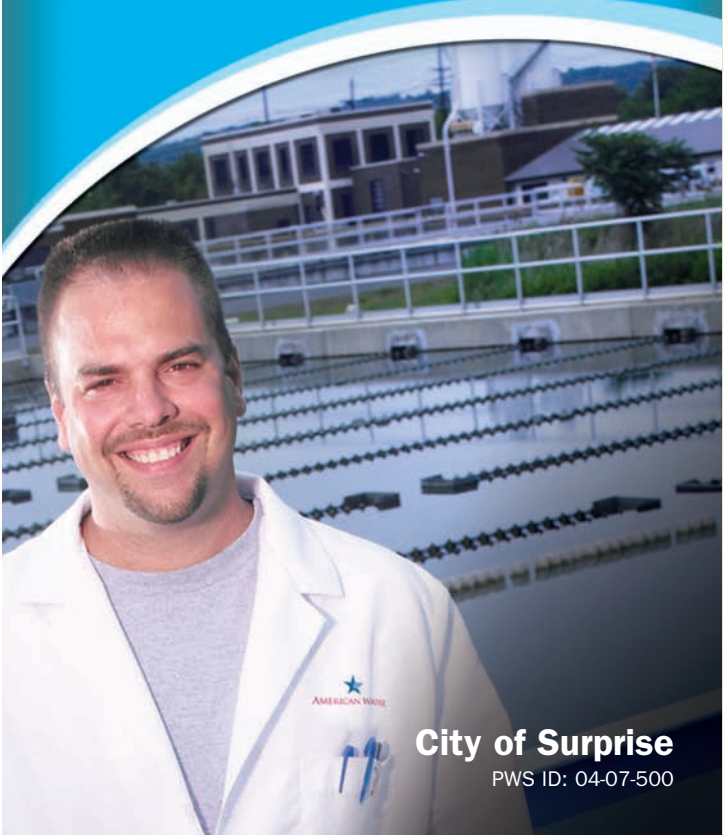


# 2008 Annual Water Quality Report



**City of Surprise**  
PWS ID: 04-07-500

## Dear Arizona American Water Customer,

As a trusted leader in the industry, Arizona American Water places a strong emphasis on sharing information about the quality of the water we provide with our customers.

One way we do this is by reporting to you annually the results of our tests on the water we deliver to your home. Please review this Annual Water Quality Report, which outlines information applicable to your local water system for testing completed through December 2008. You'll find that we provide water that surpasses or meets all federal and state water quality regulations. In fact, we often address regulations well before they go into effect.

Just as important, Arizona American Water makes the necessary investments to maintain and upgrade its facilities, so that we can deliver quality water directly to your tap 24 hours a day, seven days a week.

Our customers are our top priority, and we are committed to providing them with the highest quality drinking water and service possible now and in the years to come. In addition to this written report, you can view information about Arizona American Water and your water system on our website <http://azamwater.com>. For more information or for any questions about this report relating to your drinking water, please contact Arizona American Water at (888) 237-1333.

Sincerely

Paul Townsley  
President

## What is a Water Quality Report?

To comply with state and U.S. Environmental Protection Agency (EPA) regulations, Arizona American Water issues an annual water quality report which describes the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and your awareness of the need to protect your drinking water sources. This report includes details about where your water comes from and what it contains. This data presented in this report is a combination of data from our nationally recognized water quality lab and commercial laboratories all certified in drinking water testing by the State of Arizona Department of Health Services. If you have any questions about this report or your drinking water, please call our Arizona Customer Service Center at 1 (888) 237-1333.

## Share This Report

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their location who are not billed customers of Arizona American Water Company and therefore do not receive this report directly.

## Where Does My Water Come From?

All of the water provided by Arizona American Water to the City of Surprise comes from groundwater pumped from the West Salt River Valley (WSRV) Sub-Basin.

The WSRV Sub-Basin is a broad, gently sloping alluvial plain that is bounded on the north by the Hieroglyphic Mountains and Hedgpeth Hills and on the west by the White Tank Mountains. Along the eastern boundary of the WSRV Sub-Basin are the Union Hills, Phoenix Mountains, and Papago Buttes. South Mountains, Estrella Mountains, and Buckeye Hills define the southern limits of the WSRV Sub-Basin. Depth to groundwater in this area is typically between 350 to 500 feet below the land surface.

Sources of groundwater include natural recharge from flood flows in streams and along mountain fronts, and incidental recharge from agricultural and urban irrigation, canals, effluent, and artificial lakes.

## Notice of Source Water Assessment

In 2004, the Arizona Department of Environmental Quality (ADEQ) completed a source water assessment for four wells used by the City of Surprise. The Assessment reviewed the adjacent land uses that may pose a potential risk to the sources. These risks include, but are not limited to, gas stations, landfills, dry cleaners, agriculture fields, wastewater treatment plants, and mining activities. Once ADEQ identified the adjacent land uses, they were ranked as to their potential to affect the water source. The assessment was finalized in 2004 and revealed that there were no adjacent land uses in the vicinity of the four wells.

