City Of Fate

Annual Water Quality Report 2017

Este reporte incluye informacion
importante sobre el agua para tomar.
Para asistencia en español, favor de
llamar al telefono (972)771-4601

Presented by City of Fate

PWS ID

TX1990006

972-771-4601

There When You Need Us

We are proud to present our annual water quality report covering all testing preformed between January 1 and December 31, 2017. Over the years we have dedicated ourselves to distributing water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best quality water to our customers. As new challenges emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Please remember that we are always available to assist should you ever any questions or concerns about your water.

Important Health Information

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immune compromised persons such as those undergoing chemotherapy for cancer; those 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 provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline at
(800) 426-4791.

Community Participation

You are invited to participate in our regular public forums and voice your concerns about your drinking water. The City Council meets the first and third Mondays of each month, beginning at 6 p.m., at City Hall located at 1900 C D Boren Parkway Fate, TX 75087.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.
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 can acquire naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife; **Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may 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 which may also come from gas stations, urban storm water runoff, and septic systems; **Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.
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 our business office. For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhome) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the TCEQ has a Web site (www.tceq.com) that provides complete and current information on water issues in Texas, including valuable information about our watershed.

Water Loss Percentage

We strive to keep our water loss percentage to a minimum. This year was 8.92% water loss and we continue to work towards lowering this percentage as we continue to grow.

Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded.

So get a run for your money and load it to capacity.

- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix the leak and you could 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 an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks.

Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Impact of Zebra Mussels

The zebra mussel is a small mussel native to Russia. In 1988, it reached North America by a transatlantic freighter. Since then, they have continued to spread throughout the country. Zebra mussels are very successful invaders because they live and feed in many different aquatic habitats and breed prolifically (each female produces 1 million eggs per year) for their entire five year lifespan.

Adult zebra mussels colonize on living and non-living surfaces, including boats, buoys, piers, plants, and clams. They are a great concern to drinking water utilities because they can attach to water intake pipes, severely restricting the flow of fresh water. They can also impact water quality by increasing taste-and-odor problems in the water supply. Zebra mussels are almost impossible to eradicate once they become established. Water utilities have had to retool their water intake systems to prevent zebra mussel-related problems costing millions of dollars a year. Utilities rely on a variety of methods to remove mussels from intake pipes; since there is no single, ideal removal solution, new methods are constantly under investigation. While complete removal may be impossible, preventing zebra mussel spread is not. Human activities have spread them into many inland lakes and streams, usually through recreational boating, fishing, and diving practices. Simple steps such as draining live wells, cleaning vegetation off boat trailers, removing attached zebra mussels from boat hulls, and not dumping bait into lakes or rivers can prevent the spread of zebra mussels into non-infested waters.

Lead in Home Plumbing

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 www.epa.gov/safewater/lead.

Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our water source and sent to an aeration tank, which allows for oxidation of the high iron levels that are present in the water. The water then goes to a mixing tank where poly aluminum chloride and soda ash are added. The addition of these substances causes small particles to adhere to one another (called floc), making them heavy enough to settle into a basin from which sediment is removed. Chlorine is then added for disinfection. At this point, the water is filtered through layers of fine coal and silicate sand. As smaller, suspended particles are removed, turbidity disappears and clear water emerges. Chlorine is added again as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, soda ash (used to adjust the final pH and alkalinity), fluoride (used to prevent tooth decay), and a corrosion inhibitor (used to protect distribution system pipes) are added before the water is pumped to sanitized underground reservoirs, water towers, and into your home or business.

Q & A

What is the typical per-day water usage?

While usage varies from community to community and person to person, on average, Americans use 183 gallons of water a day for cooking, washing, flushing, and watering purposes. The average family turns on the tap between 70 and 100 times daily. About 74% of home water usage occurs in the bathroom, about 21% in the laundry room, and about 5% in the kitchen.

Why do water pipes tend to break in winter?

Liquids generally contract when frozen and become denser; however, the unique qualities of water cause it to expand by up to 9% when it freezes. That is why water pipes burst when temperatures reach the freezing mark.

How much water is used to create the food we eat each year?

The average American consumes 1,500 pounds of food each year; 1,000 gallons of water are required to grow and process each pound of that food. Thus, 1.5 million gallons of water is invested in the food eaten annually by just one person! This 200,000-plus cubic feet of water per person is enough to cover a football field four feet deep.

Is it okay to use hot water from the tap for cooking and drinking?

No, ALWAYS use cold water. Hot water is more likely to contain rust, copper, and lead from household plumbing and water heaters. These harmful substances can dissolve into hot water faster than they do into cold water, especially when the faucet has not been used for an extended period of time.

What type of container is best for storing water?

