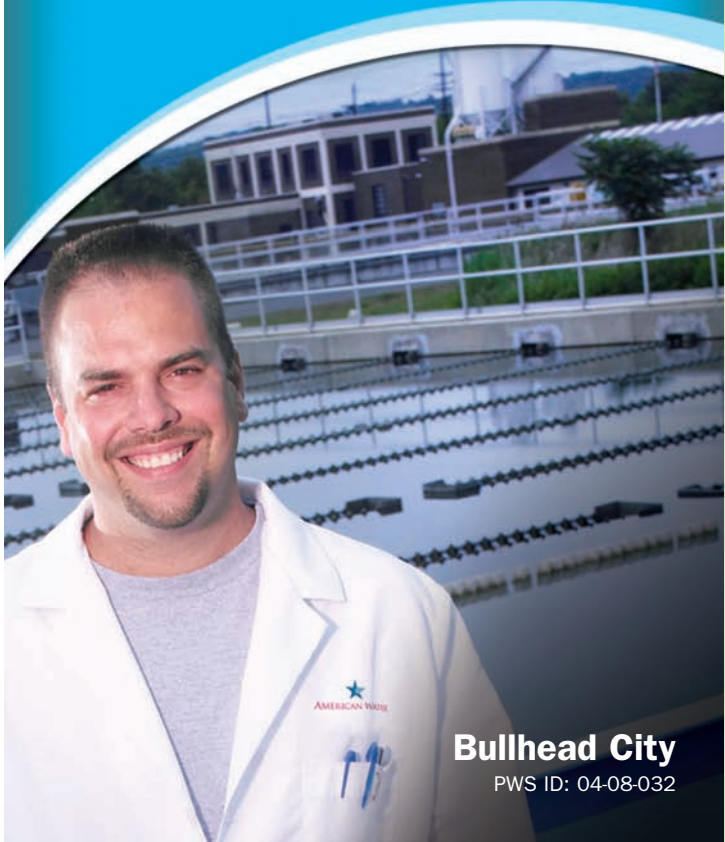


# 2008 Annual Water Quality Report



**Bullhead City**

PWS ID: 04-08-032

## 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 (888) 237-1333.

## Where Does My Water Come From?

All of the water provided by Arizona American Water comes from groundwater pumped from the Lake Mohave Basin. The basin is a narrow strip of land bounded by the Colorado River in the west and the Black Mountains in the east. Groundwater is found in the alluvial sand, silt, and gravel deposits adjacent to the Colorado River and Lake Mohave.

## Notice of Source Water Assessment

In 2004 the Arizona Department of Environmental Quality completed a source water assessment for the six wells used by Arizona American Water Company-Bullhead City. 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, waste water treatment plants, and mining activities. Once ADEQ identified the adjacent land uses, they were ranked as to their potential to affect the water sources. The results of the assessment were that four wells had no adjacent land uses, one well had 8 adjacent land uses that pose a low risk and 5 adjacent land uses that pose a high risk, and one well that had three adjacent land uses that pose a low risk.

The sources are currently protected by well construction and system operations and management. Residents can help protect sources by taking hazardous household chemicals to hazardous material collection days, and limiting pesticide & fertilizer use.

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).

## 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.

## 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, etc.
- Replace old fixtures; install water-saving devices in faucets, toilets and appliances.
- Wash only full loads of laundry.
- Do not use the toilet for trash disposal.
- Take shorter showers.
- 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.

## What's In My Water?

This data presented in this report is a combination of analysis results 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. 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

**District: Bullhead City Main**

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
Alpha Emitters (pCi/L)	2001-2003	0	15	12.5	5.2 - 12.5	Yes	Erosion of natural deposits
Arsenic (ppb)	2006	0	10	3	ND - 3	Yes	Erosion of natural deposits; discharge from orchards; runoff from glass and electronics production wastes
Barium (ppm)	2006	2	2	0.066	0.016 - 0.066	Yes	Discharge of drilling wastes; erosion of natural deposits
Chromium (ppb)	2006	100	100	2	ND - 2	Yes	Erosion of natural deposits
Combined Radium (pCi/L)	2001-2003	0	5	0.4	<0.3 - 0.4	Yes	Erosion of natural deposits
Fluoride (ppm)	2006	4	4	1.1	0.2 - 1.1	Yes	Erosion of natural deposits
Mercury (ppb)	2006	2	2	0.5	ND - 0.5	Yes	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nitrate (ppm) <sup>2</sup>	2008	10	10	6.5	0.58 - 6.5	Yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppm)	2006	0.05	0.05	0.012	ND - .012	Yes	Erosion of natural deposits; discharge from mines
Tetrachloroethylene (PCE) (ppb)	2008	0	5	0.7	ND - .7	Yes	Discharge from factories and dry cleaners
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 [Total trihalomethanes] (ppb) <sup>1</sup>	2008	NA	80	12.4	10 - 18.7	Yes	By-product of drinking water disinfection
HAA (ppb) <sup>1</sup>	2008	NA	60	2.1	1.5 - 2.8	Yes	By-product of drinking water disinfection
Chlorine Residual (ppm)	2008	4	4	0.3	0.1 - 0.5	Yes	Water additive to control microbes
Unregulated Substances Measured on the Water Leaving the Treatment Facility							
Substance (units)	Year Sampled		Range Low - High		Typical Source		
Boron (ppm)	2006		.134 - .412		Natural erosion		
Calcium (ppm)	2006		54 - 190		Natural erosion		
Iron (ppm)	2006		ND - 0.25		Natural erosion		
Magnesium (ppm)	2006		10 - 48		Natural erosion		
Manganese (ppm)	2006		ND - .017		Natural erosion		
Molybdenum (ppm)	2006		.0002 - .007		Natural erosion		
Nickel (ppm)	2006		.0019 - .0071		Natural erosion		
Potassium (ppm)	2006		ND - 8		Natural erosion		
Silica (ppm)	2006		27 - 53		Natural erosion		
Sodium (ppm)	2006		105 - 182		Natural erosion		
Strontium (ppm)	2006		1.217 - 3.434		Natural erosion		
Zinc (ppm)	2006		ND - 0.015		Natural erosion		
Total Hardness (grains/gal)	2002		14 - 45		Natural erosion		
Sulfate (ppm)	2006		154 - 737		Natural erosion		
Chloride (ppm)	2006		89 - 364		Natural erosion		
Total Dissolved Solids (ppm)	2005		460 - 1228		Natural erosion		
Tap Water Samples: Lead and Copper Results							
Substance (units)	Year Sampled	MCLG	Action Level	Number of Samples	90th Percentile	Number of Samples Above Action Level	Typical Source
Lead (ppm)	2007	0	0.015	30	0.004	0	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	2007	1.3	1.3	30	0.212	0	Corrosion of household plumbing systems; erosion of natural deposits
Special Footnotes:							
Year Sampled - The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.							
<sup>1</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.							
<sup>2</sup> 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.							

## How to Read This Table

Arizona American Water conducts extensive monitoring to ensure that your water meets all water quality standards. 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 amount 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 government 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

- **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.
- **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.
- **NA:** Not applicable.
- **pCi/L (Picocuries per liter):** Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).
- **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, Bromodichloromethane, Dibromochloromethane, Bromoform
- **HAA – Five 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, 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).



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.