

2015 Annual Drinking Water Quality Report

CITY OF FLORENCE

TX2460005

Annual Water Quality Report for the period of January 1 to December 31, 2015

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

For more information regarding this report contact:

Name Cory Seyk, Water Operator

Phone 254-793-4016

Florence Council Meetings 1st Tuesday of every month at 6:00 pm

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al teléfono (254)793-2490.

Sources of 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>.

The TCEQ completed an assessment of your source water and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, contact Cory Seyk, Water Operator 254-793-4016.

Information about Source Water

A Source Water Susceptibility Assessment for your drinking water source(s) is currently being updated by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment allows us to focus source water protection strategies.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: <http://gis3.tceq.state.tx.us/swav/Controller/index.jsp?wtrsrc=>

The TCEQ completed an assessment of your source water and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for the City of Florence are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, contact Cory Seyk, Water Operator- 254-793-4016.

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: <http://dww.tceq.texas.gov/DWW>.

Our water comes from both ground water and surface water sources. Ground water is primarily supplied by the Trinity Aquifer. Surface Water is primarily supplied by Lake Georgetown which is also fed by Stillhouse Lake, but not directly into the distribution system.

2015 Regulated Contaminants Detected

Lead and Copper

Definitions:
 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 which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	09/01/2012	1.3	1.3	1.12	1	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	09/01/2012	0	1.5	8.3	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Water Quality Test Results

Definitions:

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

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 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)

na:

not applicable.

NTU

nephelometric turbidity units (a measure of turbidity)

pCi/L

picocuries per liter (a measure of radioactivity)

Water Quality Test Results

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 picograms per liter (pg/L)

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)*	2015	1	0 - 2	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2015	9	2.7 - 14.5	No goal for the 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	2015	0.0723	0.0566 - 0.0723	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2015	1.44	1.32 - 1.44	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]	2015	0.07	0.07 - 0.07	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	2015	3.9	0 - 3.9	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2015	19.1	15.3 - 19.1	0	50	pCi/L,*	N	Decay of natural and man-made deposits.

*EPA considers 50 pCi/L to be the level of concern for beta particles.

Combined Radium 226/228	2015	3.2	3.2 - 3.2	0	5	pCi/L	N	Erosion of natural deposits.
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Violations Table

Violation Type		Violation Begin	Violation End	Violation Explanation
Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.				
Disinfectant Level Quarterly Operating Report (DLQOR).		10/01/2015	12/31/2015	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. The City has implemented stringent policies on reporting in a timely matter.

Lead and Copper Rule

Violation Type		Violation Begin	Violation End	Violation Explanation
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.				
FOLLOW-UP OR ROUTINE TAP M/R (LCR)		10/01/2013	2015	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. The City has implemented stringent policies on reporting in a timely matter.
FOLLOW-UP OR ROUTINE TAP M/R (LCR)		10/01/2014	2015	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. The City has implemented stringent policies on reporting in a timely matter.
FOLLOW-UP OR ROUTINE TAP M/R (LCR)		10/01/2015	2015	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. The City has implemented stringent policies on reporting in a timely matter.

Disinfectant Residual Table

Disinfectant	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Units of Measure	Violation	Likely Source of Contamination
Chlorine Gas	2015	1.76	.42	3.38	4.0	<4.0	ppm	N	Water additive used to control microbes.

City of Georgetown

Maximum Residual Disinfectant Level

Year	Disinfectant & Unit of Measure	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Violation (Y or N)	Source of Disinfectant
2015	Chloramine Residual (ppm)	2.72	0.2	3.72	4.00	<4.00	N	Disinfectant used to control microbes.

Inorganic Contaminants

Year	Contaminant & Unit of Measure	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Violation (Y or N)	Source of Contaminant
2011	Barium (ppm)	0.0529	0.0529 - 0.0529	2.00	2.00	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
2014	Fluoride (ppm)	0.79	0.79 - 0.79	4	4	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2015	Nitrate (ppm)	2.37	0.09 - 2.37	10.0	10.0	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
2011	Selenium (ppb)	3.4	3.4 - 3.4	50	50	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Radioactive Contaminants

Year	Contaminant & Unit of Measure	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Violation (Y or N)	Source of Contaminant
2011	Combined Radium 226 & 228 (pCi/L)	2.4	2.4 - 2.4	5	0	N	Erosion of natural deposits.
2011	Gross Alpha including radon and uranium (pCi/L)	2.4	2.4 - 2.4	15	0	N	Erosion of natural deposits.

