2020

Water Quality Report

CITY OF KYLE
ESTABLISHED 1880

Public Works Department
Water Treatment Division

City of Kyle
Annual Drinking Water Quality Report
for the period of
January 1 to December 31, 2020

For more information contact:
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PWS ID# TX1050002
City of Kyle, Texas

This report is intended to provide important information about Kyle's drinking water and the efforts made by this water system to provide safe drinking water.

NOTICE: This customer confidence report is only applicable to persons who receive their water from the City of Kyle. If you do not receive your water service from the City of Kyle, please contact your water provider to obtain your confidence report.

Este reporte incluye información importante sobre el agua para tomar.
Para asistencia en español,
favor de llamar al telefono 512-262-3024 o email pw@cityofkyle.com.

Sources of Drinking Water

NOTE: All public and private water systems are required to include certain regulatory language in their annual water quality reports. The results of the TCEQ testing for Kyle's water system are included in this water quality report.

The sources of drinking water (including tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells.

City of Kyle uses purchased surface water and treated groundwater.

Surface Water comes from:

- Canyon Lake via Lake Dunlap , Guadalupe County through the Guadalupe-Blanco River Authority (GBRA)

Groundwater comes from:

- San Antonio segment - Edwards Aquifer, Hays County
- Barton Springs segment - Edwards Aquifer, Hays County

Federal and State Regulations

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems.

The Federal Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Contaminants may be found in all drinking water that may cause taste, color or odor problems. It's important to note that these types of issues 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.

Public Input

The Kyle City Council meets on the first and third Tuesdays of each month at Kyle City Hall, located at 100 W. Center Street in Kyle, TX. Occasionally, the council discusses business that pertains to drinking water quality, supply and infrastructure. For more information, agendas and meeting details, please call 512-262-1010 or visit our website at www.cityofkyle.com. Agendas are posted at least 72 hours prior to meetings and are available on the city's website.

Contaminants

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.

Contaminants that MAY be present in source water include:

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

Some people can 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.

If you or family members are at risk, you should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline, toll free, at 1-800-426-4791.

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.

The City of Kyle is 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 the water inside your home tested by a private, third-party entity.

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.

Information About Source Water Assessments

Fluoride / Fluoridation

Kyle's water supply does NOT have fluoride added to it; the fluoride in our groundwater sources are naturally occurring. The Texas Commission on Environmental Quality (TCEQ) has notified the **City of Kyle, PWS ID# 1050002** that the drinking water being supplied to customers has exceeded the Secondary Constituent Level (SCL) of 2.0 mg/L for fluoride.

This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system **City of Kyle** has a fluoride concentration of **2.38** mg/L.

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternate sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/L of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/L of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/L because of this cosmetic dental problem.

For more information, please call **Tim Samford** of **City of Kyle, Public Works** at **(512) 262-3024**. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

Hardness

The hardness of Kyle's municipal drinking water can vary considerably depending on several factors, including the time of year. This is a result of the amount of groundwater we are using in the system at any given time. Groundwater resources are the primary contributors of hardness in our system. The average range of hardness is 260-315 mg/L of total hardness (as CaCO3). This is approximately equal to 15-18 grains per gallon in range.

Water Loss

Water loss is a concern for all water utilities. Here in the City of Kyle, our water loss goal is 15 percent or less. The water loss for the reporting period (January-December, 2020) was 9.07 percent.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: https://www.tceq.texas.gov/gis/swaview
Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: http://dww2.tceq.texas.gov/DWW/

Definitions of Water Quality Test Results

The tables on the last two pages of this report contain scientific terms and measures, some of which may require explanation. See the list below for what these terms mean.

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 the 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.

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 that a water system must follow.

MFL: million fibers per liter (a measure of asbestos)

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.

ppt: parts per trillion, or nanograms per liter (ng/L)

ppq: parts per quadrillion, or pictograms per liter (pg/L)

2020 Water Quality Test Results

Lead & Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Contamination Source
Copper	2019	1.3	1.3	0.122	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
Lead	2019	0	15	1.99	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits

Water Quality Test Results

Regulated Contaminants

Disinfectants / Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2020	14.4	1.2 - 14.4	No goal for total	60	ppb	N	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	2020	75.7	2.4 - 75.7	No goal for 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
Barium	2019	0.171	0.062 - 0.171	2.0	2.0	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	2020	2.38	2.38 - 2.38	4.0	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	1.84	0.13 - 1.84	10	10	ppm	N	Runoff from fertilizer; Leaching from septic tanks, sewage; Erosion of natural deposits

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	2019	1.18	1.18 - 1.18	0	5	pCi/L	N	Erosion of natural deposits
Gross alpha excluding radon and uranium	2019	6.4	6.4 - 6.4	0	15	pCi/L	N	Erosion of natural deposits

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Ethybenzene	2018	0.8	0.8 - 0.8	700	700	ppb	N	Discharge from petroleum factories; from chemical factories
Xylenes	2020	1.5	1.3 - 1.5	10,000	10,000	ppb	N	Discharge from petroleum factories; from chemical factories

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Max. Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination:
0	0 positive monthly sample	0 (out of 360 tests)	2 consecutive positives	0	N	Naturally present in environment

Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
	2020	1.53	0.76 - 2.2	4	4	ppm	N	Water additive used to control microbes.

