Safe Drinking Water

This Water Quality Report is intended to provide you with information about your drinking water. It summarizes information that Winkler Water Supply already collects to comply with Environmental Protection Agency **(EPA)** and Texas Commission on Environmental Quality **(TCEQ)** regulations. It includes information about the source of your drinking water, chemical contaminants, bacteriological contaminants, compliance with drinking water rules, educational information, water system contacts and public participation opportunities. This report is also known as a *Consumer Confidence Report*. Winkler Water Supply's Texas Public Water Supply (PWS) number is TX1750023.

For more information, contact Carol Pyle at **903-599-9096** or winklerwater@windstream.net. Office hours: Tuesday through Thursday from 10:00 a.m. until 5:00 p.m. Location: 2038 Loper Drive, Streetman, Texas.

Public Participation Opportunities

Winkler Water Supply Board of Directors' meetings are held on the third Tuesday of each month with adjustments made for holidays and other conflicts. These meetings are usually held in the Southern Oaks Volunteer Fire Station and begin at 7:00 p.m. Agendas are posted on our website at www.winklerwater.com at least 72 hours in advance of the meeting.

Please join us! Your presence and input are needed and appreciated!

Where does our drinking water come from?

Winkler Water Supply purchases raw, untreated water from **Tarrant Regional Water District**. We pump the water from Richland Chambers Reservoir through a raw water intake line located in Rustling Oaks Subdivision. The water is filtered and disinfected at the treatment plant on Loper Drive in Rustling Oaks and then distributed to members.

TCEQ completed an assessment of source water in Richland Chambers Reservoir and results indicate that this source is susceptible to certain contaminants. The sampling requirements for Winkler Water Supply are based upon this susceptibility and previous sample data. Any detection of these contaminants may be found in this Annual Water Quality Report. For more information about source water, please refer to www.tceq.texas.gov/gis/swaview. Further details are available at *https://dww2.tceq.texas.gov/DWW/*.

Possible Contaminants in Drinking Water Sources

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.

What is a contaminant?

The Safe Drinking Water Act (SDWA) defines "contaminant" as any physical, chemical, biological or radiological substance or matter in water. 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, but some contaminants may be harmful if consumed at certain levels in drinking water.

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.

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. More information about contaminants and potential health effects can be obtained by calling the **EPA's Safe Drinking Water Hotline at 1-800-426-4791** or going to www.epa.gov/safewater.

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.
  *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 at 1-800-426-4791.*

- **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, 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.

Abbreviations and Definitions

The following table does NOT list all of the contaminants tested for by Winkler Water Supply. It includes only the contaminants that were detected in the water. Regulated contaminants that are not listed below were not detected in our water. As the table shows, in 2018 Winkler Water Supply did not have any violations for having contaminants in our drinking water. The following table contains scientific terms and measures, some of which may require explanation:

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 not known or expected risk to health. ALGs allow a margin of safety.

Avg: Regulatory compliance with some MCLs is based on running annual average monthly samples.

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 the 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 a water system.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG): The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs

Maximum Residual Disinfectant Level Goal (MRDLG): The level of 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.

mrem: millirems per year (a measure of radiation absorbed by the body)

N/A: not applicable

NTU: nephelometric turbidity units (a measure of turbidity)

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

ppb: parts per billion or micrograms per liter (μg/L) or one ounce per 7,350,000 gallons of water

ppm: parts per million or milligrams per liter (mg/L) or one ounce in 7,350 gallons of water

ppq: parts per quadrillion or picograms per liter (pg/L)

ppt: parts per trillion or nanograms per liter (ng/L)

REGULATED CONTAMINANTS: Contaminants that require monitoring with specific Maximum Contaminant Levels (MCL) set by the Environmental Protection Agency

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Turbidity: A measure of water's clarity. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Water with lower turbidity is clearer than water with higher turbidity.

