



Water Quality

2011 REPORT

This Water Quality Report is a summary about the sustainable, affordable drinking water San Antonio Water System delivers to our customers 24 hours a day, 365 days a year. The data in this report was prepared from the most recent required tests set by the U.S. Environmental Protection Agency (EPA). The Texas Commission on Environmental Quality conducts most of the water quality tests and provides the results for this report. Public water systems, like SAWS, are required by law to report every year on the type and quantity of substances that are in our water.

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 the naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Where Our Water Comes From

During 2010 – the testing period represented in this report – most of SAWS drinking water originated as groundwater from the Edwards, Carrizo, and Trinity aquifers, and in some areas, surface water from Canyon Lake. Additional information on water resources is available online at www.saws.org/waterresources.



What are Contaminants?

A contaminant is a technical term for anything detected other than water. It is natural for drinking water to contain some contaminants, and San Antonio Water System is no exception.

The presence of contaminants in drinking water and even bottled water does not necessarily indicate that water poses a health risk.

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. These constituents are not causes for health concerns. A table with this information is presented on page 4 of this report.

How to Read Your Water Quality Report

A water quality report, also called a consumer confidence report, lets you know what contaminants, if any, are in your drinking water and how these contaminants may affect your health. It lists all the regulated constituents that were detected in the years the tests were conducted.

The year or years tests were conducted.	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements SAWS must follow.	The highest amount of a contaminant EPA allows in drinking water.	Below this level, a contaminant has no known or expected health risks.	How a contaminant ends up in SAWS drinking water.		
Contaminants (2006-2010)	Action Level	Concentration Range Found	Avg. Conc. Found	MCL	MCLG	Potential Source
Substance 1 (ppm)		0.024 – 0.112	0.05	2	2	Discharge from drilling wastes; discharge from metal refineries; erosion of natural deposits.
Substance 2 (ppb)		0 – 8.4	2.4	100	100	Erosion of natural deposits; discharge from fertilizer and aluminum factories

Parts per billion-One ppb equals to one teaspoon in 1,302,000 gallons.

Parts per million-One ppm equals to one teaspoon in 1,302 gallons.

The amount from lowest to highest of a contaminant detected in SAWS drinking water.

The average amount of a contaminant detected in SAWS drinking water.

This describes some of the ways contaminants enter drinking water; wording is provided by EPA and may or may not apply to SAWS

Understanding the Charts:

Remember that substances are shown in parts per million or parts per billion. From these charts, you will see that water delivered by SAWS is of excellent quality.

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

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected health risk. This goal allows for a margin of safety.

Maximum Contaminant Level (MCL): The highest permissible level of a contaminant 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 disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of drinking water disinfectant below which there is no known or expected risk to health. This goal does not reflect the benefits of the use of disinfectants to control microbial contamination.

MFL: million fibers per liter (a measure of asbestos)

N/A: Not applicable

ND: Not detected

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

NTU: Nephelometric Turbidity Units

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

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

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.

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.

Inorganic Contaminants (2006-2010)

Substance	Concentration Range Found	Avg. Conc. Found	MCL	MCLG	Potential Source
Barium (ppm)	0.0326 – 0.0621	0.0459	2	2	Discharge from drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium (ppb)	0 – 1.18	.073	100	100	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride (ppm)	0.12 – 2.02	0.38	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Added for dental health.
Nitrate (ppm)	0 – 2.44	1.8	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Combined Radium 226 & 228 (pCi/L)	0 – 0.43	0.17	5	0	Erosion of natural deposits.
Gross beta emitters (pCi/L)	0 – 0.45	1.3	50	0	Decay of natural and man-made deposits.
Gross alpha Adjusted (pCi/L)	0 – 4.3	1.96	15	0	Erosion of natural deposits.

- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Radioactive contaminants**, which can be naturally occurring or the result of oil and gas production and mining activities.

Organic Contaminants (2006-2010)

Substance	Concentration Range Found	Avg. Conc. Found	MCL	MCLG	Potential Source
Tetrachloroethylene (ppb)	0 – 0.76	0.063	5	0	Discharge from factories and dry cleaners
Xylenes Total (ppb)	0 – 0.68	0.0023	10	10	Discharge from petroleum and chemical factories

- **Organic chemical contaminants**, which are by-products of industrial processes and petroleum production and also can come from gas stations, urban storm water runoff and septic systems.

