

2018 Consumer Confidence Report for Public Water System CITY OF KEENE

This is your water quality report for January 1 to December 31, 2018

CITY OF KEENE provides surface water purchased from **Johnson County Special Utility District from City of Mansfield TX located in Tarrant, Johnson and Ellis Texas Counties, and Ground water from City of Keene located in Johnson County Texas.**

For more information regarding this report contact:

Name __Johnny Coker_____

Phone __817-641-3336_____

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (_817__) _641__ - _3336__.

Definitions and Abbreviations

Definitions and Abbreviations

The following tables contain scientific terms and measures, some of which may require explanation.

Action Level:

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

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.

Avg:

Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Level 1 Assessment:

A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment:

A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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

picrocuries per liter (a measure of radioactivity)

Definitions and Abbreviations

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 EPA's 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 KEENE purchases water from JOHNSON COUNTY SUD. JOHNSON COUNTY SUD provides purchase surface water from City of Mansfield TX, located in Tarrant, Johnson and Ellis Texas Counties.
 '[insert a table containing any contaminant that was detected in the provider's water for this calendar year, unless that contaminant has been separately monitored in your water system (i.e. TTHM, HAA5, Lead and Copper, Coliforms)].'

'TCEQ completed an assessment of your source water, and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your water system is based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system contact Johnny Coker at 817-641-3336.'

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level 1 positive monthly sample.	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		0	N	Naturally present in the environment.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	10/05/2017	1.3	1.3	0.23	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
Lead	10/05/2017	0	15	2.02	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

2018 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)	2018	19	0 - 19.7	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 year¹

Total Trihalomethanes (TTHM)	2018	26	0 - 29.6	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 year¹

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	06/28/2017	0.089	0.089 - 0.089	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Cyanide	06/28/2017	55.7	0 - 55.7	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
Fluoride	2018	0.657	0.581 - 0.657	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]	2018	0.617	0.0176 - 0.617	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite [measured as Nitrogen]	2018	2	0 - 1.92	1	1	ppm	Y	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	05/16/2016	1.5	1.5 - 1.5	0	5	pCi/L	N	Erosion of natural deposits.

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Atrazine	2018	0.1	0 - 0.1	3	3	ppb	N	Runoff from herbicide used on row crops.

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Dichloromethane	2018	1	0 - 1.33	0	5	ppb	N	Discharge from pharmaceutical and chemical factories.

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
Chloramines	2018	2.08	0.1-4.1	4	4	PPM	N	Water additive used to control microbes.

Violations

Consumer Confidence Rule			
The Consumer Confidence Rule requires community water systems to prepare and provide to their customers annual consumer confidence reports on the quality of the water delivered by the systems.			
Violation Type	Violation Begin	Violation End	Violation Explanation
CCR REPORT	07/01/2017	02/22/2019	We failed to provide to you, our drinking water customers, an annual report that informs you about the quality of our drinking water and characterizes the risks from exposure to contaminants detected in our drinking water. We corrected the violation and have provided proper access to the 2017 CCR.

Violations

Nitrite [measured as Nitrogen]			
Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, SINGLE SAMPLE	04/01/2018	06/30/2018	A water sample showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated. We had a problem with process control at Well 6 Bluebonnet Trail. After flushing and disinfection of the ground storage tank all subsequent samples have been below state allowed levels less than 0.1mg/l.



Johnson County Special Utility District

"Quality and Service since 1965"

March 22, 2019

Mr. Tim Williford
Monarch Utilities I, L.P.
Metroplex Homesteads 1260074
Sundance Addition 1260025
Ridgecrest – Johnson 1260035
12535 Reed Road
Sugar Land, TX 77478

City of Alvarado-Water 1260001
104 W. College St.
Alvarado, TX 76009

Bethany SUD 1260016
133 S. CR 810
Alvarado, TX 76009

City of Keene 1260008
100 N. Mockingbird Ln.
Keene, TX 76059

Chuck Bell Water Systems LLC
P.O. Box 731 1260080
Crowley, TX 76036 1260086

City of Godley-Water 1260007
P.O. Box 27
Godley, TX 76044

RE: Lake Granbury Surface Water and Treatment System Proposed, JCSUD water quality data for your use when preparing Consumer Confidence Report (CCR) for your customers, per 30 TAC §290.274(g).

