



RICHMOND

EST. **TEXAS** 1837

2018

Water Quality Report

For City of Richmond and Municipal Utility Districts

MUD's 121, 140, and 187



Water Quality Report for City of Richmond and Municipal Utility Districts MUD's 121, 140, and 187

Dear Customers,

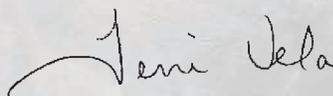
As you may be aware, the City of Richmond provides water and wastewater services to the City's customers and several adjacent Municipal Utility Districts. This new look for our 2018 Water Quality Report includes the 2018 water quality results for the City of Richmond's source water and distribution system that includes Fort Bend County MUD's 207, 215, and Williams Ranch MUD 1. Specific distribution sample results are also listed for MUD's that the City operates but have unique water system identification numbers - Fort Bend County MUD's 121, 140, and 187.

The City has been very busy with new infrastructure projects and rehabilitating and modernizing older facilities. Recently we have updated our Water/Wastewater/Reuse Master Plan to serve as a guide

to ensure that we maintain excellent services to our customers now and in the future. This master plan projects potential service plans for development and maintaining our existing critical infrastructure. This plan is available for review on the City's Public Works website.

If you have any questions with regards to the Water Quality Report or the Master Plan, please contact our Public Works Department at (281)342-0559.

Thank you,



Terri Vela
City Manager

This is your water quality report for January 1 to December 31, 2018



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.

Source Water Assessment Reports

TCEQ completed an assessment of your source water, and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your water system is

based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system please contact Public Works at (281) 342-0559.



Information about your Drinking Water

The City of Richmond Water Utilities goal and responsibility is to provide you safe and reliable drinking water. Our drinking water is obtained from surface water and ground water sources. Our ground water comes from the Gulf Coast Aquifer and our surface water comes from the Brazos River.

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.

We hope this information helps you become more knowledgeable about what is in your drinking water. Please feel free to contact our Utilities Coordinator at (281) 342-0559 if you have any questions or would like to request a meeting regarding your drinking 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 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 EPA Safe Drinking Water Hotline.

All Drinking Water May Contain Contaminants

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 EPA's Safe Drinking Water Hotline at (800) 426-4791.

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.

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.

Lead in Homes

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>

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)

TREATMENT TECHNIQUE OR TT: A required process intended to reduce the level of a contaminant in drinking water.

CITY OF RICHMOND

2018 WATER QUALITY TEST RESULTS

Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2018	1.3	1.3	0.27	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2018	0	15	2	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Inorganic Contaminants

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2018	0.096	0.096 - 0.096	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2018	0.2	0.24 - 0.24	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2018	0.07	0 - 0.07	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	2018	3.4	3.4 - 3.4	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Radioactive Contaminants

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2018	4.6	4.6 - 4.6	0	50	pCi/L*	N	Decay of natural and man-made deposits.
Combined Radium 226/228	01/10/2017	1.3	0 - 1.3	0	5	pCi/L	N	Erosion of natural deposits.

*EPA considers 50 pCi/L to be the level of concern for beta particles.

Disinfectant Residual

Disinfectant Residual	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
	2018	2.69	0.81	3.85	4	4	ppm	No	Water additive used to control microbes.

Disinfection By-Products

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorite	2018	0.653	0 - 0.653	0.8	1	ppm	N	By-product of drinking water disinfection.
Haloacetic Acids (HAA5)	2018	11	0 - 25.3	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2018	30	0 - 58.7	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 HAA5 sample results collected at a location over a year.

* 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.

Synthetic organic contaminants including pesticides and herbicides

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
2,4-D	2018	0.1	0 - 0.1	70	70	ppb	N	Runoff from herbicide used on row crops.
Atrazine	2018	0.55	0 - 0.55	3	3	ppb	N	Runoff from herbicide used on row crops.

Turbidity

Turbidity	Level Detected	Limit (Treatment Technique)	Violation	Likely Source of Contamination
Highest single measurement	0.46 NTU	1.0 NTU	N	Soil runoff.
Lowest monthly % meeting limit	100%	0.3 NTU	N	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 system and disinfectants.

Total Organic Carbon

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

Water Accountability

The City of Richmond is required to submit a Water Audit Report to the Texas Water Development Board annually. In 2018, the City of Richmond pumped 572,687,633 gallons with 94.64% accountability.

FORT BEND COUNTY MUD 121

2018 WATER QUALITY TEST RESULTS

Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	09/01/2016	1.3	1.3	0.38	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	09/1/2016	0	15	1.0	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfection By-Products

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2018	3	3.4 - 3.4	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2018	10	10.4 - 10.4	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 HAA5 sample results collected at a location over a year.

* 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

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate [measured as Nitrogen]	2018	0.03	0.03 - 0.03	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Disinfectant Residual

Disinfectant Residual	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
	2018	2.33	1.32	3.36	4	4	ppm	No	Water additive used to control microbes.

Water Accountability

Fort Bend County MUD 121 is required to submit a Water Audit Report to the Texas Water Development Board annually. In 2018, the City of Richmond pumped 128,506,327 gallons to MUD 121 with 96.29% accountability.

FORT BEND COUNTY MUD 140

2018 WATER QUALITY TEST RESULTS

Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	09/12/2017	1.3	1.3	0.095	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	09/12/2017	0	15	1.6	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfection By-Products

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2018	9	0 - 9.2	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2018	31	0 - 30.8	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 HAA5 sample results collected at a location over a year.

* 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

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate [measured as Nitrogen]	2018	0.05	0.05 - 0.05	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Disinfectant Residual

Disinfectant Residual	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
	2018	2.65	0.51	4.01	4	4	ppm	No	Water additive used to control microbes.

