

DISINFECTANT ADDED TO WATER

Sodium Hypochlorite Solution (Bleach)	All Sample Points	2012	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 mill on (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).

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.

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 be 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.

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.

Lead:

Pregnant women, 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. City of Wheatland 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 (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

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.

SOURCE WATER ASSESSMENT:

A source water assessment has been completed for the wells serving the City of Wheatland. The sources are considered most vulnerable to the following activities not associated with any detected contaminants:

Well 3: Above ground storage tanks, construction /demolition staging areas, equipment storage areas, water supply wells, chemical/petroleum pipelines, gas stations.

Well 4: Gas stations, sewer collection systems.

Well 5: Chemical/petroleum pipelines, sewer collection systems.

Well 6: Auto repair & machine shops, bus terminals, grazing, septic systems, existing and historic gas stations.

Well 7: Grazing, home manufacturing, sewer collection systems.

Well 8: Sewer collection systems.

A copy of the complete assessment may be viewed at:

CDPH Valley District Office	<u>or at</u>	City of Wheatland
415 Knollcrest Drive		111 C Street
Suite 110, Redding, CA 96002		Wheatland, CA 95692
Reese Crenshaw at 530-224-4867		

Water Conservation

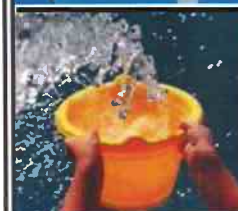
The State of California Assembly Bill 1420 requires that overall water usage be reduced 20% by 2020. Although the Utilities Department does not have immediate plans for mandatory water rationing, water conservation is vital. All Wheatland residents are encouraged to use water wisely and make reductions in water usage where you can. Although conservation is just one component of a more comprehensive solution that is necessary to overcome the state's water challenges, it is something we can all do today and it is easier than you might expect. Just little changes in our daily habits can make a big difference. Here are a few suggestions:

- Take shorter showers. Replace your showerhead with an ultra-low-flow version.
- Change to low flow faucet aerator and don't let water run while shaving or washing your face. Brush your teeth first while waiting for water to get hot, then wash or shave after filling the basin.
- Verify that your home is leak-free and repair dripping faucets by replacing washers.
- Change to low flush toilets and avoid flushing the toilet unnecessarily. Dispose of tissues, insects and other similar waste in the trash rather than the toilet.
- Store drinking water in the refrigerator. Don't let the tap run while you are waiting for cool water to flow.
- Operate automatic dishwashers and clothes washers only when they are fully loaded. Set the water level for the size of load you are using.
- Water before 8 am or after 6 pm and avoid watering on windy days. This reduces losses from evaporation.
- Check sprinkler system valves for leaks and keep the heads in good repair.
- Wash your car with a bucket of soapy water and use a nozzle to stop the flow of water from the hose between rinsing.

Visit our web site at wheatland.ca.gov for more water conservation ideas.

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CITY of WHEATLAND



2012 WATER QUALITY CONSUMER CONFIDENCE REPORT

wheatland.ca.gov

2012 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.

City of Wheatland is pleased to present our 2012 annual water quality report to our customers. This edition covers all testing completed from Jan 1, 2012 through Dec 31, 2012. 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 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.

2012 One Day Max Flow – 1,604,000 Gals (1 Aug 2012)

2012 Month Max Flow – 38,569,000 Gals (July)

2012 Year Total Water Produced – 270,349,000 Gallons

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.

ppb: parts per billion or micrograms per liter

ppm: parts per million or milligrams per liter

nd: non detectable at testing limit

UCMR: unregulated chemical with no MCL

NTU: Nephelometric Turbidity Units

Threshold Odor Number (TON):

DETECTED CONTAMINANTS IN YOUR WATER:

The following 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.

