

Contaminant	Units	MCL	MCLG	City Well Field		Range <sup>2</sup> 2002-2005		Sample Date	Buckman Tank	Range <sup>2</sup> 2003-2005		Sample Date	Canyon Road WTP	Range <sup>2</sup> 2003-2005		Sample Date	Violation	Typical Source
				Low	High	Low	High			Low	High							
<b>Inorganic Contaminants</b>																		
Antimony	ppb	6	6	ND				2002-2005	ND			2005	3	ND	3	2005	No	Discharge from petroleum refineries, tire retardants, ceramics, electronics, solder
Arsenic	ppb	10 <sup>a</sup>	0 <sup>a</sup>	3.1	1.3	6		2002-2005	6	6	10	2005	ND	ND		2005	No	Erosion of natural deposits; Runoff from crochards; Runoff from glass and electronics production wastes
Barium	ppm	2	2	0.287	0.071	0.556		2002-2005	0.154			2005	0.007	0.007	0.007	2005	No	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium [Total]	ppb	100	100	7.8	ND	26		2002-2005	28	5	28	2005	ND	ND		2005	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride	ppm	4	4	0.2	ND	1.15		2005	0.44	0.44	0.47	2005				2005	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [as N]	ppm	10	10	3.91	0.59	7.2		2005	1.13	1.13	1.3	2005	0.05	0.05	0.05	2005	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion from natural deposits
Selenium	ppb	50	50	0.63	ND	2		2002-2005	2	ND	2	2005	ND	ND	1.10	2005	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Thallium	ppb	2	0.5	ND	ND	0.06		2002-2005	ND			2005	ND	ND		2005	No	Leaching from eye-processing sites; Discharge from electronics, glass and drug factories
<b>Synthetic Organic Contaminants</b>								2003					ND	ND		2003		
D[2-ethylhexyl]adipate	ppb	400	400						1.22	ND	1.22	2004					No	Discharge from chemical factories
D[2-ethylhexyl]phthalate	ppb	6	0						2.19	ND	2.19	2004					No	Discharge from rubber and chemical factories
<b>Radioactive Contaminants</b>																		
Gross Alpha Emitters	pCi/L	15	0	2.17	0	2.17		2005	9.09	7.5	9.09	2004	0.2			2003	No	Erosion of natural deposits
Gross Beta/Photon Emitters	pCi/L	50 <sup>b</sup>	NA						6.78	5.2	15.2	2004	1.4			2003	No	Decay of natural and man-made deposits.
Radium 226/228	pCi/L	5	0						0.308	0.1	0.3	2004	0.05			2003	No	Erosion of natural deposits
Uranium	ppb	30	0	1.35	0.986	1.76		2005	7.53	7.53	45.00	2004	<1			2003	No	Erosion of natural deposits;
<b>Disinfectants &amp; Disinfection By-Products</b>																		
Halocetic Acids (HAA5)	ppb	80	NA	12.3	1.3	18.8		Quarterly 2005	1.75	0.2	4.2	Quarterly 2005	17.4	4.5	27.3	Quarterly 2005	No	By-product of drinking water chlorination.
TTHMs [Total Trihalomethane]	ppb	80	NA	33.53	9.1	52.1		Quarterly 2005	2.5	0.6	4.4	Quarterly 2005	48.58	21.6	68.1	Quarterly 2005	No	By-product of drinking water chlorination.
<b>Surface Water Contaminants</b>																		
Turbidity* (highest single measurement)	NTU	TT = 0.3	0	NA					NA				NA	0.946		Continuous	No	Soil Runoff
Turbidity* (lowest monthly % meeting limits)	NTU	TT = Percentage <0.3 NTU	0	NA					NA				95%	NA	NA	Continuous	No	Soil Runoff
Total Organic Carbon (TOC)	ppm	TT	NA	NA					NA				25% to 65% Removal required <sup>c</sup>	2.3	3.8	Monthly in 2005	No	Naturally present in the environment

**Notes:**  
 a. These arsenic values are effective January 23, 2006. Until then the MCL is 50µg/l and there is no MCLG.  
 b. EPA considers 50 pCi/L to be the level of concern for beta particles.  
 c. The City complies with alternative compliance criteria to meet TOC removal requirements.  
 d. The range represents the highest and low values. Range values are not given if only one sample was taken during the range period.  
 e. Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

