# L E G A C Y



2017 DRINKING WATER QUALITY REPORT

1.0

"This is an excellent publication- I love the writing throughout the book and especially in the introduction. What a great way to chronicle the history of Mansfield water and provide educational information."

> Julie Hunt Trinity River Authority Assistant Regional Manager of Operations.

"Engaging. Fun to read. Learned about my city, water, and my responsibility." Scot Bowman Mansfield Resident

"Informative. Historical and captivating at the same time." Linda Christie Tarrant Regional Water District

#### 7 2018

WaterMark Award in the publication category Texas Section of the American Water Works Association

Y 2018 Silver Award for Graphic Design American Advertising Federation Addy Awarc

Learn how to get yours in our director's welcome on the next page.



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). Dear Valued Mansfield Water Customer,

It's that time of year again, and we hope you enjoy this centennial-themed 2017 Water Quality Report. This year I'm very excited about launching the Mansfield Water Utilities Customer Portal to all Mansfield water customers. The portal will give customers real-time data that can be used to better manage their water usage. For more information on the portal, check out the story on page 28 of this magazine.

The City of Mansfield marked 100 years of water utilities in 2017 and we had quite the community celebration. Not only did we celebrate with a birthday party celebrating 100 years of water, we wrote a book outlining the story of Mansfield water. The book is titled "From Water Street to Water Legacy: 100 Years of Water in Mansfield, TX." Each section in this book is tied to one of our division's core values: Excellence, Leadership, Teamwork, Authenticity, and Creativity. If you want a copy of the commemorative book written by staff about the history of water in Mansfield, we will have the books with us at every water utilities public outreach engagement. Please stop by and have a chat with us. We'd love to get you a copy.

We end this year's water quality report with a focus on community. We'd be out of work if we didn't have the community of customers to serve every day. We thank you for your support and we encourage you to continue to participate with the services the division provides. If you have any questions about this report, please reach out to us at water@mansfieldtexas.gov.

We take incredible pride in serving the community of Mansfield. This place is our home too. Our families are being raised here, just like yours. An informal tagline that came out of the book was-- from our family, to yours; for your family, from ours--and we truly mean it. It takes every one of our core values to provide safe, clean drinking water and reliable wastewater services. We appreciate your continued support. We look forward to seeing you all around town.

Sincerely,

Jeff Price Director of Water Utilities

If you would like an opportunity to participate in decisions that may affect the quality of water, I invite you to attend a city council meeting. City Council meetings are the second and fourth Monday each month at 7 p.m. at City Hall, 1200 E. Broad St.

# Teaching the next generation of water nerds

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Mansfield Water Utilities | Water 360 Education Program





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# Water Creates Community

In Texas, you go big or go home. In Mansfield, you invite the entire community, because you are home. When Mansfield Water Utilities set out to celebrate their centennial, they knew without question the entire community would be involved.

Mansfield marked 100 years of water utilities in 2017. So the question arose--how does a water utility celebrate this milestone? For posterity, the decision was made to develop a book that told water's story. It wasn't a comprehensive history of water and wastewater in Mansfield, but instead, a story that told all of water's touch points in our daily lives that go unnoticed. Finding water's touch points across history unfolded a community's relationship to this precious resource; a relationship forged 100 years in the past, yet still resonating today.

The book wasn't enough. Every great birthday deserves a great party. Mansfield Water Utilities reserved The LOT Downtown--a community gem located in historic downtown. The public education team created life-sized, familyfriendly games to make the event fun for everyone. In Mansfield, teaching the value of water starts early.

MWU didn't want this event to just be an educational opportunity. The entire department came in early one morning, before their shifts began, to brainstorm how each game would work and what supplies were needed. The games were built and manned by the same staff and crew members that provide the critical water and wastewater services central to the public health of the community. On the Facebook event page, 300 people marked interested in coming to the birthday party. The team was excited that so many people were interested in a birthday party for their water utility. On Sept. 21, more than 200 residents showed up to celebrate. Creations Bakery partnered with MWU to create the official 100-year birthday cupcake. Longtime partner and local business, Master Meter Inc., donated a dunk tank and mechanical bull to the festivities. The birthday party fell on the wake of Hurricane Harvey. Mayor David Cook, Police Chief Tracy Aaron, Water Utilities Director Jeff Price, and Code Compliance Supervisor Cliff Griffin all volunteered as dunkees to raise funds for Hurricane Harvey relief efforts.

A few weeks later on Oct. 12, MWU held a book launch for the "From Water Street to Water Legacy: 100 Years of Water in Mansfield, TX" commemorative book. The audience filled Farr Best Theater and heard an excerpt read by Bud Ervin, former water utilities director. If that name sounds familiar, you see it every day when you drive past the Bud Ervin Water Treatment Plant sign on Pleasant Ridge Drive.

Mansfield Water Utilities is just getting started. The legacy marked by the first centennial was creating a water system capable of handing the exponential growth Mansfield faced. The next 100 years will include maintaining and repairing that infrastructure, while also continuing to expand and evolve with a growing population. There will also be new technologies that allow Mansfield Water Utilities to operate more efficiently and to better serve you--the customer.