The complete assessment is available for inspection at the Arizona Department of Environmental Quality, 1110 W. Washington, Phoenix, Arizona 85007, between the hours of 8:00 a.m. and 5:00 p.m. Electronic copies are available from ADEQ at [dml@azdeq.gov](mailto:dml@azdeq.gov). For more information, call ADEQ's Source Water Assessment and Protection Unit at 602-771-4644 or visit their website at [www.azdeq.gov/environ/water/dw/swap.html](http://www.azdeq.gov/environ/water/dw/swap.html).

## What we do to protect groundwater:

We protect the sources by ensuring proper well construction and system operations and management.

## What you can do to protect groundwater:

Residents can help by taking hazardous household chemicals to hazardous material collection days and limiting pesticide and fertilizer use. For information on household hazardous material collection days in your area, please contact the City of Surprise at (623) 222-6000.

## How Did We Do?

Our water quality report is intended to provide you with valuable information on your water. Call us TOLL FREE at 1-866-464-0228. By completing a short phone survey (6 yes/no questions), you will help us improve the value of the information we provide to you each year.

## Home Water Treatment Units

If you install a home treatment system such as a water softener or reverse osmosis system to improve taste or odor, remember to follow the manufacturer's instructions on operation and maintenance. Failure to perform maintenance can result in poor water quality. We recommend contacting the manufacturer of your treatment system for maintenance instructions or assistance. Additional information about home treatment systems is available from the Arizona Water Quality Association at 480-947-9850 or by writing to 6819 E. Diamond St., Scottsdale, AZ 85257.

## Water Conservation Tips

Water conservation measures are an important first step in protecting our water supply. Such measures not only save the supply of our source water but can also save you money by reducing your water bill.

### Conservation measures you can use

#### Inside your home include:

- Fix leaking faucets, pipes, toilets and other plumbing fixtures in need of maintenance.
- Replace old fixtures with high-efficiency faucets, toilets and other plumbing appliances.
- Wash only full loads of laundry.
- Do not use the toilet for trash disposal.
- Take shorter showers (5 minutes or less).
- Turn the water off while lathering and only turn on the water for rinsing in the shower.
- Do not let the water run while shaving or brushing teeth.
- Soak dishes before washing.
- Run the dishwasher only when full.

#### You can conserve outdoors as well:

- Water the lawn and garden in the early morning or evening.
- Use mulch around plants and shrubs.
- Repair leaks in faucets and hoses.
- Use water-saving nozzles.
- Use water from a bucket to wash your car, and save the hose for rinsing or better yet use a commercial carwash that has a water recycling system.

## What's In My Water?

The data presented in this report is a combination of analysis results from our nationally recognized water quality laboratories and commercial laboratories certified in drinking water testing by the State of Arizona Department of Health Services. For your information, we have compiled a list in the table below showing what substances were detected in our drinking water during 2008 or the last sampling period. If you have any questions about this report or your drinking water, please call our Arizona Customer Service Center at (888) 237-1333.

