



GMD/PWD
Water/Wastewater
Operations

2008 Water Quality Report

South Sector
NM3500826

West Sector
NM3500926

GMD/PWD
Water/Wastewater



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County of Santa Fe 2008 Water Quality Report

Introduction

Santa Fe County Water/Wastewater Operations (SFCWWO) is pleased to present to the public and to our customers its Annual Water Quality Report. This 2008 report is designed to inform the user and consumer about the quality of water and services that we deliver every day throughout the year. The 2008 Water Quality Report is for the entire Santa Fe County utility water system, which comprises the South Sector (Rancho Viejo, Las Lagunitas, Oshara Village, La Pradera, New Mexico National Guard, SFC Public Safety Complex, SFC Detention Center, Entrada La Cienega & Paseo C de Baca), West Sector (El Prado, La Serena, La Vida, Los Sueños & Sonrisa) and Valle Vista (Valle Vista, Valle Vista County Housing & Pueblo Garcia Heights). Our constant goal is to provide a safe and dependable supply of drinking water. We want the public to understand the efforts we make to continually improve the water supply and distribution process and the efforts being provided to protect our water resources. We are committed to ensuring the quality of your water.

Source of Supply

SFCWWO purchases our water from the City of Santa Fe, whose supplies consist of surface water from the upper Santa Fe River and groundwater from the urban area and the Buckman well fields. The City of Santa Fe has a source water protection plan which addresses

protection of groundwater and surface water supplies.

The Santa Fe County Water/Wastewater Operations is pleased to report for this past year that the drinking water furnished to our customers is safe and meets all federal and state requirements.



McClure Reservoir

Source Water Assessment and its Availability

In 2003 the New Mexico Environment Department (NMED) completed the Source Water Assessment for the County of Santa Fe. This assessment includes a determination of source water protection areas and an inventory of contaminant sources within the areas of concern. NMED concluded: *“The Susceptibility Analysis of the County of Santa Fe 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 based on an evaluation of the available information. The susceptibility rank of the entire water system is moderately low.* “ A copy of the Assessment is available by contacting NMED at 476-8631.

Why are there contaminants in my 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 this 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), or visiting: www.epa.gov/safewater.

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. This can include microbial contaminants, such as viruses and bacteria that may come from sewage treatment

Radioactive contaminants can be naturally occurring, or 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.

Results of voluntary monitoring

EPA has established National Secondary Drinking Water Regulations that set non-mandatory water quality standards. EPA and the State do not enforce these “secondary maximum contaminants levels” or “SMCLs.” They are established only as guidelines to assist public water systems in managing their drinking water. These contaminants are not considered to present a risk to human health. The City tests for them on a voluntary basis. The presence of these contaminants typically results from the erosion of natural deposits. Aluminum and manganese containing materials are used as treatment aids in the water treatment process.

In cooperation with Los Alamos National Laboratory (LANL) and New Mexico Environment Department, the City of Santa Fe continues to monitor Buckman Wells 1, 2 and 8 for LANL derived contamination. Samples have been analyzed for radiologicals, general inorganics, metals, high explosives and organics. The results indicate detectable levels of radionuclides associated with natural sources. No Laboratory-derived radionuclides were detected in 2008. Repeated sampling since 2001 indicates Laboratory-derived radionuclides are not present in the Buckman Wells 1, 2 and 8. These wells are part of 13 wells that make-up the Buckman Wellfield. Water from these wells is delivered to the Buckman Tank prior to distribution into the system.

TABLE 1—Results of Recent SMCL Voluntary

Parameter	Units	SMCL	City Well Field		Canyon Road Plant		Buckman Well Field	
			Range		Range		Range	
			Low	High	Low	High	Low	High
Aluminum	mg/L	0.05 - 0.2		ND	ND	0.21	ND	0.115
Chloride	mg/L	250	ND	44.8	25	27.48	2.69	7.8
Copper	mg/L	1	ND	0.02		ND	ND	0.054
Iron	mg/L	0.3		ND		ND	ND	0.95
Manganese	mg/L	0.05		ND	ND	0.046	ND	0.054
pH		6.5 - 8.5	7.7	7.93	7.4	7.5	7.04	8.21
Silver	mg/L	0.1		ND		ND		ND
Sulfate	mg/L	250	ND	75.6	21.38	26	ND	29
Total Dissolved Solids	mg/L	500	204	372	130	148	170	890
Zinc	mg/L	5		ND		ND	ND	0.023
Hardness (Ca & Mg)	mg/L	NA	131.89	226.58		32	16.54	494.19

