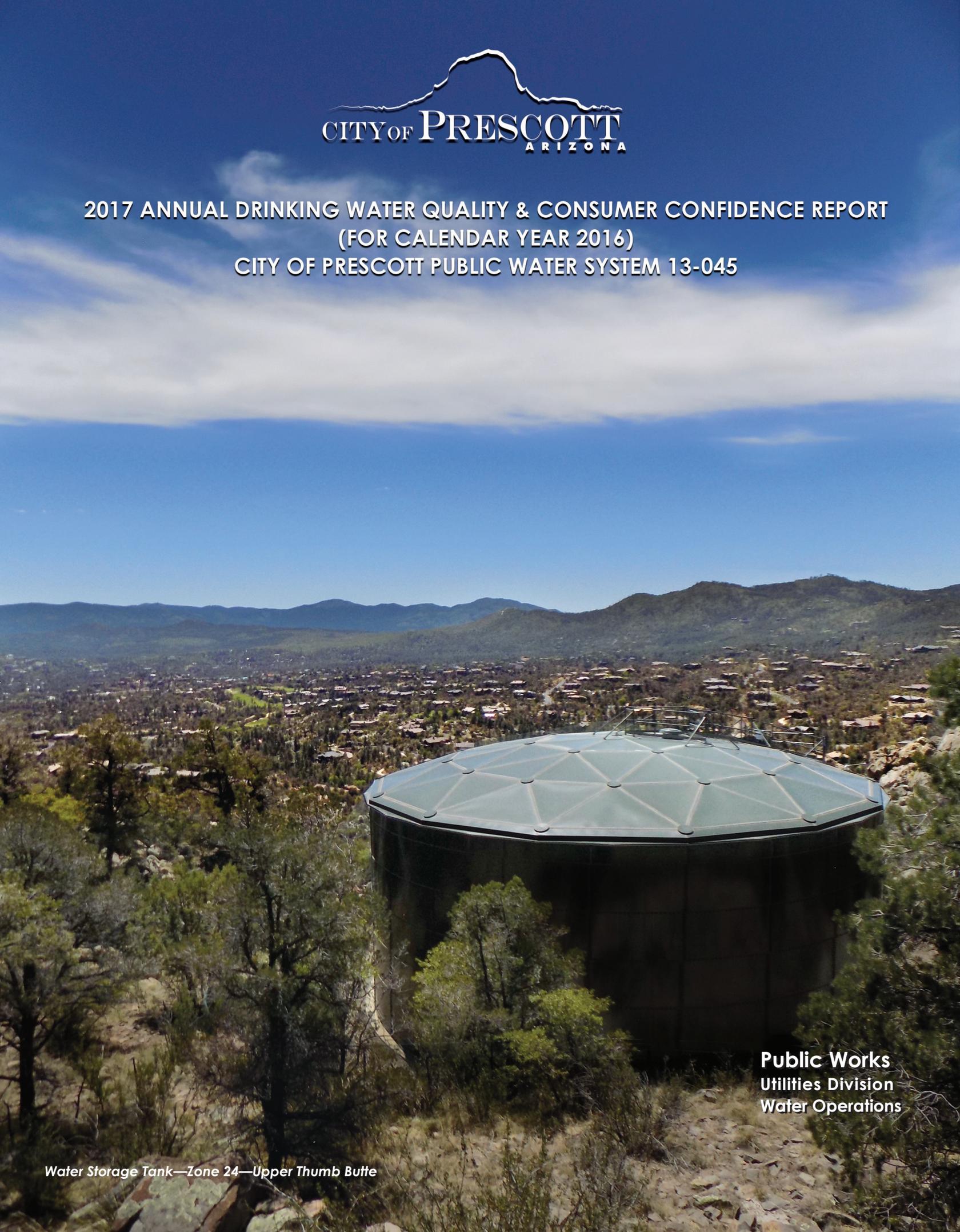




**2017 ANNUAL DRINKING WATER QUALITY & CONSUMER CONFIDENCE REPORT
(FOR CALENDAR YEAR 2016)
CITY OF PRESCOTT PUBLIC WATER SYSTEM 13-045**



**Public Works
Utilities Division
Water Operations**

Water Storage Tank—Zone 24—Upper Thumb Butte

A NOTE FROM WATER OPERATIONS

As your water provider, we serve more than water. We provide value, public health, reliability, and peace of mind. Our job is to ensure that your safe supply of water keeps flowing not only today, but well into the future. It's all part of our service commitment to you and everyone in our community. The 2017 Water Quality Report is a comprehensive report issued by the City of Prescott Water Operations. This annual report identifies the sources of Prescott's drinking water, provides water quality information, and summarizes analytical tests of the City's drinking water supply for Calendar Year 2016. During 2016, water from the City system met or exceeded all applicable federal and state drinking water health standards.

