



SAHUARITA Water Company

2010 Annual Water Quality Report

January 1 – December 31, 2010

WELCOME

Sahuarita Water Company (SWC) is pleased to present you with this year's Annual Water Quality Report. The data presented in this report is from the most recent testing done in accordance with Arizona Department of Environmental Quality rules.



THE PURPOSE OF THIS REPORT

This Annual Water Quality Report, also known as a Consumer Confidence Report, is intended to provide you with accurate and understandable information on the quality of the water delivered by Sahuarita Water Co. (PWSIDAZ0410-312) and to characterize the risks, if any, from exposure to contaminants detected in your drinking water.

WATER TREATMENT

SWC continues to meet all drinking water standards set forth by ADEQ and USEPA. In 2010, SWC completed compliance testing on the Arsenic Removal Treatment Plant. SWC sampled four consecutive quarters with each result below the MCL. The water quality data table found on the reverse side details the range of all four samples and the average result as required by ADEQ.

To ensure the system remains free of microbiological contamination, SWC treats the distribution system with Chlorine. Chlorine acts as a disinfectant in the water system and prevents microbiological contamination. SWC maintains 0.2–0.5 parts per million (ppm) chlorine residual.

SPANISH (ESPAÑOL)

If you are a non-English speaking resident, we recommend that you speak with someone who understands the report. You can obtain more information about this report by calling (520) 399-1105.

Spanish (Español): Este informe contiene información muy importante sobre la calidad de su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Para obtener más información de este reporte, llame al (520) 399-1105.

GENERAL INFORMATION ABOUT DRINKING WATER

All 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 the water poses a health risk. The source of drinking water (tap water and bottled water) includes rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels across 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:

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, which 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 that 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, which are by-products of industrial processes and petroleum production, and also may 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, the Arizona Department of Environmental Quality (ADEQ) regulates the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

This report contains information about:

- Your drinking water source
- General information about drinking water and expected drinking water contaminants
- Water treatment
- Recommendations for 'at-risk' populations
- Technical and regulatory terms and abbreviations
- Detected contaminants table
- Detailed information on detected contaminants
- Drinking water rule violations
- Where to get more information

WATER QUALITY DATA

TERMS AND ABBREVIATIONS

To help you understand the terms and abbreviations used in this report, we have provided the following definitions:

Action Level — The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a community water system must follow.

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.

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.

Parts Per Billion (ppb) — One ppb equals one microgram per liter. For example, one part per billion equals six tablespoons of water in Sahuarita Lake.

Parts Per Million (ppm) — One ppm equals one milligram per liter or 1,000 times more than a ppb. One part per million equals one M&M® in a ton of M&Ms®.

Picocuries Per Liter (pCi/L) — The measure of radioactivity in water specifically, the quantity of radioactive material in one liter of water which produces 2.22 nuclear disintegrations per minute.

Point of Entry (POE) — All water sources are monitored at the POE to the water distribution system. This point is after any required treatment but before the first customer service.

DETAILED WATER QUALITY DATA

SWC routinely monitors for contaminants in your drinking water in accordance with Federal and State laws. The State of Arizona requires SWC to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination.

