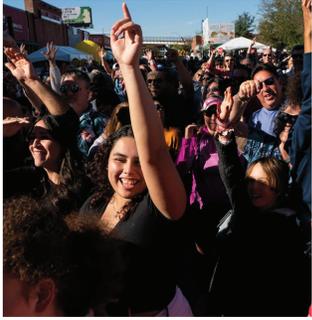




# SUSTAINABILITY PLAN



2025



# CREDITS



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Pictured: (back row from left) Cory Heiple, Ethan Harrison-Weil, Kaicee Black, Michael Ramdhan, Craig Whelan. (front row from left) Krista Pender, Andie McClure, Novella Landau, Carlos Ordonez

# CREDITS



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# LETTER FROM THE CITY MANAGER

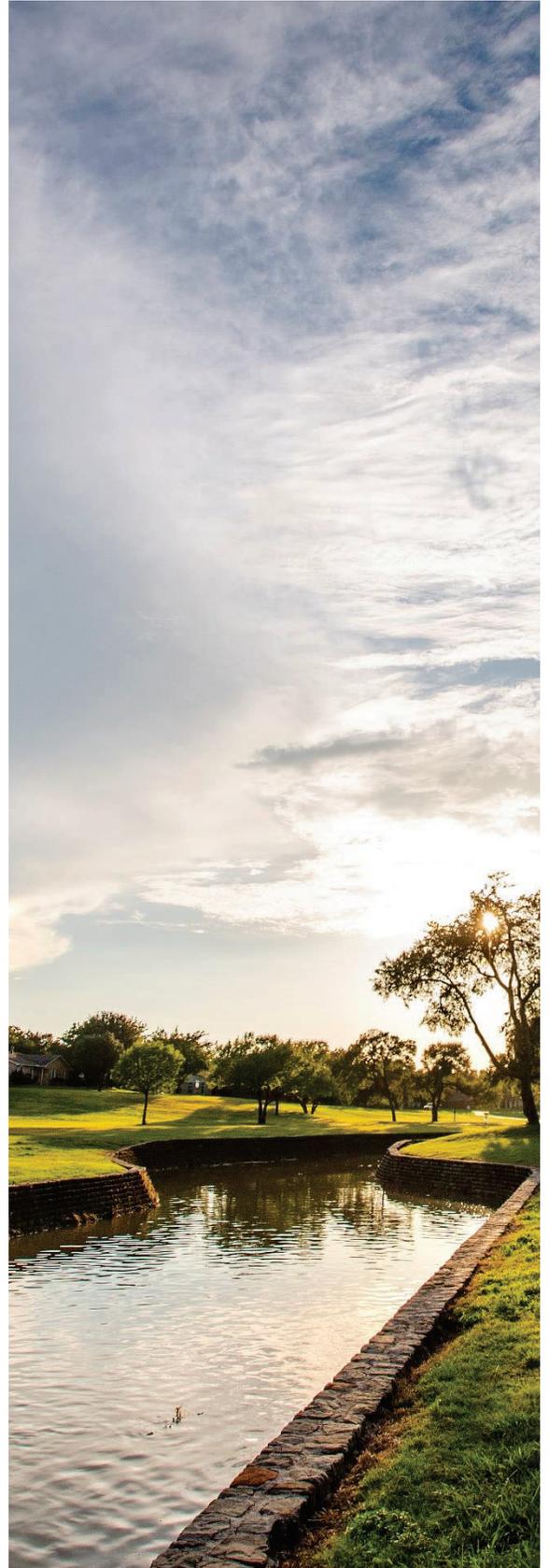
It is with great pride that I introduce the City of Carrollton's 2024 Sustainability Plan, a significant undertaking and endeavor to create. This comprehensive and forward-looking document serves as a blueprint for our city's ongoing efforts to foster a sustainable, resilient, and thriving community. The plan addresses the pressing environmental, social, and economic challenges we face today while ensuring the City of Carrollton continues to be the community that families and businesses want to call home.

Our initiatives span key areas such as land and air conservation, water resource management, energy efficiency, equitable public services, and fostering a vibrant local economy. Through nearly 300 strategic actions, we are setting a course for enhanced environmental stewardship and improved quality of life, securing a sustainable future for all Carrollton residents and businesses.

The development of this plan required the concerted efforts of every city department and the invaluable input of community stakeholders. Such collaboration is essential to our success and we recognize that long-term sustainability is a shared responsibility that requires engagement and partnership at all levels.

As we move forward, we are committed to transparency, accountability, and continuous improvement. The success of these efforts depends on the active involvement of our entire community. I encourage all residents and businesses to take part in this shared mission, as together we will ensure Carrollton's continued prosperity, resilience, and sustainability for generations to come.

Erin Rinehart  
City Manager, City of Carrollton



# How To Read This Plan



## Introduction

This comprehensive plan for the City of Carrollton delves into each aspect of sustainability, offering detailed narratives that provide background information, outline the scope of each topic, and present a clear vision for progress through various city initiatives.

## Structure of the Plan

Each section of this plan contains a series of tables highlighting key strategies by which City departments contribute to each area of interest. These tables also identify areas for future focus. The plan is designed to be versatile; it can be read in its entirety or by focusing on individual sections of interest.

## Areas of Focus

The plan identifies seven key areas of focus and outlines nearly 300 strategies—both current and future. Some strategies build on existing programs and initiatives that are already well-developed and active, while others introduce new ideas to be explored or planned for future implementation. Every initiative is vital, contributing significantly to the present and future sustainability of Carrollton.

## Key Features

1. Comprehensive Narratives: Each topic includes a detailed narrative that provides background and context, helping readers understand the scope and importance of the initiatives.
2. Strategic Tables: Each section contains tables that highlight relevant key strategies, showing how city departments currently contribute and identifying future areas of focus.
3. Versatile Readability: The plan is designed to be user-friendly, whether read cover to cover or by individual sections.

## Implementation and Future Considerations

When engaging with this plan, consider the various perspectives, areas of expertise, community networks, and external partnerships required to fully implement and advance the plan's objectives. Collaboration and broad engagement are essential to achieving the sustainable future envisioned for Carrollton.

## Land & Air

- Promote Native Vegetation
- Public Greenspace
- Protection from Natural Hazards
- Community Grants & Conservation
- Air & Skies

## Water

- Surface Water Protection
- Drinking Water Protection & Conservation
- Wastewater Protection
- Volunteer & Outreach Programs

## Energy

- Energy Management
- Energy Efficient Development

## Built Environment

- City Planning & Development
- Resource Management
- Community Waste
- Buildings & Infrastructure
- Transportation

## Public Equity

- Diversity
- Equity
- Inclusivity

## Community

- Outreach & Engagement
- Community Improvements
- Resiliency
- Safe Environments
- Healthy Living

## Vibrant Economy

- Attract New Business
- Retain, Rehab, Redevelop Current Business
- Create a Destination City
- Workforce Stability
- Stewardship

# Planning Process



In 2021, a team of 10 dedicated staff members formed the Sustainability Team with a goal of cataloging the City of Carrollton's ongoing City sustainable initiatives and to look to the future for what initiatives are yet to come. Utilizing the United Nations' 17 Sustainable Development Goals (SDGs) as a framework for this process, the team began the research phase to determine sustainable initiatives currently published to the public and already in practice for each city department. Once initial department research was completed, the team conducted interviews with each department to uncover current sustainable practices that might go unnoticed to ensure the full scope of sustainability was captured.

Each department shared information for each division, scope of work, programs, and current and future initiatives that match a SDG sustainable criteria to fill research gaps. Information came from institutional knowledge, strategic business plans, and City websites, policies, ordinances, and annual reports documented both internally and to external agencies. This information was then categorized under the most relevant United Nations SDG. With the research completed, drafting the Sustainability Plan report commenced. Of the seventeen United Nations SDGs, nine sections became the focus for the plan: Land and Air, Water, Energy, Transportation, Built Environment, Community, Vibrant Economy, Partnerships, and Public Equity, each comprised of multiple SDGs.



# Planning Process



Throughout the writing process, the team utilized two self-assessment tools to identify strengths and areas of opportunity in the plan. The first tool identified and utilized was the Community Sustainability Self-Assessment Tool developed by the Land Information Access Association in Traverse City, Michigan. This assessment covers topics such as economic, social, and environmental factors which potentially impact a community and might be utilized as an indicator of local resilience. While this assessment served as a fundamental guideline to ensure the City of Carrollton's draft fully encompassed the scope and detail required for a useful sustainability plan, its specialization to Michigan needs, issues, and goals was not a perfect solution. The second community assessment identified was the LEED for Cities and Communities: Existing Cities, a data-driven framework for measuring sustainable practices in municipalities. In January 2024, the City pursued a grant application through the U.S. Green Building Council to participate in the LEED for Cities 2024 cohort; the grant, in addition to offsetting the cost

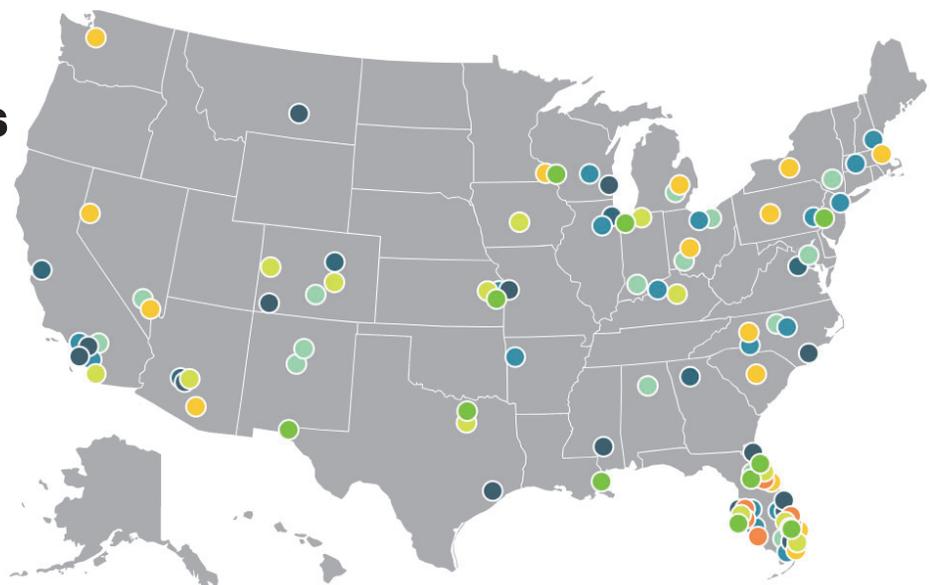
to receive professional technical assistance and review and certification, provides a cohort of like-minded cities undergoing the same sustainability plan writing, comprehensive internal review, and gap analysis. In April, it was announced Carrollton was accepted into the cohort program alongside the following cities:

- |                   |                    |
|-------------------|--------------------|
| Boca Raton, FL    | La Crosse, WI      |
| Coral Springs, FL | New Orleans, LA    |
| El Paso, TX       | Overland Park, KS  |
| Gainesville, FL   | Philadelphia, PA   |
| Gary, IN          | St. Petersburg, FL |
| Jacksonville, FL  |                    |

Future editions of the Carrollton Sustainability Plan will be updated using gap analysis results as a guide for new long-term initiatives.

The Sustainability Team truly believes in the value of this completed work, that this project matters to residents, businesses, and City staff, and that this plan outlines the path forward to build a brighter sustainable future.

## LEED for Cities Cohort Participants



# What is Sustainability?



## Thriving under changing conditions

### What Drives Us:

The first step in making a change is believing that you can.

In just the last few years, North Texas has experienced a variety of unexpected circumstances: a global pandemic, economic uncertainty, supply chain disruptions, and severe storms and weather conditions (severe heatwaves and drought, winter weather, flooding). The City of Carrollton incorporates sustainability and sustainable planning by addressing, responding to, and planning for national and global concerns at a local level. Sustainable planning can be the guide that brings Carrollton through the next years and decades, to continue to bring vitality, public safety, economic security, and a sense of community to this City and the people who make it what it is. Sustainability is not just a buzzword or plan, it is a set of ideas that can inform how to develop and strengthen the City and its policies moving forward by considering the future needs of the City while accounting for the current needs of today.

### What is Sustainability:

In its broadest sense, sustainability is defined as the ability to thrive under changing conditions. It also means the ability to foresee what conditions might arise, harnessing opportunities, and planning for success moving forward. A key element for municipal planning is designing things to last, making systems and infrastructure more durable, more resilient, and more capable of standing up to current and future challenges. It means protecting our natural and manmade environments, and maintaining the beautiful ecosystems, plants, and wildlife that make Texas special. It means growth and adaptation, financial stewardship and transparency, and ensuring economic development that benefits everyone. In a narrower and more concrete sense, sustainability leads to more efficient use of resources, long lasting and well-maintained infrastructure, equitable community and economic stability, environmental quality and protections, and overall strengthened City operations gained through deliberate planning.





### **Why Sustainability:**

The City of Carrollton reflects the commitment to maintaining this community as the place families and businesses want to call home; not just today, but looking ahead towards the next five, ten, and fifty years. To accomplish this, the city must correctly identify the challenges and opportunities that will present themselves in the future. According to the “Vision North Texas 2050” study completed by the North Central Texas Council of Governments, the DFW Metroplex population is expected to double in population by the year 2050. An increase in population brings more economic growth, but also increases traffic, logistical complexity, home availability, resource usage, emissions, and other factors. It further puts a strain on existing infrastructure, water and electricity consumption, and other community resources. An interconnected world leads to a larger and more complex supply chain, with local, regional, and global disruptions affecting local operations more acutely. Inflation and economic uncertainty make affordability and economic justice crucial topics that affect everyone. Severe weather conditions, less predictable seasons, extreme winter weather and harsh heatwaves and droughts have impacted citizens’ quality of life and apply increasing pressure not just on the environment and wildlife, but on our economy, our farm and food systems, and our infrastructure.

### **Our Opportunities:**

The future does not only involve overcoming challenges. Things look bright for the City of Carrollton. As a city that is nearly entirely developed, the city has the opportunity to focus on improving the existing city systems and incorporating smart planning practices to adapt to changing conditions, such as emphasizing strategic redevelopment, renewal, and modernization and building the support systems needed to sustain an increasing population. In short, Carrollton is stable and growing stronger, enjoys the benefit of a diverse and vibrant community with a strong sense of place. The city also contains attractive and established neighborhoods, affordable homes and services, considerable community programs and events, and beautiful abundant parks and trail systems. In addition, Carrollton is located along some of the largest transportation arteries in the metroplex, not far from central Dallas, nor constrained by geographic boundaries. The increased consideration of further sustainable practices in our planning efforts will only serve to better a city that is already home to a thriving, vibrant, and successful community.

## Path to Success:

The City of Carrollton has invested great time and effort to ensure responsible future planning. In addition to annual initiatives made by each department and the work of our Strategic Services team to streamline city operations, the City Sustainability Team has spent the last three years drafting this comprehensive report. With this plan and the research gathered, the City is armed with a far stronger understanding of the existing and expected future conditions, and the strategies that can be utilized to be successful moving forward. The knowledge of the reporting team, the initiatives in this plan, and the additional opportunities gained through this pursuit will help to grow Carrollton's ability to withstand any changes to come. In addition to this plan, and in collaboration with numerous departments, the City is actively engaged in two pursuits to support long-term resiliency – a Regional Resilience Cohort for Texas and Oklahoma, and national Local Government Leadership Program

under LEED for Cities. Each of these actions will create a solid foundation for Carrollton to build its planning efforts on and provides the planning tools needed to best serve Carrollton residents.

## Final Thoughts:

Equipped with this plan and the support of residents, businesses, and other institutions, Carrollton will be well prepared to face the challenges in the years to come. A strong city can continue to provide a high quality of life and resources expected by the community. The City can work hand-in-hand with residents to maintain this standard of living and bring Carrollton into a more sustainable future, ensuring families' safety, security, comfort, and ability to enjoy nature, the environment, and a strong, thriving community.



# Carrollton Overview



The City of Carrollton, nestled in the heart of the Dallas-Fort Worth area, is a vibrant corporate and residential community. Carrollton's business-friendly environment and cost advantages attract and support a diverse local economy, with over 15,000 businesses calling the city home. Key economic sectors include manufacturing, construction, wholesale trade, finance, insurance, and real estate. Its strategic location provides easy access to major transportation arteries, including Interstate 35E and President George Bush Turnpike, facilitating connectivity and commerce across its 37 square miles spanning Denton, Dallas, and Collin counties. Residents are drawn to Carrollton for its high quality of life, abundant parks, excellent schools, and safe neighborhoods.

## Why Carrollton?

- *Cigna Healthy Workforce* - Silver, Cigna, 2023
- *Top 5 Hardest-Working Cities in the U.S.*, CoworkingCafe's Top 20 Hardest-Working Cities, 2024
- *Top 25 Safest Cities Nationwide*, GOBankingRate's 50 Safest and Most Affordable US Cities to Live In, 2024
- *2024 Municipal Traffic Safety Award*, TMCEC, 2024
- *Gold Fleet Award*, DFWCC, 2023
- *Top 50 Best Real Estates Markets in Nation*, WalletHub, 2023
- *AAA Bond Rating*, Fitch Ratings Inc., 2023

## History:

Early settlers arrived in the 1840's and built cabins in an area around present-day Perry Park as the rise of the land provided an ideal lookout position and the natural springs provided fresh, clean water. The Fifth Congress of the Republic of Texas (an independent nation until it became a state in 1845) met in 1841 and adopted a law that ended up sparking interest in the area. "An Act Granting Land to Emigrants" was passed with the purpose of colonizing unoccupied areas of Texas. William Smalling Peters was one of the contractors tasked with colonizing North Texas – eventually the group in North Texas became more commonly known as The Peter's Colony. Most local historians believe Carrollton received its name from the hometown of many early settlers, traveling from Carrollton, Illinois. The name was officially established on May 16, 1878 when the first U.S. Post Office opened in Carrollton. On June 14, 1913, Carrollton voted to incorporate as a general law city with J.T. Rhoton serving as the first mayor until 1915.



# Carrollton Overview



## Demographics:

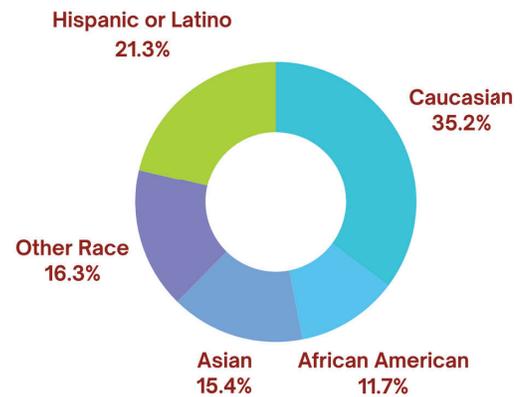
Carrollton, Texas, is known for its diverse and multicultural population, reflected in vibrant cultural events and festivals celebrating various traditions and cuisines. The city's multicultural nature fosters a rich community atmosphere, with residents from different backgrounds contributing to the unique cultural landscape. The median age in Carrollton is approximately 37 years. Quality schools and family-friendly amenities attract families and individuals of all ages.

Carrollton's population density is roughly 3,500 people per square mile, characteristic of a moderately dense suburban area. This density supports a robust local economy with a mix of residential, commercial, and industrial zones. The city's strategic location within the Dallas-Fort Worth metropolitan area makes it desirable for commuters, contributing to steady population growth of 12% from the 2010 to 2020 U.S. Census. Despite its growth, Carrollton maintains a balance between urban development and green spaces, offering residents a high quality of life. The well-planned infrastructure and variety of housing options accommodate diverse needs, from single professionals to large families, ensuring Carrollton remains a vibrant and attractive place to live.



## CARROLLTON DEMOGRAPHICS

### ETHNICITY



### MEDIAN AGE



### EDUCATION LEVEL



### MEDIAN HOUSEHOLD INCOME



# Carrollton Overview



## Economy:

Carrollton, Texas, features a dynamic and diversified economy, bolstered by its strategic location within the Dallas-Fort Worth metroplex. According to the City of Carrollton's Economic Development department, the city is home to over 15,000 businesses and has a daytime workforce exceeding 71,000 people. The manufacturing sector remains a significant economic driver, with numerous companies involved in electronics, machinery, and other industrial products. The presence of major highways and proximity to Dallas/Fort Worth International Airport further enhances Carrollton's appeal for business operations and logistics.

The retail sector also plays a crucial role in Carrollton's economy. The city has invested in various retail development initiatives, including the redevelopment of aging retail centers and the introduction of new dining and shopping options. U.S. Census Bureau data indicates the median Carrollton household income in 2022 was \$95,380, approximately 15% higher than the DFW average, and indicating a strong economic community that supports robust retail activity. Retail spaces benefit from a diverse customer base, driven by the city's population of approximately 133,000 residents and a high number of daily visitors.

Professional services and technology firms are increasingly establishing a presence in Carrollton, attracted by a skilled workforce and a favorable business environment. The city supports this growth with modern office spaces, technology parks, and various business incentives. Significant employers include nationally and internationally recognized companies, contributing to Carrollton's reputation as a business-friendly city. Economic development initiatives, including tax incentives and job creation grants, further position Carrollton for continued economic growth and development.

## Education:

Carrollton, Texas, offers a robust and diverse education system, supported by multiple school districts and an array of educational resources. The city is primarily served by the Carrollton-Farmers Branch Independent School District (CFBISD) and the Lewisville Independent School District (LISD), along with several private schools and higher education institutions.

The Carrollton-Farmers Branch Independent School District is a significant educational body in the area, enrolling approximately 24,000 students across 38 campuses. This includes five high schools such as Creekview High School and Newman Smith High School, six middle schools including Blalack Middle School and Field Middle School, and 27 elementary schools like Carrollton Elementary and Kent Elementary. CFBISD is known for its diverse programs that cater to various educational needs and interests, including dual-language programs, special education services, an early college high school, and extensive fine arts and athletic programs.



# Carrollton Overview



In addition to CFBISD, the Lewisville Independent School District serves over 49,000 students across 68 campuses. LISD provides a comprehensive curriculum that includes advanced placement courses, International Baccalaureate programs, STEM academies, and special education services, ensuring that students receive a well-rounded education.

Carrollton is also home to several private schools that offer alternative educational approaches and curriculums, contributing to the diversity of educational options available to residents. Moreover, higher education institutions in and around Carrollton provide opportunities for continuing education and professional development, supporting lifelong learning.

Complementing these educational institutions, Carrollton boasts two public libraries: the Josey Ranch Lake Library and the Hebron & Josey Library. These libraries offer a wide range of books, digital resources, and community programs. They serve as hubs for lifelong learning and community engagement, providing workshops, reading programs, and access to online resources, ensuring that residents have ample opportunities for educational growth.

## **Culture and Community:**

Carrollton, TX, is a vibrant City that actively celebrates its rich cultural diversity through a plethora of events, festivals, and cultural programs year-round. Carrollton Culture Fest is celebration of various cultures, drawing residents and visitors alike to partake in a dynamic showcase of international cuisine, live performances, and artisanal crafts.

This festival, along with others like the Carrollton Festival at the Switchyard and the community organized Korean Festival, which features live music, arts, and family-friendly activities, significantly contributes to the community's sense of engagement and togetherness. These events serve as vital platforms for cultural exchange and communal bonding, reflecting Carrollton's commitment to inclusivity. The heart of Carrollton's cultural scene is its Historic Downtown area, which acts as a central hub for many of these celebrations. Here, numerous public art installations adorn the streets and parks, adding a touch of creativity and cultural vibrancy to the cityscape.



# Carrollton Overview



Carrollton's population is a true melting pot, encompassing residents from a wide array of ethnic backgrounds and nationalities. This diversity is vividly reflected in the City's dining scene and the City's festivals and community events, showcasing this multiculturalism and offering numerous opportunities for residents to celebrate their heritage and share it with others.

## **Residential Housing:**

One of the key factors driving Carrollton's growth is its strategic location within the Dallas-Fort Worth metroplex. This location offers residents convenient access to major employment hubs, educational institutions, and recreational facilities. The City's economic opportunities, combined with a high quality of life, make it a desirable destination for both new residents and businesses.

The real estate market in Carrollton has seen significant growth in recent years with over 50,000 single-family homes within the City limits. In 2024, the median home value in Carrollton was approximately \$430,000, a substantial increase from previous years. According to 2024 Census Bureau data, this figure is roughly in line with the national median home value of \$429,800, highlighting the City's robust and competitive real estate market.

This growth in property values reflects the overall economic health of the City and its attractiveness as a residential location. Despite the high property values, Carrollton maintains a relatively balanced homeownership rate of 56%, which, while slightly lower than the national average of 64.6%, indicates a healthy mix of owned and rented properties. This balance allows for a diverse community where both long-term residents and newcomers can find suitable housing options.

As of 2023, Carrollton boasts 94 residential complexes, including apartments and townhomes, with a total of 19,137 units. This variety of residential options ensures that there is something for everyone, whether they are looking for a spacious single-family home or a more compact apartment unit.

Overall, Carrollton, Texas stands out as a thriving suburban city with a diverse housing market, steady population growth, and a high quality of life. Its appealing location, economic opportunities, and vibrant community make it a desirable place to live, work, and play. The city's continued growth and development ensure that it remains a dynamic and attractive destination for years to come.



