

A close-up, high-speed photograph of water splashing, creating a dense field of white foam and droplets against a bright blue background. The water is captured in mid-air, with individual droplets and larger splashes clearly visible.

# **Hinton Public Water System 2016 Consumer Confidence Report**



# **2016 Annual Drinking Water Quality Report**

## ***Hinton Public Water System (OK2000809)***

We're very pleased to provide you with this year's Annual Drinking Water Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. This report shows our water quality and what it means.

Our water source is groundwater obtained from eight (8) wells producing from the Rush Springs Aquifer. An analysis of contamination susceptibility of our source water has been prepared and is available for inspection. Briefly, the analysis showed that our water's susceptibility to contamination has an **average score of 29 out of 100** placing our system at a rating of "**LOW**" regarding susceptibility to contamination. This plan is available for viewing in our offices. Information such as potential sources of contamination is listed in the plan.

If you have any questions about this report or concerning your water utility, please contact:

**Mr. Keith Wright, Superintendent**

Hinton Public Works  
123 East Main Street  
Hinton, OK 73047  
Tel. (405) 542-3273

We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the third Tuesday of the month at 6:00 PM at:

**Hinton Fire Station**

115 S. Broadway  
Hinton, Oklahoma 73047

The Hinton Public Water System routinely monitors for contaminants in your drinking water according to Federal and State laws. The following Water Quality Table table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2016. (Some of our data may be more than one year old because the state allows us to monitor for some contaminants less often than once per year.) All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk.

## WATER QUALITY DATA TABLES

**The table below lists all of the drinking water contaminants we detected for the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report.**

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

*Non-Detects (ND)* - laboratory analysis indicates that the constituent is not present.

*Parts per million (ppm) or Milligrams per liter (mg/l)*

*Parts per billion (ppb) or Micrograms per liter (ug/l)*

*Parts per trillion (ppt) or Nanograms per liter (nanograms/l)*

*Parts per quadrillion (ppq) or Picograms per liter (picograms/l)*

*Picocuries per liter (pCi/L)* - picocuries per liter is a measure of the radioactivity in water.

*Millirems per year (mrem/yr)* - measure of radiation absorbed by the body.

*Micrograms per liter (ug/l)* – measure of uranium in water

*Nephelometric Turbidity Unit (NTU)* - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

*Treatment Technique (TT)* - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

*Maximum Contaminant Level (MCL)* - The MCL is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

*Maximum Contaminant Level Goal* - The MCLG is 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.

### **Contaminants that may be present in source water before we treat it include:**

\**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 stormwater 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 and residential uses.

\**Radioactive contaminants*, which are naturally occurring.

\**Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 EPA's Safe Drinking Water Hotline (800-426-4791).

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 from 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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 Hinton Public Water System 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://www.epa.gov/safewater/lead>.

**MCLs are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a significant increased risk of having the described health effect.**

**Nitrates:** As a precaution we always notify physicians and health care providers in this area if there is ever a higher than normal level of nitrates in the water supply.

## Regulated Contaminants Detected

### Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	# of Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	7/2016	1.3	1.3	0.136	0	ppm	NO	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems

### Disinfection and Disinfection Byproducts

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	Daily	1.2	0.8-1.2	MRDLG=4	MRDL=4	ppm	NO	Water additive used to control microbes
Total Trihalomethanes (TTH)	9/2016	5	0-4.8	No Goal for the total	80	ppb	NO	By-product of drinking water disinfection.

### Radioactive Contaminants

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Gross alpha excluding radon and uranium	2015	2.49	2.49-2.49	0	15	pCi/L	NO	Erosion of natural Deposits

## Inorganic Contaminants

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	2012-2016	11	5.29-12.20	0	10	ppb	YES	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production waste
Barium	2012-2016	0.348	0.152—0.348	2	2	ppm	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate [measured as Nitrogen]	2016	11	2.32 – 12.10	10	10	ppm	YES	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

During the period of this report in 2016, we failed to sample one of our source water sites for analysis of a group of contaminants known as Inorganic Chemicals. Below is a list of the members of this group and the possible health consequences of drinking water containing these contaminants.