| Inorganic Contaminants | Sample Date | Maximum Result | Range | MCL | MCLG | Violation | Major Sources |
|------------------------------|---------------------------------|-----------------------|--|-----------------------------------|----------|-----------|---|
| Arsenic | 1/19/2010 | 6.5 ppb | 5.2–7.6 ppb | 10.0 ppb | None | No | Erosion of natural deposits |
| Barium | 1/19/2010 | Non-Detect | N/A | 2.00 ppm | 2.00 ppm | No | Erosion of natural deposits |
| Fluoride | 1/19/2010 | 0.98 ppm | N/A | 4.0 ppm | 4.0 ppm | No | Erosion of natural deposits |
| Nitrate | 1/19/2010 | 1.3 ppm | N/A | 10.0 ppm | 10.0 ppm | No | Erosion of natural deposits; Runoff from fertilizer use; Leaching from septic tanks, sewage |
| Disinfection By Products | | | | | | | |
| Trihalomethanes | 1/19/2010 | 0.003 ppm | N/A | .080 ppm | .080 ppm | No | By-product of drinking water chlorination |
| Haloacetic Acids | 1/19/2010 | <0.0018 ppm | N/A | .060 ppm | .060 ppm | No | By-product of drinking water chlorination |
| Radiochemical Contaminants | | | | | | | |
| Combined Uranium | 1/19/2010 | 1.5 ppb | N/A | 30.0 ppb | | No | Erosion of natural deposits |
| Alpha Emitters | 1/19/2010 | 2.2 pCi/L | N/A | 15.0 pCi/L | 0 pCi/L | No | Erosion of natural deposits |
| Microbiological Contaminants | Months with Coliform Detections | # of Positive Samples | Total # of Samples Collected per month | MCL | MCLG | Violation | Major Sources |
| Total Coliform | none | 0 | 15 | No more than one positive monthly | 0 | No | Naturally present in the environment |
| Lead and Copper | Sample Date | Maximum Results | 90th Percentile Value Action Level | Action Level MCL Not Applicable | MCLG | Violation | Major Sources |
| Lead | 7/16/2010 | 1.0 ppb | 1.5 ppb | 15.0 ppb | 0.0 ppb | No | Corrosion of household plumbing |
| Copper | 7/16/2010 | 0.6 ppm | 0.13 ppm | 1.30 ppm | 1.3 ppm | No | Corrosion of household plumbing |

Drinking Water Rule Violations — In 2010, Sahuarita Water Company collected 180 samples for analysis of Total Coliform Bacteria. As a result of diligent operation and monitoring of the water distribution system, there were no violations in 2010.

DETAILED INFORMATION

DETECTED CONTAMINANTS

Arsenic — Arsenic occurs naturally in rocks and soil, water, air and plants and animals. It can be further released into the environment through natural activities like volcanic action, erosion of rocks, and forest fires, or through human actions. Approximately 90 percent of industrial arsenic in the U.S. is currently used as a wood preservative, but arsenic is also used in paints, dyes, metals, drugs, soaps and semi-conductors. Agricultural applications, mining, and smelting also contribute to arsenic releases in the environment. Higher levels of arsenic tend to be found more in ground water sources than in surface water sources (i.e., lakes and rivers) of drinking water. Compared to the rest of the United States, western states have more systems with arsenic levels greater than 10 ppb.

In 2006, EPA reduced the drinking water standards (MCL) for arsenic from 50 ppb to 10 ppb, and now requires all water utilities to meet this reduced standard. Your drinking water meets EPA's standard for arsenic, but it contains low levels of arsenic. EPA's 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. Some people who drink water containing arsenic in excess of the MCL over the course of several years may experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

For additional information visit:
<http://water.epa.gov/drink/contaminants/basicinformation/arsenic.cfm>

Alpha Emitters — Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of EPA's standard over the course of several years may have an increased risk of getting cancer.

Barium — Barium is a lustrous, machinable metal that exists in nature only in ores containing mixtures of elements. It is used to make a wide variety of electronic components, metal alloys, bleaches, dyes, fireworks, ceramics and glass. In particular, it is used in well drilling operations where it is directly released into the ground. EPA has found that barium can potentially cause short-term health effects, such as gastrointestinal disturbances and muscular weakness when people are exposed to it at levels above the MCL for relatively short periods of time. Barium has the potential to cause high blood pressure when the body is exposed to levels above the MCL over the course of a lifetime.

For additional information visit:
http://water.epa.gov/drink/contaminants/basicinformation/basicinformation_barium.cfm

Copper — Copper is a metal found in natural deposits as ores containing other elements. It is widely used in household plumbing materials. Since copper contamination generally occurs from corrosion of household copper pipes, it cannot be directly detected or removed by the water system. Instead, EPA is requiring water systems to control the corrosiveness of their water if the level of copper in home taps exceed an action level.

