

*2011
Annual Drinking Water Quality Report
for*



We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality of the 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 sources are the West Spring, East Spring, Gardner Spring, North Spring, South Spring, Fish Spring, Garland Overflow and the Cedar Ridge Well. We also purchase water from the Bear River Water Conservancy District, from the Newman Well.

Tremontion City has a Drinking Water Source Protection Plan. It provides more information such as potential sources of contamination and our source protection areas. It has been determined we have a low susceptible level to potential sources of contamination, such as septic tanks, roads, homes, etc. If you have any questions regarding source protection, contact the office to review our source protection plan. Our source is in a remote location, and there are no potential contamination sources in the protection zones, so we consider our source to have a low susceptibility to potential contamination events. We have also developed management strategies to further protect our sources from contamination. Please contact us if you have questions or concerns about our source protection plan.

There are many connections to our drinking water distribution system. When connections are properly installed and maintained, the concerns are very minimal. However, unapproved and improper piping changes or connections can adversely affect not only the availability, but also the quality, of the drinking water. A cross connection may let polluted water or even chemicals mingle into the drinking water supply system when not properly protected. This not only compromises the drinking water quality but can also affect your health. So, what can we do? Do not make or allow improper connections at your homes. Even that unprotected garden hose lying in the puddle next to the driveway, placed in a bucket or placed down a plugged sewer line is a cross connection. The unprotected lawn sprinkler system could also possibly be a cross connection. When the cross connection is allowed to exist at your home it will affect you and your family first. **To help protect the City's drinking water system from those potential hazards we have opted to install a "Dual Check Valve Device" at your water meter, these have been in place on new service connection since 1995 and are**

installed when old service connection need to be repaired/replaced. Because of these Dual Check Valves and other devices such as Pressure Reducing Valves that are required by the Plumbing Code all homes should use some form of “Thermal Expansion Protection Device”, this is to protect your water Heater from damage, due to high trapped pressures, which could cause harm to you or your family. If you'd like to learn more about helping to protect the quality of our drinking water, call us for further information about ways you can help.

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

If you have any questions about this report or concerning your water utility, please contact Paul Fulgham, from 8:00 a.m. to 4:30 p.m. Monday thru Friday, at 257-9471. 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 1st and 3rd Tuesdays of each month at 7:00 p.m. at the Tremonton City Office Building located at 120 South Tremont Street

Tremonton City routinely monitors for constituents in our drinking water in accordance with the Federal and Utah State laws. The following table shows the results of our monitoring for the period of January 1st to December 31st, 2011. 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 the following 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.

ND/Low - High - For water systems that have multiple sources of water, the Utah Division of Drinking Water has given water systems the option of listing the test results of the constituents in one table, instead of multiple tables. To accomplish this, the lowest and highest values detected in the multiple sources are recorded in the same space in the report table.

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 (ug/l) - 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 (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

Maximum Contaminant Level (MCL) - 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) - 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) - 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) - 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.

Date- Because of required sampling time frames i.e. yearly, 3 years, 4 years and 6 years, sampling dates may seem out-dated.

Waivers (W)- Because some chemicals are not used or stored in areas around drinking water sources, some water systems have been given waivers that exempt them from having to take certain chemical samples, these waivers are also tied to Drinking Water Source Protection Plans.