# WATER

#### In Their Own Words



# What's the nerdiest water thing that's ever come out of your mouth?

Explaining to non-water people that there are 7.48 gallons in one cubic-foot of water. One time a guy claimed his smoker held 6,000 gallons. I thought 'no way' and did some calculations. I told the guy it was no more than 1,200 gallons then proceeded to explain my math. The guy was like "How do you know it's 7.48 gallons per cubic foot?!"

# How often during the day is the water at the plant and the water in the distribution system tested?

Around 450 times by hand, but that doesn't tell the whole story, over 290,000 samples are collected daily with online analyzers.

#### What's something surprising to know about your job?

Every decision requires a level of concern for the end users.

# If you could serve a glass of Mansfield water to anyone, dead or alive, who would it be?

Louis Pasteur and I would say "look what I did!" Note from the Editor: This may be the nerdiest thing that's ever come out of his mouth.

#### Why should people value water?

Why shouldn't they? Water is everything, everything uses water.

#### Why should someone work for a water utility?

It's an advancing career, not just a job. There's a lot of skill and knowledge to it.

#### What's your favorite thing about giving a water treatment plant tour?

Making the kids holler WATER!

**Describe your job in five words or less.** Awesome. Rewarding. Knowledge sharing.





#### What's something surprising to know about your job?

Mike: People get mad at us every day. They don't understand our jobs, they just know we work for the city and in the water department. They especially don't like us on cutoff days.

#### Have you ever been afraid on the job?

**Teresa:** I was afraid the time a customer said he was going to shoot me for turning his water off.

#### Why should someone work for water utilities?

- **Tim:** You learn more about water and that it's more than just drinking water. I see water differently now.
- Mike: I took water for granted before I worked here.

#### Words of advice for new staff?

All: Be ready for the elements; you'll work in them all--heat, cold, rain, wind, ice.

#### What's a water tip you can give to customers?

**Teresa:** A running toilet is the biggest culprit of leaks. You grow numb to the noise.

#### Why should people value water?

- **Mike:** Because of the man hours that go into it and not just 8 a.m. to 5 p.m. There are people at the treatment plant all the time, people on call all the time.
- **Teresa:** Before I worked in water, I never knew how hard it was on them when they had main breaks and had to be called out.
- **Tim:** If customers knew how hard it was they'd understand better and value it more.



Alex Whiteway Field Operations Superintendent | 14 years

#### What's the hardest day you've ever had at work?

The day the North Street sewer line collapsed. I had just been recently promoted. My boss, Jesse, was off that day. I had to adapt on the spot.

### Why should someone work for Mansfield Water Utilities?

Water is something that every human being will always need. You'll always have job security because people will always need water.

#### Words of advice for new staff?

Be open to anything that is thrown your way.

#### How does your job provide value to Mansfield residents?

They get water and sewer service. Billions of people around the planet can't say the same thing.

#### What's a water tip you can give to customers?

Make sure your irrigation is set properly and you check on it regularly.

### What makes you proud to work in the water industry?

I just love the work, you know. I enjoy working with my hands. This job you have to enjoy. You're not going to get rich doing this job. You have to love it.

#### Tell your first main break story.

I had to put a clamp on the pipe underneath the water and they had to tie a rope around me so I wouldn't float away down Walnut Creek.



#### What's the most dangerous part of your job?

Deep holes. I've been in a 20-foot deep hole recently. We needed two trench boxes to protect us from the walls caving in. At the lift stations we have to worry about electricity arcs.

### Main break in the winter or clogged lift station in the summer? Pick one and why.

Main break in the winter. On a lift station you don't know when you're going home. You have to troubleshoot everything.

#### Words of advice for new staff?

Quit whining and just do the work.

#### What's something surprising to know about your job?

That I hate moist towelettes. They cause so many sewer backups. Quit flushing those wet wipes! They aren't meant to go down the toilet.



**Describe your job in five words or less.** Connecting with people. Exciting.

What's something surprising to know about your job?

That meters are actually read every month!! We do not estimate bills.

#### How does your job provide value to Mansfield?

I believe my job provides value because I am one of the first people new customers see. I have always felt that the city is more like family, and I express that to all of the customers that come into the office.

#### What's a tip you can give to customers?

Conserve!! I would love to be able to explain the importance of conserving water.

#### Why should people value water?

Conserving water helps not only environmentally but also it helps our customers' pocket books. We should cherish water more than we cherish gold, for everything that we have in this world needs water to survive.

How do you cope after shutoff day? Wine or chocolate?

I have to admit BOTH!!

#### What brought you to the water industry?

I grew up in the City of Mansfield Water Department. My dad (Jesse Fernandez) worked for the city my whole life until he retired after 30 years of service and my dream was to always follow in his footsteps. The people that I work with in the water department--from the people in the office, the meter readers, the crew members, and the treatment plant--are all family.



**Describe your job in five words or less.** Hard work and late nights

Words of advice for new staff? Don't be lazy.

What's something surprising to know about your job? All they think I do at work is turn off people's water. They have no idea all the work that gets done behind the scenes or all the different jobs we do.



# ONE TEAM. One Dream.

Ever wonder how the Grand Canyon was formed? It's a geological byproduct of the slow, steady flow of the Colorado River--the inevitable end to the erosive tug of war that rock and water play against one another across time. Water is patient and relentless. It will seep in, take hold and create change whether you want it or not. It's a force to be reckoned with. For every man-made wonder and technological advancement, at the core is water.

