

# City of Goodland 2010 Water Report

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- ▶ Water is a precious commodity with which we need to take great measures to be resourceful and conserve what is provided to each of us. Please take time to look over the annual water quality report for **2010**. Included are details about where the water comes from, how it is treated, what it contains and how it compares to standards set forth by regulatory agencies. It contains vital information about your drinking water.
- ▶ This report is published in part because of amendments to the Safe Drinking Water Act, which requires all public water systems to issue such reports on an annual basis.
- ▶ Each day, City of Goodland employees work hard to make sure that the water delivered to our customers meets or exceeds all regulatory requirements. To maintain high water quality, the staff collects samples in accordance with all State and Federal requirements.
- ▶ The Water Division Superintendent is Rich Simon and the Water Division Manager is Neal Thornburg. Other staff members include Joey Snethen and Dylan Glover.
- ▶ City Commission meetings are on the 1<sup>st</sup> and 3<sup>rd</sup> Mondays of each month at 5:00 p.m. MST. Contact number for questions or comments is 785-890-4500.

## MESSAGE FROM EPA

- ◆ Drinking Water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants.
- ◆ Some people may be more vulnerable to contaminants in drinking water than the general population. Such as cancer patients, organ transplants, HIV/AIDS or other immune system disorders, some elderly and infants. If concerned, you should seek advice about drinking water from a health care provider.
- ◆ Source of drinking water include rivers, lakes, streams, ponds, reservoirs, springs and wells.
- ◆ EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants and potential health effects are available by calling the Safe Drinking Water Hotline 800-426-4791.

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

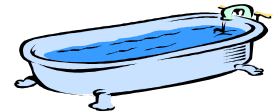
**Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

**Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas productions, mining or farming.

**Pesticides and herbicides**, which may come from a variety of sources such as storm water run off agriculture, and residential uses.

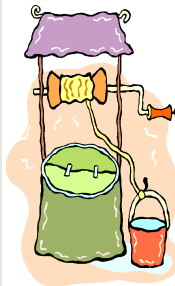
**Radioactive contaminants**, which can be naturally occurring or the result of mining activity.

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



## Water Conservation Tips

- △ Don't use running water to thaw meat or other frozen foods.
- △ Insulate your water pipes.
- △ Don't flush the toilet unnecessarily.
- △ Don't let water run while shaving or brushing teeth.
- △ Use dishwasher, clothes washers only when fully loaded.
- △ Repair dripping faucets by fixing washers.
- △ Check toilets for leaks by adding food coloring to the tank.
- △ Water plants with any unused water.



### Production well field - sources of water

The City of Goodland has authority for the placement of eleven (11) groundwater wells. In 2010, eight (8) wells produced water and three (3) wells were taken out of service. The source water assessment has been completed by the State, which helps the City identify possible sources of well contamination. The replacement of Well 4 is still ongoing as the city is trying to locate a suitable site. The well depths for Wells 3 through 8, 10 and 12 average 290-300 feet in depth. Wells 9 and 11 average 350 feet in depth. All of the wells receive their water from the Ogallala Aquifer.

### Treatment process and chemicals used

In order to ensure that tap water is safe to drink, EPA prescribes regulation which limits the amount of certain contaminants in water provided by public water systems. We treat our water according to EPA's regulations. City water is treated to remove several contaminants and a disinfectant is added to protect you against microbial contaminants. The Safe Drinking Water Act (SDWA) required states to develop a Source Water Assessment (SWA) for each public water supply that treats and distributes raw source water in order to identify potential contamination sources. The State has completed an assessment of our source water. For results of the assessment, please contact us or view on-line at: <http://www.kdheks.gov/nps/swap/SWreports.html>.

Our water system tested a minimum of five samples per month in accordance with the Total Coliform Rule for microbiological contaminants. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease causing bacteria. When Coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public.

The tables on the following page list all of the drinking water contaminants. The presence of these contaminants does not necessarily indicate the water poses a health risk. Unless noted, the data presented in this table is from the testing done January 1- December 31, 2010. The State requires the City to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

**Maximum Contaminant Level Goal (MCL):** the "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLGs allow for a margin of safety.

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

**Secondary Maximum Contaminant Level (SMCL):** recommended level for a contaminant that is not regulated and has no MCL.

**Action Level (AL):** the concentration of a contaminant that, if exceeded, triggers treatment or other requirements.

**Treatment Technique (TT):** a required process intended to reduce levels of a contaminant in drinking water.

**Maximum Residual Disinfectant Level (MRDL):** the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Non-Detects (ND):** lab analysis indicates that the contaminant is not present.

