

Water Quality Report for Sandy City

2019

Important Facts About Your Drinking Water

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 (800) 426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as person 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 guideline on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.



Sandy City has two main water sources that supply our drinking water: Surface Water from Metropolitan Water District of Salt Lake and Sandy, which is taken from Little Cottonwood Creek and Deer Creek Reservoir; and currently 16 Wells that pump groundwater from underground aquifers. The Wells generally only operate in the summer months. For more information on groundwater please contact Mike Campbell – Distribution Supervisor at (801) 352-4400.

Only samples collected for the purpose of compliance are reported in the 2019 Consumer Confidence Report. The EPA requires monitoring of over 80 drinking water contaminants. The contaminants listed in the table below are the only contaminants detected in your drinking water.

Drinking Water Quality Compliance Sampling								
2019				Sandy City Wells		MWDSLS Plant Finished Water		
Contaminants	MCLG	MCL	Units	Ground Water	Year	Surface Water	Year	Most Likely Source
PRIMARY INORGANIC								
CHROMIUM	0.1	0.1	mg/L	ND	2019	0.00714	2019	Erosion of naturally occurring deposits.
Cyanide, Total	0.2	0.2	mg/L	ND	2019	ND	2017	Discharge from plastic & fertilizer
FLUORIDE	4.0	4.0	mg/L	0.3	2019	0.191 - 0.751	2019	Erosion of naturally occurring deposits and additional to meet regulations
MERCURY	0.002	0.002	mg/L	ND	2019	ND	2017	Erosion of naturally occurring deposits.
NITRATE	10	10	mg/L	3.6	2019	0.471	2019	Runoff from fertilizer, leaching from septic tanks and naturally occurring organic material
SULFATE	NE	1000	mg/L	27	2019	25.3 - 51.6	2019	Erosion of naturally occurring deposits.
TOTAL DISSOLVED SOLIDS		2000	mg/L	356	2019	183 - 276	2019	Erosion of naturally occurring deposits.
TURBIDITY (Ground)	5.0		NTU	0.06	2019			Soil runoff
(Surface)	0.3		NTU			0.114	2019	Soil runoff
METALS								
Aluminum	NA	NA	mg/L	ND	2019	0.0131	2019	Occurs naturally in soil, water, and air
Antimony, Total	0.0006	0.006	mg/L	ND	2019	ND	2019	Discharge from Refineries, Fire Retardant
ARSENIC	N/A	0.01	mg/L	0.0005	2019	0.00123	2019	Erosion of naturally occurring deposits.
BARIUM	2	2	mg/L	0.096	2019	0.0762	2019	Erosion of naturally occurring deposits.
SELENIUM	0.05	0.05	mg/L	0.0006	2019	0.0016	2018	Erosion of naturally occurring deposits.
SODIUM	UR	UR	mg/L	14.3	2019	11.9	2017	Erosion of naturally occurring deposits and runoff from road de-icing
URANIUM	NE	0.030	mg/L	0.0186 - 0.0205	2018			Erosion of natural deposits
BIOLOGICAL CONTAMINANTS - Surface and Well Water								
FECAL COLIFORM & E COLI, Total Coliform	> 5%	0	NA	0	2019	0	2019	Monthly compliance. No violations were issued. Human & animal fecal waste, naturally occurring in environment were issued. Human & animal fecal waste, naturally occurring in environment.