# Carrollton Overview



## Transportation:

Carrollton, Texas boasts a robust transportation network supported by a comprehensive highway system and efficient public transportation options. Major highways such as the President George Bush Turnpike (PGBT), Interstate 35E (I-35E), and State Highway 121 (SH-121) serve as critical arteries facilitating regional and intercity travel. These highways connect Carrollton to significant destinations within the Dallas-Fort Worth metro area, enhancing accessibility for both commuters and commercial traffic. The maintenance and development of these highways are overseen by the Texas Department of Transportation (TxDOT), ensuring they meet the demands of a growing population.

Public transportation in Carrollton is anchored by the services provided by Dallas Area Rapid Transit (DART). DART operates several key light rail stations in the City, including the Downtown Carrollton Station and the North Carrollton - Frankford Station, both part of the Green Line. This line offers seamless connectivity to major areas across Dallas and its suburbs, making it a vital transit option for daily commuters. The Green Line also supports transit-oriented development, promoting residential and commercial growth around its stations. In addition to

the Green Line, DART is expanding its services with the Cotton Belt "Silver Line" project, which will provide regional rail service along a 26-mile corridor from DFW International Airport to Plano. This new line will include stations in Carrollton, further integrating the City into the regional rail network and enhancing connections to major employment and entertainment hubs.

Carrollton also emphasizes pedestrian and bicycle infrastructure as part of its transportation strategy. The City is working on expanding its trail system to connect with DART services, thereby promoting sustainable transportation options and improving the quality of life for its residents. The trails offer safe and scenic routes for walking and biking, contributing to reduced traffic congestion and better air quality.

Overall, Carrollton's transportation infrastructure is designed to support diverse mobility needs, ensuring efficient travel within the City and the broader North Central Texas region. The combination of highways, public transit, and trails initiatives underscores Carrollton's commitment to fostering a well-connected and sustainable urban environment.



# LAND AND AIR





## Background

Greenspaces, parks, and land use planning are critical considerations for urban development, and directly shape the physical, social, and economic landscapes of a community while the ambient air provides for a healthy and livable atmosphere. As the City of Carrollton navigates the complexities of growth and change within the larger metropolitan area, the City recognizes and prioritizes the importance of these assets.

Safeguarding the natural environment, air quality, and life on land encompasses the protection, restoration, and the promotion of sustainable use and enjoyment of the complex natural ecosystem. Terrestrial and atmospheric ecosystems rely on multiple factors to thrive and are continually shaped, both for the better and worse, by human activity. On the global scale, sustainability efforts focus on combating desertification, land degradation, and biodiversity loss. Locally, the City of Carrollton emphasizes the utilization of greenspaces connected by hike and bike trail systems, beautification of entryways and parks, and specific initiatives designed to promote the natural landscape and provides a host of services for native wildlife of our terrestrial environment in DFW.

Greenspaces and parks are indispensable for promoting public health and enhance the quality of life for the community. Research consistently demonstrates the physical and mental health benefits of access to nature and outdoor recreational opportunities. From reducing stress levels and improving cognitive function to encouraging physical

activity and social interaction, greenspaces play a vital role in supporting the well-being of individuals and community at large. By continuing to prioritize the development and maintenance of parks and greenspaces, the City of Carrollton invests in the health and happiness of the community, fostering a more resilient population.

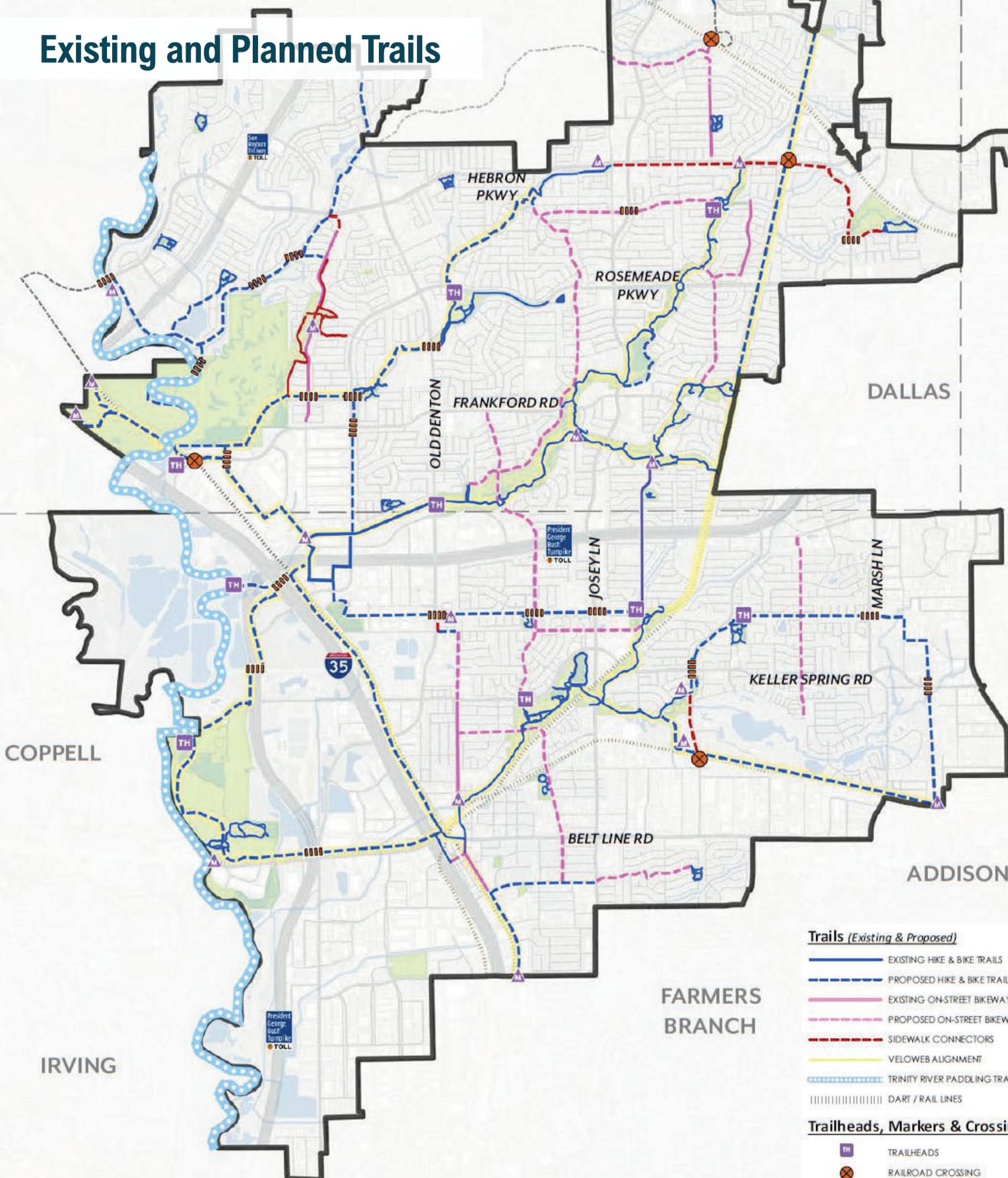
Equitable access to greenspaces and parks is essential for building inclusive communities and local governments have a responsibility to address these inequities through strategic land use planning and targeted investments. As Carrollton continues development, integration of greenspaces are not only encouraged, but required, to ensure these amenities remain an important community centerpiece for years to come. Moreover, parks serve as vital community hubs, providing spaces for cultural events, recreational activities, and social gatherings that bring people together across diverse backgrounds.



LEWISVILLE

PLANO

# Existing and Planned Trails



DALLAS

COPPELL

ADDISON

FARMERS  
BRANCH

IRVING

### Trails (Existing & Proposed)

- EXISTING HIKE & BIKE TRAILS
- - - PROPOSED HIKE & BIKE TRAILS
- EXISTING ON-STREET BIKEWAYS
- - - PROPOSED ON-STREET BIKEWAYS
- - - SIDEWALK CONNECTORS
- VELOWEB ALIGNMENT
- ⋯ TRINITY RIVER PADDLING TRAIL
- | | | | | DART / RAIL LINES

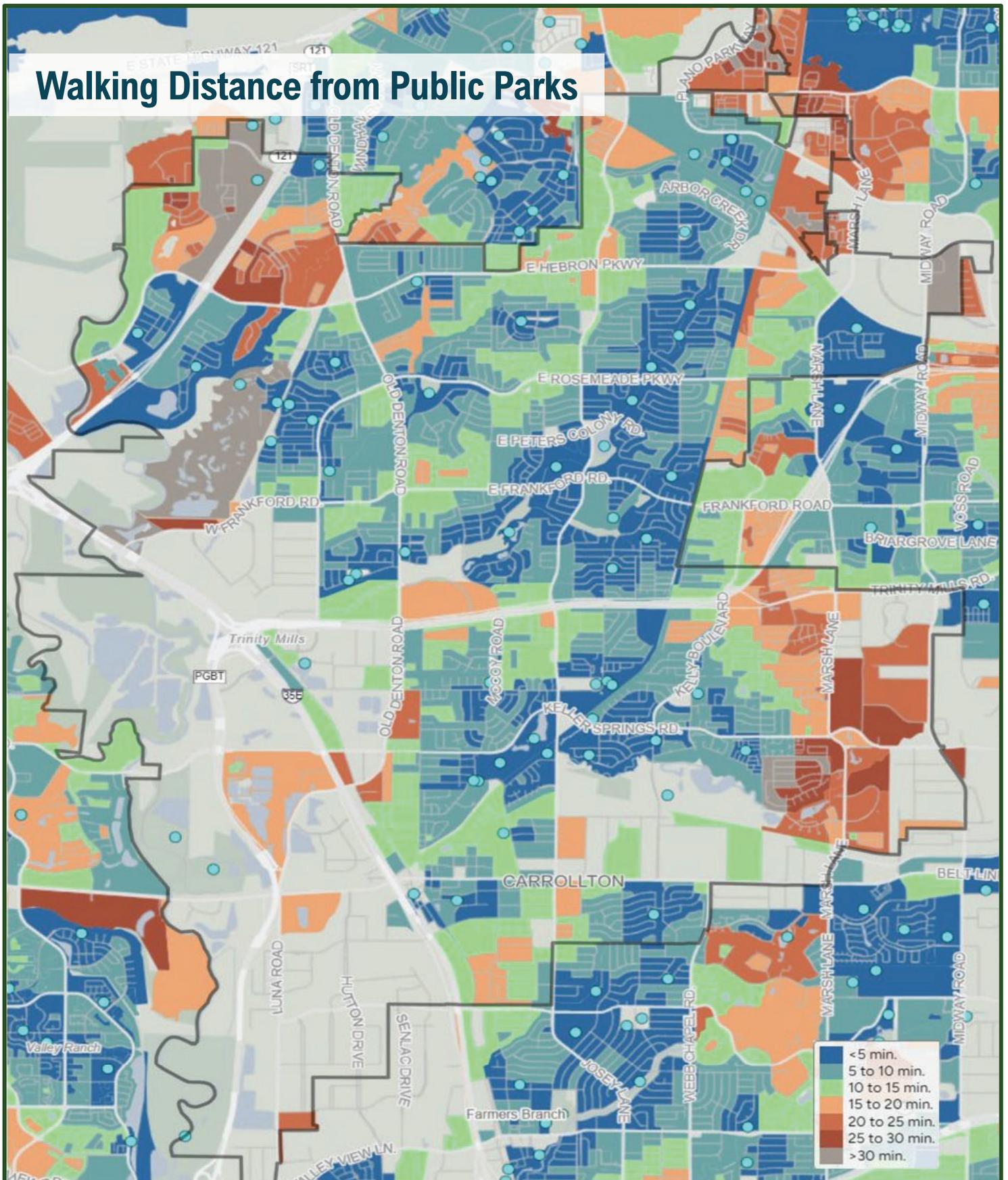
### Trailheads, Markers & Crossings

- TH TRAILHEADS
- ⊗ RAILROAD CROSSING
- | | | MAJOR CROSSING
- ▲ PORTALS & BRANDING

# LAND AND AIR



## Walking Distance from Public Parks





Greenspaces play a crucial role in urban ecosystems, mitigating the impacts of climate change and enhancing and stabilizing local biodiversity. By preserving natural habitats, creating green corridors, and implementing sustainable land management practices, the City of Carrollton directly promotes improved air and water quality, reduced urban heat island effects, and protect valuable natural resources enjoyed both by residents and local fauna. To ensure the preservation of local wildlife thrives within an urban metropolitan area, the City of Carrollton has undertaken several initiatives including the promotion of planting nectar-producing flowers for migrating butterflies, public educational opportunities on urban wildlife such as bobcats and coyotes, and several events for landscaping and gardening tips, and the promotion of native plantings through the Texas SmartScape program.

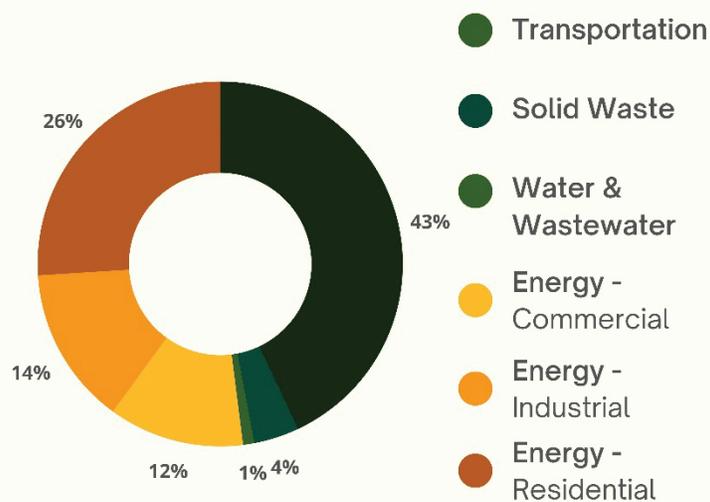


Earth Day is one event for residents, City staff, and local agencies to coordinate efforts to provide educational outreach to residents and children alike to support green initiatives and find opportunities to promote healthy land and air at home.

A growing concern for the City of Carrollton and the region is the deterioration of air quality as it directly impacts the health, well-being, and productivity of residents. Poor air quality may lead to increased days of limiting outdoor activities and increased healthcare

costs due to a rise in respiratory illnesses and other health conditions. Local DFW governments have taken action to protect the environment and natural resources within their jurisdiction, and ensuring clean air is essential for preserving ecosystems and biodiversity and enhancing the overall livability of the community. By implementing effective air quality management strategies, such as promoting clean energy sources, regulating emissions from industries and vehicles, and raising public awareness, the City of Carrollton can help contribute to a more enjoyable, healthier community.

DFW 12-County 2019 CO<sub>2</sub>e  
Emissions by Sector



Source: "North Central Texas Regional 2019 Inventory of Community Greenhouse Gas Emissions", NCTCOG, 2022.

To better understand the local air quality, the City of Carrollton participated in the North Central Texas Council of Government's (NCTCOG) Greenhouse Gas Inventory study in 2022 to determine baseline air quality concerns across the metroplex. Inner ring cities, or those that are closer to the City of Dallas, were found to be exposed to proportionally higher emissions and higher levels of pollutants in the air. During this study, ozone levels were compared to



national standards, which establish classifications based on overall air quality. The DFW region has been designated a nonattainment area for ozone, indicating these standards have not been met. In addition, the region was reclassified from a ‘serious’ to ‘severe’ nonattainment status in 2022, one level below the ‘extreme’ and final classification. As of 2024, Carrollton lies fully within the 90-95<sup>th</sup> national percentile for ozone. Ongoing air quality monitoring and reporting is performed at the state level, through the Texas Commission on Environmental Quality, whereas regional air quality and emission studies are performed by NCTCOG. The report indicates the greatest potential for emissions reductions lie with energy, transportation, and solid waste sectors.

In addition to reducing air pollution, the City of Carrollton is addressing the growing concern of light pollution impacting the City and metroplex. While a seemingly inconsequential impact of living in an urban environment, increased light pollution impacts numerous aspects of both human health and the environment. Excessive artificial illumination disrupts the natural rhythms of the night, leading to disruptions in sleep patterns, decreased melatonin production, and an increased risk of various health issues, including insomnia, obesity, and certain cancers.

Beyond its effects on human well-being, light pollution also poses significant threats to biodiversity, as it disrupts the behavior and habitats of nocturnal animals, leading to disorientation, decreased reproductive success, and population declines. Additionally, unnecessary light pollution wastes vast amounts of energy. Overall, the pervasive glow of artificial light not only obscures the beauty of the night sky but also undermines our health, disrupts ecosystems, and perpetuates unsustainable energy consumption patterns. During initial testing completed in 2023 and 2024, the City was measured to have a significantly high brightness rating, at 17.9 on a scale from 17.5 (brightest) to 22.0 (darkest).

To combat the effects of light pollution, the City of Carrollton is participating in the Dark Skies Initiative, a voluntary collaborative effort across the globe aimed to reduce light pollution through policy, lighting fixtures, and education. Embracing the Dark Skies Initiative is a pivotal step towards ensuring future generations inherit a world where the splendor of the night sky remains unblemished while still accounting for the safety and security nighttime lighting provides.

Local governments play a pivotal role in promoting recycling and reducing solid waste, either by directly providing the service or by contract. In Carrollton, the former Solid Waste Department was determined to be best operated by a third-party and currently contracts



Light pollution over the Dallas-Fort Worth metroplex leads to health impacts to humans and native wildlife and limits the ability to view the night sky. “VIIRS 2023.”, [www.lightpollutionmap.info](http://www.lightpollutionmap.info), 2024.

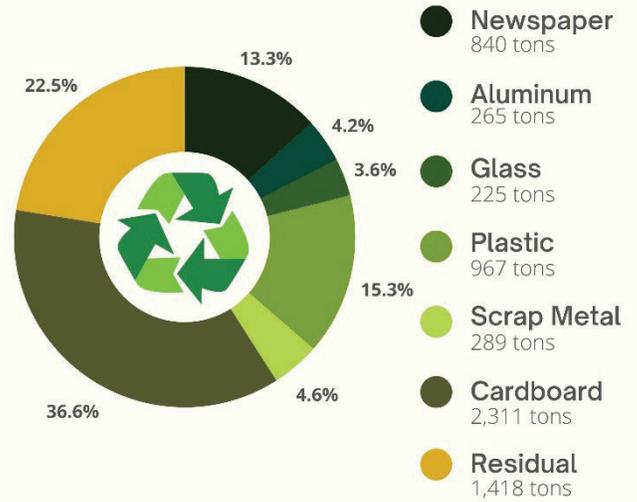
# LAND AND AIR



with Republic Services. With their assistance, the City has placed an increased prioritization on initiatives to increase recycling, reduce solid waste production which limits environmental degradation, enhances resource efficiency, and improves public health. Recycling conserves valuable natural resources by reducing the need for raw materials extracted from the environment. For example, recycling paper saves trees, recycling metals reduces the need for mining, and recycling plastics decreases the demand for fossil fuels used in their production. Most importantly, recycling diverts waste from adding to landfills, helping to alleviate the environmental problems associated with landfilling. Additionally, as DFW inner suburb cities continue to develop their remaining vacant land, creating land scarcity, landfill locations are becoming more difficult to integrate into the metroplex. Emphasizing recycling as a key component of waste management and promoting recycling initiatives significantly contribute to environmental sustainability by reducing the need for new materials and new landfills.

## A Year in Carrollton Recycling

2023 Materials Diverted



Source: City of Carrollton December 2023 Report, Republic Services.





## What We Do

The City of Carrollton protects the greenspaces around the City and parks for residential and City use. Due to the lack of developable land remaining in the City of Carrollton, it is imperative to preserve greenspace and ensure land sustainability measures through outreach, maintenance, and proper disposal of non-recyclable items. The City is taking steps to effectively build development plans, maintain high-quality greenspace management, continuing neighborhood improvement initiatives through landscaping initiatives, and creating opportunities for community involvement in all greenspace preservation.

Promote Native Vegetation 	
Strategies	Relevance
<b>Host public workshops on native plants and wildlife</b>	Three to four of these workshops are held annually and help demonstrate the need for native flora and fauna and how residents co-exist with urban wildlife.
<b>Free Seed Library at the Josey Ranch Library</b>	Roughly 100 seed bags per week are taken from the Seed Library and are replaced as residents grow and replace the seeds taken from the library.
<b>Mayor’s Monarch Pledge</b>	In 2018, the City of Carrollton joined the Mayor’s Monarch Pledge and continues the promotion of 19 Action Items to promote butterfly and beneficial insect populations.
<b>Promotion and utilization of the Texas SmartScape program</b>	This program promotes the installation of local vegetation and landscaping to reduce water use and supports the local biodiversity.
<b>Installation and maintenance of the Water Wise demonstration garden at the Josey Ranch Library</b>	The Water Wise garden showcases the effectiveness of various irrigation systems and the local vegetation that is best grown in Texas while providing an aesthetic garden space near the library and Josey Ranch Lake.
<b>Wildflower exemption from high grass and weed restrictions</b>	Grass must be mowed to less than 10”, however, Code Enforcement exempts well-kept wildflowers before and during their bloom from this requirement.
<b>Commercial landscaping requirements</b>	Commercial developments require three ornamental trees and two shade trees per 100’ linear feet for public-facing developments.
<b>Residential landscaping requirements</b>	Residential developments require at least one ornamental and one shade tree per the landscaping ordinance.



<p><b>Partner with local Master Gardeners to provide free programs on native plants and landscaping</b></p>	<p>Partnerships help boost awareness of the local environment and empowers local non-profits to grow their outreach.</p>
<h2>Public Greenspace </h2>	
<h3>Strategies</h3>	<h3>Relevance</h3>
<p><b>Maintain and promote public greenspaces for resident enjoyment</b></p>	<p>30 parks and greenbelts are available for resident use, 2 dog parks, 2 disc golf courses, with many of the parks connected by over 10 miles of trails.</p>
<p><b>Incorporate public greenspace into development designs</b></p>	<p>The EVIVA Trinity Mills project, a 25-acre, five-story mixed-use blend of residential and retail space with a 3-acre esplanade for public enjoyment.</p>
<p><b>Autonomous mowers for athletic field and park maintenance</b></p>	<p>The autonomous mowers are electric-powered and have an average life expectancy of 5-6 years, providing high-quality maintenance during the hottest summer months at a comparable price per mower.</p>
<p><b>Dog parks</b></p>	<p>McInnish Dog Park and Rosemeade Dog Parks have accommodations for large and small dogs.</p>
<p><b>Provide volunteer opportunities and support for creek cleanup events</b></p>	<p>In 2023, 114 volunteer cleanup events removed 583 bags of trash with 21 Adopt-a-Spot programs maintained by volunteer groups quarterly.</p>
<p><b>Preservation of the Elm Fork Nature Preserve</b></p>	<p>A secluded 38-acre tract along the Elm Fork of the Trinity River features a 14-acre pond, 3.5 acres of wetlands, 9 acres of river bottom timber, and 11 acres of native vegetation with canoe and kayak launches onsite.</p>
<h2>Protection from Natural Hazards </h2>	
<h3>Strategies</h3>	<h3>Relevance</h3>
<p><b>Development of retention and detention ponds for flood control</b></p>	<p>Retention and detention ponds reduce heavy water flow, reducing flooding and erosion near waterways.</p>
<p><b>Discouraging egret establishment within neighborhoods</b></p>	<p>As species protected under the Migratory Species Act, egrets and herons can be deterred until eggs are laid. Egret deterrence occurs from late February to mid-May.</p>
<p><b>Feral hog control program</b></p>	<p>Feral hogs can quickly destroy park land, greenspaces, and golf courses as quickly as overnight. Hogs are captured and removed when found.</p>



<p><b>Erosion control and SWPPP oversight</b></p>	<p>Stormwater Pollution Prevention Plans (SWPPPs) help to eliminate erosion and control contaminants from impacting waterways during construction activities.</p>
<p><b>Municipal Setting Designations (MSD) support</b></p>	<p>MSDs are a TCEQ-approved certification process that allows contaminated sites to be remediated and approved for redevelopment while protecting public health and drinking water.</p>
<p><b>Natural or “no mow zones” along waterways</b></p>	<p>Provides natural habitat for local wildlife while reducing the risk of erosion.</p>
<p><b>Community Grants and Conservation Initiatives</b></p>	
<p><b>Strategies</b></p>	<p><b>Relevance</b></p>
<p><b>Neighborhood Enhancement Matching Grant Program (NEMGP) to revitalize landscaping at entryways on public rights-of-way</b></p>	<p>The City has funded \$433,583 towards 47 projects as of 2024.</p>
<p><b>Tree Preservation and Protection Ordinance</b></p>	<p>The ordinance prohibits clear-cutting of land, requires tree removal permitting, and for developers to pay \$225 per caliper-inch of tree removed into the Tree Preservation Fund for trees removed that are not replaced.</p>
<p><b>Tree Replacement Program</b></p>	<p>In 2023, City Council Phase 1 of the Tree Replacement Program to remove large trees in City rights-of-way subjected to the unsightly pruning required to prevent disruption of overhead power lines. These trees will be replaced with smaller ornamental trees that require less or no pruning.</p>
<p><b>Integrated Pest Management (IPM) system to limit pesticide application and reduce impacts to the environment</b></p>	<p>The City uses an IPM system to reduce pests such as mosquitos where treatment is applied when and where needed to reduce pesticide use while maintaining pest control.</p>
<p><b>Household hazardous waste program available to all residents</b></p>	<p>Safe disposal of hazardous household products and electronic waste is offered to all residents at no cost for items such as paints, solvents, cooking oils, pesticides, pool chemicals, cleaning products, televisions and computers.</p>
<p><b>Household recycling is offered and residents may request an additional recycling bin</b></p>	<p>Carrollton residents diverted a total of 6,317,190 tons of recyclable material from entering the landfill in 2023.</p>



<b>Repurposed plastic City park benches</b>	Two park benches were created through the Bags to Benches program, each repurposing 600 lbs. of plastic film products donated by residents.
<b>Air and Skies</b> 	
<b>Strategies</b>	<b>Relevance</b>
<b>Regional greenhouse gas emissions study</b>	Participated in the 2019 NCTCOG local and regional greenhouse gas emission inventory cohort to determine baseline greenhouse gas (GHG) emission levels.
<b>DFW Clean Cities Gold Fleet Award</b>	Carrollton has achieved this recognition for the last four years, reflecting its dedication to improving air quality and cleaner fleet vehicle operation.
<b>Sky quality monitoring and education program</b>	Sky quality measurements are taken once per quarter to evaluate light pollution. Educational booth on sky quality and Dark Sky Initiative at annual community Earth Day event.
<b>Air quality information on City webpage</b>	Provides resources on outdoor air quality and emission reduction tips.

