

DRINKING WATER QUALITY REPORT

**2020 ANNUAL REPORT
UTAH PUBLIC WATER SYSTEM #27016**



DRINKING WATER QUALITY

Santa Clara City is pleased to present you with 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. To ensure the safety of your water, we routinely monitor for contaminants in your drinking water according to Federal and State laws, rules, and regulations. Except where indicated otherwise, this water quality report is based on the results of monitoring through the period of January 1, 2020 to December 31, 2020. Data obtained before January 1, 2020, and presented in this publication are from the most recent testing done in accordance with the laws, rules, and regulations.

WHERE DOES YOUR WATER COME FROM?

Santa Clara gets our water from many different sources. Our water sources are from both groundwater and surface water sources. We are part of the Snow Canyon Compact Well System with St. George City. The Snow Canyon Wells include Wells #6 and #7, owned exclusively by Santa Clara, and five wells, known as the Snow Canyon Compact, which are shared by the Cities of Santa Clara, St. George, and Ivins. Our multiple spring and groundwater sources draw from consolidated rock aquifers of the Navajo Sandstone and Kayenta Formation, which lie within the Virgin River basin. The City also has the option of purchasing surface water from the Washington County Water Conservancy District (WCWCD) through the Regional Pipeline. Their surface water is drawn from the Virgin River, stored at Quail Lake and Sand Hollow Reservoirs, and treated at the Quail Creek Water Treatment Plant before transmission to our City boundaries and distribution to our customers. All water customers within the City receive a mixture of water from groundwater and surface water sources during some time of the year.

HOW CAN I LEARN MORE?

If you want to learn more about this report, or have questions relating to your drinking water provided by Santa Clara, please call Kristelle Hill at (435) 656-4690 Ext. 213 or email khill@sccity.org. If you want to get involved in water resources, you can attend any of the regularly scheduled meetings of the Washington County Water Conservancy District (WCWCD). Meetings are held at 533 East Waterworks Drive (just off East Red Hills Parkway) in St. George. The schedule is available at <https://www.wcwcd.org/about-us/management/board-of-trustees-meeting-schedule> or call (435) 673-3617.

SOURCE PROTECTION PLAN

Drinking Water Source Protection Plans for the City of Santa Clara are available for your review. They contain information about source protection zones, potential contamination sources, and management strategies to protect drinking water that originates from City-owned groundwater wells and springs. Most of our groundwater sources are located in remote and protected areas and have a low level of susceptibility to potential contamination sources. We have also developed management strategies to further protect our sources from contamination. Our plans are available for review on the City's web site at www.sccity.org/utilities/waterdepartment. The WCWCD maintains the Watershed Protection Plans for the portion of the Virgin River basin from which they draw, store and treat surface water. Additional information on their source protection plans can be obtained by calling (435) 673-3617.

WATER HARDNESS

Most of the water sources in Southern Utah are said to be "hard" and that's because they contain high amounts of non-toxic calcium or magnesium minerals. Hard water does not dissolve soap readily, so making lather for washing and cleaning is difficult. Many customers use treatment devices, such as water softeners, to remove the calcium and magnesium from tap water to produce soft water for household use. Customers with water softeners may find that softener settings between 13 to 24 grains per gallon will provide the most effective treatment.

TERMS & ABBREVIATIONS

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.



WATER QUALITY TEST RESULTS

The City of Santa Clara routinely monitors for constituents in our drinking water in accordance with Federal and State law. Some contaminants are sampled less frequently because they do not change frequently. Unless otherwise noted, the following table lists all drinking water contaminants that we detected in our water through analytical monitoring during the 2020 calendar year, or during the last sample event. You may find terms and abbreviations in the table below that you may not be familiar with. We have provided definitions on the facing page.

When reviewing the above table, please recognize that 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. To ensure that tap water is safe to drink, EPA imposes regulations that limit the amount of certain contaminants in water provided by public water systems. Please note that all contaminants listed in this table were found to be present in concentrations below the maximum contaminant levels established by EPA. The EPA has determined that your water is safe at these levels.

