

## CONSUMER CONFIDENCE REPORT

Report Covers Calendar Year: January 1 – December 31, 2016

Este informe contiene información muy importante sobre el agua usted bebe. Tradúscalo ó hable con alguien que lo entienda bien.

### I. Public Water System (PWS) Information

<b>PWS Name:</b>	City of Williams				
<b>PWS ID #</b>	AZ04-03026				
<b>Owner / Operator Name:</b>	City of Williams				
<b>Telephone #</b>	(928) 635-4451				
We want our valued customers to be informed about their water quality. If you would like to learn more about public participation or to attend any of our regularly scheduled meetings, please contact <u>City of Williams</u> at <u>above</u> for additional opportunity and meeting dates and times.					

### II. Drinking Water Sources

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 pickup substances resulting from the presence of animals or from human activity.	
<b>Our water source(s):</b>	The City provides essential municipal services for its residents. Among these are water treatment/supply and wastewater treatment. The drinking water (potable) in Williams is produced at the City's Water Filter Plant at 600 South 6 <sup>th</sup> Place. The City has two source water systems which include Surface water (lakes) and Groundwater (wells). Surface water is the City's major source and the system consists of 5 reservoirs: City Dam, Santa Fe Dam, Cataract Lake, Dogtown Lake and Kaibab Lake. Groundwater may be blended with lake water in raw water lines, treated at the Water Plant and delivered to our customers.

### III. Consecutive Connection Sources

A public water system that receives some or all of its finished water from one or more wholesale systems by means of a direct connection or through the distribution system of one or more consecutive systems. Systems that purchase water from another system report regulated contaminants detected from the source water supply in a separate table. City of Williams does not buy or sell water to any other public water system.
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### IV. Drinking Water Contaminants

<p><u>Microbial contaminants</u>, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.</p> <p><u>Inorganic contaminants</u>, 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.</p> <p><u>Pesticides and herbicides</u> that may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.</p> <p><u>Organic chemical contaminants</u>, 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.</p> <p><u>Radioactive contaminants</u>, that can be naturally occurring or be the result of oil and gas production and mining activities.</p>
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### V. Vulnerable Population

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants
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does not necessarily indicate that 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.

**VI. Source Water Assessment**

The City’s public water system received a Source Water Assessment (SWA) as follows: Based on the information currently available on the hydrogeologic settings of and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this public water system, the Arizona Department of Environmental Quality has given a low risk designation for the degree to which this public water system drinking water source(s) are protected. A low risk designation indicates that most source water protection measures are either already implemented, or the hydrogeology is such that the source water protection measures will have little impact on protection. Specific water quality data has not been included in this report however, that information can be obtained by contacting ADEQ at (602) 771-4641.

**VII. Definitions**

AL = Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements.  
MCL = Maximum Contaminant Level - The “Maximum Allowed” is the highest level of a contaminant that is allowed in drinking water.  
MCLG = Maximum Contaminant Level Goal - The “Goal” is the level of a contaminant in drinking water below which there is no known or expected risk to health.  
MFL = Million fibers per liter.  
MRDL = Maximum Residual Disinfectant Level.  
MRDLG = Maximum Residual Disinfectant Level Goal.  
MREM = Millirems per year – a measure of radiation absorbed by the body.  
NA = Not Applicable, sampling was not completed by regulation or was not required.  
NTU = Nephelometric Turbidity Units, a measure of water clarity.  
PCi/L = Picocuries per liter - picocuries per liter is a measure of the radioactivity in water.  
PPM = Parts per million or Milligrams per liter (mg/L).  
PPB = Parts per billion or Micrograms per liter (µg/L).  
PPT = Parts per trillion or Nanograms per liter.  
PPQ = Parts per quadrillion or Picograms per liter.  
TT = Treatment Technique - A treatment technique is a water.  
 N/A = not analyzed

ppm x 1000 = ppb	required process intended to reduce the level of a contaminant in drinking
ppb x 1000 = ppt	
ppt x 1000 = ppq	

**VIII. Health Effects Language**

**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.

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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.

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.

**IX. Water Quality Data**

Contaminant (units)	Violation Y / N	Highest Level Detected	Range Detected Absent (A) or Present (P)	MCL	MCLG	Sample Month Year	Likely Source of Contamination
<b>Microbiological</b>							
Total Coliform Bacteria (System takes ≥ 40 monthly samples) 5% of monthly samples are positive; (System takes ≤ 40 monthly samples) 1 positive monthly sample	NO	zero	A	0	0	(3)Monthly	Naturally Present in Environment