## Looking Forward

The City of Carrollton has taken several measures to protect and promote the greenspaces and biodiversity in the city, however, it is critical to continue long term planning to allow these amenities to be enjoyed and improved upon for years to come. As new threats to air quality or land use are identified, continual progress is strategically planned to counter these new challenges.

<b>Promote Native Vegetation</b> 	
<b>Strategies</b>	<b>Proposed Benefits</b>
<b>Neighborhood and public tree planting</b>	Large cities exhibit a temperature of up to 10°F higher than non-urban areas. Planting trees and vegetation lower ambient air temperatures.
<b>Change philosophy from building to maintaining with regards to landscaping</b>	As the city is over 95% built out, maintaining and replacing existing landscaping will become more commonplace than installing new landscaping.



**Increase utilization of xeriscaping and SmartScape landscaping**

Xeriscaping has been found to reduce landscaping irrigation water consumption up to 50-75% and may require less maintenance due to suitability for Texas.

## Public Greenspace



### Strategies

### Proposed Benefits

**Tree planting initiative**

Goal to have 30% of city with tree coverage.

**Maintain existing greenspace, locate future greenspace additions**

Integrating new greenspace, either private or publicly owned will continue to be considered for new developments or redevelopment projects such as the Trinity Mills EVIVA esplanade project.

**Complete upcoming Parks Master Plan**

The Parks and Recreation Department completes a Parks Master Plan every five years with the next plan to be released in 2025.

**Continue volunteer opportunities and support for creek cleanup events**

Ensure residents have ongoing opportunities available to take direct action through volunteering programs.

## Protection from Natural Hazards



### Strategies

### Proposed Benefits

**Increase natural and protected treescapes**

Protection of existing treescapes in City parks and greenbelts reduce erosion and flooding concerns.

**Continue tree trimming initiatives to reduce egret migration impacts**

Egrets prefer tall tree species with thick canopies, such as live oaks. Resident maintenance of these trees reduces the likelihood of egret rookeries roosting in neighborhoods.

**Drainage management**

Storm water and drainage management through no mow zones and adequate drainage channels reduces erosion and protects existing channels.

## Community Grants and Conservation Initiatives



### Strategies

### Proposed Benefits

**Implement Phase 2 and 3 of Tree Replacement Program**

Phase 2 and 3 will target trees impacted by Oncor trimming that present less of an immediate safety hazard or aesthetic concern.

# LAND AND AIR



<b>Identify new programs for Tree Preservation Fund application</b>	Identifying new methods and programs to install trees paid into the fund provide shade, reduce heat island effects, and provide aesthetic city spaces.
<b>Continue household hazardous waste program and update allowable items for disposal as needed to ensure safe disposal</b>	As new products are introduced or become commonplace in households, ensuring proper disposal is available provides ongoing protection of the landfills, groundwater, and soil.
<b>Pursue state and federal grants for continued greenspace, median, and entryway beautification projects</b>	Pursue the TxDOT Green Ribbon grant for beautification along highways and farm-to-market roads including the installation of landscaping, vegetation, and irrigation.
<b>Determine the appropriate methodology to measure the heat island effect and determine baseline results</b>	Reducing the area of concrete exposed to direct sunlight through the installation of trees and landscaping can reduce the ambient air temperature as much as 7° F according to NOAA.

## Air and Skies



### Strategies

### Proposed Benefits

<b>Continue implementation of Dark Sky Initiative</b>	The City exhibits a significantly high brightness rating, at 17.9 on a scale from 17.5 (brightest) to 22.0 (darkest). Evaluate lighting ordinance and assess public lighting fixture installations.
<b>Improve education and City webpage materials on outdoor air quality</b>	Market air quality improvement tips and update online content.
<b>Participate in upcoming Greenhouse Gas Inventories in coordination with NCTCOG</b>	Ensuring accurate data is available for municipal and regional use provides better information on how policy changes provide improvements.

## What You Can Do

Citizens	Businesses
Plant native landscaping	Plant native commercial and industrial landscaping
Create small native prairie plots or wildflower gardens	Participate in the Adopt-A-Spot creek clean-up program

# LAND AND AIR



Pick up trash or litter while on walks in the City

Identify and incorporate sustainable practices

Coordinate or participate in creek clean-up events with support from the City

Utilize more recyclable materials

Take advantage of NEMGP grants to install native landscaping in public rights-of-way

Pick up native seed packets at the Josey Ranch Library and donate native seeds back for others to plant

## Summary

Land provides the principal basis for human livelihoods and well-being. The City of Carrollton continues to protect, restore, and promote sustainable efforts by enhancing natural vegetation and protecting greenspaces around the community. Greenspaces improve a sense of community for both residential and business areas as an aesthetic appeal as well as having ecological functions. They provide valuable habitat and a natural instrument for treating stormwater and pollution related issues. The City will continue to offer grants and initiatives that will improve these community green and common spaces.

## References

<https://www.tceq.texas.gov/airquality/sip/dfw/dfw-status>

<https://ejscreen.epa.gov/mapper/>



# CONTRIBUTING DEPARTMENTS

## DEVELOPMENT SERVICES

- Promote Native Vegetation
- Public Greenspace
- Protection from Natural Hazards
- Community Grants and Conservation Initiatives



## ENGINEERING

- Protection from Natural Hazards

## ENVIRONMENTAL SERVICES

- Promote Native Vegetation
- Public Greenspace
- Protection from Natural Hazards
- Community Grants and Conservation Initiatives
- Air and Skies



## FLEET AND FACILITIES

- Community Grants and Conservation Initiatives
- Air and Skies

## LIBRARY SERVICES

- Promote Native Vegetation



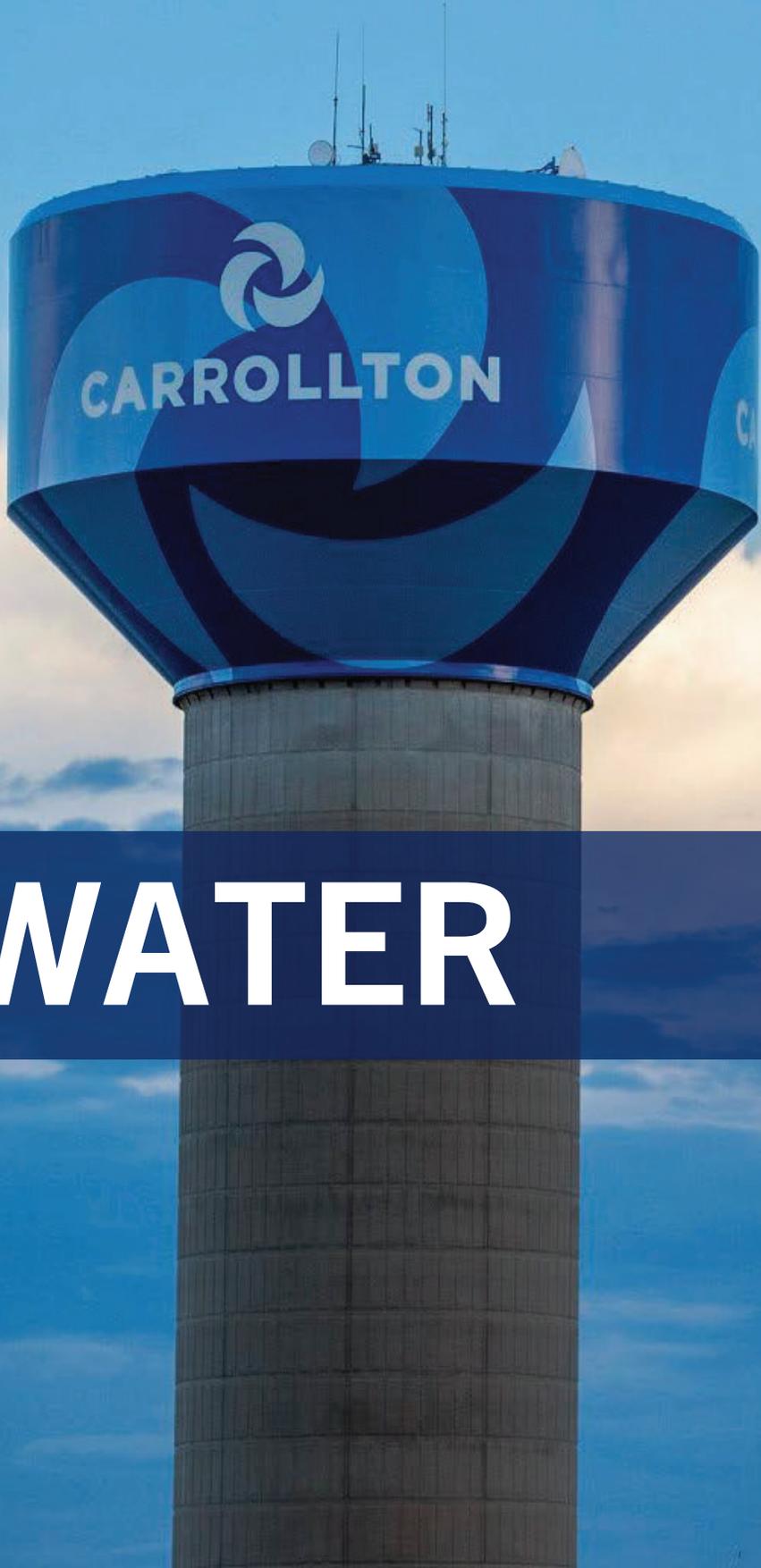
## PARKS AND RECREATION

- Promote Native Vegetation
- Public Greenspace
- Protection from Natural Hazards
- Community Grants and Conservation Initiatives

## PUBLIC WORKS

- Promote Native Vegetation
- Air and Skies





# WATER



## Background

Water sustainability is a conscious effort to ensure water resources are managed wisely and responsibly, both in terms of quantity and quality with regards to drinking water, surface waters, and wastewater treatment. The implications of water scarcity and pollution are far reaching, affecting public and environmental health, food security, economic stability, and social equity. Recent population growth, urbanization, and industrialization have placed an unprecedented demand on finite water sources, leading to over-extraction from aquifers, rivers, and lakes, and the degradation of existing water bodies. This in turn exacerbates water scarcity resulting in droughts, agricultural shortages, and residential water availability as seen with recent regional water contingency plans put in effect to reduce water demand in peak summer months. Shifting meteorological patterns have brought higher summer temperatures, more frequent and intense droughts, floods, and storms, making it increasingly essential to manage water resources adaptively and efficiently. The City prioritizes water conservation through leak monitoring, water loss audits, and public education, to ensure the City stewards its water for future generations of Texans.



In 2024, the City of Carrollton initiated a Storm Drain Art Contest, inviting artists to submit designs that incorporate storm water educational messages into artwork that was painted on Downtown Carrollton storm inlets.

Water is managed and preserved by three primary areas of concern: surface water, drinking water, and wastewater. Surface water refers to any body of water formed above land such as streams, lakes, rivers, and ponds. In urban areas, these are directly impacted by human activity due to littering, illicit discharges, and stormwater runoff carrying sediment, litter, or other pollutants. Much of the regional drinking water, or potable water, is treated and made safe for consumption from these surface waters. Once water has been used in the home, business, or industry, this water is discharged as wastewater where it is treated at a wastewater treatment facility and discharged as clean water back into the surface waters. These three





different types of water used in our daily lives are directly correlated with one another and the degradation of one has far-reaching negative impacts on the rest.

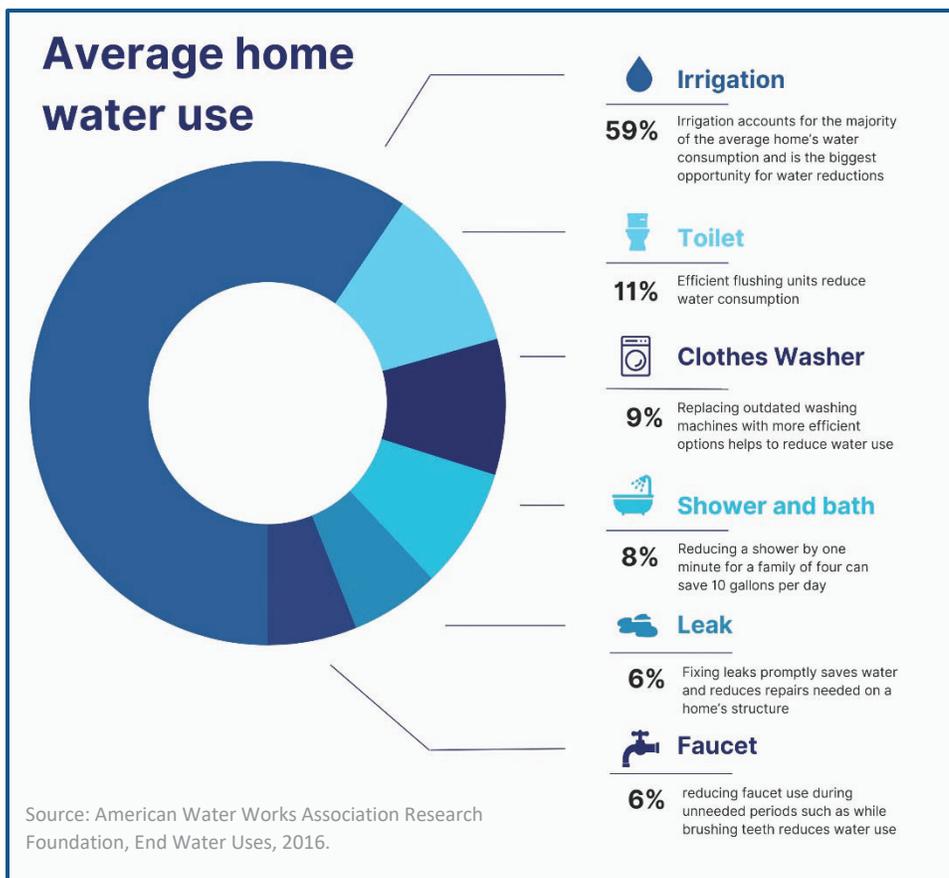
Caring for water results in healthy rivers, lakes, and wetlands that support diverse wildlife and provide vital services such as water purification, flood and erosion control, and habitat preservation. When any of these ecosystems are compromised due to unsustainable water use, the delicate balance of nature is disrupted, often with cascading negative effects on other aspects of the environment. In addition to water use, water pollution impacts from illegal dumping or discharges of unknown or hazardous liquids, chemicals, and other substances into our waterways is infrequent, however, intervention measures reduce pollution events through monitoring, permitting, and remediation.

Additionally, public education provided by the City of Carrollton in coordination with State and Federal agencies work to protect local waterways by reducing intentional acts that impact surface waters. When spills do occur within the City, Environmental Services provides 24/7 emergency spill response to ensure any immediate environmental impact is limited and provides remediation coordination and oversight to reduce pollution to safe levels for public and environmental health.

The industrial pretreatment and stormwater programs are two programs that reduce the negative impacts on the water system and supply. Preventing illicit discharges or disruptions to our water treatment processes and keeping harmful substances from entering storm drains are top priorities and provide immediate reductions in surface water pollution. To reduce the impacts of stormwater pollution on surface waters, the U.S. Environmental Protection

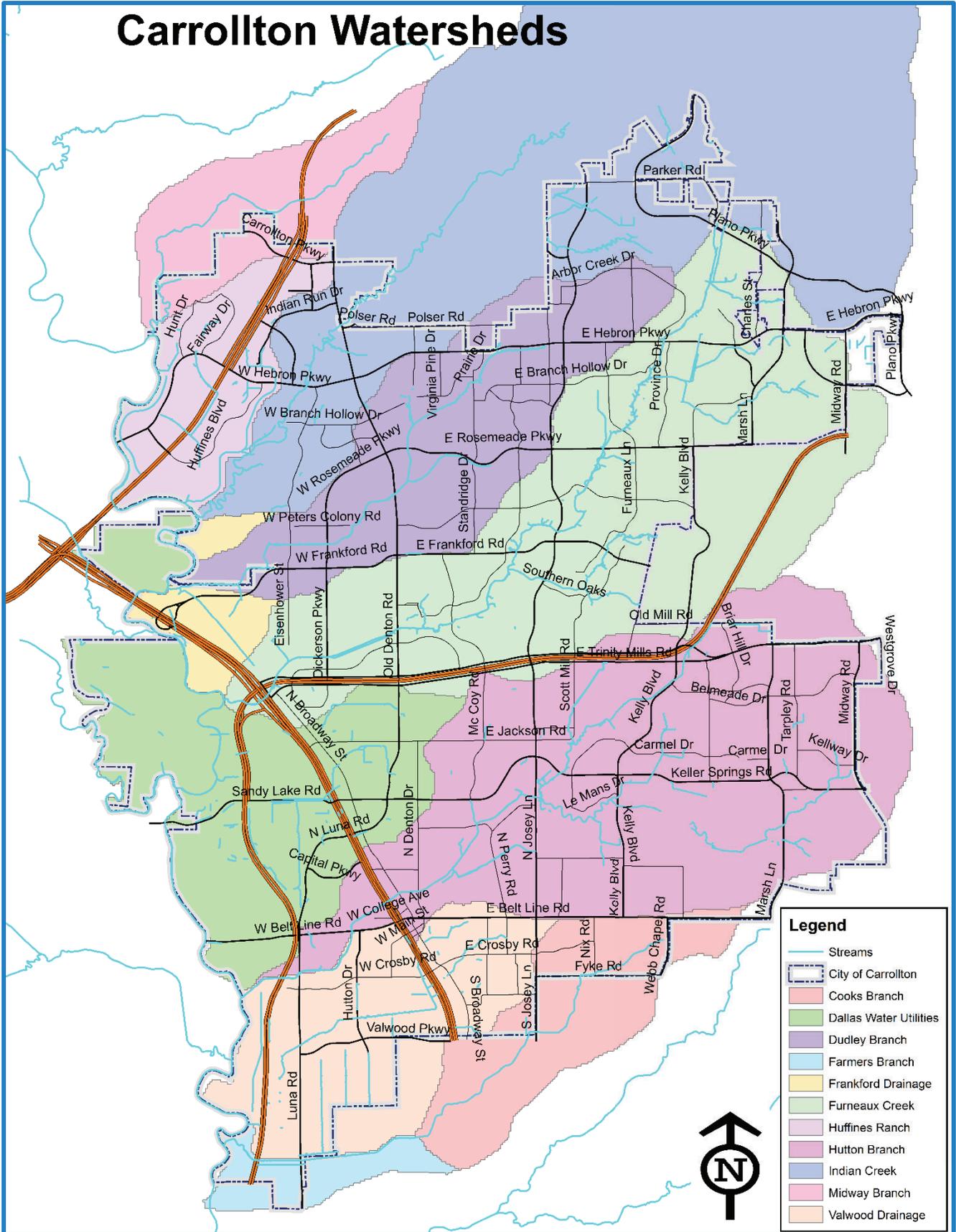
Agency has issued regulations for urban areas, including Carrollton. The Stormwater Phase II regulations are designed to help guide our efforts to reduce water pollution in which the city maintains a permit and is required to develop programs to reduce the levels of contaminants discharged into the stormwater system. This Stormwater Management Plan is updated every five years and is available for review on the city website.

Water sustainability extends far beyond the conservation of natural resources. To meet the challenges of the present and secure a sustainable future, the City must prioritize responsible water use and management, promote conservation efforts, and invest in innovative solutions that preserve this invaluable resource for generations to come.

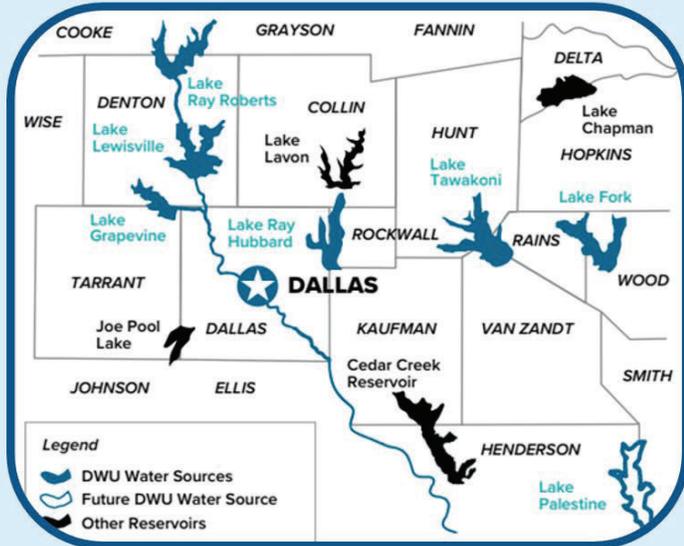




## Carrollton Watersheds



# WATER



## Where We Get Our Drinking Water

Carrollton contracts with the City of Dallas for our community's water supply. Dallas uses surface water from seven sources: the Elm Fork of the Trinity River which runs through Carrollton and lakes Fork, Grapevine, Lewisville, Ray Hubbard, Ray Roberts, and Tawakoni. Dallas Water Utilities (DWU) and the City of Carrollton are a "superior" rated water system, the highest rating from the Texas Commission on Environmental Quality (TCEQ).

## What We Do

The City of Carrollton has implemented a wide variety of water conservation and protection initiatives that are vital to address the increasingly pressing challenges of water sustainability. These initiatives encompass a wide range of efforts, from City department projects to local and regional collaborations, all aimed at conserving, managing, and ensuring equitable access to clean water resources. The initiatives are the results of the development of innovative technologies, policies, and awareness campaigns to promote responsible water use and combat water scarcity, pollution, and inefficient practices. Water initiatives are a crucial step toward safeguarding this precious resource for future generations and mitigating the far-reaching consequences of water-related issues on both the local community and ecosystem.

## Surface Water Protection



### Strategies

### Relevance

**Implementation of the stormwater management plan**

Reduces pollution reaching streams and waterways through preventative measures for residents, businesses, and industries.

**City facility stormwater inspections**

11 facilities designated as high priority. All City facilities reviewed for high priority status every 5 years based on potential for stormwater pollution.

**Trash and litter removal from waterways**

The City removes over 53,000 pieces of trash from parks, greenbelts, streams, creeks, and ponds in a year; in fiscal year 2023, volunteers removed 538 bags of trash from waterways.

# WATER



<b>Storm inlet inspections and dry weather screening</b>	Over 3,000 inlets and 220 screened outfalls are inspected each year.
<b>Maintaining City streets free of trash and debris</b>	Nearly 10,000 miles of street curbs are swept each year.
<b>24-hour emergency spill response to remediate spills to reduce impacts on waterways</b>	In 2022 alone, 468 spills were investigated and remediated including water main breaks, vehicle accidents and spills, or accidental industrial releases.
<b>Surface water monitoring to determine health of City creeks and waterways</b>	Six creeks are tested bi-annually for temperature, pH, dissolved oxygen, total suspended solids, turbidity, and other compounds.
<b>Fish relocation plans</b>	Water quality monitoring ensures the waterways are safe for fish and if not, they can be relocated to a secondary location.
<b>Annual Drug Takeback events held in coordination with the DEA, Carrollton Police, and Environmental Services to properly dispose residents' illicit, expired, or unneeded drugs</b>	Five events have collected over 4,100 lbs. of drugs, preventing medications from dissolving in wastewater or landfills and potentially entering the waterways.
<b>Household Hazardous Waste program utilized through Waste Management and Republic Services provides chemical, battery, oil-based paint, and other pickups at no additional charge</b>	Over 600,000 lbs. of household hazardous waste has been collected over the life of the program.
<b>Creek and channel inspections and maintenance</b>	Visual monitoring and buffer/no mow zones are maintained to prevent pollution.
<b>Trash nets installed at storm water outfalls remove trash and litter blown into storm drains from entering waterways</b>	Over 900 lbs. of litter is removed from trash nets each year.

## Drinking Water Protection and Conservation



Strategies	Relevance
<b>Full-time employed Water Conservation Specialist</b>	Responds to irrigation and leak complaints, manages the Water Contingency Plan, and engages in community outreach to reduce water consumption.
<b>Conservation-signaling water rate structure</b>	City of Carrollton uses a seasonal increasing block rate, and also increases the rates during the months of May through September.