More information about contaminants and potential health effects may be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

SUBSTANCES THAT COULD BE IN WATER

Sources of drinking water (both bottled and tap) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it can dissolve naturally occurring materials, and can pick up a wide variety of substances:

- Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife
-
- Inorganic Contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining or farming
-
- Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses
-
- Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and which may also come from urban stormwater runoff, gas stations and septic systems
-
- Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791, or their web site at: www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-information

ARSENIC

Some water sources in our system have arsenic concentrations that exceed the EPA standard (10 ppb); however all water delivered to customers in 2020 met the standard. The City meets the MCL by combining sources to blend water so that the EPA's standard for arsenic is met. Our blending treatment proposals were approved by the Utah Division of Drinking Water & detailed performance testing concluded in 2011. The City was able to demonstrate that our blending treatment process can meet the arsenic MCL for our affected sources. Some people who drink water containing arsenic that is in excess of the MCL over many years could experience skin damage or problems with their circulatory system and may have an increased cancer risk. It is important to note that EPA's arsenic MCL 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 chronic exposure to low levels of arsenic (see table for arsenic levels). Point-of-use treatment devices (i.e., reverse osmosis or distillation) can be effective in removing arsenic. However, their effectiveness varies, they can be expensive, and they must be properly maintained. Customers who choose to install water treatment devices are advised to monitor system performance with routine testing and ensure the system is maintained as recommended by the manufacturer.

FLUORIDE

The fluoride present in our drinking water is from natural deposits. Our water sources do not add fluoride to our water (see table for fluoride concentrations).

LEAD

Lead can enter drinking water when plumbing materials containing lead corrode, especially if the water is highly acidic or contains a low mineral content. The most common sources of lead in drinking water are lead pipes, faucets, and fixtures. Lead service lines that connect a building or house to the water main can also be a significant source of lead in drinking water. Lead pipes are more likely to be found in older cities and homes or buildings built before 1986. Drinking water in buildings without lead service lines may still contain lead if it leaches into the water from brass or chrome-plated brass faucets and plumbing with lead solder. We are responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. All customers can minimize their potential for exposure to lead by flushing faucets for 30 seconds to 2 minutes before using the water for drinking or cooking. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at www.epa.gov/safewater/lead.

MICROBIOLOGICAL CONTAMINANTS

Some people may be more vulnerable to microbiological 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 microbiological contaminants are available from the EPA's Safe Drinking Water Hotline (800-426-4791).

IN HOME FILTRATION SYSTEMS

Customers are advised to exercise caution with whole-house filtration systems that remove the chlorine used by our water utility for water disinfection. By unknowingly removing the residual chlorine concentration in your home piping network, you could allow microbes to multiply. These microbes may cause illnesses, especially for immuno-compromised family members. These types of filters are best limited to point of use such as the kitchen faucet.

CROSS CONNECTIONS

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.



Contaminant	Violation Y/N	City of Santa Clara Ground Water Sources		Washington County Water Conservancy District Sources			Unit of Measure	MCLG	MCL	Likely Source of Contamination
		Level Detected High - Low	Year Sampled	Quail Creek WTP	Sand Hollow Wells	Year Sampled				
MICROBIOLOGICAL CONTAMINANTS										
Coliform Bacteria	No	0	2020	NA			Count	0	5	Naturally present in the environment.
E. Coli	No	0	2020	NA			Count	No Goals	None	Human and animal fecal waste.
RADIOACTIVE CONTAMINANTS										
Combined Radium 226/228	No	1.4	2019	NA			PCI/L	0	5	Erosion of natural deposits.
Radium 226	No	.4	2019	NA			pCi/L	0	-	Erosion of natural deposits.
Radium 228	No	1	2019	.6	1.2	2020	pCi/L	0	5	Erosion of natural deposits.
Alpha Emitters	No	1.9	2016	1	5	2020	pCi/L	0	5	Erosion of natural deposits.
Uranium	No	1	2016	NA			ppb	0	30	Erosion of natural deposits.
INORGANIC CONTAMINANTS										
Antimony	No	1.2	2018	NA			ppb	6	6	Erosion of natural deposits.
Arsenic	No	RAA = 7.9 Range = 5.4 - 11	2020	RAA = 3 Range = 1 - 8		2020	ppb	0	RAA = 10	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	No	.27	2018	.1	.3	2020	ppm	2	2	Erosion of natural deposits.
Fluoride	No	.1	2018	.2	.3	2020	ppm	4	4	Erosion of natural deposits.
Nitrate	No	.8	2020	ND	2.7	2019	mg/l	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	No	.76	2018	.9	2.7	2020	ppb	50	50	Erosion of natural deposits.
Sodium	No	8.1	2018	44	53	2020	ppm	500	NE	Erosion of natural deposits.
Sulfate	No	25.9	2018	179	169	2020	ppm	NE	500*	Erosion of natural deposits.
Total Dissolved Solids	No	161	2018	504	480	2020	ppm	NE	1,000*	Erosion of natural deposits.
LEAD & COPPER										
Lead	No	ND	2018	NA			ppm	0	15 (AL)	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	No	0 - .23	2018	NA			ppb	1.3	1.3 (AL)	Corrosion of household plumbing systems; Erosion of natural deposits.
DISINFECTANTS & DISINFECTION BYPRODUCTS										
Chlorine	No	.2 - .39	2020	NA			ppm	4.0	4.0	Water additive used to control
Haloacetic Acids	No	7 - 8.3	2020	NA			ppb	0	60	By-product of drinking water disinfection.
Total Trihalomethanes	No	29.7 - 31.6	2020	NA			ppb	0	80	By-product of drinking water disinfection.