2018 Water Quality Test Results

DISINFECTANTS	
Chloramines: (Chlorine & Liquid Ammonium Sulfate)	Water utilities which get their water from surface water (such as Richland Chambers Reservoir) are required to use liquid ammonia sulfate and chlorine as their **primary disinfectant**. Chloramine is used to control microbes. Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia. Chloraminated water may be toxic to fish. Fish tanks may need special filters or chemicals.
Source: Lone Star Maintenance – P.O. Box 1418 Bruceville, TX 76630 Chemicals: Chlorine and Liquid Ammonium Sulfate	

DISINFECTANT BY-PRODUCTS					
Disinfection By-Products (Volatile Organic Contaminants)	**Highest Level Allowed MCL**	**Ideal Goal EPA's MCLG**	**Highest Level or Average Detected**	**Range of Levels Detected**	**Violation**
Haloacetic Acids (HAA5) collection date 2018	60 ppb	No goal established	34 ppb	12.4 ppb to 84.6 ppb	No
Likely Source of HAA5 & Possible Health Effects: By-product of drinking water chlorination. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. The value in the Highest Level or Average Detected column is the highest average of all HAA5 sample results collected at a location over a year.					
Total Trihalomethanes (TTHM) collection date 2018	80 ppb	No goal established	65 ppb	7.88 ppb - 182 ppb	No
Likely Source of TTHM & Possible Health Effects: By-product of drinking water chlorination. 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. The value in the Highest Level or Average Detected column is the highest average of all TTHM sample results collected at a location over a year.

DISINFECTANT RESIDUAL for water additive used to control microbes

Collection Year	MRDL	MRDLG	Average Level	Range of Levels Detected	Violation
2018	4 ppm	4 ppm	2.47 ppm	0.5 ppm – 4.0 ppm	No

Turbidity	Limit (Treatment Technique)	Level Detected	Violation
Highest Single Measurement	1 NTU	0.9 NTU	No
Lowest monthly % meeting limit	0.3 NTU	100.00%	No

Likely Source of Turbidity & Possible Health Effects:
Soil runoff. 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. 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.

Inorganic Contaminants	Ideal Goal EPA's MCLG	Highest Level Allowed MCL	Highest Level or Average Detected	Range of Levels Detected	Violation
Barium collection date 2018	2000 ppb	2000 ppb	56 ppb	56 ppb - 56 ppb	No
Likely Source of Barium & Possible Health Effects: Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits. Some people who drink water containing Barium in excess of the MCL over many years could experience an increase in their blood pressure.					
Cyanide collection date 2018	200 ppb	200 ppb	96.3 ppb	96.3 ppb – 96.3 ppb	No
Likely Source of Cyanide: Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.					
Fluoride collection date 2018	4000 ppb	4000 ppb	200 ppb	235 ppb - 235 ppb	No
Likely Source of Fluoride & Possible Health Effects: Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain & tenderness in bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling also known as dental fluorosis, may include brown staining &/or pitting of the teeth and occurs only in developing teeth before they erupt from the gums.					
Nitrate (measured as Nitrogen) collection date 2018	10,000 ppb	10,000 ppb	1,000 ppb	518 ppb - 518 ppb	No
Likely Source of Nitrate & Possible Health Effects: Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and -if untreated-may die. Symptoms include shortness of breath and blue baby syndrome.					

Radioactive Contaminants	Ideal Goal EPA's MCLG	Highest Level Allowed MCL	Highest Level or Average Detected	Range of Levels Detected	Violation
Beta/photon emitters collection date 2018	0 pCi/L	50 pCi/L	4.6 pCi/L	4.6 - 4.6 pCi/L	No
Likely Source of Beta/photon emitters & Possible Health Effects: Decay of natural and man-made deposits. EPA considers 50 pCi/Ls to be the level of concern for beta particles. Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.					
Combined Radium 226/228 collection date 2018	0 pCi/L	5 pCi/L	1.5 pCi/L	1.5 pCi/L – 1.5 pCi/L	No
Likely Source of Combined Radium & Possible Health Effects: Erosion of natural deposits. 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.					
Synthetic Organic Contaminants - including pesticides and herbicides	**Ideal Goal EPA's MCLG**	**Highest Level Allowed MCL**	**Highest Level or Average Detected**	**Range of Levels Detected**	**Violation**
Atrazine Year 2018	3 ppb	3 ppb	0.4 ppb	0.4 ppb - 0.4 ppb	No
Likely Source of Atrazine: Runoff from herbicide used on row crops.					