Water is also at the core of a community's vitality. However, Mansfield Water Utilities can't approach life like the Colorado River. In a city, departments must work together to grow together. Teamwork is one of the core values at Mansfield Water Utilities. This not only lives in the department, but spreads across other city departments. Government is notorious for creating silos that can stifle innovation and efficiency. Teamwork and collaboration towards a common goal are the antithesis of a silo and the reason it was adopted as a core value.

It takes a team mindset to guide a project from beginning to end. It keeps a city nimble and able to adapt to change and manage growth. Here are some prime examples of how water takes collaboration to the streets.



#### Water and Development

Water and development go hand in hand. This has been true since the beginning for Mansfield. Mr. Man and Mr. Feild left Fort Worth and headed southeast to find a more reliable water source for their grist mill when drought hindered Fort Worth's water supply. M.M. Farr took it a step further in 1917 and became the catalyst for Mansfield's commitment to ensuring an adequate infrastructure was in place. That mindset became ingrained in the Mansfield psyche and resulted in treatment facilities and capabilities that are uncommon for similarly sized cities. This has played a key role in the economic development of Mansfield.

"It's important to have a water supply that is not nearing its limit. It's important to be able to say that you have plenty of water," explains Scott Welmaker, director of economic development for the city. "You can have plenty of land but it's not a viable site until you have water, sewer and roads. If you don't have water, you have nothing."

#### Water and Police



Struggling to see the connection there? The obvious connection is when police officers assist with traffic control on water utilities' job sites. However these two departments share a less obvious common denominator. Advocacy. In 2016, the two departments participated in a team building event called the H2Olympics developed by education staff in the water utilities division.

At the event Chief Tracy Aaron explained the connection to local media stating, "I'm looking for advocates every day of the week, and the way we do that is through Citizen's Police Academy, events like this and having opportunities to talk with our community members. This is a way to build those advocates." The camaraderie from that event lives on. Water Utilities crews continue to share stories of how these relationships have helped in situations at job sites and even how some police officers have paid the tab for water utilities crews at lunch if they see them--something previously unheard of. Employees on both sides take these stories home with them at the end of their shifts and become ambassadors across departmental divides.

#### Water and Streets



While the normal wear and tear on city streets is enough to keep any public works department busy, the water utilities division adds an extra element. A completely perfect street may need to be dug up for crews to repair the sewer main break or water service leak beneath the surface. Crews from the Streets Department come in behind water utilities, leaving no trace that a problem ever existed. This often requires back breaking work in the heat of a Texas summer. An incredible amount of teamwork goes into ensuring scheduled repairs and emergencies are completed to get Mansfield residents on the move again. Water and Public Works don't only share streets, they also share a home; both are housed at the Chris W. Burkett Service Center. While water is vital to a community, traffic flow is key to getting residents where they need to go.

#### Water and Environmental



The Chris W. Burkett Service Center where Mansfield Water Utilities is housed lies adjacent to the Environmental Collection Center. The ECC and environmental services department provide Mansfield residents with monthly household hazardous waste drop offs and bi-annual chunk your junk/shred day events. Keep Mansfield Beautiful also uses the site to host the annual Earth Day Mansfield event and as the staging area for the bi-annual Creekside Cleanup events. Mansfield Water Utilities staff are present at all of these events to supplement the environmental services staff.

Jeff Price, director of water utilities said, "Our education program is titled Water 360 and this is because we wanted it to be clear to our residents, that water is important to us in all its forms; water, wastewater and stormwater. We may not directly manage environmental services programs, like stormwater, but we're here to lend a hand to make those programs successful since it all impacts the water quality of our community."

Without cross departmental collaboration, programs and events such as these would not be possible. Teamwork allows the City of Mansfield to provide its residents with special services that add value and make Mansfield a vibrant community. Teamwork as a core value allows Mansfield Water Utilities to meet its mission--to be community centric and to be a trusted ally for the residents it serves.

#### Water and Fire



Mansfield Fire Rescue and Mansfield Water Utilities are connected by more than just the pipes that carry water to more than 3,000 fire hydrants around the city. They share a common goal and the commitment to see it achieved.

Even the best trained and well-equipped firefighters, which Mansfield has, cannot protect the property, safety and lives of this community without access to water at the hydrants. A reliable source of water and water pressure is essential to the performance and success of firefighting operations. Without it, their ability to limit the loss of property and lives becomes far more difficult.

Chief Barry Bondurant has dedicated his life to the City of Mansfield. With more than 33 years of service as a Mansfield firefighter/paramedic, Chief Bondurant is acutely aware of the importance of the city's water distribution system. Chief Bondurant explains, "The Mansfield Fire Rescue Mission Statement says 'Mansfield Fire Rescue is a customer service organization that exists to protect the lives and property of our citizens, members and visitors and to foster the feeling of safety- any place or time-through planning, mitigation, response and restoration. None of this could be accomplished without the outstanding working relationship we have with the water distribution system, which is second to none in the United States. This is not just isolated to structure fires. Mansfield Water Utilities offers its assistance on ALL emergencies we encounter."

