2020 WATER QUALITY REPORT

City of Frisco, Texas
Public Works Department

Message About **OUR WATER**

Safe, High-Quality Drinking Water

Frisco's water system has a "superior" rating with the Texas Commission on Environmental Quality (TCEQ) and exceeds all state and federal drinking water standards.

The Consumer Confidence Report is a summary of important information about your drinking water and the efforts made by the water supplier to provide safe drinking water. In order to ensure tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems.

This report provides an analysis and summary of recent tests performed, as required by the TCEQ. **The city's distribution system did not receive any health violations in 2019.**

The EPA requires every public water system to provide information to each water customer annually. We hope this information helps you become more knowledgeable about your drinking water. The City of Frisco keeps a record of all water quality reports on the city's website. Visit www.friscotexas.gov/waterreports to learn more.

Why is this report important?

This report describes the susceptibility and types of constituents, or small amounts of contaminants, 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 on source water protection strategies. For more information on source water assessments and protection efforts of Frisco's system, contact the Public Works Department at publicworks@friscotexas.gov or 972-292-5800.

Special Notice for People with Weakened Immune Systems

Residents with weakened immune systems may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water.

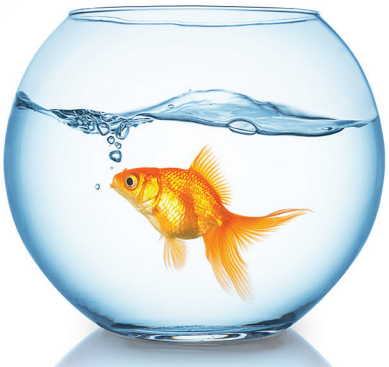
Infants, some elderly or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections.

We recommend you seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to reduce the risk of infection by Cryptosporidium are available from the EPA Safe Drinking Water Hotline at (800) 426-4791.

Chloramines

The North Texas Municipal Water District (NTMWD) uses chloramines for disinfection purposes. The benefit is to reduce the levels of disinfection by-products in the system, while still providing protection from waterborne disease.

The use of chloramines can cause problems to persons dependent on dialysis machines. A condition known as hemolytic anemia can occur if the disinfectant is not completely removed from the water that is used for the dialysate. Consequently, pretreatment used for dialysis units must include some means, such as a charcoal filter, for removing the chloramine from the water used. Medical facilities should also determine if additional precautions are required for other medical equipment.



Chloraminated water may be toxic to fish. If you have a fish tank, please make sure the chemicals or filters that you are using are designed for use in water that has been treated with chloramines. You may also need to change the type of filter that you use for fish tanks.

Water **QUALITY**

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 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 dissolves naturally-occurring minerals, and in some cases, radioactive material, and it can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in the source water before treatment may include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants and organic chemical contaminants. The NTMWD conducts daily tests on both the raw water in Lavon Lake and the treated water delivered to the City of Frisco. When drinking water meets federal standards there may not be any health-based benefits to purchasing bottled water or point of use devices. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at (800) 426-4791.

A Source Water Susceptibility Assessment for your drinking water sources is currently being updated by the TCEQ. Further details about source water assessments are available in Drinking Water Watch at https://dww2.tceq.Texas.gov/DWW/.

For more information on source water assessments and protection efforts at the NTMWD Water Treatment Plant in Wylie, contact the NTMWD Environmental Services Department at 972-442-5405.

Cryptosporidium

Cryptosporidium is a microorganism (protozoan) present in lakes and rivers when the water is contaminated with sewage or animal waste. It affects the digestive tract of humans and animals. People with healthy immune systems will usually recover within two weeks. When ingested, it may result in symptoms that include diarrhea, nausea and/or stomach cramps. The NTMWD continues to diligently test both the lake water and treated water for the presence of cryptosporidium. Cryptosporidium has been absent in all samples tested.

Secondary Constituents

Secondary constituents, such as calcium, sodium or iron which are often found in drinking water, can cause taste, color and odor problems. The State of Texas regulates these taste and odor constituents. These constituents are not necessarily causes for health concerns. Secondary constituents are not required to be reported but may affect the appearance and taste of your water.

