2015 Annual Drinking Water Quality Report

City of Center – Public Water System #TX2100001 – (936)-598-2941

This is the City of Center Public Water System's 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. 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.

All drinking water, including bottled water, may contain contaminants. When drinking water meets federal standards there may not be any health-based benefits to purchasing bottled water or point of use devices. 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 (800-426-4791). 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.

For more information regarding this report you can contact Marcus Cameron, Utility Director at (936)-598-2941.
City council meetings are normally held on the 2nd and 4th Mondays of each month at 5:00pm at City Hall.

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (936)-598-2941.

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 EPA's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap 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. Contaminants that may be present in source water before treatment 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.

The City of Center uses Surface Water, not wells. We obtain our source water from two distinct water reservoirs, Lake Center, or Mill Creek, and Pinkston Reservoir. The Texas Commission on Environmental Quality has 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 detection of these contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, you can contact Marcus Cameron, Utility Director at 936-598-2941. Further details about sources and source water assessments are also available in Drinking Water Watch at the following URL: http://dww.tceq.texas.gov/DWW/. Also you can find more information about your sources of water, at the following URL http://www.tceq.texas.gov/gis/swaview

DEFINITIONS: (The following tables contain scientific terms and measures, some of which may require explanation)

- Maximum Contaminant Level (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 (MCLG) – The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.
- Maximum Residual Disinfectant Level (MRDL) – The highest level of 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 (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.
- Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.
- Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which 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 MCLs are based on the running annual average of monthly samples.
- Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the turbidity (clarity) of water.
- MFL – million fibers per liter (a measure of asbestos)
- pCi/L – picocuries per liter (a measure of radioactivity)
- na – not applicable
- ppm – parts per million or milligrams per liter (mg/L) - one part per million or one ounce in 7,350 gallons of water
- ppb – parts per billion or micrograms per liter (µg/L) - one part per billion or one ounce in 7,350,000 gallons of water
- ppt – parts per trillion or nanograms per liter (ng/L) – one part per trillion
- ppq – parts per quadrillion or picograms per liter (pg/L) – one part per quadrillion

Inorganic Contaminants

Collection Date	Contaminant	Maximum Level	Range of Levels Detected	MCL	MCLG	Unit of Measure	Violation	Source of Contaminant
2015	Barium	0.042	0.041-0.042	2	2	ppm	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2015	Fluoride	0.4	0-0.401	4	4	ppm	N	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2015	Nickel	0.00096	0.00069-0.00096	0.10	0.10	ppm	N	Abundant naturally occurring element.
2015	Cyanide	47.2	47.2	200	200	ppb	N	Discharge from plastic and fertilizer factories, steel/metal factories
2015	Nitrate (measured as nitrogen)	2	0.222-1.82	10	10	ppm	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

Radioactive Contaminants

Collection Date	Contaminant	Highest Level	Range of Levels Detected	MCLG	MCL	Units	Violation	Source of Chemical
2015	Combined Radium 226/228	1	1-1	0	5	pCi/L	N	Erosion of natural deposits.

Maximum Residual Disinfectant Level

Collection Date	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
2015	Chloramine	2.12	1.59	2.76	4.0	<4.0	ppm	Disinfectant used to control microbes.

Disinfection By-Products

Collection Date	Contaminant	Maximum Avg. Level	Range of Levels Detected	MCL	MCLG	Unit of Measure	Violation	Source of Contaminant
2015	Total Haloacetic Acids	79	42.1-180	60	NA	ppb	Y	Byproduct of drinking water disinfection.
2015	Total Trihalomethanes	78	30.8-174	80	NA	ppb	Y	Byproduct of drinking water disinfection.

Turbidity - Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration

Collection Date	Turbidity	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Constituent
2015	Highest single measurement	1 NTU	0.30 NTU	N	Soil runoff.
2015	Lowest monthly % meeting limit	0.3 NTU	100 %	N	Soil runoff.

Lead and Copper

Collection Date	Contaminant	MCLG	Action Level (AL)	90th Percentile	# Sites over AL	Unit of Measure	Violation	Likely Source of Contamination
8/20/2013	Copper	1.3	1.3	0.462	1	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
8/20/2013	Lead	0	15	2.56	1	ppb	N	Erosion of natural deposits; 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

Haloacetic Acid (HAA5)*

Some people who drink water containing haloacetic acids in excess of MCL over many years may have an increased risk of getting cancer.

