Ivins City 2018 Water Quality Report

We are pleased to present to you this year's 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.

Note for Kayenta residents: The west side Kayenta neighborhood, mostly west of the Hellhole Wash, is served by KWU, a private water system. This water quality report does not include the water delivered to KWU which uses a different water source. You should receive a separate report from KWU. If you are unsure whether you are on the KWU system or not, please call Ivins City Public Works 634-0689 or go to www.ivins.com/culinary-water-system/

Ivins City Water Sources:

- **Gunlock Wells:** Ivins City purchases this groundwater from the City of St. George, who owns and operates several wells near Gunlock Reservoir.
- **Quail Creek Water Treatment Plant:** Ivins City purchases this treated surface water from the Washington County Water Conservancy District. This water that has been drawn from the Virgin River and then held in either the Sand Hollow Reservoir and Quail Creek Reservoir prior to being treated at the plant. The plant removes suspended particles using absorption with activated carbon and sand filtration. The water is sent to Ivins City through the Regional Water System transmission pipeline network.
- **Sand Hollow Wells:** Ivins City purchases this groundwater from the Washington County Water Conservancy District, who owns and operates several wells near Sand Hollow Reservoir. This water is mixed with water from the Quail Creek Water Treatment Plant before being sent to Ivins City.
- **Snow Canyon Wells:** Ivins City jointly owns several wells in Snow Canyon with the cities of St George and Santa Clara, which provides this important groundwater source to our city along with our partners. Usually this water is mixed with water from Quail Creek/Sand Hollow.

As this water has either traveled over the surface of land or through the ground, it absorbs dissolved naturally occurring minerals, and in some cases, radioactive material, and can also absorb substances resulting from the presence of animals or from human activity.

General Information:

Ivins City and our suppliers routinely monitor for contaminants in our drinking water in accordance with Federal and State laws. **All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants.** All sources of drinking water are subject to potential contamination by contaminants that are naturally occurring or manmade. Those contaminants can be microbes, organic or inorganic chemicals, or radioactive materials. 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 or by going to the website: https://www.epa.gov/ground-water-and-drinking-water

***Maximum Contaminant Levels* or MCL's are set with conservative stringent standards. To understand the possible health effects described for many regulated contaminants, a person would have to drink two liters of water every day at the MCL 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 at 1-800-426-4791.

There are many connections to our water distribution system. When connections are properly installed and maintained, concerns are very minimal. However, unapproved and improper piping changes or connections can adversely affect the quality and availability of our 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 home. 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 a 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.

Definitions:

Action Level (AL) - the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Maximum Contaminant Level (MCL) - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's 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. MCLG's allow for a margin of safety.

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.

Non-Detects (ND) - laboratory analysis indicates that the contaminant 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 contaminants 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.

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

Running Annual Average (RAA) - Highest running annual average of four consecutive quarters when sampling occurs.

