

***Annual Drinking Water Quality Report  
The Water We Drink  
Town of Superior, WY  
Jan.13, 2014***

We're pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our water source is 3 wells about 10 miles east of town. Wells 17 and 18 draw from the Erickson Formation, and well 19 draws from the Almond Formation.

I'm pleased to report that our drinking water is safe and meets federal and state requirements.

This report shows our water quality and what it means.

If you have any questions about this report or concerning your water utility, please contact **Candace Smith at 362-1152 or 362-8173**. 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 second and fourth Thursdays of each month at 7:00 pm at Town Hall at 3 North Main St.**

The Town of Superior routinely monitors for constituents in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2013. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

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)* - one part per million corresponds to one minute in two years or a single penny in \$10,000.

*Parts per billion (ppb) or Micrograms per liter* - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

*Parts per trillion (ppt) or Nanograms per liter (nanograms/l)* - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

*Parts per quadrillion (ppq) or Picograms per liter (picograms/l)* - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

*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.

*Million Fibers per Liter (MFL)* - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

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

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

*Maximum Contaminant Level (MCL)* - (mandatory language) The “Maximum Allowed” (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 (MCLG)* - (mandatory language) The “Goal”(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.

*Maximum Residual Disinfectant Level (MRDL)* – (mandatory language) 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.

*Maximum Residual Disinfectant Level Goal (MRDLG)* – (mandatory language) The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

<b>TEST RESULTS</b>						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
<b>Microbiological Contaminants</b>						
1. Total Coliform Bacteria	N	0		0	presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment
2. Fecal coliform and <i>E.coli</i>	N	0		0	a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive	Human and animal fecal waste

TEST RESULTS						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
5. Turbidity				n/a	TT	Soil runoff
<b>Radioactive Contaminants</b>						
6. Beta/photon emitters	N	0	mrem/yr	0	4	Decay of natural and man-made deposits
7. Alpha emitters	N	0	pCi/l	0	15	Erosion of natural deposits
8. Combined radium	N	0	pCi/l	0	5	Erosion of natural deposits
9. Uranium <sup>1</sup>	N	0	µg/L	0 <sup>1</sup>	30 <sup>1</sup>	Erosion of natural deposits
<b>Inorganic Contaminants</b>						
10. Antimony	N	0	ppb	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
11. Arsenic <sup>2</sup>	N	0	ppb	n/a <sup>2</sup>	50 <sup>2</sup>	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
12. Asbestos	N	0	MFL	7	7	Decay of asbestos cement water mains; erosion of natural deposits
13. Barium	N	0.1	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
14. Beryllium	N	0	ppb	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
15. Cadmium	N	0	ppb	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
16. Chromium	N	0	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
17. Copper	N	0.23	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
18. Cyanide	N	0	ppb	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
19. Fluoride	N	0.4	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
20. Lead	N	0.04	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
21. Mercury (inorganic)	N	0	ppb	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
22. Nitrate (as Nitrogen)	N	0	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

<b>TEST RESULTS</b>						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
23. Nitrite (as Nitrogen)	N	0	ppm	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
24. Selenium	N	0	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
25. Thallium	N	0	ppb	0.5	2	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
<b>Synthetic Organic Contaminants including Pesticides and Herbicides</b>						
26. 2,4-D	N	0	ppb	70	70	Runoff from herbicide used on row crops
27. 2,4,5-TP (Silvex)	N	0	ppb	50	50	Residue of banned herbicide
28. Acrylamide	N	0		0	TT	Added to water during sewage/wastewater treatment
29. Alachlor	N	0	ppb	0	2	Runoff from herbicide used on row crops
30. Atrazine	N	0	ppb	3	3	Runoff from herbicide used on row crops
31. Benzo(a)pyrene (PAH)	N	0	nanograms/l	0	200	Leaching from linings of water storage tanks and distribution lines
32. Carbofuran	N	0	ppb	40	40	Leaching of soil fumigant used on rice and alfalfa
33. Chlordane	N	0	ppb	0	2	Residue of banned termiticide
34. Dalapon	N	0	ppb	200	200	Runoff from herbicide used on rights of way
35. Di(2-ethylhexyl) adipate	N	0	ppb	400	400	Discharge from chemical factories
36. Di(2-ethylhexyl) phthalate	N	0	ppb	0	6	Discharge from rubber and chemical factories
37. 1,2-Dibromo-3-chloropropane (DBCP)	N	0	nanograms/l	0	200	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
38. Dinoseb	N	0	ppb	7	7	Runoff from herbicide used on soybeans and vegetables
39. Diquat	N	0	ppb	20	20	Runoff from herbicide use
40. Dioxin [2,3,7,8-TCDD]	N	0	picograms/l	0	30	Emissions from waste incineration and other combustion; discharge from chemical factories
41. Endothall	N	0	ppb	100	100	Runoff from herbicide use
42. Endrin	N	0	ppb	2	2	Residue of banned insecticide
43. Epichlorohydrin	N	0		0	TT	Discharge from industrial chemical factories; an impurity of some water treatment chemicals
44. Ethylene dibromide	N	0	nanograms/l	0	50	Discharge from petroleum refineries
45. Glyphosate	N	0	ppb	700	700	Runoff from herbicide use
46. Heptachlor	N	0	nanograms/l	0	400	Residue of banned termiticide
47. Heptachlor epoxide	N	0	nanograms/l	0	200	Breakdown of heptachlor

