPA. Your water is safe, and remains so.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as those 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 providers. EPA/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 Water Drinking Hotline (800-426-4791) ... although Cryptosporidium is not normally associated with groundwater sources.

Where Does The Water Come From?

In 2010, we obtained our water from seven wells, located in two separate well fields and we obtained approximately equal quantities from each well field. Our historic source is the Horton Well Field, with five wells, and we draw water drawn from the fractured Madera Limestone formations of the Estancia Basin. Our other source is from two wells in the north central part of the Estancia Basin, with water drawn from the graveled alluvium and fractured sandstone formations. All of our wells pump water to storage tanks which, in turn, serve booster stations that lift the water to storage tanks at higher elevations; we disinfect the water at the booster stations. From these storage tanks, the water flows by gravity to your home or to another booster station – such as in Magic Valley, portions of Sandia Mountain Ranch, Woodlands, Steeplechase, the upper portion of Raindance in Paako, and in Rancho Verde. We utilize an approved EPA disinfection technology called MIOX, which produces multiple, redundant, disinfection agents by means of an electro-chemical reaction using sodium chloride (table salt). Two of the disinfection agents are ozone and a weak chlorine concentration. The ozone provides an immediate bacteriological kill to the fifth decimal, and the chlorine solution provides long-term protection in the water mains, serving as an inhibitor to bacteriological growth. We check the residual strength of the chlorine in various parts of the system on a weekly basis, and we obtain bacteriological samples every two weeks from various parts of the systems - these are analyzed at certified labs and the results are reported to NMED.

Source Water Assessment and its availability

A “Susceptibility Analysis” of our system was conducted by NMED several years ago, it reports our facilities are well maintained and operated and the sources of drinking water are generally protected from potential sources of contamination based on well construction, hydrogeologic characteristics, and system operations and management. The susceptibility rank of the entire water system is MODERATELY HIGH.

Although throughout the U. S. 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 the primary methods of protecting and ensuring high quality drinking water.

Copies of the analysis, also called a ‘source water assessment’ are available from us at the Entranosa office. In addition, copies may also be requested by calling Andy Edmondson in the Drinking Water Bureau (DWB) of NMED at (877) 654-8720 (in Santa Fe), or by emailing him at andy.edmondson@state.nm.us. Please include your name, address, phone number, your email address (if applicable), and the name of Entranosa. The DWB may charge a nominal fee for paper copies.

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain 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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791). The sources of drinking water (both tap water and bottled water) across the Nation include rivers, lakes, streams, ponds, reservoirs, springs, and wells (all of our water is sourced from deep wells). As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and (and in some cases, radioactive material), and can pick up substances resulting from the presence of animals or from human activity. Contaminants are categorized as: **Microbial contaminants**, such as viruses and bacteria, and 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** 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 can also come from gas stations, urban stormwater runoff, and septic systems. **Radioactive contaminants** can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Lead & copper.

Our last test was in 2009. We remain below the thresholds (set by EPA) at which lead and copper are considered hazardous although two test sites were high in lead – we resampled those sites. They were well below the threshold, but for reporting purposes they were high. Elevated levels of lead, if present, 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 (i.e. lead based solder and flux, while prohibited from use in drinking water, has been found in homes). We are responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing

components. If 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>.

Water Quality Data Table (2010)

The table below lists all of the drinking contaminants we detected during the period of 2004 through 2010. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The EPA and NMED require us to monitor for certain contaminants less frequently than once a year because the concentrations of these contaminants do not fluctuate.