Violation Type	Violation Began	Violation Ended	Violation Explanation
MCL, LRAA	4/1/15	6/30/15	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called maximum contaminant level and abbreviated MCL.) for the period indicated.
MCL, LRAA	7/1/15	9/30/15	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called maximum contaminant level and abbreviated MCL.) for the period indicated.
MCL, LRAA	10/1/15	12/31/15	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called maximum contaminant level and abbreviated MCL.) for the period indicated.

Total Trihalomethanes (TTHM)

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Violation Type	Violation Began	Violation Ended	Violation Explanation
MCL, LRAA	7/1/15	9/30/15	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called maximum contaminant level and abbreviated MCL.) for the period indicated.
MCL, LRAA	10/1/15	12/31/15	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called maximum contaminant level and abbreviated MCL.) for the period indicated.

Corrective actions for violations

Violation Type	Corrective actions taken
MCL, HAA5	To reduce the formation of disinfection byproducts, we have lowered the amount of free chlorine to be entered into the system and ensured our chloramine to monochloramine ratio is optimal.
MCL, TTHM	To reduce the formation of disinfection byproducts, we have lowered the amount of free chlorine to be entered into the system and ensured our chloramine to monochloramine ratio is optimal.

Secondary and Other Not Regulated Constituents (no associated adverse health effects)

Collection Date	Constituent	Maximum Level	Range of Levels Detected	Secondary Limit	Unit of Measure	Likely Source of Constituent
2015	Aluminum	0.071	0.044 – 0.071	0.2	ppm	Abundant naturally occurring element.
2015	Calcium	8.46	6.04 – 8.46	NA	ppm	Abundant naturally occurring element.
2015	Chloride	18.0	12.3-18.0	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2015	Sodium	17.9	12.4-17.9	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2015	Sulfate	17.1	16.5-17.1	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2015	Manganese	0.0079	0.0022-0.0079	0.05	ppm	Abundant naturally occurring element.
2015	Zinc	0.056	0.056	5	ppm	Abundant naturally occurring element.
2015	Magnesium	4.53	3.63-4.53		ppm	Abundant naturally occurring element.
2015	Copper, Free	0.014	0.0011-0.014	1.0	ppm	Abundant naturally occurring element.
2015	Alkalinity, Bicarbonate		21.4-26.9		ppm	Naturally occurring calcium.
2015	Total Alkalinity as CaCO3	26.9	21.4-26.9	NA	ppm	Naturally occurring soluble mineral salts.
2015	Silver	0.00047	0.00047	0.10	ppm	Naturally occurring element.
2015	Potassium	3.65	2.31-3.65		ppm	Naturally occurring soluble minerals.
2015	Total Dissolved Solids	107	76-107	1000	ppm	Total dissolved mineral constituents in water.
2015	Total Hardness as CaCO3	39.8	30-39.8	NA	ppm	Naturally occurring calcium.

DID YOU KNOW?

- The City of Center Public Water System pumped 1,143,710,000 gallons of water to its customers during the 2015 calendar year (January to December), that's over 1 billion gallons.
- The City of Center has approximately 2453 active retail service connections.
- The City of Center maintains approximately 82 miles of distribution piping.
- In the latest City of Center water loss audit submitted to the Texas Water Development Board for the time period of January to December 2015, our system reported an estimated water loss of 94,009,621 gallons.

If you have questions about our water loss audit, please contact us at City Hall at 936-598-2941.

WATER CONSERVATION IS IMPORTANT

Although our system has had a sufficient supply of water to meet demands, recent droughts have demonstrated the positive impact of water conservation efforts. Thanks to conservation efforts, we have been able to maintain our water system so that our customers have had enough water to meet their daily requirements. These efforts may again be necessary as the summer heat and dryness come this year.

Remember – **WATER CONSERVATION IS IMPORTANT**

- Saving water saves energy and associated costs of operating a water system, which can be passed on to the customers.
- Saving water reduces the need to construct costly new water systems, pumping and piping systems, and water tanks.
- Saving water lessens the strain on the water system during a dry spell or droughts, helping to avoid water use restrictions and ensure that essential fire fighting needs are maintained.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever possible. It is not hard to conserve water. Conservation tips include:

- Water lawns or gardens in early morning or evenings.
- Use mulch around plants and shrubs.
- Run dishwashers and washing machines when full, partial loads can use the same amount of water as full loads.
- Turn off the tap when brushing your teeth or shaving.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you can save more than 30,000 gallons a year.

More water conservation ideas and information can be found at:
http://www.twdb.state.tx.us/assistance/conservation/
http://www.wateriq.org/ssw/index.htm
http://www.tceq.state.tx.us/permitting/water_supply/water_rights/conserve.html
http://twri.tamu.edu/