Annual Drinking Water Quality Report

TX1750015 M E N WSC

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

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.

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M E N WSC is Purchased Surface Water

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (903) 872-1899.

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, 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.

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

Source Water Name		Type of Water	Report Status	Location
SW FROM CORSICANA	CC FROM TX1750002 CITY OF	SW	A	Navarro Mills Lake
SW FROM CORSICANA	CC FROM TX1750002 CITY OF	SW	A	Lake Halbert

2016 Regulated Contaminants Detected

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	0 Positive monthly sample	0	>1 routine/ repeat sample per month which is total coliform positive	0	N	Naturally present in the Enviroment

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	2016	1.3	1.3	0.13	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing
Lead	2016	0	15	3.9	0	ppb	N	Corrosion of household plumbing 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

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 pictograms 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)	2016	35	14.8 - 63.2	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2016	63	31.3 - 125	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
Nitrate [measured as Nitrogen]	2016	0.15	0.124 - 0.15	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of

Disinfectant Residual Table

Disinfectant	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Likely Source of Contamination
Chloramines	2016	1.92	0.14	4.00	4.0	4.0	ppm	N	Water additive used to control microbes.

Purchased Surface Water from Forest CORSICANA

Detected Regulated Contaminates for 2016

EP 1 Navarro Mills

SOC Pesticide	Detected Quantity	MCL	Date Collected	Analytical Method
Bis (2-Ethylhexyl) phthalate	0.8 ug/l	6.0 ug/l	2/2/2016	E525.2 GC/MS
VOC's				
Acetone	7.23 ug/l	N/A	2/2/2016	E524.2 GC/MS
Chloroform	43.7 ug/l	N/A	2/2/2016	E524.2 GC/MS
Bromodichloromethane	15.3 ug/l	N/A	2/2/2016	E524.2 GC/MS
Dibromochloromehtane	3.43 ug/l	N/A	2/2/2016	E524.2 GC/MS
Inorganics				
Chloride	6.15 mg/l	300.0 mg/l	2/2/2016	E300.0 Anions
Fluoride	0.796 mg/l	4.0mg/l	2/2/2016	E300.0 Anions
Nitrate (as N)	0.0810 mg/l	10.0mg/l	2/2/2016	E300.0 Anions
Sulfate	31.5 mg/l	300.0 mg/l	2/2/2016	E300.0 Anions
Total Dissolved Solids	174 mg/l	1000.0 mg/l	2/2/2016	SM2540C
Inorganics Metals Trace Elements				
Sodium Total	11.5 mg/l	20,000.0 mg/l	2/2/2016	E200.7 Metals, Trace E200.8 ICP-MS
Aluminum Total	0.028 mg/l	0.2 mg/l	2/2/2016	E200.8 IC-MS
Antimony Total	<0.00020 mg/l	0.006 mg/l	2/2/2016	E200.8 IC-MS
Arsenic Total	0.00070 mg/l	0.01 mg/l	2/2/2016	E200.8 IC-MS
Barium Total	0.037 mg/l	2.0 mg/l	2/2/2016	E200.8 IC-MS
Chromium Total	0.00083 mg/l	0.1 mg/l	2/2/2016	E200.8 IC-MS
Copper Total	0.0023 mg/l	1.3 mg/l AL	2/2/2016	E200.8 IC-MS
Manganese Total	0.00012 mg/l	0.05 mg/l	2/2/2016	E200.8 IC-MS
Nickel Total	0.0011 mg/l	0.1 mg/l	2/2/2016	E200.8 IC-MS
Selenium Total	<0.00100 mg/l	0.05 mg/l	2/2/2016	E200.8 IC-MS
Heavy Metals				
Mercury Total	0.000189 mg/l	0.002 mg/l	2/2/2016	E245.1 Mercury
Cyanide Total	0.573 mg/l	0.2 mg/l	2/2/2016	E355.4 CN

DEFINITIONS

ug/l	parts per billion or micrograms per liter
mg/l	parts per million or milligrams per liter