Water Accountability

Fort Bend County MUD 140 is required to submit a Water Audit Report to the Texas Water Development Board annually. In 2018, the City of Richmond pumped 80,050,000 gallons to MUD 140 with 96.03% accountability.

FORT BEND COUNTY MUD 187 2018 WATER QUALITY TEST RESULTS

Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	09/15/2016	1.3	1.3	0.04	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	09/15/2016	0	15	1.0	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfection By-Products

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2018	15	13.5 - 14.7	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2018	51	49.3 - 51.4	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 HAA5 sample results collected at a location over a year.

* 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

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate [measured as Nitrogen]	2018	0.04	0.04 - 0.04	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

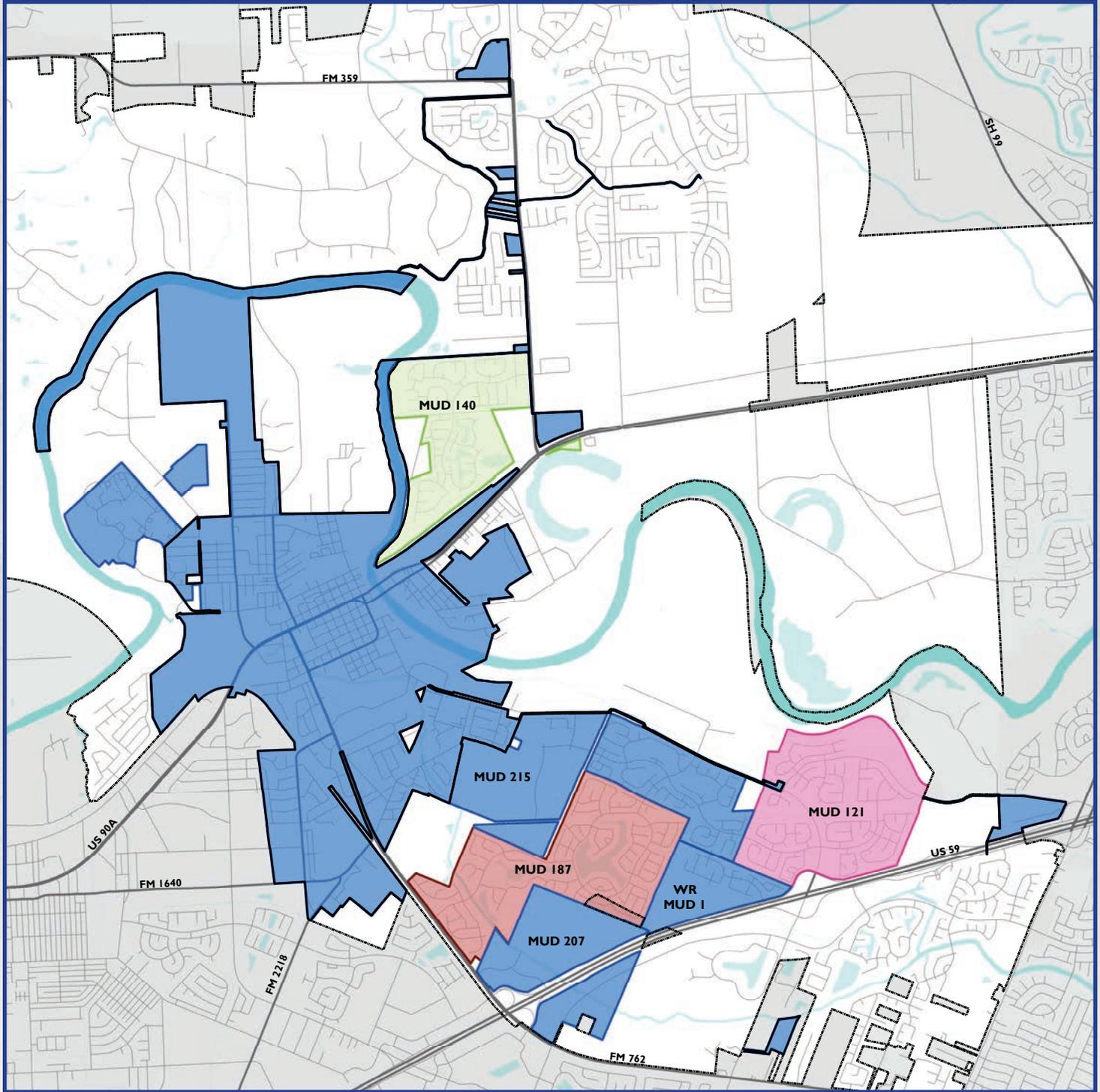
Disinfectant Residual

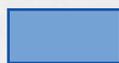
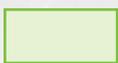
Disinfectant Residual	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
	2018	2.79	0.78	3.87	4	4	ppm	No	Water additive used to control microbes.

Water Accountability

Fort Bend County MUD 187 is required to submit a Water Audit Report to the Texas Water Development Board annually. In 2018, the City of Richmond pumped 125,808,854 gallons to MUD 187 with 97.24% accountability.

SERVICE AREA MAP



- | | | | |
|---|--------------------------------|--|-----------------------|
|  | City of Richmond (Main System) |  | MUD 140 - Rivers Edge |
|  | MUD 121 - Riverpark West |  | MUD 187 - Del Webb |



City of Richmond
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Richmond, TX 77469

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Customer Service is Our Number One Priority

We take pride in the water that is provided to our customers and we are continually striving to improve our service to you. To accomplish this goal, we need your help. Any time you find your water quality or service response is below your expectations, please contact us at (281) 342-0559. We will respond promptly and professionally.

EN ESPAÑOL

Este reporte incluye información importante sobre el agua para tomar. Si tiene preguntas o' quiere discutir sobre este reporte en español, favor de llamar al tel. (281) 342-0559.