CITY OF PRESCOTT
ARIZONA

2015 ANNUAL DRINKING WATER QUALITY & CONSUMER CONFIDENCE REPORT

(FOR CALENDAR YEAR 2014)

CITY OF PRESCOTT PUBLIC WATER SYSTEM 13-045

PUBLIC WORKS
UTILITIES DIVISION
WATER OPERATIONS

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 2015 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 2014. During 2014, water from the City system met or exceeded all applicable EPA 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.

Secured Well Housing

Well Pump

Water Storage Tank

Booster Pumps for Distribution

Clean Water To Your Tap

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 million gallons per day (MGD). The wells are pumped in different combinations to meet daily demand. The annual average daily demand is 5.8 MGD. In 2014, the City of Prescott produced (pumped) 6,538 acre-feet of water from the wells and delivered this water to approximately 23,042 customers through 523 miles of pipeline and 27 water storage tanks throughout its service area.

Is My Water Treated? YES. As the City of Prescott is fortunate to draw from high quality aquifers, the water requires minimal treatment. Water Operations selects a combination of two treatment processes appropriate to reduce the contaminants found in our groundwater. These processes ensure the delivery of potable water not only at safe levels, but water quality that surpasses state and federal regulations.

PROTECTING OUR WATER SUPPLY All sources of drinking water contain some naturally occurring contaminants. 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.

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 by-products 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.

In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (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.

Arsenic treatment systems have been installed at various wells to treat and maintain arsenic levels below the federal standard. The City of Prescott also treats its water with chlorine to prevent the development of bacterial contamination that could occur in the water storage and distribution systems.

Chlorine taste or odor in Drinking Water

If a strong chlorine taste or odor is noticeable in your drinking water, be assured, the level of chlorine is within safe limits. To dispel chlorine from your drinking water, a container of water can be placed in the sunlight for two hours or stored overnight in the refrigerator to help dissipate the chlorine taste or odor. If a very strong chlorine taste or odor is still detected, please contact Water Operations at (928) 777-1118 and a technician will be sent out to take a chlorine residual sample from the reported location.

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.

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 http://water.epa.gov/drink/info/lead/index.cfm

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 1.62 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://water.epa.gov/drink/contaminants/basicinformation/nitrate.cfm

MONITORING FOR CRYPTOSPORIDIUM *Cryptosporidium* is an emerging pathogen resistant to chlorination and can appear even in high quality water supplies. New regulations from the U.S. Environmental Protection Agency (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: http://water.epa.gov/lawsregs/rulesregs/sdwa/radon/basicinformation.cfm

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.

WATER QUALITY DATA REPORT FOR CITY OF PRESCOTT

IMPORTANT DEFINITIONS AND ABBREVIATIONS

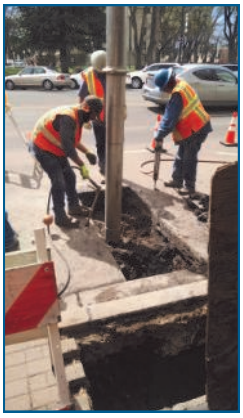
Action Level (AL) The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.
Contaminant – Any physical, chemical, biological or radiological substance or matter in the water.
Maximum Contaminant Level Goal (MCLG) – The level of 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 allowed by the EPA in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.
Maximum Residual Disinfectant Level Goal (MRDLG) 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.
Maximum Residual Disinfectant Level (MRDL) – 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.
Non Detect (ND) The substance was analyzed but not detected.
Part per million (ppm) / Part per billion (ppb) – Equivalent to mg/L and ug/L respectively, describe the levels of detected substances. One ppm is approximately equal to one drop of food coloring in 13 gallons of water. One ppb is approximately equal to one drop of water in a small backyard swimming pool (13,000 gallons).
Picocuries per liter (pCi/L) – A measure of the radioactivity of a substance.

REGULATED SUBSTANCES - MEASURED ON THE WATER LEAVING THE TREATMENT FACILITIES

Parameter	AL		Highest Level	90th Percentile Value	Unit	Date
Lead & Copper			Highest Detected Level			
Lead Results - Homes	15		0.0226	<0.00200	ppb	2013
Copper Results - Homes	1.3		0.114	0.0753	ppm	2013
Parameter	**MCL**	**MCLG**	**Highest Level**	**Range**	**Unit**	**Date**
RadioChemical Monitoring			Highest Average	Range		
Gross Alpha	15	0	11.1 +/- 2.0	8.2 - 11.1 +/-1.3 - 2.0	pCi/L	2013/14
Combined Radium	5	0	< 0.4	< 0.3 - 0.8	pCi/L	2013
Regulated Inorganic Compounds			Highest Detected Level	Range		
Antimony	6	2	2.5	ND - 2.5	ppb	2012
Arsenic	10	0	9.3	ND - 3.5	ppb	2014
Barium	2	2	0.005	ND - 0.032	ppm	2012
Chromium	0.1	0.1	0.009	ND - 0.0099	ppm	2012
Fluoride	4	4	0.7	< 0.5 - 0.7	ppm	2012
Nitrate (as N)	10	10	1.62	1.08 - 1.62	ppm	2014
Nitrite	1	1	< 0.02	< 0.02	ppm	2012
Selenium	5	2	0.00498	<0.002 - 0.00498	ppm	2012
Disinfection Byproduct Monitoring			Highest Detected level	Range		
Total Trihalomethane (TTHM)	80	0	4.8	3.4 - 4.8	ppb	2014
Haloacetic Acids (HAA5)	60	NA	< 0.001	< 0.001	ppb	2014
Maxium Residual Disinfection Level (MRDL)			Highest Detected level	Range		
Chlorine	4	0.2 - 1.0	0.53	0.37 - 0.53	ppm	2014
Biological Monitoring in Distribution System	**MCL**		**Entire Distribution System**	**Likely Source in Drinking Water**	**Unit**	**Date**
Total Coliform - tested monthly	Presence in no more than 5% of monthly samples		Highest monthly % of positive total Coliform samples: 0 in 53	Naturally present in the environment	Absent or Present	2014

