

2008 Annual Water Quality Report

For Customers of the City of Phoenix-Hedgepeth Hills Water System

A Publication of the City of Phoenix

May 2009

Drinking water safe throughout 2008

About your water system

The City of Phoenix-Hedgepeth Hills Water System was established in April 2008. From April through the remainder of 2008, tap water delivered to city of Phoenix customers north of the Loop 101, south of Mohawk Drive, east of 51st Avenue and west of 47th Avenue, met or surpassed all federal and state drinking water standards. The city of Phoenix supplies you with water treated by the city of Glendale through an interconnect located at 51st Avenue and Tonopah Drive. The city of Glendale is required to provide high quality water that meets the federal and state drinking water standards. Once the water reaches the Phoenix-Hedgepeth Hills Water System, the City of Phoenix Water Services Department maintains and assures the high quality water by maintaining and monitoring the distribution system and informing customers of any water quality issues. Phoenix is also responsible for providing this annual water quality report, which provides information about the water delivered to you.

Where does my water come from?

Your water comes from several sources. The city of Glendale can use renewable water supplies from the Salt, Verde and Colorado rivers. In addition, Glendale can pump a limited amount of groundwater when needed. Runoff from the Salt/Verde River watershed is stored in a series of lakes operated by the Salt River Project. Runoff from the Colorado River is stored in Lake Mead, Lake Powell, Lake Pleasant and delivered to Arizona through the Central Arizona Project. For a broader picture of the City of Glendale Water System, please contact the Glendale Water Quality Laboratory 623-930-3885 or visit the city website at www.glendaleaz.com. The site also offers links to water related sites.

What's in my water?

The city of Glendale and the City of Phoenix Water Services Department conduct extensive monitoring to ensure that your water meets or exceeds all water quality standards. During the past year, the water delivered to your home or business met or surpassed state and federal drinking water standards. Substances detected in the water and the Maximum Contaminant Level (MCL) allowed in the drinking water according to federal and state regulations are shown in the tables throughout this report. 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 for all of the substances tested, please contact the Phoenix Water Services Department's Compliance and Regulatory Affairs Office at 602-262-4992. **Please note, the simple presence of a substance or contaminant in drinking water does not necessarily indicate the drinking water poses a health risk.**

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).

2008 Detected Regulated Substances at Points Where Water Enters Distribution System

Substance (units)	MCLG	MCL	Lowest Level	Highest Level	Typical Source of Substance
Arsenic ¹ (ppb)	0	10	ND	8.0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production waste
Barium (ppm)	2	2	0.01	0.14	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	100	100	ND	36.6	Discharge from steel and pulp mills; erosion of natural deposits
Combined Radium (pCi/L)	0	5	ND	0.4	Erosion of natural deposits
Di (2-ethyl hexyl) phthalate (ppb)	0	6	ND	1.90	Discharge from rubber and chemical factories
1,2-Dibromo-3-Chloropropane (DBCP) (ppb)	0	0.2	ND	0.04	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples and orchards
Fluoride (ppm)	4	4	ND	1.71	Erosion of natural deposits; Water additive which promotes strong teeth
Gross Alpha (excluding Radon and Uranium) (pCi/L)	0	15	1.4	6.0	Erosion of natural deposits
Gross Beta (pCi/L)	0	50 ³	ND	6.5	Erosion of natural deposits
Nitrate ² (ppm)	10	10	ND	7.9	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits
Selenium (ppb)	50	50	ND	7.0	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Uranium (ppb)	0	30	ND	5.7	Erosion of natural deposits

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.

3 - The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.

The City of Glendale water treatment plants produce water of superior clarity through filtration. Turbidity readings are a measure of water clarity and a good indicator that the treatment process is removing tiny particles, including microorganisms. The standard for turbidity or clarity after treatment can not be greater than 0.3 Nephelometric Turbidity Units (NTU – a measure of clarity) in at least 95 percent of the measurements taken each month, and must not exceed 1 NTU. The corresponding chart shows that the water you received in 2008 met the requirements.

**2008 Turbidity Monitoring after Treatment
at the City of Glendale Water Treatment Plants**

Substance	Treatment Technique Applies instead of MCL	MCLG	Highest Measurement	Lowest Monthly Percentage	Typical Source
Turbidity	No value can exceed 1 NTU and at least 95% of monthly measurements must be less than or equal to 0.3 NTU	N/A	0.2 NTU	100 % of monthly measurements met treatment technique	Soil runoff

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 Glendale water system household tap water met the Action Level required by federal drinking water standards for lead and copper.

