

**2013 Water Quality Consumer Confidence Report
Public Water System Number 5810004**

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

The City of Wheatland is pleased to present our 2013 annual water quality report to our customers. This edition covers all testing completed from Jan 1, 2013 through Dec 31, 2013. We are pleased to tell you that our compliance with the state and federal drinking water laws remains exemplary. As in the past, we are committed to delivering the best quality drinking water. To that end, we remain vigilant in meeting the challenges of source protection, water conservation, and community education, while continuing to serve the needs of all of our water users. This report tells you where our water comes from, what our test show about it, and other information. The safety of our water supply has remained our top priority and we will notify you immediately if there is any reason for concern. We are providing this information to you so you can make informed choices about your water supply. For additional information concerning your drinking water, contact Donald R. Scott at 530-633- 2785 or email at don@wheatland.ca.gov. If you wish to publicly participate in decisions affecting your drinking water quality, you may attend regularly scheduled City Council meetings on the 2nd and 4th Tues of each month. These meetings start at 6:00 pm and are located at 111 C Street, Wheatland. If you wish more info, you may call City Hall at 530-633-2761.

Where does my water come from?

Water supply for the City of Wheatland originates from six deep groundwater sources known as Wells #3, #4, #5, #6, #7 and # 8 ranging from a depth of 159 to 280 feet below ground level. The water system has one ground level storage tank which holds 660,000 gals and one elevated storage tank that holds 72,000 gals. The elevated storage tank is used primarily to keep a constant pressure of approximately 48-50 psi throughout the water system grid. The average water consumption in the summer months is approximately 1,300,000 gals per day with a peak demand of 1,600,000 gals per day. Sodium hypochlorite solution (also known as bleach) is added at each well source head to disinfect and kill any possible disease causing bacteria. The amount of bleach that is injected into the water is closely monitored by the operator and the SCADA (Supervisory Control and Data Acquisition) computer system. SCADA computer system controls and monitors the complete water system and the operator can observe or control the On/Off status, flow rate, pressure (psi), chlorine residual level, and well's on/off tank levels at each well site. In the event of a problem occurring after hours or weekends, the SCADA system has an alarm system that dials the 24 hr. standby operator on duty so he may log on his computer at home to fix the problem or quickly respond if needed. The Wheatland Water Department is inspected annually by the CA Dept. of Public Health. We are required to follow all regulations set forth by U.S. Environmental Protection Agency and CA Dept. of Public Health, including a strict sample monitoring schedule. A copy of the inspection report is available upon request. Please know, your water meets or exceeds all state and federal standards.

Wheatland 2013 Water Usage Flow Totals

2013 One Day Max Flow – 1,604,000 Gals (1 Aug 2013)
2013 Month Max Flow – 38,569,000 Gals (July)
2013 Year Total Water Produced – 270,349,000 Gallons

Chemical Detected	Source	Year Tested	Level Detected	SMCL	PHG	Major Source
SECONDARY STANDARDS (Aesthetic Effects Only-Do Not Pose a Health Hazard)						
Color	Well 3 Well 4 Well 5 Well 7 Well 8 Well 6	2009	1 Unit 2 Unit	15 Units	None	Erosion/ Leaching of natural deposits
Odor Threshold	Well 4 Well 5 Well 6 Well 7 Well 8 Well 6	2012 2009 2009 2009 2009 2009	1 T.O.N. 2 T.O.N.	3 T.O.N.	3 T.O.N.	Erosion/ Leaching of natural deposits
Turbidity	Well 3 Well 4 Well 5 Well 6 Well 7 Well 8	2009 2013 2009 2009 2009 2009	0.05 NTU 0.5 NTU 0.2 NTU 5.2 NTU 0.3 NTU 0.1 NTU	5 NTU	None	Erosion/ Leaching of natural deposits
Total Dissolved Solids	Well 3 Well 4 Well 5 Well 6 Well 7 Well 8	2013 2005 2008 2008 2008 2009	270 ppm 310 ppm 310 ppm 330 ppm 450 ppm 260 ppm	1000	None	Erosion/ Leaching of natural deposits
Iron	Well 4 Well 8 Well 6	2013 2010 2012	320 ppb 149 ppb 355 ppb	300	None	Erosion/ Leaching of natural deposits
Chloride	Well 3 Well 5 Well 6 Well 7 Well 8	2013 2008 2011 2013 2009	26.5 ppm 40.8 ppm 18.0 ppm 215 ppm 57.7 ppm	600	None	
Sulfate	Well 3 Well 5 Well 6 Well 7 Well 8	2004 2008 2011 2013 2009	55.4 ppm 22.0 ppm 65 ppm 45 ppm 27.1 ppm	600	None	

DETECTED CONTAMINANTS IN YOUR WATER:

The tables give a list of all detected chemicals in our water during the most recent sampling. The US Environmental Protection Agency (EPA) and the CA Dept of Public Health (DPH) set the testing schedule. Please note that not all sampling is required annually so in some cases results are more than one year old. The following tables list only organic, inorganic, and secondary chemicals that were detected in your water. Your water is tested for nearly 100 other chemicals that if not listed, were found to be **not detected**. The minimum detection level is typically in parts per million, parts per billion, or parts per trillion. Test results are then compared to state and federal standards to confirm your water meets all drinking water health standards. Secondary Standard contaminants are not considered to present a risk to human health.

