

WATER QUALITY 2018



PWS# 0280002

EXCELLENCE IN WATER QUALITY

Luling Water Department 830-875-2469

GBRA Water Treatment Plant 830-875-2132

Dear Customer,

The City of Luling is pleased to provide you with the 2018 Water Quality Report (January 1-December 31, 2018). We take all possible precautions to safeguard your water supply and hope you will be encouraged to learn about the high quality of water provided to you.

The federal Safe Drinking Water Act (SDWA) requires water utilities to issue an annual report to customers, in addition to other notices that may be required by law. This report explains where your drinking water comes from, what it contains, and the health risks our water testing and treatment are designed to prevent.

We are committed to providing you with information about your water supply because informed customers are our best allies in supporting improvements needed to maintain the highest drinking water standards.

We are proud to report that the Texas Commission on Environmental Quality (TCEQ) has assessed our system and determined that your drinking water, meets or exceeds all federal and state water quality standards.

The tables on this report list all substances that were detected in our treated water, and the highest level at which they were detected. The tables also reflect the highest levels allowed by federal regulatory agencies. Please read this information carefully and if you have questions, call the numbers listed in this report. An electronic copy of this report can be found at:
www.gbra.org/documents/publications/ccrs/2018/Luling.pdf.

Customer Views Welcome

The City of Luling strongly supports the national primary water regulation compliance process. If you are interested in learning more about the water department, water quality, or participating in the decision-making process, there are a number of opportunities available.

Questions about water quality can be answered by calling 830-875-2469 from 8 am – 5 pm, Monday through Friday. Inquiries about public participation and policy decisions should be directed to the City Manager's office at 830-875-2481.

The Luling City Council meets every second Thursday of the month at 6:00 pm at City Hall and all meetings are open to the public.

En Español

Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre este informe en español, favor de llamar al tel. 830-875-2469 para hablar con una personal bilingüe en español durante las horas regulares de oficina (8 am – 5 pm).

CONSERVE WATER/SAVE WATER!

Water Saving Tips:

Reduce indoor water usage by 40-50% by installing low-flush toilets and low flow fixtures
Water lawns once a week rather than a short period every day
Fix leaks and stop the dripping faucets
American Water Works Drip calculator to estimate water waste:
<https://drinktap.org/Water-Info/Water-Conservation/Drip-Calculator>



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>.

Photo by Daniel Ocegüera



Where Do We Get Our Drinking Water?

The City of Luling received its water from surface water diverted from the San Marcos River and treated at the GBRA Luling Water Treatment Plant, operated by the Guadalupe-Blanco River Authority.

A Source Water Susceptibility Assessment for your drinking water source was conducted by TCEQ. This report describes the susceptibility and types of constituents that may come into contact with the drinking water source based on human activities and natural conditions. The system from which we purchase our water received the assessment report. For more information on source water assessments and protection efforts at our system contact City of Luling, City Hall at 830-875-2481.

Trained operators monitor and test the water, including the addition of fluoride and chloramine, to ensure that our water meets or exceeds all state and federal drinking water standards. The treated water is delivered to the city's water towers and delivered through its distribution system to you. For information on the treatment of your drinking water and water quality protection efforts, contact GBRA Luling Water Treatment Plant at 830-875-2132.

What We Found

The following tables list the contaminants that have been found in your drinking water. USEPA requires water systems to test for more than 97 contaminants. The column marked "Highest Level at Any Sampling Point" shows the highest test results during the year. The "Source of Contaminant" column shows where the substance usually originates. In the water loss audit submitted to the Texas Water Development Board, our system loss an estimated 42,820,400 gallons. If you have any questions about the water loss audit, please call 830-875-2481.

DEFINITIONS and ABBREVIATIONS

Action Level (AL) – the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that 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 MCL's are based on running annual average of monthly samples.

Maximum Contaminant Level (MCL) – the highest level of the contaminant allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) – the level of a contaminant in drinking water below which there is no known or expected health risk. MCLG's 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.

NA – Not Applicable

ND – Not Detected

NTU's – Nephelometric Turbidity Units

pCi/L - picocuries per liter (a measure of radioactivity)

ppm – parts per million, or milligrams per liter (mg/L)

ppb – parts per billion (ug/L)

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.

Photo by Albert Soto



TABLE I - Test results for the GBRA Luling Water Treatment Plant source

Total organic carbon (TOC) sampled from water has no health effects. The disinfection can combine with TOC to form disinfection byproducts. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. Byproducts of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report.