Appendix D-Unregulated Contaminants

Figure: 30 TAC §290.275(4)

Note: only items on the table that were detected are listed here.

	Highest levels detected 2020	
(1) Chloroform	37.5	No MCL listed
(2) Bromodichloromethane	9.9	No MCL listed
(3) Bromoform	11.0	No MCL listed

Violations Table

None.

Ph range table

Average = 7.8

Range 7.3 - 8.2

Surface Water Quality Results

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	UNITS	Violation	Likely Source of Contamination
Turbidity	2020	0.093	0.004 - 0.093	0.3	0.3	NTU	N	Soil runoff
Inorganic Contaminants	**Collection Date**	**Highest Level Detected**	**Range of Levels Detected**	**MCLG**	**MCL**	**UNITS**	**Violation**	**Likely Source of Contamination**
Nitrate	2020	1.74	1.74 - 1.74	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Disinfection By-Products	**Collection Date**	**Highest Level Detected**	**Range of Levels Detected**	**MCLG**	**MCL**	**UNITS**	**Violation**	**Likely Source of Contamination**
Chlorite	2020	0.75	0.46 - 0.75	0.8	1.0	ppm	N	By-product of drinking water disinfection

Fourth Unregulated Contaminant Monitoring Rule (UCMR4)

The Unregulated Contaminant Monitoring Rule (UCMR) provides EPA and other interested parties with scientifically valid data on the occurrence of contaminants in drinking water. This national survey is one of the primary sources of information on occurrence and levels of exposure that the EPA uses to develop regulatory decisions for contaminants in the public drinking water supply.

The following compounds are currently not regulated so there is not an established MCLG or MCL. If you have further questions regarding UCMR you can visit:
https://www.epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule
or contact the City of Kyle Public Works office at 512-262-3024.

CONTAMINANT	COLLECTION DATE	HIGHEST LEVEL DETECTED	RANGE OF LEVELS DETECTED	UNITS
Bromochloroacetic acid	2020	7.26	0.418 – 7.26	ppm
Bromodichlooacetic acid	2020	5.35	<0.500 – 5.35	ppm
Chlorodibromoacetic acid	2020	9.02	<0.300 – 9.02	ppm
Dibromoacetic acid	2020	8.15	<0.300 – 8.15	ppm
Dichloracetic acid	2020	5.28	<0.200 – 5.28	ppm
Monobromocacetic acid	2020	1.42	<0.300 – 1.42	ppm
Monochloroacetic acid	2020	<2.00	<2.00 - <2.00	ppm
Trichloroacetic acid	2020	2.48	<2.00 – 2.48	ppm
Tribomoacetic acid	2020	3.96	<0.500 – 3.96	ppm
Antoxin-a	2020	<0.0300	<0.0300 - <0.0300	ppm
Cylindrospermopsin	2020	<0.0900	<0.0900 - <0.0900	ppm
Total Microcystins & Nodularins	2020	<0.300	<0.300 - <0.300	ppm
Germanium	2020	<0.300	<0.300 - <0.300	ppm
Manganese	2020	0.648	<0.400 – 0.648	ppm
alpha-Hexachlorocyclohexane	2020	<0.0100	<0.0100 - <0.0100	ppm

Dimethipin	2020	<0.200	<0.200 - <0.200	ppm
Chlorpyrifos	2020	<0.0300	<0.0300 - <0.0300	ppm
Ethoprop	2020	<0.0300	<0.0300 - <0.0300	ppm
Oxyfluorfen	2020	<0.0500	<0.0500 - <0.0500	ppm
Profenofos	2020	<0.300	<0.300 - <0.300	ppm
Tebuconazole	2020	<0.200	<0.200 - <0.200	ppm
Permethrin, cis & trans	2020	<0.0400	<0.0400 - <0.0400	ppm
Tribufos	2020	<0.0700	<0.0700 - <0.0700	ppm
Butylated hydroxyanisole	2020	<0.0300	<0.0300 - <0.0300	ppm
o-Toluidine	2020	<0.00700	<0.00700 - <0.00700	ppm
Quinoline	2020	<0.0200	<0.0200 - <0.0200	ppm
1-Butanol	2020	<2.00	<2.00 - <2.00	ppm
2-Methoxyethanol	2020	<0.400	<0.400 - <0.400	ppm
2-Propen-1-ol	2020	<0.500	<0.500 - <0.500	ppm