Chemical Detected	Source	Year Tested	Level Detected	MCL	PHG	Major Source
INORGANIC CONTAMINANTS						
Fluoride (Natural Source)	Well 3	2013	177 ppb	2000	1000	Erosion of natural deposits; water additive which promotes strong teeth
	Well 4	2004	151 ppb			
	Well 5	2005	200 ppb			
	Well 6	1999	130 ppb			
	Well 7	2013	151 ppb			
	Well 8	2009	355 ppb			
Selenium	Well 6	2009	8.2 ppb	50	None	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage
Barium	Well 3	2013	54 ppb	1000	None	
Nitrite	Well 7	2009	0.25 ppb	1000	None	
Arsenic	Well 3	2011	1.8 ppb	10	0.004	
	Well 5	2010	1.2 ppb			
	Well 7	2013	2.9 ppb			
		Average	Range	MCL	PHG	
Nitrate (NO ₃)	Well 3	12.1 ppm	11.4-12.8 ppm	45	45	
	Well 4	17 ppm	12.8 - 21.2 ppm			
	Well 5	13.6 ppm	13.6 ppm			
	Well 6	18.6 ppm	18.6 ppm			
	Well 7	10.6 ppm	6.9 - 13.0 ppm			
	Well 8	5.6 ppm	2.8 - 11.1 ppm			
SODIUM AND HARDNESS TEST RESULTS						
Sodium	Well 3	2011	39.3 ppm	None	None	Erosion of natural deposits
	Well 4	2006	15 ppm			
	Well 5	2006	24 ppm			
	Well 6	2006	15 ppm			
	Well 7	2010	71 ppm			
	Well 8	2006	63.1 ppm			
Total Hardness (as CaCO ₃)	Well 3	2003	222 ppm	None	None	
	Well 4	2006	273 ppm			
	Well 5	2006	134 ppm			
	Well 6	2006	242 ppm			
	Well 7	2006	204 ppm			
	Well 8	2006	66 ppm			
UNREGULATED CONTAMINANTS						
Boron	Well 6	2003	340 ppb	UCMR	1000	Erosion/Leaching of natural deposits
	Well 7	2003	100 ppb			
	Well 8	2006	360 ppb			
Vanadium	Well 3	2003	8.6 ppb	UCMR	None	
	Well 4	2002	6.7 ppb			
	Well 5	2002	9.2 ppb			
	Well 6	2002	6.4 ppb			
	Well 7	2003	5 ppb			
	Well 8	2004	21 ppb			

Definitions of some of the terms used in this report:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is technologically, and economically feasible.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Residual Disinfection Level (MRDL): The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG): The Level of disinfectant added for water treatment below which there is no known or expected risk to health. MRDLG's are set by the U.S. Environmental Protection Agency.

Secondary Maximum Contaminant Level (SMCL): EPA does not enforce these contaminants. They are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. They are not considered to present a risk to human health at the SMCL.

parts per million (ppm): Equals one part of liquid per million parts of liquid.

parts per billion (ppb): Equals one part of liquid per billion parts of liquid.

ND: not detectable at testing limit.

UCMR: unregulated chemical with no MCL

NTU: Nephelometric Turbidity Units

Threshold Odor Number (TON):

90th Percentile Value: The reported copper and lead values represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90 percent of the lead and copper values detected by your water system.

Action Level (AL): The concentration of a contaminant which, if exceeded, then triggers treatment and/or other requirements that a drinking-water supplier must follow

General Information: 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 human activity.

The Truth about Bottled Water:

Did you know that the average bottle of water can cost up to 1,000 times more than tap water? Despite what it's higher cost would lead us to believe, estimates are that 25- 40% of the bottled water on the market is simply repackaged tap water. Tap water is regulated by the Environmental Protection Agency (EPA) under the Safe Drinking Water Act, while bottled water is considered a food and is thus regulated by the Food and Drug Administration (FDA). Though some bottlers may voluntarily exceed FDA standards, those standards are less stringent than for tap water. For more info, visit www.DrinkTap.org. **Possible Options:** During these economically sensitive times, it's important to know that you have other, more affordable options to bottled water:

1. *Chill a pitcher of tap water in your refrigerator:*

To enhance the taste of tap water, one simple suggestion is to leave an open pitcher in the refrigerator overnight. The exposure to the air allows the small amount of chlorine, which is added to all tap water to ensure adequate disinfection and maintain high quality, to evaporate. Using the chilled water pitcher with refillable water bottles or thermoses allows for an inexpensive way to achieve portability and a refreshing taste.

