



# City of Farmers Branch

## Strategic Sustainability Plan

*Meeting the needs of the present  
while planning for the future*

*Month 2021*

City of Farmers Branch  
Sustainability & Public Health



**FARMERS  
BRANCH**

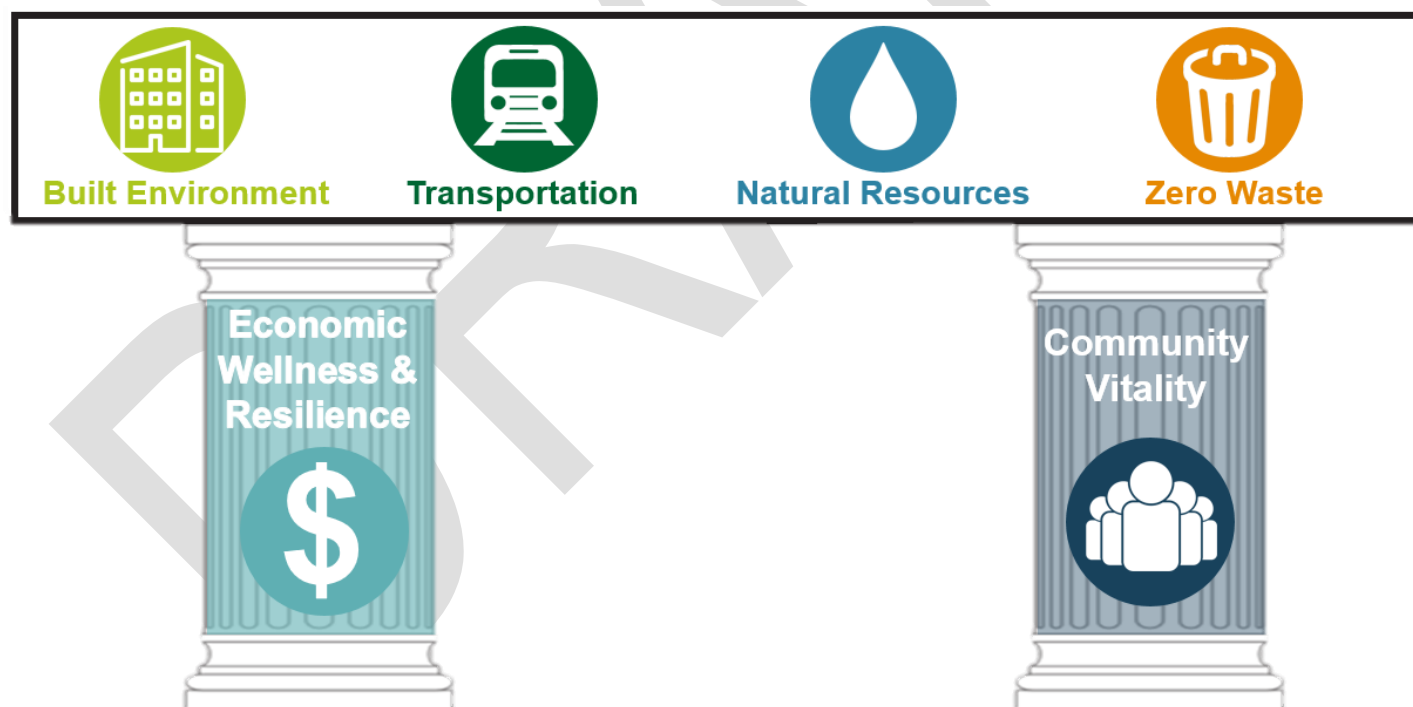
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# Executive Summary

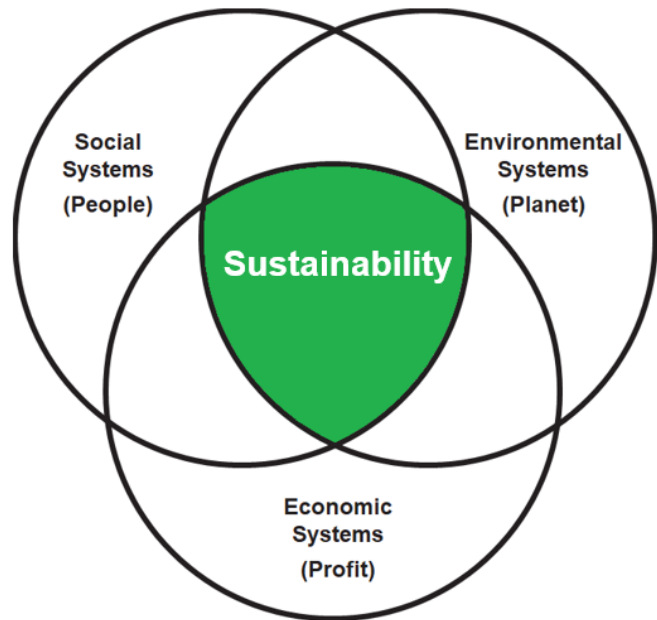
The City of Farmers Branch is committed to building a legacy of stewardship and becoming a more sustainable community. This Sustainability Plan provides a framework for improving the health of the natural environment while improving the well-being of the economy, strengthening our community, and uplifting residents in an equitable manner.

The Sustainability Plan provides recommendations for six key focus areas: built environment, transportation, natural resources, zero waste, economic wellness & resilience, and community vitality. The environmental focus areas rest upon the pillars of economic wellness & resilience and community vitality showcasing the symbiosis of the environmental, economic, and social aspects of sustainability. Without considering all aspects of sustainability, not only do you lose out on multiple co-benefits, but the entire structure risks falling apart.