**Parts per Million (ppm) or milligrams per liter (mg/l)**

**Parts per Billion (ppb) or micrograms per liter (ug/l)**

**Picocuries per Liter (pCi/L)** a measure of the radioactivity in water.

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

**Million Fibers per Liter (MFL):** a measure of the presence of asbestos fibers that are longer than ten micrometers.

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

Regulated Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Arsenic	2/17/2009	4.5	2.7-4.5	ppb	10	0	Erosion of natural deposits
Barium	2/18/2009	0.13	.087-.13	ppm	2	2	Discharge from metal refineries
Chromium	2/17/2009	6	1.9-6	ppb	100	100	Discharge from steel and pulp mills
Fluoride	2/23/2009	1.6	1-1.6	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth
Nitrate	10/19/2010	11	4.1-11	ppm	10	10	Runoff from fertilizer use
Selenium	2/17/2009	13	7.5-13	ppb	50	50	Erosion of natural deposits
Turbidity	2/7/2006	1.7	.17-1.7	NTU	1	0	Soil runoff

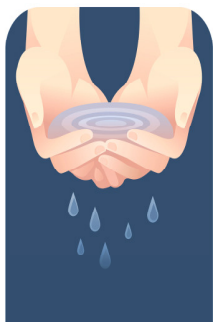
Disinfection Byproducts	Monitoring Period	Highest RAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes (TTHMs)	2008-2010	3	3.1	ppb	80	0	By-product of drinking water chlorination

Lead and Copper	Monitoring Period	90 <sup>th</sup> Percentile	Range	Unit	AL	Sites Over AL	Typical Source
Copper, Free	2008-2010	.16	.0052-.21	ppm	1.3	0	Corrosion of household plumbing
Lead	2008-2010	3.1	1.1-4.8	ppb	15	0	Corrosion of household plumbing

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. Your 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>.

Radiological Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Combined Radium(-226 & -228)	8/11/2010	1.3	1.2-1.3	pCi/L	5	0	Erosion of natural deposits
Combined Uranium	8/11/2010	26	16-26	ug/l	30	0	Erosion of natural deposits
Gross Alpha, Excl. Radon & U	7/12/2010	3.7	3.7	pCi/L	15	0	Erosion of natural deposits

Secondary Contaminants	Collection Date	Highest Value	Range	Unit	SMCL	
Alkalinity, Total	2/17/2009	187	150-187	MG/L	300	During the 2010 calendar year, violations of drinking water regulations are as follows, Nitrate-maximum contaminant level (MCL) violations 2 <sup>nd</sup> , 3 <sup>rd</sup> and 4 <sup>th</sup> quarters 2010. Nitrate in drinking water at levels above 10ppm 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 for advice from your health care provider.
Calcium	2/17/2009	56	36-56	MG/L	200	
Chloride	2/18/2009	27	9.4-27	MG/L	250	
Conductivity @ 25 C UMHOS/CM	2/17/2009	600	440-600	UMHO/CM	1500	
Corrosivity	2/17/2009	.58	.046-.058	LANG	0	
Gross Uranium by Activity	8/11/2010	18	12-18	PCI/L		
Hardness, Total (AS CAC03)	2/18/2009	210	140-210	MG/L	400	
Magnesium	2/23/2009	18	13-18	MG/L	150	
Nickel	2/23/2009	.0011	.001-.0011	MG/L	.1	
PH	2/17/2009	8.4	7.7-8.4	PH	8.5	
Potassium	2/23/2009	5	4.1-5	MG/L	100	
Silica	2/23/2009	60	51-60	MG/L	50	
Sodium	2/17/2009	44	33-44	MG/L	100	
Sulfate	2/23/2009	45	21-45	MG/L	250	
TDS	2/17/2009	390	280-390	MG/L	500	
Zinc	2/17/2009	.039	.014-.039	MG/L	5	



This report summarizes the results of our water quality tests and provides specific information about the quality of the water served in your neighborhoods. Last year, we conducted hundreds of field and laboratory tests to ensure the quality of our water before we serve the water to our customers. We hope the information included in this annual water quality report will provide helpful information about the water you rely on for your daily needs. Its purpose is to help you understand the amounts and types of testing done to ensure the high quality of water we provide every customer.

On behalf of the City, I would like to thank you – our customers – for your cooperation and support.

Doug Gerber, City Manager