



## 2018 Annual Drinking Water Quality Report

**Site:** Quail Lake System; Utah System #27094  
**Source:** Ground water (Sand Hollow Wells) & surface water (Quail Creek WTP)  
**Serves:** Regional Pipeline (St. George, Washington, Ivins and Santa Clara)

### **Executive summary:**

The Quail Lake System meets or surpasses all federal and state health and safety requirements.

Washington County Water Conservancy District (WCWCD) will continue monitoring the quality, treatment and sustainability of all its water sources to preserve and protect our current and future supply.

### **About this report:**

The Environmental Protection Agency (EPA) requires the monitoring of more than 80 contaminants. The contaminants listed on the following chart were discovered in this water source.

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1.800.426.4791).

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, persons 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.

Some water sources in this system have arsenic concentrations in excess of EPA's standard; however, under an arsenic blending plan, approved by the Utah Division of Drinking Water, these sources are being blended with sources which have lower arsenic concentrations to ensure the water reaching our customers is not in violation of EPA's standard.

While your drinking water meets EPA's standards for arsenic, 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.

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. The WCWCD 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 [epa.gov/safewater/lead](http://epa.gov/safewater/lead).

**Protecting your water source:**

Drinking water source protection plans for Quail Creek Reservoir, Sand Hollow Reservoir, and Sand Hollow Wells are available at the WCWCD office. The plans include information about source protection zones, potential contamination sources and management strategies to protect our drinking water.

One common source of contamination is cross connections – any connection not properly protected by a backflow protection device that allows polluted water or chemicals to enter the water supply system. This can be as simple as a hose-end sprayer used to fertilize or apply pesticides. WCWCD encourages all water users to not make or allow improper connections due to its potential adverse effects on our water supply, the community and its residents.

**Additional information:**

Customers desiring to know more about their water utility can contact the WCWCD offices at 435.673.3617 or attend one of our regularly scheduled board meetings. Visit [wccd.org/about-us/management/board-of-trustees-meeting-schedule/](http://wccd.org/about-us/management/board-of-trustees-meeting-schedule/) for the schedule.

**Reporting agency contact:**

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## Water Quality Test Results

Contaminant	Unit	Quail Creek WTP	Sand Hollow Wells	MCL (EPA Limit)	MCLG (EPA Goal)	Year(s) Sampled	Violation	Possible Sources of Contamination
Alpha Emitters	pCi/L	1	5	15	0	2016 & 2018	No	Erosion of natural deposits
Arsenic	ppb	RAA = 3 Range = 1-8		RAA = 10	0	2018	No	Erosion of natural deposits
Barium	ppm	0.1	0.3	2	2	2018	No	Erosion of natural deposits
Beta Emitters	pCi/L	3	5	50	0	2016 & 2018	No	Decay of natural and man-made deposits
Fluoride	ppm	0.3	0.3	4	4	2018	No	Erosion of natural deposits
Nitrate (as Nitrogen)	ppm	Average = 0.1	2.8	10	10	2018	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radium 228	pCi/L	0.5	0.8	5	0	2016 & 2018	No	Erosion of natural deposits
Selenium	ppb	1	3	50	50	2018	No	Erosion of natural deposits
Sodium	ppm	47	53	NE	NE	2018	NA	Erosion of natural deposits
Sulfate	ppm	194	169	500*	NE	2018	No	Erosion of natural deposits
Total Dissolved Solids	ppm	516	480	1,000*	NE	2018	No	Erosion of natural deposits
Total Organic Carbon	ppm	Average = 1.5	NA	TT	NE	2018	No	Naturally present in the environment
Turbidity	NTU	0.1	1	TT	NE	2018	No	Naturally present in the environment

\*Although the EPA has not established an MCL for sulfate and TDS, the Utah Division of Water Quality requires a sulfate concentration of less than 500 ppm and a total dissolved solids concentration less than 1,000 ppm unless the water system has no other water sources available.

## Glossary

**Maximum Contaminant Level (MCL)** – 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)** – 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.

**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.

**None Established (NE)** – MCL or MCLG has not been established for particular contaminant.

**Non-detect (ND)** – Not detected above reporting limits of laboratory analysis.

**Not Applicable (NA)** – Violation is not applicable because the EPA has not established an MCL for particular contaminant or does not require sampling at particular source.

**Parts per million (ppm)** – One part per million is a unit that represents 1 part contaminant in 1,000,000 parts water. In water applications, one part per million is also equivalent to 1 milligram per liter (mg/L).

**Parts per billion (ppb)** – One part per billion is a unit that represents 1 part contaminant in 1,000,000,000 parts water. In water applications, one part per billion is also equivalent to 1 microgram per liter (ug/L).

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

**Range** – Range of highest and lowest laboratory results.

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

**Treatment Technique (TT)** – EPA requires process intended to reduce the level of a contaminant in drinking water.

**Year Sampled** – WCWCD is allowed to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some data, though representative, are more than one year old. Systems with more than one source may have multiple dates listed.