<b>Water conservation ordinances</b>	The city maintains ordinances prohibiting leaking irrigation systems, improper and inefficient irrigation, and watering during rain or freezing conditions.
<b>Leak detection and monitoring</b>	The leak detection system monitors lines for small to large water main leaks and operates a 24-hour water main break response program.
<b>Alternative source irrigation for Indian Creek Golf Course and McInnish Park</b>	These locations are irrigated with water pumped from the Trinity River as opposed to drinking water.
<b>Irrigation inspections to help residents locate water waste at no charge to residents</b>	Roughly 200 water irrigation inspections are completed annually, checking for leaks and advising citizens on best practices.
<b>Water Conservation Plan</b>	The Water Conservation Plan stipulates the restrictive measures should water availability be reduced for a given period due to drought, high temperatures, or due to mechanical failure.
<b>Superior rated water system</b>	The highest assessment for water quality issued by TCEQ equates to healthy drinking water with ongoing compliance with all nine rating measurements.
<b>Cross-connection control and sampling</b>	This program ensures backflow prevention is properly implemented and tested to eliminate a connection between wastewater and drinking water.
<b>Implementation of smart monitoring systems to reduce Parks irrigation requirements</b>	Parks has installed 25 SmartRain controllers which operate off evapotranspiration rates to maximize water efficiency and minimize water waste.

## Wastewater Protection



Strategies	Relevance
<b>Dedicated Industrial Pretreatment Program with two staff to monitor wastewater discharges from local industries</b>	20 industries are permitted, monitored quarterly, inspected annually to prevent noncompliant discharges into the wastewater that disrupts the Trinity River Authority water treatment operation.
<b>FOG (Fats, Oils, and Grease) program to reduce negative impacts on wastewater and sewer infrastructure and prevents sanitary sewer overflows and backups</b>	Over 600 restaurant grease traps are inspected annually to ensure functionality and compliance with FOG requirements.

# WATER



<b>Cease the Grease annual events to collect resident’s used cooking oil for proper disposal</b>	Events have collected over 1,700 gallons of used cooking oil and grease for proper disposal.
<b>Sanitary sewer preventative maintenance and education</b>	Routine sewer cleaning and inspections prevents leaks, breaks, and sanitary sewer overflows. In 2023, 102,775 ft. of line was tested to check for leaks.
<b>Requiring and issuing Liquid Waste Hauler annual permits and reviewing waste manifests to ensure liquid waste is properly transported and disposed</b>	Over 100 Liquid Waste Haulers are permitted and inspected annually.
<b>The Storm Drain Art Contest provides additional art and murals in Carrollton while promoting water protection concepts</b>	12 locations have been painted as part of a new program that provides residents an opportunity to create art for their community.

## Volunteer and Outreach Programs

Strategies	Relevance
<b>Adopt-A-Spot program to provide routine cleanup activities in high litter areas of Carrollton creeks</b>	30 volunteers or volunteer groups participated in the Waterway Clean-up and Adopt-A-Spot on 114 different days and collected 538 bags of trash. 2 new Adopt-A-Spot groups joined the program for a total of 21 adopted locations.
<b>Promote and support creek cleanup events and individual cleanup volunteer efforts</b>	108 volunteer groups removed over 1,600 bags of trash in 2023.
<b>Storm Drain Marking Program</b>	Storm drain inlets are marked to discourage littering and illegal discharges from entering the storm drains. 174 drain markers were placed in 2023.
<b>Provide school presentations to classrooms for waterway protection and water conservation</b>	32 presentations are given per year to provide school children with the foundation of preserving water and reducing pollution in our surface waters.
<b>Environmental Distinction Award and Environmental Leadership Awards to promote industrial governance</b>	Annual award recognizing an industry that has provided exceptional environmental monitoring and sustainable initiatives. Environmental Leadership Awards recognize all industries that have maintained compliance with all applicable environmental requirements for their industry.



## Looking Forward

The City of Carrollton has meticulously planned for drinking water, wastewater, and surface water sustainability to ensure these three interrelated facets of water management continue to provide cornerstones of our environmental well-being. However, as the City navigates current and future population growth, increasing water scarcity, and growing urbanization, water sustainability and availability is expected to be under continuous pressure. A holistic and forward-thinking approach to water, wastewater, and surface water management is not merely an advantageous consideration; it is an absolute necessity to ensure a continued success of the community, ecology, and greater urban region. This entails not only planned and efficient resource utilization but also the ongoing preservation of aquatic ecosystems, the equitable distribution of water access, and the safeguarding of water quality and quantity for generations to come.

### Surface Water Protection



#### Strategies

#### Proposed Benefits

**Continued compliance in storm water management program to reduce pollution to surface waters**

Keeping ordinances current with changing EPA, TCEQ, and regional initiatives provides fundamental protection to surface waters.

**Join the Clean Rivers Program administered by the Trinity River Authority (TRA) as a regional effort to mitigate surface water pollution and reduce contaminants**

Coordinated effort between TRA partnering cities to perform fixed-point water monitoring for ongoing surface water quality analysis.

**Coordinate with new industry to create innovative new designs**

Provides an opportunity for creative use of existing land and sites for increased density.

**Develop water quality baseline based on seasonal quality measures**

Understanding how regional surface water quality changes seasonally provides insight to where attention is needed.

### Drinking Water Protection and Conservation



#### Strategies

#### Proposed Benefits

**Begin upgrades of Advanced Metering Infrastructure (AMI) on residential and commercial water meters**

Transitioning from standard meters to a “smart” meter that can be checked remotely and provides water use data collection for better conservation and rate setting.

**Rainwater harvesting systems**

Explore rebates for the installation of rain barrels for irrigation and gardening use.

# WATER



<b>Review and implement industry-standard water conservation ordinances and Water Conservation Plan to set more ambitious water reduction targets</b>	Ensures Carrollton is a regional leader in water reduction efforts and works to match or exceed the increasing gap in water supply and demand for the region by maintaining a robust Water Conservation Plan and related ordinances.
<b>Update drought conservation plans and water contingency plans</b>	Provides immediate response to major water shortage events to ensure sufficient water is available for the most pressing needs for all residents.
<b>Update irrigation and landscaping ordinances to further promote native and adapted species</b>	More native and adapted species require less water for landscaping, reducing the water consumption rates.
<b>Support smart landscaping through rebate or installation programs and awards</b>	Encourages native biodiversity while naturally reducing the water use in summer months.
<b>Ensure water rates and rate structure encourage conservation by residents and the commercial and industrial sectors</b>	Encourages smart water use while maintaining equity, affordability, and budget sustainability.
<b>Explore feasibility of water reuse programs for expanded implementation</b>	Reduces burden on fresh drinking water supplies by implementing reuse where possible.
<b>Join the Wyland Mayor’s Challenge, a voluntary water conservation pledge and friendly intercity competition to reduce water rates</b>	Promotes water conservation in a meaningful and competitive manner that is fun and practical for residents.
<b>Pursue additional resources required for enhanced monitoring of lead, copper, and per- and polyfluoroalkyl substances (PFAS) in drinking water</b>	Emerging contaminant reduction and elimination is key to long-term sustainable drinking water production.

## Volunteer and Outreach Programs



### Strategies

### Proposed Benefits

**Continue and expand upon existing education and volunteer programs**

Provides residents with additional opportunities to get involved and engages with residents on manners in which they can reduce water or surface water pollution at their home or business.

## What You Can Do

### Citizens

Participate in volunteer programs

### Businesses

Participate in Adopt-a-Spot

# WATER



Clean up outdoor pet waste

Use best management practices for pollution prevention

Take advantage of used oil and household hazardous waste disposal programs

Restaurants: frequent grease trap servicing and cooking grease management posters in kitchen for staff

HOAs: encourage water conservation and smart landscaping by adopting rules and water scheduling

Implement water conservation on landscaping irrigation such as drip systems and irrigation controllers

Conserve water by fixing leaks, watering less often using rain and evaporation data or limiting watering to once or twice a week, and installing water-wise plants

Reduce irrigation water use by planting native species such as Texas Smartscape, limit turf surface in favor of native ornamental plants or permeable surfaces

Ensure lawn clippings are bagged or left on the grass, and not blown into storm drains

Water landscaping based on evapotranspiration data such as [watermyyard.com](http://watermyyard.com), or limit to 1-2x weekly

## Summary

Prioritizing water sustainability at the City of Carrollton is a duty of ethical and practical necessity that reflects a continued commitment to the well-being and preservation of the community. At the municipal level, decisions and actions have a direct and immediate impact on the lives of residents, the health of ecosystems, and play a role in the stability of the region. Through strategic planning, investment in continually maintained water, sewer, and storm water infrastructure, and the implementation of water preservation policies, the City plans to safeguard against the uncertainties of climate shift, population growth, and water scarcity. This is completed through best management practices to provide a preliminary defense supporting pollution prevention efforts, water conservation education and support, and immediate response to surface water quality degradation. Furthermore, through active engagement with Carrollton residents and regional municipal governments the city can foster a culture of water conservation and awareness by empowering individuals to take an active role in preserving this invaluable resource.



# CONTRIBUTING DEPARTMENTS



## ENGINEERING

- Surface Water Protection
- Drinking Water Protection and Conservation
- Wastewater Protection

## ENVIRONMENTAL SERVICES

- Surface Water Protection
- Drinking Water Protection and Conservation
- Wastewater Protection
- Outreach and Volunteering



## FLEET AND FACILITIES

- Surface Water Protection

## FINANCE

- Drinking Water Protection and Conservation



## FIRE

- Surface Water Protection

## PARKS AND RECREATION

- Surface Water Protection
- Drinking Water Protection and Conservation



## PUBLIC WORKS

- Surface Water Protection
- Drinking Water Protection and Conservation
- Wastewater Protection
- Outreach and Volunteering

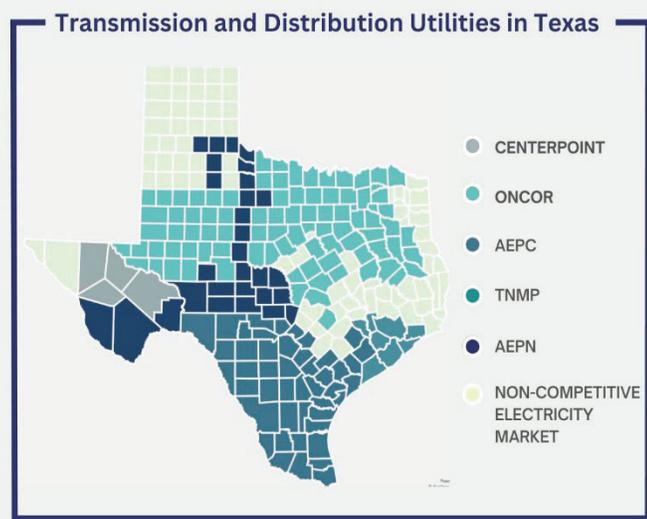
# ENERGY





## Background

Texas has long been a pioneer of the energy industry, and per the Texas Comptroller's Office, the state leads the nation in both energy production and energy consumption. While primarily generating energy from natural gas, Texas has shown a significant decrease in coal use and has inherent features conducive to modern renewable energy sources including high annual sun hours due to the south's climate with the flat landscape providing high wind production. These features provide a renewable energy advantage and has resulted in Texas leading the nation in wind energy generation and second in solar generation. As a result, the City of Carrollton has been able to ensure a significant portion of our electricity is generated by renewable resources. In addition, the City is proud to hold the second lowest electricity rate in the metroplex.



The Texas energy grid comprises nearly 90% of the state and is one of three energy grids that makes up the entirety of the U.S. energy system. Within ERCOT, five major distributors provide areas with electricity.

Due to Texas' unique and deregulated electrical grid which differs significantly from the rest of the U.S., regulatory oversight, generation, distribution, and retail sale of energy also differs. In Texas, regulatory authority of electric transmission and management is overseen by the Public Utility Commission of Texas (PUC), comprised of five commissioners appointed by the Governor and confirmed by the Texas Senate. The PUC oversees the state's competitive utility markets, energy legislation, and enforcement of fair market rules to ensure compliance with federal law and fair and equitable rates are offered to residents.

Additionally, the PUC oversees the Electric Reliability Council of Texas (ERCOT) which runs the electric grid for 90% of the state's needs and ensures consumers across the state receive the benefit of competitive markets. Consumer complaints for electricity bills, charges, surcharges, or other energy market concerns can be addressed through the PUC Consumer Complaint Center at [puc.texas.gov](http://puc.texas.gov). ERCOT is the electrical grid operator and manages the electric flow to more than 26 million Texas residents, including the Dallas-Fort Worth metroplex. As the grid operator, ERCOT does not produce energy and acts solely as the primary oversight for where and how distribution loads and capacity is managed for nearly the entire state. As such, ERCOT's primary goal is the power scheduling of the grid that connects more than 52,700 miles of transmission lines and 1,100 generation units and ensures competitive wholesale market rates for residents.

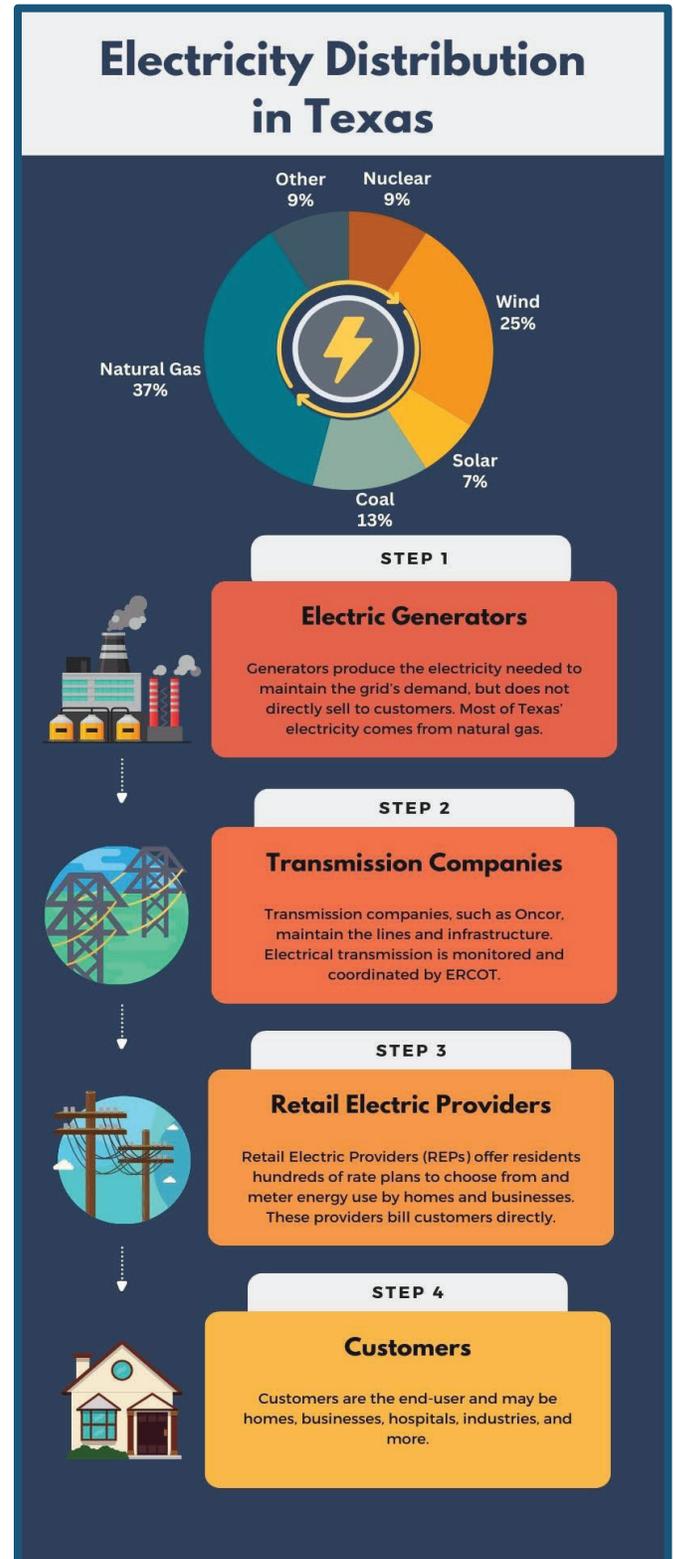
Oncor Electric Delivery, formerly, TXU Energy serves as the transmission and distribution electric utility to





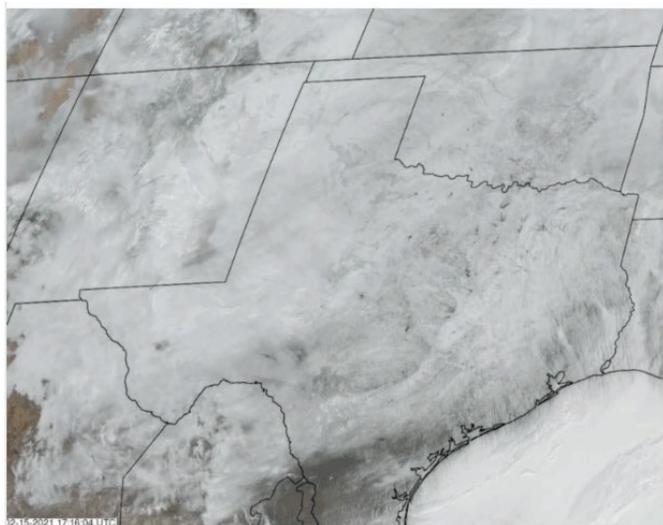
ensure the electrical infrastructure is maintained and is responsible for restoring power in the event of power outages. Energy security is a national and state-level concern. Texas, with its large population and thriving industries, needs to ensure a stable and secure energy supply. Dependence on a single energy source, such as natural gas or coal, can make the state vulnerable to price fluctuations, supply disruptions, and geopolitical conflicts. One such disruption is the impact of extreme weather events, with hurricanes, droughts, and heatwaves becoming increasingly more common. A transition to sustainable energy sources like wind, solar, and geothermal power can help reduce greenhouse gas emissions and mitigate climate change. It also reduces dependence on finite fuel sources often imported and subject to external pricing factors. Further investment in locally produced renewable energy takes advantage of Texas' high production capabilities and can enhance the state's resilience to extreme weather events and protect the well-being of its residents. Investing in sustainable energy solutions also promotes innovation and creates new job opportunities. The renewable energy sector, in particular, has seen substantial growth in Texas, leading to the creation of numerous jobs in manufacturing, installation, maintenance, and research and development. By prioritizing energy sustainability, Texas can foster a culture of innovation, attract talent, and stimulate economic growth in emerging industries.

While the City has taken great care to manage consumption and invest in city infrastructure and facility improvements, outside factors can still disrupt energy availability. Intense regional demand can overwhelm existing systems and lead to grid failures, as experienced during Winter Storm Uri in February 2021. During this winter storm, more than two out of three Texans lost power over a period of seven days. This power loss and rolling blackouts created dangerous conditions for citizens, and the storm contributed to over 200 deaths. Texas has also felt an array of extreme heat waves and droughts, with





each summer seeing the highest statewide energy demand on record, often breaking the record multiple times per summer; for example, 2023 saw nine separate statewide energy records set. Blackouts and brownouts, either full grid disruption or partial, momentary disruptions, are avoided in part through support from renewable energy sources, which supplies nearly 40% of total energy needs per the ERCOT Fuel Mix 2023 Report. In response to these types of weather-related disruptions, the City has initiated an electrical generator installation schedule to ensure City facilities, and therefore services, are able to continue through power losses to bolster the city's resiliency. Additionally, in 2008 the City pursued solar panel installations at City Hall and on Fire Station #2 under the Energy Efficiency Grant through the Department of Energy.



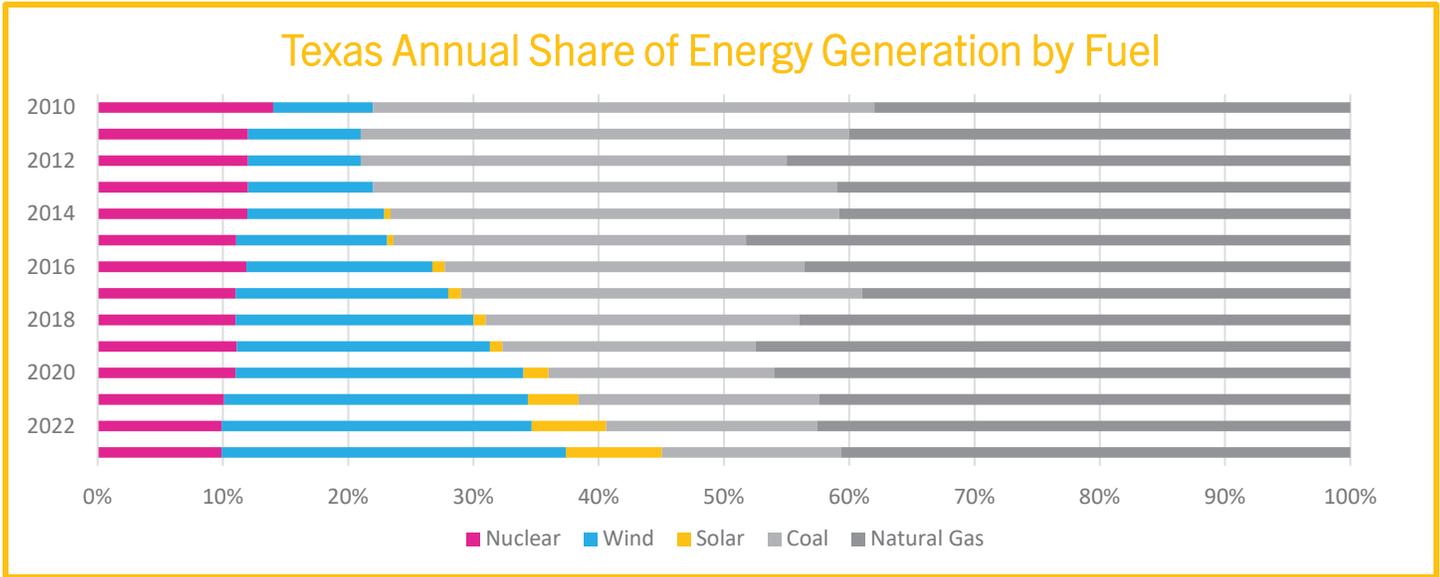
February 11 – 20, 2021, Winter Storm Uri resulted in extremely low temperatures coupled with accumulated ice and snow that disrupted power for more than 4.5 million homes for several days. Photo by the National Weather Service, 2021.

Increasing populations in Texas and Carrollton will continue to test the limits of what our state energy sources can provide. As of 2022, Texas was the second most populous state in the nation, behind California, surpassing a state population of 30 million. As Carrollton continues to grow, both in terms of population and energy demand, the City is

part of a larger coalition to ensure reliable energy is available to residents through programs and the cooperative efforts of the North Central Texas Council of Governments (NCTCOG). This association of local governments was established for long term planning for common needs, cooperating for a mutual benefit between cities, and for sound regional development. NCTCOG serves a 16-county region of North Central Texas, centered around Dallas-Fort Worth, and has over 230 member cities. This provides the benefit of regional coordination of energy reliability, even if cities do not directly generate, transmit, or distribute energy as seen in other U.S. cities. One such initiative to which the City of Carrollton participates is the U.S. Department of Energy's Clean Cities initiative to reduce transportation energy use and improve air quality in urban areas. In 2023, Carrollton received its fourth Gold Fleet Award through this initiative for its continued replacement of City fleet vehicles with electric vehicles, reducing gasoline use and negative impacts on local air quality. In addition to fleet improvements, the City has increased its focus on updating its facilities through strategic LED lighting installations within facilities and streetlights, HVAC monitoring and timing to reduce energy use, and utilizes an energy broker to ensure the most competitive market rates for City facility use.

Reliable and affordable access to energy is critical to maintaining a high quality of life and wellbeing for Carrollton citizens. Therefore, it is vital to support efforts to further energy efficiency measures in the form of building upgrades, community assistance programs, and citizen education. Above all, the greatest impact will come from energy conservation – ensuring energy use is highly efficient or avoided when unnecessary. The City of Carrollton is committed to coordination with ongoing partnerships with Oncor, NCTCOG, and other affiliated agencies to ensure disruptions are minimized with a continued progression towards energy security, safety, and affordability.

# ENERGY



Texas is the top U.S. state producing renewable energy due to high sun hours conducive to solar energy and flat landscape favorable towards wind energy and accounts for 14% of the U.S. total renewable energy. Additionally, Texas continues to grow its renewable energy sector and surpassed 40% of total generation from carbonless energy sources, ERCOT Fuel Mix Reports 2010-2023.

## What We Do

Each member of our community has a role in our overall energy use. While Carrollton is comprised of a robust network of businesses and industry, it is also home to over 135,000 residents. To better manage our energy needs, the City of Carrollton will strive to identify and promote options for citizens and private sector leaders to harness energy efficiency practices and reduce overall consumption. In accompaniment, the City will do its part to research and improve internal operations, in line with the goals created in this plan. Existing efforts by the City include the use of a hired energy management broker, prompt adoption of the most recent building code updates, streamlined operations by the Development Services department, and the installation of energy efficient facility retrofits. These continued efforts and select future initiatives will set the City on a trajectory for responsible use of its resources moving forward.

### Energy Management



#### Strategies

**Energy management broker monitors City electricity consumption**

#### Relevance

A retained energy management broker follows City usage data and has helped the City of Carrollton lock in the 2nd lowest electricity rate in the metroplex.

