



## ANNUAL DRINKING WATER QUALITY REPORT RIVERDALE CITY 2009

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 have been determined to be from groundwater and surface water sources. Our water sources are from wells and the Weber Basin Water Conservancy District. Some water purchased from Weber Basin Water Conservancy District comes from treated surface water sources.



The Drinking Water Source Protection Plan for Riverdale City is available for your review. It contains information about source protection zones, potential contamination sources and management strategies to protect our drinking water. Our sources have been determined to have a low level of susceptibility from potential contamination from sources such as underground petroleum storage tanks, improper use of pesticides and fertilizer, chemical spills in industrial areas or on highways. 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 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 water. A cross connection may let polluted water or even chemicals mingle into the water supply system when not properly protected. This not only compromises the water quality but can also affect your health. So, what can you do? Do not make or allow improper connections at your homes. Even that unprotected garden hose lying in the puddle next to the driveway is a cross connection. The unprotected lawn sprinkler system after you have fertilized or sprayed is also a cross connection. When the cross connection is allowed to exist at your home, it will affect you and your family first. If you'd like to learn more about helping to protect the quality of our water, call us for further information about ways you can help.

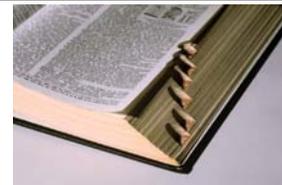
### **I'm pleased to report that our drinking water meets federal and state requirements.**

If you have any questions about this report or concerning your water utility, please contact Lynn Moulding at 801-394-5541 Ext. 1219. 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 first and third Tuesday of each month at 6:00 PM. They are held at the Riverdale Civic Center, 4600 S. Weber River Drive, Riverdale, Utah. The dates, times and locations sometimes change, so please call for current information. Water related issues are not always on the agenda, please check the agenda in advance.

Riverdale 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 1<sup>st</sup> to December 31<sup>st</sup>, 2009. 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.

Lynn Moulding, Public Works Director

## DEFINITIONS OF TERMS AND ABBREVIATIONS



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.

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

**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.

**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
<b>Microbiological Contaminants</b>							
Turbidity for Surface Water	N	ND-.24	NTU	.3	0.5 in at least 95% of the samples and must never exceed 5.0	2009	Soil runoff (highest single measurement & the lowest monthly percentage of samples meeting the turbidity limits)
<b>Radioactive Contaminants</b>							
Alpha emitters	N	.8-3.6	pCi/1	0	15	2005 - 2009	Erosion of natural deposits
<b>Inorganic Contaminants</b>							
Antimony	N	ND-600	ppt	6000	6000	2005-2009	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	N	ND-600	ppt	10000	10000	2005-2009	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production waste
Barium	N	204-1000	ppb	2000	2000	2005-2009	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits

**TEST RESULTS (Continued)**

Contaminant	Violation Y/N	Level Detected ND/Low-High	Unit Measurement	MCLG	MCL	Date Sampled	Likely Source of Contamination
<b>Inorganic Contaminants (Continued)</b>							
Copper a. 90% results b. # of sites that exceed the AL	N	a. ND-290 b. 0	ppt	1300000	AL=1300	2005	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride	N	500-1200	ppb	4000	4000	2005-2009	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-3 b. 0	ppt	0	AL=15000	2005	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	N	500-1400	ppb	10000	10000	2005-2009	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	N	600-800	ppt	50000	50000	2009	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium	N	16800-38600	ppb	None set by EPA	None set by EPA	2005-2009	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills.
Sulfate	N	19-48	ppm	1000*	1000*	2005-2009	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills, runoff from cropland
Thallium	N	500-1000	ppt	1000	2000	2005-2009	Leaching from ore processing sites; discharge from electronics, glass, and drug factories
TDS (Total Dissolved Solids)	N	235-416	ppm	2000**	2000**	2005-2009	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.

