

# 2008 Annual Water Quality Report

## For Customers of the City of Phoenix-Rigby Water System

A Publication of the City of Phoenix

May 2009

### Drinking water safe throughout 2008

#### About your water system

In November 2002, the City of Phoenix Water Services Department acquired the Rigby Water System, which consists of a local well that provided drinking water to your area through March 18, 2008. As part of the U.S. Environmental Protection Agency regulations, the city must inform customers on an annual basis about the quality of drinking water it delivers. This document was created specifically for customers who were serviced by the City of Phoenix-Rigby Water System. The city was responsible for maintaining and operating the well that supplied water to your home. Additionally, the water supply was disinfected with chlorine and then tested to ensure that the water met federal and state drinking water standards.

On March 18, 2008 the City of Phoenix-Rigby Water System went out of service permanently when all of the customers previously served by the system were connected directly to the City of Phoenix Water system. This will be the final Annual Water Quality Report for the City of Phoenix-Rigby Water System, since it is no longer in existence. In addition to this you will receive an annual report, enclosed with your water bill, which details the water quality of the City of Phoenix Water System.

It is reasonable for customers to ask basic questions about the water they are delivered. Answers to questions typically asked include:

#### *Is my water safe?*

Throughout 2008, your tap water met all U.S. Environmental Protection Agency (EPA) and State of Arizona drinking water standards. To ensure compliance with those stringent standards, the water is tested for nearly 100 substances.

#### *Where does my water come from?*

Your water comes from groundwater pumped from a well in your neighborhood. The well water is disinfected with chlorine before it is delivered to your home.

#### *How can I learn more?*

Customers with questions about the water supply, treatment and delivery may call Phoenix Water Services' Customer Services at (602) 262-6251 during normal business hours (Monday through Friday, except holidays, from 8:00 a.m. to 5:00 p.m.) or write to: Water Quality Questions, City of Phoenix Water Services Department, 200 W. Washington St., 9th Floor, Phoenix, AZ 85003-1611. Citizens who wish to address the Phoenix City Council about water issues or other non-agenda items may do so at the Citizen Request Sessions at City Council Formal Meetings, which are held in the City Council Chambers, 200 W. Jefferson St. For information about specific meeting times and agenda items, please contact the City of Phoenix City Clerk Department at 602-262-6811, or visit phoenix.gov and click on "Mayor/City Council," then "City Meetings," then "Public Meetings." You may also call the EPA's Safe Drinking Water Hotline for information about the Safe Drinking Water Act or EPA's other drinking water programs at 800-426-4791.

*To acquire this publication in Braille, large print or audio tape, contact the City of Phoenix Water Services Department at 602-262-6251, or 602-534-1113/TTY.*

*Este informe contiene información importante sobre su agua potable. Si desea esta publicación impresa en español, braille, letra grande o en casete de audio comuníquese el Departamento Municipal de Phoenix del Servicio del Agua, al 602-262-6251, ó 602-534-1113/TTY.*

## Substances Expected In Drinking Water

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water.

The sources of drinking water may include rivers, lakes, streams, ponds, reservoirs, springs, 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 from human activity.

It is reasonable to expect drinking water, including bottled water or water that passed through home treatment systems, to contain at least small amounts of some contaminants.

However, the presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include the following:

- Microbial contaminants, such as viruses and bacteria, that may be from wastewater treatment plants, septic systems, agricultural livestock operations or 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, 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, that are byproducts of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff and septic systems; and
- Radioactive contaminants that can be naturally-occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency's Safe Drinking Water Hotline, 800-426-4791.

Information on bottled water can be obtained from the FDA.

### **Special Health Information**

**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, 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 from their health care providers about drinking water. The EPA and the 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 EPA Safe Drinking Water Hotline (800-426-4791).**

**What substances were detected in the water?**

All levels of tested substances were within the acceptable ranges defined by drinking water standards. Substances detected in the water and the Maximum Contaminant Level (MCL) allowed in drinking water according to federal and state regulations are shown in the following tables. Definitions of terms used in this report can be found on the last page of this report. This report lists only the substances that were detected in the water. If you would like to receive a list of all the substances that were tested for, please contact the Water Services Department’s Compliance and Regulatory Affairs Office at (602) 262-4992. **The presence of a contaminant in drinking water does NOT necessarily indicate the drinking water poses a health risk.**

**Detected Inorganic Substances**

Inorganic Contaminants	MCLG	MCL	Lowest Level Detected	Highest Level Detected	Typical Source(s)
Arsenic <sup>1</sup> (ppb) <sup>**†</sup>	0	10	3.0	3.0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production waste
Barium (ppm) <sup>**†</sup>	2	2	0.068	0.068	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb) <sup>**†</sup>	100	100	3.2	3.2	Discharge from steel and pulp mills; Erosion of natural deposits
Selenium (ppb) <sup>**†</sup>	50	50	5.7	5.7	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Fluoride (ppm) <sup>***†</sup>	4	4	0.1	0.1	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate <sup>2</sup> (ppb)	10	10	8.6	8.7	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits

\* Sample collected in 2006

\*\* Sample collected in 2003

1 - 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.

2 - Nitrate in drinking water at levels greater than 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 activity. If you are caring for an infant, you should ask for advice from your health care provider.

† - Some of our data, though representative, are more than a year old. The state of Arizona allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.