SMCL - Secondary Drinking Water Standard—monitoring recommended, **ND**—Not Detected, **NA** - Not Applicable, **mg/l**—milligrams per liter

Areas Served by Santa Fe County

West Sector

- El Prado
- La Serena
- La Vida
- Los Sueños
- Sonrisa

South Sector

- College Heights
- Las Lagunitas
- La Pradera
- Rancho Viejo
- Oshara Village
- Entrada La Cienega
- Paseo C de Baca



TABLE 2—Results of Disinfection By-Product

Disinfection By-Product	Units	MCL	South Sector		West Sector		Valle Vista		Sample Date	Typical Source
			Re-sult	Ex-ceeds MCL	Re-sult	Ex-ceeds MCL	Re-sult	Ex-ceeds MCL		
Total Haloacetic Acids	ppb	60	3.5	No	0	No	7.8	No	9-Sep-08	By-product of drink-ing water chlorina-tion.
Total Triha-lomethanes	ppb	80	40	No	0	No	38	No	9-Sep-08	By-product of drink-ing water chlorina-tion.

Disinfection By-Products (DPBs)

Santa Fe County has been testing for total Triha-lomethanes (TTHMs) and haloacetic acids (HAA5s) and results have revealed low levels of each. Triha-lomethanes (THMs) and Haloacetic Acids (HAA5) are two groups of chemicals that are formed along with other disinfection byproducts when chlorine or other disinfec-tants used to control microbial contaminants in drinking water react with naturally occurring organic and inor-ganic matter in water. Some studies have suggested a possible link between high levels of TTHMs and adverse effects on reproductive health, including low birth weight and miscarriage. These research findings have not been confirmed, but studies are continuing and the EPA is considering newer, more restrictive standards for TTHMs.

Lead and Copper Sampling

Tests for lead and copper are taken from customer taps located throughout the County system every three years. The next round of lead and copper testing will take place in the summer of 2010. If you are concerned about ele-vated lead levels in your home’s water you may wish to have your water tested or you can flush your tap for 30 seconds to 2 minutes before using tap water. Flushed water can be used to water plants.

TABLE 3—Results of Lead and Copper Testing

Inorganic Contami-nants	MCLG	AL ^a	South Sector ^b		West Sector ^c		Valle Vista ^d		Sample Date	Typical Source
			Re-sult	# of Sample <AL	Re-sult	# of Sam-ple <AL	Re-sult	# of Sam-ple <AL		
Copper (ppm)	1.3	1.3	0.53	10	0.51	5	—	—	25-Oct-07	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
Lead (ppb)	0	15	5.7	10	0	5	—	—	25-Oct-07	Corrosion of household plumbing systems; Erosion of natural deposits

Nitrates

City of Santa Fe drinking water meets the federal drink-ing water standard of less than 10 ppm for nitrates. Nitrates have been detected in some of the City Wells above 5 ppm. Nitrates in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Contacts for Additional Information

This report provides details regarding our water quality and what it means. If you have any questions about this report, concerns regarding your water utility, or would like to learn more about the County’s plans for the fu-ture water supply, please contact the Santa Fe County Water/Wastewater Operations Section at 992-9870 or at www.santafecounty.org. We want our valued customers to be informed about their water quality as well as their utility. If you want to find out more, please attend any of the Santa Fe County Commission meetings, our gov-erning body, which has regularly scheduled meetings the second and last Tuesday of each month starting at 3:00 PM and 10:00 AM respectively.

Important Drinking Water Definitions:

MNR: *Monitoring not required, but recommended.*

ND: *Non-Detects* - laboratory analysis indicates that the constituent is not present.

PPM: *Parts per million or Milligrams per liter (mg/l)* - one part in a million parts.