<b>TEST RESULTS</b>						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
48. Hexachlorobenzene	N	0	ppb	0	1	Discharge from metal refineries and agricultural chemical factories
49. Hexachlorocyclopentadiene	N	0	ppb	50	50	Discharge from chemical factories
50. Lindane	N	0	nanograms/l	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens
51. Methoxychlor	N	0	ppb	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
52. Oxamyl [Vydate]	N	0	ppb	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
53. PCBs [Polychlorinated biphenyls]	N	0	nanograms/l	0	500	Runoff from landfills; discharge of waste chemicals
54. Pentachlorophenol	N	0	ppb	0	1	Discharge from wood preserving factories
55. Picloram	N	0	ppb	500	500	Herbicide runoff
56. Simazine	N	0	ppb	4	4	Herbicide runoff
57. Toxaphene	N	0	ppb	0	3	Runoff/leaching from insecticide used on cotton and cattle
<b>Volatile Organic Contaminants</b>						
58. Benzene	N	0	ppb	0	5	Discharge from factories; leaching from gas storage tanks and landfills
59. Carbon tetrachloride	N	0	ppb	0	5	Discharge from chemical plants and other industrial activities
60. Chlorobenzene	N	0	ppb	100	100	Discharge from chemical and agricultural chemical factories
61. o-Dichlorobenzene	N	0	ppb	600	600	Discharge from industrial chemical factories
62. p-Dichlorobenzene	N	0	ppb	75	75	Discharge from industrial chemical factories
63. 1,2 - Dichloroethane	N	0	ppb	0	5	Discharge from industrial chemical factories
64. 1,1 - Dichloroethylene	N	0	ppb	7	7	Discharge from industrial chemical factories
65. cis-1,2-Dichloroethylene	N	0	ppb	70	70	Discharge from industrial chemical factories
66. trans - 1,2 Dichloroethylene	N	0	ppb	100	100	Discharge from industrial chemical factories
67. Dichloromethane	N	0	ppb	0	5	Discharge from pharmaceutical and chemical factories
68. 1,2-Dichloropropane	N	0	ppb	0	5	Discharge from industrial chemical factories
69. Ethylbenzene	N	0	ppb	700	700	Discharge from petroleum refineries
70. Styrene	N	0	ppb	100	100	Discharge from rubber and plastic factories; leaching from landfills
71. Tetrachloroethylene	N	0	ppb	0	5	Discharge from factories and dry cleaners
72. 1,2,4 - Trichlorobenzene	N	0	ppb	70	70	Discharge from textile-finishing factories
73. 1,1,1 - Trichloroethane	N	0	ppb	200	200	Discharge from metal degreasing sites and other factories
74. 1,1,2 -Trichloroethane	N	0	ppb	3	5	Discharge from industrial chemical factories

TEST RESULTS						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
75. Trichloroethylene	N	0	ppb	0	5	Discharge from metal degreasing sites and other factories
76. Toluene	N	0	ppm	1	1	Discharge from petroleum factories
77. Vinyl Chloride	N	0	ppb	0	2	Leaching from PVC piping; discharge from plastics factories
78. Xylenes	N	0	ppm	10	10	Discharge from petroleum factories; discharge from chemical factories
Disinfectants/Disinfection By-Products						
79. Bromate	N	0	ppb	0	10	By-product of drinking water disinfection
80. Chlorite	N	0	ppm	0.8	1	By-product of drinking water disinfection
81. HAA5's [Haloacetic Acids]	N	0.45	ppb	n/a	60	By-product of drinking water disinfection
82. TTHM [Total trihalomethanes]	N	5.06	ppb	n/a	80	By-product of drinking water chlorination
83. Chloramines as Cl <sub>2</sub>	N	0	ppm	MRDLG = 4	MRDL = 4	Water additive used to control microbes
84. Chlorine as Cl <sub>2</sub>	N	0	ppm	MRDLG = 4	MRDL = 4	Water additive used to control microbes
85. Chlorine dioxide as ClO <sub>2</sub>	N	0	ppm	MRDLG = 0.8	MRDL = 0.8	Water additive used to control microbes

TEST RESULTS						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Unregulated Contaminants						
86.	N			n/a	n/a	
87.	N			n/a	n/a	

(17) 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.

(19) 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.

(20) Lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

(82) Total Trihalomethanes (TTHMs). Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, inorganic or organic

chemicals and radioactive substances. All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

MCL's are set at very stringent levels. **The MCL's are set such that out of every 10,000 or 1,000,000 people (depends upon how the MCL was developed) drinking 2 liters of water every day for a lifetime, only 1 of those people may experience the described health effect.**

**Lead:** Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.

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).

Please call our office if you have questions.

We at the Town of Superior work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.