



# Water Quality Report 2019



# Planning For Growth, Investing In Our Future

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## Water System Capital Improvement Projects 2019-2020:

- Recoating of Water Towers - Hook, Scherer, Ranson and Woods Chapel
- South Terminal Discharge Main
- Water Asset Management Plan
- Water Main - Harris Rd - Herring to Haines
- Water Main Rehab FY20 - Continuation
- Water Main Rehab FY21 - Design
- Cathodic Protection Pilot Program - Ongoing



The Water Utilities Department is dedicated to planning for future growth and providing current and future customers with safe and reliable water services. The capital improvement projects listed above are just some of the projects that are underway that will help us maintain the level of service that our customers expect.

For more information regarding the Water Utilities Department Capital Improvement Plan, please visit:

<https://cityofls.net/water-utilities/system-improvements/capital-improvements>

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Listed in this report are the most recent test results for our water supply as required by the Safe Drinking Water Act of 1996. We're proud to say, there were no water quality violations and that our water, purchased from Kansas City and Independence, meets and exceeds all federal and state standards. For the full list of monitoring results, refer to the chart on the backside of this report.





# YOUR WATER

## Definitions:

**AL:** Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

**MCL:** Maximum Contaminant Level – 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.

**MCLG – Maximum Contaminant Level Goal:** 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.

**90TH PERCENTILE:** For lead and copper testing. Ten percent of test results are above this level and 90 percent are below this level.

**Ppb:** parts per billion or micrograms per liter.

**ND:** Not detectable at testing limits.

**RAA:** Running Annual Average, or the average sample analytical results for samples taken during the previous four calendar quarters.

**LRAA:** Locational Running Annual Average, or the locational average of sample analytical results for samples taken during previous four calendar quarters.

## Innovative Technology - PipeDiver Update

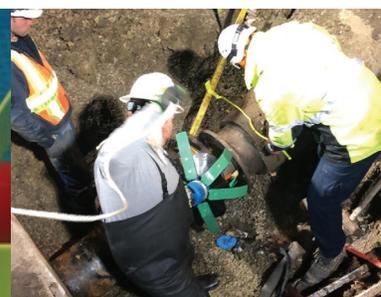
The City of Lee's Summit conducted an inspection of the water infrastructure on March 21, 2019 through the use of innovative technology known as PipeDiver. The City worked with HDR Engineering Inc. and Pure Technologies to perform the inspection.

The PipeDiver was inserted into pipeline at the Bowlin Pumping Station near Northeast Maybrook Road. The insertion location was then isolated and depressurized and the 16-inch spool piece was removed by the City and the PipeDiver tool was inserted by hand. The device then traveled an overall distance of 5.95 miles, inspecting 1,959 pipes.

The PipeDiver tool was extracted from the Independence Transmission Main via an existing 12-inch butterfly valve upstream of the altitude valve vault, located near the intersection of NE Douglas Street and E Chipman Road. Once the PipeDiver tool was confirmed to be at the extraction location, the main was isolated, depressurized, and dewatered. The 12-inch butterfly valve was then removed by the City, and the tool was pulled out of the main by hand.

The purpose of the PipeDiver inspection was to conduct a non-destructive evaluation to detect pipes with broken prestressing wire wraps and measure the level of distress in the water main at the time of the inspection. No pipes had broken prestressing wire wraps and only one pipe was detected that did not resemble characteristics of broken wire wraps.

Once the inspection was complete the data was then collected and analyzed. Pure Technologies then compiled a report that will aid in the development of an asset management strategy for the Water Utility Department.



# Lee's Summit Monitoring Results

The table lists the substances detected in Lee's Summit's drinking water during 2018 in accordance with the EPA standards. We have provided definitions on page three to help better understand the terms and abbreviations in the table.

