

# PAGOSA AREA WATER AND SANITATION DISTRICT

## 2008 Drinking Water Consumer Confidence Report

For Calendar Year 2007

Public Water System ID # CO0104300

***Esta es información importante. Si no la pueden leer, necesitan que alguien se la traduzca.***

We are pleased to present to you this year's water quality report. Our constant goal is to provide you with a safe and dependable supply of drinking water.

### ***General Information About Drinking Water***

All 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 the water poses a health risk. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 can be particularly at risk of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and microbiological contaminants call the EPA Safe Drinking Water Hotline at 1-800-426-4791.

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 and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria that 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 that 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 byproducts of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.

- Radioactive contaminants, that 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, the Colorado Department of Public Health and Environment prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

### ***Our Water Sources***

Raw water sources for PAWSD are all surface water sources and include Hatcher reservoir as well as the West Fork of the San Juan River and the main stem of the San Juan River. Both river sources include pre-sedimentation ponds before water is pumped into the treatment facilities.

The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment Report for our water supply. You may obtain a copy of the report by visiting [www.cdphe.state.co.us/wq/sw/swaphom.html](http://www.cdphe.state.co.us/wq/sw/swaphom.html) or by contacting Gene Tautges at 970-731-2691 Ext: 25

Potential sources of contamination in our source water area generally come from abandoned mines, transportation (commercial/industrial), pasture, forests, and septic systems. The Source Water Assessment Report provides a screening-level evaluation of potential contamination that could occur. It does not mean that the contamination has or will occur. We can use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help us ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan.

Please contact Gene Tautges at 970-731-2691 Ext: 25 to learn more about what you can do to help protect your drinking water sources, any questions about the Drinking Water Consumer Confidence Report, to learn more about our system, or to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

### ***Terms and Abbreviations***

The following definitions will help you understand the terms and abbreviations used in this report:

- ***Parts per million (ppm) or Milligrams per liter (mg/L)*** - one part per million corresponds to one minute in two years or a single penny in \$10,000.
- ***Parts per billion (ppb) or Micrograms per liter (µg/L)*** - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.



- **Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water.
- **Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **Action Level (AL)** - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **Maximum Contaminant Level Goal (MCLG)** - The "Goal" is 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.
- **Maximum Contaminant Level (MCL)** - The "Maximum Allowed" is 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.
- **Maximum Residual Disinfectant Level Goal (MRDLG)**: 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.

- **Maximum Residual Disinfectant Level (MRDL)**: 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.
- **Running Annual Average (RAA)**: An average of monitoring results for the previous 12 calendar months.
- **Gross Alpha, Including RA, Excluding RN & U**: This is the gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222 and uranium

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. PAWSD 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 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>."

### Detected Contaminants

PAWSD routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table(s) show all detections found in the period of January 1 to December 31, 2007 unless otherwise noted. The State of Colorado requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Therefore, some of our data, though representative, may be more than one year old. The "Range" column in the table(s) below will show a single value for those contaminants that were sampled only once. Violations, if any, are reported in the next section of this report. *Note: Only detected contaminants appear in this report. If no tables appear in this section, that means that PAWSD did not detect any contaminants in the last round of monitoring.*

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Organics and Inorganics	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
BARIUM	8/20/2007	0.032	0.011 - 0.032	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM	8/20/2007	3.1	2.9 - 3.1	ppb	100	100	Discharge from steel and pulp mills; Erosion of natural deposits
FLUORIDE	8/20/2007	0.12	0.12	ppm	4.0	4.0	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories

	Sample Date	Level Found	TT Requirement	Typical Source
TURBIDITY	Date: 8/5/07	Highest single measurement: .95 NTU	Maximum 1.0 NTU for any single measurement	Soil Runoff
	Month: March 07	Lowest monthly percentage of samples meeting TT requirement for our technology: 98%	In any month, at least 95% of samples must be less than .3 NTU	

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
RADIUM, COMBINED (226, 228)	3/26/2007	0.67	0.23 - 0.67	pCi/L	5	0	Erosion of natural deposits

Disinfection By-Products	Date	Average	Range	Highest RAA	Unit	MCL	MCLG	Typical Source
TOTAL HALOACETIC ACIDS (HAA5)	2007	18.9	13.1 to 28.7	21	ppb	60	N/A	By-product of drinking water disinfection
TOTAL TRIHALOMETHANES (TTHM)	2007	41	31.9 to 48.8	41	ppb	80	N/A	By-product of drinking water chlorination

