

Water Quality

Report 2006



Public water systems, like San Antonio Water System (SAWS), 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) that was amended by Congress in 1996 – has specific guidelines concerning drinking water quality, as well as the methods and frequency of testing. The data 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. Locally this is carried out by the Texas Commission on Environmental Quality (TCEQ).

SAWS conducts daily testing on the quality of water. In addition, TCEQ also reviews the Edwards and the Trinity aquifers as part of its source water assessment.

Our Commitment to You

SAWS has a long-term commitment to providing our customers with excellent drinking water. Historically, SAWS and its predecessors have been rated as a superior water system since 1936.

Your confidence in San Antonio's water supply is important to us at SAWS. We are committed to providing reliable, quality water.

Where Our Water Comes From

During 2005 – the testing period represented in this report – SAWS drinking water was derived as ground water from the Edwards and Trinity Aquifers.

In 2006, SAWS added surface water from Canyon Lake to our system. That water is not represented in this report, but will be included in future reports. Additional water resources information is also available at our web site at www.saws.org/our_water/waterresources.

What are Contaminants?

The technical term for anything other than water is “contaminant.” It is 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.

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.

What are Secondary Constituents?

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water, can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concern. While secondary constituents are not required to be reported, a table with this information is on page 3 of this report.

Special Notice

For Elderly, Infants, Cancer Patients, People with HIV/AIDS or Immune Problems:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as person 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. The EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Your Water Quality Report

TCEQ has completed an assessment of our source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this report.

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. Cryptosporidium is an example of a microbiological contaminant affecting surface water sources. Since SAWS uses underground aquifers as water sources, in 2005 Cryptosporidium was not a tested contaminant.

- **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 storm water 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; and
- **Radioactive contaminants**, which can be naturally occurring or the result of oil and gas production and mining activities.

For more information on source water assessments and protection efforts at our system, please contact us at 210-704-SAWS (704-7297).

Understanding 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.

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.

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.

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.

pCi/l: Picocuries per liter. A measure of radioactivity in water.

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 is of excellent quality.

Inorganic Contaminants (2002-2005)

Substance	Concentration Range Found	Avg. Conc. Found	MCL	MCLG	Possible Source
Nitrate (ppm)	0.94 – 2.46	1.84	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Barium (ppm)	ND – 0.1	0.10	2	2	Discharge from drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride (ppm) ^a	0.2 - 1.4	0.7	4	4	Erosion of natural deposits; Discharge from fertilizer and aluminum factories.
Combined Radium 226 & 228 (ppb)	0.7	0.7	5	0	Erosion of natural deposits.
Gross alpha adjusted (pCi/l)	1.2 - 2.4	1.8	15	0	Erosion of natural deposits.
Chromium (ppb)	1 - 4	3	100	100	Discharge from steel and pulp mills; erosion of natural deposits

^a Fluoride in the form of hydrofluorosilic acid (H₂SiF₆) was added to SAWS drinking water as of August 2002.

Maximum Residual Disinfectant Level

Disinfectant	Test Year	Concentration Range Found	Avg. Conc. Found	MRDL	MRDLG	Possible Source
Chlorine Residual, Free (ppm)	2005	0.2 - 2.2	0.9	4	4	Disinfectant used to control microbes.

Secondary Constituents (2005)

Constituent	Concentration Range	Average Concentration Found	Limit (ppm)
Aluminum (ppb)	5 - 5	5	50
Bicarbonate (ppm)	184 - 269	218	Not Regulated
Calcium (ppm)	66 - 101	78	Not Regulated
Chloride (ppm)	11 - 23	16	300
Copper (ppm)	0.001 - 0.037	0.01	1.3
Iron (ppb)	139 - 139	139	300
Magnesium (ppm)	12 - 22	16	Not Regulated
Manganese (ppm)	2 - 2	2	50
Nickel (ppb)	2 - 3	2	Not Regulated
Sodium (ppm)	8 - 16	11	Not Regulated
Sulfate (ppm)	14 - 56	26	300
Total Hardness as Calcium/Milligram	232 - 310	261	Not Regulated
Total Alkalinity as Calcium Carbonate	184 - 269	218	Not Regulated
Total Dissolved Solids	317 - 317	317	1,000

What Are Coliforms?

Total coliform bacteria are used as indicators of microbial contamination of drinking water, because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Fecal coliform bacteria and in particular, E. coli, are members of the coliform bacteria group originating in the intestinal tract of warm-blooded animals and are passed into the environment through feces. The presence of fecal coliform bacteria (E. coli) in drinking water may indicate recent contamination of the drinking water with fecal material. The table below indicates whether total or fecal coliform bacteria were found in the monthly drinking water samples submitted for testing last year.