**Key to Units, Terms and Abbreviations**  
 NA: Not Applicable  
 ND: Not Detected  
 NTU: Nephelometric Turbidity Units  
 MNR: Monitoring not required, but recommended  
 ppm: parts per million, or milligrams per liter (mg/l)  
 ppb: parts per billion, or micrograms per liter (µg/l)  
 pCi/l: picocuries per liter (a measure of radioactivity)  
 µg/l: Number of micrograms of substance per liter of water  
 mg/l: Number of milligrams of substance per liter of water



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# 2005 WATER QUALITY REPORT

## Introduction

This is an annual report on the quality of drinking water delivered by the City of Santa Fe's Sangre De Cristo Water Division (SDCW) to its customers. SDCW is subject to the federal Safe Drinking Water Act and is required to test and meet United States Environmental Protection Agency (EPA) and State of New Mexico drinking water standards. This report contains information on calendar year 2005 water quality tests. In 2005 SDCW tap water met all EPA and state drinking water health standards. Additional details about where your water comes from, what it contains, and how it compares to standards set by federal and state regulatory agencies are also included. A safe and dependable water supply is vital to our community and is the primary mission of SDCW.

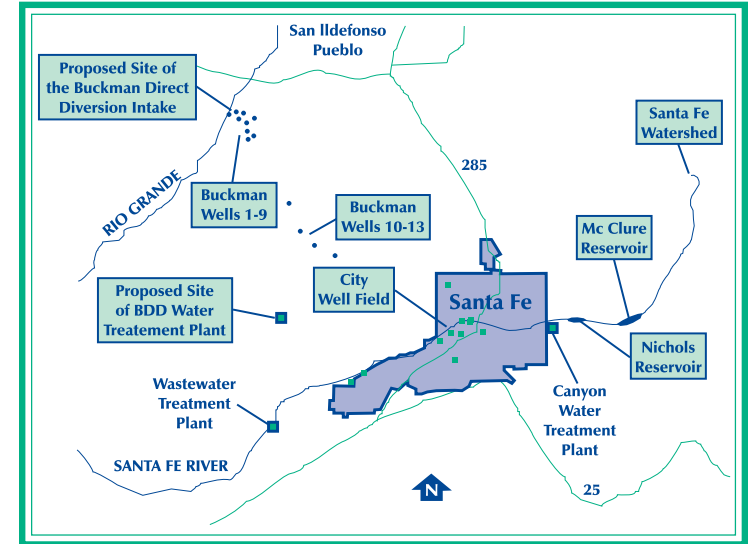
## Sources of Supply

The SDCW is served by three primary sources of supply which include surface water from the Santa Fe River watershed; groundwater from the City Well Field; and groundwater from the Buckman Well Field. 1. The City's surface water supply is generated by runoff from the 17,000 acre Santa Fe watershed. The runoff flows into the Santa Fe River where it is stored at the McClure and Nichols Reservoir. Surface water is treated with conventional treatment at the Canyon Road Water Treatment Plant. 2. The City well field is mostly located in close proximity to the Santa Fe River and consists of 8 active wells located within the City of Santa Fe limits. 3. The Buckman well field consists of 13 active wells located near the Rio Grande, approximately 15 miles northwest of Santa Fe. All three sources are treated with chlorine which is used for disinfection and is applied for pathogenic microorganism reduction. Fluoride is added to the water supply to benefit the community as recommended by public health professionals, and is not intended to improve raw water quality.

## 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 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 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).

## Map of Water Sources



## Source Water Assessment and its Availability

In 2003 the New Mexico Environment Department (NMED) completed the Source Water Assessment for the City of Santa Fe. This assessment includes a determination of source water protection areas and an inventory of pollution sources within the areas of concern. NMED concluded: "The Susceptibility Analysis of the City 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 827-7536. The Santa Fe City Council built upon the recommendations in the Source Water Assessment and in early 2005 adopted the "Safe Drinking Water and Source Water Protection" and the "Stormwater Illicit Discharge Control" ordinances which provide additional controls and protections for the City's ground and surface water supplies.

## En Espanol

Este reporte contiene informacion importante sobre la calidad del agua en Santa Fe. Si tiene alguna pregunta o duda sobre este reporte puede hablarle a Gary Martinez al telefono 505-955-4370.