### Monitoring Violations Table

Antimony			
Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.			
Violation Type	Violation Begin	Violation End	Violation Explanation
Monitoring, Routine Major	01//01/2014	12/31/2016	We failed to test our drinking water for the contaminate and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

Barium			
Some people who drink water containing antimony in excess of the MCL over many years could experience increases in blood pressure.			
Violation Type	Violation Begin	Violation End	Violation Explanation
Monitoring, Routine Major	01//01/2014	12/31/2016	We failed to test our drinking water for the contaminate and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

## Monitoring Violations table (continued)

<b>Beryllium</b>			
Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
Monitoring, Routine Major	01//01/2014	12/31/2016	We failed to test our drinking water for the contaminate and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

<b>Cadmium</b>			
Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
Monitoring, Routine Major	01//01/2014	12/31/2016	We failed to test our drinking water for the contaminate and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

<b>Chromium</b>			
Some people who drink water containing chromium in excess of the MCL over many years could experience allergic dermatitis.			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
Monitoring, Routine Major	01//01/2014	12/31/2016	We failed to test our drinking water for the contaminate and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

<b>Fluoride</b>			
Some people who drink water containing fluoride well in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old.			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
Monitoring, Routine Major	01//01/2014	12/31/2016	We failed to test our drinking water for the contaminate and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

<b>Selenium</b>			
Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers and toes, or problems with their circulation.			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
Monitoring, Routine Major	01//01/2014	12/31/2016	We failed to test our drinking water for the contaminate and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.



## Monitoring Violations table (continued)

<b>Thallium</b>			
Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
MCL, Single Sample	01/01/2014	12/31/2016	We failed to test our drinking water for the contaminate and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

In addition to the above monitoring violations, we detected unacceptable levels of nitrates and arsenic. Below is another violations table listing those items:

### MCL Violation Table

<b>Arsenic</b>			
Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
MCL, Average	01//01/2016	12/31/2016	Arsenic level above MCL. Working to install treatment process.

<b>Nitrate (measured as Nitrogen)</b>			
Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
MCL, Average	01//01/2016	12/31/2016	Arsenic level above MCL. Working to install treatment process.

## Health Effects for detected or unmonitored contaminants:

**Microbiological Contaminants: NONE DETECTED**

### **Radiochemical Contaminants Detected:**

(6) **Gross Beta/Photon Emitters.** Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.

(7) **Gross Alpha Excluding Radon and Uranium.** Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

(8) **Combined Radium 226/228.** Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

### **Inorganic Contaminants Detected:**

(10) **Antimony.** Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.

(11) **Arsenic.** Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

(12) **Barium.** Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

(13) **Beryllium.** Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.

(15) **Cadmium.** Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.

(20) **Chromium.** Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.

(21) **Copper.** Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

(23) **Fluoride.** Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.

(26) **Nitrate.** Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

***Pesticides and Herbicides: NONE DETECTED***

***Synthetic Organic Contaminants: NONE DETECTED***

***Organic Chemical Contaminants: NONE DETECTED***

### **Arsenic**

While your drinking water meets EPA's standard for **arsenic**, it does contain low levels of arsenic. 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.

**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 you should ask advice from your health care provider.

### **What does this mean?**

The table shows that our system uncovered some problems this year with arsenic. The duration of the violation was 01/01/2016 to 12/31/2016. The potential adverse health effects are that some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. We are under increased monitoring by the Oklahoma Department of Environmental Quality (ODEQ) and are working with an engineering firm to take steps to correct this by as soon as possible. Since 04/30/2010, Hinton PWS has been operating under a Consent Order (Case No. 10-111) regarding this issue.

The sources of drinking water (both tap water 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.

The following is the Spanish translation for ‘This report contains important information about your drinking water. Get someone to translate for you or talk to someone who understands it well.’

**Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted o hable con alguien que lo entienda bien.**

We at the Hinton Public Water System work around the clock to provide top quality water to every tap. We take our responsibility to provide quality water to your business or family very seriously. Please contact us with your comments and concerns.

**For further information contact:**

Mr. Keith Wright, Superintendent  
123 East Main  
Hinton, OK 73047  
Tel. (405) 542-3253

Date distributed: 05/25/2017 Signed: \_\_\_\_\_  
Keith Wright, Superintendent