Consumer Reports has consistently advised that glass or BPA-free plastics such as polyethylene are the safest choices. To be on the safe side, do not use any container with markings on the recycle symbol showing 7 PC (which is the code for BPA). You could also consider using stainless steel or aluminum containers that have BPA-free liners.

How much water is used in the shower?

A 10-minute shower can take 25 to 50 gallons of water. High-flow shower heads allow a flow of 6 to 10 gallons a minute. Low-flow shower heads can cut the rate in half without reducing pressure.

CONSUMER CONFIDENCE REPORT TCEQ CERTIFICATE of DELIVERY

For Calendar year 2017
Public Water System (PWS) Name:CITY OF FATE
PWS ID Number: 1990006

I certify that the community water system named above has distributed the Consumer Confidence Report (CCR) for the calendar year of 2017 and that the information in the report is correct and consistent with the compliance monitoring data previously submitted to the TCEQ. Systems serving 100,000 or more people are required to post the CCR on a publicly available web site and provide the direct URL.

Date of Delivery: 6/20/2018
Certified By: Name (print): Travis Kimber
Title: Utilities Manager
Phone Number: 972-771-4601

Signature: _____ Date: 6/15/2018

You must use at least one direct delivery and at least one good faith delivery method: (indicate "☒" all that apply):

Systems serving 100,000 or more people are required to post the CCR on a publicly available web site and provide the direct URL here: http://

Direct Delivery Methods

☐ Mail a paper copy of the CCR
☒ Mail notification that CCR is available on-line at http://www.cityoffate.com/ArchiveCenter/ViewFile/Item/127
*The Internet link (url) you insert above **must** take customers directly to the open CCR.
☒ Email direct web address of the CCR, available at http://www.cityoffate.com/ArchiveCenter/ViewFile/Item/127
☐ Email CCR as an attachment to or an embedded image in an email.
☐ Other direct delivery (for example, door hangers or additional electronic delivery method).
Please specify:

Good faith delivery methods - To reach people who do not receive bills (check all that apply):

☒ Posting the CCR on the Internet at http://www.cityoffate.com/ArchiveCenter/ViewFile/Item/127
☐ Mailing the CCR to people who receive mail, but who do not receive bills.
☐ Advertising the availability of the CCR in news media.
☒ Posting the CCR in public places.
☐ Delivering multiple copies to single billing addresses serving multiple persons.
☐ Delivering multiple copies of the CCR to community organizations.

All systems are required to mail by July 1 the Certificate of Delivery and complete Consumer Confidence Report to:

Sending by certified mail:	Sending by regular mail:
TCEQ DWSF, MC-155, Attn: CCR, 12100 Park 35 Circle Austin, TX 78753	TCEQ DWSF, MC-155, Attn: CCR, PO Box 13087 Austin, TX 78711-3087

2017 Consumer Confidence Report for Public Water System CITY OF FATE

This is your water quality report for January 1 to December 31, 2017

CITY OF FATE provides surface water from Lake Lavon located in Collin County

Definitions and Abbreviations

Definitions and Abbreviations	The following tables contain scientific terms and measures, some of which may require explanation.
Action Level:	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 running annual average of 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 our 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 our water system on multiple occasions.
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.
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.
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)
mrem:	millirems per year (a measure of radiation absorbed by the body)
na:	not applicable.
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.
ppq	parts per quadrillion, or picograms per liter (pg/L)
ppt	parts per trillion, or nanograms per liter (ng/L)

Definitions and Abbreviations

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

Information about your 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

CITY OF FATE purchases water from NORTH TEXAS MWD WYLIE WTP. NORTH TEXAS MWD WYLIE WTP provides purchase surface water from Lake Lavon located in Collin County.

'TCEQ completed a Source Water Susceptibility for all drinking water systems that own their sources. This report describes the susceptibility and types of constituents that may come into contact with the drinking water source based on human activities and natural conditions. The system(s) from which we purchase our water received the assessment report. For more information on source water assessments and protection efforts at our system contact **Scott Monaghan (972)771-4601.**'

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2017	1.3	1.3	0.729	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2017	0	15	1.97	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

2017 Water Quality Test Results

Disinfection By-Products	Collection Date	Highest Level or Average Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2017	35.8	23.9 – 35.8	No goal for the total	60	ppb	N	By-product of drinking water disinfection.

'* 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)	2017	30	16.9 – 30.0	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

'* 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'

Inorganic Contaminants	Collection Date	Highest Level or Average Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate [measured as Nitrogen]	2017	0.693	0.693 - 0.693	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Disinfectant Residual

' A blank disinfectant residual table has been added to the CCR template, you will need to add data to the fields. Your data can be taken off the Disinfectant Level Quarterly Operating Reports (DLQOR).'

Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
Chlorine Residual (Chloramines)	2017	2.19	0.69 - 3.6	4	4	ppm	N	Water additive used to control microbes.

NTMWD Wylie Water Treatment Plants - 2017

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	1 positive monthly sample	0	0	0	0	Naturally present in the environment

NOTE: Reported monthly tests found no fecal coliform bacteria. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Total Haloacetic Acids (HAA5)	2017	35.8	23.9-35.8	No goal for the total	60	ppb	0	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2017	30	16.9-30.0	No goal for the total	80	ppb	0	By-product of drinking water disinfection.
Bromate	2017	Levels lower than detect level	0.0 - 0.0	5	10	ppb	No	By-product of drinking water ozonation.

NOTE: Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Antimony	2017	Levels lower than detect level	0 - 0	6	6	ppb	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; and test addition.
Arsenic	2017	Levels lower than detect level	0 - 0	0	10	ppb	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Barium	2017	0.060	0.059 - 0.060	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Beryllium	2017	Levels lower than detect level	0 - 0	4	4	ppb	No	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries.
Cadmium	2017	Levels lower than detect level	0 - 0	5	5	ppb	No	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints.
Chromium	2017	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	2017	0.38	0.26- 0.38	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Mercury	2017	Levels lower than detect level	0 - 0	2	2	ppb	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland.
Nitrate (measured as Nitrogen)	2017	0.97	0.09 - 0.97	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Selenium	2017	Levels lower than detect level	0 - 0	50	50	ppb	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Thallium	2017	Levels lower than detect level	0 - 0	0.5	2	ppb	No	Discharge from electronics, glass, and leaching from ore-processing sites; drug factories.

NITRATE ADVISORY: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2017	6.2	6.2 - 6.2	0	50	pCi/L	No	Decay of natural and man-made deposits.
Gross alpha excluding radon and uranium	2017	Levels lower than detect level	0 - 0	0	15	pCi/L	No	Erosion of natural deposits.
Radium	2017	1.27	1.27 - 1.27	0	5	pCi/L	No	Erosion of natural deposits.

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
2, 4, 5 - TP (Silvex)	2017	Levels lower than detect level	0 - 0	50	50	ppb	No	Residue of banned herbicide.
2, 4 - D	2017	Levels lower than detect level	0 - 0	70	70	ppb	No	Runoff from herbicide used on row crops.
Alachlor	2017	Levels lower than detect level	0 - 0	0	2	ppb	No	Runoff from herbicide used on row crops.
Atrazine	2017	0.20	0.20 - 0.20	3	3	ppb	No	Runoff from herbicide used on row crops.
Benzo (a) pyrene	2017	Levels lower than detect level	0 - 0	0	200	ppt	No	Leaching from linings of water storage tanks and distribution lines.
Carbofuran	2017	Levels lower than detect level	0 - 0	40	40	ppb	No	Leaching of soil fumigant used on rice and alfalfa.
Chlordane	2017	Levels lower than detect level	0 - 0	0	2	ppb	No	Residue of banned termiticide.
Dalapon	2017	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff from herbicide used on rights of way.
Di (2-ethylhexyl) adipate	2017	Levels lower than detect level	0 - 0	400	400	ppb	No	Discharge from chemical factories.
Di (2-ethylhexyl) phthalate	2017	Levels lower than detect level	0 - 0	0	6	ppb	No	Discharge from rubber and chemical factories.
Dibromochloropropane (DBCP)	2017	Levels lower than detect level	0 - 0	0	0	ppt	No	Runoff / leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.
Dinoseb	2017	Levels lower than detect level	0 - 0	7	7	ppb	No	Runoff from herbicide used on soybeans and vegetables.
Endrin	2017	Levels lower than detect level	0 - 0	2	2	ppb	No	Residue of banned insecticide.
Ethylene dibromide	2017	Levels lower than detect level	0 - 0	0	50	ppt	No	Discharge from petroleum refineries.
Heptachlor	2017	Levels lower than detect level	0 - 0	0	400	ppt	No	Residue of banned termiticide.
Heptachlor epoxide	2017	Levels lower than detect level	0 - 0	0	200	ppt	No	Breakdown of heptachlor.
Hexachlorobenzene	2017	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from metal refineries and agricultural chemical factories.
Hexachlorocyclopentadiene	2017	Levels lower than detect level	0 - 0	50	50	ppb	No	Discharge from chemical factories.
Lindane	2017	Levels lower than detect level	0 - 0	200	200	ppt	No	Runoff / leaching from insecticide used on cattle, lumber, and gardens.
Methoxychlor	2017	Levels lower than detect level	0 - 0	40	40	ppb	No	Runoff / leaching from insecticide used on fruits, vegetables, alfalfa, and livestock.
Oxamyl (Vydate)	2016	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff / leaching from insecticide used on apples, potatoes, and tomatoes.
Pentachlorophenol	2016	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from wood preserving factories.
Simazine	2017	Levels lower than detect level	0 - 0	4	4	ppb	No	Herbicide runoff.
Toxaphene	2017	Levels lower than detect level	0 - 0	0	3	ppb	No	Runoff / leaching from insecticide used on cotton and cattle.