PPB: *Parts per billion (ppb) or Micrograms per liter (µg/l)* - one part in a billion parts.

PCi/L: *Picocuries per liter* - Picocuries per liter is a measure of the radioactivity in water.

MFL: *Million Fibers per Liter* - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

NTU: *Nephelometric Turbidity Unit* - Nephelometric turbidity unit is a measure of the clarity of water. Tur-bidity in excess of 5 NTU is just noticeable to the aver-age person.

V&E: *Variances & Exemptions* - State or EPA permis-sion not to meet an MCL or a treatment technique under certain conditions.

AL: *Action Level* - the concentration of a contaminant, which, if exceeded, triggers treatment or other require-ments, which a water system must follow.

TT: *Treatment Technique* - (mandatory language) a treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

MCL: *Maximum Contaminant Level* - (mandatory lan-guage) The “Maximum Allowed” (MCL) 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.

MCLG: *Maximum Contaminant Level Goal* - (mandatory language) The “Goal”(MCLG) 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.

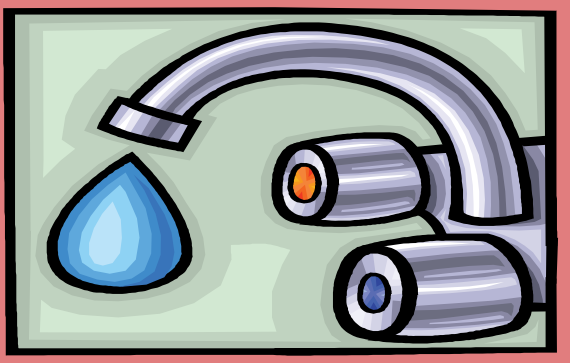
2008 City of Santa Fe Water Quality Table

The table on the following page lists contaminants which:

- 1) Have associated Primary Maximum Contami-nant Levels (MCLs) that are regulated and;
- 2) Were detected in testing conducted by the City of Santa Fe and the New Mexico Envi-ronment Department. Contaminants were detected at or above detection limits estab-lished by the USEPA in calendar year 2008 or the most recent test if a sample was not ana-lyzed in 2008.

The compounds detected represent a small frac-tion of the substances that were tested for. Test-ing is required for over 80 contaminants. The EPA requires monitoring for certain contaminants less than once per year because the concentra-tions are not expected to vary significantly from year to year. Drinking water, including bottled, may reasonably be expected to contain at least small amounts of some contaminants. The pres-ence of these contaminants does not necessarily indicate that water poses health risk.

More information about contaminants and poten-tial health effects can be obtained by calling the Environmental Protection Agency’s (EPA) Safe Drinking Water Hotline (800-426-4791), or visit-ing www.epa.gov/safewater.



Action Level

- a. The lead and copper levels reported are values for the 90th percentile which in this case is the 9th sample.
- b. The lead and copper levels reported are values for the 90th percentile which in this case is the average of the 4th and 5th samples.
- c. Lead and copper samples were not collected/analyzed for this area this year.

