City of Quinlan

2020
Annual Drinking
Water Quality
Report

City of Quinlan

Purchased Surface Water System
TX 1160007

2020 Consumer Confidence Report for Public Water System CITY OF QUINLAN

This is your water quality report for January 1 to December 31, 2020

CITY OF QUINLAN provides purchased surface water from Cash SUD TX 1160018 located in Quinlan, TX and from Combined Consumers WSC, TX 1160052.

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono

For more information regarding this report contact:

Name Bobby Clay

Phone 903-356-3306

903-356-3306.

Definitions and Abbreviations

Definitions and Abbreviations	The following tables contain scientific terms and measures, some of which may require explanation.
Avg:	Regulatory compliance with some MCLs are based on running annual average of monthly samples.
Maximum Contaminant Level or MCL:	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 or MCLG:	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.
Maximum residual disinfectant level or MRDL:	The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum residual disinfectant level goal or MRDLG:	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MFL	million fibers per liter (a measure of asbestos)
mrem:	millirems per year (a measure of radiation absorbed by the body)
na:	not applicable.
NTU	nephelometric turbidity units (a measure of turbidity)
pCi/L	picocuries per liter (a measure of radioactivity)
ppb:	micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.
ppm:	milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.
ppq	parts per quadrillion, or picograms per liter (pg/L)
ppt	parts per trillion, or nanograms per liter (ng/L)
Treatment Technique or TT:	A required process intended to reduce the level of a contaminant in drinking water.

Information about your Drinking Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

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 EPAs Safe Drinking Water Hotline at (800) 426-4791.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water 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 storm water runoff, and residential uses.

- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the system's business office.

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; persons who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders, can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care providers. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).

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. We are responsible for providing high quality drinking water, but we 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 http://www.epa.gov/safewater/lead.

Information about Source Water

City of Quinlan purchases water from Cash SUD, Cash SUD provides purchase surface water from Lake Tawakoni, which supplies Cumby, Lone Oak, and Cash areas south of Interstate 30.Cash SUD also has a second source of water they purchase from North Texas Municipal Water District (NTMWD) which treats the raw water from Lake Lavon, and services< this water supplies the Southeast Caddo Mills, Quinlan, and Union Valley areas south of 30.
City of Quinlan also purchases water from Combined Consumer WSC which is obtained from Lake Tawakoni.

'No Source Water Assessment for your drinking water source(s) has been conducted by the TCEQ for your water system. The report describes the susceptibility and the types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information in this assessment allows us to focus our source water protection strategies.'

2020 Water Quality Test Results

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2020	17	6-17.7	No goal for the total	60	ppb	N	By-product of drinking water disinfection.

'* The value in the Highest Level or Average Detected column is the highest average of all HAA5 sample results collected at a location over a year'

Total Trihalomethanes (TTHM)	2020	29	21.6-31.6	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

'* The value in the Highest Level or Average Detected column is the highest average of all TTHM sample results collected at a location over a year'

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate [measured as Nitrogen]	2020	1	0.542-0.651	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite [measured as Nitrogen]	10/21/2015	0.332	0.178 - 0.332	1	1	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Disinfectant Residual

' A blank disinfectant residual table has been added to the CCR template, you will need to add data to the fields. Your data can be taken off the Disinfectant Level Quarterly Operating Reports (DLQOR).'

Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
Chloramine	2020	2.02	.46-3.9	4	4	PPM	N	Water additive used to control microbes.

Cash Special Utility District PWS ID 1160018 Information:

Source Water Assessment: The TCEQ completed an assessment of your source water and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, contact Clay Hodges, General Manager, at (903) 883-2695.

2020 Monitoring Results

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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Year	Contaminant (Unit of Measure)	Cash SUD		NTMWD		MCL	MCLG	Source of Contaminant
		Highest	Range	Highest	Range			
INORGANIC CONTAMINANTS								
2019	Arsenic (ppb)	N/A	N/A	ND	N/A	10	0	Erosion of natural deposits; runoff from orchards; runoff form glass and electronics production wastes
2020	Barium (ppm)	0.062[1]	N/A	0.061	0.058 - 0.061	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
2020	Bromate (ppb)	ND	N/A	8.91	8.91 - 8.91	10	5	By-product of drinking water ozonation
2019	Chromium (ppb)	ND	N/A	ND	N/A	100	100	Discharge from steel and pulp mills; erosion of natural deposits
2020	Fluoride (ppm)	0.131[1]	N/A	0.225	0.218 - 0.225	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
2020	Nitrate (measured as Nitrogen) (ppm)	0.644	0.639 - 0.644	0.827	0.266 - 0.827	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
2018	Beta/photon emitters (pCi/L)	ND	N/A	8.0	8.0 - 8.0	50	0	Decay of natural and man-made deposits