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
1, 1, 1 - Trichloroethane	2017	Levels lower than detect level	0 - 0	200	200	ppb	No	Discharge from metal degreasing sites and other factories.
1, 1, 2 - Trichloroethane	2017	Levels lower than detect level	0 - 0	3	5	ppb	No	Discharge from industrial chemical factories.
1, 1 - Dichloroethylene	2017	Levels lower than detect level	0 - 0	7	7	ppb	No	Discharge from industrial chemical factories.
1, 2, 4 - Trichlorobenzene	2017	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from textile finishing factories.
1, 2 - Dichloroethane	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
1, 2 - Dichloropropane	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
Benzene	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories; leaching from gas storage tanks and landfills.
Carbon Tetrachloride	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from chemical plants and other industrial activities.
Chlorobenzene	2017	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from chemical and agricultural chemical factories.
Dichloromethane	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from pharmaceutical and chemical factories.
Ethylbenzene	2017	Levels lower than detect level	0 - 0	0	700	ppb	No	Discharge from petroleum refineries.
Styrene	2017	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from rubber and plastic factories; leaching from landfills.
Tetrachloroethylene	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories and dry cleaners.
Toluene	2017	Levels lower than detect level	0 - 0	1	1	ppm	No	Discharge from petroleum factories.
Trichloroethylene	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from metal degreasing sites and other factories.
Vinyl Chloride	2017	Levels lower than detect level	0 - 0	0	2	ppb	No	Leaching from PVC piping; discharge from plastics factories.
Xylenes	2017	Levels lower than detect level	0 - 0	10	10	ppm	No	Discharge from petroleum factories; discharge from chemical factories.
cis - 1, 2 - Dichloroethylene	2017	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from industrial chemical factories.
o - Dichlorobenzene	2017	Levels lower than detect level	0 - 0	600	600	ppb	No	Discharge from industrial chemical factories.
p - Dichlorobenzene	2017	Levels lower than detect level	0 - 0	75	75	ppb	No	Discharge from industrial chemical factories.
trans - 1, 2 - Dicholoroethylene	2017	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from industrial chemical factories.

Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.74	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	99.30%	No	Soil runoff.

NOTE: 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.

Maximum Residual Disinfectant Level

Chemical Used	Year	Average Level of Quarterly Data	Lowest Result of Single Sample	Highest Result of Single Sample	MRDL	MRDLG	Units	Source of Chemical
Chlorine Residual (Chloramines)	2017	2.19	0.69	3.8	4.0	<4.0	ppm	Disinfectant used to control microbes.
Chlorine Dioxide	2017	0	0	0	0.8	0.8	ppm	Disinfectant.
Chlorite	2017	0	0	0.072	1.0	N/A	ppm	Disinfectant.

Total Organic Carbon

	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Source Water	2017	4.38	3.93 - 4.38	ppm	Naturally present in the environment.
Drinking Water	2017	3.24	2.20 - 3.24	ppm	Naturally present in the environment.
Removal Ratio	2017	47.2%	22.5 - 47.2	% removal *	N/A

NOTE: Total organic carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection by-products. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. By-products of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report.

* Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

Lead and Copper

Lead and Copper	Date Sampled	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2017	1.3	0.729	0	ppm	0	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.
Lead	2017	15	1.97	0	ppb	0	Corrosion of household plumbing systems; erosion of natural deposits.

ADDITIONAL HEALTH INFORMATION FOR LEAD: 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 plumbin City of Fate 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.

Cryptosporidium And Giardia

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Cryptosporidium	2017	0	0 - 0	(Oo) Cysts/L	Human and animal fecal waste.
Giardia	2017	0	0 - 0	(Oo) Cysts/L	Human and animal fecal waste.

Unregulated Contaminants

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Chloroform	2017	16.70	6.14-16.7	ppb	By-product of drinking water disinfection.
Bromoform	2017	5.62	2.0-5.62	ppb	By-product of drinking water disinfection.
Bromodichloromethane	2017	17.40	7.31-17.4	ppb	By-product of drinking water disinfection.
Dibromochloromethane	2017	16.50	6.24-16.5	ppb	By-product of drinking water disinfection.

NOTE: Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection by-products. There is no maximum contaminant level for these chemicals at the entry point to distribution.