



# 2016 WATER QUALITY REPORT

The water provided by the Town of Payson meets or surpasses

## all Federal and State drinking water quality standards.

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act(SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

### From a Well into Your Home or Business

The Town of Payson Water Department(Public Water System AZ04-04032) is a public water utility that supplies drinking water to approximately 17,000 customers within a 16 square mile area. The water system includes 41 active production wells, 8.1 million gallons storage capacity, nine booster pumping stations, one water remediation facility and more than 150 miles of pipe lines. A staff of 18 full-time employees provides a variety of services for our customers.

Payson obtains all its water supply from groundwater stored in a series of complex and random cracks and fractures in the granite rock beneath the town. The only substance that is added to the water is a small amount of chlorine to disinfect the water and prevent bacterial growth. To ensure that the water is microbiologically safe, the Town collects samples throughout the system at least once every month.

### HOW IS OUR WATER TESTED?

In order to ensure that tap water is safe to drink, the U.S Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.

Water from each approved drinking water well is tested for several different types of contaminants, which include the following:

- 1) Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- 2) 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 and farming.
- 3) Pesticides and Herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.

- 4) Organic Chemicals, including synthetic and volatile organics which are by-products of industrial processes and petroleum production, and can come from gas stations, urban storm water runoff, and septic systems.
- 5) Radioactive contaminates, that can be naturally occurring or be the result of oil and gas production or mining activities.

The Water Quality Table on Page 5 lists the quantities of substances that were detected in our water. None of the substances found in Payson's water exceed the Maximum Contamination Levels established by EPA for healthful water.

### FOR MORE INFORMATION ABOUT YOUR DRINKING WATER

The Town of Payson is committed to providing a safe and sufficient supply of drinking water for our community both now and in the future. If you have any questions about your drinking water, please call Dan Utz, Water Quality Specialist at 472-5102.

Town of Payson's Web Site [www.paysonaz.gov](http://www.paysonaz.gov)

This report is available online at:

<http://www.paysonaz.gov/wqr-16.pdf>

Environmental Protection Agency's Safe Drinking Water Hotline

(800) 426-4791 [www.epa.gov/drink/](http://www.epa.gov/drink/)

Arizona Department of Environmental Quality (800) 234-5677

[www.adeq.state.az.us/environ/water/dw/health.html](http://www.adeq.state.az.us/environ/water/dw/health.html)

The Town Council may make decisions that affect the quality of our water, and you are invited to participate. Meeting notices are published in the local newspaper, and posted at Town Hall (303 North Beeline Highway).

**Payson Groundwater hardness: 200.mg/L**

**CC Cragin water hardness: 28.mg/L**

\*for details see page 4

## **PROTECTING OUR WATER QUALITY**

Health standards for drinking water are designed to detect and eliminate any unwanted substances long before they pose a threat to public health. If an unwanted contaminant is detected, the Town of Payson Water Department implements a strict set of established procedures to correct any problems immediately.

### **Why are there contaminants in my drinking water?**

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. The presence of these 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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

### **Vulnerable Population**

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 for infections. These people should seek advice about drinking water from their health care providers. EPA/CDC 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).

### **Understanding Water Quality Results**

The sources of drinking water (both tap 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.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The Water Quality Table on Page 5 lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally 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 have nutritional value at low levels. Results listed in the table are from 2010 -2014,

which presents the most recent information acquired. The EPA and ADEQ require us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

The sample results are organized into two major tables:

- 1) The Primary Drinking Water Standards, which are limits established for regulated substances (either a Maximum Contaminant Level or Action Level), and
- 2) The Secondary Drinking Water Standards, which contain unregulated substances that public water systems are required to monitor, but that have no established regulatory limits.

### **Maximum Contaminant Level (MCL)**

The highest level of a substance that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available technologies for treatment.

**Maximum Contaminant Level Goal (MCLG)** The level of a substance in drinking water below which there is no known or anticipated adverse health effects. This level is a non-enforceable health goal which allows an adequate margin of safety.

**Action Level (AL)** The concentration of a substance, which if exceeded, triggers treatment or other requirements which a water system must follow.

### **PARAMETER**

Barium

Copper

Fluoride

### **MAJOR POTENTIAL SOURCES OF DETECTED SUBSTANCES**

Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.

Erosion of natural deposits; Discharge from fertilizer and aluminum factories.

Gross Alpha	Erosion of natural deposits
Haloacetic Acids	Byproduct of drinking water chlorination.
Lead	Corrosion of household plumbing systems; Erosion of natural deposits
Nitrate	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Combined Radium	Erosion of natural deposits.
Tetrachloroethylene	Discharge from dry cleaners.
Total Trihalomethanes	By-product of drinking water chlorination.
Zylenes	Byproduct of Storage Reservoir Coating

### Information Statement about Lead

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 Town of Payson 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(1-800-426-4791) or at [www.epa/safewater/lead](http://www.epa/safewater/lead).

**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 caring for an infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

### Source Water Assessment

On August 05, 2003, Arizona Department of Environmental Quality (ADEQ) staff published a Source Assessment document that provides detailed information on the Town of Payson's drinking water sources and the vulnerability of those sources to contamination.

Based on currently available information, ADEQ determined that our source water is susceptible to possible future contamination. For further information or to request a copy of the final source water assessment report, contact the Payson Water Department at (928) 472-5102.

