**Annual Drinking Water Quality Report**

**TX1410028 KEMPNER WSC**

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

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| 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 \_Delores Atkinson\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Phone \_254-681-8042\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Este reporte incluye información importante sobre el agua para tomar. Para |
| KEMPNER WSC is Surface Water | asistencia en español, favor de llamar al telefono (\_\_\_) \_\_\_-\_\_\_\_. |

# **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 EPAs 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, andwildlife.
* Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewaterdischarges, 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>.

**Information about Source Water Assessments**

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=

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

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| Source Water Name | Type of Water | Report Status | Location |
| INTAKE 1 - SW STILLHOUSE HOLLOW LAKE 10441 CEDAR KNOB CHURCH | SW | \_\_A\_\_ | \_\_\_\_Stillhouse Hollow Lake\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| SW FROM CENTRAL TEXAS WSC CC FROM TX0140161 CENTRAL | SW | \_\_A\_\_ | \_\_\_\_Stillhouse Hollow Lake\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

2016 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.

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| Lead and Copper | Date Sampled | MCLG | Action Level (AL) | 90th Percentile | # Sites Over AL | Units | Violation | Likely Source of Contamination |
| Copper | 2016 | 1.3 | 1.3 | 0.44 | 0 | ppm | N | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. |
| Lead | 2016 | 0 | 15 | 3.9 | 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.

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.

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.

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.

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.

**Water Quality Test Results**

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| mrem: | millirems per year (a measure of radiation absorbed by the body) |
| 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. |
| Treatment Technique or TT: | A required process intended to reduce the level of a contaminant in drinking water. |
| ppt | parts per trillion, or nanograms per liter (ng/L) |
| ppq | parts per quadrillion, or picograms per liter (pg/L) |

**Regulated Contaminants**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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) | 2016 | 28 | 2.4 - 45.1 | No goal for the total | 60 | ppb | N | By-product of drinking water disinfection. |
| Total Trihalomethanes  (TTHM) | 2016 | 75 | 42.5 - 244 | No goal for the total | 80 | ppb | Y | 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 | 2016 | 0.0491 | 0.0491 - 0.0491 | 2 | 2 | ppm | N | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits. |
| Fluoride | 2016 | 0.2 | 0.24 - 0.24 | 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] | 2016 | 1 | 0.64 - 0.64 | 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 |
| Combined Radium 226/228 | 01/31/2011 | 1 | 1 - 1 | 0 | 5 | pCi/L | N | Erosion of natural deposits. |

**Turbidity**

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| --- | --- | --- | --- | --- |
|  | Limit (Treatment Technique) | Level Detected | Violation | Likely Source of Contamination |
| Highest single measurement | 1 NTU | 0.9 NTU | N | Soil runoff. |
| Lowest monthly % meeting limit | 0.3 NTU | 100% | N | Soil runoff. |

Information Statement: 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

**Total Organic Carbon**

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

**Violations Table**

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| Total Trihalomethanes (TTHM) / Our new TTHM Reduction Modification Project just went on line the first of this month (June 2017). The project consists of a new fine bubble air diffuser grid which is designed to aerate the finished water in the plant’s clear well.  As the air bubbles rise, the THMs concentrate within the bubbles and rise to the surface where they are expelled to the atmosphere. | | | |
| 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 Begin | Violation End | Violation Explanation |
| MCL, LRAA | 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, LRAA | 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. |
| In August 2016, after a free chlorine burn, one (1) sample site out of 4 turned out high in THM’s.  The EPA rates the samples on a ‘running annual average’ so this has caused KWSC to send out notices every quarter for a full year.  A running annual average basically means that they always keep 4 samples on record per testing site.  For example, if you have 2 good samples and the third one happens to be elevated it causes the average to be high for the next 12 months even if the next three samples are within normal range.   TCEQ forces us to send out notices every quarter even though the water is perfectly safe to drink.  All of this translates to the simple fact that 1 sample out of 16 samples taken throughout the entire year was shown to be elevated after a free chlorine burn.  Those numbers simply were not a correct representation of our entire system and the way it is managed. The risks to health from these by-products are minuscule in comparison with the risks associated with inadequate disinfection, and this was only one (1) sample in one (1) area of our system, taken last year. KWSC added automatic flush valves to the sample site area preventing this from happening again in the future.  A little history on THM’s – Water has been treated with chlorine for over 100 years and is still used in public swimming pools. The treatment of water with chlorine has been proven invaluable, stopping a lot of the waterborne diseases such as cholera, dysentery, and typhoid.  Ammonia was added to drinking water in the 90’s. Water systems are regulated by state and federal laws allowing systems to return to free chlorine burns for no more than 30-days per year. This treatment change is good for removing biofilm in pipelines and while the water continues to be safe to drink, it will elevate THM’s for that short period of time. | | | |

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| Consumer Confidence Rule / **THIS VIOLATION HAS BEEN RESOLVED** | | | | | | |
| The Consumer Confidence Rule requires community water systems to prepare and provide to their customers annual consumer confidence reports on the quality of the water delivered by the systems. | | | | | | |
| Violation Type | Violation Begin | | Violation End | | Violation Explanation | |
| CCR ADEQUACY/AVAILABILITY/CONTENT | 07/01/2016 | | 11/07/2016 | | Below please find explanation of Surface Water Monitoring Violation below. The SWMOR was late one month and had the wrong month on the other one is 2015. This information was to be placed on the CCR for last year. I was unaware due to the SWMOR being resolved in both cases the same week of the occurrence with no water quality issues that it was to be included in last year’s CCR. Delores Atkinson, GM | |
| The February 2015, Surface Water Monthly Operating Report (SWMOR) was due on March 10, 2015. The report was actually sent on March 14, 2015. There were no quality issues with the report, only that it was turned in late by the water treatment plant operator.  The June 2015, SWMOR was turned in on time but the plant manager did not change the “month of May” date to the month of June on the form. Add data showed no quality issues and included only data for June, but said May on the report.  Both of the above violations by our Water Treatment Plant Manager were inexcusable and have led to his dismissal from Kempner WSC employment. We have since hired a new Plant Manager, Michael Lentz, from the state regulatory agency. We are confident we will not receive any more violations relating to paper work not being submitted properly to our state regulatory agency.  We are sorry for the inconvenience and want you to rest assured Kempner Water continues to strive for quality water and state compliance at all times. | | | | | | |
| Public Notification Rule / **THIS VIOLATION HAS BEEN RESOLVED / TTHM notifications have been sent out to all members** | | | | | | |
| 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. | | | | | | |
| Violation Type | | Violation Begin | | Violation End | | Violation Explanation |
| PUBLIC NOTICE RULE LINKED TO  VIOLATION | | 10/20/2016 | | 10/28/2016 | | We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations. |
| TTHM samples are to be mailed out every quarter, due to a sample taken August 2016. | | | | | | |