Taste and Odor

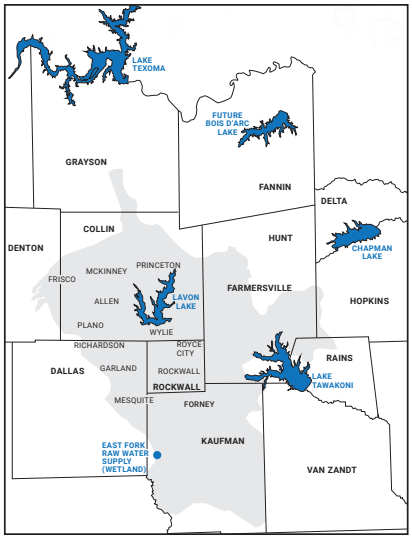
Taste and odor problems can occur in any lake for a number of reasons, such as algae growth, change in temperature, excessive rainfall, flooding and dry weather conditions. The grassy, earthy taste and smell usually occur during the hot summer months and are not causes

for health concerns. The NTMWD completed implementation of ozone for primary disinfection at the Wylie Water Treatment Plants in 2014 for compliance with the Disinfection By-Products 2 Rule (DBP2). Ozone helps reduce or eliminate taste and odor issues in the water.

LOCAL Water Supply

The City of Frisco receives treated water from the NTMWD which supplies water to approximately 1.8 million people in 80 communities, and 10 counties in north Texas. Frisco is a member city of the NTMWD.

The NTMWD reservoir system consists of five surface water supply sources. Lavon Lake, located in Collin County, is our primary water source. Additional sources include: Jim Chapman Lake, Lake Texoma, Lake Tawakoni and the East Fork Raw Water Supply Project (Wetland). The NTMWD pumps raw water from the lakes and treats it at the Wylie Water Treatment Plant.



The United States Army Corps of Engineers has full authority to operate, maintain and release water for flood control at its reservoirs used in the NTMWD service area. The NTMWD has water supply rights granted through permits by the State of Texas for use of the stored water in these reservoirs.

Water For **OUR FUTURE**

To meet future water demands, the NTMWD is constructing Bois d'Arc Lake. Located in Fannin County, the lake will yield 108 million gallons of water per day. It is the first major reservoir to be built in Texas in nearly 30 years. This additional storage will help ensure crucial water supplies for the future of our growing region. Water delivery is scheduled to begin in 2022.

ACCREDITED AGENCY APWA

The City of Frisco Public Works Department received the distinguished American Public Works Association (APWA) Accreditation designation for providing excellence in quality service to residents, establishing sound policies and demonstrating effective organizational procedures. It is the 13th agency in the State of Texas and one of 143 agencies across North America to be awarded the APWA Accreditation designation.

Drinking Water
QUALITY RESULTS

The following table lists the regulated and monitored chemical constituents which have been found in our drinking water. The U.S. EPA requires water systems to test for up to 97 primary constituents. Our drinking water meets or exceeds all federal (EPA) drinking water requirements. (Data collected is primarily from 2019.)

INORGANIC CONSTITUENTS

Collection Date	Substance	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Likely Source of Contamination
2019	Antimony	Levels lower than detect level	0 - 0	6	6	ppb	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; and test addition.
2019	Arsenic	Levels lower than detect level	0 - 0	0	10	ppb	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
2019	Barium	0.044	0.043 - 0.044	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2019	Chromium	Levels lower than detect level	0 - 0	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
2019	Fluoride	0.230	0.215 - 0.230	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2019	Nitrate (measured as Nitrogen)	0.772	0.083 - 0.772	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
2019	Selenium	Levels lower than detect level	0 - 0	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
2018	Beta/photon emitters	8.0	8.0 - 8.0	0	50	pCi/L	Decay of natural and man-made deposits.

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 a health care provider.

ORGANIC CONSTITUENTS

Collection Date	Substance	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Likely Source of Contamination
2019	Atrazine	0.2	0.10 - 0.20	3	3	ppb	Runoff from herbicide used on row crops.
2019	Di (2-ethylhexyl) phthalate	Levels lower than detect level	0 - 0	0	6	ppb	Discharge from rubber and chemical factories.
2019	Simazine	0.33	0.32 - 0.33	4	4	ppb	Herbicide runoff.

