



# 2011 Water Quality Report

JUNE 2012

## Noticia Importante

Este informe contiene informacion muy importante sobre su agua de beber. Traduzcalo o hable con alguien que lo entienda bien.



**When  
you're out  
of quality,  
you're out  
of business**

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## Consumer Confidence Report

This report is meant to provide you with the facts, not sales pitches, misleading statements, or wrong conclusions. It contains information about your drinking water, its source, how it is treated and most importantly its quality. It also contains a table of contaminants detected in samples collected in the year 2011 and mandatory health advisories about drinking water and bottled water.

## Is My Water Safe?

**San Antonio Water Company tested your water 314 times during 2011 for harmful bacteria. These routine samples resulted in no positive detections for coliform bacteria throughout the year.**

The Water Company also test the water for 52 known chemical listed in Title 22 with the results returning as either non-detectable or well below the Maximum Contamination Limit or MCL.

In 2011 San Antonio Water Co. tested selected wells for Gross alpha. Alpha radiation is naturally occurring element in the soil, air and even in the masonry of your home. As the radioactive elements decay, alpha radiation naturally continues to be release into the ground water. The water company pumps this ground water as a source for your drinking water. Our wells are scheduled for sampling as directed by the Department of Health Services or every three years. Samples collected are checked for Gross Alpha activity and results may vary from location to location. Should any sample results return above the drinking water standards the Water Company would have to develop a plan to reduce those levels to below the drinking water standards. There are no immediate health risks from drinking water that contains alpha radiation; however, over the long term elevated levels may cause bone cancer, and water with elevated levels of uranium increases ones risk of kidney damage. Well water resulting in a detection value of greater than 5pCi/L will trigger additional samples to be taken, usually Uranium. The water company's Well #15 sample results returned at 9.6 picocuries per Liter or pCi/L; still in compliance with drinking water standards of less than 15 pCi/L which is the MCL for Gross Alpha radiation, but triggers the extra sampling of Uranium. Detection results for uranium from this ground water source returned at 6.0 pCi/L well below the MCL of 20 pCi/L.

The Water Company was also required in 2011 to test for TTHM and HAA5; which is a byproduct of disinfection process, the byproduct is produced when chlorination comes in contact with organics in the water. The Water Company samples the water from the furthest point from chlorination, which gives the chemical byproduct time to form in the water. The water we test was well below the MCL set by the state and the EPA.



## What if I have questions about my water & how can I get involved?

San Antonio Water Company is a private Mutual Water Company, formed pursuant to the State Corporations Code. Our Board of Directors meetings are open to the public and allow for shareholders and public testimony in the beginning of each open monthly board meeting. *For more information about your water and consumer input opportunity, call (909)982-4107 at any hour and ask the office staff or request a response from the General Manager. If your message is left after business hours, your question will be answered in a timely manner. For meeting dates and locations see our website for information and the ability to contact the office via email [www.sawaterco.com](http://www.sawaterco.com).*

## Who is the EPA & what do they say about drinking water contaminants?

The EPA (Environmental Protection Agency) was established in 1970 by the White House and Congress. Their mission is to protect human health and the environment.

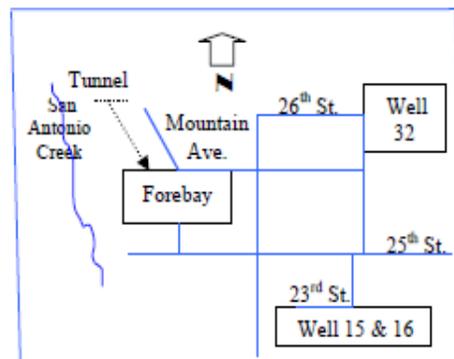
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily pose a health risk. *More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline [1-800-426-4791].*

## Where does your water come from?



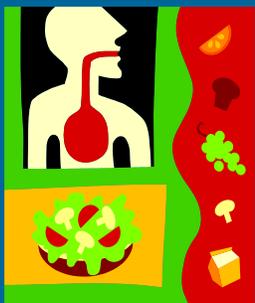
30% of fresh water is in the ground.