2. *Water Filtration Systems:*

Another possibility is to install a home water filter system. These systems are convenient, easy to use, and enhance the taste of water. These systems achieve the same desired results, while still costing a fraction of the price of bottled water. For info on CA certified water filtration systems, click on the Devices and Machines of Public Health website, www.cdph.ca.gov.

Contaminates that may be present in source water include:

Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic tanks, agricultural livestock operations, and wildlife.

Inorganic contaminants, Such as salts and metals, that 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, that may come from variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

Radioactive contaminants, that can be naturally-occurring or be that result of oil and gas production and mining activities.

Important Health Information:

In order to ensure that tap water is safe to drink, USEPA and the CA Dept. of Public Health prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. 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 USEPA's Safe Drinking Water Hotline (1-800-426-4791). 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 particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and more information about contaminants and potential health effects are available from the USEPA's Safe Drinking and Water Hotline at (800) 426-4791 or go online to www.epa.gov/safewater.

Lead & Copper Testing Results:

Since 1986 in the U.S. the use of lead in plumbing pipes, fixtures, and solder has been restricted by law, when the federal Safe Drinking Water Act was first amended to require a rule regulating lead and copper at the drinking water consumers tap.

Posing certain health risks to most people if consumed in excess, lead and copper enter drinking water mainly as a result of corrosion of plumbing material. As a result, the federal "lead and copper rule" was issued in 1991 by the EPA to limit the concentration of those two metals in public water. October 2007, the rule was revised; requiring water suppliers to reduce water corrosiveness in attempt to protect public water systems consumers from excessive exposure to lead and copper even further.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels in your home may be higher than in other homes as a result of materials in your house plumbing. The City is responsible for providing high-quality drinking water, but it cannot control the variety of materials used in household plumbing pipes and fixtures.

So, when your water has been sitting for several hours, minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using the water for drinking or cooking. If you are concerned about lead in your water, contact Donald Scott, at 530-633-2785, about its testing. For information on lead in drinking water, call the Safe Drinking

Water Hotline (1-800-426-4791) or go to <http://www.epa.gov/safewater/lead>.

To find out how well they are doing this, water suppliers are required to sample a representative number of consumer's taps, with the frequency of sampling depending upon the size of the system and the system's lead and copper results.

The City of Wheatland, for instance, is required to sample for lead and copper at 40 consumers taps, every three years. The City of Wheatland last lead and copper testing was required and performed in 2011 and those results are reported below. Next sampling will take place in 2014 and those results will be reported in 2015. The table below summarizes the most recent monitoring for these constituents.

	Year Tested	Number of samples collected	Number of above action level	90 th Percentile Result (ppb)	Action Level (ppb)
Lead	2011	42	0	ND	15
Copper	2011	42	0	275	1300

Nitrates:

Nitrate in drinking water at levels above 45 ppm is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness: symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with specific enzyme deficiencies. If you are caring for an infant you should ask advice from your health care provider.

Arsenic:

While your drinking water meets and is well below the federal and state standard of MCL 10ppb for arsenic, it does contain very low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency 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.

Disinfectant Added to Water						
12.5 % Sodium Hypochlorite Solution (Bleach)	All 15 Sample Points	Year 2013	Avg. (ppm)	Range (ppm)	MRDL	MRDLG
			0.74	0.52 – 1.00	4.0	4.0

Bleach in Water:

Why do we put bleach in the water? Bleach is an oxidizing agent used as a disinfectant that, when added to water, kills microorganisms such as bacteria and viruses. The State of California requires that we maintain a minimum residual of 0.2 parts per million (ppm) of chlorine in our water at all times to kill any potential microorganisms.

Microbiological Water Quality:

The simple fact is bacteria and other micro-organisms are naturally present in the environment and can be found all around us: in our food; on our skin; in our bodies; and, in the air, soil and water. Some are harmful to us and some are not. Testing for these bacteriological contaminants in the distribution system is required by State regulations. The testing is done regularly to verify that the water system is free from coliform bacteria which are bacteria that are naturally present in the environment and are used as an indicator that other; potentially-harmful, bacteria may be present. The minimum number of tests required by CA Dept. of Public Health per month is four (4). The City collects five (5) per month with a total of 60 samples collected annually. The highest number of samples found to contain coliform bacteria during any one month was one(1)