MAXIMUM RESIDUAL DISINFECTANTS

Year	Substance	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Units	Source of Chemical
2019	Chlorine Residual (Chloramines)	2.49	0.28	3.98	4.0	<4.0	ppm	Disinfectant used to control microbes.
2019	Chlorine Dioxide	0	0	0	0.8	0.8	ppm	Disinfectant.
2019	Chlorite	0.04	0	0.42	1.0	N/A	ppm	Disinfectant.

Note: Water providers are required to maintain a minimum chlorine disinfection residual level of 0.5 ppm for systems disinfecting with chloramines and an annual average chlorine disinfection residual level between 0.5 ppm and 4.0 ppm. Public water systems using free chlorine are required to maintain a minimum chlorine residual disinfectant level of 0.2 or 0.5 ppm chloramine (measured as total chlorine).

DISINFECTION BY-PRODUCTS

Collection Date	Disinfectants and Disinfection By-Products	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
2019	Total Haloacetic Acids (HAA5)	26.0	13.9 - 26.0	No goal for total	60	ppb	No	By-product of drinking water disinfection.
2019	Total Trihalomethanes (TTHM)	41.2	27.1 - 41.2	No goal for total	80	ppb	No	By-product of drinking water disinfection.
2019	Bromate	6.3	5.2 - 6.3	5	10	ppb	No	By-product of drinking water ozonation.

UNREGULATED CONSTITUENTS

Collection Date	Contaminants	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
2019	Chloroform	16.40	6.94 - 16.40	ppb	By-product of drinking water disinfection.
2019	Bromoform	2.85	1.05 - 2.85	ppb	By-product of drinking water disinfection.
2019	Bromodichloromethane	14.60	9.94 - 14.60	ppb	By-product of drinking water disinfection.
2019	Dibromochloromethane	11.20	6.00 - 11.20	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.

View water quality and water usage reports online at friscotexas.gov/waterreports.

LEAD AND COPPER							
Collection Date	Contaminants	The 90th Percentile	# of sites exceeded action level	Action Level	Units	Violation	Likely Source of Contamination
2017	Lead	2.20	0	15	ppb	No	Corrosion of household plumbing systems; Erosion of natural deposits.
2017	Copper	0.47	0	1.3	ppm	No	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.

ADDITIONAL HEALTH INFORMATION FOR LEAD: Lead was not detected during testing as indicated by this report. 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. The water supplier 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 at 800.426.4791 or at http://www.epa.gov/safewater/lead.

TURBIDITY				
Turbidity	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.97	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	95.50%	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.

TOTAL COLIFORM BACTERIA						
Year	Total Coliform Max Contaminant Level	Highest Number of Positive Samples	Fecal Coliform or E. Coli Max Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
2019	1 positive monthly sample	3	0	0	No	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.

SECONDARY AND OTHER CONTAMINANTS NOT REGULATED (NO ASSOCIATED ADVERSE HEALTH EFFECTS)					
Collection Date	Substance	Highest Level Detected	Range of Levels Detected	Units	Likely Source
2019	Calcium	60.7	60.6 - 60.7	ppm	Abundant naturally occurring element.
2019	Chloride	65.3	11.6 - 65.3	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
2019	Hardness as Ca/CO3	191	114 - 191	ppm	Naturally occurring calcium.
2019	pH	8.65	7.94 - 8.65	units	Measure of corrosivity of water.
2019	Sodium	40	39.8 - 40.0	ppm	Erosion of natural deposits; by-product of oil field activity.
2019	Sulfate	132	34.8 - 132	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.

Definitions

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 contamination.

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.

Abbreviations

NTU – Nephelometric Turbidity Unit

pCi/L – picoCuries per liter

ppb – parts per billion or micrograms per liter (µg/L) - or one ounce in 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

Questions? Call the Public Works Department at 972-292-5800.

FREQUENTLY ASKED **QUESTIONS ABOUT WATER**

Water Quality Concerns?

