

2023

Water Quality Report

City of Kyle
Annual Drinking Water Quality Report
for the period of
January 1, 2023 to December 31, 2023

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PWS ID# TX1050002
City of Kyle, Texas

CITY OF
KYLE

ESTABLISHED 1880

Public Works Department
Water Treatment Division

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.

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Este reporte incluye información importante sobre el agua para tomar.
Para asistencia en español,
favor de llamar al telefono 512-262-3024 or 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 is naturally occurring. The Texas Commission on Environmental Quality (TCEQ) has notified the City of Kyle, PWSID# 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). Dental fluorosis, in its moderate or severe forms, may result in 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. The drinking water provided by your community water system City of Kyle has a fluoride concentration of 2.24 mg/L.

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.

Some home water treatment units are available to remove fluoride from drinking water. To learn more about 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 range of hardness is 292- 316 mg/L of total hardness (as CaCO₃). General guidelines for classification of waters are: 0 to 60 mg/L (milligrams per liter) as calcium carbonate is classified as soft; 61 to 120 mg/L as moderately hard; 121 to 180 mg/L as hard; and more than 180 mg/L as very hard.

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 2023) was 9.19 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)

2023 Water Quality Test Results

Lead & Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Contamination Source
Copper	2023	1.3	1.3	0.11	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
Lead	2023	0	15	1.3	1	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)	2023	30.5	9.8 - 30.5	No goal for total	60	ppb	N	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	2023	79.6	31.8 - 79.6	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	2022	0.18	0.0553 - 0.18	2.0	2.0	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	2023	2.24	2.24 - 2.24	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]	2023	1.49	0.11 - 1.49	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	2023	1.1	1.1 - 1.1	0	5	pCi/L	N	Erosion of natural deposits
Gross alpha excluding radon and uranium	2023	5.7	3.6 - 5.7	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	2023	<MRL	<MRL	700	700	ppb	N	Discharge from petroleum factories; from chemical factories
Xylenes	2023	2.7	0.9 - 2.7	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	1 positive monthly sample	1 (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
	2023	1.47	0.51 - 2.18	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 2023	No MCL listed
(1) Chloroform	28.6	No MCL listed
(2) Bromodichloromethane	25.6	No MCL listed
(3) Bromoform	10.4	No MCL listed

Violations Table

None.

Ph range table

Average = 7.74
Range 7.1 - 8

Surface Water Quality Results

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	UNITS	Violation	Likely Source of Contamination
Turbidity	2023	0.102	0.008 - 0.102	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	2023	1.44	1.44 - 1.44	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	2023	0.86	0.029 - 0.86	0.8	1.0	ppm	N	By-product of drinking water disinfection

Fifth Unregulated Contaminant Monitoring Rule (UCMR5)

The fifth Unregulated Contaminant Monitoring Rule (UCMR 5) was published on December 27, 2021. UCMR 5 requires sample collection for 30 chemical contaminants between 2023 and 2025 using analytical methods developed by the EPA and consensus organizations. This action provides the agency and other interested parties with scientifically valid data on the national occurrence of these contaminants in drinking water. Consistent with the EPA's PFAS Strategic Roadmap, UCMR 5 will provide new data that will improve the agency's understanding of the frequency that 29 per- and polyfluoroalkyl substances (PFAS) and lithium are found in the nation's drinking water systems, and at what levels. The monitoring data on PFAS and lithium will help the EPA make determinations about future regulations and other actions to protect public health under SDWA.

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/fifth-unregulated-contaminant-monitoring-rule#notes> or contact the City of Kyle Public Works office at 512-262-3024.

Contaminant	Date Sample Collected	Highest Level Detected	Range of Levels Detected	Minimum Reporting Level (MRL)	Contaminant Classification
lithium	2023-24	12.6 µg/L	<MRL-12.6 µg/L	9 µg/L	Metal; pharmaceutical
(11Cl-PF3OUdS)	2023-24	<MRL	<MRL	0.005 µg/L	PFAS
(9Cl-PF3ONS)	2023-24	<MRL	<MRL	0.002 µg/L	PFAS
(ADONA)	2023-24	<MRL	<MRL	0.003 µg/L	PFAS
(HFPO-DA) (GenX chemicals)	2023-24	<MRL	<MRL	0.005 µg/L	PFAS
(NFDHA)	2023-24	<MRL	<MRL	0.02 µg/L	PFAS
(PFBA)	2023-24	.0194 µg/L	<MRL-.0194 µg/L	0.005 µg/L	PFAS
(PFBS)	2023-24	<MRL	<MRL	0.003 µg/L	PFAS
(8:2FTS)	2023-24	<MRL	<MRL	0.005 µg/L	PFAS
(PFDA)	2023-24	<MRL	<MRL	0.003 µg/L	PFAS
(PFDoA)	2023-24	<MRL	<MRL	0.003 µg/L	PFAS
(PFEESA)	2023-24	<MRL	<MRL	0.003 µg/L	PFAS
(PFHpS)	2023-24	<MRL	<MRL	0.003 µg/L	PFAS
(PFHpA)	2023-24	<MRL	<MRL	0.003 µg/L	PFAS
(4:2FTS)	2023-24	<MRL	<MRL	0.003 µg/L	PFAS
(PFHxS)	2023-24	<MRL	<MRL	0.003 µg/L	PFAS
(PFHxA)	2023-24	.0031 µg/L	<MRL-.0031 µg/L	0.003 µg/L	PFAS
(PFMPA)	2023-24	<MRL	<MRL	0.004 µg/L	PFAS
(PFMBA)	2023-24	<MRL	<MRL	0.003 µg/L	PFAS
(PFNA)	2023-24	<MRL	<MRL	0.004 µg/L	PFAS

Fifth Unregulated Contaminant Monitoring Rule (UCMR5)

Contaminant	Date Sample Collected	Highest Level Detected	Range of Levels Detected	Minimum Reporting Level (MRL)	Contaminant Classification
(6:2FTS)	2023-24	<MRL	<MRL	0.005 µg/L	PFAS
(PFOS)	2023-24	<MRL	<MRL	0.004 µg/L	PFAS
(PFOA)	2023-24	<MRL	<MRL	0.004 µg/L	PFAS
(PFPeA)	2023-24	.0045	<MRL-.0045 µg/L	0.003 µg/L	PFAS
(PFPeS)	2023-24	<MRL	<MRL	0.004 µg/L	PFAS
(PFUnA)	2023-24	<MRL	<MRL	0.002 µg/L	PFAS
(NEtFOSAA)	2023-24	<MRL	<MRL	0.005 µg/L	PFAS
(NMeFOSAA)	2023-24	<MRL	<MRL	0.006 µg/L	PFAS
(PFTA)	2023-24	<MRL	<MRL	0.008 µg/L	PFAS
(PFTrDA)	2023-24	<MRL	<MRL	0.007 µg/L	PFAS