Drinking Water Quality Compliance Sampling

2019				Sandy City Wells		MWDSLS Plant Finished Water		
Contaminants	MCLG	MCL	Units	Ground Water	Year	Surface Water	Year	Most Likely Source
RADIOACTIVE CONTAMINANTS								
GROSS-ALPHA	NE	15	pCi/L	8.8	2019	-0.7	2017	Erosion of natural deposits
GROSS-BETA	NE	50	pCi/L	7.9	2019			Decay of natural and man-made deposits
RADIUM 226	NE	5	pCi/L	0.20	2019			Decay of natural and man-made deposits
RADIUM 228	NE	5	pCi/L	0.30	2019	0.55	2017	Decay of natural and man-made deposits
PESTICIDES & HERBICIDES								
	Various	Various		ND	2019	ND	2019	Various Sources
VOLATILE ORGANIC CHEM.								
Bromodichloromethane	NE	NE	mg/L	ND	2019	ND	2019	By-product of drinking water disinfection
Chlorodibromomethane	NE	NE	mg/L	ND	2019	ND	2019	By-product of drinking water disinfection
TETRACHLOROETHYLENE	0	0.005	mg/L	ND	2019	ND	2019	Improper disposal of dry cleaning and other solvents
Chloroform	NE	NE	mg/L	ND	2019	ND	2019	By-product of drinking water disinfection
SECONDARY INORGANIC								
CHLORIDE	NE	250	mg/L	43	2019	59.4	2019	Erosion of naturally occurring deposits.
Total Hardness, mg/L as CaCO ₃	NE	NE	mg/L	181	2019	180 - 186	2019	
pH	NE	6.5 - 8.5	units	8.0	2019	7.04 - 8.24	2019	Naturally Occurring
ORGANIC MATERIAL								
TOC	UR	NE	mg/L			< 0.50 - 2.42	2019	Naturally Occurring
DOC	UR	NE	mg/L			< 0.50 - 2.34	2019	Naturally Occurring
UV-254	UR	NE	cm-1			0.014 - 0.034	2019	Naturally Occurring
DISINFECTION-BY-PRODUCT- Surface and Well Water				Annual Average				
THM'S (Total Trihalomethanes) ppb	NE	80	ug/L	30.89	2019	10.2 - 44.1	2019	By-product of drinking water disinfection
Total Haloacetic Acids (HAA5)	NE	60	ug/L	30.71	2019	9.1 - 50.8	2019	By-product of drinking water disinfection
Total Haloacetic Acids (HAA6)	NE	60	ug/L	33.90	2019	10.6 - 53.6	2019	By-product of drinking water disinfection
Lead and Copper - Surface and Well Water				90th Percentile				
Lead	NE	*AL = 0.015	mg/L	0.00371	2019	N/A	2019	Corrosion of household plumbing system
Copper	NE	*AL = 1.3	mg/L	0.320	2019	N/A	2019	Corrosion of household plumbing system

Inadequately treated water (surface water) may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

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. Sandy 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 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 <https://www.epa.gov/safewater/lead>.

Visit Sandy.utah.gov/stormwater for more information and ways that you can help protect our waters. WE ALL LIVE DOWNSTREAM!

DEFINITIONS FOR ABBREVIATIONS:

AL – Action Level – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL – Maximum Contaminant Level – The highest level of 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.

MCLG – Maximum Contaminant Level Goal – The level of a contaminant in drinking water below which there is not known or expected risk to health. MCLG's allow for a margin of safety.

mg/L - Milligrams per liter or parts per million (ppm) – one part per million corresponds to one minute in two (2) years, or a single penny in \$10,000.

NE – Not established.

ND – Non-detects- Laboratory analysis indicates that the constituent is not present.

NTU – Nephelometric Turbidity Unit – Nephelometric Turbidity Unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb – Parts per billion

ppt – Parts per trillion 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.

pCi/L – picocuries per liter – picocuries per liter is a measure of the radioactivity in water.

Range – Range of measurements based on testing of Sandy City sources.

(a) The MCL for beta particles is 4 mrem (millirems) per year. EPA considers 50 pCi/L to be the level of concern for beta particles.

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

ug/L - Micrograms per liter or parts per billion (ppb) – one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

UR – Unregulated.

February 2019 Fluoride Overfeed Event

As required by Salt Lake County, Sandy City adds fluoride to the drinking water to improve dental health, and the level of fluoride added to the water is set by the County based on recommendations by the US Department of Health and Human Services. The City has been adding fluoride to its drinking water wells since 2003. On February 5, 2019 there was an accidental overfeed of fluoride at one of the City's wells. The event lasted approximately 38 hours, and we estimate that up to 270 homes may have received drinking water with excess fluoride from this well. After discovery of the problem on February 7th, City staff shut off the fluoride feed pump, began flushing the water system to remove the high fluoride water from the pipes, and worked with residents in the impacted area to flush their home plumbing.