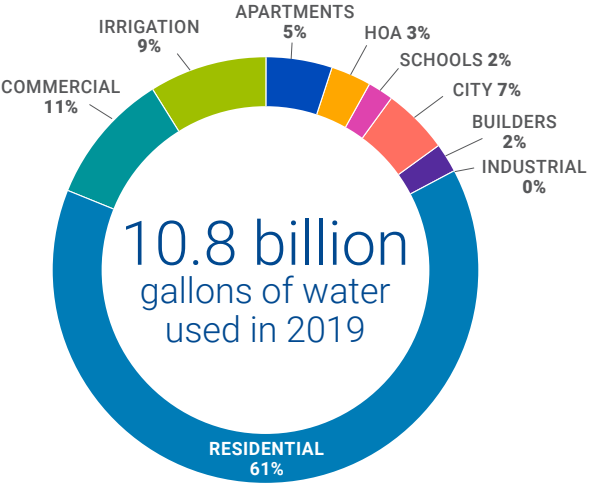
The City of Frisco checks disinfectant residuals daily to confirm the safety of our water. Every month the NTMWD provides detailed water analysis reports. Visit friscotexas.gov/waterreports to view the drinking water quality reports or contact the NTMWD at 972-442-5405.

Pressure Concerns?

Water pressure at your property may be controlled by an individual pressure reducing valve on your service line or by the pressure on the city's water lines. To determine the source of any pressure problems, call the Public Works Department at 972-292-5800 or send a service request using myFRISCO app.

Is Frisco's Water Hard or Soft?

The treated water supplied by NTMWD is considered "moderately hard" primarily due to minerals found in Lavon Lake. Calcium and magnesium carbonate, two minerals commonly found in water, pose no harm to human health or safety. They can cause lime scale on plumbing fixtures and can make it difficult to produce lather with soap. Visit ntmwd.com/water-hardness for more information.



Frisco's Water **DISTRIBUTION SYSTEM**

The City of Frisco Public Works employees take pride in delivering safe, high quality water to our water customers. Our water distribution system is comprised of 1,059 miles of water main lines and two pump stations. Storage capacity, including ground and elevated water storage is 51.75 million gallons.

In 2019 Frisco's water usage totaled 10.8 billion gallons of water or 157 gallons per person per day (GPCD). The state goal is 140 GPCD. More than 60% of water consumption during the summer months was used for outdoor irrigation.

In the water loss audit submitted to the Texas Water Development Board for the time period of January through December 2019, our system lost an estimated 6.55% of the total system input volume. For questions about the water loss audit, call the Public Works Department at 972-292-5800.

PUBLIC Participation

The Frisco City Council meets the first and third Tuesday of every month at 6:30 p.m. The Council Chamber is located in the George A. Purefoy Municipal Center at 6101 Frisco Square Blvd.

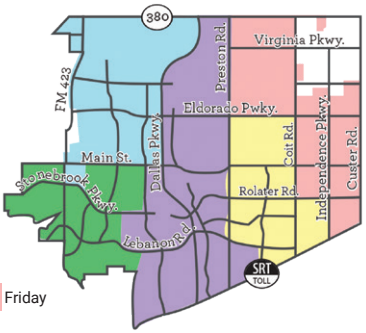
Council meetings are open to the public with opportunities for residents to share their concerns on any city-related subject.

FRISCO'S WATERING Schedule

Watering with a sprinkler system is permitted once per week in Frisco. Water only when needed on your recycling and trash collection day.

No watering between 10 a.m. - 6 p.m. during Daylight Saving Time.

Use hand-held and soaker hoses, drip irrigation and bubblers up to two hours daily.



Monday Tuesday Wednesday Thursday Friday

Subscribe to weekly watering advisories via email or text messaging. Visit www.friscotexas.gov/water.

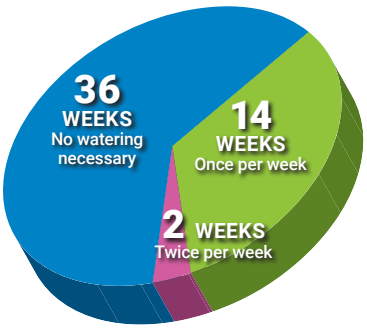
Frisco's **WEATHER STATION**

How much water do lawns really need? When it comes to watering efficiently outdoors, knowing how much to water is half the battle.