Your drinking water supply comes from three deep wells and a deep rock tunnel. Our domestic wells are located in two underlying groundwater basins (Cucamonga, and Chino) and the deep rock tunnel is in the lower San Antonio Canyon. Before the water is delivered to the domestic system we add a disinfectant (sodium hypochlorite) to protect you against the natural occurring microbial contaminants. We produced a total of 19,465.810 acre-feet of water last year. From that total, 14% was delivered into the domestic system and 60% was delivered to irrigation customers and 26% was spread for recharge/storage (future usage).



## Are there other factors that affect my health?

Some people may be more vulnerable to contaminants in drinking water than the general population. *Immunocompromised 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 professionals. USEPA/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 Drinking Water Hotline [1-800-426-4791]*.



## Why are there contaminants found in drinking water?

Sources of drinking water (both tap and bottled) include springs, ponds, streams, rivers, lakes, reservoirs 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 activities.

Contaminates that may be present in source water include:

- ◆ **Microbial contaminants**, such as viruses and bacteria, which may come from septic systems, sewage treatment plants, agricultural livestock operations and wildlife.
- ◆ **Inorganic contaminants**, such as salts, and metals, that 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**, which 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 that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.

**Radioactive contaminants** can be naturally occurring or is the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA and the California Department of Health Services (DHS) prescribe regulations that limit the amount of certain contaminants in water provided by both public and private water systems. DHS regulations also established a limit for contaminants in bottled water that must provide the same protection for public health.

## What is the significance of contaminants?



**Nitrate** in drinking water at levels above 45 [one part per million (ppm) is equivalent to 4 drops of ink in a 55 gallon barrel of water] is a health risk for infants typically less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or are pregnant, you should ask advice from your health care professional. The presence of Nitrate in our sources for irrigation water is due to activities associated with fertilization practices on golf courses, residential areas, septic systems (low density), and leaking sewer collection systems.

**Lead** in drinking water is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. San Antonio Water Company is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components in your home. 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. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

## New Requirement for Specific Conductance

**What is Specific Conductance (SC)?** Generally, there aren't regulatory levels of Specific Conductance (SC). Instead, the concentration of total dissolved solids (TDS) is often regulated. Specific Conductance (SC) is a measure of how well water can conduct an electrical current. SC is an indirect measure of the presence of dissolved solids such as chloride, nitrate, sulfate, phosphate, sodium, magnesium, calcium and iron, and can be used as an indicator of water pollution. Specific Conductance measures how well water can conduct an electrical current at a certain temperature and is a good indicator of the amount of dissolved solids in a water, and thus can be used to detect contaminants in water.

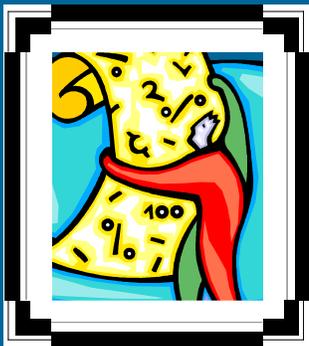
As a comparison, pure water would theoretically have an SC value of zero  $\mu\text{S}/\text{cm}$  at 25°C. Sea water has an SC of approximately 50,000  $\mu\text{S}/\text{cm}$ , because of the large amount of dissolved salts it contains.

The typical conversion of conductivity to the total dissolved solids is done assuming that the solid is sodium chloride: 1  $\mu\text{S}/\text{cm}$  is then an equivalent of about 0.6 mg of NaCl per kg of water.

\*In the past, units of EC were micromhos per centimeter was shown as  $\mu\text{mhos}/\text{cm}$  and is now shown as microsiemens/cm or  $\mu\text{S}/\text{cm}$  to describe the conductivity of water solutions.



Water vapor gets together in a cloud. When it is big enough to be called a drop, it does.