AL - Action Level

TABLE 4—City of Santa Fe 2008 Water Quality Table

Contaminant	Units	MCL	MCLG	CityWell Field ^f	Range ^d 2007 - 2008		Sample Date	Buckman Tank ^e	Range ^d 2007 - 2008		Sample Date	Canyon Rd. WTP	Range ^d 2007 - 2008		Sample Date	Violation	Typical Source
					Low	High			Low	High			Low	High			
Inorganic Contaminants																	
Arsenic	ppb	10	0	5	1.2	5	03-Jun-08	8			20-May-08	ND			20-May-08	No	Erosion of natural deposits. Runoff from orchards. Runoff from glass and electronics production wastes.
Barium	ppm	2	2	0.7	ND	0.7	03-Jun-08	0.1			20-May-08	ND			20-May-08	No	Discharge from drilling wastes. Discharge from metal refineries. Erosion of natural deposits.
Chromium [Total]	ppb	100	100	2	ND	2	01-Jul-08	5			20-May-08	ND			20-May-08	No	Discharge from steel and pulp mills. Erosion of natural deposits.
Fluoride	ppm	4	4	0.28	0.15	0.28	01-Jul-08	0.51			20-May-08	0.12			20-May-08	No	Erosion of natural deposits. Water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories.
Cyanide	ppm	0.2	0.2	0.044	ND	0.044	10-Dec-08	ND			20-May-08	ND			20-May-08	No	Discharge from steel/metals factories; Discharge from plastic and fertilizer factories.
Nitrate [as N]	ppm	10	10	7.3	0.53	2.3	01-Jul-08	1.4			20-May-08	ND			20-May-08	No	Runoff from fertilizer use. Leaching from septic tanks and sewage. Erosion from natural deposits.
Sodium	ppm	NA	NA	15.8	5.7	15.8	10-Jul-08	84			10-Dec-08	12			10-Dec-08	No	Erosion of natural deposits. Runoff from de-icing agent used on roads.
Radioactive Contaminants																	
Gross Alpha Emitters	pCi/L	15	0	2.7	1.3	2.83	05-Jul-07	7.1			21-Sep-07	0.7			21-Sep-07	No	Erosion of natural deposits.
Gross Beta/Photon Emitters	pCi/L	50 ^a	NA	1.8	ND	2.38	21-Sep-07	7.2			21-Sep-07	1			21-Sep-07	No	Decay of natural and man-made deposits.
Radium 226/228	pCi/L	5	0	0.36	ND	2.08	21-Sep-07	0.63			21-Sep-07	0.34			21-Sep-07	No	Erosion of natural deposits.
Uranium	ppb	30	0	2	ND	2		9			21-Sep-07	ND			21-Sep-07	No	Erosion of natural deposits.
Synthetic Organic Contaminants																	
Di(2-ethylhexyl)adipate	ppb	400	400	8.7	ND	8.7	03-Jun-08	ND			20-May-08 22-Oct-08	ND			20-May-08 10-Dec-08	No	Discharge from chemical factories
Disinfectants & Disinfection By-Products																	
Haloacetic Acids (HAAs)	ppb	60	NA	1.7	0.33	4.01	Sampled Qtrly 2008	12.85	ND	26.27	Sampled Qtrly 2008	17.63	1.31	33.4	Sampled Qtrly 2008		By-product of drinking water chlorination.
Total Trihalomethanes (TTHMs)	ppb	80	NA	0.775	0.2	1.6	Sampled Qtrly 2008	2.9	ND	3.5	Sampled Qtrly 2008	40.98	ND	73.8	Sampled Qtrly 2008	No	By-product of drinking water chlorination.
Surface Water Contaminants																	
Turbidity ^d (highest single measurement)	NTU	TT = 0.3	0	NA				NA				0.4	NA	NA	Continuous	No	Soil runoff.
Turbidity ^d (lowest monthly % meeting limits)	NTU	TT = Percent-age <0.3 NTU	0	NA				NA				99.5%		100%	Continuous	No	Soil runoff.
Total Organic Carbon (TOC)	ppm	TT	NA	NA				NA				45 to 60% Removal ^b	4.3	9.4	Monthly in 2008	No	Naturally present in the environment.

Notes:

a. EPA considers 50 pCi/L to be the level of concern for beta particles.

b. The City complies with alternative compliance criteria to meet TOC removal requirements.

c. The range represents the high and low values. Range values are not given if only one sample was taken during the range period.

d. Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtrations

e. City well field: Alto, Agua Fria, Ferguson, Osage, Santa Fe, St. Michael & Torreón.

f. Buckman wells 1-13 and Northwest well.

Key to Units, Terms and Abbreviations:

NA: Not Applicable

ND: Not Detected

NTU: Nephelometric Turbidity Units

TT: A Treatment Technique standard was set instead of a Maximum Contaminant Level

MNR: Monitoring not required, but recommended

ppm: parts per million, or milligrams per liter (mg/l)

ppb: parts per billion, or micrograms per liter (ug/l)

pCi/l: picocuries per liter (a measure of radioactivity

ug/l: Number of micrograms of substance per liter of water.

mg/l: Number of milligrams of substance per liter of water