## **What Can You Do To Help?**

It's much easier and far less expensive to prevent a water pollution problem than it is to clean it up. You can help protect the quality of our drinking water by following these simple guidelines:

- 1) Use herbicides, insecticides and fertilizers sparingly.**
- 2) Recycle old car batteries, used motor oil and other fluids.**
- 3) Take hazardous household products, including solvents, paints and chemicals to a proper disposal center.**
- 4) Unused medicines and pharmaceutical/prescription products should be disposed of at the police department drop box in lobby, (medicines will be incinerated).**

## **Frequently Asked Questions**

### **What is the Hardness of Payson Water?**

The water in our system is considered hard. The hardness is due to dissolved minerals-primarily calcium and magnesium- in the water. These minerals are not harmful, but can leave spots and make cleaning more difficult. The most recent testing of Payson's active wells showed a hardness in the range of 62 – 230 ppm (3.6 – 13. gpg).

**Note: Beginning in 2018, the Town of Payson will be using surface water from CC Cragin Reservoir for 9 months out of the year. CC Cragin water is soft, with a median hardness of 28 mg/L(1.6gpg)**

### **Does the Town of Payson add Fluoride to its Drinking Water?**

No, the Town of Payson does not add fluoride to its drinking water. Fluoride is naturally occurring in Payson groundwater with an average concentration of 0.7 mg/L

A paper version of this report is available at the Town of Payson Water Department, 303 N. Beeline Highway, Bldg. A, or the Payson Public Library.

# WATER QUALITY ANALYSIS

PARAMETER	DATE	UNIT	MCL	MCLG	Town of Payson Drinking Water Sources									
					Payson Groundwater									
<b>PRIMARY DRINKING WATER STANDARDS - Mandatory Health-Related Levels Established by EPA and ADEQ.</b>														
<b>BIOLOGICAL MONITORING</b> - 20 Samples required each month for the entire water distribution system.														
Total Coliform	2016		1	0	Highest Monthly Number of Positive Samples = 0									
<b>DISINFECTANT RESIDUALS</b> - 20 Samples required each month for the entire water distribution system.														
			MRDL	MRDLG	Running Annual Average		Range							
Chlorine (Free)	2016	ppm	4	4	0.56		0.03 – 1.35							
<b>LEAD AND COPPER</b> - Compliance with Action Levels based on samples collected at source wells and thirty (30) customer taps.														
Lead Results - Homes	2016	ppb	15	0	90 <sup>th</sup> Percentile = 4.7	1 Household >Action Level								
Copper Results- Homes		ppm	1.3	1.3	90 <sup>th</sup> Percentile = 0.27	0 Households >Action Level								
Lead Results- Sources		ppb	~	~	Town-wide Source Level Range = <0.50 – 19.									
Copper Results-Sources		ppm	~	~	Town-wide Source Level Range = 0.05 – 0.35									
<b>RADIOCHEMICAL MONITORING</b>					Average	Range								
Gross Alpha	2016	pCi/l	15	0	7.4	N.D. – 14.5								
Combined Radium	2016	pCi/l	5	0	0.5	N.D. – 1.1								
<b>REGULATED INORGANIC COMPOUNDS</b>					Average	Range								
Barium	2016	ppm	2	2	0.049	0.0043 -0.10								
Fluoride	2016	ppm	4	4	0.67	N.D. – 1.9								
Nitrate (as N)	2016	ppm	10	10	1.3	N.D. – 3.8								
<b>REGULATED ORGANIC COMPOUNDS</b>					Average	Range								
Tetrachloroethylene	2016	ppb	5	0	N.D.	N.D. – 0.61								
Xylenes	2016	ppm	10	10	N.D.	N.D. – 0.00072								
<b>DISINFECTION BYPRODUCT MONITORING</b>					Average	Range								
Total Trihalomethane (TTHM)	2016	ppb	80	N/A	9.8	9.8 – 9.8								
Haloacetic Acids (HAA)	2016	ppb	60	N/A	2.2	2.2 – 2.2								
<b>SECONDARY DRINKING WATER STANDARDS</b> - Aesthetic Levels Established by EPA and ADEQ.														
<b>UNREGULATED INORGANIC COMPOUNDS</b>					Range									
Alkalinity	2016	ppm	~	~	66 - 240									
Calcium	2016	ppm	~	~	16 - 71									
Chloride	2016	ppm	~	~	3.7 - 21									
Hardness, Total	2016	ppm	~	~	62 - 230 (3.6 – 13.2 gpg)									
Iron	2016	ppm	~	~	N.D. – 1.5									
Magnesium	2016	ppm	~	~	5.4 - 22									
Manganese	2016	ppm	~	~	N.D. - 0.15									
pH	2016	SU	~	~	6.2-7.5									
Sodium	2016	ppm	~	~	12 - 22									
Sulfate	2016	ppm	~	~	5.8 - 15									
Total Dissolved Solids	2016	ppm	~	~	170 - 330									
Zinc	2016	ppm	~	~	N.D. – 0.063									

## KEY TO CHART

MCL	Maximum Contaminant Level	~	Limits are not set for these parameters	N.D.	Not Detected
MCLG	Maximum Contaminant Level Goal	Range	Low to high measurements reported during the year	N/A	Not Applicable
MFL	Million Fibers per liter	Pci/l	Pico Curies per liter, measurement for radiochemicals	ppm	Parts per million
(<)	Less than amount indicated	gpg	Grains per gallon ( Water Softener Terminology)	ppb	Parts per billion
MRDL	Maximum Residual Disinfection Level	MRDLG	Maximum Residual Disinfection Level Goal	TT	Treatment Technique



Water Department

**303A N. Beeline Highway  
Payson, AZ 85541**