

THE SHOW LOW WATER GAZETTE

Ninth Edition

Summer 2007

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TAKING WATER QUALITY SERIOUSLY

One of the varied duties of the City of Show Low's Public Works Department is the operation of the City's Drinking Water System. Providing an adequate supply of clean safe drinking water is something the Public Works Water Crew takes very serious. This requires a great deal of effort in planning, monitoring, and maintenance. City personnel work every day of the year to ensure that there is plenty of drinking water for any purpose that is used and they maintain the quality of it as if every single drop was going to be consumed.

In reality, less than 2% of the water that is delivered by the City's distribution system is actually drank. Most is used in showering, cleaning, laundry, irrigating, and flushing toilets; and yet every drop must meet the United States Environmental Protection Agency's bacteriological

standards of no coliform bacteria. This is in contrast to the United States Department of Agriculture's bacteriological standards for coliform bacteria in yogurt which is less than 20 per gram.

What percentage of the yogurt do you eat as compared to the percentage of the water you use that you drink. The drinking water delivered to your home at less than pennies per gallon is regulated more stringently than dairy products and the bottled water that is bought for almost a dollar a bottle. The City's Water Department strives to insure that an adequate quantity and quality of water is available to its customers every day of the year.

Inside this issue:

Items Detected in Water	2
EPA Information Statement	2
Tables of Contaminants	3
U. S. Environmental Protection Agency's Hotline on Contaminants	3
Definitions	4
Is there Arsenic in my	4
In Case of an Emergency	5
Hours of Operations	5

Direct questions regarding this publication or Show Low's Water system to:

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 1281 E Thornton
 Show Low, AZ 85901
 928-532-4096

ITEMS DETECTED IN WATER SUPPLIES

The City, as with other water distributors, sometimes finds detectable items within the water supply that do not violate water quality standards.

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.

The sources of drinking water (both tap and bottled) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. All water sources for Show Low is from underground 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 humans. Contaminants that may be present in source water include the following:

- ♣ Microbial contaminants, such as viruses and bacteria, which 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 storm water 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 storm water runoff, and residential uses.
- ♣ Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- ♣ Radioactive contaminants, which can be naturally occurring or be the result of oil, gas production, and mining activities.

To ensure that tap water is safe, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

All of the City of Show Low's drinking water comes from underground wells, with no organic chemicals.

EPA INFORMATION STATEMENT

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's stand 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 (40CFR 141.154 (b)(1)).

Contaminants Tested and Detected

Water Quality Parameter	Test Date	Levels Detected by City of Show Low	Highest Detected Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Potential Sources of Contaminant
Unregulated Volatile Organic Contaminants					
Bromoform	8/15/06	0.0013	0.0800		
Dibromochloromethane	8/15/06	0.0008	0.0800		
Inorganic Contaminants					
Fluoride	02/23/06	0.22 mg/L	0.20		Water additive that promotes strong teeth; natural deposit erosion; fertilizer & aluminum factory discharge.
Nitrate	6/13/06	0.21 mg/L	10.0		
Arsenic	02/17/06	0.0071 mg/L	0.0095		Natural deposit erosion; orchard runoff; glass/electronics production waste runoff
Selenium	03/20/06	0.0023 M5 mg/L	0.0020		
Sodium	02/22/06	5.3 mg/L	5.0		Natural deposit erosion
Calcium	02/17/06	76 mg/L	5		
Magnesium	02/20/06	27 mg/L	5		

Contaminants Tested and Not Found

Antimony	Copper	
Barium	Dibromoacetic Acid	Monochloroacetic Acid
Beryllium	Dichloroacetic Acid	Nickel
Bromodichloromethane	Iron	Thallium
Cadmium	Lead	Trichloroacetic
Chloroform	Mercury	
Chromium	Monobromoacetic Acid	

U.S. ENVIRONMENTAL PROTECTION AGENCY'S HOTLINE ON CONTAMINANTS

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 individuals, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The Environmental Protection Agency and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline. (1-800-426-4791)

DEFINITIONS

Action Level – The concentration of a contaminant, which, when exceeded, triggers treatment or other requirements that a water system must follow

EPA – Acronym for U.S. Environmental Protection Agency

Maximum Contaminant Level (MCL) – Highest level of a contaminant allowed in drinking water. MCL's are set as close to the MCLG as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) – Level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

MFL = millifibers per liter

PPM = part per million or one Milligram per liter **mg/L**

PPB = part per billion or one microgram per liter **ug/L**

PCi/L = Picocuries per liter measures radioactivity in water. A picocurie is 10^{-12} curies and is the quantity of radioactive material producing 2.22 nuclear transformations per minute.

IS THERE ARSENIC IN MY DRINKING WATER?

There continues to be concerns raised about arsenic in drinking water. The United States Environmental Protection Agency lowered the arsenic in drinking water standard in 2006 to 10 parts per billion from the former standard of 50 parts per billion, which was first established in 1962.

Most of us are aware that arsenic is a deadly poison and we obviously would not want any in our drinking water. There are, however, several things we may not be aware of. Arsenic is the 12th most common element found in the human body and is an essential trace element. Normal dietary amounts of arsenic consumed in America average about 11 micrograms per day. One microgram is relatively the same as 1 part per billion in relation to a liter of water. Arsenic, in excessive amounts is classified as a human

carcinogen. About 30% of the drinking water systems in the State of Arizona have arsenic levels in excess of 10 parts per billion. One part per billion in relationship to time would be the equivalent of 1 second in 31.5 years, or in relationship to distance it would be 1 inch in 15,783 miles.

The City of Show Low currently obtains drinking water from seven different wells. The wells are individually sampled for arsenic concentrations on a quarterly basis and results indicate that all but one of the wells show either no arsenic at detectable levels or amounts below 10 parts per billion. One of the wells, however, ranges around 13 to 14 parts per billion, however, due to the City's blending program, no water with arsenic above 10 parts per billion is delivered to any homes.

The City of Show Low Water Department has taken a proactive stance to compliance with all EPA requirements and continues to carry out an extensive arsenic monitoring, blending, and testing program. The drinking water delivered to the homes of those citizens served by the City of Show Low's water system has and will continue to be in complete compliance with the United States Environmental Protection Agency requirements. The Water Department has taken steps to insure compliance long before January 2006.

If you have any questions concerning arsenic in your drinking water, you can call Ken Wilcock, Utility Operations Manager, at 928-532-4096.



IN CASE OF AN EMERGENCY WHAT SHOULD I DO?



In the case of an emergency, the City of Show Low will follow our standard emergency operating procedures to continue to supply our customers with drinking water. In the case of a power outage, the City has the ability to gravity feed 4 million gallons of water into the system for Approximately 24 hours, depending on the demand for water and the time of year.

The City of Show Low usually has broken water lines repaired and service restored to the customer within four hours. If water lines become chemically contaminated, all water service connections will be turned off and customers will be notified via door hangars, radio or whatever means possible. These lines will be flushed until all contaminants are gone.

HOURS OF OPERATION

Our operations office is located at 1281 E Thornton. Our hours of operation are Monday thru Friday from 7:00 a.m. until 4:00 p.m. excluding holidays.

Should you have a water emergency during normal office hours, please call 532-4100.

In the event of a water emergency after normal office hours, during the weekend, or on City observed holidays, please contact the Show Low Police Department at 537-5091 and they will dispatch the duty man on call.