Jeff Price, the city's director of water utilities said he understands the role his department must play in protecting the lives and property of Mansfield residents. "We do not have the luxury of shutting down operations in the evening or on the weekend. There are crews on duty and on standby 24 hours a day, every single day of the year. That means someone is hard at work when your children are opening presents on Christmas morning and someone else may be repairing a water main when you sit down with your family on Thanksgiving. People don't just depend on us for safe drinking water. They also depend on us to provide a pressurized distribution system, even if they don't know it."

With explosive growth in the southern part of Mansfield,

demand for service from both departments is sure to increase. The city's 10-year strategic plan includes two additional fire stations for Mansfield, one in the southeast and another in the southwest. A second water treatment plant is also planned to meet the demands of a growing city. Miles and miles of pipe and hundreds of fire hydrants will go in as new homes, retail and industry continue to come to Mansfield. City leadership has planned for resources to meet these needs.



Courage & Valor Love & Respect Accomplish & Achieve Try & Succeed I Can & I Will Hustle & Heart Truth & Justice Forgive & Forget Laugh & Smile Sing & Dance Challenge & Overcome Happy & Healthy Humble & Kind To Live & Let Live Pressure & Perseverance Love & Happiness Care & Concern Compassion & Love Sympathy & Empathy Potential & Unlimited Energize & Inspire Cultivate & Foster Spontaneous & Exciting Encourage & Support Joy & Hope Vibrant & Active Aspirational & Accomplished Family & Friends Gone & Not Forgotten Respect & Self-Esteem Flourish & Grow Safe & Secure Mother & Daughter Genuine & True Modesty & Sincerity Commend & Recognize Calm & Collected Articulate & Clear Comfort & Embrace Nurture & Nourish **Robust & Strong** Explore & Discover **Inclusive & Welcoming** Positive & Upbeat **Diverse & Inclusive** Prepared & Determined Different & Curious Endure & Overcome Surprise & Elation Affluent & Generous Beautiful & Unusual Unique & Authentic Affirm & Agree Team & Together Brave & Kindhearted Curiosity & Wonder Give & Receive Question & Answer Blossom & Bloom Learn & Grow Admire & Cherish Laughter & Tears Thriving & Vibrant Recall & Remember Youthful & Enthusiastic Abundant & Thankful Acclaimed & Deserving Creative & Resourceful Mentor & Inspire Amaze & Astonish Strong & Independent Quiet & Simple Open-Mindedness & Acceptance Renewal & Transformation Innovation & Forward-Thinking Heart & Character Health & Vitality Knowledge & Learning Confidence & Enthusiasm Adventure & Optimism Gratitude & Appreciation Thank You & You're Welcome Motivation & Ambition Youth & Potential Dignity & Grace Tolerance & Compassion Peace & Tranquility Action & Reaction Hugs & Kisses Need & Assistance Assertiveness & Brilliance Artistic & Genius Pressure & Persistence Relax & Let Go Willing & Able Meditation & Therapeutic Beaming & Glowing Congregate & Rejoice Alive & Grateful Fire Protection & Water Supply Quest & Journey Neighbors & Friends Fast & Exhilarating Courage & Sacrifice Honesty & Integrity Public Health & Clean Water Dignity & Respect Gorgeous & Handsome We & Us Honor & Duty FIRE & WATER Service & Pride Bright & Effervescent Gray & Distinguished, You & I Life & Safety Protect & Serve Dignity & Respect Health & Safety Clever & Astute Absolute & Unwavering Adopt & Adore Dedication & Commitment Poise & Balance Care & Concern Victory & Celebration Everyone & Everybody Fame & Fortune Nature & Beauty Recycle & Reuse Established & Familiar Better & Best Hold & Console Father & Son Venture & Gain Certainty & Change Convictions & Beliefs Pets & Companionship To Love & Be Loved Understand & Accept Reassess & Adjust Compassion & Empathy Feel & Express Stand Up & Cheer Adversity & Triumph Volunteerism & Rewarding Rhyme & Reason Consistent & Reliable Elegant & Graceful Fresh & Clean Faith & Harmony Fit & Healthy Highest & Best Clear & Concise Plant & Grow Alter & Improve Yes Sir & Yes Ma'am Agile & Nimble Give Up & Never Better & Better Charm & Charisma Revisit & Rediscover Devoted & Faithful Friendly & Genuine Easy & Carefree Transparent & Honest Rest & Recover Effort & Grit Break & Mend Each Day & Gift Plentiful & Copious Silent & Content Speak & Be Heard Well Known & Revered Freedom & Democracy Leader & Responsibility Voyage & Exploration Replenish & Restore Steadfast & Principled Pure & Untouched Visualize & Make Happen Smile & Laugh Spiritual & Fulfilled Focused & Productive Stylish & Refined Thorough & Complete Direct & To The Point Enormous & Potential Unity & Togetherness Refresh & Rejuvenate Purposeful & Intentional Constant & Devoted Gather & Connect Ebb & Flow Goals & Objectives Plan & Prepare Attitude & Outcome Imagination & Creativity Early Bird & Worm Wisdom & Experience You're Here & You Matter Thoughts & Affirmations Fighter & Survivor Newborn & Miracle Divide & Conquer Friends & Loved Ones Invent & Revolutionize Partners & Allies Welcome & Home Quaint & Charming Quest & Journey Please & Thank You Accomplishment & Celebration Articulate & Eloquent Delicious & Nutritious Eager & Ready Illuminate & Shine Truth & Trust Helpful & Resourceful Meaningful & Rewarding Quality & Quantity Lively & Spirited Charitable & Beneficial Risk & Reward Delightful & Enjoyable Love & Compassion Community & Connection

