

# 2001 WATER QUALITY REPORT



Public water systems, like San Antonio Water System, are required by law to report every year on the type and quantity of substances that are in our water. This law – the Safe Drinking Water Act (SDWA) – has specific guidelines about what types of substances are tested for in drinking water, as well as methods of testing, and how often testing is conducted. The data reported in this Water Quality Report was recorded within the last five years according to SDWA regulations.

The Environmental Protection Agency (EPA) administers the SDWA to make sure tap water is safe to drink by restricting the presence of contaminants in public water systems. Bottled water, on the other hand, is regulated by the Food and Drug Administration (FDA) which limits contaminants for similar protection to the public health.

## OUR COMMITMENT TO YOU

SAWS' long-term commitment to providing our customers with excellent drinking water has been proven through the years. Since 1936, SAWS has been rated as a superior water system by the Texas Natural Resource Conservation Commission.

Your confidence in San Antonio's water supply is important to us at SAWS. We are committed to providing you with reliable, quality water, as well as providing responsible leadership in managing San Antonio's water resources.

## WHERE OUR WATER COMES FROM

First, let's start with where our water comes from. Almost all municipal water supplies come from two sources. Water which is drawn from rivers and lakes is called "surface water," and water which comes from wells is called "ground water."

In San Antonio, our drinking water is currently derived as ground water from the Edwards Aquifer. The aquifer is divided into three segments—the drainage area, recharge zone and artesian/reservoir area.

An aquifer is a geologic formation which may contain sand, gravel, clays and/or limestone that collects and holds rainwater as it flows through the ground. This happens over the recharge zone. Recharge is water that flows

overland from the drainage area to the north onto the exposed Edwards region of the recharge zone. Rain falling directly on the recharge zone percolates or seeps into the ground and eventually enters the confined underground reservoir or artesian area of the aquifer to the south. The geologic formation that forms the Edwards Aquifer is primarily limestone, which is calcium carbonate. A relatively high level of calcium carbonate dissolved in the water is what makes water "hard."

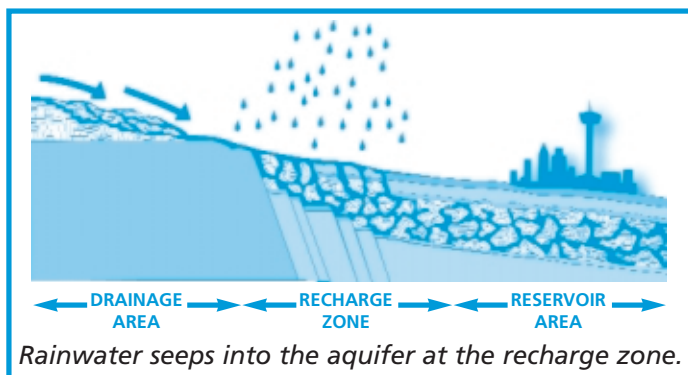
It's important to protect the recharge zone from contaminants such as fertilizer, petrochemical products, and other chemical contaminants because they might eventually filter into the water supply in the aquifer. There are strict regulations about what may and may not be discharged over the recharge zone, and aquifer water is checked and analyzed regularly to be sure it's safe to drink.

## WHAT'S IN OUR WATER

The technical term for anything other than water in our water is 'contaminant.' In this line of thinking, you could consider orange juice as water which has been 'contaminated' by the orange pulp, the oil, and the flavorings in the orange—all the things that make orange juice taste so good! The important thing when reading this is not to be alarmed by this use of the word 'contaminant.'

It's natural for drinking water to contain contaminants, but as you will see, San Antonio's water is well within allowable limits. 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 water poses a health risk.

If you'd like more information about contaminants and potential health effects, contact the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.



# TYPES OF CONTAMINANTS

Sources for 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:

- ◆ microbiological contaminants, such as viruses and bacteria which 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, which may have a variety of sources such as agriculture, urban stormwater runoff and residential uses
- ◆ organic chemical contaminants 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, which can be naturally-occurring or the result of oil and gas production and mining activities

Contaminants may be found in drinking water that may cause taste, color or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor or color of drinking water, please contact the SAWS Regulatory Programs Department at (210)704-7350.

# UNDERSTANDING THE CHARTS

The following list explains the terms used in the charts

**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 margin of safety.

**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.

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

**Not Regulated:** The contaminant is not currently regulated by the Environmental Protection Agency.

**ppm** – Parts per million. One part per million equals one teaspoon in 1,302 gallons, which is enough water to fill a typical bathtub more than 40 times.

**ppb** – Parts per billion. One part per billion is equal to one teaspoon in 1,302,000 gallons – enough to fill a typical bathtub more than 40,000 times.

**N/A** – Not applicable

**ND** – Not detected

**Points-of-entry** – Entry point to the distribution system which is representative of each well after disinfection.

**Remember that these substances are shown in parts per million or parts per billion. As you will see in these charts, water delivered by SAWS from the Edwards Aquifer is of excellent quality.**

Substance	Highest Concentration Found in Water	Concentration Range found in Water	MCL	MCLG	Possible Source
Antimony (ppb) 1999	2.7	ND–2.7	6	6	Discharge from petroleum refineries; Fire retardants; Ceramics; Electronics; Solder.
Barium (ppm) 1999	0.090	ND–0.090	2	2	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries.
Fluoride*** (ppm) 1999	0.3	ND–0.3	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Methylene Chloride (ppb)** 1999	0.5	ND–0.5	5	0	Discharge from pharmaceutical and chemical factories.
Nitrate (ppm) 1999	1.94	ND–1.94	10	10	Erosion of natural deposits; Runoff from fertilizer use; Leaching from septic tanks, sewage.
Tetrachloroethylene (ppb) 2000	0.8	ND–0.80	5	0	Leaching by PVC pipes; Discharge from factories and dry cleaners.
Total Trihalomethanes (ppb) 2000	9.2	ND–9.2	100	N/A	N/A By-products of drinking water chlorination.
Ethyl Benzene (ppb)* 2000	1.1	ND–1.1	700	700	Discharge from petroleum refineries.
Total Xylene (ppm)* 2000	0.0096	ND–0.0096	10	10	Discharge from petroleum refineries; Discharge from chemical factories.
4-Methyl-2 Pentanone (ppb)* 2000	9.2	ND–9.2	N/A	N/A	Tank coating solvent.