Synthetic Organic Contaminants including pesticides and herbicides (2010)

Substance	Concentration Range Found	Avg. Conc. Found	MCL	MCLG	Potential Source
Di-(2-ethylhexyl) phthalate (ppb)	0 – 1.1	1.1	6	0	Discharge from rubber and chemical factories

Synthetic organic contaminants are man-made compounds used for a variety of industrial and agricultural purposes. This group of contaminants includes pesticides, polychlorinated biphenyls, and dioxin.

Maximum Residual Disinfectant Level (2010)

Disinfectant	Concentration Range Found	Avg. Conc. Found	MRDL	MRDLG	Potential Source
Chlorine Residual, Free (ppm)	0.25 – 2.15	1.00	4	4	Disinfectant used to control microbes.

Microbiological Contaminants Monitoring (2010)

Substance/Measurement	MCL	Amount Found	Potential Source
Total Coliform Bacteria	≥ 5% of monthly samples	Highest Monthly %: 1.13%	Naturally present in the environment

- **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.

Lead and Copper Results (2010)

Health-related information about lead:

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. SAWS is responsible for providing high quality drinking water, but cannot control the variety of materials used in household 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. SAWS water is well below the action level. This information is provided as a general guideline only. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available by calling the Safe Drinking Water Hotline at 800-426-4791 or at www.epa.gov/safewater/lead.

Substance	90th Percentile	Action Level	Number of Residences Exceeding Action Level	Potential Source
Lead (ppb)	4.4	15	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Copper (ppm)	0.25	1.3	0	Corrosion of household plumbing systems; erosion of natural deposits

Distribution Sampling for By-Products of Drinking Water Chlorination (Disinfection) (2010)

Substance	Concentration Range Found	Average Concentration Found	MCL	Potential Source
Total Haloacetic Acids (HAAs) (ppb)	0 – 26.7	9.4	60	By-product of drinking water disinfection.
Total Trihalomethanes (THMs) (ppb)	0 – 103.4	35.4	80	By-product of drinking water disinfection.

Special Notice

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

Some people may be more vulnerable than the general population to certain contaminants found in our drinking water. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, those with HIV/AIDS or other immune system disorders and 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 at 800-426-4791.

Secondary Constituents (2006-2010)

Constituent	Concentration Range	Avg. Concentration Found
Bicarbonate (ppm)	193 – 278	220
Calcium (ppm)	42.5 – 101	76
Chloride (ppm)	8 – 23	16
Copper (ppm)	0.001 – 0.037	0.01
Iron (ppm)	0 – 0.139	0.007
Magnesium (ppm)	12.4 – 26.7	16.6
Manganese (ppm)	0 – 0.0037	0.0003
Nickel (ppm)	0.002 – 0.004	0.002
pH	7.3 – 8.1	7.7
Sodium (ppm)	8 – 16	11
Sulfate (ppm)	11 – 52	24
Total Alkalinity as Calcium Carbonate (ppm)	159 – 278	218
Total Dissolved Solids (ppm)	245 – 574	311
Total Hardness as Calcium Carbonate (ppm)	183 – 183	183
Hardness as Calcium/Mg (ppm)	180 – 310	250
Zinc (ppm)	0 – 0.141	0.019



Turbidity (2010)

Substance	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Limits	Potential Source
Turbidity (NTU)	0.08	100	0.3	Soil runoff.

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms.

Contact Us

Questions about your water quality report?

If you would like more information or a copy of this Water Quality Report:

Call: 233-3673 or 233-3546
8 a.m. - 5 p.m.

Call 24 hours a day to:

- Report leaks, main breaks, or sewer back-ups
- Discuss water quality concerns

704-SAWS (704-7297)

In Your Neighborhood

SAWS External Relations team extends its community outreach efforts with neighborhood leaders through homeowners associations and neighborhood meetings, schools and community gatherings. Call us for more information about how we can assist in your neighborhood.

210-233-3246

www.saws.org

Our Web site has the latest news and program information on water issues.

En Español

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.



Public Water System
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