# WATER STREET To Water Legacy

In the popular musical "Hamilton", the lead character Alexander Hamilton asks, "Legacy. What is a legacy? It's planting seeds in a garden you'll never get to see." Mansfield Water Utilities is only 100 years into building its legacy. Many of the leaders who planted the seeds of the current water system in Mansfield are still around to witness how it has met the challenges of the explosive growth of the area and stayed ahead of the technology curve. City leaders such as City Manager, Clay Chandler; retired Water Utilities Director, Bud Ervin; retired Assistant City Manager, Chris Burkett; and retired Field Operations Superintendent, Jesse Fernandez are still local voices in the Mansfield water sphere. In fact, Bud Ervin's name adorns the facilities that treat Mansfield's water, while Chris Burkett's name resides on the service center that houses the personnel and equipment that maintain the city infrastructure.

Mansfield Water Utilities strives to build a legacy of leadership. Bud Ervin had the foresight and gumption to speak up and ensure the utility had what it needed to meet future growth demands. City management had the wisdom to truly listen and city council ensured those needs were met. Every day, the water utilities division accomplishes a lengthy list of tasks and goals with a lean team of employees. The staff at water utilities continues to set expectations high, from the attention to detail at every job site, to the director who personally responds to high water bill calls, to the creativity in the public communication efforts.

These efforts were recognized by the State of Texas in 2017 when Mansfield Water Utilities received the Blue Legacy Award for public communications. Presented on Texas Water Day, March 22, at the state capitol in Austin, the Blue Legacy is awarded by the Water Conservation Advisory Council of the Texas Water Development Board and recognizes water suppliers that have demonstrated innovative means to promote the efficient use of water.

A city can only win the award once, so it carries the weight of a lifetime achievement award. MWU received the award in the area of public communication but in Mansfield the entire division tells the story. The authenticity and ingenuity of the division's communication efforts stems from the deliberate use of its team members. Anything you read or see in a Mansfield Water Utilities communication campaign is the true voice of the division's greatest source of capital--its employees.

The Blue Legacy Award was also inspiration for the 100-year commemorative book titled, "From Water Street to Water Legacy: 100 Years of Water in Mansfield, TX". Main Street runs through Historic Downtown Mansfield but was called Water Street until 1958. Legend has it Water Street earned its name because that is where the first water well in Mansfield was located. Ralph Man and Julian Feild came to the area where they would later found the City of Mansfield in search of a reliable water source for their grist mill. More than 100 years later, Mansfield continues to provide this reliable water source that enables economic growth and community vitality. The water utilities division continues to not only provide this invaluable resource and services, but to also be a leader in the State of Texas.



# 2017 Water Quality Report City of Mansfield TX2200018

Annual Water Quality Report for the period January 1 to December 31, 2017. 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. Using Data Collected in 2017 Unless Noted.

En Español: Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en espanol, favor de llamar al telefono 817-477-2248.

# Drinking Water Source

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.

There are minerals, organisms, and even some potential pollutants in our raw surface water source. Some are naturally-occurring and some are manmade. Drinking water, even 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.

# Source Water Assessment

The Texas Commission on Environmental Quality (TCEQ) completed an assessment of your source water and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Water Quality Report. For more information on source water assessments and protection efforts at our system, contact Robby Isbell, Water Treatment Plant Superintendent, **817-728-3661**.

For more information about your sources of water, please refer to the source water assessment viewer available at the following url: http://www.tceq.texas.gov/gis/swaview. Further details about sources and source water assessments are available in the Drinking Water Watch at the following url: http://dww2.tceq.texas.gov/DWW/

# 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.

#### INORGANIC CONTAMINANTS

Contaminant	Units	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
Barium	ppm	0.051	.051051	2.00	2.00	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium	ppb	1.5	1.5-1.5	100	100	No	Discharge from steel and pulp mills; erosion of natural deposits.
Cyanide	ppb	35.8	35.8-35.8	200	200	No	Discharge from plastic and fertalizer factories; discharge from steel/metal factories
Fluoride	ppm	0.2	.195195	4.00	4.00	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (Measured as Nitorgen)	ppm	0.423	.423423	10.00	10.00	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

SYNTHETIC ORGANIC CONTAMINANTS (including pesticides and herbicides)								
Contaminant	Units	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination	

Atrazine	ppb	0.1	0.1-0.1	3	3	No	Runoff from herbicide used on row crops.	

RADIOA	RADIOACTIVE CONTAMINANTS (collected 1/25/2017)								
Contaminant	Units	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination		
Beta/Photon emitters		4.6	4.6-4.6	0.00	50	No	Decay of natural and man-made deposits.		