\* one time observation due to painting of tank at pump station.

\*\* Dichloromethane (DCM) or methylene chloride is not likely associated with your drinking water because it did not occur in repeat sampling. TNRCC considers the chemical a probable artifact of unknown origin. DCM, a commonly used solvent, may have originated in the sampling vials or as an air contaminant.

\*\*\* This level reflects naturally-occurring fluoride.

### OTHER SUBSTANCES (1999)

Substance	Concentration (ppm)	Avg. Concentration (ppm)	MCL (ppm)
Calcium	74-102	84	Not regulated
Chloride	18-25	20	250
Magnesium	5-16	12	Not regulated
Sodium	10-15	11	Not regulated
Sulfate	21-29	25	250
Total Hardness*	236-258	245	Not Regulated
Total Alkalinity*	202-252	224	Not Regulated
Total Dissolved Solids	268-317	289	500
*As Calcium Carbonate			

### DISINFECTION BY-PRODUCTS OBSERVED UNDER THE INFORMATION COLLECTION RULE (1997-1998)

Substance	Maximum Observed Concentration (ppb)
Chloroform	9
Trichloroacetonitrile	ND
Dichloroacetonitrile	1
Bromodichloromethane	6
Dichloropropanone	1
Chloropicrin	ND
Dibromochloromethane	12
Bromochloroacetonitrile	1
Dibromoacetonitrile	2
Trichloropropanone	ND
Bromoform	8
Chloral Hydrate	1
Monochloroacetic acid	2
Monobromoacetic acid	ND
Dichloroacetic acid	8
Trichloroacetic acid	2
Bromochloroacetic acid	4
Dibromoacetic acid	4
*Note: No MCLs are established	

### REQUIRED MONITORING -No MCLs\* (2000) *\*these values are from points of entry*

Substance	Range (ppb)	Average Concentration (ppb)	Reason for Monitoring
Chloroform	ND-0.6	0.6	Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.
Bromodichloromethane	ND-1.2	1.2	
Dibromochloromethane	ND-2.5	2.5	
Bromoform	ND-3.3	1.8	

### LEAD AND COPPER RESULTS (1998)

Substance	90th Percentile	Action Level	Number of residences exceeding Action Level	Possible Source
Lead (ppb)	5.8	15	1	Corrosion of household plumbing.
Copper (ppm)	0.237	1.3	1	

**Note:** These two metals get into the water because of corrosion of household plumbing. Many older homes have copper pipes that were put together with lead-based solder. The 90th percentile means that 90 percent of the homes measured had less than that.

A TOTAL OF 50 RESIDENCES WERE MONITORED.

## SPECIAL NOTICE FOR THE ELDERLY, INFANTS, CANCER PATIENTS, PEOPLE WITH HIV/AIDS OR OTHER IMMUNE PROBLEMS;

You may be more vulnerable to certain microbial contaminants in drinking water than the general population. In particular, infection by *Cryptosporidium* is of concern. Infants, some elderly, or IMMUNO-COMPROMISED persons such as those UNDERGOING CHEMOTHERAPY FOR CANCER; those who have undergone ORGAN TRANSPLANTS; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (1-800-426-4791).

Thank you for reading this report and for being a  
San Antonio Water System customer.

### SAWS CUSTOMER SERVICE CENTERS

Downtown	1001 E. Market St.
Eastside	3930 E. Houston
Westside	Las Palmas Mall

### NOTE:

Presently there is a nationwide concern about the amount of arsenic in drinking water supplies. The EPA is currently re-evaluating the present limits for arsenic, which is currently set at 50 ppb. We are pleased to say that San Antonio's water within the SAWS service area was last tested in 1999 and had a result of less than 2 ppb—a level well below both current EPA limits, as well as any proposed limits. We intend to test our water this year and report results in our 2002 Water Quality Report.

## HOW CAN YOU PARTICIPATE?

Your input is very important in determining SAWS plans for San Antonio's water future.

If you'd like to learn more about water-related issues, SAWS sponsors numerous information fairs, educational programs, and public speakers at neighborhood, school, and town meetings. SAWS can provide you with a wide range of information including:

- Future water resources • Conservation • Water quality • Water recycling • Watershed protection
- Aquifer studies • Well head protection • Stormwater runoff

If you would like to find out about SAWS Board Meetings, Information Fairs, or Town Hall Meetings, call SAWS Communications office at (210) 704-7333. You can also check our web site at [www.saws.org](http://www.saws.org).

If you would like more information or a copy of the report in Spanish, please call 704-7350.  
Este reporte incluye información importante sobre su agua de beber. Si requiere más información o una copia de este reporte en español, por favor llame 704-7350.



Look inside!!  
This is your annual report on the  
quality of your drinking water.

# 2001 WATER QUALITY REPORT