Detected Regulated Contaminates for 2016

EP2 Lake Halbert

VOC's	Detected Quantity	MC/L	Date Collected	Analytical Method
Acetone	10.7 ug/l	N/A	2/2/2016	E524.2 GC/MS
Chloroform	46.1 ug/l	N/A	2/2/2016	E524.2 GC/MS
Bromodichloromethane	2.43 ug/l	N/A	2/2/2016	E524.2 GC/MS
Dibromochloromehtane	2.43 ug/l	N/A	2/2/2016	E524.2 GC/MS
Inorganics				
Chloride	6.73 mg/l	300.0 mg/l	2/2/2016	E300.0 Anions
Fluoride	0.733 mg/l	4.0 mg/l	2/2/2016	E300.0 Anions
Nitrate (as N)	0.0810 mg/l	10.0mg/l	2/2/2016	E300.0 Anions
Sulfate	39.0 mg/l	300.0 mg/l	2/2/2016	E300.0 Anions
Total Dissolved Solids	135.mg/l	1000.0 mg/l	2/2/2016	SM2540C
Inorganics **Metals Trace Elements**				
Sodium Total	13.9 mg/l	20,000.0 mg/l	2/2/2016	E200.7 Metals, Trace E200.8 ICP-MS
Aluminum Total	0.059 mg/l	0.2 mg/l	2/2/2016	E200.8 IC-MS
Barium Total	0.031 mg/l	2.0 mg/l	2/2/2016	E200.8 IC-MS
Chromium Total	0.00042 mg/l	0.1 mg/l	2/2/2016	E200.8 IC-MS
Copper Total	0.0011 mg/l	1.3 mg/l AL	2/2/2016	E200.8 IC-MS
Manganese Total	0.00017 mg/l	0.05 mg/l	2/2/2016	E200.8 IC-MS
Nickel Total	0.00079 mg/l	0.1 mg/l	2/2/2016	E200.8 IC-MS
Cyanide Total	0.0531 mg/l	0.2 mg/l	2/2/2016	E355.4 CN

DEFINITIONS

Ug/l parts per billion or micrograms per liter

Ug/l parts per million or milligrams per liter

Turbidity and TOC 2016

Navarro Mills								Lake Halbert							
NTU				TOC				NTU				TOC			
Month	Average	Highest	% Compliance	Raw TOC	Tap TOC	% Removal	% Compliance	Month	Average	Highest	% Compliance	Raw TOC	Tap TOC	% Removal	% Compliance
Jan	0.06	0.07	100	4.62	2.96	35.9	103	Jan	0.13	0.29	100	5.16	2.53	51.0	113
Feb	0.07	0.14	100	4.60	2.84	38.3	153	Feb	0.17	0.29	100	4.89	2.62	46.4	133
Mar	0.06	0.13	100	4.27	3.01	29.5	118	Mar	0.13	0.28	100	4.71	2.74	41.8	120
Apr	0.06	0.11	100	4.63	3.17	31.5	126	Apr	0.14	0.24	100	4.62	2.90	37.2	106
May	0.07	0.17	100	4.63	3.09	33.3	133	May	0.13	0.29	100	4.81	2.93	39.1	112
Jun	0.07	0.15	100	4.71	2.98	36.7	105	Jun	0.14	0.29	100	5.17	3.05	41.0	117
Jul	0.07	0.10	100	4.35	3.00	31.0	117	Jul	0.10	0.20	100	4.50	2.93	34.9	100
Aug	0.06	0.13	100	4.32	3.15	27.1	77	Aug	0.12	0.28	100	4.27	2.86	33.0	94
Sep	0.06	0.09	100	4.30	2.67	37.9	108	Sep	0.12	0.22	100	5.67	3.62	36.2	103
Oct	0.06	0.11	100	3.86	2.8	27.5	110	Oct	0.13	0.23	100	5.31	3.90	26.6	76
Nov	0.06	0.11	100	4.09	2.71	33.7	126	Nov	0.14	0.27	100	5.58	3.57	36.0	103
Dec	0.07	0.10	100	3.88	2.75	29.1	116	Dec	0.12	0.25	100	5.01	2.97	40.7	116
Average	0.06			4.36	2.93	32.6	116.0		0.13			4.98	3.05	38.7	108.0
			NTU	Raw TOC	Tap TOC	% Removal									
Average Both Plants			0.10	4.67	2.99	35.6									