Broker ensures City consumption stays within annual usage limits.

# ENERGY



<p><b>Smart electrical meters are utilized for all applications where feasible for real-time monitoring of energy use and HVAC efficiencies</b></p>	<p>323 meters are currently in use and monitored through a virtual dashboard.</p>
<p><b>City facility electricity contract stipulating 30% of energy to be generated from renewable sources</b></p>	<p>Facilities utilizing renewable sources reduce carbon emissions footprint.</p>
<p><b>Performed Detailed Utility Assessment of City facilities and operations in 2005</b></p>	<p>The assessment identified potential financial, energy, and water savings opportunities, resulting in a total estimated annual cost savings of \$207,270 and reduction of 71,972 BTU/SF if improvements were pursued.</p>
<p><b>Additional maintenance for protection of electrical power lines</b></p>	<p>Implementation of Tree Replacement Program to replace large trees growing into power lines and replace with dwarf ornamental varieties.</p>
<p><b>Reduced energy use at City parks and facilities through new technology</b></p>	<p>City park lighting has been reduced through timers and photocells to turn off when unneeded. Lighting at athletic complexes use satellite communication for scheduling and allow remote control of lighting.</p>

<h2>Energy Efficient Development </h2>	
<h3>Strategies</h3>	<h3>Relevance</h3>
<p><b>Updates to governing energy and building codes are promptly adopted</b></p>	<p>For years, the City of Carrollton has been proud to be one of the first cities in the nation to adopt the most updated building codes as they are released. Current City adopted codes are primarily beyond state codes.</p> <p>The International Energy Conservation Code (IECC) addresses energy-efficient systems for building heating and cooling, lighting, insulation, and water distribution.</p>
<p><b>Permits for energy efficient systems</b></p>	<p>Permits available for solar panel arrays, electric vehicle chargers, and wind turbines.</p>
<p><b>Energy efficient features at City facilities</b></p>	<p>Efficient features such as energy management systems, high efficiency air cooling and heating systems, conversion of lighting to LED, occupancy sensors and timers, and managed recreation field lighting.</p>

# ENERGY



LED interior lights are 80% more energy efficient and can last 13 times longer than fluorescent bulbs.

LED streetlights are 40-60% more energy efficient than traditional streetlights and last 3 to 5 times longer. A pilot solar streetlight was installed within a residential neighborhood in 2024.

## Rooftop solar panels at public facilities

Installed at City Hall and Fire Station 2 under the Energy Efficiency Grant, each system produces 30.55 kW.

## Backup generators at various City facilities

32 backup generators are currently in place with more planned for installation to ensure city function continues during extreme weather or electric blackouts.

## Community development programs and grants

Single-Family Rehabilitation Grants include the installation of energy-efficient windows.

## Looking Forward

Recent and short-term future years are marked with burgeoning energy instability in the DFW metroplex due to rapid population growth, higher energy demand from an increasing population and warmer summer months, and a recent shift from fossil fuel vehicles to electric vehicles. Due to the role of reliable, consistent energy in everyday life and the extreme impacts energy instability has on public health, the economy, and daily living as witnessed during the 2021 winter storm and ERCOT's calls for energy reductions during high demand days requires immediate and long term planning to address these concerns. While local government, particularly in the deregulated energy market of Texas, has a limited role in energy capability, the City of Carrollton has taken a number of steps to be a leader in progressive energy growth and the support of alternatives to reduce usage and subsequent emissions. Together with efforts from the North Central Texas Council of Governments, residents, Oncor, ERCOT, and the Department of Energy, the City will continue to explore new and innovative methods and mechanisms to further provide energy efficiency and energy reduction methods to reduce demand where possible for years to come.

## Energy Management



### Strategies

### Proposed Benefits

**Consult City energy management broker and review historical energy usage to identify further reduction opportunities**

The Texas Health and Safety Code requires local governments to report on and establish goals to reduce electric consumption by at least 5% each year.

# ENERGY



**Routinely monitor energy consumption and develop a city energy plan.**

Managing energy efficiency where possible allows City services to continue to grow with the increase of population while reducing energy usage.

**Establish city-wide initiatives targeting highest areas of energy consumption**

Collaborate with highest private and commercial users to reduce overall consumption.

**Energy usage analysis of City facilities**

**Energy management**  
Isolate individual facility energy usage.  
Identify further reduction opportunities.

**Building performance**  
Goal for buildings to reach basic level of performance.  
Calculate energy metrics for individual facilities.  
Publish City facility energy usage data.

**Potential pilot programs**  
Perform energy audit of 1 City facility.  
Utilize energy portfolio manager for 1 City facility.  
Pursue Energy Star certification for 1 City facility.

**Provide resources about responsible energy consumption**

Create and maintain a City webpage with resources.

## Energy Efficient Development



### Strategies

### Relevance

**Consider pilot program to target the highest commercial and industrial energy users**

Discuss strategies and incentivize usage reduction with highest energy consumers.

**Research energy co-op opportunities to provide residents with renewable energy opt-in programs.**

Secures competitive energy rates with a focus on 100% renewable energy use and provides residents the power of energy market choice at reduced prices.

**Continue to explore emerging technologies**

Updating the city's infrastructure to keep pace with new developments provides increased resiliency, adaptability, and efficiency.

**Adjust building system operation times to better match working hours**

Reducing energy consumption after business hours reduces energy costs and use through all seasons.

**Seek out grant opportunities for energy efficiency projects**

Assess state and federal funding options to increase efficiency and reduce energy consumption. The State Energy Conservation Office provides free energy audits and technical assistance to local governments.

**Complete a technical review, test installation, and cost-benefit analysis of solar-powered residential streetlights**

If feasible, solar lighting reduces trenching, wiring, and other installation costs and can provide up to 5 days of autonomous power in case of electrical grid failure.

# ENERGY



## What You Can Do

Citizens	Businesses
Learn more about your home energy use	Learn more about your facility or business' energy use
Monitor and compare your home usage with regional/state averages	Monitor and compare your facility usage with regionals/state averages
Identify ways to your lower energy use	Consider energy tracking tools and software solutions
Utilize Oncor and CoServ's online energy tools	Utilize Oncor and CoServ's online energy resources
Use the Power to Choose tool to research service providers	Use the Power to Choose tool to research service providers
Perform a home energy assessment	Conduct an energy audit
Perform home energy efficiency improvements such as replacing old windows and appliances with energy efficient models	Discuss energy usage with property tenants and staff
Research opportunities for financial assistance to improve energy efficiency	Perform building energy efficiency improvements
	Research opportunities for financial assistance to improve energy efficiency for businesses

## Summary

The City of Carrollton is dedicated to the continued responsible use of our resources and energy needs in a way that is practical and fiscally responsible. With the rise of the state's population and irregular weather patterns, so rises the demand for energy and utility reliability by our citizens. Through the increase of public education toward energy conservation and the integration of greater energy efficient practices in our buildings and operations, we can better manage our total consumption and increase the odds that Carrollton will be provided with sufficient electrical service in times of need.



# CONTRIBUTING DEPARTMENTS



## DEVELOPMENT SERVICES

- Managing City Facility Energy Use and Emissions
- Building for Energy Efficiency

## ENGINEERING

- Managing City Facility Energy Use and Emissions
- Building for Energy Efficiency
- Energy Reliability

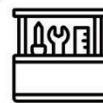


## ENVIRONMENTAL SERVICES

- Managing City Facility Energy Use and Emissions
- Building for Energy Efficiency

## FLEET AND FACILITIES

- Managing City Facility Energy Use and Emissions
- Building for Energy Efficiency
- Energy Reliability



## FIRE

- Building for Energy Efficiency

## PARKS AND RECREATION

- Managing City Facility Energy Use and Emissions
- Building for Energy Efficiency
- Energy Reliability



# BUILT ENVIRONMENT



# BUILT ENVIRONMENT



## Background

The built environment consists of all structures in the surroundings which are not naturally occurring: the man-made systems that support daily life. The buildings, roads, walking trails, and the utility networks which distribute water and electricity to homes are all part of the built environment and these systems all have a direct effect on individual health and wellbeing. The proper function of these systems are critical; the healthier the system and the environment, the better the health of individuals and the community as a whole.

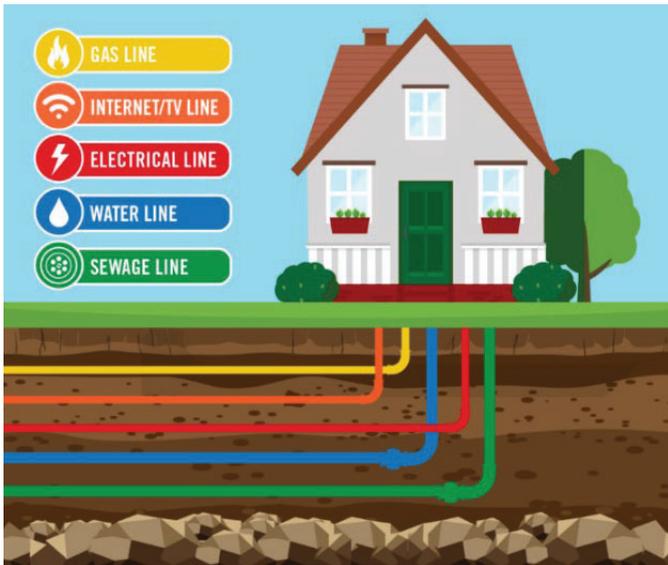
Carrollton is home to a residential population of approximately 133,000 and is a hub for commercial and industrial business that maintain a commuting workforce population, all of whom require reliable infrastructure to meet daily needs. Per the EPA, the typical American spends an average of 90% of their day indoors (1), requiring dependable access to water, electricity, and clean air, all of which are provided by the built environment. A functional built environment is preserved through various proactive and reactive projects. The City of Carrollton periodically performs a comprehensive analysis of existing infrastructure, rating each of the many systems in a robust Infrastructure Report Card. To develop and enact effective plans, it is imperative that there is an understanding of current and future development patterns and environmental risks.



The soil throughout the City is composed of predominately black clay and silty clay soils, which are slow to allow water to permeate and have a moderate to severe potential for erosion. When dry, black clays crack up to 30 inches deep, there can be high incidence rates of geotechnical shifting in the ground. This shifting can impact building foundations and underground utility and water lines over time. The City also has variable groundwater table depth, in some places occurring less than 20 feet below ground surface, meaning natural spring waters occasionally surface and flow in visible areas. The variability in soil moisture and water table level requires continuous monitoring and maintenance of the City's infrastructure.



# BUILT ENVIRONMENT



Carrollton's Public Works Department is primarily responsible for the ongoing maintenance requirements of City infrastructure including streets, sidewalks, sewer and water mains, and more. Oncor, CoServ, Frontier, and Atmos Energy are responsible for non-city infrastructure such as power, gas, phone, cable, and internet lines.

In the 1970s, Carrollton experienced a period of rapid development and growth, tripling the total developed area of what was construction prior to this period. Today, the City is over 97% built out, prioritizing redevelopment, revitalization, and retrofitting updates far more than new developments. The City's growth and experience in maintaining infrastructure and advances in new technology have resulted in new practices and materials that best serve infrastructure longevity. Some materials, such as clay pipes, have difficulty maintaining structural integrity in this region due to the climate and prevalent ground shifting. Some of the infrastructure designed in Carrollton's oldest areas was not originally designed to handle the rapid development and increase in storm water or waste water capacity. Therefore, the City has taken significant action to replace problematic materials and to assess future projected use and demands on the systems to ensure long-term functionality and the expected increase in capacity needs. As upgrades are installed, durable and lasting pipelines such as PVC are installed, with an expected service lifetime of 100 years or more. Management projections are created

using GIS asset location to monitor and anticipate future needs for replacement to ensure that future needs are installed during these upgrades and new developments consider the city's current and future demand during the planning and design phase.

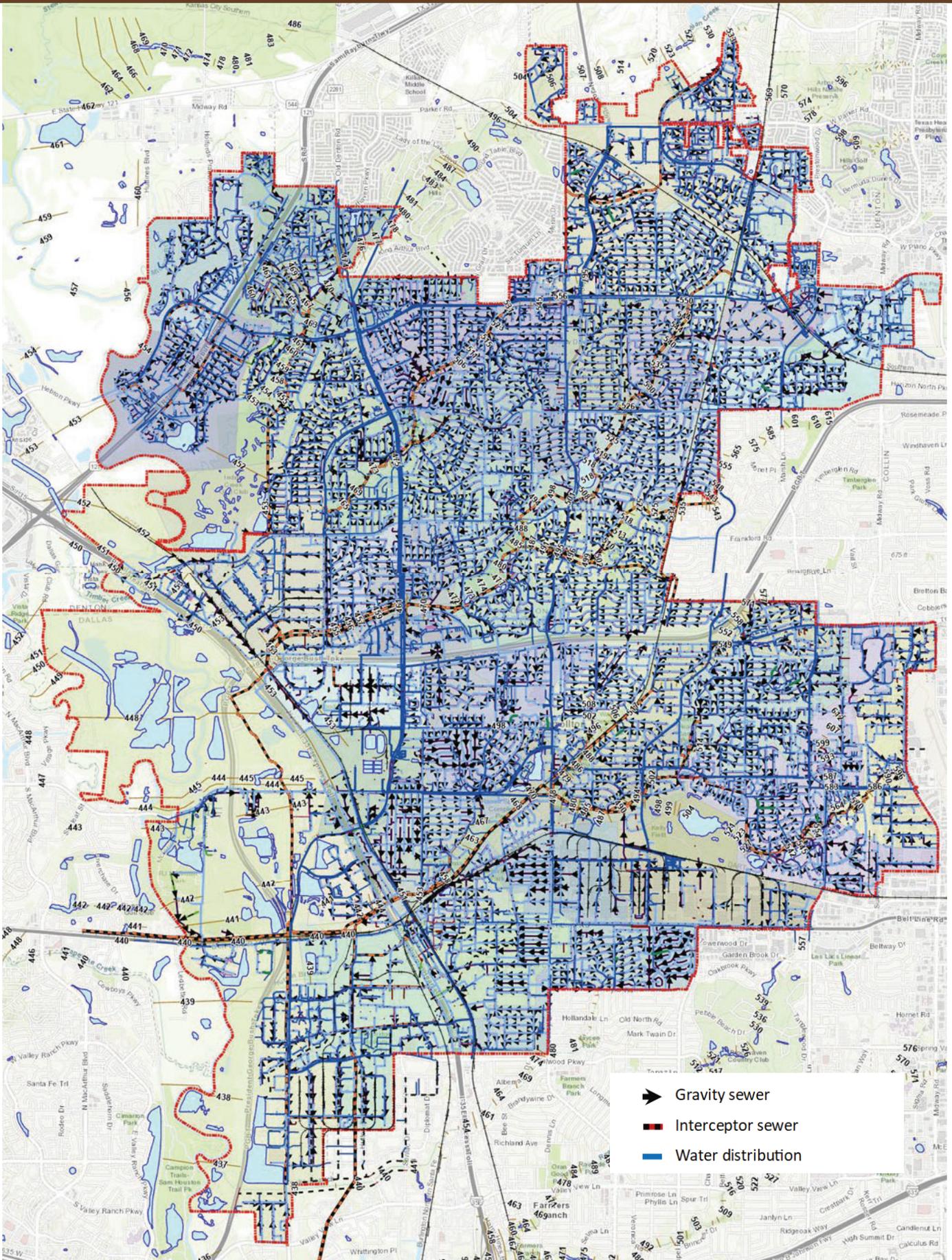


The former N. Josey water tower stood for 48 years with a capacity of 1.5 million gallons, replaced in 2022 with the water tower standing today at 2 million gallons to accommodate future water needs.

Implementing building features to improve the efficiency, comfort, and health of existing buildings is one of the least expensive ways to improve the built environment used in daily life. This can include a variety of systems that reduce energy or water usage, improve indoor air quality, or utilize recycled-content materials in new projects. By incorporating these enhancements, buildings not only become more sustainable but can lead to significant long-term cost savings by reducing operational expenses and increasing the lifespan of building components.



# BUILT ENVIRONMENT



# BUILT ENVIRONMENT



Analyzing factors such as the history of development and weather patterns enables the City to make informed decisions in the face of varying conditions. Understanding the impact of geotechnical shifting and the predicted lifespan of the infrastructure systems enables the City to form and enact plans for long-term sustainable development. The City develops proactive and reactive plans in the form of long-term strategies for prioritization of repairs, through the implementation of Capital Improvement Projects (CIPs), and response plans for immediate issues which disrupt access to water or pose a danger to public health. The prioritization of repairs is a schedule based on an inherently equitable process, wherein entire neighborhoods are assessed on short-, long-, and full life-term replacement cycles. This appraisal focuses on the existing state of roads and utilities and determines priority areas, while creating 5-year plans to address issues throughout the City. It is generally a far more efficient method to perform full street and pipeline replacement over a single neighborhood, than pursue numerous smaller-scale repairs at different locations. Factors such as these are considered when deciding projects to take on, and how to divide available funding. City departments take on many improvement projects, from roadways to drainage channels to

ensure the public has continued access to utilities such as water and electricity. A well-maintained system provides safe and operational roadways, prevents contamination of drinking water, and minimizes leaks and losses from water systems. The Public Works Department completes work at a cost competitive with the private market and was determined to be one of the most lean and sustainable operating outfits in the metroplex. This distinction was attained through exceptional working achievements, such as having the lowest inflow and infiltration (I&I) rate in the metroplex, in which external source water breaches sanitary sewer lines.



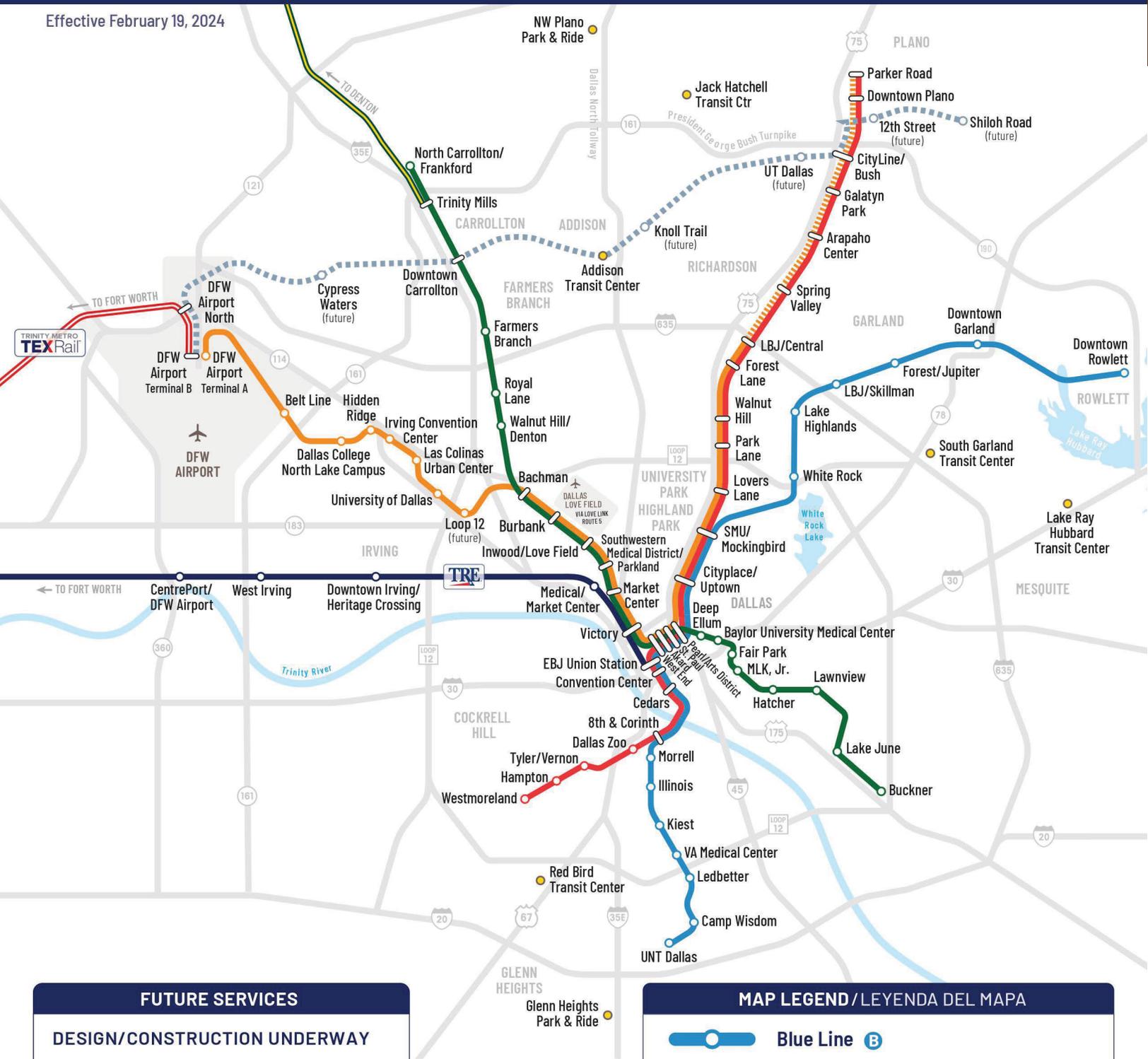
A modern, efficient transportation system provides residents of all ages and abilities access to safe, reliable, and affordable methods of mobility. A well-designed system can deliver residents to their destinations with minimal impact to the environment, reducing harmful emissions and contributing to an improved quality of life and air for all. This can be achieved through a strong public transportation system, transit- and pedestrian-oriented development, and low-emission practices utilized by citizens and City fleet vehicles. Resources such as the DART Green and Silver Lines, electric fleet vehicles, and city-wide hike and bike trails broaden the range of mobility options for those who have limited vehicle or financial means.



# DART Current and Future Rail Services



Effective February 19, 2024



**FUTURE SERVICES**

DESIGN/CONSTRUCTION UNDERWAY

**Silver Line**  
(Late 2025 to Mid-2026)

**TRE AND TEXRAIL TO FORT WORTH**

**MAP LEGEND/LEYENDA DEL MAPA**

- Blue Line **B**
- Red Line **R**
- Green Line **G**
- Orange Line **O**
- Orange Line/(Weekdays Peak Only)
- Trinity Railway Express **TRE**
- TEXRail (Operated by Trinity Metro) **TRINITY METRO TEXRail**
- A-Train (Operated by DCTA) **Atrain**
- Transit Centers/Transfer Centers/  
Transfer Locations/Park-and-Rides

# BUILT ENVIRONMENT

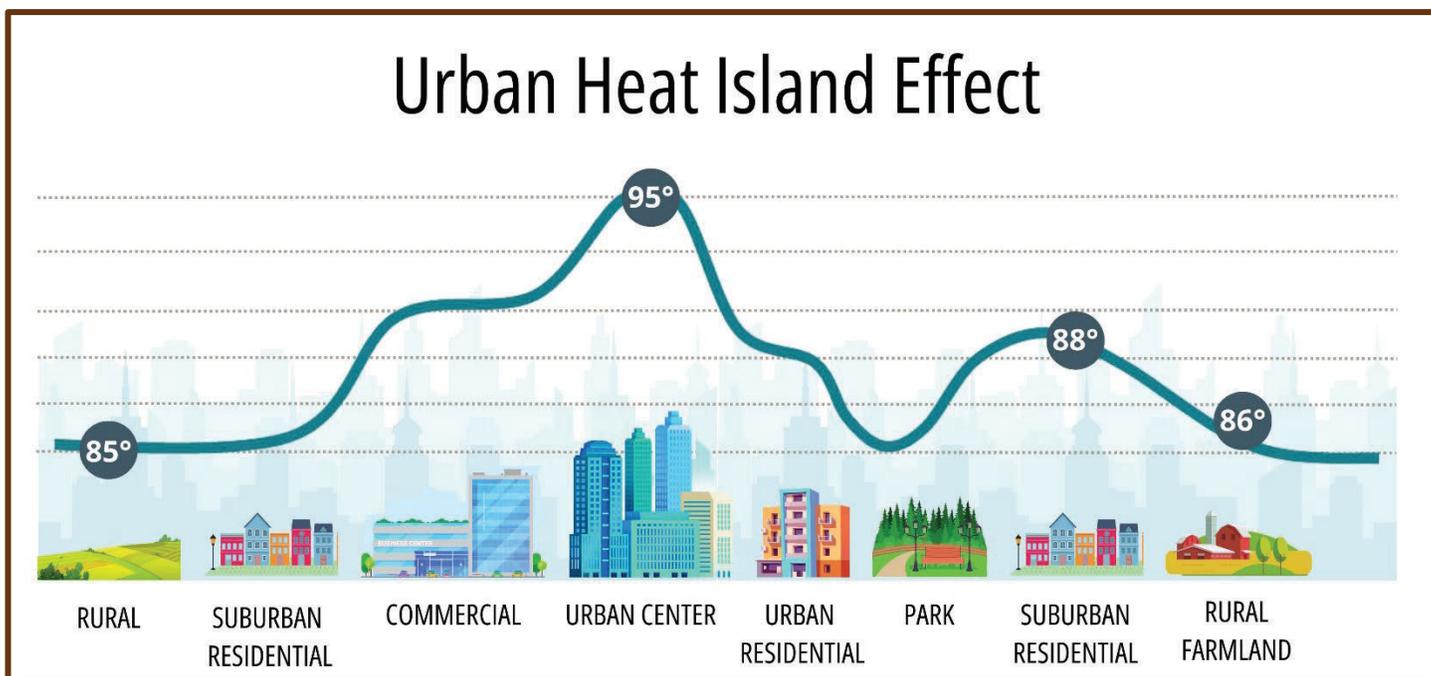


The City is also expanding the current Trails Master Plan to incorporate more walking and bike routes. Though conventional single passenger vehicle travel is still the primary mode of transport, continued investment in mass transit and pedestrian systems will support increased use as they become more accessible and convenient.

