



2011 Annual Drinking Water Quality Report

For
Public Water System: Clarkdale
Public Water system Number: AZ04—13-024

We are pleased to present to you this year's water quality report. Our constant goal is to provide you with a safe and dependable supply of drinking water.

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. 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 of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and microbiological contaminants call the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

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 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 stormwater 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 stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, that 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 prescribes regulations

limiting 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.

Our Water Source(s)

The system's sources of water are listed below.

Ground Water Wells (2): Haskell Springs
Mountain Gate

Source Water Assessments on file with the Arizona Department of Environmental Quality are available for public review. If a Source Water Assessment is available, you may obtain a copy of it by contacting the Arizona Source Water Coordinator at (602) 771-4641.

The Source Water Assessment Report provides a screening-level evaluation of potential contamination that **could** occur. It does not mean that the contamination **has 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.

Please contact Wayne Debrosky – Utilities Director at (928) 639-2520, to learn more about what you can do to help protect your drinking water sources, any questions about the annual drinking water quality report, to learn more about our system, or to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

Terms and Abbreviations

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

- **Parts per million (ppm) or Milligrams per liter (mg/L)** - one part per million corresponds to one minute in two years or a single penny in \$10,000.
- **Parts per billion (ppb) or Micrograms per liter (µg/L)** - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- **Parts per trillion (ppt) or Nanograms per liter (nanograms/L)** - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.
- **Parts per quadrillion (ppq) or Picograms per liter (picograms/L)** - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.
- **Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water.
- **Nephelometric Turbidity Unit (NTU)** - nephelometric

turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

- **Action Level (AL)** - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Action Level Goal (ALG)** - The “Goal” is the level of a contaminant in drinking water below which there is no known or expected risk to health. The ALG allows for a margin of safety.
- **Maximum Contaminant Level (MCL)**- The “Maximum Allowed” is 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 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.
- **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.
- **Running Annual Average (RAA):** An average of monitoring results for the previous 12 calendar months.

Water Quality Data

We routinely monitor for contaminants in your drinking water according to Federal and State laws. The State of Arizona requires us 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. Some of our data, though representative, may be more than one year old.

These tables show the results of our monitoring for the period of January 1 to December 31, 2011 unless otherwise noted.

Microbiological Contaminants

Contaminant	MCL	MCLG	Unit	Result	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Total Coliform Bacteria for systems that collect <40 samples per month	No more than 1 positive monthly sample	0	Absent	0	No	2011	Naturally present in the environment

Radionuclides

Contaminant	MCL	MCLG	Units	Level Detected & Range	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Alpha emitters	15	15	pCi/l	1.2+/-0.6 2.5+/-0.7	No	2009	Erosion of natural deposits

Lead and Copper

Contaminant	AL	ALG	Units	90 th Percentile	Number of Sites over AL	Violation (Yes or No)	Sample Date/Year	Likely Source of Contamination
Copper	1.3	1.3	ppm	0.57	0	No	2011	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	15	15	ppb	6.0	0	No	2011	Corrosion of household plumbing systems, erosion of natural deposits

Disinfectants

	MRDL	MRDLG	Units	Level Detected & Range	Violation (Yes or No)	Sample Date/Year	Source
Chlorine	4	4	ppm	0.97-1.03	No	RAA	Water additive used to control microbes

Disinfection Byproducts

Contaminant	MCL	MCLG	Units	Average	Range	Highest RAA	Violation (Yes or No)	Sample Date/Year	Likely Source of Contamination
Haloacetic Acids (HAA)	80	N/A	ppb	< 2.0	< 2.0	<2.0	No	8/2011	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	60	N/A	ppb	3.0	1.7-4.3	4.3	No	8/2011	By-product of drinking water disinfection