Year	Contaminant (Unit of Measure)	Cash SUD		NTMWD		MCL	MCLG	Source of Contaminant
		Highest	Range	Highest	Range			
ORGANIC CONTAMINANTS								
2020	Atrazine (ppb)	0.1[1]	N/A	0.2	0.2 - 0.2	3	3	Runoff from herbicide used on row crops
2020	Di (2-ethylhexyl) phthalate (ppb)	ND	N/A	0.6	0.6 - 0.6	6	0	Discharge from rubber and chemical factories.
2020	Simazine (ppb)	ND	N/A	0.08	0.07 - 0.08	4	4	Runoff from herbicide used on row crops

Year	Contaminant (Unit of Measure)	Cash SUD		AL	Source of Contaminant
		90th Percentile	Sites Above AL		
LEAD AND COPPER					
2018	Lead (ppm)	0.0031	0	0.015	Corrosion of household plumbing systems; erosion of natural deposits
2018	Copper (ppm)	0.1429	0	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

MAXIMUM RESIDUAL DISINFECTANT LEVEL								
Year	Contaminant (Unit of Measure)	Cash SUD		NTMWD		MRDL	MRDLG	Source of Contaminant
		Average	Range	Average	Highest			
2020	Chlorine Residual (ppm)	2.975	2.8 - 3.2	N/A	N/A	4.0	<4.0	Disinfectant used to control microbes
2020	Chlorine Dioxide (ppm)	ND	N/A	ND	N/A	0.8	0.8	Disinfectant
2020	Chlorite (ppm)	ND	N/A	0.0475	0.483	1.0	N/A	Disinfectant

TURBIDITY							
Year	Contaminant (Unit of Measure)	Highest Single Measurement		Lowest Monthly % of Samples Meeting Limits		Turbidity Limits	Source of Contaminant
		Cash	NTMWD	Cash	NTMWD		
2020	Turbidity (NTU)	0.09	0.31	100%	100.00%	0.3	Soil runoff
NOTE: Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.							

Year	Contaminant (Unit of Measure)	Cash SUD		NTMWD		MCL	MCLG	Source of Contaminant
		Highest	Range	Highest	Range			
TOTAL ORGANIC CARBON								
2020	Source Water	5.56	3.31 - 5.56	5.16	3.95 - 5.16	N/A	N/A	Naturally present in the environment
2020	Drinking Water	2.88	1.86 - 2.88	3.14	2.13 - 3.14	N/A	N/A	
2020	Removal Ratio	1.454	0.794 - 1.454	53.90%	28.4 - 53.9	N/A	N/A	N/A
* Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed. NOTE: Total organic carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection byproducts. Byproducts of disinfection include trihalomethanes (THM) and haloacetic acids (HAA), which are reported elsewhere in this report.								

Year	Contaminant (Unit of Measure)	Cash SUD Level Detected	MCL	MCLG	Source of Contaminant
MICROBIOLOGICAL CONTAMINANTS					
2020	Total Coliform Bacteria (# positive monthly samples)	1*	1 positive sample/month	0	Naturally present in the environment
* May, 2020					

Year	Contaminant (Unit of Measure)	Cash SUD		MCL	MCLG	Source of Contaminant
		Highest	Range			
DISINFECTION BYPRODUCTS						
2020	Total Haloacetic Acids (ppb)	29.6	8.6 - 29.6	60	N/A	Byproduct of drinking water disinfection
2020	Total Trihalomethanes (ppb)	45.2	18.5 - 45.2	80	N/A	

Year	Contaminant (Unit of Measure)	Cash SUD		MCL	MCLG	Source of Contaminant
		Highest	Range			
UNREGULATED CONTAMINANTS						
2020	Bromodichloromethane (ppb)	10.7	3.73 - 10.7	N/A	N/A	Byproduct of drinking water disinfection
2020	Bromoform (ppb)	<1.00	ND - <1.00	N/A	N/A	
2020	Chloroform (ppb)	30.7	13.8 - 30.7	N/A	N/A	
2020	Dibromochloromethane (ppb)	3.02	1.03 - 3.02	N/A	N/A	
NOTE: Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection by-products. There is no MCL for these chemicals at the entry point to distribution.						