WATER CONSERVATION

Washington County is in extreme drought and we all need to do more to save water, particularly during the hot summer months. Whether you live in an apartment, condo or single-family home, there are multiple ways you can conserve water. How will you choose to save?

Easy does it, Washington County.

Simple ways to save water

- No.1**  Decide to use less water than before
- No.2**  Follow the seasonal watering schedule
- No.3**  Use a broom to clean the patio and driveway instead of the hose
- No.4**  Rainy day? Turn off the irrigation system
- No.5**  Only wash full loads of laundry
- No.6**  Turn off the tap while brushing your teeth
- No.7**  Take showers instead of baths
- No.8**  Plant a landscape that thrives in our desert climate
- No.9**  Adjust sprinklers to water the yard, not the concrete
- No.10**  Use drip irrigation on plants, trees, and shrubs
- No.11**  Plant turf grass sparingly
- No.12**  Turn off the tap while shaving
- No.13**  During warm months, irrigate landscape overnight
- No.14**  Use a pool cover
- No.15**  Core-aerate your soil annually
- No.16**  Hand water dry spots
- No.17**  Raise your lawn mower blade to 2.5 to 3 inches
- No.18**  Use a plugged sink when hand washing dishes
- No.19**  Replace broken or missing sprinklers
- No.20**  Shorten your shower

We live in the driest and fastest-growing part of the state and have a limited water supply. But thanks to you, our community members, we are making every drop count.

How can you be water wise? It's easy. Start by choosing to implement a few water-saving actions in your home. Then, add another and another. Easy does it, Washington County.

 Visit wcwcd.org to learn more.

GUIDE TO SEASONAL WATERING



 WINTER November - February <h1 style="font-size: 4em;">1</h1> DAY A WEEK <small>*Irrigation is typically not needed in December and January</small>	 SPRING March - May <h1 style="font-size: 4em;">1-3</h1> DAYS A WEEK
 SUMMER June - August <h1 style="font-size: 4em;">3-5</h1> DAYS A WEEK	 FALL September - October <h1 style="font-size: 4em;">1-3</h1> DAYS A WEEK



WATERING GRASS? CYCLE AND SOAK

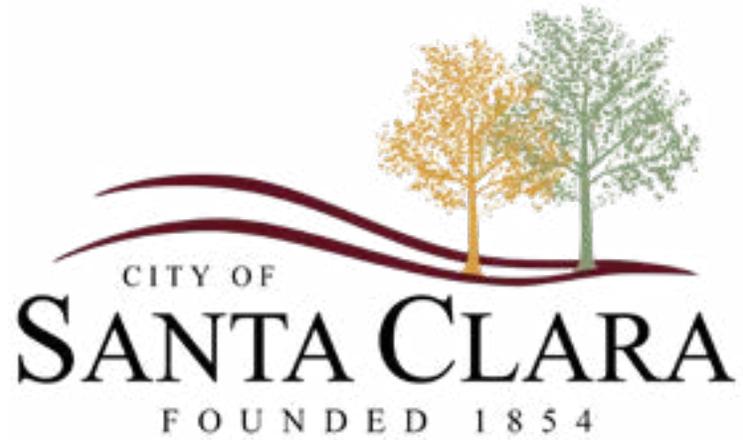
- Run 3 cycles per watering day
- 1 hour between each cycle
- 4 minutes for a fixed spray or 8 minutes for a rotating spray
- Monitor and adjust as needed

WATERING PLANTS AND TREES? DRIP LOW AND SLOW

High flow (up to 20 gallons per hour)	12 minutes
Low flow (up to 4 gallons per hour)	30 minutes
Low flow (up to 2 gallons per hour)	60 minutes
Low flow (up to 1 gallons per hour)	90 minutes

Because every landscape and irrigation system is different, you may need to adjust this schedule. Variables such as soil, weather, flow rate, and plant type will affect irrigation needs.

wcwcd.org



2603 Santa Clara Drive
Santa Clara, UT 84765

Monday - Thursday: 8 am - 5 pm

Friday: 8 am - 1 pm

Closed Saturday & Sunday

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<https://sccity.org/public-works>