Urban areas capture and retain heat at a much higher rate than rural or natural ones, creating an ‘island’ effect. Cities with extensive concrete, asphalt, buildings, and limited vegetation absorb and re-emit thermal energy throughout the day and night. Per the EPA, daytime and nighttime temperatures in urban areas are ~1-7 °F and 2-5 °F higher, respectively. To reduce these effects, shading and the

implementation of green stormwater infrastructure are critical methods of mitigation. Shade structures, tree canopies, and vegetated ground cover can help in this effort. ‘The net cooling effect of a young, healthy tree is equivalent to ten room-size air conditioners operating twenty hours a day’ (3).

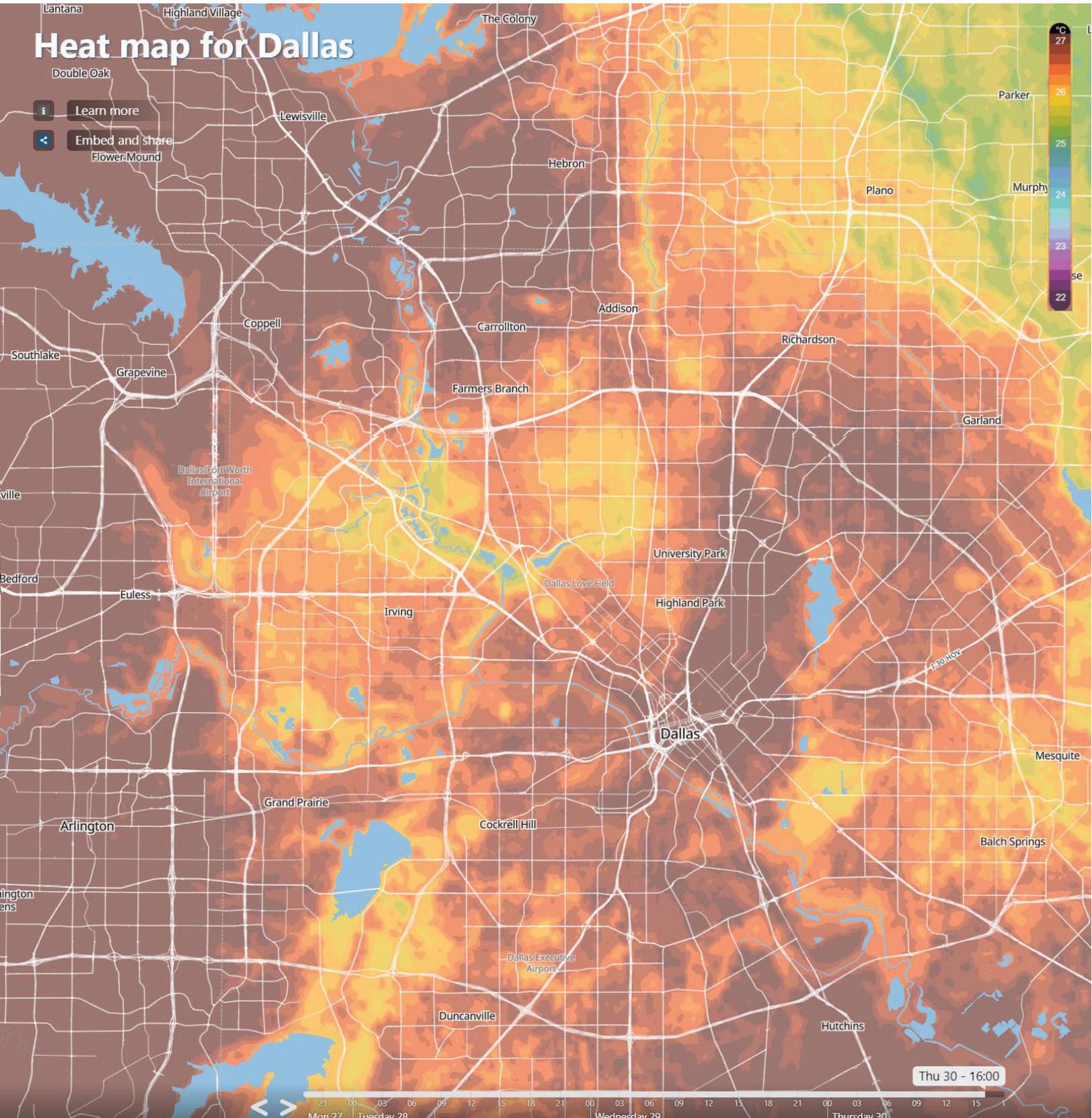
The health of the built environment and City infrastructure impacts the entire community. Caring for the places where residents spend time each day means having access to the resources needed in daily life, such as water, electricity, and clean air. Maintaining the built environment and emphasizing responsible management and use of resources will set a path of long-term sustainability and a healthy, thriving community for generations to come.



The urban heat island effect is the observable temperature difference between urban centers with high heat retention from concrete heat absorption and rural or natural areas with little built environment and high vegetative cover. As a result, highly developed urban areas can experience mid-afternoon temperatures that are 1-7°F warmer than surrounding, vegetated areas.

Source: NHHIS 2021, <https://www.heat.gov/pages/urban-heat-islands>.

# BUILT ENVIRONMENT



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## What We Do

The state of the built environment impacts the entire community and having well-maintained infrastructure and built spaces promotes a healthy population. Planning for development and growth is the first step, establishing the standards which preserve public health and safety. City departments work hard to monitor and maintain utilities to ensure everyone has access to needed resources. Monitoring water and energy usage, and what happens with the waste generated is critical to maintaining a healthy and thriving community. Existing efforts by the City include community events and programs for waste, buildings, and site improvements, geolocation mapping of infrastructure, and community-wide water usage monitoring.

### City Planning and Development



#### Strategies

#### Relevance

**Streamlined public services for development projects**

Building permits can be issued in a very swift 5 days or less.

**Green building permits available for development projects**

Permits include solar panel arrays, rainwater harvesting systems, electric vehicle chargers, wind turbines, and more.

**Prompt adoption of updated governing energy and building codes**

International building codes are adopted upon release, including the International Energy Conservation Code addressing energy-efficient systems for building heating and cooling, lighting, insulation, and water distribution.

**Incorporating resiliency in planning and development**

Participation in the TX and OK Regional Resiliency Cohort through ICLEI which advises local governments on accounting for future environmental risks in planning and floodplain assessment and watershed management.

**City mapping and data gap analysis**

A comprehensive gap analysis of City data resources provides updates and maps beneficial to the public.

**Updated analysis of City-wide infrastructure**

New draft of updated Infrastructure Report Card, including systems for surface infrastructure, drinking water, stormwater, wastewater, and facilities in development.

**Focus on growth in Transit- and Pedestrian-Oriented Development Areas (TOD and POD)**

Encourage high-density development and walkability to reduce vehicular needs and parking areas.

# BUILT ENVIRONMENT



## Resource Management



### Strategies

### Relevance

**Community-wide water usage and monitoring**

All water usage and data available to the public, including a water loss audit, water conservation report, the 5-Year Water Conservation and Drought Contingency Plan.

**Water Resource Management and Resiliency**

Carrollton's five water towers hold a total of 12 million gallons of water and ground storage holds 36.5 million gallons.

**Water reduction programs**

City programs offer free pressure reducing valves for residents with water saving estimates of up to 30% water reduction, and other programs including free rain and freeze sensors, and rebates for water-saving equipment for commercial, industrial, and institutional water users.

**Energy management broker monitors City energy consumption**

The broker monitors City energy usage and has assisted Carrollton to contract the 2<sup>nd</sup> lowest electricity rate in the metroplex while managing consumption rates within annual usage limits.

## Community Waste



### Strategies

### Relevance

**Residential recycling and waste collection services**

52,973 tons of waste collected from all services in 2023.

**Community Programs, including Household Hazardous Waste, Fats, Oils, and Grease, and Liquid Waste Hauling to divert incompatible landfill materials**

785 grease/grit traps are inspected annually and 118 Liquid Waste Hauler trucks are inspected and permitted to ensure compliance with hazardous material disposal and free residential collection of HHW such as paints fertilizers, and aerosol products.

**Community Events including Cease the Grease and Drug Take Back events**

Annual collection events allow residents to properly dispose of used cooking oil, meat fats, lard, and grease, and expired, illicit, or unneeded drugs. 350 gallons of FOG material collected and 2,223 lbs. of drug material properly disposed in 2023.

**Internal City recycling and material use**

Materials are recycled or properly disposed of, including out-of-date technology, city equipment, lightbulbs, scrap metal, and fleet vehicle parts and items.

# BUILT ENVIRONMENT



**Repurposed plastic City park benches**

Two benches were created through the Bags to Benches program, repurposing 600 lbs. of plastic film bags donated by the community.

**Library collection, resale, or repurposing of unwanted printed materials, books, and media**

Encourages recycling of materials to prolong printed material and book use and avoids landfilling.

## Buildings and Infrastructure



### Strategies

### Relevance

**Continuous maintenance of municipal infrastructure, including streets, pipes, and erosion controls**

In 2023, 124 miles of infrastructure projects were completed, 20% of sanitary system cleaned, 2,899 miles of streets swept, and 11,863 pieces of trash collected from streets.

**Replacement of problematic infrastructure materials**

Outdated sanitary sewer pipes are replaced as able to reduce system breaches and contamination.

**Updated mapping of infrastructure assets**

GIS geolocation of existing system components such as pipelines, manholes, and stormwater features provides real-time GIS updates for precision identification.

**Regionally sourced and recycled-content construction materials**

Waste concrete sent to Lewisville concrete recycling facility and the Trinity Mills EVIVA project reused existing concrete systems as flex base material for new onsite installations.

**Construction best management practices**

Preconstruction meetings for new and existing development projects offered to provide developers an opportunity to review City policies and expectations with City staff. Developments receive three compliance inspections throughout building phases in addition to state environmental requirements.

**Routine compliance inspections of private developments and operations to ensure public health and safety**

Inspections consist of building inspections, adherence to construction design standards, code enforcement, industrial pretreatment, stormwater compliance, and public health and sanitation inspections.

**Sustainable energy building features in City facilities**

Energy management systems, occupancy controls, and high-efficiency HVAC units and LED lighting to reduce energy consumption and rooftop solar panel arrays installed at City Hall and Fire Station 2.

**Sustainable water consumption at City facilities**

Equipment includes high-efficiency water heaters, low flow plumbing fixtures, and a pilot program for

# BUILT ENVIRONMENT



advanced metering infrastructure (AMI) technology to provide real-time water use and data.

## Sustainable building materials at City facilities

Selected use of long-lasting and durable materials, recycled content products, low volatile organic compound (VOC) interior products, and updated use of HVAC system refrigerants, including the elimination of R-22 Freon HVAC systems in 2020.

## Energy efficient street lighting

LED streetlights are 40-60% more energy efficient than traditional streetlights and last 3 to 5 times longer. A pilot solar streetlight program was installed in 2024.

## Localized installations of permeable pavement systems

Paver grid and lattice systems installed at the Carrollton Animal Shelter parking lot and select parking lots downtown provide increased permeable surface area.

## Fiber optic cable installation plan to provide high-speed internet to City facilities

Improved online functionality has led to increases in operation efficiency and public accessibility to City services.

## Transportation



### Strategies

### Relevance

## Regional collaboration on transportation systems

NCTCOG leads transportation efforts for regional planning, congestion management, air quality, freight logistics, and other traffic measures for the 12-county DFW metroplex.

## Modes of mass transit

The DART lines contain 93 miles of light rail transportation to 65 stations across DFW with 4 DART bus lines operating in Carrollton with service every 30-60 minutes.

## Ridesharing availability

DART GoLink provides on-demand ridesharing serving several City zones and an ADA-accessible vehicle.

## Abundant hike and bike trails and walkability

35 miles of existing hike and bike trails, including 4 major trails and 19 neighborhood trails.

## Traffic studies, prioritization, and annual system studies

These studies are performed to identify potential signal and streetlight projects throughout the city, including corridor congestion reviews to retime traffic signals to reduce congestion.

## Energy efficient traffic signals

All new or upgraded signals require LED installations which extends the signal lamp life to 10 years

# BUILT ENVIRONMENT



compared to 1 to 2 years for traditional incandescent lamps.

## Low-impact City fleet vehicle initiatives

Carrollton has earned the Gold Fleet Award for the last 4 years with its 24 electric fleet vehicles reducing consumption of fuel by over 1,100 gallons per vehicle per year. Nearly half of fleet vehicles meet or exceed Low Emission Vehicle standards.

## Looking Forward

A healthy community depends on the quality and longevity of its built environment. Buildings, roads, and infrastructure components that are designed and maintained with resilience in mind will have a greater lifespan and therefore be better able to serve the people who depend on it for daily use. Setting goals for efficient resource use and management will enable us to achieve a more durable and sustainable built environment.

## City Planning and Development



### Strategies

### Proposed Benefits

**Evaluate internal regulatory guidelines and code of ordinances**

Review Code of Ordinances, Planning and Zoning Ordinance, and related development plans for opportunities to incorporate industry-leading standards.

**Incentivize sustainable development and construction processes**

Encourage private sector to consider sustainable improvement alternatives by offering to waive or reimburse permit fees, explore rebate options, and establish a recognition program for sustainable development.

**Plan for City resiliency**

Utilize information gained from the 2024 TX and OK Resiliency Cohort to foster planning efforts mindful of future community risks and areas of vulnerability.

**Support project designs utilizing Low Impact Development (LID) and Green Infrastructure**

Assess opportunity to integrate low-impact practices into general design standards, such as increasing water retention capabilities, preserving green space, and naturally cooling pedestrian areas.

**Improve accessibility to online City mapping and data tools**

Public-facing maps allow developers and residents real-time information for active construction projects, road closures, and more.

# BUILT ENVIRONMENT



## Resource Management



### Strategies

### Proposed Benefits

**Review options to create a City resource management plan**

Consider future use projections over resource streams such as energy, water, and waste to reduce usage.

**Comprehensive water usage analysis of community**

Explore customer characterization, water survey, and mandatory water and irrigation schedule to reduce water consumption.

**Water usage reduction efforts**

Consider potential community reduction challenges, landscape irrigation limits, and further smart metering at City facilities to reduce consumption and waste.

**Partner with top industrial water and energy users to support operation improvement**

Provide additional information resources and support to high usage entities including industrial parks, apartment complexes, and homeowner associations to encourage best practices.

**Conduct energy usage analysis of City facilities**

Further utilize energy management broker, isolate facility energy usage, and further reduction opportunities through an energy audit and pursuit of Energy Star certification of at least one facility.

## Community Waste



### Strategies

### Proposed Benefits

**Improve community waste tracking**

Review options to track and evaluate total community waste footprint and inform residents to best resources or assistance programs.

**Further educate community on reuse and composting practices**

Continue expansion of recycling education and provide online information on composting.

**Improve City facility waste practices**

Analyze internal practices for areas of opportunity and implement a City waste plan.

**Consider new community waste events**

Assess community needs and research opportunities for recycling/repurposing plastic and other waste.

# BUILT ENVIRONMENT



## Buildings and Infrastructure



### Strategies

### Proposed Benefits

**Assess opportunities to retrofit City buildings with resource saving installations**

Consider sustainable improvements such as recycled-content products, installing high efficiency appliances, and ensure building seals prevent energy loss.

**Establish a green building or business award program**

Recognize businesses and other entities that have implemented sustainable improvements or reduced operational resource needs.

**Consider City demonstration project**

Encourages residents to consider improvements such as sealing and weatherization, energy efficiency appliances, and insulated doors and windows.

**Provide online information on indoor air quality**

Create and promote information on topics including asbestos, microbial growth, volatile organic compounds (VOCs), duct work and ventilation quality, and remediation options.

**Procure permanent road temperature sensors for key roadways to monitor road conditions**

Monitoring 10 roadways provides real-time information to develop thresholds for weather response.

**Utilize mapping services to develop building emergency plans**

Internal mapping drones utilize LIDAR to create uniform facility floor plans and improved emergency egress and response plans.

## Transportation



### Strategies

### Proposed Benefits

**Incentivize mass transit use and ridesharing**

Encourage resident and commuter rail, or, carpooling.

**Alternative modes of transportation**

Research and improve access to low-impact alternatives to single-occupant vehicle use.

**Enhance City walkability**

Expansion of Trails Master Plan to include 47 miles of new trails and connections to larger trails within Carrollton and adjacent cities.

**Continued City fleet and equipment improvements**

Expansion of electric vehicle fleet and equipment use, including electric equipment such as mowers.

**Provide online resources on transportation efficiency**

Enhance City website to inform of driving practices, mass transit, walkability, and other transportation topics that reduce single-occupant transportation.

# BUILT ENVIRONMENT



## What You Can Do

Citizens	Businesses
Refer to online guides for sustainable homes	Refer to online guides for sustainable and lean business practices
Choose long-lasting, durable, efficient systems	Choose long-lasting, durable, efficient systems
Research products before purchasing for sustainable, environmentally-friendly, or responsibly sourced	Utilize Commercial Rehabilitation Grant funding for exterior improvements
Discuss energy and water use in the household	Discuss energy and water use with building users, employees
Seek City resources and other online tools to learn more about items that cannot be discarded down drains	Perform audits for energy, water, or waste streams
Utilize mass transit systems, City trails, and find opportunities to carpool or reduce single-occupant vehicles	Support alternative transport use by providing carpool opportunities, EV chargers and parking spaces, and bike racks
Plan travel routes to avoid rush hour congestion to decrease vehicle idle times	Optimize travel routes and supply loads to reduce transportation costs and emissions

## Summary

The systems used in daily life have been designed for public safety and efficient operation. The City of Carrollton works diligently to support and maintain these systems, to ensure a high quality of life for all residents and visitors. Roadways are built for safe navigation, efficient traffic flow, and emergency responder use. Pipelines and streets are constructed to live a long life and reduce repair needs. Buildings, streets, and developed areas are designed to direct rainwater flow. Drinking water and ambient air are continually tested for quality. These are the efforts that build a healthy and thriving community. Looking forward, Carrollton residents and the City can work together to best manage continued redevelopment and resource use.



# CONTRIBUTING DEPARTMENTS



## DEVELOPMENT SERVICES

- City Planning and Development
- Buildings and Infrastructure

## ENGINEERING

- City Planning and Development
- Resource Management
- Buildings and Infrastructure
- Transportation



## ENVIRONMENTAL SERVICES

- City Planning and Development
- Resource Management
- Buildings and Infrastructure

## FACILITIES

- Resource Management
- Buildings and Infrastructure



## IT

- Resource Management
- Buildings and Infrastructure

## PARKS AND RECREATION

- City Planning and Development
- Resource Management
- Buildings and Infrastructure
- Transportation



## PUBLIC WORKS

- City Planning and Development
- Resource Management
- Buildings and Infrastructure
- Transportation



# PUBLIC EQUITY

# PUBLIC EQUITY



## Background

Inequality, both locally and globally, stands as one of the most pressing challenges of our time, defining the landscape of societies and shaping the opportunities available to individuals. At its core, inequality manifests in various forms, spanning economic disparities, social exclusion, and unequal access to resources and opportunities. Whether observed within the confines of a neighborhood or across continents, it undermines the principles of fairness, justice, and human dignity. On the local level, inequality manifests in a myriad of ways, often starkly evident within neighborhoods, cities, and regions. Such disparities exacerbate social divides, contributing to a host of interconnected issues such as limited access to quality education, healthcare, housing, and employment opportunities.

Overcoming these obstacles requires a full understanding of the characteristics of a community to ensure the needs of the vastly different individuals are met. When individuals from different backgrounds, cultures, and experiences come together, they bring a plethora of unique ideas, approaches, and solutions to the table; a local trait celebrated by the City of Carrollton. By embracing diversity, organizations harness a diverse array of talents and perspectives, fostering creativity and driving innovation. Studies have consistently demonstrated that diverse teams outperform homogeneous ones, as they are better equipped to tackle complex challenges and adapt to dynamic environments.



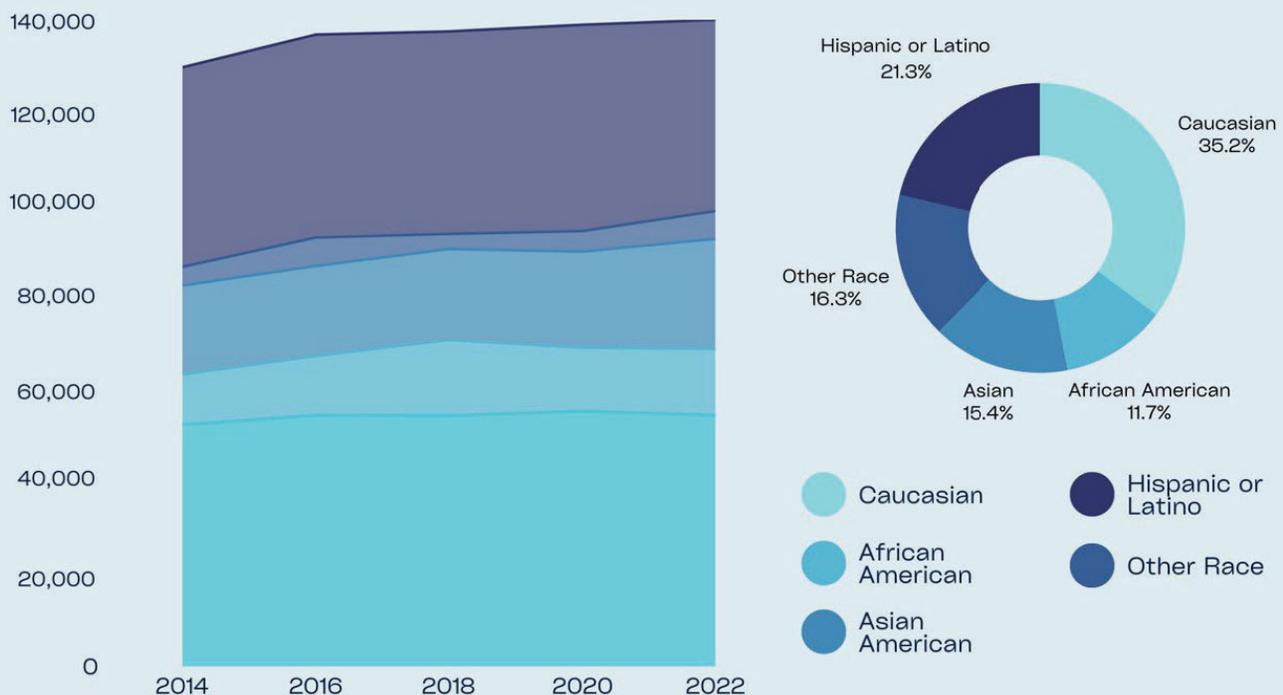
Diversity, equity, and inclusivity (DEI) stand as fundamental pillars of modern society, serving not only as moral imperatives but also as pathways towards progress. In a world characterized by multifaceted identities and experiences, acknowledging, valuing, and embracing diversity in all its forms is crucial for fostering understanding, innovation, and resilience. At its core, diversity encompasses the rich tapestry of human differences, including but not limited to race, ethnicity, gender, sexual orientation, age, socioeconomic status, religion, ability, and culture. Each individual brings a unique perspective shaped by their background, upbringing, and lived experiences. By recognizing and celebrating this diversity, organizations, communities, and societies can harness the collective wisdom and creativity of all its members. The City of Carrollton is a uniquely diverse city as there is no racial majority that makes up its residents. As such, residents enjoy a rich tapestry of cultural celebrations, events, restaurants, and a variety of world views.





## Carrollton's Growing Diversity

2014-2022 ACS 1-Year Estimates



Source: 2014-2022 American Communities Survey (ACS) 1-Year Estimates Data Profiles, DP05 ACS Demographic and Housing Estimates, Carrollton, TX

Equity entails the fair treatment, access, and opportunity for all individuals, irrespective of their backgrounds or circumstances. It requires acknowledging perpetuated disparities in various spheres of life, from education and employment to healthcare and housing, and taking measures to counteract those disparities, dismantle barriers, and create inclusive environments where everyone has an equal chance to thrive.

Inclusivity complements diversity and equity by fostering a sense of belonging and respect for all individuals within a community or organization. It involves creating spaces and cultures where diverse

perspectives are welcomed, voices are heard, and contributions are valued. Inclusive environments not only enhance morale and productivity but also cultivate empathy, collaboration, and innovation. Achieving meaningful progress requires collective commitment and sustained action. It demands introspection, education, and accountability to confront biases, dismantle systemic barriers, and promote equitable opportunities for all. To improve the quality of life of its citizens, the City of Carrollton encourages and invests in diversity, progress, and innovation through various programs and direct action that benefit residents. Additional progress is achieved through grants, incentives, and assistance programs to inject funding into low- to moderate-

# PUBLIC EQUITY



income areas. These programs may revitalize a neighborhood through the complete reconstruction of infrastructure, incentivization of housing rehabilitation, or grants to low-income residents to complete necessary repairs. These opportunities further inject homeowner and neighborhood accountability by providing a catalyst that kickstarts a neighborhood revitalization effort, making these neighborhoods more enjoyable and revitalized. Additional efforts have been mobilized to eliminate physical barriers through ADA-compliant upgrades and inclusive playgrounds for the enjoyment of all.