## Water Quality Results

Regulated Substances Measured on the Water Leaving the Treatment Facility								
Substance (units)	Year Sampled	MCLG	MCL	Highest Amount Detected	Range of Detections	Compliance Achieved	Typical Source	
Arsenic (ppb) <sup>1</sup>	2008	NA	10	14.0	3 - 14	YES	Erosion of natural deposits	
Barium (ppb)	2008	2000.0	2000	19.0	1 - 19	YES	Erosion of natural deposits	
Chromium (ppb)	2008	100.0	100	36.0	10 - 36	YES	Erosion of natural deposits	
Selenium (ppb)	2008	50.0	50	3.0	ND - 3.0	YES	Erosion of natural deposits	
Fluoride (ppm)	2008	4.0	4	1.6	0.5 - 1.6	YES	Erosion of natural deposits	
Nitrate (ppm) <sup>2</sup>	2008	10.0	10	5.8	1.0 - 5.8	YES	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Alpha Emitters (pCi/L)	2008	0.0	15	3.4	2.4 - 3.4	YES	Erosion of natural deposits	
Ethylbenzene (ppb)	2008	700.0	700	1.2	0.7 - 1.2	YES	Industrial or agricultural sources	
Xylenes (ppm)	2008	10.0	10	5.3	1.3 - 5.3	YES	Discharge from petroleum refineries; discharge from chemical factories	
Other Compounds Measured in the Distribution System								
Substance (units)	Year Sampled	MCLG/MRDLG	MCL/MRDL	Average Amount Detected	Range of Detections	Compliance Achieved	Typical Source	
TTHMs (ppb) <sup>3</sup>	2008	NA	80	5.6	1.0 - 17.2	YES	By-product of drinking water disinfection	
HAA (ppb) <sup>3</sup>	2008	NA	60	2.1	0.0 - 5.1	YES	By-product of drinking water disinfection	
Chlorine residual (ppm)	2008	4.0	4	0.9	0.6 - 1.4	YES	Water additive used to control microbes	
Tap Water Samples: Lead and Copper Results								
Substance (units)	Year Sampled	MCLG	Action Level	90th Percentile	Number of Samples	Number of Samples Above Action Level	Compliance Achieved	Typical Source
Copper (ppm)	2008	1.3	1.3	0.357	30	0	YES	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2008	15	15	3.0	30	0	YES	Corrosion of household plumbing systems; erosion of natural deposits
Unregulated Substances Measured on the Water Leaving the Treatment Facility								
Substance (units)	Year Sampled		Range of Detections		Typical Source			
Boron (ppb)	2008		0.0 - 50		Erosion of natural deposits			
Calcium (ppm)	2008		14 - 21		Erosion of natural deposits			
Chloride (ppm)	2008		27 - 70		Erosion of natural deposits			
Magnesium (ppb)	2008		3.0 - 10.0		Erosion of natural deposits			
Molybdenum (ppb)	2008		4.0 - 9.0		Erosion of natural deposits			
Nickel (ppb)	2008		0.6 - 0.9		Erosion of natural deposits			
Silica (ppm)	2008		18 - 32		Erosion of natural deposits			
Sodium (ppm)	2006		46 - 100		Natural erosion			
Strontium (ppb)	2008		101 - 552		Erosion of natural deposits			
Sulfate (ppm)	2005		17 - 72		Natural erosion			
Hardness (grains/gallon)	2008		4.0 - 6.0		Natural calcium/magnesium content			
pH (standard units)	2008		7.6 - 8.2		pH is a measure of acid/base properties			
<p><sup>1</sup> Arsenic — The City is committed to meeting all Safe Drinking Water Act Requirements (SDWAR). There are arsenic facilities completed or currently under construction within the City of Surprise to comply with the SDRWAR. On July 31, 2008 the City received an arsenic exemption approval from the Environmental Protection Agency (EPA) which allowed the City sufficient time to come into compliance by January 23, 2009. In December 2008, the City's system met compliance with the SDWAR. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.</p> <p><sup>2</sup> Nitrate — Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.</p> <p><sup>3</sup> TTHM/HAA — Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants: Trihalomethanes: bromodichloromethane (zero); bromoform (zero); chloroform (zero); dibromochloromethane (0.06 mg/L). Haloacetic acids: dichloroacetic acid (zero); trichloroacetic acid (0.3 mg/L). Monochloroacetic acid, bromoacetic acid, and dibromoacetic acid are regulated with this group but have no MCLGs.</p>								

## How to Read This Table

Arizona American Water conducts extensive monitoring to guard against contaminants in your water. The results of our monitoring are reported in the adjacent tables. For help with interpreting this table, see the “Table Definitions” section.

Starting with a **Substance**, read across. **Year Sampled** is usually in 2008 or prior. **MCLG** is the goal level for that substance (this may be lower than what is allowed). **MCL** shows the highest level of substance (contaminant) allowed. **Highest Amount Detected** represents the highest result that was found. **Range of Detections** tells the highest and lowest amounts found. A **Yes** under **Compliance Achieved** means the amount of the substance is below regulatory requirements. **Typical Source** tells where the substance usually originates.

Unregulated substances are measured, but maximum contaminant levels have not been established by the government.

## Definitions of Terms Used in This Report

- **MCL (Maximum Contaminant Level):** 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.
- **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 allow for a margin of safety.
- **MRDL (Maximum Residual Disinfectant Level):** 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.
- **MRDLG (Maximum Residual Disinfectant Level Goal):** 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.
- **TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.
- **AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **gpg or grains/gallon:** Used to describe the dissolved hardness minerals contained in water and is a unit of weight that equals 1/7000 of a pound.
- **ND:** None detected.
- **pCi/L (Picocuries per liter):** Measurement of the natural rate of disintegration.
- **ppb – parts per billion:** One part substance per billion parts water (or micrograms per liter).
- **ppm – parts per million:** One part substance per million parts water (or milligrams per liter).
- **TTHM – Total Trihalomethanes:** Consist of Chloroform, Bromoform, Bromodichloromethane, Dibromochloromethane.
- **HAA – Haloacetic Acids:** Consist of Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Bromoacetic Acid, Dibromoacetic Acid.

## Substances Expected to be in Drinking Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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

## Substances that may be present in source water include:

**Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife.

**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 stormwater runoff, and residential uses.

**Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems.

**Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at 1-800-426-4791.

## Special Health Information

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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

## Lead & Copper

Arizona American Water Company monitored the water for lead and copper in 2008 at 30 residences throughout the community and met the federal lead and copper standards. The 30 houses sampled were representative of the types of houses throughout the system. If your house was sampled you would have received the analysis results. If you weren't part of the representative sampling and are concerned about elevated lead levels in your home's water, you may wish to flush your tap for 30 seconds to 2 minutes before using the water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).



19820 N. 7th Street, Suite 201  
Phoenix, AZ 85024

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. 1-(800) 383-0834

For more information about this report, or for any questions relating to your drinking water, please call our customer service center at 1-(800) 383-0834.