Inorganic Contaminants

Contaminant	MCL	MCLG	Units	Level Detected/Range	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Arsenic	10	0	ppb	1.2-4.0	No	2011	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2	2	ppm	<0.40	No	2009	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	100	100	ppm	<0.020	No	2009	Discharge from steel and pulp mills; erosion of natural deposits
Nitrate (as Nitrogen)	10	10	ppm	0.32-0.97	No	2011	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	50	50	ppm	<0.010	No	2009	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

Volatile Organic Contaminants

Contaminant	MCL	MCLG	Units	Level Detected/Range	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Xylenes	10	10	ppm	<0.0010	No	2011	Discharge from petroleum factories; discharge from chemical factories

Arsenic

If **arsenic** is less than the MCL, your drinking water meets EPA's standards. 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 many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.**

ADDITIONAL UTILITIES INFORMATION

- Between September 2010 and March 2011 the Town of Clarkdale replaced 12,400 linear feet of aged 4" steel water main in Lower Town with new 8" and 12" C-900 PVC pipe upgrading valves, hydrants, and customer service connections from the new mains to the residents meter boxes. This new infrastructure was put in-service March 2011. As part of this project water meters were upgraded and a new drive-by automated meter reading system is now in use in Lower Town Clarkdale.
- Broadway Water Main Loop Project - Installed 3,400 feet of new 8" and 12" C-900 PVC water mains, 2 pressure reducing valves, 4 new fire hydrants, valves and related water infrastructure along Broadway from Main Street to Centerville Road. A new 8" water main also extended along Park Road from Broadway to Zuni Drive. This project was completed and the system put in-service by December 2011.
- Scraped, caulked, and repainted the exterior of the older water storage tank on Route 89A.
- Replaced the existing pressure reducing valve on Lanny lane.
- Started the design work for the "Twin 5s" water main replacement project.

WATER UTILITY DEPARTMENT
AND AFTER HOUR EMERGENCY
(928) 639-2520

Town of Clarkdale office hours are 8:00am to 5:30pm Monday through Thursday.

By calling **928-639-2520** during office hours, you will reach a Clarkdale Utility Department representative. By calling **928-639-2520** after office hours, your call will be routed to an after-hour phone service who will alert our on-call staff to investigate the call and take any necessary corrective actions.

Examples of after-hour emergencies:

- Water service outages, water main breaks, leaks, and sewer backups or blockages.
- Suspicious activities in or around the water and/or sewer systems

JUST A REMINDER

The Town of Clarkdale will begin Demand Reduction Strategy I “Water Alert” beginning May 1st through September 30th.

Outdoor water usage shall not occur between the hours of 9:00 am and 5:00 pm. Watering days shall be coordinated with your address. Even numbered addresses may irrigate on Wednesday, Friday, and Sunday. Odd numbered addresses may irrigate on Tuesday, Thursday, and Saturday. For places where there is no discernable address, the even date schedule should be followed (right-of-ways, medians, etc). No irrigation shall be allowed on Monday.

For a full Drought Plan Report, please see our website at www.clarkdale.az.gov or stop in at the Utilities Department, 890 Main Street, Clarkdale, AZ for a copy.

April is “Water Awareness Month”. Visit www.azwater.gov/conservation click on *Residential* or click on the *WAM web page* to see conservation methods to assist in doing your part to conserve.

Water Tips

The Utilities Department has Leak Detection Kits available that can guide you through some simple procedures to test your toilets for leaks, and when found, simple ways to fix those leaks. The Kit also has information on fixing faucets.

Water Wasted in One Month From Leaks:

Source	Gallons Wasted Per Month
A slow steady drip (100 drops per min)	350 gallons
A fast drip	about 600 gallons
A small stream	2000-2700 gallons
A large stream	4600 gallons

Additional water tips can be found on our website at www.clarkdale.az.gov.

“La información contenida en este informe tiene información importante con respecto a la calidad del agua proporcionada por la utilidad municipal del agua de el pueblo de Clarkdale. Si usted quisiera recibir una copia de este informe en español, por favor llame 928-639-2520 para solicitar una copia.”