For additional information visit:
<http://water.epa.gov/drink/contaminants/basicinformation/copper.cfm>

Fluoride — Most communities add fluoride to their drinking water to promote dental health, however, SWC does not. Each community determines whether or not to add fluoride. EPA has set

an enforceable drinking water standard for fluoride of 4mg/L (some people who drink water containing fluoride in excess of this level over the course of several years may get bone disease, including pain and tenderness of the bones). EPA has also set a secondary fluoride standard of 2mg/L to protect against dental fluorosis. Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they descend from the gums. Children under nine should not drink water that has more than 2mg/L of fluoride.

For additional information visit:
<http://water.epa.gov/drink/contaminants/basicinformation/fluoride.cfm>

Lead — Lead, a metal found in natural deposits, is commonly used in household plumbing materials and water service lines. The greatest exposure to lead is by swallowing or breathing in lead paint chips or dust. Lead in drinking water can also cause a variety of adverse health effects. For infants and children, exposure to lead in drinking water above the action level can result in delays in physical and mental development, along with slight deficits in attention span and learning abilities. Among adults, it can cause increases in blood pressure. Adults who drink this water over the course of several years could develop kidney problems or high blood pressure.

Lead is rarely found in source water, but enters tap water through corrosion of plumbing materials. Old and poorly maintained homes are more likely to have lead pipes, joints, and solder. However, new homes are also at risk — even legally "lead-free" pipes may contain up to 8 percent lead. These pipes can leave significant amounts of lead in the water for the first several months after their installation.

For additional information visit:
<http://www.epa.gov/safewater/lead/index.html>

Nitrate — Nitrates and nitrites are nitrogen-oxygen chemical units that combine with various organic and inorganic compounds. Once inhaled, nitrates are converted into nitrites. Nitrates are most commonly used as a fertilizer.

The water delivered to you by SWC is well within drinking water standards. As part of our public education efforts, we have provided the health effects from drinking water that do not meet standards. Excessive levels of nitrate in drinking water have caused serious illness and sometimes death. The serious illness in infants is due to the conversion of nitrate to nitrite by the body, which can interfere with the oxygen-carrying capacity of the child's blood. This can be an acute condition in which health deteriorates rapidly over a period of days. Symptoms include shortness of breath and blueness of the skin. Nitrates and nitrites have the potential to cause the following effects from a lifetime exposure at levels above the MCL: diuresis, increased starchy deposits and hemorrhaging of the spleen.

For additional information visit:
<http://water.epa.gov/drink/contaminants/basicinformation/nitrite.cfm>

Total Coliforms — Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present.

For additional information visit:
http://www.epa.gov/enviro/html/icr/gloss_path.html

FOR MORE INFORMATION

QUESTIONS ABOUT THIS REPORT OR YOUR WATER QUALITY

For more information regarding this annual report or for information about your drinking water, contact Sahuarita Water Company at 520-399-1105. We do not hold regular meetings, but you are welcome to call SWC with your questions or concerns about your water quality.

YOUR DRINKING WATER SOURCE

SWC's water supply is 100% ground water and comes from three deep wells located in the Rancho Sahuarita area. This water is drawn from the Tucson Basin aquifer, a part of the Santa Cruz River Watershed.

Source Water Assessments are on file with the Arizona Department of Environmental Quality and are available for public review. You may obtain a copy by contacting the ADEQ Source Water Coordinator at (602) 771-4641.

The Source Water Assessment Report provides a screening-level evaluation of potential contamination that may occur. It does not mean that the contamination has occurred or will occur. We can use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help us ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan.

RECOMMENDATIONS FOR 'AT-RISK' POPULATIONS

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, persons with HIV, AIDS, or other immune system disorders, some elderly, and infants can be particularly at risk of infections. These people should seek advice about drinking water from their health care providers. United States Environmental Protection Agency and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Environmental Protection Agency's Safe Drinking Water Hot Line (800-426-4791).