Fecal coliform and E. Coli (TC Rule)	NO			0	0		Human and animal fecal waste
Fecal Indicators (E. coli, enterococci or coliphage) (GW Rule)	NO			TT	n/a		Human and animal fecal waste
Total Organic Carbon (ppm)	NO	5	1-7	TT	n/a	Monthly 2016	Naturally present in the environment
Turbidity (NTU), surface water only	No	0.81	0.00-0.88	TT	n/a	Continuous 2016	Soil Runoff
<b>Disinfectants</b>							
Chloramines (ppm)	N/A			MRDL = 4	MRDLG = 4		Water additive used to control microbes
Chlorine (ppm)	NO	0.51mg/l		MRDL = 0.07	MRDLG = 0.02	Daily 2016	Water additive used to control microbes
Chloride dioxide (ppb)	N/A			MRDL = 800	MRDLG = 800		Water additive used to control microbes
<b>Disinfection By-Products</b>							
Haloacetic Acids (ppm) (HAA5)	NO	0.02				10/2/16	Byproduct of drinking water disinfection
Total Trihalomethanes (ppm) (TTHM)	NO	0.014				10/5/16	Byproduct of drinking water disinfection
Bromate (ppb)	N/A						Byproduct of drinking water disinfection
Chlorite (ppm)	N/A						Byproduct of drinking water disinfection
<b>Lead &amp; Copper</b>							
Copper (ppm)	NO	0.029				9/22/16	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	NO	0.002				9/22/16	Corrosion of household plumbing systems; erosion of natural deposits
<b>Radionuclides</b>							
Beta / photon emitters (mrem/yr)	N/A			4	0		Decay of natural and man-made deposits
Alpha emitters (pCi/L)	N/A			15	0		Erosion of natural deposits
Combined Radium 226 & 228 (pCi/L)	N/A			5	0		Erosion of natural deposits
Uranium (pCi/L)	N/A			30	0		Erosion of natural deposits
<b>Inorganics</b>							
Antimony (ppb)	NO		<0.001	0.006		8/27/14	Discharge from petroleum refineries; fire retardants; ceramics, electronics and solder
Arsenic (ppb)	NO		<0.001	0.010		8/27/14	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Asbestos (MFL)	N/A			7			Decay of asbestos cement water mains; Erosion of natural deposits
Barium (ppm)	NO		0.37	2.0		8/27/14	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	NO		<0.001	0.004		8/27/14	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	NO		<0.0005	0.005		8/27/14	Corrosion of galvanized pipes; natural deposits; metal refineries; runoff from waste batteries and paints

Chromium (ppb)	N/A		<0.001	0.1		8/27/14	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	NO		<0.025	0.2		8/27/14	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	NO		0.074	4.0		8/27/14	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (ppb)	NO		<0.0002	0.002		8/27/14	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland.
Nitrate (ppm)	NO		0.28 mg/l	10	10	9/15/16	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (ppm)	N/A			1	1		Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	NO		<0.005	0.05		8/27/14	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Thallium (ppb)	NO		<0.001	0.002		8/27/14	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
<b>Synthetic Organic Contaminants</b>							
2,4-D (ppb)	NO		<0.0001	0.07		8/27/14	Runoff from herbicide used on row crops
2,4,5-TP (Silvex) (ppb)	NO		<0.0002	0.05		8/27/14	Residue of banned herbicide
Acrylamide	N/A			TT	0		Added to water during sewage / wastewater treatment
Alachlor (ppb)	NO		<0.0001	0.002	0	8/27/14	Runoff from herbicide used on row crops
Atrazine (ppb)	NO		<0.00005	0.003		8/27/14	Runoff from herbicide used on row crops
Benzo (a) pyrene (PAH) (ppt)	NO		<0.00002	0.0002	0	8/27/14	Leaching from linings of water storage tanks and distribution lines
Carbofuran (ppb)	NO		<0.0005	0.04		8/27/14	Leaching of soil fumigant used on rice and alfalfa
Chlordane (ppb)	NO		<0.0001	0.002	0	8/27/14	Residue of banned termiticide
Dalapon (ppb)	NO		<0.001	0.2		8/27/14	Runoff from herbicide used on rights of way

