

# The City of Goodyear Water Quality Report 2014



## Continuing Our Commitment to Water Quality:

The city of Goodyear is proud to present its annual water quality report. This edition covers all testing completed in 2014. Please see the chart on the next page which shows all test results.

The city of Goodyear is dedicated to providing quality drinking water that meets or exceeds all regulatory requirements for our customers south of Interstate 10 (Goodyear residents north of I-10 receive water services and a Water Quality Report from Liberty Utilities). The city of Goodyear vigilantly safeguards its water supplies and complies with all state and federal drinking water regulations.



We are continually striving to adopt innovative improvement methods for delivering the best quality drinking water to your tap in the most cost-effective manner. As new challenges arise, we will remain vigilant in providing quality drinking water at an affordable price, protecting source water, conserving treated water, and educating the community, while continuing to serve the needs of all the water customers of the city of Goodyear.

For more information about water quality in Goodyear, please call Linda Shapcott, Environmental Compliance Supervisor at 623-882-7565 or city of Goodyear Environmental Services at 623-932-3010.

# 2014 Water Quality Data

## City of Goodyear PWS #07-094

## Liberty Utilities PWS #07-046

Regulated Substances	units	MCL or MRDL	MCLG or MRDLG	year sampled	running average or highest value	range			violation	year sampled	running average or highest value	range		violation	major sources in drinking water
						low	high	low				high			
<b>Disinfectants &amp; Disinfectant By-Products</b>															
Chlorine (as Cl2)	ppm	4	4	2014	0.41	0.02	1.21	no	2014	0.59	0.47	0.68	no	water additive used to control microbes	
Haloacetic Acid (HAA5)	ppb	60	n/a	2014	3.8	2.2	6	no	2014	6.2	4.7	7.6	no	by-product of drinking water chlorination	
TTHMs (total trihalomethanes)	ppb	80	n/a	2014	31.3	18	56	no	2014	25.2	21.5	28.9	no	by-product of drinking water chlorination	
<b>Inorganics</b>															
Arsenic	ppb	10	0	2014	7	3.5	12	no	2014	7	4.8	8.5	no	erosion of natural deposits; runoffs from orchards; runoffs from glass and electronics production wastes	
Nitrate	ppm	10	10	2014	6.8	2.1	8.3	no	2014	9.15	3.4	9.15	no	runoff from fertilizer use; leaching from septic tanks,sewage; erosion of natural deposits	
Barium	ppm	2	2	2013	0.16	0.017	0.16	no	2013	0.083	0.06	0.11	no	discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	
Sodium (optional)	ppm	n/a	n/a	2013	170	62	170	no	2013	120.2	58	235	no	erosion of natural deposits; leaching	
Fluoride*	ppm	4	4	2014	2.2	0.23	2.2	no	2013	0.89	0.39	1.83	no	erosion of natural deposits; water additive promoting strong teeth; discharge from fertilizer and aluminum factories	
Selenium	ppb	50	50	2013	n/d	n/d	n/d	no	2013	2.5	n/d	5	no	discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines	
Chromium	ppb	100	100	2013	27	7.3	27	no	2013	8.7	n/d	17	no	discharge from steel and pulp mills; erosion of natural deposits	
<b>Microbiological</b>															
Total Coliforms	% positive samples	5% positive monthly samples	0	2014	5 of 495	0%	12.5%	yes**	2014	n/d	n/d	n/d	no	naturally present in the environment	
<b>Volatile Organics</b>															
Trichloroethylene	ppb	5	0	2014	1	n/d	1.2	no	n/a	n/a	n/a	n/a	no	discharge from metal degreasing sites and other factories	
<b>Synthetic Organics</b>															
Di (2-ethylhexyl)phthalate	ppb	6	0	n/a	n/a	n/a	n/a	no	2013	1	n/d	1	no	discharge from rubber and chemical factories	
<b>Radionuclides</b>															
Gross Alpha	pCi/l	15	0	2013	7.0 +/- 1.3	0.4 +/- 0.3	7.0 +/- 1.3	no	2013	3.9	3	5.4	no	erosion of natural deposits	
Combined Radium 226 & 228	pCi/l	5	0	2013	1.3 +/- 0.2	1.3 +/- 0.2	1.3 +/- 0.2	no	2013	0.3	n/d	0.3	no	erosion of natural deposits	
Uranium	pCi/l	30	0	n/a	n/a	n/a	n/a	n/a	2013	5	n/d	5	no	erosion of natural deposits	

\*Goodyear does not fluoridate the drinking water; it is naturally occurring in the groundwater. \*\*The city of Goodyear received a violation for exceeding the Maximum Contaminant Level (MCL) for positive total coliforms in October 2014. The city also received two monitoring violations for failure to monitor for the presence of total coliform bacteria under the Total Coliform Rule and Groundwater Rule in October 2014. All resamples were negative.