Chemical Detected	Source	Year Tested	Level Detected	MCL	PHG	Major Source
INORGANIC CONTAMINANTS						
Fluoride (Natural Source)	Well 3	2004	170 ppb	2000	1000	Erosion of natural deposits; water additive which promotes strong teeth
	Well 4	2011	127 ppb			
	Well 5	2005	200 ppb			
	Well 6	1999	130 ppb			
	Well 7	2008	271 ppb			
Nitrate (NO ₃)	Well 8	2009	355 ppb	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage
	Well 3	2012	15.8 ppb			
	Well 4	2012	23.2 ppb			
	Well 5	2012	23.1 ppb			
	Well 6	2012	22.7 ppb			
Cadmium	Well 7	2012	13.1 ppb	5	0.07	Erosion/leaching of natural deposits
	Well 8	2012	2.6 ppb			
	Well 5	2003	1.2 ppb			
Selenium	Well 6	2003	0.50 ppb	50	None	Erosion/leaching of natural deposits
	Well 4	2003	5.0 ppb			
	Well 5	2003	5.5 ppb			
Barium	Well 6	2009	8.2 ppb	1000	None	Erosion/leaching of natural deposits
Nitrite (as N)	Well 3	2004	85 ppb	1000	None	
Arsenic	Well 7	2009	0.25 ppb	1000	None	
	Well 3	2011	1.8 ppb	10	0.004	Erosion of natural deposits
	Well 5	2010	1.2 ppb			
	Well 7	2010	1.4 ppb			

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			
Total Hardness (as CaCO ₃)	Well 8	2006	63.1 ppm	None	None	Erosion of natural deposits
	Well 3	2003	222 ppm			
	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	Erosion/ Leaching of natural deposits
	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			

Chemical Detected	Source	Year Tested	Level Detected	MCL	PHG	Major Source
SECONDARY STANDARDS (Aesthetic Effects)						
Color	Well 3	2009	1 Unit	15 Units	None	Erosion/ Leaching of natural deposits
	Well 4		1 Unit			
	Well 5		1 Unit			
	Well 7		1 Unit			
	Well 8		1 Unit			
Odor Threshold	Well 6	2009	2 Unit	3 T.O.N.	3 T.O.N.	Erosion/ Leaching of natural deposits
	Well 3		1 T.O.N.			
	Well 4		1 T.O.N.			
	Well 5		1 T.O.N.			
	Well 7		1 T.O.N.			
Turbidity	Well 8	2009	1 T.O.N.	5 NTU	None	Erosion/ Leaching of natural deposits
	Well 6		2 T.O.N.			
	Well 3		0.05 NTU			
	Well 4		0.15 NTU			
	Well 5		0.2 NTU			
Total Dissolved Solids	Well 6	2009	5.2 NTU	1000	None	Erosion/ Leaching of natural deposits
	Well 7		0.3 NTU			
	Well 8		0.1 NTU			
	Well 3		290 ppm			
	Well 4		310 ppm			
Iron	Well 5	2008	310 ppm	300	None	Erosion/ Leaching of natural deposits
	Well 6		330 ppm			
	Well 7		450 ppm			
Chloride	Well 8	2009	260 ppm	600	None	Erosion/ Leaching of natural deposits
	Well 3		149 ppb			
	Well 6		355 ppb			
Sulfate	Well 3	2004	18.6 ppm	600	None	Erosion/ Leaching of natural deposits
	Well 5		40.8 ppm			
	Well 6		18.0 ppm			
	Well 7		287 ppm			
	Well 8		57.7 ppm			
Sulfate	Well 3	2004	55.4 ppm	600	None	Erosion/ Leaching of natural deposits
	Well 5		22.0 ppm			
	Well 6		65 ppm			
	Well 7		51.3 ppm			
	Well 8		27.1 ppm			

Lead & Copper Testing Results: Lead & copper testing of water from individual household taps in the distribution system is required by State regulations. Typically copper and lead sources come from internal corrosion of household plumbing systems. The table below summarizes the most recent monitoring for these constituents. The 90th percentile level for lead and copper must be less than the action level. (90 percentile result level is the result that is less than the top 9%)

	Year Tested	Number of samples collected	Number of above action level	90 th Percentile Result (ppb)	Action Level (ppb)
Lead	2011	42	0	2.0	15
Copper	2011	42	0	275	1300

Total Water Hardness Table

Soft- 0-60 ppm = 0-3 Grains/Gal
Semi-Hard - 61-120 ppm = 4-7 Grains/Gal
Hard - 121-180 ppm = 8-10 Grains/Gal
Very Hard - Over 180 ppm = Over 10 Grains/Gal

Turbidity is the measurement of the cloudiness of the water.

Total Dissolved Solids (TDS) is a measure of the total amount of all material that is dissolved in water.

Threshold Odor Number (T.O.N.) is the minimum odor of water sample that can just be detected after successive dilutions with odorless water.

Color is determined by visual comparison of the sample with known concentrations of colored solutions.

Fluoride: At this time the city does not add fluoride to the water supply. Fluoride occurs naturally in the groundwater at a level of approximately 0.20 ppm. (200 ppb)