\*EPA considers 50 pCi/L\* (4 mrem/yr) to be the level of concern for beta particles

SECONDA	SECONDARY CONTAMINANTS									
Contaminant	Units	Average Level	Minimum Level	Maximum Level	Secondary Limit	Likely Source of Contamination				
Chloride	ppm	19.40	19.40	19.40	300.00	Abundant naturally occurring element; used in water purification.				
Hardness as Ca/Mg	ppm	98.80	98.80	98.80	NA	Naturally occurring in calcium and magnesium.				
рН	units	8.20	8.10	8.30	NA	Measure of corrosivity of water.				
Sodium	ppm	19.40	19.40	19.40	NA	Erosion of natural deposits; byproducts of oil field activity.				
Sulfate	ppm	30.60	30.60	30.60	300.00	Naturally occurring; common industrial byproduct; byproducts of oil field activity.				
Total Dissolved Solids	ppm	223.00	223.00	223.00	1000.00	Total dissolved mineral constituents in water.				

#### TURBIDITY

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.

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest Single Measurement	1 NTU	0.26 NTU	No	Soil Runoff.
Lowest Monthly % Meeting Limit	0.3 NTU	100%	No	Soil Runoff.

COLIFO	RM BACTERIA	Ą				
MCLG	Total Coliform MCL	Highest No. of Positive	Fecal Coliform or E. Coli MCL	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	5% of monthly samples are positive.	1.3%		0.00	No	Naturally present in the environment.

# Addressing Lead Concerns

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

#### LEAD & COPPER (Samples taken in 2015)

	Units	The 90th Percentile	# Sites Over AL	Action Level (AL)	MCLG	Violation	Likely Source of Contamination
Lead	ppb	1.70	0.00	15.00	15.00	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper	ppm	0.21	0.00	1.30	1.30	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

#### 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.

	Average Level	Minimum Level	Maximum Level
Raw Water	6.20	5.08	7.32
Treated Water	3.56	2.90	4.23
Removal Ratio	1.19	0.84	1.49

#### DISINFECTION BYPRODUCTS

These test results are related to the diinfection process during treatment.

Contaminant	Units	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
Chlorite	ppm	0.49	0.05-0.49	0.80	1.00	No	Byproduct of drinking water disinfection
Haloacetic Acids (HAA5)	ppb	20.5	11.7-20.5	No goal for that total	60.00	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	ppb	54.3	33.3-54.3	No goal for that total	80.00	No	Byproduct of drinking water disinfection

#### **DISINFECTION RESIDUAI**

Disinfection	Units	Average Level	Range of Levels Detected	MRDL	MRDLG	Violation	Likely Source of Contamination
Chloramine	ppm	3.67	1.6-4.0	4.00	4.00	No	Water additive used to control microbes.

# Use these definitions when reading the chart of test samples. It will help explain what the different acronyms and references mean.

#### Action level

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system much 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.

# 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.

#### 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 picograms per liter (pg/L)



21,632 metered customer connections and

a city with the population of 70,170

# 4,480,309,00

4.4 billion gallons of water treated and distributed in 2017

1,962,366,000

1.9 billion gallons of wastewater collected and treated in 2017

2,517,943,00

2.5 billion gallons of water used for outdoor irrigation in 2017



The Environmental Protection Agency estimates that as much as 50 percent of household water is wasted due to overwatering caused by inefficiencies in irrigation.

Richland-Chamber Reservoir releasing water at sunset



# They Say Water is Awesome, and We Agree

Tarrant Regional Water District is a wholesale raw water supplier created in 1924 as a political subdivision of the State of Texas. TRWD is one of the largest water suppliers in the state. It's four largest wholesale customers include the cities of Fort Worth, Arlington, Mansfield and the Trinity River Authority. The water treated at the Bud Ervin Water Treatment Plant in Mansfield is purchased from TRWD. The raw water is pumped directly to the plant via a 72-inch and 90-inch pipeline from Cedar Creek and Richland-Chambers reservoirs, approximately 67 miles southeast of Mansfield.

For decades, reservoirs in the TRWD system (Bridgeport, Eagle Mountain, Cedar Creek and Richland-Chambers) have served our water needs. However the metroplex is growing and TRWD's service area population is expected to double from 2.1 million today to 4.3 million by 2070. TRWD currently has a major infrastructure project partnering with the City of Dallas called the Integrated Pipeline or IPL to help meet our water demand. This project connects existing reservoirs to bring additional water supplies to our area. It also provides some reliability and redundancy to our existing system to protect our water supplies in times of emergency or maintenance.

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It is very difficult and extremely expensive to build new lakes and infrastructure to deliver the water to our area. Water conservation is a key water supply strategy to meet current and future needs. Conserving water today helps extend the life of existing supplies, helps meet the needs of a growing population, delays the need for expensive

new supplies, makes more water available during drought situations, reduces peak demands on our infrastructure and is by far the least expensive water supply strategy for the long-term. Water conservation programs, efficient plumbing fixtures and changing water use habits have resulted in an estimated savings of 100 million gallons per day!

You may have seen our new campaign, "Water Is Awesome." After almost 100 years of investment from the community into our water supply and delivery systems, we think water is awesome. We want you to use it and enjoy it, just don't waste it. One way to do that is by signing up for weekly watering advice for your lawn. It's easy to do and following the advice will help you better manage your water use and bill. Sign up today at: www.waterisawesome.com.





TRWD and IPL

representatives

in front of an assembled 108-inch

Gate Valve

10

0





# The Value of Wastewater

The Trinity River Authority of Texas (TRA) is the largest wholesale provider of wastewater treatment services in Texas, operating five wastewater treatment facilities and four water treatment facilities.