Year	Constituent	Average Constituent	Minimum Concentration	Maximum Concentration	Units of Measure	Source of Constituent
2018	Total organic carbon	1.26	0.72	2.62	ppm	Naturally occurring; no health effects directly associated

TABLE II - Test results for the GBRA water supply to Luling (Sampled at the GBRA Luling Water Treatment Plant)

Inorganics

Year	Detected Constituent	Measured Concentration	Number of Analyses	MCL	MCLG	Units of Measure	Violation	Source of Constituent
2018	Barium	0.038	1	2	2	ppm	N	Discharge of drilling wastes; erosion of natural deposits.
2018	Fluoride	0.66	365	4	4	ppm	N	Erosion of natural deposits; water additive which promotes strong teeth; runoff from fertilizer use.
2018	Nitrate-Nitrogen	1.58	1	10	10	ppm	N	Runoff from fertilizer use; leaching from septic tanks; treated wastewater effluent; erosion of natural deposits.
2018	Cyanide	0.07	1	0.2	0.2	ppm	N	Discharge from steel/metal factories, Discharge from plastic and fertilizer factories.

Volatile Organic Contaminants

Year	Detected Constituent	Measured Concentration Avg	Number of Analysis Performed	MCL	MCLG	Units of Measure	Violation	Source of Constituent
2018	p-Dichlorobenzene	0.7	1	75	75	ppb	N	Discharge from industrial chemical factories

Synthetic Organic Contaminants

Year	Detected Constituent	Measured Concentration	Number of Analyses	MCL	MCLG	Units of Measure	Violation	Likely Source of Contamination
2018	Atrazine	0.12	1	3	3	ppb	N	Runoff from herbicide used on row crops.

Turbidity

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. Turbidity is measured 4 times per day through grab samples and continuously through automatic on-line filter turbidity monitors.

Year	Detected Constituent	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Units of Measure	Violation	Source of Constituent
2018	Turbidity	0.14	100%	0.3	NTU	N	Soil runoff

Total Coliforms

Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Year	Total Coliform	Reported monthly test no coliform bacteria
2018	E coli	Reported monthly tests found no E. coli bacteria



TABLE III - Test results for the GBRA water supply to Luling (Sampled in the Luling Distribution System)

Total Coliforms

Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. Of Positive	Fecal Coliform or E.coli Maximum Contaminant level	Total Number of Positive E.coli or fecal Coliform Samples	Violations	Likely Source of Constituent
0	1 positive monthly sample	1		0	N	Naturally present in the environment

Maximum Residual Disinfectant Level

Year	Detected Constituent	Average Concentration	Minimum Concentration	Maximum Concentration	MRDL	MRDLG	Unit Of Measure	Source of Constituent
2018	Chloramines	2.64	0.5	4.8	4	4	ppm	Disinfectant used to control microbes

Disinfection Byproducts

Year	Constituent	Highest Level or Avg. Detected	Range of Individual Samples	MCLG	MCL	Unit of Measure	Violation	Source of Contaminant
2018	Total Haloacetic Acids	16	4.6 - 15.6	No Goal	60	ppb	N	Byproduct of drinking water disinfection.
2018	Total Trihalomethanes	28	15.6 - 38.5	No Goal	80	ppb	N	Byproduct of drinking water disinfection.

Inorganic Contaminant

Year	Detected Constituent	Measured Concentration	Number of Analysis	MCL	MCLG	Units of Measure	Violation	Source of Constituent
2018	Nitrate-Nitrogen	165	1	10	10	ppm	N	Runoff from Fertilizer use; leaching from septic tanks treated wastewater effluent; erosion of natural deposits

Lead and Copper

Year	Detected Constituent	MCLG	Action Level	90th Percentile	# Sites Over AL	Unit of Measure	Violation	Source of Constituent
2018	Lead	0	15	14	2	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.
2018	Copper	1.3	1.3	0.16	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

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. This water supply is responsible for providing high quality drinking water, but 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>.

Violations Table

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)	10/1/2016	2018	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.
Follow up or Routine TAP M/R (LCR)	10/1/2017	2018	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.
Follow up or Routine TAP M/R (LCR)	10/1/2018	2018	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.
Public Notification Rule			
The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency)			
Violation Type	Violation Begin	Violation End	Violation Explanation
Public Notice Rule Linked to Violation	10/25/2018	2018	We failed to adequately notify you, our drinking water customers, about a violation of the drinking water regulations.