Di (2-ethylhexyl) adipate (ppb)	NO		<0.0006	0.4		8/27/14	Discharge from chemical factories
Di (2-ethylhexyl) phthalate (ppb)	NO		<0.0006	0.006	0	8/27/14	Discharge from rubber and chemical factories
Dibromochloropropane (ppt)	NO		<0.00001	0.0002	0	8/27/14	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Dinoseb (ppb)	NO		<0.0002	0.007		8/27/14	Runoff from herbicide used on soybeans and vegetables
Diquat (ppb)	NO		<0.0004	0.022		8/27/14	Runoff from herbicide use
Dioxin [2,3,7,8-TCDD] (ppq)	NO		<0.000000005	30	0	8/27/14	Emissions from waste incineration and other combustion; discharge from chemical factories
Endothall (ppb)	NO		<0.005	0.1		8/27/14	Runoff from herbicide use
Endrin (ppb)	NO		<0.00001	0.002		8/27/14	Residue of banned insecticide
Epichlorohydrin	N/A			TT	0		Discharge from industrial chemical factories; an impurity of some water treatment chemicals
Ethylene dibromide (ppt)	N/A				0		Discharge from petroleum refineries
Glyphosate (ppb)	NO		<0.006	0.7	700	8/27/14	Runoff from herbicide use
Heptachlor (ppt)	NO		<0.00001	0.0004	0	8/27/14	Residue of banned temiticide
Heptachlor epoxide (ppt)	NO		<0.00001	0.0002	0	8/27/14	Breakdown of heptachlor
Hexachlorobenzene (ppb)	NO		<0.00005	0.001	0	8/27/14	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclo pentadiene (ppb)	NO		<0.00005	0.05		8/27/14	Discharge from chemical factories
Lindane (ppt)	NO		<0.00001	0.0002	200	8/27/14	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor (ppb)	NO		<0.00005	0.04		8/27/14	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl [Vydate] (ppb)	NO		<0.0005	0.2	200	8/27/14	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs [Polychlorinated biphenyls] (ppt)	N/A				0		Runoff from landfills; discharge of waste chemicals
Pentachlorophenol (ppb)	NO		<0.00004	0.001	0	8/27/14	Discharge from wood preserving factories

Picloram (ppb)	NO		<0.0001	0.5		8/27/14	Herbicide runoff
Simazine (ppb)	NO		<0.00005	0.004		8/27/14	Herbicide runoff
Toxaphene (ppb)	NO		<0.0005	0.003	0	8/27/14	Runoff/leaching from insecticide used on cotton and cattle
<b>Volatile Organics</b>							
Benzene (ppb)	NO		<0.0005	0.005	0	8/27/14	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride (ppb)	NO		<0.0005	0.005	0	8/27/14	Discharge from chemical plants and other industrial activities
Chlorobenzene (ppb)	NO		<0.0005	0.1		8/27/14	Discharge from chemical and agricultural chemical factories
o-Dichlorobenzene (ppb)	NO		<0.0005	0.6		8/27/14	Discharge from industrial chemical factories
p-Dichlorobenzene (ppb)	NO		<0.0005	0.075		8/27/14	Discharge from industrial chemical factories
1,2-Dichloroethane (ppb)	NO		<0.0005	0.005	0	8/27/14	Discharge from industrial chemical factories
1,1-Dichloroethylene (ppb)	NO		<0.0005	0.007		8/27/14	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene (ppb)	NO		<0.0005	0.07		8/27/14	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene (ppb)	NO		<0.0005	0.1		8/27/14	Discharge from industrial chemical factories
Dichloromethane (ppb)	NO		<0.0005	0.005	0	8/27/14	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane (ppb)	NO		<0.0005	0.0055	0	8/27/14	Discharge from industrial chemical factories
Ethylbenzene (ppb)	NO		<0.0005	0.7		8/27/14	Discharge from petroleum refineries
Styrene (ppb)	NO		<0.0005	0.1		8/27/14	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene (ppb)	NO		<0.0005	0.005	0	8/27/14	Discharge from factories and dry cleaners
1,2,4-Trichlorobenzene (ppb)	NO		<0.0005	0.07		8/27/14	Discharge from textile-finishing factories
1,1,1-Trichloroethane (ppb)	NO		<0.0005	0.2		8/27/14	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (ppb)	NO		<0.0005	0.005		8/27/14	Discharge from industrial chemical factories
Trichloroethylene (ppb)	NO		<0.0005	0.005	0	8/27/14	Discharge from metal degreasing sites and other

							factories
Toluene (ppm)	NO		<0.005	1		8/27/14	Discharge from petroleum factories
Vinyl Chloride (ppb)	NO		<0.0003	0.002	0	8/27/14	Leaching from PVC piping; discharge from chemical factories
Xylenes (ppm)	NO		<0.0005	10		8/27/14	Discharge from petroleum or chemical factories

**XI. Stage 2 Disinfectants and Disinfection By-products Rule**

Stage 2 DBP Rule requires some systems to complete an Initial Distribution System Evaluation (IDSE) to characterize DBP levels in their distribution systems and identify locations to monitor DBPs for Stage 2 DBP Rule compliance. The following table summarizes the individual sample results for the IDSE monitoring in 2009:

Contaminant	Number of Analyses	Minimum Level Detected	Highest Level Detected
Haloacetic Acids (HAA5) (ppm)	4		0.0028
Total Trihalomethanes (TTHM) (ppm)	4		0.055

**XII. Violations**

Type / Description	Compliance Period	Corrective Actions taken by PWS
<b>None</b>		

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.)

Within the standards required by E.P.A. and A.D.E.Q. the water used by the customers of the City of Williams is safe to drink.