SECONDARY AND OTHER CONSTITUENTS NOT REGULATED (No associated adverse health effects)							
Year	Contaminant (Unit of Measure)	Cash SUD		NTMWD		Secondary Limit	Source of Contaminant
		Highest	Range	Highest	Range		
2020	Calcium (ppm)	26.3[1]	N/A	62.4	58.3 - 62.4	N/A	Abundant naturally occurring element.
2020	Chloride (ppm)	47[1]	N/A	78.9	23.2 - 78.9	250	Abundant naturally occurring element; used in water purification; byproduct of oild field activity.
2020	Magnesium (ppm)	2.55[1]	N/A	9.40	8.83 - 9.40	N/A	Abundant naturally occurring element.
2020	Manganese (ppm)	0.0017[1]	N/A	0.017	0.012 - 0.017	0.05	Abundant naturally occurring element.
2020	Nickel (ppm)	0.0027[1]	N/A	0.0068	0.0066 - 0.0068	0.1	Erosion of natural deposits.
2020	pH (units)	7.86	7.75 - 7.86	8.60	8.04 - 8.60	6.5-8.5	Measure of corrosivity of water.
2019	Potassium (ppm)	3.62[1]	N/A	N/A	N/A	N/A	Runoff/leaching from natural deposits
2020	Sodium (ppm)	27.5[1]	N/A	68.5	62.7 - 68.5	N/A	Erosion of natural deposits; byproduct of oil field activity.
2020	Specific Conductance (micromhos) (µS/cm)	307[1]	N/A	ND	N/A	1600	Substances the form ions when in water; seawater influence
2020	Sulfate (ppm)	16[1]	N/A	158	42.0 - 158	250	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2020	Total Alkalinity as CaCO3 (ppm)	56.4	N/A	107	72.0 - 107	N/A	Naturally occurring soluble mineral salts.
2020	Total Dissolved Solids (ppm)	191[1]	N/A	504	265 - 504	1000	Total dissolved mineral constituents in water.
2020	Total Hardness as CaCO3 (ppm)	70.33[1*]	N/A	207	106 - 207	N/A	Naturally occurring calcium.
* 2019							

[1] Result is a single sample

The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old.

Combined Consumers SUD PWS# 1160052 Information:

Source Water Assessment: The TCEQ completed an assessment of our source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confident Report. For more information on source water assessments and protection efforts at our system, contact Drew Roberts (903 -356 -3321)

Lead and Copper Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety. Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2020	1.3	1.3	0.221	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2020	0	15	6.08	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Turbidity Turbidity is a measurement of the cloudiness of the water caused by suspended particles.

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.18 NTU	N	Soil runoff.
Lowest monthly % meeting limit	0.3 NTU	100 %	N	Soil runoff.

Regulated Contaminants

Disinfectants and Disinfection By-Products	*Collection Date*	*Highest Level Detected*	*Range of Levels Detected*	*MCLG*	*MCL*	*Units*	*Violation*	*Likely Source of Contamination*
Haloacetic Acids (HAA5)*	2020	38	19.7 – 39.3	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2020	29	13.6 – 31.8	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	***Collection Date***	***Highest Level Detected***	***Range of Levels Detected***	***MCLG***	***MCL***	***Units***	***Violation***	***Likely Source of Contamination***
Antimony	2020	. 0.001 MG/L	0	6	6	ppb	N	Discharge from petroleum refineries; fire retardants; ceramics; solder; test addition
Arsenic	2020	.001	0	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2020	0.041	0.041 - 0.041	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium	2020	1.4	1.4 – 1.4	100	100	ppb	N	Discharge from steel and pulp mills; Erosion of natural deposits.
Cyanide	2020	113	113 – 113	200	200	ppm	N	Discharge from plastic and fertilizer factories. Discharge from steel/metal factories.
Fluoride	2020	0.1	0.121 - 0.121	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate measured as Nitrogen]	2020	0.443	0.443 – 0.443	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Total Organic Carbon The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

Disinfectant	*Year*	*Average Level*	*Range of Levels Detected*	*MRDL*	*MRDLG*	*Unit of Measure*	*Violation*	*Likely Source of Contamination*
CL@Gas Chlorine	2020	*4.03*	*1.4 – 5.6*	*4*	*4*	*ppm*	*N*	*Water additives used to control microbes.*

Synthetic organic contaminates including pesticides and herbicides	*Collection Date*	*Highest Level Detected*	*Range of Levels Detected*	*MCLG*	*MCL*	*Units*	*Violation*	*Likely Source of Contamination*
Atrazine	2020	0.2 UG/L	0.2 - 0.2	3	3	ppb	N	Runoff from herbicide used on row crops.

Coliform Bacteria

Maximum Contaminant Level	*Total Coliform Maximum Contaminant Level*	*Highest No. of Positive*	*Fecal Coliform or E. Coli Maximum Contaminant Level*	*Total no. of Positive E. Coli or Fecal Coliform Samples*	*Violation*	*Likely Source of Contamination*
0	1 positive monthly sample	2	0	0	N	Naturally present in the environment.

Volatile Organic Contaminants	*Collection Date*	*Highest Level Detected*	*Range of Individual Samples*	*MCLG*	*MCL*	*Units*	*Violation*	*Likely Source of Contamination*
Toluene	2020	0.00159	0.00159 – 0.00159	1	1	ppm	N	Discharge from petroleum factories.

Violations

Lead and Copper Rule			
The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.			
Violation Type	**Violation Begin**	**Violation End**	**Violation Explanation**
FOLLOW-UP OR ROUTINE TAP M/R (LCR)	10/01/2020	2020	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.