The initiatives that have been put into action by the City aim to create a healthy and productive workforce,

offer community outreach and improvement, provide access to information and educational resources, implement programs for minorities and at-risk groups, encourage police and community engagement, promote healthy living, and enhance accessibility in a variety of manners.

Embracing and championing the city's diversity, taking measures to ensure equity, and progress towards inclusivity is not only the right thing to do but also the smart thing to do. By recognizing and valuing the inherent worth and dignity of every individual, we can build a more just, inclusive, and resilient world for generations to come.



On November 9, 2019, City Council, in partnership with the Rotary Club of Carrollton-Farmers Branch, held a ribbon-cutting ceremony to open the fourth adaptive playground in the City. The first adaptive playground is located at Mary Heads Carter Park installed in 2014.

# PUBLIC EQUITY



## What We Do

Diversity, equity, and inclusivity (DEI) represent fundamental principles that underpin a thriving society and prosperous organizations. At its core, DEI embodies the recognition and appreciation of the rich tapestry of human experiences, perspectives, and identities. This paper elucidates the significance of DEI in fostering innovation, enhancing organizational performance, and promoting social cohesion. The City of Carrollton celebrates its diversity through the provision of language translation onsite and by phone, when necessary to conduct business at City facilities, partnerships with local social service agencies, and grants and incentives to assist low- to moderate-income Carrollton families.

Diversity	
Strategies	Relevance
<b>Compliance with Title VI Non-Discrimination Plan and Title VI Four-Factor Analysis</b>	Promotes fairness and equality for City employees and residents.
<b>City website can be translated into multiple languages, multi-lingual staff onsite to assist in-person, and Language Line available to call and translate for additional languages not spoken onsite</b>	Over 200 languages can be spoken to provide translation through the Language Line and languages consisting of 10% of Carrollton population are spoken in person.
<b>Workforce Services implementation of a DEI Committee to promote diversity, equity, and inclusivity in the workplace and through City events and programs</b>	DEI Committee consists of 9 members of various backgrounds to create a strong, productive, diverse, and inclusive organization.
<b>Community Funding opportunities for cultural arts programs</b>	Each year, the Community Funding Committee receives and approves public funding grants to non-profit groups that benefit the community, including cultural arts programs.
<b>World language collections available at libraries</b>	Collections provide educational and recreational opportunities in multiple languages for diverse populations.
<b>Library cultural programming and bi-lingual story times</b>	Programs promote diversity and inclusion for all ages.
Equity	
Strategies	Relevance
<b>Partnership between Environmental Services, Carrollton Police, and Metrocrest Services joint homelessness response</b>	Partnership provided homeless prevention services and assistance towards permanent housing for 563

# PUBLIC EQUITY



	individuals since the program was established in 2020.
<b>Library improvements to promote equitable learning opportunities through expanded WiFi in library parking lots, computer device rentals, WiFi hotspot rentals, and an increased focus on electronic resources</b>	Electronic resources has grown significantly and now accounts for 33% of total library use and 40 hotspots are available for rentals.
<b>Elimination of library late fees and free library cards to reinstate previously delinquent accounts</b>	Provides, free, equal, and equitable access to information in all forms and reduces economic barriers.
<b>Leveraging public funding to improve older neighborhoods through Neighborhood Empowerment Zones</b>	Five zones, primarily in Carrollton’s southern and older neighborhoods, are eligible for housing rehabilitation incentives and receive no-cost building permits.
<b>Low and moderate-income based housing rehabilitation programs</b>	8,446 homes qualify for NEZ benefits. As of 2023, 177 rehab projects were completed resulting in \$1.2m in private investment from \$295k in public funding to assist low and moderate income residents with housing repairs.
<b>Extended utility payment due dates</b>	Provides a 60-day grace period to residents to accommodate for unexpected financial disruptions without penalization.
<b>City procurement process requires bids to be received from Historically Underutilized Business (HUB) Vendors to promote contract opportunities from minority- and women-owned businesses</b>	Most competitively bid contracts between \$3,000 and \$50,000 require contacting at least two HUB.
<b>Utility assistance program</b>	Utility bill assistance is available through an ongoing partnership with Metrocrest Services.
<b>Parks pro-rata funding to enhance and maintain amenities in key Carrollton neighborhoods</b>	Pro-rata proportional funding ensures amenities in neighborhoods with a higher need for repair, maintenance, or enhancements are addressed
<b>Inclusivity</b>	
<b>Strategies</b>	<b>Relevance</b>
<b>Providing online payment options and multiple payment locations for bills, permit fees, fines, etc.</b>	Provides residents and businesses options to conduct business with the City without the need to find transportation onsite.

# PUBLIC EQUITY



<b>Compliant with Open Meetings Act, the Public Information Act, and Texas Open Records requirements</b>	Ensures residents have access to public meetings and documents within the required timeframes for transparency and research needs.
<b>Library programs including computer literacy, financial literacy, and digital resources to ensure residents of all backgrounds have access to modern tools and technology</b>	Ensures equity to all, regardless of financial status or background.
<b>Library programs including SAT prep, job and career fairs, reading programs, and resume building to help residents of all backgrounds further their education</b>	Those wishing to further their education or career have the opportunities and tools required to make the next step.
<b>Inclusive playgrounds</b>	There are 4 inclusive playgrounds, located at Holman Rhoton Park, Mary Heads Carter Park, Rosemeade Park, and W.J. Thomas Park.
<b>Adaptive programming</b>	Children and adults of all abilities can partake and review Leisure magazine Adaptive Recreation page which denotes barrier-free activities.
<b>Parks and Recreation and Library Services partnered with KultureCity to make six Carrollton facilities sensory inclusive</b>	Crosby and Rosemeade Rec, the Senior Center, Homestead Museum, and Hebron & Josey and Josey Ranch Libraries have adaptive offerings and are sensory inclusive.
<b>ADA-Compliant sidewalks</b>	Public Works ensures all sidewalk repairs or replacements are barrier-free and ADA-compliant.
<b>Communication boards to allow individuals to easily communicate with caregivers at City parks</b>	A total of 6 boards are being installed at Parks across the City to provide individuals with communication difficulties an alternative communication method.

## Looking Forward

While the City of Carrollton has meticulously planned for continued progress to promote its diversity, ensure equity across all residents, and take steps towards a more inclusive city, there is always additional room for growth. As new challenges are identified, continual progress will be made to overcome each obstacle to diversity, equity, and inclusivity.

### Diversity



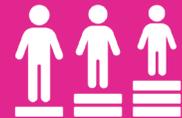
#### Strategies

#### Proposed Benefits

**Continued compliance with Title VI Non-Discrimination Plan and Title VI Four-Factor Analysis**

Promotes fairness and equality for City employees and residents.

# PUBLIC EQUITY



## Enhance translation services

City staff to receive a small translation compensation if able to provide written and spoken translation services for residents that speak a language of less than 5% of the total population, as opposed to 10% today.

## Institute a “Library of Things” to expand library resources

Increases the diversity of resources for recreational, educational, and professional pursuits.

## Equity



### Strategies

### Proposed Benefits

#### Continue and expand Childhood Literacy programming and Grab & Go Kits

Encourages child literacy through multi-faceted learning practices.

#### Enhance support for caregivers and other underserved groups

Improves access to education for all members of the community regardless of family structure or demographic.

#### Identify service providers for ESL, GED, and Citizenship programs

Promotes diversity and integration into the community and provides education tools and resources to further education.

## Inclusivity



### Strategies

### Proposed Benefits

#### Coordinate inclusivity and accessibility improvements at City facilities and City functions

Ensures accessibility for all residents and visitors regardless of ability.

#### Establish “quiet zones” in all City facilities to create sensory-inclusive spaces

Provides the necessary space for individuals that require an area with less sensory stimulus.

#### Evaluate ease and accessibility to events, facilities, and programs through KultureCity certification

Ensures events, facilities, and programs are fully inclusive to all and provides a standard for the region.

#### Apply Community Development Block Grant funding towards ADA-Compliant sidewalks and paths

Future funding will aid Public Works in identifying and installing barrier-free sidewalks, walking paths, curbs, and other infrastructure.

# PUBLIC EQUITY



## What You Can Do

### Citizens

Utilize library and recreation center resources

Participate in community and outreach programs

### Businesses

Provide resources for employee health and wellness

Encourage employee training and continued learning

## Summary

The City of Carrollton is dedicated to creating a diverse, inclusive, and healthy community that provides equal opportunity and access to all resources. This is a fundamental aspect ingrained in organizational culture that is supported and promoted by all City departments. The City of Carrollton strives to create a strong and meaningful connection with citizens to ensure everyone feels welcome and safe, that their thoughts and concerns are heard, and that they are proud to live in Carrollton. In diverse societies, local governments must reflect the varied identities and perspectives of their respective populations to effectively serve all citizens.



A night scene of a fireworks display over a lake. In the foreground, a young man with a tattoo on his arm sits on the grass, looking towards the fireworks. Other people are scattered around, some sitting on blankets and others standing, many holding up their phones to capture the moment. The fireworks are exploding in the dark sky, with bright streaks of light and large bursts of color. The lake is visible in the background, reflecting the light from the fireworks. The overall atmosphere is festive and communal.

# COMMUNITY

# COMMUNITY



## Background

Community refers to the social connections and networks between individuals, organizations, and neighborhoods and is a critical component of long-term sustainability through a sense of belonging and support to individuals, fostering trust and cooperation, and the promotion of social and economic growth. It is crucial for ensuring that future generations have access to resources and opportunities currently available today and those still on the horizon. Ensuring public safety through the provision of law enforcement, firefighting services, emergency medical care, and disaster response provides the base from which communities are built upon. It is critical for maintaining order, promoting well-being, and providing a sense of security for individuals and communities. When community, sustainability, and public safety are fully integrated and balanced, individuals are more likely to thrive and communities are more likely to be resilient and able to overcome adversity.



Communities are vital for providing a sense of belonging and connection, and for fostering trust and support between individuals. They also provide us with opportunities to take part in meaningful activities, share experiences, and create lasting relationships. In order for community connection to occur, the City of Carrollton provides opportunities for residents to engage with the City and community members by leveraging and celebrating its diversity to create an opportunity for understanding, learning, and engaging. Additionally, ensuring equitable conditions are available regardless of background, providing fundamental safety and addressing problems unique to each Carrollton neighborhood and City as a whole creates a safe place to live, work, and raise a family. An informed and educated community is vital for continued growth in these aspects and continues to develop as opportunities to engaged with residents evolves over time. Through in-person informal conversations, formal educational workshops, and equipment made available to



# COMMUNITY



residents, the opportunity to learn, grow, and connect as a community continues to flourish. The City recognizes its role in educating our residents and businesses, leading by example, and the importance of innovative and multilayered community outreach on the strategies selected for utilization.



The 2015 flooding impacts on McInnish Park in southern Carrollton. Localized flooding, tornadoes, and hail are common natural disasters Carrollton has preparation and emergency planning for future response.

Resiliency refers to a community's ability to withstand and recover from adversity, such as natural disasters, economic downturns, or social crises. It is an essential consideration as communities that are more resilient are better equipped to cope with and recover from unexpected events, reducing the long-term impact of these events. Resilient communities are also better positioned to identify and address systemic challenges that may contribute to vulnerabilities. Building community resiliency requires a multifaceted approach that involves collaboration between community members, government agencies, and other organizations. By prioritizing community resiliency, we can create a more sustainable and equitable future for all. Emergency preparedness is of utmost importance in ensuring the safety and well-being of individuals and communities during times of crisis.

Natural disasters, pandemics, and other emergencies can strike at any moment, leaving individuals and communities vulnerable. By being prepared for these situations, individuals and communities can reduce the impact of the emergency and improve their chances of survival. Emergency preparedness includes activities such as developing emergency plans, stockpiling essential supplies, and practicing emergency drills. It also involves staying informed about potential risks and hazards in the area. By investing in emergency preparedness, individuals and communities can minimize the loss of life, prevent injuries, and reduce the financial impact of emergencies. It is a critical component of risk management and can provide peace of mind to individuals and communities alike.



Carrollton Fire and Rescue assisted neighboring partners in the Town of Addison in response to a 3-alarm structure fire of an apartment complex.

Public safety is of utmost importance in any society as it serves as a fundamental basis for social stability and progress. Ensuring public safety involves creating an environment where individuals feel safe and secure, free from harm and danger. It encompasses a wide range of factors including crime prevention, emergency response, and disaster management. Public safety measures are crucial in promoting a

# COMMUNITY



healthy and thriving community by reducing the incidence of accidents, violence, and crime. By providing a sense of security to the citizens, public safety measures enable them to pursue their daily

activities with confidence and without fear. It is, therefore, essential for governments, organizations, and individuals to prioritize public safety to maintain a stable and prosperous society.

## What We Do

Encouraging an active and engaged community is assisted through various educational and outreach opportunities to a wide variety of residents and interests. A sense of community is also provided by ensuring the long-term sustainability of neighborhoods. Blight elimination is provided by direct or indirect grants and incentives that promote homeowner repairs and revitalize neighborhoods. Providing safety through civil service and additional programs that integrate these civil servants across cultural beliefs and backgrounds helps to bring all community members together in a safer environment that is inclusive to every resident.

## Outreach and Engagement



### Strategies

### Relevance

**UNIDOS – outreach and assistance for the Hispanic Community in Carrollton**

UNIDOS is conducted quarterly and entirely in Spanish.

**Coffee with a Cop – casual community get-togethers to meet CPD Officers**

Offers an opportunity to speak with local Police Officers and ask questions.

**Citizen Police and Fire Academies – members learn Police or Fire operations, investigations, and response**

Courses conducted once per week over 14 weeks.

**Citizen volunteering opportunities to give back to the community**

Storm drain marking, creek cleanups, Citizen Patrol, and youth sports leagues can be found at [www.justserve.org](http://www.justserve.org).

**Urban wildlife outreach programs help train citizens on identification, proper procedures, and acceptance of native animals**

Carrollton is home to coyotes, bobcats, skunks, raccoons, and fox which are not considered an immediate threat unless sick, injured or overly accustomed to humans.

**CPR, Stop the Bleed, and Civilian Response to Active Shooter Events workshops and citizen certifications**

Citizens can receive two-year CPR certification and learn the proper response to an active shooter event.

**Library outreach to schools and community events**

Increases awareness of information, programs and resources available to schools and students.

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**Partnership with Friends of the Public Library to offer “pocket library” resources**

Resources are deployed at remote locations where they're needed most such as local WIC clinics and Rec Centers.

## Community Improvements



### Strategies

### Relevance

**Transit-Oriented Districts (TODs) increase density around transit centers**

TODs increase economic activity and create residential density which help to reduce single occupant vehicle trips.

**Rail crossing Quiet Zones in residential areas**

Quiet Zones eliminate train horn noise in residential areas at nine crossings.

**Short Term Rental regulation for better neighborhood integration**

Carrollton has an estimated 300-400 short term rentals. Registration and inspections reduce negative impact to single-family neighborhoods.

**Continued focus on housing redevelopment projects**

The City is 98% built out – as such a focus on high density development, infill sites, and the Josey- Belt Line Overlay District provide integrated housing in remaining development sites.

**Corridor beautification along City arterials, collector streets, and entryways**

The Neighborhood Enhancement Matching Grant is a 2:1 corridor beautification program providing up to \$25,000 for neighborhood improvement projects.

## Resiliency



### Strategies

### Relevance

**Emergency preparedness trailer for rapid response during weather or disaster emergencies**

Trailer can support 100 residents and pets for three days. Equipped with medical supplies and essential items.

**Emergency volunteer management to intake, screen, train, equip, and deploy assistance**

Emergency volunteer hours count towards FEMA public assistance grants for 100% reimbursement.

**Installation of backup generators across City facilities and at emergency shelters**

32 backup generators ensure the City and emergency response teams continue operating in times of citywide blackouts.

**Carrollton Fire is specialized and responsible for regional Swift Water Rescue, confined space, and high angle rescue services**

Surrounding cities share resources for rescue specialization, including Addison in Plane Crash

# COMMUNITY



<p><b>Fortification of virtual security to protect from data loss and breaches of City systems</b></p>	<p>Response, Coppell for trench rescue, and Plano, Irving, and Dallas responsible for HazMat response.</p> <p>The City experienced a large-scale cyber-attack in 2019, seeing its website down for three weeks and a long recovery. Reportedly, more than 70% of all reported ransomware attacks in the U.S. target state and local governments.</p>
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## Safe Environments

Strategies	Relevance
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<p><b>Crime Reduction Program targets apartments with high police calls requiring management take steps to reduce crime</b></p>	<p>Carrollton was named the 27<sup>th</sup> safest city in America in a 2021 Smart Asset report.</p>
<p><b>Improved Police and Fire response times to better provide emergency response to residents</b></p>	<p>Fire average response times were 5:13 and EMS average response time was 4:49 in 2022, below the national average of roughly seven minutes.</p>
<p><b>Project H.O.M.E. – Police assistance for Carrollton residents with cognitive impairments.</b></p>	<p>“Help Our Missing and Endangered” allows registration of loved ones for Police to match physical descriptions with a found individual.</p>
<p><b>Lockbox Program – senior citizens receive a lockbox for their house key for use in medical emergencies</b></p>	<p>Reduces property damage due to forced entry in an emergency and allows faster response.</p>
<p><b>Citizen Patrol utilizes volunteers to assist with City safety and neighborhood patrol</b></p>	<p>Citizen patrol volunteers assist the Police Department with low-risk safety assistance to improve officer response time.</p>
<p><b>Fire Department free installation of smoke detectors without alarms</b></p>	<p>296 low-income families have received smoke detectors since the program’s start.</p>
<p><b>Exchange Zone provides safe locations to exchange bought or sold items for citizens</b></p>	<p>Located in front of Police Station and is monitored 24/7.</p>
<p><b>Fire Department received a grant for AEDs in all City facilities and select City vehicles</b></p>	<p>154 AEDs have been deployed in City facilities and vehicles since 2021.</p>
<p><b>The 4-Minute City Program: 200 dispatchable AEDs assigned to trained CARE Team Volunteers by Carrollton Fire and Rescue</b></p>	<p>The first 4 Minute City Program in Texas mobilizes citizens to accelerate emergency access to AEDs and creates a unified prehospital response system by connecting bystanders, NTECC 911 dispatchers, CFR, and hospital providers.</p>
<p><b>Seek Council approval for backlit street signs at major intersections</b></p>	<p>Lit street signs are more legible at night and provide an improved aesthetic at major intersections.</p>

# COMMUNITY



## Healthy Living



### Strategies

### Relevance

**Response and protection against West Nile, Zika, and other mosquito-borne viruses**

14 mosquito testing zones are designated across the City to trap and test for WNV and Zika in coordination with Dallas County. Positive tests result in spraying affected areas.

**Access to health, wellness, and recreational amenities**

Available amenities include:

- Crosby and Rosemeade Rec Centers and Senior Center
- 31 total parks and greenbelts
- 38 athletic fields and 5 sports complexes
- Elm Fork Nature Preserve
- 11 miles of hike and bike trails

**Annual Health and Safety Fair**

Highlight City services and create engagement with local health and public safety resources.

**Food safety inspections performed in greater frequency than state requirements**

Over 1,600 food safety inspections are completed on average per year.

**Public pools, spas, and interactive water features are inspected annually**

Over 185 pool, spa, and interactive water feature inspections are completed each year.

**Multi-family units are inspected annually to ensure healthy, safe living conditions**

Over 10,000 multi-family units are inspected each year to ensure property owners provide safe living conditions for tenants.

**Household Hazardous Waste program to pick up hazardous and electronic waste**

Over 100,000 lbs. of household hazardous waste is properly disposed of each year at no additional charge to residents.

**Free library programs and classes**

Provide a variety of topics promoting healthy living, mental health, financial literacy, and managing life events.

**Library Family Place Playgroups**

Nationally recognized program includes resources for child nutrition, activity, development sessions, as well as other professional expertise for whole-family health.

## Looking Forward

Community planning is crucial to ensure their long-term success, sustainability, and resilience. This requires developing strategies to meet the needs of the community, including housing, transportation, economic development, environmental

# COMMUNITY



conservation, and public services. Effective community planning requires collaboration among community members, local government, and other stakeholders to identify priorities, allocate resources, and implement solutions. By planning for the future, communities can avoid issues such as urban sprawl, environmental degradation, and social inequality. Planning can also help to create more livable and desirable communities that attract investment and support economic growth. Ultimately, community planning is essential for creating communities that are healthy, equitable, and prosperous, both now and in the future.

## Outreach and Engagement



### Strategies

### Proposed Benefits

**Receive resident feedback for desired workshops and outreach opportunities**

Tailor workshops to citizen desires and adapt to evolving needs.

**Pilot an animal foster care program**

Foster care helps improve animal adoption rates by increasing sociability, additional care when needed, reduces time spent sheltered.

**Pursue FTEs for Korean Community Liaison, Public Service Officer, Community Affairs Officer, Case Review Unit, and Police Reserve Division**

Provides an increased flexibility in police response and adds an additional outreach component for CPD.

**Implement a youth diversion and intervention program**

These services can act as an early intervention step to reduce or eliminate juvenile delinquency through positive education and outreach.

**Expand High-Performance CPR (HP-CPR) community engagement**

Goal is to teach and train 10,000 residents basic CPR and AED use.

## Community Improvements



### Strategies

### Proposed Benefits

**Connect City bike trails to DART stations**

Increases walkability and reduces single occupant vehicle travel.

**Improve City facility internet connection from microwave to fiber internet**

Fiber laying efforts may provide fiber access to residential homes.

**Introduce Augmented Reality (AR) for more immersive City interactive experiences**

AR helps staff train more effectively and helps citizens better understand city planning, architecture, and other city initiatives.

**Downtown mural refreshment program**

Provides vibrant artwork to enhance downtown and create a destination location.

# COMMUNITY



**Research mandatory microchipping for improving return-to-owner rates for lost pets**

Microchipping pets increases return-to-owner rates to more than 74% for dogs and 63% for cats.

## Resiliency



### Strategies

### Proposed Benefits

**Migrate City digital records to offsite facilities and cloud storage**

Reduces risk of severe weather or cybersecurity records loss.

**Provide additional spoken language translators onsite at City Hall**

Change population threshold for supporting onsite languages from 10% of population to 5% of population.

**Continue development of Comprehensive Department Emergency Plans for continued City services during weather events, power outages, or other disruption events**

Improves resiliency during events that disrupt normal City services.

## Safe Environments



### Strategies

### Proposed Benefits

**Reduce overall crime through education, community engagement, and data-driven intelligence-based policing**

Targeting overall crime reduction by 3%, violent crime by 5%, and property crime by 5%.

**Utilize and leverage technology as a multiplier to reduce areas of increased crime**

Use of Targeted Area-Action Grids (TAAGs) to more effectively reduce crime.

**Expand FLOCK license plate reader program to increase officer efficiency in detecting and interrupting criminal activity**

Identification of vehicles entering, exiting and traveling within the areas of interest to enhance security and safety of those areas.

**Implement an online reporting module to allow citizens to file reports for specific incidents without having to call 911**

Reduces on call hold time and reallocates officer resources by taking 10-30% of non-emergency reports online.

**Pursue Virtual Crime Center that brings together disconnected data from nationwide police agencies and public records**

Utilizes intelligence resources from over 10,000 different policing sources for intelligence-led policing.

**Expand free smoke detector program to include carbon monoxide detectors**

Provides additional safety measure for residential homes in Carrollton's older neighborhoods.

**Utilization of a Truck/Squad concept for emergency response**

This concept provides enhanced EMS service delivery, improved response times, in-district unit reliability, and reduced wear of apparatuses.

# COMMUNITY



**Increase the free Smoke Detector program**

Goal to reach 1,000 smoke detectors installed in underserved neighborhoods.

**Implement an online crime reporting system for specific incidents and avoid the need to call 911**

Reduces on-hold call times and would migrate roughly 10-30% of calls to online reporting.

## Healthy Living



### Strategies

### Proposed Benefits

**Increase programs through virtual means such as Fitness on Demand and virtual instruction for Recreation programs**

Provides additional avenues for residents to maintain activity and fitness levels if unable to attend in person.

**Create programming opportunities for teens and youth during non-school hours**

Additional camps, multi-sport summer leagues, and other teen and youth activities provide additional means for opportunities to stay active outside of school.

## What You Can Do

### Citizens

### Businesses

Attend outreach events and educational workshops

Construct new builds or update current builds to updated building codes

Volunteer for City events

Consider proximity to local area transit hubs

Become an emergency response volunteer during natural disasters

Utilize Commercial Rehabilitation Grant funding for exterior improvements

Participate in H.O.M.E. and Lockbox programs for yourself or family members needing assistance

Find opportunities to assist with local natural disaster response

# COMMUNITY



## Summary

The City of Carrollton is dedicated to fostering a thriving, resilient, and inclusive community. Through the combined efforts of City departments, the City continues to enhance the quality of life for its residents by addressing key areas such as public safety, community engagement, and environmental sustainability. Programs aimed at improving public safety, encouraging active citizenship, and promoting emergency preparedness are crucial to ensuring that the City remains a secure and vibrant place to live. Moreover, Carrollton's commitment to sustainable development and forward-thinking planning has positioned it as a leader in promoting environmental stewardship, housing revitalization, and public health initiatives. As the City continues to grow and adapt, its focus on collaboration, innovation, and inclusivity ensures that it will meet the needs of current and future residents alike. By prioritizing these values, Carrollton is paving the way for a prosperous and equitable future.