The immediate action of flushing the system was aimed at addressing the adverse health effect of elevated levels of fluoride in tap water. However, the fluoride chemical is acidic and at high concentrations can also cause damage to home plumbing material that could result in the release of lead, copper, and other metals into the tap water. For this reason, the City collected thousands of samples from impacted homes and analyzed them for lead, copper, and a variety of constituents. The table below presents the average and range of the levels of fluoride and all other constituents analyzed in the water samples collected in 2019 beginning on February 7th in response to the overfeed event. All values are in mg/L (equal to part-per-million or ppm). Also listed in the table are the drinking water (DW) limits for each constituent.

2019 Fluoride Event Water Quality Sampling				
Constituent	Average	Range	DW Limit	DW Limit based on:
Fluoride	3.36	0.59 – 152	4.0	Health concern
Calcium	37	1.3 – 56	--	None
Magnesium	11	0.8 – 16	--	None
Phosphorus	0.872	0 – 5.45	--	None
Potassium	2.87	0 – 5.56	--	None
Silica	12	3.4 – 99	--	None
Sodium	37.4	21 – 127	--	None
<i>Metals</i>				
Aluminum	0.372	0 – 2.67	0.2	Aesthetic concern
Antimony	0.002	0 – 0.048	0.006	Health concern
Arsenic	0.003	0 – 0.034	0.01	Health concern
Barium	0.053	0 – 0.112	2.0	Health concern
Beryllium	0	0 – 0	0.004	Health concern
Boron	0.0037	0 – 0.052	--	None
Cadmium	0.0001	0 – 0.0008	0.005	Health concern
Chromium	0.0013	0 – 0.017	0.1	Health concern
Cobalt	0.0008	0 – 0.005	--	None
Copper	0.169	0 – 24.8	1.3	Health concern
Iron	0.334	0 – 3.85	0.3	Aesthetic concern
Lead	0.002	0 – 0.663	0.015	Health concern
Lithium	0.015	0 – 0.023	--	None
Manganese	0.037	0 – 0.469	0.3	Health Advisory
Mercury	0.00	0 – 0.00	0.002	Health concern
Molybdenum	0.0018	0.0015 – 0.002	--	None

Constituent	Average	Range	DW Limit	DW Limit based on:
Nickel	0.0055	0 – 0.032	--	None
Selenium	0.0004	0 – 0.001	0.05	Health concern
Silver	0.0001	0 – 0.001	0.10	Aesthetic concern
Strontium	0.242	0.006 – 0.362	--	None
Thallium	0.00	0.00 – 0.00	0.002	Health concern
Tin	0.0105	0 – 0.258	--	None
Titanium	0.0034	0 – 0.025	--	None
Uranium	0.0029	0.0010 – 0.012	0.03	Health concern
Vanadium	0.0004	0 – 0.0070	--	None
Zinc	0.0121	0 – 0.174	5.0	Aesthetic concern

Note: All concentrations are in mg/L, or parts-per-million (ppm)

As shown in the above table, some constituents exceeded their health based DW limits during the incident. The following is specific information on the health effects of those constituents:

Fluoride – Health effects from short term exposure to high fluoride levels can include abdominal pain, nausea, and vomiting.

Lead and Copper – Health effects from acute lead exposure can include dullness, restlessness, irritability, poor attention span, headaches, muscle tremor, abdominal cramps, kidney damage, and hallucinations. Health effects from acute exposure to copper can include gastrointestinal bleeding, headache, nausea, and vomiting.

Arsenic – Health effects from short term arsenic exposure include vomiting, abdominal pain, diarrhea, and possible numbness of the extremities.

Antimony – Health effects from short term exposures to antimony in drinking water can include vomiting and abdominal pain.

Manganese – The EPA has a 10-day Health Advisory value of 0.3 mg/L for infants younger than 6 months. Near-term actions to address public health concerns, particularly for formula-fed infants may be warranted if the manganese level exceeds the Health Advisory value.

In addition to the close monitoring of the tap water quality at the impacted homes after the incident, the City has initiated a large scale water quality monitoring program at all 270 homes impacted by this event, and the results continue to show that all constituents of concern have decreased to well below their drinking water limits. Residents with any questions about the fluoride overfeed incident are encouraged to contact the City's water department at 801-568-6074.