APPLICABLE FEDERAL AND STATE REQUIREMENTS

The United States Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality (ADEQ) require purveyors of drinking water to annually report the quality of the water they deliver. The City of Prescott safeguards its water supplies, and once again is pleased to report compliance with prescribed maximum contaminant levels and other water quality standards. The City regularly conducts testing beyond the minimum regulatory requirements to further assure the safety of our drinking water.

CITY OF PRESCOTT - SOURCE OF WATER

Groundwater is the sole source of potable water in the City of Prescott. The City produces its water from seven production wells within the Prescott Active Management Area (AMA) which are drilled into the confined deep Lower Volcanic Unit of the aquifer underlying the Little Chino Sub-Basin. The water is pumped from the ground through one of the City's seven wells and then treated prior to entering the drinking water distribution system. The water is of excellent quality with a safe production capability of up to 12.03 million gallons per day (MGD). The wells are pumped in different combinations to meet daily demand. The annual average daily demand is 5.9 MGD. In 2016, the City of Prescott produced (pumped) 6,581.61 acre-feet of water from the wells and delivered this water to approximately 23,763 customers through 523 miles of pipeline and 25 water storage tanks throughout its service area.



Secured Well Housing



Well Pump



Water Storage Tank



*Booster Pumps
for Distribution*



*Clean Water
To Your Tap*

PROTECTING OUR WATER SUPPLY

All sources of drinking water contain some naturally occurring contaminants. A contaminant is any physical, chemical, biological or radiological substance or matter in the water. At low levels, these contaminants generally are not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and may even have nutritional value at low levels.

Is My Water Treated? YES.

The City of Prescott is fortunate to draw from high quality aquifers, therefore, the water requires minimal treatment. Water Operations selects a combination of two appropriate treatment processes to reduce the contaminants found in our groundwater and ensure the delivery of potable water that not only meets safe levels, but surpasses state and federal regulations. The first of the two processes utilizes sorptive media for the removal of arsenic at wells that exceed state water quality requirements. The second of the two processes utilizes chlorine for disinfection to prevent the development of bacterial contamination that could occur in the water storage and distribution systems.

In 2015, the City implemented an approved ADEQ Blending Plan to manage arsenic levels in the City's water system. A Blending Plan is a process that combines water from various wells "blending" the water from the wells to achieve the lowest detected levels of arsenic. This process allows the City to meet daily demands while keeping the levels of arsenic below action level regulatory requirements. Currently, the City has one well that has its own arsenic treatment system which also maintains arsenic levels below the federal action level standards.

WATER QUALITY TABLE INFORMATION

The Water Quality Table on Page 5 contains the most recent analysis for regulated testing. The frequency of sample collection is determined by state and federal regulations and based on many different parameters such as type of water source, number of people served, as well as past and current analyses of the contaminant to be tested. This explains why some data may be more than one year old. The City of Prescott is required to test for unregulated contaminants. The data generated by these tests will be used by the EPA to evaluate and prioritize contaminants on the Drinking Water Contaminant Candidate List. None of the unregulated contaminants tested have been detected in the City's drinking water. If you would like to learn more about the monitoring results, please contact Water Operations at (928) 777-1118.

ABBREVIATIONS & DEFINITIONS

AL	=	Action Level - The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.
MCL	=	Maximum Contaminant Level - The highest level of a contaminant allowed by the EPA in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.
MCLG	=	Maximum Contaminant Level Goal - 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.
MRDLG	=	Maximum Residual Disinfectant Level Goal - 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.
MRDL	=	Maximum Residual Disinfectant Level - The highest level of a disinfectant (chlorine) allowed in drinking water. There is convincing scientific evidence that the addition of a disinfectant is required for the control of microbial contaminants.
NA	=	Not Applicable - Sampling was not completed by regulation or was not required.
ND	=	Not Detected - Concentration too low to be detected
NTU	=	Nephelometric Turbidity Units - A measure of water clarity
pCi/L	=	Picocuries per liter - A measure of the radioactivity in water
PPM	=	Parts Per Million - Or milligrams per liter (mg/L) 1ppm
PPB	=	Parts Per Billion - Or micrograms per liter (µg/L), 1000 ppb = 1 ppm
TT	=	Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water
ADEQ	=	Arizona Department of Environmental Quality
EPA	=	US Environmental Protection Agency

Monitoring Requirements Not Met For City Of Prescott

The City of Prescott is required to monitor the drinking water for a wide range of contaminants on a regular basis. The results of that regular monitoring indicates that the drinking water meets health standards. During 2016, the City did not monitor or test for Nitrate at one of the Entry Points to Distribution System (EPDS) and therefore could not be sure of the quality of the drinking water from that supply point during that monitoring period. The missed monitoring EPDS location was within the airport zone. As our customers, you have the right to know that the City failed to test and submit one required sample and what the City has done to correct this situation.