## What are drinking water standards?

Individual water companies do not decide what constitutes “safe” water. *The federal Safe Drinking Water Act requires all public water supplies in the State to meet stringent quality standards.* Those standards are set by the State Department of Health Services, Division of Drinking Water in concert with the United States Environmental Protection Agency. These two organizations set standards that are very protective of the public’s health. In California, drinking water standards (also called Maximum Contaminant Levels or MCLs) are set in two categories. Primary standards relate to public health concerns, and the secondary standards relate to aesthetic qualities such as taste, odor and color. You will find a complete listing in this report of the standards alongside the test results on those contaminants detected in the source waters.

## How do I read this report?

Below are terms to assist consumers in understanding this report.

<u>Abbreviation</u>	<u>Term</u>	<u>Definition</u>
PHG	Public Health Goal	The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.
MCLG	Maximum Contaminant Level Goal	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.
MCL	Maximum Contaminant Level	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the PHGs and MCLGs as is economically or technologically feasible.
PDWS	Primary Drinking Water Standard	Primary MCLs specific treatment techniques adopted in lieu of primary MCLs and monitoring and reporting requirements for MCLs that are specified in regulations.

## Abbreviations, Symbols & Descriptions

- MCL = Maximum Contaminant Level
- ND = Monitored for but Not Detected - detection limits are available upon request
- NS = No Standard
- NA = Not Analyzed - standards have not been finalized
- NC = Not Collected
- TU = Nephelometric Turbidity Units. This is a measure of the suspended material in water
- pCi/L = picoCuries per Liter
- umho/cm = micromhos per centimeter
- ppm = Parts per million
- DPH = Department of Public Health
- ug/L = micrograms per liter
- ppb = Parts per billion
- ppt = Parts per trillion
- (a) = results are based on distribution systems sampling of approximately 451 samples
- (b) = sources are blended to meet State MCL
- (c) = calculated on a running annual average
- (d) = measured in million fibers per liter (longer than 10 microns)
- (e) = State level is dependent upon air temperature
- (f) = to convert the data from NO<sub>3</sub> to N (Nitrogen) divide by 4.43
- μS/cm = microsiemens per centimeter

WATER QUALITY DATA

“The table below lists those water contaminants and physical properties from the 3 domestic wells and tunnel flow that were detected during the 2011 calendar year. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January through December 2011. The State of California requires us to monitor about 130 different contaminants and physical properties, some of which are monitored less than once a year. This lesser frequency is because the concentrations of certain contaminants are not expected to vary significantly from year to year; therefore, some of the data is more than one year old, but is still representative of the water quality.”