# CONTRIBUTING DEPARTMENTS



## DEVELOPMENT SERVICES

- Community Improvements

## ECONOMIC DEVELOPMENT

- Community Improvements



## EMERGENCY MANAGEMENT

- Resiliency
- Healthy Living

## ENGINEERING

- Community Improvements



## ENVIRONMENTAL SERVICES

- Outreach and Engagement
- Community Improvements
- Safe Environments
- Healthy Living

## FACILITIES

- Resiliency



## FIRE

- Outreach and Engagement
- Resiliency
- Safe Environments
- Healthy Living

## INFORMATION TECHNOLOGY

- Resiliency



## PARKS AND RECREATION

- Outreach and Engagement
- Resiliency
- Healthy Living

## POLICE

- Outreach and Engagement
- Safe Environments
- Healthy Living





# VIBRANT ECONOMY

# VIBRANT ECONOMY



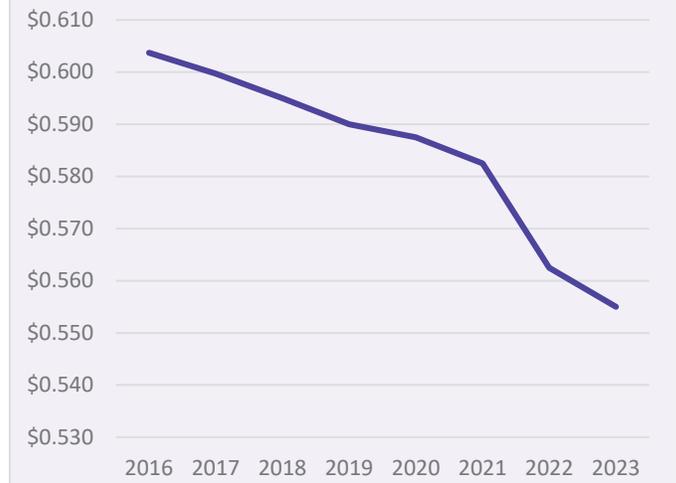
## Background

A vibrant economy is dynamic, robust, and growing and is characterized by high levels of economic activity, low levels of unemployment, and a high level of productivity. Additionally, a healthy economy creates competition among businesses, leading to innovation and improved quality of goods and services and can be characterized by a diverse range of industries and sectors. This diversity helps to create a resiliency that can weather economic shocks and adapt to changing market conditions. A vibrant economy also exhibits a high level of consumer confidence and spending, leading to increased demand for goods and services, which in turn drives economic growth. This growth creates new job opportunities and increases the standard of living for the population.



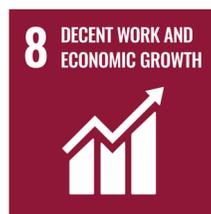
A rendering of the upcoming Trinity Mills Station Development which incorporates mixed-use retail, residential, Class A Office and greenspace to serve as an economic hub along the DART Green line and President George Bush Turnpike.

## Property Tax Rate Per \$100



Carrollton City Council continues to lower the property tax rate per \$100 to reduce the impact of increasing home values to Carrollton property owners.

A healthy, sustainable economy prioritizes the protection of the environment, preservation of natural resources, and equitable distribution of wealth and opportunities. In a sustainable economy, economic growth is balanced with social and environmental considerations, with a focus on creating a more resilient and adaptive system. Additionally, the economy should support communities, particularly those that are marginalized, by creating jobs and providing access to essential services such as healthcare, education, and housing. A sustainable economy values people and the community over profits and is committed to reducing inequality and promoting prosperity for all. To achieve this, there must be a shift towards more cooperative and

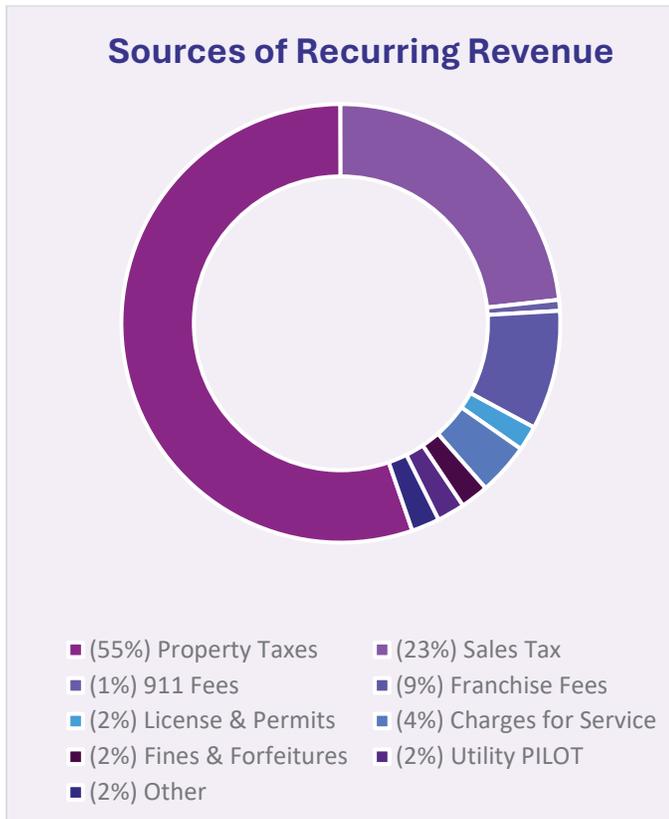


# VIBRANT ECONOMY



collaborative forms of economic activity, and a greater focus on local and regional economic systems. The City of Carrollton is dedicated to achieving the highest quality of development, infrastructure, and quality of life for its citizens. These objectives are met, in part, by the continued enhancement and expansion of the city’s economy. Due to the competitive nature of economic development at the local, state, and national levels, additional incentives and grants are often needed in order to attract and retain businesses, resulting in capital investment to the community which in turn lowers the tax rate on Carrollton residents.

Recent economic uncertainty stemming from an unprecedented pandemic resulted in volatile developments in labor productivity levels and mobility restrictions which prevented labor reallocation to informal employment. Rather than become unemployed or shift to informal jobs, as in previous crises, laid-off employees, retirement eligible, and self-employed workers left the labor force en masse. A disproportionate impact on informal workers was reflected in a decline in the informal employment rate at the height of the crisis, which has left families in a highly precarious position, exposed to sudden income losses and heightened risks of falling into poverty. Meanwhile, the level of unemployment underestimates the full employment impact of the crisis since many who left the labor force have not come back nor does it reflect the reduction in working hours for those who remained employed.

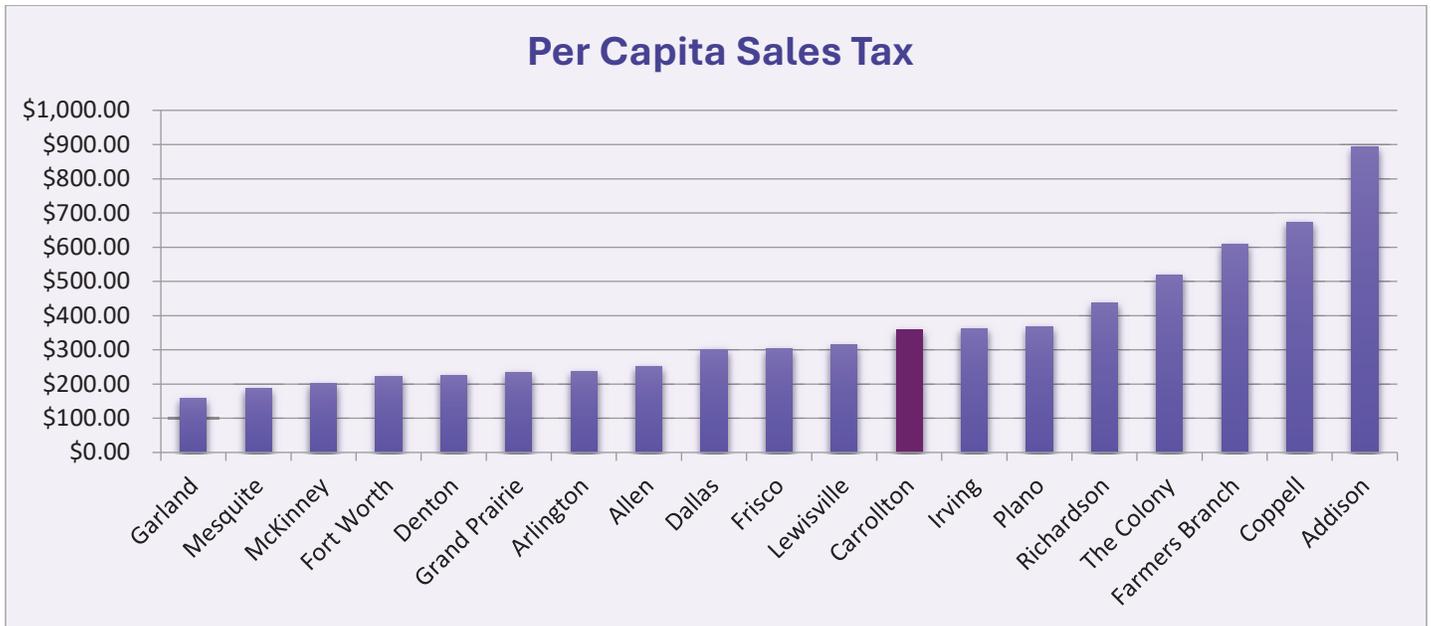


The chart above represents the General Funds recurring revenue sources as percentages of the total expected revenue for FY2023.

To continue to spur sustainable economic growth and provide a sustained blanket to the city’s tax base, the City of Carrollton invests heavily in attracting and maintaining its industrial workforce and business. The Economic Development department participates in the State of Texas transparency program that provides information to taxpayers about programs and incentives supported by the residents' tax dollars to create jobs and grow the economy. This in turn provides employment opportunities in a multitude of sectors, including skilled labor, manufacturing, warehouse, and C-Suite corporate offices. With an increased focus on Transit-Oriented District serving as office, civic, and mixed-use residential hubs, these fully functional centers provide both work and living opportunities, eliminating the commuting aspect while serving the housing and work needs of current or future residents.



# VIBRANT ECONOMY



## What We Do

Decent work and economic growth is incorporated into the community through grants and incentives to attract and retain businesses, including warehousing, manufacturing, office space, and a multitude of small businesses. These opportunities provide residents with work opportunities, provide the foundation for the city’s tax base, and through the increased retail opportunities, offer an increased capital into the city’s sales base. Utilizing these grants incentivizes new businesses to establish or relocate in the City, further providing a stable, growing local economy.



Carrollton is consistently a frontrunner for providing services to residents at a lower comparative rate than surrounding cities coming in second for the lowest cost for services for residents in fiscal year 2024.

# VIBRANT ECONOMY



## Retain, Rehabilitate, and Redevelop Current Business



### Strategies

### Relevance

**Tax Increment Reinvestment Zone commits 65% of future revenue increases to fund infrastructure near DART stations**

The districts are most commonly used to fund street, water and sewer improvements but can be used for street lighting, parking structures, sidewalks and landscaping.

**Industrial Rehab Grants for landscaping and site improvements to rehabilitate aging industrial locations on major thoroughfare**

Trinity Mills Development

- 25-acre redevelopment of vacant land, aging buildings, parking lots
- 3-acre greenspace
- 135k sq. ft. office bldg.
- 400+ unit mixed-use multi-family

**Retail Rehab Grants to improve aging retail exteriors, landscaping, and parking lots**

Shops at Old Denton retail rehab project updated a 295k sq. ft. retail center resulting in the H-Mart anchor store with a 95% occupancy rate.

**Grants for exterior, façade, and signage improvements for vacant groceries to be backfilled by specialty retailers.**

\$14 billion in assessed value for commercial space with over 380 restaurants.

**Job Creation Grant providing \$100-\$2000 per job created and located in City**

Average household income in Carrollton as of 2022: \$95,380.

## Create a Destination City



### Strategies

### Relevance

**Public/Private Agreement Program providing up to 30% incentive on improvement costs in Transit-Oriented Development district**

6.8 million sq. ft. of retail.

**Maintain a diversified inventory of businesses**

Occupancy rates:

- Office: 82%
- Industrial: 97%
- Retail: 95%

**Provide translation assistance during application, permitting, and inspection process to support multi-cultural business inclusion**

Over 200 languages available for translation.

## Workforce Stability



### Strategies

### Relevance

**Job Creation Grant providing \$100-\$2000 per job created and located in City**

AmerisourceBergen received grant for 3,000 new jobs.

# VIBRANT ECONOMY



Partnership with Metrocrest Services to identify work opportunities for homeless or near homeless individuals	Metrocrest Services job assistance helps over 2,000 individuals per year.
Facilitation of local start-up businesses to provide aid in small business success	89,157 people employed in Carrollton.
<b>Stewardship</b>	
<b>Strategies</b>	<b>Relevance</b>
Community Service funding to support local nonprofit organizations	\$1,210,000 in Community Service Funding was provided in 2023 to assist nonprofits, including Bea’s Kids, Children’s Advocacy Center, CASA of Denton County, Metrocrest Services, and Woven Health Clinic.
Managed Competition ensures city department right-sizing, increased productivity, and implementation of best practices	Managed Competition has saved the city roughly \$45 million since inception by reviewing over 40 City Divisions and Departments.
Financial Transparency award recipient from Texas Comptroller	Traditional financial information, debt information, pension information, and economic development projects are readily available on the city website.
Consistently rated “AAA” Bond rating for city creditworthiness	Fitch Ratings, Inc. and S&P Global Ratings have assigned a “AAA” long-term rating to Carrollton for \$29.6 million in general obligation bonds with a stable outlook for 2024.

## Looking Forward

Carrollton’s long-term economic success begins at home with its local businesses including small businesses, restaurants, industries, retail, and unique locations to draw in a broader interest. Understanding Carrollton’s advantages of its central location, being intersected by multiple highways, and strong community and enacting strategic plans to leverage those benefits externally creates a strong local economy supported by its community. With further planning to identify areas for current and future growth, the City of Carrollton can plan to generate this economic momentum long-term.

## Retain, Rehabilitate, and Redevelop Current Business



<b>Strategies</b>	<b>Proposed Benefits</b>
Encourage reuse and redevelopment of abandoned sites	Utilizes Carrollton’s advantageous location to attract industry

# VIBRANT ECONOMY



**Implementation of an environmental remediation incentive**

Environmental remediation is a key component of rehabilitating abandoned or underutilized industrial sites and provides an incentive to remediate historical contamination

## Create a Destination City



### Strategies

### Proposed Benefits

**Construction and promotion of green buildings**

Reduced infrastructure loads and modernizes existing or future development projects

**Recruit specialty and destination restaurants looking to expand**

Further develops inventory of destination restaurants

**Identify businesses unique to Carrollton**

Fosters destination city model

**Incentivize relocation**

Provides fresh business opportunities and supports an ongoing sales tax base

**Coordinate with new industry to create innovative new designs**

Provides an opportunity for creative use of existing land and sites for increased density

**Aid local business startups**

Providing assistance to new businesses or business types creates a new business incubator for long-term economic success

**Coordinate with counties to create a County Incentive for business attraction**

Joint incentives boost local economies, create jobs, and enhance community development

## Workforce Stability



### Strategies

### Proposed Benefits

**Utilize job creation grants to provide workforce stability**

Current city average wage of \$64,535 is set to increase with current year-over-year growth trends

## Stewardship



### Strategies

### Proposed Benefits

**Complete full Managed Competition process on all city departments**

Ensures streamlining, best practices, and right sizing for non-civil service areas of local government

**Explore and implement new banking technologies that automate revenue collection**

Automating revenue collection decreases the manual processing of cash and checks and provides residents with an increased ease-of-use

# VIBRANT ECONOMY



Achieve a fifth Transparency Star for contracts and procurement from the Texas Comptroller's Office or obtain the Excellence in Procurement Award

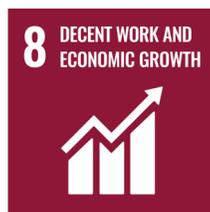
Improved contracts and procurements provides the highest value for procured items and contracted services

## What You Can Do

Citizens	Businesses
Shop local grocers and locally owned businesses	Hire locally
Attend local concerts, art exhibitions	Utilize job creation and rehab grants
Support community events, fairs, farmers markets	

## Summary

Economic Development will continue to be a long-term focus to provide the industry and retail tax base while ensuring sustainable growth, work opportunities, and a mixed-use of businesses to attract new business and to remain a destination location. Long-term planning includes shifting priority business attraction to keep abreast with shifting market trends. For example, the rehabilitation and redevelopment of outmoded businesses or locations into more desirable or needed trades, industries, or sites. This will be achieved through a continued focus on grants and incentives to attract relocating businesses, the development of mixed-use retail and office spaces, such as the Trinity Mills and Downtown projects. The creation or relocation of new business through redevelopment or new development results in job creation in a highly residential city, promoting workforce stability and opportunities without the reliance on single passenger or long commutes, particularly in the Transit-Oriented Districts.



# PARTNERSHIPS

#mycarrollton

 **CARROLLTON**  
TEXAS

DO NOT CLIMB NO STEP

NO SUBIR NO ESCALAR

# PARTNERSHIPS



## Background

Cities do not operate in isolation but are interconnected within local, regional, and national networks. Partnering with municipal partners and external agencies allows the City of Carrollton to leverage these networks to amplify the impact within the community and for sustainable initiatives. Collaborative initiatives such as city-to-city partnerships, knowledge-sharing platforms, and national conversation enable cities to learn from each other, replicate successful strategies, and collectively address shared challenges. Through these networks, cities not only benefit from collective strategies but also contribute insight and experience to drive continuous innovation and progress beyond the city limits.

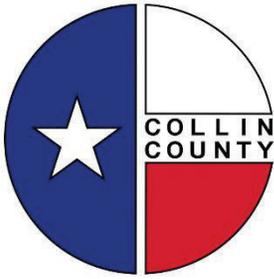
That innovation and progress is further bolstered through harnessing the diverse expertise of external agencies, ranging from non-governmental organizations (NGOs), local school districts, and non-profit organizations. By partnering with these entities, the City of Carrollton opens dialogues and gains access to specialized knowledge, research, and innovative solutions. Collaboration with these agencies furthers data-driven decision making and fosters solution-based results to community or broader urban challenges. Furthermore, open lines of communication with these external groups ensures policy or direction changes resulting in impacts to various groups, residents, or businesses are employed in the most effective manner.

The City of Carrollton participates in a number of

municipal organizations and memberships in order to receive information on relevant industry practices, updates to state and federal policy changes, as well as regional groups to ensure pertinent information resources are broadly distributed. The North Central Texas Council of Governments (NCTCOG) is one such voluntary organization in which 16 Dallas-Fort Worth counties and over 230 member governments make up this organization to assist local governments in planning for common needs, coordinating for sound regional development, and cooperating for a mutual benefit. Participating cities have access to regional building codes, economic development strategies, and sustainability and transportation efforts, including regional data and mapping systems. Through the NCTCOG, the City of Carrollton is a voting member of the Regional Integration of Sustainability Efforts (RISE) Coalition, a platform used to steer regional sustainability initiatives, gather regional environmental data, and share results in a collaborative manner.

Locally, the City employs multiple partnerships with various NGOs, NPOs, and other agencies to further sustainable initiatives. Partnerships include direct funding assistance and Community Development Block Grant funding to social service agencies including Metrocrest Services and Woven Health Clinic to provide assistance to low-income Carrollton residents. Additional partnerships are employed with the counties, federal administrations, transportation and utility authorities, and more. These strategic partnerships ensure best industry practices and enhanced responsiveness to shifting policies or resiliency planning.





FEMA





**American  
Red Cross**



WOVEN HEALTH CLINIC



**METROCREST**  
CHAMBER OF COMMERCE  
ADDISON • CARROLLTON • FARMERS BRANCH



**OPERATION  
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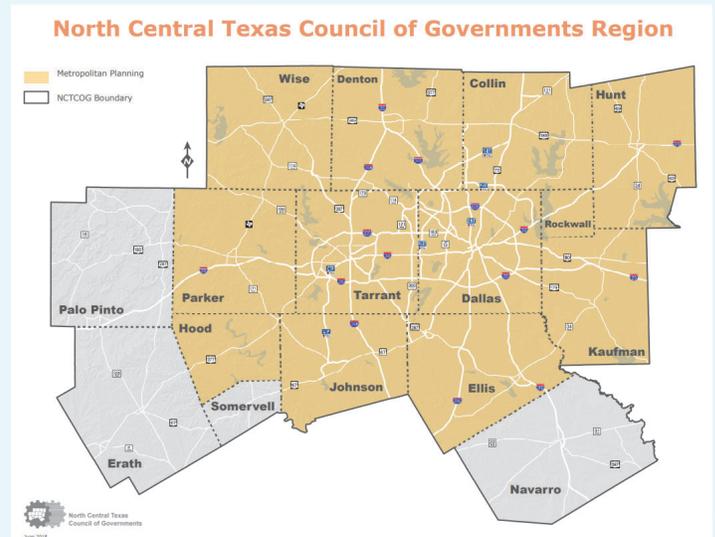
# Regional Integration of Sustainability (RISE) Coalition



The North Central Texas Council of Governments' (NCTCOG) Regional Integration of Sustainability Efforts Coalition (RISE) provides local governments an opportunity to engage, share ideas, and receive support on sustainability and environmental initiatives with peers. RISE's mission is to bring together North Central Texas governmental and quasi-governmental organizations to achieve measurable environmental benefits and emissions reductions that contribute to the vitality of the North Central Texas economy and the quality of life of its residents.

The coalition membership is open to all NCTCOG members and is made up of voting members, non-voting members, and participants. Current voting members include the cities of Carrollton, Cedar Hill, Dallas, Denton, Farmers Branch, Fort Worth, Lewisville, Plano, and Tarrant Regional Water District. Members are expected to attend the four quarterly meetings and participate in various activities to further regional sustainability initiatives. Carrollton joined the coalition as a voting member in April 2021 and continues that membership today.

Each year the Coalition establishes a work program that describes projects, goals, and initiatives to be undertaken by the Coalition and NCTCOG that benefit the region. Current focus topics include conducting a regional emissions assessment, communicating sustainability to leadership, sustainable transportation and air quality strategy analysis, and energy efficient programs and regional energy resilience. A past project included a Local and Regional Greenhouse Gas Emission Inventory.



NCTCOG is a voluntary association of, by, and for local governments and entities in the Dallas Fort Worth metroplex and was established to assist local governments in planning for common needs, cooperating for mutual benefit, and coordinating for sound regional development. The purpose is to strengthen both the individual and collective power of local governments and to help cities participate in regional opportunities, eliminate unnecessary duplication, and make joint decisions. NCTCOG serves a 16-county region of North Central Texas, which is centered around the two urban centers of Dallas and Fort Worth. NCTCOG has over 230 member governments including 16 counties, school districts, and special districts. NCTCOG Regional programs include Economic Development, Emergency Preparedness, Environment and Development, NCT 911, Public Safety, and Transportation.

# Closing



## **Moving Forward:**

The Sustainability Plan for Carrollton is a dynamic, living document that necessitates regular review and updates. These updates will incorporate advancements in technology, changes in financial structures, and evolving community perspectives. This plan serves as the bedrock for the City's future actions, initiatives, and developments, ensuring that Carrollton remains responsive and proactive in a rapidly changing world. Achieving the ambitious goals outlined in the Sustainability Plan requires the collective contribution and active participation of the entire community. This includes City staff, Boards and Commissions, City Council, community groups, and individuals. Emphasizing equity is crucial to ensure that the most vulnerable populations are included in efforts to enhance the community, especially during challenging times. This means guaranteeing that everyone has access to a safe and energy-efficient home, affordable and reliable transportation, quality educational resources, and all other essential services the City provides.

The City's commitment to the community is evident through its excellent public services, such as emergency response, educational outreach, and continuous infrastructure improvements. Dedicated neighborhood associations and community groups play a vital role in maintaining a social framework,

offering support to those in need, and striving to continually improve the city. Carrollton takes immense pride in its natural areas, parks, trails, and water quality, ensuring a clean and safe environment and a high quality of life for all residents. These natural assets are cherished and diligently preserved, reflecting the community's commitment to sustainability and environmental stewardship.

The Sustainability Plan is not merely a response to current challenges but a strategic vision for the future. It aims to position Carrollton as a leader in sustainability, setting a standard for efficiency, safety, inclusivity, and resilience. This plan will help the city navigate the complexities of a rapidly evolving world, ensuring that Carrollton remains a vibrant and sustainable community.

By taking these actions, Carrollton can build a sustainable future that benefits all residents, enhances the environment, and creates a thriving, resilient city for generations to come. The path forward is one of collaboration, innovation, and unwavering commitment to the principles of sustainability. Together, the community can achieve the vision of a sustainable and prosperous Carrollton, setting an example for other cities to follow.









**CARROLLTON**

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