Lead and Copper	Collection Date	90 <sup>TH</sup> Percentile	Unit	AL	Typical Source
COPPER	2005 - 2007	0.19	ppm	1.3	Corrosion of household plumbing systems; Erosion of natural deposits.
LEAD	2005 - 2007	1	ppb	15	Corrosion of household plumbing systems; Erosion of natural deposits

  

Disinfectants	MRDL	MRDLG	Units	Level Detected & Range	Violation (Yes or No)	Sample Date/Year	Source
CHLORINE	4	4	ppm	1.7 .78 to 1.7	NO	RAA	Water additive used to control microbes
CHLORINE DIOXIDE	800	800	ppb	.5 .01 to .5	Yes, see below	2007	Water additive used to control microbes

### Disinfection Byproducts

Contaminant	MCL	MCLG	Units	Average	Range	Highest RAA	Violation (Yes or No)	Sample Date/Year	Likely Source of Contamination
HALOACETIC ACIDS (HAA)	80	N/A	ppb	18.9	13.1 to 28.7	20.3	Yes, see below	2 <sup>nd</sup> qtr of 2007	By-product of drinking water disinfection
TOTAL TRIHALO-METHANES (TTHM)	60	N/A	ppb	41	31.9 to 48.8	41	Yes, see below	2 <sup>nd</sup> qtr of 2007	By-product of drinking water disinfection
CHLORITE	1	0.8	ppm	.19	0 to .59	.59	Yes, see below	2007	By-product of drinking water disinfection

Contaminant	Compliance Factor (measurements should not be lower than this factor)	Lowest Running Annual Average (compliance factor)	Running Annual Average	Violation (Yes or No)	Sample Date/Year	Likely Source of Contamination
TOTAL ORGANIC CARBON (TOC)	1.0	1.0	1.4	NO	2007	Naturally present in the environment

Secondary Contaminants	Collection Date	Highest Value	Range	Unit	Secondary Standard
NICKEL	8/20/2007	0.0052	0.0017 - 0.0052	MG/L	
SODIUM	8/20/07	23	9.9 - 23	MG/L	10000

Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these standards but does not require water systems to comply.

Violation Type	Category	Analyte	Compliance Period
MONITORING, (DBP) (CHL. DIOXIDE)	Failure to Monitor	CHLORINE DIOXIDE	9/1/2007 - 9/30/2007
MONITORING, ROUTINE (DBP), MAJOR	Failure to Monitor	CHLORITE	9/1/2007 - 9/30/2007
MONITORING, ROUTINE (DBP), MAJOR	Failure to Monitor	CHLORITE	11/1/2007 - 11/30/2007
MONITORING, ROUTINE (DBP), MAJOR	Failure to Monitor	TOTAL HALOACETIC ACIDS (HAA5)	4/1/2007 - 6/30/2007
MONITORING, ROUTINE (DBP), MAJOR	Failure to Monitor	TTHM	4/1/2007 - 6/30/2007
MONITORING, ROUTINE (DBP), MINOR	Failure to Monitor	CHLORITE	8/1/2007 - 8/31/2007
MONITORING, ROUTINE (DBP), MINOR	Failure to Monitor	CHLORITE	10/1/2007 - 10/31/2007
MONITORING, ROUTINE (DBP), MINOR	Failure to Monitor	CHLORITE	12/1/2007 - 12/31/2007
FOLLOW-UP OR ROUTINE TAP M/R (LCR)	Failure to Monitor	LEAD & COPPER RULE	1/1/2005 - 12/31/2007

The table above shows the types of violations we had regarding our drinking water recently. Although these were not emergencies, as our customers, you have a right to know. There is nothing you need to do at this time. If there had been an emergency at the time of these violations, you would have been notified immediately. There were several Failure to Monitor violations in 2007. These were mostly due to misinterpretations of the regulations by staff. It is important to note that no MCL's were exceeded in the subsequent samples that were taken, however some samples were not taken, or were taken outside of their respective compliance periods. Staff training on the complex regulations regarding these tests has been done to prevent their recurrence. If you have any questions or comments, please feel free to call Gene Tautges at 970-731-2691.

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