As a consumer, what should I do? There is nothing a consumer needs to do at this time.

The information below indicates which contaminant the City did not properly test for in the 2016 monitoring period. It also includes information about the required sampling frequency for this contaminant, the number of samples required, when samples should have been taken, and when corrective samples were taken, including the date the follow-up corrective sample was taken.

The contaminant sample missed was for Nitrate. The required sampling frequency for Nitrates is one sample from each entry point annually. One of the three required samples was missed in 2016.

What is being done? A follow up sample was taken in February 2017 to confirm that the City's water quality meets or exceeds federal and state guidelines for this contaminant. No emergency exists, this notice is for informational purposes only. The follow up sample taken returned a result that met the nitrate drinking water standards. This result verifies that the drinking water continues to be a safe supply of drinking water.

Please share this information with other people who drink this water, especially those who may not have seen this notification.

WATER QUALITY DATA REPORT FOR CITY OF PRESCOTT

Primary Drinking Water Standards - Mandatory Health-Related Levels Established by EPA and ADEQ						
Water Samples Collected from homes qualified per ADEQ standards in Prescott, AZ						
Parameter	Violation Y or N	AL	Number of Samples Over the AL	90th Percentile	Unit	Date
Lead & Copper						
Lead Results - Homes	N	15	0	0.001	ppb	2016
Copper Results - Homes	N	1.3	0	0.062	ppm	2016

Regulated Substances - Measured from Water Leaving the Treatment Facilities						
Parameter	MCL	MCLG	Highest Level	Range	Unit	Date
RadioChemical Monitoring						
			Highest Detected Level	Range		
Gross Alpha	15	0	1.3	1.3	pCi/L	2016
Combined Radium	5	0	< 0.4	< 0.4	pCi/L	2016
Uranium 234	30	< 30	0.00018	0.00018	ug/l	2016
Uranium 235	30	< 30	0.017	0.017	ug/l	2016
Uranium 238	30	< 30	2.3	2.3	ug/l	2016
Regulated Inorganic Compounds						
			Highest Detected Level	Range		
Antimony	6	2	< 5	< 5	ppb	2015
Arsenic	10	0	8.3	2.9 - 8.3	ppb	2016
Barium	2	<2	0.037	,0.005 - 0.037	ppm	2015
Chromium	0.1	0.1	0.007	< 0.002 - 0.007	ppm	2015
Fluoride	4	<4	< 0.5	< 0.5	ppm	2015
Nitrate (as N)	10	<10	1.48	1.15 - 1.48	ppm	2016
Nitrite	1	<1	<0.02	< 0.02	ppm	2015
Selenium	5	2	0.001	0.001	ppm	2015
Disinfection Byproduct Monitoring						
			Highest Detected level	Range		
Total Trihalomethane (TTHM)	80	0	7.6	3.2 - 7.6	ppb	2016
Haloacetic Acids (HAA5)	60	n/a	< 1	< 1	ppb	2016
Maximum Residual Disinfection Level (MRDL)						
	MRDL	MRDLG	Highest Detected level	Range		
Chlorine	4	<4	0.72	0.42 - 0.72	ppm	2016
Biological Monitoring						
	MCLG	Entire Distribution System		Likely Source in Drinking Water	Unit	Date
Total Coliform - tested monthly	0	Highest monthly number of positive Coli-form samples: 0 in 53		Naturally present in the environment	Absent or Present	2016

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

- ◆ Microbial contaminants such as viruses and bacteria which may come from sewage 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 which may come from a variety of sources such as agriculture, urban storm water runoff or 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.
- ◆ Radioactive contaminants, such as Radon, that can be naturally-occurring or the result of oil and gas production or mining activities.

Note: In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. United States Food and Drug Administration regulations establish limits for contaminants in bottled water.

What is a ppm (parts per million) measurement? What is a ppb (parts per billion) measurement?



A simple way to visualize the Water Quality Table measurement scale is to consider the following analogies:

One ppm is like:
One car in bumper to bumper traffic from Cleveland to San Francisco.

One ppb is like:
One drop of water in a swimming pool of approximately 13,000 gallons of water.