<u>Contaminants</u>	<u>MCLG Or MRDL G</u>	<u>MCL, TT, or MRDL</u>	<u>Your Water</u>	<u>Range</u> <u>Low</u> <u>High</u>		<u>Date Sampled</u>	<u>Violation</u>	<u>Typical Source</u>
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.)								
Chlorine (as Cl ₂) (ppm)	4	4	0.48	0.12	0.89	2010	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	1.45	NA	1.45	2009	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	3.7	1.4	3.7	2009	No	By-product of drinking water chlorination
Inorganic Contaminants								
Arsenic (ppb)	0	10	1	0	1	2008	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.2	0.2	0.2	2008	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	100	100	3	ND	3	2008	No	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	4	4	0.5	ND	0.5	2008	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate & Nitrite [measured as Nitrogen] (ppm)	10	10	1.3	1.2	1.3	2010	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Microbiological Contaminants

Total Coliform (pos samples/month)	0	1	1	NA	2009	No	Naturally present in the environment
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Radioactive Contaminants

Alpha emitters (pCi/L)	0	15	3.11	ND	3.11	2010	No	Erosion of natural deposits
Radium (combined 226/228) (pCi/L)	0	5	1.13	ND	1.13	2010	No	Erosion of natural deposits
Uranium (ug/L)	0	30	7.00	7.00	7.00	2010	No	Erosion of natural deposits

<u>Contaminants</u>	<u>MCLG</u>	<u>AL</u>	<u>90th Percentile</u>	<u>Sample Date</u>	<u># Samples over AL</u>	<u>Exceeds AL</u>	<u>Typical Source</u>
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Inorganic Contaminants

Copper - action level at consumer taps (ppm)	1.3	1.3	0.46	2009	0	None	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	15	8	2009	2	None	Corrosion of household plumbing systems; Erosion of natural deposits

Unit Descriptions

<u>Term</u>	<u>Definition</u>
ug/L	ug/L : Number of micrograms of substance in one liter of water
Ppm	ppm: parts per million, or milligrams per liter (mg/L), or one ounce in 7,350 gallons
Ppb	Ppb: parts per billion, or micrograms per liter (µg/L), or one ounce in 7,350,000 gallons
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
positive samples/month	positive samples/month: Number of samples taken monthly that were found to be positive
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions

<u>Term</u>	<u>Definition</u>
MCLG	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.
MCL	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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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.
MRDL	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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

Radon

We conducted some radon sampling with a new well in 2009, and the highest recorded level was 325 pCi/L, which is considered acceptable. Radon is a radioactive gas that you can't see, taste, or smell and it is found throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Radon entering your home through tap water, compared to radon entering the home through soil, is a very small percentage of radon in indoor air.

Radon is known as a human carcinogen, and breathing air with radon can lead to lung cancer. Water containing radon may contribute to increased radon levels in indoor air. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. Studies indicate that up to two percent of airborne Radon in the home is sourced from aeration of water. If you are concerned about radon in your home, you can test for it. Although the New Mexico Environment Department no longer provides test kits as part of their Radon Outreach Program, you may call program manager Michael Taylor at (505) 827-1093 with questions. By whatever means, if you determine that you have an airborne radon level of 4 picocuries per liter (pCi/L) of air or higher, authorities recommend that you take steps to remedy the problem. There are simple ways to fix a radon problem that aren't too costly, which includes ventilating the home. For additional information, call NMED at (505)827-1093 or call EPA's Radon Hotline (800-SOS-RADON). You can purchase a radon test kit at www.drhomeair.com and get a discount by clicking on 'state programs' in the upper right hand corner, then on 'New Mexico'.

Other Information

Most of the questions we receive about the quality of water we provide do NOT deal with the main contents of this report nor the primary contaminants and health aspects of water, but with the secondary characteristics of the water - iron, calcium, hardness, etc. - the 'esthetics'. Our water sources (well fields) have different characteristics because they are derived from different geologic formations. The table that follows is intended to help answer the common queries, divided by source. These results were obtained from tests that were conducted in April of 2007. Note that the 'mix' of the water will vary throughout the year, from month to month, due to maintenance, weather conditions, and demand.