Many people don't give much thought to the water that flows in and out of their homes every day. The used water, known as wastewater, from activities such as flushing the toilet, showering and bathing, and washing dishes and laundry, disappears down the drain and from our minds. Where does it go? More importantly, what happens to it?

Mansfield is a customer of two of TRA's award-winning wastewater treatment facilities-Central Regional Wastewater System (CRWS) and Mountain Creek Regional Wastewater System (MCRWS). CRWS is located in Dallas and began operations in 1959 as the first regional facility of its kind. MCRWS is located in Midlothian. Operations began in 2005, and the facility uses ultraviolet light disinfection, which reduces the need for chemicals and benefits the environment while improving safety.

When the used water leaves homes and businesses, it flows to a TRA wastewater treatment facility. Pollutants are removed from the wastewater before it is safely returned to the environment. Treatment consists of physical, biological and chemical processes. Few people are aware of the specifics of the wastewater treatment process and therefore undervalue this vital service.

Prior to proper wastewater treatment, some wastewater was commonly discharged directly into the nearest body of water. This practice led to many public health and environmental issues such as water-borne illnesses and unstable levels of dissolved oxygen in water bodies creating a lack of habitat for wildlife. Wastewater cleaned at TRA's facilities flows into the Trinity River, and TRA's superior treatment processes help improve the ecosystems of the river, making it a more sustainable habitat.

TRA is committed to providing the best possible service to all of its wastewater customers because wastewater treatment is critical to human health and the environment. Today, the Trinity River is healthier than ever before due, in part, to the high-quality effluent that is discharged from TRA's wastewater treatment facilities.







Mountain Creek Regional Wastewater System (MCRWS) uses ultraviolet light disinfection

# WASTEWATER The Other Side of the Equation

Think back to the last thing you bought. How much did you spend? Was it more than \$3.29? What did you get for that \$3? Did you get 1,000 of whatever you purchased? Was it medicine or something to prevent illness? Did you receive 1,000 doses?

Every month you spend \$3.29 per 1,000 gallons of wastewater used. Every drop of water that goes down the drain or is flushed down the toilet is sent to the Trinity River Authority wastewater treatment plant to be cleaned. When it has concluded the treatment process it is discharged into the Trinity River. However, it's never just water going down the drain or the toilet. People put just about anything down both and this has caused the cost of treating wastewater to increase.

Every time you flush the toilet you participate in a luxury that 4.5 billion people across the planet do not have. Wastewater treatment prevents the spread of disease. In Mansfield this infrastructure includes not only pipelines, but also lift stations. Gravity-fed systems are ideal, as gravity is much cheaper than the electricity to run pumps. However, elevation is not always possible. Three two-man crews maintain the wastewater infrastructure in Mansfield.



You can do your part by following these "Defend Your Drain" best practices. But more importantly, sharing them with your friends, family and coworkers. You can also check out defendyourdrainsnorthtexas.com. This is a regional effort to raise awareness of what not to put down the drain or toilet in order to protect the integrity of our wastewater system.



**Wipes:** But they say flushable. In theory, they may be-however the plastic fibers that make them durable also mean they don't break down quickly. This means they can clog your sewer line, which depending on the location of the clog, can cause a backup not only in your line but in your neighbors as well. Don't be that neighbor. Always throw wipes in the trash.



**Paper towels and feminine hygiene products:** These should also be put in the trash. Paper towels are designed to be extremely absorbent without breaking down. Feminine hygiene products use fibers of cotton and rayon (similar to what's found in your clothing). They are designed to be durable and therefore they don't break down. Flushing these items can result in clogged sewer lines.



**Personal care items:** These items such as dental floss, hair, cotton swabs, and condoms do not break down in water. When you flush, you want whatever is in the toilet to leave as fast as possible. Using your toilet as a trashcan will put things in the pipes

that impede the ability for your pipes to do their job. Things become entangled and then you have a mess. Toss these items in the trash.



**Grease:** The toilet isn't the only culprit in the house. The kitchen sink also plays a role. When fats, oils, and grease are put down the drain they harden in your pipes. Using hot, soapy water is an old wives' tale. We have plenty of footage from our video inspections that prove this. Scrape food into the trash and wipe up that grease with a paper towel once cooled. You can also recycle your grease at that Mansfield Environmental Collection Center aka the ECC. The ECC also accepts other household hazardous waste such as old cleaning products, paint and pesticides. These items should never be poured down the drain or storm drain. For a full listing of accepted items visit mansfieldtexas.gov/ecc.



**Medications:** Do you have expired, unused medications? They shouldn't go down the toilet either. You can drop them off at the Mansfield Public Safety Building, 1305 E. Broad St., Monday through Friday from 8 a.m. to 5 p.m. You can drop them in the mailbox receptacle they have in the lobby. You can also participate in the bi-annual National Prescription

Drug Take Back Day, a partnership effort between local police departments and the Drug Enforcement Administration. Find out more information or other disposal locations at takebackday.dea.gov.