LEAD ADVISORY 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 Prescott 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 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 steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead

NITRATES Nitrates are inorganic substances that are monitored due to run off from fertilizer use. Nitrates 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." The City of Prescott nitrates levels are well below the maximum contaminant level at 1.69 ppm. (See chart on Page 5) 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. For more information on nitrates: <http://www.epa.gov/nitratefaqs>

MONITORING FOR CRYPTOSPORIDIUM *Cryptosporidium* is an emerging pathogen resistant to chlorination and can appear even in high quality water supplies. New regulations from the EPA require water systems to monitor *Cryptosporidium* and adopt a range of treatment options based on source water *Cryptosporidium* concentrations. The City of Prescott has not detected or had any occurrence of *Cryptosporidium*.

RADON Radon is a gas that has no color, odor, or taste and comes from the natural radioactive breakdown of uranium in the ground. Radon is only a concern if your drinking water comes from underground, such as a well that pumps water from an aquifer, though not all water from underground sources contains radon. Although there is currently no federally-enforced drinking water standard for Radon, the City of Prescott does monitor Radio Chemicals: Gross Alpha and Combined Radium (See Page 5) and surpasses mandatory health levels established by the EPA and ADEQ. For more information on Radon: <https://www.epa.gov/radon>

ARSENIC If Arsenic is less than or equal to 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. For more information about Arsenic: http://legacy.azdeq.gov/environ/water/dw/download/epa_arsenic.pdf

CONTAMINANTS AND POTENTIAL HEALTH EFFECTS 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 (800-426-4791).

PERSONS WITH SENSITIVE IMMUNE SYSTEMS

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 a health risk. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised individuals, such as those undergoing chemotherapy or other treatments, 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.



EPA /Centers for Disease Control and Prevention (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.

FREQUENTLY ASKED WATER TOPICS & QUESTIONS

WATER PRESSURE: The most common question regarding water is about a change in water pressure to the



Clogged Aerator

house. Low water pressure to the home can be caused by many things: Mineral deposit build-up in the home's pipes, clogged aerators in faucets, and even an aging water heater. If a water heater is not regularly maintained per factory specifications, the inside of a water heater can degrade causing pieces of scale, minerals and particulates to dislodge and migrate through a home's water system.



Mineral Deposit Build Up

Another common cause of water pressure concerns can be related to the setting or the age of a water pressure regulator valve (PRV). A previous



Pressure Regulator Valve

home owner may have had a regulator set to limit the force of water diverted from the municipal supply line. A PRV factory setting is 50 PSI. A plumber can assist you to check the setting or assess the condition of the PRV. It is important to understand that a PRV has a shelf life and can be damaged directly from the manufacturer. A failing PRV can cause low or high water pressure. Installing a PRV for each property ensures that the pressure coming from the municipal supply line is reduced to an acceptable pressure. If the PRV is placed at the meter, instead of just at the entrance to the building, then the regulator will also protect the supply line to the house and many parts of the property's irrigation system. An added benefit of regulating the pressure to the irrigation system is that it will help reduce misting, thereby increasing the efficiency of the irrigation system - saving water and money.

WATER HARDNESS: Water hardness is the amount of dissolved calcium and magnesium salts in water. Calcium and magnesium enter water mainly through the weathering of rocks. The more calcium and magnesium in water, the harder the water. Water hardness is usually expressed in parts per million (ppm) or grains per gallon of dissolved calcium and magnesium carbonate. The City's water is considered moderately hard, averaging 113 to 127 ppm, which equals 6.6 to 7.4 grains per gallon. In hard water, soap reacts with the calcium to form "soap scum". As a result, more soap or detergent is needed to get things clean, be it your hands, hair, or your laundry.

Total Hardness in mg/L or ppm			
0-75	75-150	150-300	>300
Soft	Moderately Hard	Hard	Very Hard

Where to Learn More about Your Drinking Water

Specific information about this report can be obtained by contacting:

- ◆ **City of Prescott Water Operations Staff**

Office Location: 1481 Sundog Ranch Road

Phone: (928) 777-1118 Email: water.operations@prescott-az.gov

Hours of Operation: 7:00 a.m. to 3:30 p.m. Monday—Friday

City of Prescott Website: <http://www.prescott-az.gov/services/water/water-general.php>

- ◆ **Environmental Protection Agency Safe Drinking Water Hotline (800) 426-4791**

Website: <https://www.epa.gov/ground-water-and-drinking-water>

- ◆ **Arizona Department of Environmental Quality (800) 234-5677**

Website: www.azdeq.gov/environ/water/index.html

- ◆ Water related topics are discussed at City Council meetings and in other forums in which the public can participate. Meeting notices are published in the local newspaper and posted at **City Hall, 201 S. Cortez Street, Prescott, Arizona**. Opportunities for public participation in decisions that affect water quality will be announced through the City of Prescott Calendar of Events. Follow this link for upcoming events: <http://prescott-az.gov/events/>



Public Works - Utilities Division

Water Operations

1481 Sundog Ranch Road

Prescott, AZ 86301