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

WATER ANALYSIS FOR YEAR 2018

Contaminant	Violation	Level Detected ND/Low-High	Unit Measure-ment	MCLG	MCL	Last Sample Date	Likely Source of Contamination
Microbiological Contaminants (Sampled weekly by Ivins City)							
Total Coliform Bacteria	NO	0 Positive of 168 Samples Taken	Positive or Negative	0	> 1 Positive Per month	2018	Naturally present in the environment
Fecal Coliform & E. Coli	NO	0 Positive of 168 Samples Taken	Positive or Negative	0	If routine & repeat samples are total coliform positive and one is also fecal coliform or E. Coli positive	2018	Human and Animal Fecal Waste
Radioactive Contaminants (Sampled at the source by City of St. George and WCWCD)							
Alpha Emitters	NO	0 - 7.6	pCi/L	0	15	2018	Erosion of natural deposits
Beta Emitters	NO	3 - 21	pCi/L	0	50	2016 & 2018	Erosion of natural deposits
Combined Radium 226/228	NO	0.4 – 1.8	pCi/L	0	5	2018	Erosion of natural deposits
Gross Alpha including Radon & Uranium	NO	7.3	pCi/L	N/A	N/A	2014	Erosion of natural deposits
Uranium	NO	0.33 – 2.7	pCi/L	0	30	2016	Erosion of natural deposits
Radon has been detected in all groundwater sources tested. Currently, no state or federal regulations exist for radon concentrations in drinking water. Exposure to radon in the air over a long period of time may cause adverse health effects. Radon released from drinking water comprises a small portion of the total radon concentration in the air. Radon is primarily released into the air from rocks and soil and is a found in cigarette smoke.							
Inorganic Contaminants (Sampled at the water source by City of St. George and WCWCD)							
Antimony	NO	ND - 1.2	ppb	6	6	2018	Erosion of natural deposits
Arsenic	NO	RAA = 9.18	ppb	0	RAA = 10	2018	Erosion of natural deposits
Barium	NO	0.011 – 0.27	Ppm	2	2	2018	Erosion of natural deposits
Fluoride	NO	0.1 – 2.30	ppm	4	4	2018	Erosion of natural deposits
Nitrate (as Nitrogen)	NO	0.18 – 0.87	ppm	10	10	2018	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural
Selenium	NO	ND – 0.76	ppb	50	50	2018	Erosion of natural deposits; discharge from mines
Sodium	NO	8.1 - 169	ppm	500	N/A	2018	Erosion of natural deposits; runoff from landfills
Sulfate	NO	22 - 446	ppm	NE	500	2018	Erosion of natural deposits; runoff from landfills and croplands
Total Dissolved Solids	NO	92 - 903	ppm	N/A	1,000	2018	Erosion of natural deposits
Turbidity	NO	ND - 1.3	NTU	N/A	5	2018	Soil runoff
Lead and Copper (Sampled at 20 residences in Ivins every 3 years, next samples will be taken in 2021)							
Lead – 90th percentile results	NO	0.0017	ppm	0	AL = 0.015	2018	Corrosion of household plumbing; erosion of
Copper – 90th percentile results	NO	0.12	ppm	1.3	AL = 1.3	2018	Corrosion of household plumbing; erosion of
Disinfection Byproducts (Sampled quarterly by Ivins City)							
Chlorine (as Cl_2)	NO	0.12 – 0.40	ppm	4.0	4.0	2018	Added for sanitization
HAA's	NO	2.7 – 10.4	ppb	0	60	2018	Disinfection byproduct
TTHM's	NO	15.6 – 31.7	ppb	0	80	2018	Disinfection byproduct

As indicated by the table above, some contaminants have been detected at very low concentrations. **We are pleased to report that your drinking water meets and exceeds all requirements of the Utah Safe Drinking Water Act and the Federal Safe Drinking Water Act.**

Lead: 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. Ivins City 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 www.epa.gov/safewater/lead

Arsenic: Your drinking water meets EPA's standard for arsenic, but it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA 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.

Water Hardness: Due to the heavy influence from groundwater, Ivins City water supply is considered to be very hard. Many customers use treatment devices, such as water softeners, to remove minerals like calcium and magnesium that cause water hardness. Many customers with water softeners may find that a setting of **22 grains of hardness per gallon** provides the most effective treatment.

Ivins City personnel work very hard to provide quality water to every residence and we closely monitor it to ensure it. We ask that all our customers help us protect and conserve our water sources, which are the heart of our community. If you have any questions about this report or concerning your water utility, please contact us at 435-634-0689 or send an email publicworks@ivins.com. We want our valued customers to be informed about their water utility.

Please feel free to visit our website at www.ivins.com or attend any of our regularly scheduled City Council meetings that are held on the first and third Thursday of every month beginning at 5:30 pm.

Sincerely,

Charles R. Gillette, P.E.

Public Works Director/City Engineer
June 2019