Gentlemen:

The Consumer Confidence Report is required by the Safe Drinking Water Act of 1996 and provides the water customer the right to know and understand what is in their drinking water. The Consumer Confidence Report identifies the source of the drinking water, the treatment used to purify the water, any contaminants that have been identified in the water, and what the potential health effects could be.

To meet the U.S. Environmental Protection Agency requirements, JCSUD provides you with the appropriate water quality data. Included for your use and information is data you will need when preparing your Consumer Confidence Report that covers the year 2018.

Sincerely,

Danny Armstrong
Operations Manager

Enc.

Substance	Unit of Measure	Year	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	MCL	Typical Source
Turbidity	NTU	2018	.26	100%	0.3	TT	Soil Runoff



LCRA Environmental Laboratory Services
3505 Montopolis Drive
Austin, TX 78744
(512)356-6022
(512)356-6021

PARAMETER QUALIFIERS

Workorder: Q1807323

Parameter Qualifiers

J	Analyte Detected Below Quantitation Limit
N	N Not Accredited
SH	Spike Recovery High
SL	Spike Recovery Low



LCRA Environmental Laboratory Services
3505 Montopolis Drive
Austin, TX 78744
(512)730-6022
(512)730-6021

ANALYTICAL RESULTS

Workorder: Q1850236

Lab ID: Q1850236001
Sample ID: 1837726
Facility: EP022
Sample: TRT-TAP

Date Received: 12/11/2018 09:45
Date Collected: 12/10/2018 09:35
Location: IN VAULT
Client ID: TX1260018

Matrix: Drinking Water
Sample Type: SAMPLE

Parameter	Result	Units	MRL	LOD	MCL	DF	Prepared	By	Analyzed	By	Qual
E300.0, Anions											
Analysis Desc: E300.0, Anions											
Nitrate (as N)	0.679	mg/L	0.0100	0.00500	10	1			12/11/18 15:43	ML	



LCRA Environmental Laboratory Services
3505 Montopolis Drive
Austin, TX 78744
(512)730-6022
(512)730-6021

ANALYTICAL RESULTS

Workorder: Q1850236

Lab ID: Q1850236040
Sample ID: 1837692
Facility: EP016
Sample: TRT-TAP

Date Received: 12/11/2018 09:45
Date Collected: 12/10/2018 15:40
Location: PH
Client ID: TX1260018

Matrix: Drinking Water
Sample Type: SAMPLE

Parameter	Result	Units	MRL	LOD	MCL	DF	Prepared	By	Analyzed	By	Qual
E300.0, Anions											
Analysis Desc: E300.0, Anions											
Nitrate (as N)	0.600	mg/L	0.0100	0.00500	10	1			12/11/18 19:49	ML	

ANALYTICAL RESULTS

Workorder: Q1809021

Lab ID:	Q1809021003	Date Received:	3/7/2018 08:45	Matrix:	Drinking Water
Sample ID:	PBCU016	Date Collected:	3/5/2018 13:51	Sample Type:	SAMPLE
Facility	PBCU016	Location	3400 DOVE CREEK RD		
Sample Point	EWQP	Client ID	TX1260018		

Parameters	Results	Units	LOD	RL	MCL	DF	Prepared	By	Analyzed	By	Qual
------------	---------	-------	-----	----	-----	----	----------	----	----------	----	------

INORGANICS

Analysis Desc: E2340B, Hardness			Preparation Method: E2340B, Hardness								
			Analytical Method: E2340B, Hardness								
Hardness	99.6	mg/L				1	03/15/18 13:01	CW	03/15/18 13:01	CW	N

Analysis Desc: E200.7 Metals, Trace Elements			Preparation Method: E200.7 Prep								
			Analytical Method: E200.7 Metals, Trace Elements								
Calcium Total	33.6	mg/L	0.0700	0.200		1	03/12/18 15:23	MM	03/14/18 13:42	FO	N
Magnesium Total	3.81	mg/L	0.0700	0.200		1	03/12/18 15:23	MM	03/14/18 13:42	FO	
Iron Total	<0.0500	mg/L	0.0200	0.0500		1	03/12/18 15:23	MM	03/14/18 13:42	FO	
Sodium Total	21.3	mg/L	0.0700	0.200		1	03/12/18 15:23	MM	03/14/18 13:42	FO	