While the city of Glendale 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 Glendale and city of Phoenix are 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 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 the steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

Lead And Copper Sampling from Water Taps in 2008

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	Typical Source
Lead	90% of taps tested must not exceed 15 ppb	0 ppb	5.4 ppb	Zero (0) out of 57 taps	Corrosion of Household plumbing
Copper	90% of taps tested must not exceed 1.3 ppm	1.3 ppm	0.23 ppm	Zero (0) out of 57 taps	Corrosion of Household plumbing

Monitoring Conducted by the City of Phoenix Within the Phoenix-Hedgepeth Hills Water System

Your drinking water is safely disinfected with chlorine to prevent widespread outbreaks of serious diseases and comply with EPA standards. Federal law requires a minimum chlorine disinfectant level of 0.2 ppm in the water leaving a water treatment plant. There also is a Maximum Residual Disinfectant Level (MRDL) of 4.0 ppm allowed in the water in the distribution system as it travels to your tap. The city of Phoenix monitors the Phoenix-Hedgepeth Hills water distribution system for both chlorine disinfectant levels and for total coliform bacteria which can indicate the presence of disease-causing organisms.

While it is essential to disinfect the water, the use of disinfectants can create disinfection by-products (DBPs). To determine formation of DBPs, the city of Glendale monitors the Glendale Water System (which supplies the Phoenix-Hedgepeth Hills system) for Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAAs) which are DBPs that may cause long-term health effects at certain concentrations. A running annual average of all samples collected in the system is calculated to determine compliance with the MCL. Based on those sampling criterion, the running annual average for the Glendale Water System was less than the MCL.

2008 Disinfectant and Disinfection By-Product Monitoring in the Distribution System							
Substance	Units	MCL	MCLG	Lowest Level	Highest level	Highest Running Annual Average	Major Source in Drinking Water
Chlorine	ppm	MRDL = 4.0 Running Annual Average	MRDLG = 4.0	0.6	0.9	0.8	Water additive used to control microbes
Total Trihalomethanes (TTHM)	ppb	80 Running Annual Average	NA	16.9	120	61	By-product of drinking water disinfection
Haloacetic Acids (HAA)	ppb	60 Running Annual Average	NA	ND	34	17	By-product of drinking water disinfection

2008 Microbiological Monitoring in the Distribution System				
Substance	MCL	MCLG	Number of positive samples collected in any month	Typical Source
Total Coliform Bacteria	1 positive routine sample and 1 positive verification sample	0	0	Naturally present in the environment

Source Water Assessment for Drinking Water Sources

The Arizona Department of Environmental Quality has conducted a preliminary source water assessment for Glendale's surface water and groundwater sources. The assessment includes an evaluation of land uses, such as gas stations, landfills, dry cleaners, agricultural fields, wastewater treatment plants, and mining activities that may pose a potential water quality risk to the city's water sources.

We assure you that Glendale's top priority is providing safe drinking water 24 hours a day, seven days a week. They closely monitor water quality to ensure that the drinking water delivered to you via the City of Phoenix-Hedgepeth Hills Water System exceeds the federal and local regulatory standards.

A copy of the preliminary source water assessment report is available for inspection at ADEQ, 1110 West Washington, Phoenix, Arizona, 85007, between the hours of 8 a.m. and 5 p.m. Electronic copies are available from ADEQ at dml@azdeq.gov.

For more information, visit the ADEQ website at: www.azdeq.gov/environ/water/dw/swap.html or contact the city of Glendale Environmental Resources Department at 623-930-2580.

How can I learn more?

Customers with questions about the water you receive from the City of Phoenix-Hedgepeth Hills Water System may call the Phoenix Water Services Department Compliance and Regulatory Affairs Office at 602-262-4992 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."

For alternate formats, contact Customer Services at 602-262-6251/Voice, or 602-534-1113/TTY, or 602-534-3695/FAX.

Internet sites that provide information about drinking water

- Arizona Department of Health Services – www.azdhs.gov
- Maricopa County Environmental Services Department – www.maricopa.gov/envsvc
- U.S. Environmental Protection Agency – www.epa.gov/ogwdw
- Centers for Disease Control – www.cdc.gov
- Arizona Department of Environmental Quality – www.azdeq.gov
- Tap Into Quality – www.tapintoquality.com

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 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 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 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. MRDLGs do not reflect the benefits of the use 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.



THINK
about
WATER
*Every Time
You Use It*



**City of Phoenix
Water Services Department**

Water Conservation Tips

For 100 ideas to help you save water,
check out the website:
www.wateruseitwisely.com

Or for additional information on water conservation or to
order free literature, check out:
www.phoenix.gov/water
or call 602-256-3370