CONTAMINATE (CCR Units)	State MCL	State PHG Fed. [MCLG]	SAWCo Water	Range of detection	Most Recent Sample Yr.	Violation	Typ. Source of Contaminant & Pertinent Notations
<b>Microbiological</b>							
(a) Total coliforms (% positive)	5	[0]	<.01	0-2	2009	N	Naturally present in the environment
Fecal coliforms & E. coli (# positive)	1	[0]	0	0	2009	N	Human and animal fecal waste
<b>Radionuclide</b>							
Gross Alpha (pCi/L)	15	[0]	0.87	0-1	2010	N	Erosion of some natural minerals
Radon 222 (pCi/L)	NS	NS	ND	ND	2005*	N	Decay of radioactive elements (a gas)
Uranium	20	[0]	0.26	0-1.03	2009	N	Radioactive metallic element occurring naturally in minerals
<b>Inorganic</b>							
Arsenic (ppb)	50	NS	ND	ND	2006*	N	Erosion of natural deposits, runoff from orchards and waste from glass and electronics production water mains
Copper (ppm)	1.3	0.17	ND	ND	2006*	N	Corrosion of water plumbing, erosion of natural deposits and leaching from wood preservatives
(e) Fluoride (ppm)	2	.42	0.02	0-0.08	2009	N	Erosion of natural deposits, discharge from fertilizer and aluminum factories and an additive for teeth
Lead (ppb)	15	2	ND	ND	2006*	N	Corrosion of water plumbing, discharges from industries and erosion of natural deposits
Nitrate [NO3] (ppm) (b)&(f)	45	45	5.5	0-11	2011	N	Leaching from fertilizer (animal waste), septic tanks and sewage; erosion of natural deposits
<b>Synthetic Organics (incl. Pesticides &amp; Herbicides)</b>							
(b) Dibromochloropropane (ppm) DBCP	2	1.7	0.1	0-0.1	2010	N	Leaching of Nematocide used in soils (banned) in groves, vineyards and crop fields
<b>Additional Parameters Tested</b>							
Bicarbonate	NS	NS	60.45	0.14-200	2009	N	Leaching from naturally-occurring materials
Calcium (ppm)	NS	NS	13.6	1-45	2011	N	Leaching from naturally-occurring materials
Chloride (ppb)	500	NS	0.71	.01-1.86	2009	N	Leaching from natural deposits and seawater influence
Hardness [CaCO3] (ppm)	NS	NS	44.91	0.12-141.7	2009	N	Bonding of naturally-occurring calcium and carbonate ions in solution
Magnesium (ppm)	NS	NS	3.15	0.01-10.52	2009	N	Leaching from naturally-occurring materials
Odor threshold (Units)	3	NS	0.25	0-1	2010	N	Naturally-occurring organic materials
pH (Units)	NS	NS	3	0-6	2011	N	Naturally-occurring leachate blend from acid and base materials
Alkalinity (ppm)	NS	NS	40.1	2-134	2011	N	
Potassium (ppm)	NS	NS	.55	0-1.78	2009	N	Leaching from naturally-occurring materials
Sodium (ppm)	NS	NS	2.27	0.01-6.80	2009	N	Salt present in the water and is generally naturally occurring
Specific Conductance (micro-ohms) “1,600”	NS	NS	86.7	5-286	2011	N	Substances that form ions when in water and seawater influence
Sulfate (ppm)	500	NS	8.14	0.01-1.86	2009	N	Leaching from natural deposits and industrial wastes
Total Dissolved Solids (ppm)	“1,000”	NS	58.99	0.16-186.21	2009	N	Leaching from natural deposits
Turbidity [groundwater] (T.U.)	TT	NS	0.00	0-0	2009	N	Soil runoff. This is a good indicator of water quality and the probable effectiveness of disinfectants
TTHM (ug/L) (Total Trihalomethanes)	.080	NS	.86	0-3	2011	N	Stage 1 disinfection by-product sampling. By-products are formed when disinfectants used in water react with natural organic matter present in source water, forming these groups of chemicals that may be harmful to human health. Extensive research is underway to better understand potential risk to exposure.
HAA5 (ug/L)	.060	NS	ND	ND	2011	N	
Perchlorate	6	NS	ND	ND	2008*	N	

\*Due to a ND (monitored and not detected) result, waiver received from Department of Public Health (DPH)



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**Your Water Quality Report** is produced annually to keep San Antonio Water Company shareholders informed about the water system, water sources, definitions, levels of detected contaminants, water quality compliance/violations, and some educational information. If you have any questions or comments, please call the office at 909-982-4107.

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## What can I do to help protect our water supply?

### **Our San Antonio Canyon Watershed.**

The Watershed committee organized the seventh annual watershed clean up day in September 2011 effectively removing trash within the lower watershed left behind by holiday revelers. This effort helps to maintain the pristine water quality that we enjoy as beneficiaries of the watershed. A Sanitary Survey and Watershed Source Water Protection Plan incorporating Best Management Practices (BMP's) was also developed by the committee to ensure that beneficial uses are effectively protected from degradation due to non-point sources of pollution by the application of BMP's. As a partner in the watershed committee the Water Company continues to sample the San Antonio Creek and monitor the area to better assess the influence of developed areas and changes within the watershed.



Partnering with other beneficiaries of the watershed in monitoring and implementing BMP's we help to preserve the excellent quality of water that we receive from the San Antonio Creek.

## Your source water assessments

A source water assessment was conducted in December 2002 on the canyon tunnel, and the wells that comprise the San Antonio water system. A copy of the complete assessment may be viewed at the San Antonio Water Company office. You may also request a summary of the assessment by contacting the Department of Public Health (DPH) District Engineer at (909) 383-4328. *The purpose of the assessment was to determine the vulnerability of our sources to "possible contaminating activities" (PCAs) and to identify the possible sources of contamination.*