Regulated Substances	units	action level	MCLG	year sampled	amount detected 90th percentile	range			violation	year sampled	amount detected 90th percentile	range		violation
						low	high	low				high		
<b>Lead and Copper</b>														
Copper	ppm	1.3	1.3	2013	0.22	n/d	0.33	no	2013	0.089	n/d	0.39	no	
Lead	ppb	15	0	2013	1.9	n/d	3.7	no	2013	0.2	n/d	7	no	

Major sources in drinking water for copper are corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives.  
Major sources in drinking water for lead are corrosion of household plumbing systems, erosion of natural deposits.

**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 that is allowed in drinking water. MCLs are set as close to the 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.  
**MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant allowed in drinking water. Disinfectant is necessary for control of microbial contaminants.  
**MRDLG (Maximum Residual Disinfectant Level Goal):** The level of a drinking water disinfectant below which there is no known or expected risk to health.  
**pCi/l (picocuries per liter)**  
**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).  
**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).  
**n/a: not applicable n/d: not detected**

## City of Goodyear PWS #07-094

## Liberty Utilities PWS #07-046

Unregulated Contaminants	units	year sampled	average of detected results	range		year sampled	average of detected results	range	
				low	high			low	high
Chromium (total)	ppb	2014	13.7	8.8	26	2014	9.3	2.6	16
Molybdenum	ppb	2014	5.7	2.2	13	2014	3.2	1.1	6.6
Strontium	ppb	2014	1662	520	3000	2014	838	490	1200
Vanadium	ppb	2014	16.3	10	30	2014	15.9	8.2	26
Chlorate	ppb	2014	66	24	100	2014	159.3	44	780
Hexavalent Chromium	ppb	2014	14	9.2	25	2014	9.6	2.7	16
1,2,3-Trichloropropane	ppb	2014	n/d	n/d	n/d	2014	0.0042	n/d	0.05
1,4-Dioxane	ppb	2014	0.028	n/d	0.14	2014	0.097	n/d	0.32
Perfluoroheptanoic acid (PFHpA)	ppb	2014	n/d	n/d	n/d	2014	0.005	n/d	0.03
Perfluorooctanoic acid (PFOA)	ppb	2014	n/d	n/d	n/d	2014	0.0083	n/d	0.05
Perfluorooctanesulfonic acid (PFOS)	ppb	2014	n/d	n/d	n/d	2014	0.0342	n/d	0.22
Perfluorohexanesulfonic acid (PFHxS)	ppb	2014	n/d	n/d	n/d	2014	0.023	n/d	0.11

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring (UCMR) is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. The city of Goodyear participated in the UCMR 3 Study.

## The Source of Your Water

The city of Goodyear's drinking water source is 100% groundwater. The underground aquifer from which the city receives its water is called the West Salt Valley Sub-Basin. The city of Goodyear also purchases water from Liberty Utilities, which draws from the same West Salt Valley Sub-Basin aquifer. The aquifer's depth ranges from 100 to 1,000 feet from the surface. With 12 well sites and ten booster stations, Goodyear's operating system has a storage capacity of 15.9 million gallons.

## Violation

The city of Goodyear had three violations in 2014. The city exceeded the Maximum Contaminant Level (MCL) for total coliforms in October 2014. Five out of the forty routine monthly samples showed a presence of total coliform. Since the standard for the city of Goodyear is that no more than two sample results per month may be positive for the presence of total coliforms, the city received a MCL violation. Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. All three violations, with specific details, were addressed in the Public Notice delivered on November 21, 2014.

The city received a violation for failure to monitor under the Total Coliform Rule which was the result of not resampling for the presence of total coliforms within the required time frame. The city also received a violation for failure to monitor under the Groundwater Rule which was the result of not sampling triggered source wells monitoring for fecal indicators.

Usually, coliforms are a sign that there could be a problem with the system's treatment or distribution system (pipes). Whenever we detect coliform bacteria in any sample, we do follow-up testing to see if other bacteria of greater concern, such as fecal coliform or E. coli, are present. We did not find any of these bacteria in our subsequent testing.

The city of Goodyear continues to sample the distribution system weekly for total coliforms and to confirm that the disinfection levels are maintained. We updated the Standard Operating Procedures for the sampling of total coliforms and the procedures for receiving notification of total coliform positives.

## Drinking Water Contaminants

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. 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.

For more information about contaminants and potential health effects, or to receive a copy of the U.S. Centers for Disease Control (CDC) and the U.S. Environmental Protection Agency (EPA) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants, call EPA Safe Water Drinking Hotline at 1-800-426-4791.

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 city of Goodyear 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

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.

## Fluoride in Drinking Water

This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/l) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The fluoride in the drinking water provided by the city of Goodyear averages 1.1 mg/l; however one sample had a fluoride concentration of 2.2 mg/l.

Dental fluorosis in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/l of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/l of fluoride, but we are required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/l because of this cosmetic dental problem.

For more information, please call Linda Shapcott, Environmental Compliance Supervisor at 623-882-7565. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, call NSF International at 1-877-8-NSF-HELP.\*

Este informe contiene información muy importante sobre el agua usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien. Para española 623-882-7511.