TEST RESULTS

Contaminant	Violation Y/N	Level Detected ND/Low-High	Unit Measurement	MCLG	MCL	Date Sampled	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform Bacteria	N	ND	N/A	0	Presence of coliform bacteria in 5% of monthly samples	2011	Naturally present in the environment
Fecal coliform and <i>E.coli</i>	N	ND	N/A	0	If a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive	2011	Human and animal fecal waste
Turbidity for Ground Water	N	0.08 – 0.58	NTU	N/A	5	2011	Soil runoff
Turbidity for Surface Water	N	N/A	NTU	N/A	0.5 in at least 95% of the samples and must never exceed 5.0	2011	Soil Runoff (highest single measurement & the lowest monthly percentage of samples meeting the turbidity limits)
Radioactive Contaminants							
Alpha emitters	N	ND – 3.1	pCi/l	0	15	2011	Erosion of natural deposits
Beta/photon emitters*	N	ND – 4.1	pCi/L	0	50	2011	Decay of natural and man-made deposits.
Combined radium	N	ND	pCi/l	0	5	2011	Erosion of natural deposits
*Beta/photon emitters: The MCL for beta/photon emitters is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta/photon emitters.							
Inorganic Contaminants							
Antimony	N	ND	ppb	6	6	2011	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	N	ND – 3.1	ppb	10000	10000	2011	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Asbestos	N	ND	MFL	7	7	2011	Decay of asbestos cement water mains; erosion of natural deposits
Barium	N	40 – 120	ppb	2000	2000	2011	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium	N	ND	ppb	4	4	2011	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium	N	ND	ppb	5	5	2011	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium	N	ND	ppb	100	100	2011	Discharge from steel and pulp mills; erosion of natural deposits

Copper a. 90% results b. # of sites that exceed the AL	N	a. 23.6 b. 0	ppb	1300	AL=1300	2011	Corrosion of household plumbing systems; erosion of natural deposits
Cyanide	N	ND	ppb	200	200	2011	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride	N	ND – 200	ppb	4000	4000	2011	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead a. 90% results b. # of sites that exceed the AL	N	a. ND b. 0	ppb	0	AL=15	2011	Corrosion of household plumbing systems, erosion of natural deposits
Mercury (inorganic)	N	ND	ppb	2	2	2011	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nitrate (as Nitrogen)	N	1800-5400	ppb	10000	10000	2011	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen)	N	ND	ppb	10000	10000	2011	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	N	ND – 5.1	ppb	50	50	2011	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium	N	8 – 120	ppm	None set by EPA	None set by EPA	2011	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills.
Sulfate	N	15 – 65	ppm	500*	500	2011	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills, runoff from cropland
Thallium	N	ND	ppb	1	2	2011	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
TDS (Total Dissolved solids)	N	180 – 830	ppm	1000**	1000**	2011	Erosion of natural deposits

*If the sulfate level of a public water system is greater than 500 ppm, the supplier must satisfactorily demonstrate that: a) no better water is available, and b) the water shall not be available for human consumption from commercial establishments. In no case shall water having a level above 1000 ppm be used.

**If TDS is greater than 1000 ppm the supplier shall demonstrate to the Utah Drinking Water Board that no better water is available. The Board shall not allow the use of an inferior source of water if a better source is available.

Synthetic Organic Contaminants including Pesticides and Herbicides (If Water System has been issued waivers for these samples then this table can be deleted from the report).

2,4-D	N	ND	ppb	70	70	2011	Runoff from herbicide used on row crops
2,4,5-TP (Silvex)	N	ND	ppb	50	50	2011	Residue of banned herbicide
Acrylamide	TT	W	N/A		TT	2011	Added to water during sewage/wastewater treatment