That's why, in 2008, the City of Frisco installed a weather station, equipped with a rain gauge in each quadrant of the city. The weather station measures temperature, solar radiation, rainfall, humidity and wind speed, which help determine the amount of water a landscape actually needs.

Every Monday, subscribers receive lawn watering advice based on data collected from Frisco's weather station. Residents and local landscape professionals use the weekly watering recommendations to adjust sprinkler system schedules and to water more efficiently. Keep automated systems and hose-end sprinklers turned OFF until weather station data advises otherwise.

2019 Watering Recommendations
(based on data from Frisco's weather station)



SPRINKLER SYSTEM Checkups

The City of Frisco wants to help you reduce your outdoor water use, save money on your water bill and maintain a healthy lawn. Schedule a FREE sprinkler system checkup with one of our licensed irrigators to ensure your system is operating efficiently.

Checkups are available for residential and commercial water customers.

To schedule a checkup, use the myFRISCO app or call 972-292-5800. Visit friscotexas.gov/water for more information.

No Overseeding! Planting and watering cool season grasses, such as rye grass, is prohibited as defined in Frisco's Water Management Plan.

WATERSHED **PROTECTION**

A watershed is a land area that channels water to creeks, streams and rivers, and eventually to outflow points such as reservoirs, bays and the ocean. The City of Frisco is comprised of three watersheds: Elm Fork Trinity, East Fork Trinity and Upper Trinity. A majority of the water flows into the Elm Fork of the Trinity River.

Learn how you can help prevent stormwater pollution.
Visit friscotexas.gov/stormwater

What is Stormwater Runoff?

Stormwater runoff is generated when precipitation flows over land or impervious surfaces (streets, parking lots and rooftops) and does not soak into the ground. Stormwater accumulates litter, debris, fertilizer, pet waste, sediment and other pollutants that adversely affect water quality.

Storm drain systems are separate from sanitary sewer systems. Wastewater from your home is conveyed through a sanitary sewer system to a waste water facility where it is treated to meet quality standards before it is discharged. Stormwater, on the other hand, is channeled through an underground system of pipes and discharged without treatment to nearby creeks and lakes.

Rainwater Harvesting

Reducing runoff is critical to minimizing the impact our yards and gardens have on surrounding creeks and lakes. Capturing rain from your roof is an easy way to conserve water, reduce soil erosion and help prevent pollution by reducing the amount of runoff entering our storm drain system.

The City of Frisco offers special pricing on rain barrels during its annual sale. Learn more at friscotexas.gov/rainbarrel.

FATS OILS GREASE

YOUR DRAIN'S WORST ENEMY!

Fats, Oils and Grease (FOG) don't belong down the drain. FOG comes from food scraps, meats, butter, lard, sauces, dairy products and cooking oil. Even if you run hot water while draining them into your sink, FOG will eventually cool, harden and cause build up in your pipes or in the city sewer lines. Blockages, if left untreated, will cause a sanitary sewer overflow to occur.

Help prevent a sewer backup in your home or neighborhood.

- Never pour FOG down the drain or garbage disposal.
- Compost what you can and scrape the rest into the trash.
- Collect FOG in a resealable container, throw it away, or drop it off for recycling at the City of Frisco Environmental Collection Center.

WIPES CLOG PIPES

Flushable wipes are becoming a big problem for pipes. Many manufacturers claim wipes can be flushed, but these stronger wipes don't break down quickly. Flushed wipes congeal with FOG that build up in pipes and cause clogs.

Dispose of wipes, cleaning cloths, paper towels and personal care items in the trash. Only toilet paper should be flushed down the toilet.

For more information about preventing sewer blockages, visit friscotexas.gov/sewers.

Get connected with the myFRISCO app.
Download at Google Play or App Store.

- Report water waste
- Residential trash/recycling
- Schedule a FREE sprinkler system checkup
- Stormwater issues
- Water and sewer issues
- Water leaks

CITY OF FRISCO
Public Works Department
11300 Research Road
Frisco, TX 75033

Phone: 972-292-5800
Email: publicworks@friscotexas.gov
Website: friscotexas.gov/water
Watering Line: 972-292-5801

This report includes important information about your drinking water.

Este reporte incluye información importante sobre el agua para tomar.
Para asistencia en español, favor de llamar al teléfono 972-292-5800.