# Every Drop Counts, Every Drop Counted

Times have changed, and Mansfield Water Utilities continues to evolve with the change in technology. You may have noticed in your own neighborhood that you rarely see a meter reader. This is because Mansfield has been proactively implementing a meter replacement program. In Spring 2018, Mansfield Water Utilities started replacing the last 5000 manually-read meters. After the final installment, all meters in Mansfield will be either AMR (automatic meter reading) or AMI (advanced metering infrastructure).

The difference between the two is AMR meters are read via a radio transmitter. The data is pinged to the meter technician's equipment as they drive by in smart cars. Data from the AMI meters is transmitted directly to the database at the service center. In fact, the meter department changed the job titles to meter technicians several years ago, as their primary duties no longer involve meter reading but rather meter repair and maintenance.

In the beginning, the meter replacement program began by researching and testing AMR technology, which hit the market in the mid-80s. As the technology improved, confidence grew, and the division decided to begin a full change out program. The first pilot program for AMI began in 2014 with the replacement of 1,000 meters.

This year all Mansfield meters will complete the first phase of the meter replacement program, ensuring that all meters are either AMR or AMI technology. New AMR/AMI meters improve accuracy and reduce the potential for human error. This technology upgrade allows Mansfield Water Utilities to launch its new customer portal. The portal will give customers real-time data about their water use that they can use to better manage their water bill.



The Mansfield Water Utilities Customer Portal will be available to all customers, regardless of meter type. In order to use the benefits of the portal, all customers will need to register on the portal. You can do so by visiting the water utilities page on the City of Mansfield website. The portal will allow customers to receive leak detection alerts if the system detects a spike in usage that falls outside of their normal usage pattern.

Customers will also be able to set a water budget for themselves. This means if you want a set cost for your water bill, the system will notify you when you begin to reach your budget threshold. This will allow customers a more hands-on approach

> While the portal will help our customers detect their household leaks, Mansfield Water Utilities has a plan in place to ensure the maintenance and repair of the 300 miles of infrastructure under our residents' feet. This helps reduce the system's water loss. In the water loss audit submitted for the time period, January-December 2017, the system lost an estimated 418 million gallons of water. This represents 9.21 percent of the total gallons we purchase. According to the Environmental Protection Agency, the national water loss average is 16 percent.

to managing their water use. It will also help alleviate the sticker shock that can come when the Texas heat begins and the irrigation systems turn on.

While the MWU Customer Portal will help manage water use, sometimes the unexpected occur, like small leaks that may go unnoticed. According to the EPA's WaterSense page, the average household's leaks can account for more than 10,000 gallons. Ten percent of homes have leaks that waste 90 gallons or more per day.

Never fear! There are plenty of resources for you to find these leaks and easily repair them. Always know that Mansfield Water Utilities is just a phone call away if you want more information.





#### Toilet A leaky toilet

A leaky toilet flapper can waste up to 950 gallons a week.

#### What can you do?

Identify toilet leaks by placing a drop of food coloring in the toilet tank. If any color shows up in the bowl after 10 minutes, you have a leak. Be sure to flush immediately after the experiment to avoid staining the tank.



#### Outdoor Irrigation System

The average ZONE on an irrigation system uses approximately 15 gallons per minute (GPM). That is a conservative estimate. We have found most zones use more, but water wise irrigators are taught to keep the GPM between 12 and 16 GPM.

#### What can you do?

Get a free irrigation evaluation by a licensed irrigator. Contact Mansfield Water Utilities at **water@mansfieldtexas.gov** or call **817-728-3619**.



#### Faucet

A leaky faucet dripping at the rate of one drip per second can waste more than 3,000 gallons of water per year.

#### What can you do?

Check out EPA WaterSense's Fix a Leak page at **https://www.epa.gov/watersense/fix-leak-week**. Here you will find tips on how to make these minor household repairs yourself.



#### Showerhead

A shower leaking 10 drips per minute wastes more than 500 gallons per year.

#### What can you do?

Check out EPA WaterSense's Fix a Leak page to find helpful DIY quick fix tips PLUS get more information on WaterSense labeled products that help conserve water around the house.

Want more information? Sign up for the Texas Commission on Environmental Quality's Take Care of Texas newsletter and get tips on how you can save water and electricity around the house and at work: takecareoftexas.org.

To stay up to date on Mansfield Water Utilities classes and free events, sign up for the Water 360 newsletter at mansfieldtexas.gov/water360 or email water@mansfieldtexas.gov.

# Community Engagement Untapped

We invite you and your family to be a part of our family at Mansfield Water Utilities. Follow us on the city Facebook page and check the city calendar so you never miss out on any of our events. You can also subscribe to the Water 360 newsletter at mansfieldtexas.gov/water360 or email us at water@ mansfieldtexas.gov. Don't forget to register on the Mansfield Water Utilities Customer Portal to stay completely connected to water utilities in Mansfield.

You can register at mansfieldtexas.gov/water-utilities.

















THANK YOU FOR MAKING 2017 SPECIAL









City of Mansfield, Texas Municipal Government Published by Stephanie Zavala [2] - September 26 at 5:17pm

Mansfield Water Utilities is repairing a leak on Main St. near Mouser Electronics. People often wonder why we require multiple personnel on a job site. Often times it is for safety reasons, but today it is because our crews had to hand dig down to the leak in the line to protect the fiber optic lines nearby. We also have several new members of our crew who were training and building experience. We thank everyone for slowing down and keeping our people safe.







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