WHY WE PAY FOR WATER

When you turn on the tap, it's easy to see what your water bill buys. What's not as easy to see is what it takes to bring that water to your home. The miles of pipeline hidden below the ground, the facilities that draw water from the source, to the plant where it's treated and tested. The City of Prescott Water Production staff includes state certified water operators who maintain well houses and pump stations and the Water Distribution staff who maintains 523 miles of water lines, 3,422 fire hydrants and 40,000 valves. Our Meter Service crew reads and installs advanced water metering technology to serve over 23,000 water customers. Our staff work seven days a week to make sure that water is always there when you need it. Your water payments are helping to build a better tomorrow by supporting needed improvements that will keep water flowing for all of us—today and well into the future.



Water Smart™ **Water is a resource to use wisely.** Water Conservation in practice is low tech, low cost and everyone can participate through WaterSmart landscaping. During the summer months, water use increases significantly due to outdoor water use; however, WaterSmart landscaping reduces water use and saves you money! Native plants provide a low-maintenance, flower-filled landscape and a fun way to create your own unique yard. Visit www.prescottwatersmart.com to virtually tour local landscapes, select native and low water use plants, and share photos and landscape designs. The City of Prescott also offers rebates for WaterSmart Landscaping through the Water Conservation Rebate Program and can help you find ways to lower your water bill through a Water Audit. Both programs are offered free-of-charge to Prescott water customers. **For more information on both these programs contact Water Conservation at (928)-777– 1100 or email water.smart@prescott-az.gov.**

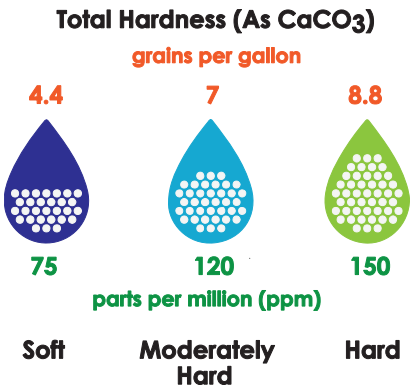
Prescott WaterSmart House—Now Online

http://www.prescott-az.gov/services/water/conservation.php?type=5

FREQUENTLY ASKED WATER QUESTIONS

WATER PRESSURE The most common question regarding water is about low pressure to the house. Low pressure can be caused by: Mineral deposit build-up, clogged aerators in faucets, and even the plastic pipe inside the water heater which can disintegrate causing pieces of plastic plug fixtures to clog water lines. Old or non-functioning pressure regulators will cause low water pressure as well as water leaks. A pressure regulator for each property ensures that the pressure coming from the municipal supply is reduced to an acceptable pressure. If the regulator is placed at the meter, instead of just at the entrance to the building, then the regulator will also act to 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 a measure of the amount of 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. Our water is considered moderately hard, averaging 113 to 127 ppm, which equals 6.6 to 7.4 grains per gallon. The term "hardness" comes from the fact that it is hard to get soapsuds from soap or detergents in hard water. This happens because calcium and magnesium react strongly with negatively-charged chemicals like soap to form insoluble compounds. As a result, hard water can reduce the effectiveness of the cleaning process.



SHOULD I GET A WATER FILTRATION SYSTEM? Since Prescott's water quality meets or surpasses all federal and state standards, home filtration systems are not necessary. However, if you choose to purchase a filtration system for aesthetic or medical reasons, keep the following in mind: Find out if the filter you are considering is capable of removing substances that concern you. Look for filters that have been certified by NSF International (an independent testing group) and Underwriters Laboratory (UL) and follow the manufacturer's maintenance instructions carefully for usage and filter replacement frequency guidelines.

WHY IS MY WATER CLOUDY? **Oxygen in the water:** Sometimes water fresh from the tap appears cloudy. Within a minute or two, the cloudiness rises toward the top of a glass and before long the whole glass is crystal clear. This is caused by excess oxygen escaping from the water. Changes in water temperature and pressure can cause the oxygen dissolved in it to reach a supersaturated state where more oxygen is in the water than it can hold. When the water passes through a faucet, the disturbance is enough to release the excess oxygen out of the water, forming microscopic bubbles. The bubbles are so tiny that it takes them a long time to rise through the water. No harm will come from using oxygenated water, and you need not take any corrective action if you experience it.

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/
- **Environmental Protection Agency Safe Drinking Water Hotline** (800) 426-4791
  Website: http://water.epa.gov/drink/index.cfm
- **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/

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