Lead	Ideal Goal EPA's Action Level Goal (ALG)	EPA's Action Level (AL)	90% of Test Levels Were Less Than:	No. of Tests with Levels Above EPA's Action Level	Violation
Lead Collection date 9/27/2017	0 ppb	90% of homes less than 15 ppb	1.9 ppb	0	No
Likely Source of Lead & Possible Health Effects: 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.					
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 1) water lines from the meter to the home or building and 2) plumbing inside the home or building.** WWSC 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 (1-800-426-4791)** or at **http://www.epa.gov/safewater/lead/**					
Copper	**Ideal Goal EPA's Action Level Goal (ALG)**	**EPA's Action Level (AL)**	**90% of Test Levels Were Less Than:**	**No. of Tests with Levels Above EPA's Action Level**	**Violation**
Copper Collection date 9/26/2017	1.3 ppm	90% of homes less than 1.3 ppm	0.26 ppm	0	No
Likely Source of Copper: Erosion of natural deposits; leaching from wood preservatives, corrosion of household plumbing systems.					

Total Organic Carbon Contaminant	Since the early 1970s, TOC has been an analytic technique used to measure water quality during the drinking water purification process. TOC in source waters comes from decaying natural organic matter (NOM) as well as synthetic sources.

The percentage of Total Organic Carbon (TOC) removal was measured each month and Winkler Water met all TOC removal requirements. Total organic carbon has no health effects, but it does provide a medium for the formation of disinfection by-products which may have health effects.

WATER USAGE INFORMATION – YEAR 2018

Gallons pumped from Richland Chambers Reservoir	Gallons sold to customers	Gallons used for flushing	Gallons Lost **(WATER LOSS)**
24,745,500	**16,111,740**	**7,495,308**	**1,138,452**

The 7,495,308 gallons used for flushing includes in-plant flushing for the clarifier, instruments, and backwashing as well as out-of-plant flushing for issues such as turbidity, odor and to maintain the disinfectant residual amount at the recommended level. The 1,138,452 gallons under the WATER LOSS column represents unknown losses associated with leaks, meters that do not accurately reflect usage and/or pilferage.

Violations

Interim Enhanced SWTR

The Interim Enhanced Surface Water Treatment Rule improves control of microbial contaminants, particularly, Cryptosporidium, in systems using surface water, or ground water under the direct influence of surface water. The rule builds upon the treatment technique requirements of the Surface Water Treatment Rule.

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE (IESWTR/LTI), MAJOR	09/01/2018	09/30/2018	We tested our drinking water for the contaminant and periods indicated, but we failed to send the report to TCEQ by the 10th of the month. Because of this failure, they could not be sure of the quality of our drinking water during the periods indicated
MONITORING, ROUTINE (IESWTR/LTI), MAJOR	10/01/2018	10/31/2018	
MONITORING, ROUTINE (IESWTR/LTI), MAJOR	12/01/2018	12/31/2018	

Revised Total Coliform Rule (RTCR)

The Revised Total Coliform Rule (RTCR) seeks to prevent waterborne diseases caused by E. coli. E coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants and young children.

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE, MAJOR (RTCR)	10/01/2018	10/31/2018	We tested our drinking water for the contaminant and period indicated, but we failed to send the report to TCEQ by the 10th of the month. Because of this failure, they could not be sure of the quality of our drinking water during the period indicated.

Surface Water Treatment Rule (SWTR)

The Surface Water Treatment Rule (SWTR) seeks to prevent waterborne diseases caused by viruses, Legionella, and Giardia lamblia. The rule requires that water systems filter and disinfect water from surface water sources to reduce the occurrence of unsafe levels of these microbes.

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, RTN/RPT MAJOR (SWTR-FILTER)	09/01/2018	09/30/2018	We filtered and tested our drinking water for the contaminant and periods indicated, but we failed to send the report to TCEQ by the 10th of the month. Because of this failure, they could not be sure of the quality of our drinking water during the periods indicated.
MONITORING, RTN/RPT MAJOR (SWTR-FILTER)	10/01/2018	10/31/2018	
MONITORING, RTN/RPT MAJOR (SWTR-FILTER)	12/01/2018	12/31/2018	

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 customers 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	05/28/2018	06/22/2018	We mailed the public notice but failed to notify you, our drinking water consumers, about a violation of drinking water regulations before the deadline.