# 2005 WATER QUALITY REPORT



## Why are there Contaminants in my Drinking Water?

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 human activity. This can 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 can be naturally-occurring or result from urban storm-water 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 storm-water runoff, and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems. Radioactive contaminants, which 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.

## 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 contaminant 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 at the SMCL. 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 compounds are used as treatment aids in the water treatment process.

RESULTS OF RECENT SMCL VOLUNTARY TESTING								
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		No Data	ND	0.21	ND	0.57
Chloride	mg/l	250	ND	17	25	27.48	2.87	7.8
Copper	mg/l	1		No Data		<0.01	ND	0.054
Iron	mg/l	0.3	ND	0.01		<0.05	ND	0.95
Manganese	mg/l	0.05	ND	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		No Data		ND	ND	0.0017
Sulfate	mg/l	250	ND	39.2	21.38	26	9.68	29.66
Total Dissolved Solids	mg/l	500	172	264	130	148	190	685.4
Zinc	mg/l	5	No Data	No Data		ND	ND	0.058
Hardness (Ca & Mg)	mg/l	NA	56	174	25.9	26	40.5	532

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

In 2005 under a continuing cooperative agreement, Los Alamos National Laboratory conducted sampling of Buckman Wells 1, 2, & 8 for the following parameters: organics, perchlorate, general inorganics, metals, tritium and radiologicals. Perchlorate, high explosives, Sr-90, or tritium were not present above established detection limits.



## Contacts for Additional Information

If you have any questions, comments, or suggestions regarding this report, please contact Gary Martinez at 955-4370 or write to the above address. Feel free to call SDCW for information about the next opportunity for public participation in decision about our drinking water. For further information, consult the City of Santa Fe's Website at [www.ci.santa-fe.nm.us](http://www.ci.santa-fe.nm.us) or EPA at [www.epa.gov/safewater](http://www.epa.gov/safewater) or the Safe Drinking Water Hotline 800.426.4791.

## Lead and Copper Sampling

Tests for lead and copper are taken from customer taps located throughout the City once every three years. Testing at customer taps was not conducted in 2005. Lead and copper are present in home plumbing fixtures and pipes. If you are concerned about elevated 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. Results presented below are from 2004.

Inorganic Contaminants	MCLG	AL*	City Water Levels*	# of Sample < AL	Sample Date	Exceeds AL	Typical Source
Copper (ppm)	1.3	1.3	0.72	31	15-Sept -04	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead (ppb)	0	15	7	30 -04	15-Sept -04	No	Corrosion of household plumbing systems; Erosion of natural deposits.

\* The City lead and copper levels reported are values for the 90<sup>th</sup> percentile which in this case is the 28<sup>th</sup> sample.  
AL = Action Level

## Important Drinking Water Definitions

Maximum Contaminant Level (MCL): 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 Contaminant Level Goal (MCLG): 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.

TT: Treatment Technique, a required process intended to reduce the level of a contaminant in drinking water.

AL: Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

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

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

## Educational Statement for Arsenic

The City of Santa Fe's Drinking water met the 2005 drinking water standard for arsenic of 50 µg/l. A new standard for arsenic in drinking water of 10 µg/l went into effect in January 23, 2006. Sampling conducted in 2005 indicated arsenic levels in City of Santa Fe drinking water below the new standard of 10 µg/l. While our drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's new standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

## Nitrates

City of Santa Fe drinking water meets the federal drinking water standard of 10 ppm for nitrates. Nitrates have been detected in some of the City Wells above 5 ppm. This value, which is ½ the standard, triggers an increase in sampling from once per year to 4 times per year. The City is in compliance with the nitrate standard. Nitrate 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.

## 2005 City of Santa Fe Water Quality Table

The table on the following page lists contaminants which have associated Primary Maximum Contaminant Levels (MCLs) that are regulated, and were detected in testing conducted by the City and New Mexico Environment Department. Contaminants were detected at or above detection limits established by the EPA in calendar year 2005 or the most recent test if a sample was not analyzed in 2005.

The contaminants detected and reported in the table, represent a small fraction of the substances that we test for. For example, we are required to test for over 80 contaminants. The EPA or the State requires us to monitor for certain contaminants less frequently because the concentrations 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 presence of these 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 EPA Safe Drinking Water Hotline (800-426-4791), or visiting [www.epa.gov/safewater](http://www.epa.gov/safewater).