Table of Other Information for Source Water

Characteristics	Horton Field	Pine Canyon
Iron	0.1 mg/L	< 0.1 mg/L
Manganese	< 0.005 mg/L	< 0.001 mg/L
Silica	9.14 mg/L	9.56 mg/L
Sodium	32.2 mg/L	15.8 mg/L
Sulfate	27.9 mg/L	33 mg/L
Hardness (Ca & Mg)	578 mg/L	197 mg/L
Calcium	180.8 mg/L	45.2 mg/L
Magnesium	34.4 mg/L	20.3 mg/L
Chloride	16.3 mg/L	< 10 mg/L
Fluoride	0.4 mg/L	0.26 mg/L
Aluminum	0.03 mg/L	0.14 mg/L

How can I get involved?

Entranosa is a cooperative association organized under the Cooperative Act with a mission to provide quality drinking water services to the community and the membership of the Association. Every member can participate in one way or another – to include simply asking questions and providing us information. Should you wish to actively participate with the Association, call John at the office (281-8700) or call and ask for one of the board members to contact you – there may be room on a committee, or a special project in which we could utilize your talents. You may choose to attend Board Meetings, which are normally held on the third Thursday of each month – but we request you contact us prior to the meeting so we can make appropriate arrangements for seating, and to confirm the meeting date and time. The Board of Directors (Steve Beffort, Rik Thompson, Ron Bodo, Carolyn Freeman, Paul Gorder, Steve Varley, and Steve Hicks) would welcome your participation. Our contact information is located on the coversheet of this report, and also appears on our billing statements. The next board meeting is scheduled for July 21st at 6:15 p.m. – but please call ahead so we can make proper arrangements.

Annual Meeting

We are planning to hold our annual meeting in late September, nominally on the 29th. You'll receive a meeting packet in late August with an agenda, details of the meeting, and the financial results of our recently completed audit - but don't wait - please plan, **NOW**, to attend. You will be electing, or reelecting, members to three seats on the Board this year, and during the meeting we'll present information about the activities of the Association. If you are interested and have some time to commit, please consider running for the Board of Directors – nominations are due in to the Entranosa office by close of business on August 5th of this year. A nomination can consist of a note that says "I would like to run for the board of directors", with your name and contact information.

Drought and Conservation

While our local drought condition fluctuates throughout the year, we DO live in the arid southwest and we are ALWAYS in one stage of drought or another. Our monthly newsletters typically contain drought information, and we've offered many suggestions in the past concerning conservation practices in water use – which always comes down to "Use what you need - no more, no less." Our wells are deep and vary in depth from 605' to 1080'. Over the years we'll need to reequip a couple of them with larger pumps, and we've recently drilled a replacement well to a depth of 630' and deepened another well to 605' to increase the longevity of the supply and improve our capacity to serve you, reliably. We have 'conservation' materials at the office and there are dozens of web sites that address conservation and household use. You might consider examining how to use grey water to get more out of the water you bring into your home – and consider the purchase of a rain barrel(s) along with creating a water harvesting system off of your roof. In our planning process, we allocate 1/3 of an acre foot of water for each dwelling – about 108,000 gallons per year – and Bernalillo County requires that we commit 0.6 acre feet per year (195,510 gallons) to new subdivisions in the County, which automatically creates a water rights 'reserve'. Regardless, if you restrict your usage and conserve water, it does not create 'more water' for us to use on development – our development policy requires that new growth funds their connection to the system, which includes bringing additional water rights to meet the new demand. Having said that – while our conservation plan has, traditionally, been effective – the region needs a regional plan. Without conservation in agricultural use of water in the Estancia Basin – our efforts to conserve do not mean much. As a reminder – we use about 2% of the water pumped from the Estancia Basin, which is the equivalent of five crop circles of corn – and we serve more than 3100 families with that resource.

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281-8700 (office) 281-0699 (fax) 604-5935 (off hours / emergency)

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Call Before You Dig – it IS the Law
260-1990 or 811

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