Analysis Desc: E200.8, ICP-MS			Preparation Method: E200.8, ICP-MS Prep								
			Analytical Method: E200.8, ICP-MS								
Manganese Total	<0.00100	mg/L	0.000400	0.00100		1	03/12/18 15:24	MM	03/14/18 17:45	FO	

Analysis Desc: E300.0, Anions			Preparation Method: E300.0, Anions								
			Analytical Method: E300.0, Anions								
Chloride	22.9	mg/L	0.500	1.00		1	03/07/18 14:03	FO	03/07/18 14:03	FO	
Sulfate	27.2	mg/L	0.500	1.00		1	03/07/18 14:03	FO	03/07/18 14:03	FO	

TOTAL DISSOLVED SOLIDS

Analysis Desc: SM2540C, TDS			Preparation Method: SM2540C, TDS								
			Analytical Method: SM2540C, TDS								
Total Dissolved Solids(TDS)	196	mg/L	10.0	25.0		10	03/08/18 16:00	ADG	03/08/18 16:00	ADG	

ALKALINITY

Analysis Desc: SM2320B, Alkalinity			Preparation Method: SM2320B, Alkalinity								
			Analytical Method: SM2320B, Alkalinity								
Total Alkalinity (CaCO ₃)	88.1	mg/L	20.0	20.0		1	03/09/18	MM	03/09/18	MM	N

Report ID: 318587 - 5378703

Page 7 of 38

This report may not be reproduced, except in full,
and with written approval from LCRA Environmental Laboratory Services.

ANALYTICAL RESULTS

Workorder: Q1809021

Lab ID: Q1809021003	Date Received: 3/7/2018 08:45	Matrix: Drinking Water
Sample ID: PBCU016	Date Collected: 3/5/2018 13:51	Sample Type: SAMPLE
Facility PBCU016	Location 3400 DOVE CREEK RD	
Sample Point EWQP	Client ID TX1260018	

Parameters	Results	Units	LOD	RL	MCL	DF	Prepared	By	Analyzed	By	Qual
Conductance @ 25°C											
Analysis Desc: SM2510B, Conductivity @ 25°C			Preparation Method: SM2510B, Conductivity @ 25°C								
			Analytical Method: SM2510B, Conductivity @ 25°C								
Specific Conductance	325	umho/cm	10.0	10.0		1	03/08/18 14:20	ADG	03/08/18 14:20	ADG	

ANALYTICAL RESULTS

Workorder: Q1825039

Lab ID: Q1825039005	Date Received: 6/22/2018 08:00	Matrix: Drinking Water
Sample ID: PBCU016	Date Collected: 6/20/2018 09:04	Sample Type: SAMPLE
Facility PBCU016	Location 3400 DOVE CREEK RD	
Sample Point EWQP	Client ID TX1260018	

Parameters	Results	Units	LOD	RL	MCL	DF	Prepared	By	Analyzed	By	Qual
------------	---------	-------	-----	----	-----	----	----------	----	----------	----	------

INORGANICS

Analysis Desc: E2340B, Hardness	Preparation Method: E2340B, Hardness
	Analytical Method: E2340B, Hardness

Hardness	88.1	mg/L					1	07/03/18 08:51	CW	07/03/18 08:51	CW	N
----------	------	------	--	--	--	--	---	----------------	----	----------------	----	---

Analysis Desc: E200.7 Metals, Trace Elements	Preparation Method: E200.7 Prep
	Analytical Method: E200.7 Metals, Trace Elements

Calcium Total	30.0	mg/L	0.0700	0.200		1	06/28/18 09:24	ME	07/02/18 14:54	FM	N
Magnesium Total	3.23	mg/L	0.0700	0.200		1	06/28/18 09:24	ME	07/02/18 14:54	FM	
Iron Total	<0.0500	mg/L	0.0200	0.0500		1	06/28/18 09:24	ME	07/02/18 14:54	FM	
Sodium Total	20.1	mg/L	0.0700	0.200		1	06/28/18 09:24	ME	07/02/18 14:54	FM	