Organic Contaminants

TESTING WAIVED, NOT REPORTED, OR NONE DETECTED

Disinfectants and Disinfection By-Products

Year	Contaminant & Unit of Measure	Average Level Detected	Range of Levels Detected	MCL	MCLG	Violation (Y or N)	Source of Contaminant
2015	HAA5 Haloacetic Acids (ppb)	20.4	2.0 - 41.4	60	No goal for the total	N	Byproduct of drinking water disinfection.
2015	Total	37.3	4.8 - 69.1	80	No goal for the	N	Byproduct of drinking water disinfection.

	Trihalomethanes (ppb)				total		
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Unregulated Contaminants

Year	Contaminant & Unit of Measure	Average Level	Minimum Level	Maximum Level	Violation (Y or N)	Source of Contaminant
2015	Chloroform (ppb)	14.77	0	40.4	N	Byproduct of drinking water disinfection.
2015	Bromoform (ppb)	2.37	0	9.3	N	Byproduct of drinking water disinfection.
2015	Bromodichloromethane (ppb)	11.02	0	21.5	N	Byproduct of drinking water disinfection.
2015	Dibromochloromethane (ppb)	6.99	0	15.5	N	Byproduct of drinking water disinfection.

Year	Contaminant & Unit of Measure	MCL	MCLG	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Violation (Y or N)	Source of Contaminant
2015	Turbidity (NTU)	TT	0.30	0.27	100	0.3	N	Soil runoff.

Lead and Copper is tested every 3 years

Year	Contaminant & Unit of Measure	MCLG	The 90 th Percentile	No. of Sites Exceeding Action Level	Action Level	Violation (Y or N)	Source of Contaminant
2014	Lead (ppb)	0	3.4	0	15	N	Corrosion of household plumbing systems; erosion of natural deposits.
2014	Copper (ppm)	1.3	0.117	0	1.3	N	Erosion of natural deposits; Leaching from wood preservatives; corrosion of household plumbing systems.

Microbiological Contaminants

Year	Contaminant	MCL	MCLG	Highest Measurement	Lowest Monthly % of Samples Meeting Limits	Violation (Y or N)	Source of Contaminant
2015	Fecal Coliform & E. Coli	N/A	N/A	N/A	N/A	N	Human and animal fecal waste. No testing required.
2015	Total Coliform Bacteria	*	N/A	1	100	N	Naturally present in the environment.

Unregulated Contaminant Monitoring Rule (UCMR3 Rule)*

Substance (units)	Year Sampled	Average	Range of Detection	Typical Source
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Chlorate (ppb)	2013	374	ND - 1400	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide.
Chromium (ppb)	2015	ND	ND	Naturally occurring element; used in making steel and other alloys; used for chrome plating, dyes, and pigments, leather tanning, and wood preservation.
Chromium (VI) (ppb)	2015	ND	ND	Naturally occurring element; used in making steel and other alloys; used for chrome plating, dyes, and pigments, leather tanning, and wood preservation.
Molybdenum (ppb)	2013	0.19	ND - 2.2	Naturally-occurring element found in ores and present in plants, animals, and bacteria; commonly used form molybdenum trioxide used as a chemical reagent.
Strontium (ppb)	2013	393	120 - 980	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions.
Vanadium (ppb)	2013	2.2	1.4 - 3	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst.

Total Organic Carbon (Source Water: Lake Georgetown)

Year	Contaminant	Average Level	Minimum Level	Maximum level	Unit of Measure	Source of Contaminant
2015	Source Water	2.74	.88	5.06	ppm	Naturally present in the environment.
2015	Drinking Water	2.25	.86	3.90	ppm	Naturally present in the environment.
2015	Removal Ratio	1.02	.64	1.34	% removal	N/A

2015 LT2 Results

Substance (unit)	Year Sampled	Average	Range of Detection	Typical Source
Cryptosporidium (ppb)	2015	0.059	ND - 0.091	Cryptosporidium is a microbial pathogen found in surface water throughout the U.S.