**Unregulated Contaminants**

Bromodichloromethane	N	ND-600	ppt	NA	NA	2008	By-product of drinking water disinfection
Chloroform	N	ND-11600	ppt	NA	NA	2007	By-product of drinking water disinfection
Dibromochloromethane	N	ND-1100	ppt	NA	NA	2007	By-product of drinking water disinfection

**Disinfection Bi-products**

TTHM [Total trihalomethanes]	N	36000-57700	ppt	0	80000	2009	By-product of drinking water disinfection
Haloacetic Acids	N	ND-68500	ppt	0	60000	2009	By-product of drinking water disinfection

*We are required to test our sources of drinking water, as well as our treated tap water, for the presence of Cryptosporidium. Cryptosporidium is a microbial parasite which is found in surface water throughout the United States. When ingested Cryptosporidium can cause gastrointestinal distress for otherwise healthy people and more serious illness or death for people with weak immune systems. We did not find any Cryptosporidium in our source (untreated) water or finished (treated) water. Therefore, we don't believe that you need to worry about these results. We have a modern and effective filtration plant, and as far as anyone knows, filtration is the single best protection against Cryptosporidium.*

## CONCLUSION

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or 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.

MCLs 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 Riverdale 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.

### CONTACT INFORMATION

Please call our office if you have questions.

Contact person:

Lynn Moulding  
801-394-5541 Ext. 1219.

Riverdale City  
4600 S. Weber River Dr.  
Riverdale, Utah 84405

### SOURCE WATER PROTECTION ZONES

The majority of Riverdale land sits on top of our drinking water aquifer which is tapped into by the city for drinking water. Riverdale operates two wells within the City. There are also several wells operated by Weber Basin Water. The areas above these aquifers are Source Water Protection Zones.



Source Water Protection Zones have been set up to help protect our drinking water from being contaminated. Once a drinking water source becomes contaminated, the water must be treated. If it cannot be treated, a new source must be found. Both options are very expensive and the cost of doing so must be passed on to the customers. It is far better to protect our drinking water from contamination in the first place.

The best way to protect our drinking water source is through education. Everyone needs to realize that what is poured onto or spread upon the ground will seep into the soil and can eventually find its way into our drinking water source. Even a small amount of a contaminant, such as motor oil, will seep into the ground. It may take years to find its way to the ground water but it will get there. Listed below are ways you can help protect our drinking water.

- Never pour used oil, antifreeze, solvents, oil based paints, or hazardous chemicals onto the soil. Dispose of them properly through the Weber County landfill.
- Do not over-fertilize. An overabundance of fertilizer will seep through the soil and into the drinking water.
- Do not use excessive amounts of pesticides.

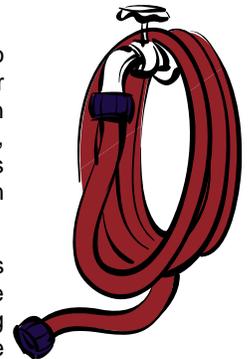
You may find out more by visiting the following websites:

- [www.deq.state.ut.us/eqdw/source\\_protection\\_intro.htm](http://www.deq.state.ut.us/eqdw/source_protection_intro.htm)
- [www.epa.gov/safewater/protect.html](http://www.epa.gov/safewater/protect.html)

If you have any questions about Source Water Protection Zones contact Lynn Moulding at 801-394-5541 ext. 1219.

### ARE YOU JEOPARDIZING YOUR DRINKING WATER?

Every effort is made by the city to ensure that the water coming into your home is safe to drink. But your own actions may jeopardize those efforts, unless you have taken the right steps and installed backflow prevention devices.



Backflow prevention is accomplished by installing a device that prohibits water from backflowing from one area to another. The backflow occurs when there is negative pressure in the line and water is sucked from one source to another. This means that water from an unprotected lawn sprinkler system may be sucked into the water lines in your home and contaminate your drinking water. Unknowingly drinking the contaminated water could result in sickness or even death.

To protect yourself, install backflow prevention devices on your lawn sprinkler system and on all outside hose bibs. It really isn't worth taking the chance of not doing it. For more information contact Lynn Moulding at 801-394-5541 ext. 1219.

### DON'T DUMP WASTE IN STORM DRAINS

According to the Utah Division of Wildlife Resources the water quality of the Weber River has declined and is getting worse. Part of the reason is people who dump wastes into storm drains.

Anything that is washed into the gutter will end up in the storm drain system and drain directly into the Weber River. Examples of contaminants include: draining a radiator and washing the antifreeze into the gutter, cleaning a paint brush in the gutter, and excess lawn fertilizer washed into the gutter.

Please exercise caution and remember, storm drains are for excess rain runoff, not for dumping waste.