Microbiological Contaminants Monitoring (2005)

Substance/Measurement	MCL	Amount Found	Source
Total Coliform Bacteria (presence)	b	Highest Monthly % of positive samples: 4%	Naturally present in the environment
Fecal Coliform and E. coli (presence)	c	2	Human and animal fecal waste

b Presence of coliform bacteria in 5% or more of the monthly samples.

c A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive

Violation (2005)

Violation Type	Period	Explanation	Steps to Correct
Acute Coliform MCL Violation -- Fecal Coliform Found	December, 2005	A positive sample for fecal coliform was identified in an isolated portion of a distribution main.	Customers in surrounding locations were notified and kept informed. Follow-up testing indicated no presence of coliform bacteria.

Lead and Copper Results ^d (2005)

Substance	90th Percentile	Action Level	Number of Residences Exceeding Action Level	Possible Source
Lead (ppb)	4.3	15	0	Corrosion of household plumbing
Copper (ppm)	0.2	1.3	0	

^d These two metals enter 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.

Organic Contaminant (2002-2005)

Substance	Concentration Range Found	Highest Average	MCL	MCLG	Source of Contaminant
Ethylbenzene (ppb)	ND - 2.1	0.1	700	700	Discharge from petroleum refineries.

Distribution Sampling for By-Products of Drinking Water Chlorination (Disinfection) (2005)

Substance	Concentration Range Found	Highest Concentration Found	MCL	Source of Contaminant
Total Trihalomethanes (THMs) (ppb)	0 - 19	5	80	Byproduct of drinking water disinfection.
Total Haloacetic Acids (HAAs) (ppb)	0 - 6	5	60	Byproduct of drinking water disinfection.

Contact Us

By Phone

704-SAWS (704-7297)

Our Customer Service Lines are open 24 hours a day for:

- Customer Service help
- Reporting leaks, main breaks, or sewer back-ups,
- Contacting us for water quality concerns

On The Web

www.saws.org

Our website has the latest news releases and program information on water issues.

In Your Neighborhood

(210) 233-3621

SAWS Community Relations team is involved in homeowners associations and neighborhood meetings, schools and community gatherings. Call us for more information about how we can assist in your neighborhood.

Visit Us

Customer Service Locations

Downtown 2800 U.S. Hwy 281 N.
Eastside 915 South WW White Rd.
Westside Las Palmas Mall

Hours: 8 a.m. to 5 p.m.

If you would like more information or a copy of this Water Quality Report in Spanish, please call 704-7297.

Este reporte incluye información sobre su agua potable. Si desea más información o una copia de este reporte en español, por favor llame al 704-7297.

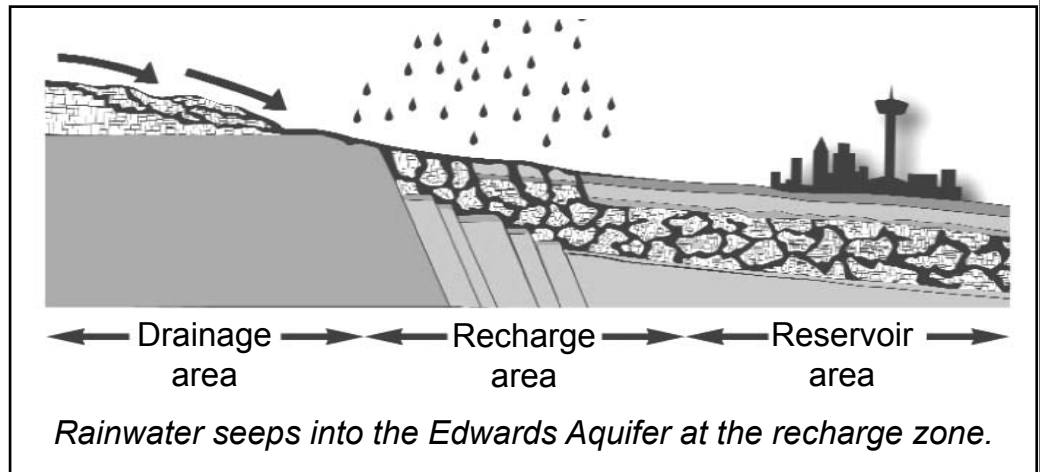
Unregulated Contaminants (2002-2005)

Substance	Concentration Range Found	Average Level	Source of Contaminant
Bromoform (ppb)	0 - 4	1	Byproduct of drinking water disinfection.
Dibromochloromethane (ppb)	0 - 5	1	Byproduct of drinking water disinfection.

Public Participation Opportunities

If you would like to find out when SAWS Board meetings and Town Hall meetings are scheduled, call SAWS Communications and Community Outreach Office at 233-3621. You can also visit our web site on the internet at www.saws.org.

Protecting Our Water Sources



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.

It is important to protect the recharge zone from contamination 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 is safe to drink.



SAWS Water: It's the best thing running

San Antonio has received the award for "Best Tasting Drinking Water in Texas."

At SAWS we have a lot of things to celebrate. Now we have one more: The "Best Tasting Drinking Water in Texas." Thanks to all our efforts at protecting and conserving this great resource, we were awarded this special designation by the Texas Section of the American Water Works Association. Water samples were judged on overall taste, odor, color, and clarity. As the undisputed champion, our water will go on to compete nationally. So what does this championship mean? Simply that we all share in the credit for making our water clearly the best.