Analysis Desc: E200.8, ICP-MS	Preparation Method: E200.8, ICP-MS Prep
	Analytical Method: E200.8, ICP-MS

Manganese Total	<0.00100	mg/L	0.000400	0.00100		1	06/28/18 09:30	ME	06/28/18 18:43	FO	
-----------------	----------	------	----------	---------	--	---	----------------	----	----------------	----	--

Analysis Desc: E300.0, Anions	Preparation Method: E300.0, Anions
	Analytical Method: E300.0, Anions

Chloride	19.4	mg/L	0.500	1.00		1	06/22/18 20:08	BC	06/22/18 20:08	BC	
Sulfate	30.0	mg/L	0.500	1.00		1	06/22/18 20:08	BC	06/22/18 20:08	BC	

TOTAL DISSOLVED SOLIDS

Analysis Desc: SM2540C, TDS	Preparation Method: SM2540C, TDS
	Analytical Method: SM2540C, TDS

Total Dissolved Solids(TDS)	193	mg/L	10.0	25.0		10	06/27/18 10:25	ADG	06/27/18 10:25	ADG	
-----------------------------	-----	------	------	------	--	----	----------------	-----	----------------	-----	--

ALKALINITY

Analysis Desc: SM2320B, Alkalinity	Preparation Method: SM2320B, Alkalinity
	Analytical Method: SM2320B, Alkalinity

Total Alkalinity (CaCO3)	83.4	mg/L	20.0	20.0		1	06/29/18	MM	06/29/18	MM	N
--------------------------	------	------	------	------	--	---	----------	----	----------	----	---

Report ID: 334605 - 5908413

Page 11 of 40

**ANALYTICAL RESULTS**

Workorder: Q1825039

Lab ID:	Q1825039005	Date Received:	6/22/2018 08:00	Matrix:	Drinking Water
Sample ID:	PBCU016	Date Collected:	6/20/2018 09:04	Sample Type:	SAMPLE
Facility	PBCU016	Location	3400 DOVE CREEK RD		
Sample Point	EWQP	Client ID	TX1260018		

Parameters	Results	Units	LOD	RL	MCL	DF	Prepared	By	Analyzed	By	Qual
------------	---------	-------	-----	----	-----	----	----------	----	----------	----	------

Conductance @ 25°C

Analysis Desc: SM2510B, Conductivity @ 25°C

Preparation Method: SM2510B, Conductivity @ 25°C

Analytical Method: SM2510B, Conductivity @ 25°C

Specific Conductance	307	umho/cm	10.0	10.0	1	07/03/18 12:21	ADG	07/03/18 12:21	ADG		
----------------------	-----	---------	------	------	---	----------------	-----	----------------	-----	--	--

Analyte	Sample Analysis Type	Value	or	< MRL (µg/L)	Additional Value	Status
1032: manganese	FS	1.1 µg/L		☐		PWS Approve / State Hold
1053: germanium	FS	0.32 µg/L		☐		PWS Approve / State Hold

Sample ID	35424289002SEA1	PWS	TX1260018: Johnson County SUD
Facility	60544: Plant 17	Sample Point	EP016MC: Sample Tap @ 340 Dove Creek Road
Sample Event	SEA1	Collection Date	10/11/2018
Monitoring Type	AM1		

EPA Method 200.8

Analyte	Sample Analysis Type	Value	or	< MRL (µg/L)	Additional Value	Status
1032: manganese	FS	3 µg/L		☐		PWS Approve / State Hold
1053: germanium	FS			☒		PWS Approve / State Hold

Sample ID	35423673010SEA1	PWS	TX1260018: Johnson County SUD
Facility	61654: Plant 10A	Sample Point	EP024MC: 2201 Cr.1224
Sample Event	SEA1	Collection Date	10/10/2018
Monitoring Type	AM1		

EPA Method 200.8

Analyte	Sample Analysis Type	Value	or	< MRL (µg/L)	Additional Value	Status
1032: manganese	FS	2 µg/L		☐		PWS Approve / State Hold
1053: germanium	FS	0.33 µg/L		☐		PWS Approve / State Hold
