

2008 Annual Drinking Water Quality Report For

Public Water System Name: City of Show Low
Public Water System Number: AZ09026

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 that must provide the same protection for public health.

Our Water Source(s)

The system's sources of water are listed below.

Well 4 55-620772	Well 5 55-620773	Well 7 55-620775	Well 8 55-570999	Well 9 55-574775
Well 10 55-579465	Well 11 55-205825	Well 12 55-512470	Show Low Bluffs Well 13	

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.

Potential sources of contamination in our source water area come from: **The aquifer that supplies Water to the City of Show Low is about 400 feet underground and is geologically protected from sources of contamination.**

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 **Ken Wilcock** at (928) 532-4096 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.
- **Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **Maximum Contaminant Level Goal (MCLG)** - The “Goal” is 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 “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, 2008 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 or Present	No Coliforms Present	No	Jan - Dec	Naturally present in the environment
Fecal coliform and E. Coli	A routine sample & a repeat sample are total coliform positive, & one is also fecal coliform or <i>E. coli</i> positive	0	Absent or Present	No Fecal Coliform Present	No	Jan - Dec	Human and animal fecal waste

Samples are collected and the system is monitored with over 45 tests per week.

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	0.41	20	No	6/24/08	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	15	0	ppb	6.9	20	No	6/24/08	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	0.1 - 0.3	No	3 times per week	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)	60	N/A	ppb	<2.0	<2.0	<2.0	No	8/19/08	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	80	N/A	ppb	<1.0	<2.0	<2.0	No	8/19/08	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	<3 - 14	No	Quarterly	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Nitrate	10	1	ppm	<0.1	No	09/08/08	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits

Volatile Organic Contaminants

Contaminant	MCL	MCLG	Units	Level Detected/Range	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Benzene	5	0	ppb	<0.05	No	11/18/08	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride	5	0	ppb	<0.05	No	11/18/08	Discharge from chemical plants and other industrial activities
Chlorobenzene	100	100	ppb	<0.05	No	11/18/08	Discharge from chemical and agricultural chemical factories
o-Dichlorobenzene	600	600	ppb	<0.05	No	11/18/08	Discharge from industrial chemical factories
p-Dichlorobenzene	75	75	ppb	<0.05	No	11/18/08	Discharge from industrial chemical factories
1,2-Dichloroethane	5	0	ppb	<0.05	No	11/18/08	Discharge from industrial chemical factories
1,1-Dichloroethylene	7	7	ppb	<0.05	No	11/18/08	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene	70	70	ppb	<0.05	No	11/18/08	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene	100	100	ppb	<0.05	No	11/18/08	Discharge from industrial chemical factories
Dichloromethane	5	0	ppb	<0.05	No	11/18/08	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane	5	0	ppb	<0.05	No	11/18/08	Discharge from industrial chemical factories
Ethylbenzene	700	700	ppb	<0.05	No	11/18/08	Discharge from petroleum refineries
Styrene	100	100	ppb	<0.05	No	11/18/08	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene	5	0	ppb	<0.05	No	11/18/08	Discharge from factories and dry cleaners
1,2,4-Trichlorobenzene	70	70	ppb	<0.05	No	11/18/08	Discharge from textile-finishing factories
1,1,1-Trichloroethane	200	200	ppb	<0.05	No	11/18/08	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane	5	3	ppb	<0.05	No	11/18/08	Discharge from industrial chemical factories
Trichloroethylene	5	0	ppb	<0.05	No	11/18/08	Discharge from metal degreasing sites and other factories
Toluene	1	1	ppm	<0.05	No	11/18/08	Discharge from petroleum factories
Vinyl Chloride	2	0	ppb	<0.03	No	11/18/08	Leaching from PVC piping; discharge from chemical factories
Xylenes	10	10	ppm	<0.05	No	11/18/08	Discharge from petroleum factories; discharge from chemical factories

Health Effects Information About the Above Tables

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, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

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.

Infants and young children are typically more vulnerable to **lead** in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

Violations

The following violations were received by our water system or were ongoing in the calendar year 2007

Type/Description	Compliance Period
No Violations	

An explanation of the violation(s) in the above table, the steps taken to resolve the violation(s) and any required health effects information are required to be included with this report. (attach copy of Public Notice if available)