## Detected Radioactive Substances

Substance	Units	MCL	MCL G	Lowest Level	Highest Level	Average	Major Source in Drinking Water
Alpha Emitters* <sup>†</sup>	pCi/l	15	0	Not Detected	8.5	4.1	Erosion of natural deposits
Combined Radium* <sup>†</sup>	pCi/l	5	0	Not Detected	1.6	0.8	Erosion of natural deposits

*\* Collected in 2003 - <sup>†</sup> Some of our data, though representative, are more than a year old. The state of Arizona allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.*

## Lead and Copper Standards Met

Lead and copper usually enter our drinking water from corrosion of household plumbing, pipes and fixtures that contain these metals, such as copper piping, lead solder or brass fixtures. The EPA requires water suppliers to perform periodic tests for lead and copper in the tap water from inside consumer's homes. Tests show levels in the city of Phoenix-Rigby household tap water met the Action Level required by federal drinking water standards for lead and copper.

While the city of Phoenix-Rigby water system meets the Action Level, lead and copper levels at some consumer's homes may be elevated due to leaching of the metals into the water from materials used in the household plumbing or fixtures. 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. The city of Phoenix-Rigby Water System is responsible for providing high quality drinking water, but cannot control the variety of materials used in 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 two 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 the steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Results of Lead and Copper Sampling from Residential Water Taps

Substance	Action Level (AL) applies instead of MCL	MCLG	90 percent of taps were less than or equal to this value	Number of sites above the AL	Major Source in Drinking Water
Lead* <sup>†</sup>	90% of taps tested must not exceed 15 ppb	0 ppb	2 ppb	Zero (0) out of 6 taps	Corrosion of household plumbing systems
Copper* <sup>†</sup>	90% of taps tested must not exceed 1.3 ppm	1.3 ppm	0.28 ppm	Zero (0) out of 6 taps	Corrosion of household plumbing systems

*\* Collected in 2003 - <sup>†</sup> Some of our data, though representative, are more than a year old. The state of Arizona allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.*

## 2008 Microbiological Monitoring in the Distribution System

Substance	MCL	MCLG	Number of positive samples collected in any month	Major Source in Drinking Water
Total Coliform Bacteria	1 positive routine sample	0	Zero (0)	Naturally present in the environment

## 2008 Disinfectant and Disinfection By-product Monitoring

Substance	Units	MCL	MCLG	Lowest Level	Highest Level	Running Annual Average	Major Source in Drinking Water
Chlorine	ppm	MRDL = 4.0 running annual average	MRDLG = 4.0	0.83	1.02	0.99	Water additive used to control microbes
Total Trihalomethanes (TTHM)	ppb	80 running annual average	NA	NA	4.5	4.5	By-product of drinking water disinfection
Haloacetic Acids (HAA)	ppb	60 running annual average	NA	NA	Not Detected	Not Detected	By-product of drinking water disinfection

## Source Water Assessment for Your Drinking Water Source

In 2004, the Arizona Department of Environmental Quality (ADEQ) completed a source water assessment for the well that provides drinking water to your area. The assessment reviewed the adjacent land uses that could pose a potential risk to the well. These risks include, but are not limited to, gas stations, landfills, dry cleaners, agricultural 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 concluded that the adjacent land uses have a low risk to affecting the drinking water well.

The city continuously ensures the safety of your drinking water by conducting regular monitoring to determine if any land uses have impacted the source water. Residents can help protect our water sources by practicing good septic system maintenance, taking hazardous household chemicals to hazardous material collection days, and limiting pesticide and fertilizer use.

The complete report is available for review at ADEQ, 1110 W. Washington, Phoenix, Arizona, 85007, or by requesting an electronic copy from ADEQ at [dml@azdeq.gov](mailto:dml@azdeq.gov). For more information visit the ADEQ website at: [www.azdeq.gov/environ/water/dw/swap.html](http://www.azdeq.gov/environ/water/dw/swap.html), or contact the Phoenix Water Services Compliance and Regulatory Affairs Office at 602-262-4992.

## DEFINITIONS OF TERMS

The following are definitions of terms used to describe types of limits for substances that may be found in drinking water.

**Action Level (AL)** – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a 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 MCLG 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 required 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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

**Part per million/part per billion** – One part per million (1 ppm) or milligram per liter (1 mg/L) is equal to one drop of bubble bath in a whole bathtub full of water (about 50 gallons). One part per billion (1 ppb) or microgram per liter (1 µg/L) is equal to one drop of bubble bath in 1,000 bathtubs full of water (about 50,000 gallons).

**Picocuries per liter (pCi/L)** – A measure of radioactivity.

**Treatment Technique (TT)** – A required process intended to reduce the level of a contaminant in drinking water.

Internet sites that provide  
information about drinking water

Arizona Department of Health Services  
[www.azdhs.gov](http://www.azdhs.gov)

Maricopa County Environmental Services  
Department  
[www.maricopa.gov/envsvc](http://www.maricopa.gov/envsvc)

U.S. Environmental Protection Agency  
[www.epa.gov/ogwdw](http://www.epa.gov/ogwdw)

Centers for Disease Control  
[www.cdc.gov](http://www.cdc.gov)

Arizona Department of Environmental Quality  
[www.azdeq.gov](http://www.azdeq.gov)  
Tap Into Quality  
[www.tapintoquality.com](http://www.tapintoquality.com)

**Water Conservation Tips**  
For 100 ideas to help you save water,  
check out the website [www.wateruseitwisely.com](http://www.wateruseitwisely.com),  
or call the Phoenix Water Conservation Office at  
602-256-3370

**THINK** about WATER  
*Every Time You Use It*

  
City of Phoenix  
WATER SERVICES DEPARTMENT