Alachlor	N	ND	ppb	0	2	2011	Runoff from herbicide used on row crops
Atrazine	N	ND	ppb	3	3	2011	Runoff from herbicide used on row crops
Benzo(a)pyrene (PAH)	N	ND	ppt	0	200	2011	Leaching from linings of water storage tanks and distribution lines
Carbofuran	N	ND	ppb	40	40	2011	Leaching of soil fumigant used on rice and alfalfa
Chlordane	N	ND	ppb	0	2	2011	Residue of banned termiticide
Dalapon	N	ND	ppb	200	200	2011	Runoff from herbicide used on rights of way
Di(2-ethylhexyl) adipate	N	ND	ppb	400	400	2011	Discharge from chemical factories
Di(2-ethylhexyl) phthalate	N	ND	ppb	0	6	2011	Discharge from rubber and chemical factories
Dibromochloropropane	N	W	ppt	0	200	2011	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Dinoseb	N	ND	ppb	7	7	2011	Runoff from herbicide used on soybeans and vegetables
Diquat	N	W	ppb	20	20	2011	Runoff from herbicide use
Dioxin [2,3,7,8-TCDD]	N	W	ppq	0	30	2011	Emissions from waste incineration and other combustion; discharge from chemical factories
Endothall	N	W	ppb	100	100	2011	Runoff from herbicide use
Endrin	N	ND	ppb	2	2	2011	Residue of banned insecticide
Epichlorohydrin	TT	W	N/A	0	TT	2011	Discharge from industrial chemical factories; an impurity of some water treatment chemicals
Ethylene dibromide	N	W	ppt	0	50	2011	Discharge from petroleum refineries
Glyphosate	N	W	ppb	700	700	2011	Runoff from herbicide use
Heptachlor	N	ND	ppt	0	400	2011	Residue of banned termiticide
Heptachlor epoxide	N	ND	ppt	0	200	2011	Breakdown of heptachlor
Hexachlorobenzene	N	ND	ppb	0	1	2011	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene	N	ND	ppb	50	50	2011	Discharge from chemical factories
Lindane	N	ND	ppt	200	200	2011	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor	N	ND	ppb	40	40	2011	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl [Vydate]	N	ND	ppb	200	200	2011	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs [Polychlorinated biphenyls]	N	ND	ppt	0	500	2011	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol	N	ND	ppb	0	1	2011	Discharge from wood preserving factories
Picloram	N	ND	ppb	500	500	2011	Herbicide runoff
Simazine	N	ND	ppb	4	4	2011	Herbicide runoff
Toxaphene	N	ND	ppb	0	3	2011	Runoff/leaching from insecticide used on cotton and cattle

Volatile Organic Contaminants							
Benzene	N	ND	ppb	0	5	2011	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride	N	ND	ppb	0	5	2011	Discharge from chemical plants and other industrial activities
Chlorobenzene	N	ND	ppb	100	100	2011	Discharge from chemical and agricultural chemical factories
o-Dichlorobenzene	N	ND	ppb	600	600	2011	Discharge from industrial chemical factories
p-Dichlorobenzene	N	ND	ppb	75	75	2011	Discharge from industrial chemical factories
1,2 - Dichloroethane	N	ND	ppb	0	5	2011	Discharge from industrial chemical factories
1,1 - Dichloroethylene	N	ND	ppb	7	7	2011	Discharge from industrial chemical factories
cis-1,2-ichloroethylene	N	ND	ppb	70	70	2011	Discharge from industrial chemical factories
trans - 1,2 - Dichloroethylene	N	ND	ppb	100	100	2011	Discharge from industrial chemical factories
Dichloromethane	N	ND	ppb	0	5	2011	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane	N	ND	ppb	0	5	2011	Discharge from industrial chemical factories
Ethylbenzene	N	ND	ppb	700	700	2011	Discharge from petroleum refineries
Styrene	N	ND	ppb	100	100	2011	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene	N	ND	ppb	0	5	2011	Discharge from factories and dry cleaners.
1,2,4 - Trichlorobenzene	N	ND	ppb	70	70	2011	Discharge from textile-finishing factories
1,1,1 - Trichloroethane	N	ND	ppb	200	200	2011	Discharge from metal degreasing sites and other factories
1,1,2 -Trichloroethane	N	ND	ppb	3	5	2011	Discharge from industrial chemical factories
Trichloroethylene	N	ND	ppb	0	5	2011	Discharge from metal degreasing sites and other factories
TTHM [Total trihalomethanes]	N	5.0	ppb	0	100	2009	By-product of drinking water disinfection
Toluene	N	ND	ppb	1000	1000	2011	Discharge from petroleum factories
Vinyl Chloride	N	ND	ppb	0	2	2011	Leaching from PVC piping; discharge from plastics factories
Xylenes	N	ND	ppb	10000	10000	2011	Discharge from petroleum factories; discharge from chemical factories
Haloacetic Acids	N	2.0	ppb	60	n/a	2009	By-product of drinking water disinfection
Chlorine	N	0.20	ppm	4	4	2009	Water additive used to control microbes

Nitrates in drinking water at levels above 10 ppm can pose a health risk for infants of less than six months of age. Symptoms could include shortness of breath and 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 and feel that you are at risk you should ask advice from your health care provider.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are man made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. 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. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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).

We at Tremonton City work around the clock to provide top quality drinking 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.

Please call our office if you have questions 257-9471.