

Annual Drinking Water Quality Report

For more information regarding this report contact:

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Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en sepanol, favor de llamar al telefono (325) 347-6449 TX 1600001

Annual Water Quality Report for the period of
January 1 to December 31, 2016

City of Mason is Ground Water

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:

- (a) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (b) 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.
- (c) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- (d) 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.

(e) 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, color, or odor 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; person 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. 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 two 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>.

Information about Source Water Assessments

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 John Palacio at 347-6449.

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=>

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

Source Water Name		Type of Water	Report Status
1 - END OF EL PASO ST	END OF EL PASO ST	GW	Y
4 - MILL CREEK RD	MILL CREEK RD	GW	
5 - W OF TOWN	W OF TOWN	GW	Y
7 - S OF TOWN	S OF TOWN	GW	Y
8 - MILL CREEK RD	MILL CREEK RD	GW	Y

NOTICE OF DRINKING WATER VIOLATIONS FOR BOTH RADIUM 226 & 228 AND GROSS ALPHA PARTICLES

The Texas Commission on Environmental Quality (TCEQ) has notified the CITY OF MASON water system that the drinking water being supplied to customers has exceeded the Maximum Contaminant Level (MCL) for gross alpha excluding radon and uranium. The U.S. Environmental Protection Agency has established the MCL for gross alpha excluding radon and uranium at 15 pico curies per liter (pCi/L) based on running annual average (RAA), and has determined that it is a health concern at levels above the MCL. Analysis of drinking water in your community for gross alpha excluding radon and uranium indicates a compliance value in quarter four of 2016 of 17 pCi/L for EP1.

The Texas Commission on Environmental Quality (TCEQ) has notified the CITY OF MASON water system that the drinking water being supplied to customers had exceed the Maximum Contaminant Level (MCL) for combined radium (-226 & -228). The U.S. Environmental Protection Agency (U.S. EPA) has established the MCL for combined radium (-226 & -228) at 5 pico curies per liter (pCi/L) based on running annual average (RAA), and has determined that it is a health concern at levels above the MCL. Analysis of drinking water in your community for combined radium (-226 & -228) indicates a compliance value in quarter four of 2016 of 6 pCi/L for EP1.

This is not an emergency. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of MCL over many years may have an increased risk of

getting cancer. You do not need to use an alternative water supply. However, if you have health concerns, you may want to talk to your doctor to get more information about how this may affect you. The City is working to correct the problem through active management and is currently working with an engineer to plan and design a water treatment system that will reduce or eliminate the radionuclide contamination. It is expected that the planning and design phase will be completed prior to the end of 2017 and that construction, connection and testing will be completed by August of 2018. Full treatment and monitoring of the water treatment facility should provide a significant reduction in the levels of radium 226 & 228 and all gross alpha contamination and bring the City of Mason drinking water into full compliance with all TCEQ and EPA regulations prior to August 2019. At this present time a centrally located reverse osmosis dispensing station has been provided at 1024 McKinley Ave to provide treated clean water at no cost to the residents of Mason. Please share this information with all people who drink this water, especially those who may not have received this notice directly (i.e., people in apartments, nursing homes, schools and businesses).

If you have questions regarding this matter, you may contact John Palacio, City Administrator at 325-347-6449

Regulated Contaminants

These tables contain scientific terms and measures, some of which may require explanation:

pCi/L

picocuries per liter (a measure of radioactivity)

ppb:

micrograms per liter or parts per billion – or one ounce 7,350,000 gallons of water.

ppm:

milligrams per liter or parts per million – or one ounce in 7,350 gallons of water.

Maximum Contaminants Level or MCL:

Highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as

feasible using the best treatment technology.

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely source of Contamination
Haloacetic Acids (HAAS)*	2015	2	1.5 - 1.5	No goal for the total	60	ppb	N	By-product of drinking disinfection.
Total Trihalomethanes (TTHM)	2014	3	2.5-2.5	No goal for the total	80	ppb	N	By-product of drinking disinfection.
Inorganic Contaminants	Collection date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination.
Arsenic	3/11/2015	2.7	2.7 - 2.7	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards

Barium	3/11/2015	0.182	0.182 - 0.182	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	02/17/2014	0.51	0.51 - 0.51	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measures as Nitrogen]	2016	2	1.86 – 1.86	10	10	ppm	N	Runoff from fertilizer use; 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
Beta/photon emitters	2016	11.5	9.3 – 11.5	0	50	pCi/L*	N	Decay of natural and man-made deposits.
Combined Radium 226/228	2016	6	5.65 – 6.6	0	5	pCi/L	Y	Erosion of natural deposits.
Gross alpha excluding radon and uranium	2016	18	15 – 18.6	0	15	pCi/L	Y	Erosion of natural deposits.
Uranium	2016	1	0 – 1.2	0	30	ug/l	N	Erosion of natural deposits.

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	09/29/2014	1.3	1.3	0.18	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
Lead	09/29/2014	0	15	2.5	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Violations Table

Combined Radium 226/228

Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, AVERAGE	01/01/2016	03/31/2016	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, AVERAGE	04/01/2016	06/30/2016	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, AVERAGE	07/01/2016	09/30/2016	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, AVERAGE	10/01/2016	12/31/2016	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.

Gross alpha excluding radon and uranium

Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, AVERAGE	01/01/2016	03/31/2016	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, AVERAGE	04/01/2016	06/30/2016	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, AVERAGE	07/01/2016	09/30/2016	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, AVERAGE	10/01/2016	12/31/2016	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for 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	06/27/2012	2016	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.
PUBLIC NOTICE RULE LINKED TO VIOLATION	08/05/2016	09/06/2016	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.
PUBLIC NOTICE RULE LINKED TO VIOLATION	12/12/2016	02/23/2017	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.