Regulated Contaminants							
Substance (unit of measure)	Monitoring Period	Violation	MCL [MRDL]	MCLG [MRDLG]	Highest Detected	Range Low-High	Typical Source
CHROMIUM (ppb)	2014	No	100	100	1.12	1.08 - 1.12	Discharge from steel and pulp mills

Unregulated Contaminant Monitoring (UCMR)							
Substance	Monitoring Period	Violation	MCL [MRDL]	MCLG [MRDLG]	Highest Detected	Range Low-High	Typical Source
MOLYBDENUM, TOTAL	2014	No	None Established	None Established	3.35	3.32 - 3.35	Naturally occurring element found in ores and present in plants, animals and bacteria
STRONTIUM	2014	No	None Established	None Established	191	168 - 191	Naturally occurring element
VANADIUM, TOTAL	2014	No	None Established	None Established	1.61	1.54 - 1.61	Naturally occurring elemental metal

Disinfection Byproducts							
Substance (unit of measure)	Monitoring Period	Sample Point	MCL [MRDL]	MCLG [MRDLG]	LRAA	Range Low-High	Typical Source
Haloacetic Acids [HAA5] (ppb)	2018	DBPDUAL-01	60	0	18	13.3 - 23.6	By-product of drinking water disinfection
Haloacetic Acids [HAA5] (ppb)	2018	DBPDUAL-02	60	0	7	0 - 15	By-product of drinking water disinfection
Haloacetic Acids [HAA5] (ppb)	2018	DBPDUAL-03	60	0	9	0 - 18.1	By-product of drinking water disinfection
Haloacetic Acids [HAA5] (ppb)	2018	DBPDUAL-04	60	0	8	0 - 16.9	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2018	DBPDUAL-01	80	0	11	7.18 - 15.3	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2018	DBPDUAL-02	80	0	6	0 - 11.8	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2018	DBPDUAL-03	80	0	6	0 - 12.9	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2018	DBPDUAL-04	80	0	6	0 - 12	By-product of drinking water disinfection

Lead and Copper							
Substance (unit of measure)	Sample Period	Violation	MCL [MRDL]	MCLG [MRDLG]	AL	Sites Over AL	Typical Source
Copper (ppm)	2015 - 2017	No	0.00485	0.00152 - 0.0121	1.3	0	Corrosion of household plumbing systems

Microbiological							
Substance	MCLG [MRDLG]	Violation	Result	MCL [MRDL]	Typical Source		
Coliform (Total Coliform Rule)	0	No	In the month of November, 0.96% of samples returned as positive		Naturally present in the environment		

Reseller Regulated Contaminants					Independence Water		Kansas City Water		Typical Source
Substance (unit of measure)	Year Sampled	Violation	MCL [MRDL]	MCLG [MRDLG]	Highest Detected	Range Low-High	Highest Detected	Range Low-High	
Barium (ppm)	2018	No	No	2	0.053	0.053	0.0416	0.0416	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	2018	No	No	100	1	1	5	5	Discharge from steel and pulp mills
Cyanide (ppb)	2018	No	No	200	ND	ND	34	0 - 34	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	2018	No	No	4	0.16	0.16	0.968	0.226 - 0.968	Natural deposits; Water additive which promotes strong teeth
Lasso (ppb)	2017	No	No	0	ND	ND	0.93	0 - 0.93	Runoff from herbicide used on row crops
Nitrate (ppm)	2018	No	No	10	0.22	0.22	4.37	0.441 - 4.37	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2018	No	No	50	0.43	0.43	2.8	2.8	Erosion of natural deposits

Disinfection Byproducts									
Substance (unit of measure)	Year Sampled	Violation	MCL [MRDL]	MCLG [MRDLG]	Highest RAA	Range Low-High	Highest RAA	Range Low-High	Typical Source
Haloacetic Acids [HAA5] (ppb)	2018	No	60	NA	0	0	0	0	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2018	No	80	NA	3	8.08 - 8.82	3	8.08 - 8.82	By-product of drinking water disinfection

Reseller Secondary Contaminants									
Substance (unit of measure)	Year Sampled	Violation	Range Low-High	Range Low-High					
Hardness, Carbonate	2018	No	114						
Hardness, Total (as CaCO3)	2018	No		98-120					