# Sustainability and Interconnected Benefits

Sustainability is the ability to meet the needs of the present without compromising the ability of future generations to meet their needs. Sustainability is often viewed as the balanced intersection of social, economic, and environmental systems. Achieving this balance results in a sustainable community.



Actions presented in this document will attempt to achieve a balance of social, economic, and environmental attributes in their implementation. Preferences will be given to programs that provide tangible co-benefits across the sustainability spectrum.

For example, see how an action to increase energy efficiency improves all aspects of sustainability.

## Increased Energy Efficiency

| <u>Environmental Benefits</u>   | <u>Economic Benefits</u>  | <u>Social Benefits</u>  |
|---|---|---|
| <ul style="list-style-type: none"><li>• Less electricity or natural gas used</li><li>• Improved air quality and reduced emissions</li></ul> | <ul style="list-style-type: none"><li>• Lower energy bills</li><li>• Increased home marketability</li></ul> | <ul style="list-style-type: none"><li>• Reduced utility burden for lower income households</li><li>• Improved thermal comfort</li></ul> |





# Community Vitality

## Making Farmers Branch a desirable place to live and work for present and future generations.

For a city to be truly sustainable it must have a positive impact on its people. In order to advance environmental and economic goals, immense focus must be placed social sustainability.

There are many measures of social wellness and community vitality. Equitable access to transportation and public services, housing and rental affordability, graduation rate equity, improved health, reduced crime, and reduced utility burden are just a few of many measures.

A strong community with accountable governance is essential to advance environmental and economic goals. All actions taken as a result of this Plan will take into account their relationship with Community Vitality and aim to advance prosperity for the people of Farmers Branch.

### Aspects of Community Vitality

Ensuring basic needs are met

Providing equitable opportunities for all people

Fostering a good quality of life (health, safety, housing, education, employment)

Diversity, empowerment, inclusion, and justice

### Get Involved!

#### **Residents:**

- Volunteer in the community
- Participate in civic organizations.

#### **Businesses:**

- Support local community and nonprofit organizations

### Sustainability Spotlight



Last year the Farmers Branch Community Garden donated 2,047 pounds of organic produce to those in need.



# Economic Wellness & Resilience

## Maintaining a prosperous economy in an era of transformation

The triple bottom line aims for a sustainable balance of people, planet, and profit. This accounting framework aims to help businesses achieve profit without harming people or the environment. To achieve economic wellness and resilience in Farmers Branch, businesses must have the opportunity to thrive while uplifting the people in the community and protecting the natural environment.

There are many measures of economic wellness and resilience. Examples include: business retention, housing and transportation accessibility, declining income inequality, and workforce readiness.

Sustainability can be used as a tool for economic development and provides a framework to help businesses prosper. A robust and resilient economy is vital to advance environmental and social goals. The actions listed in this document will account for their impact on this focus area and aim to strengthen the local economy.



### Get Involved!

#### Residents:

- Support local businesses in the community
- Purchase ingredients that are grown nearby to reduce emissions associated with shipping

#### Businesses:

- Purchase sustainable office supplies

### Sustainability Spotlight

The Westside Art Trail is being constructed to provide connectivity for pedestrians and cyclists from residential areas on the west side of I-35E to businesses surrounding the Farmers Branch DART Light Rail Station.

This connection will help make businesses more accessible for potential customers and connect to the regional trail network.



# Built Environment

## Designing, constructing, and retrofitting buildings and infrastructure in a sustainable manner

The built environment consists of human-made structures (buildings, streets, and utilities) and the processes associated with them. These physical features define the community and our experiences as places where we live, work, travel, and play. Thoughtful planning and operation of our built environment can reduce costs, conserve energy, benefit public health, and increase our quality of life.

There are three main goals within the Built Environment focus area:

- **Increased Efficiency:** Advancing efficiency standards and resource conservation for buildings.
- **Increased Renewable Energy:** Transitioning the energy portfolio towards renewable energy.
- **Harmony Between the Built and Natural Environment:** Minimizing impact on natural systems.

| Goal  | Actions  |
|---|--|
| Increased Efficiency                              | Adopt 2021 building codes  |
|   | Assist residents with utility conservation incentives and rebates  |
|   | Provide education and resources for homeowners to save energy and water <ul style="list-style-type: none"><li>- Explore the feasibility of creating a residential rebate program for energy and/or water savings</li></ul> |
|   | Continue to update building stock through demo/rebuild and PACE programs   |
|   | Reduce energy use at City Facilities through cost effective building upgrades  |
| Increased Renewable Energy                        | Pursue a 100% renewable electricity contract for City operations   |
|   | Adopt a Solar Ready building code  |
|   | Adopt an electric vehicle (EV) ready building code   |
|   | Reduce barriers to solar energy <ul style="list-style-type: none"><li>- Pursue SolSmart designation</li></ul>  |
|   | Increase the number of households on 100% renewable electricity plans through the Texas Power Switch program   |
| Harmony Between the Built and Natural Environment | Implement strategies to reduce the urban heat island effect <ul style="list-style-type: none"><li>- Consider adopting a cool roof ordinance</li></ul>  |
|   | Identify practical pathways to reduce light pollution based on recommendations from the International Dark-Sky Association and U.S. Green Building Council   |
|   | Establish grow zones around creeks and educate about their importance to water quality   |
|   | Identify opportunities to install green infrastructure and other low impact development features alongside capital improvement projects  |





# Built Environment

## How Farmers Branch will measure success

- Reduced electricity and natural gas usage
- Number of participants in utility rebates/incentive programs
- Energy use per square foot in City buildings
- Capacity of installed solar
- Number of homes/businesses with installed solar
- Number of participants in the Texas Power Switch program

## Co-Benefits

- Energy bill savings
- Reduced utility burden
- Improved air quality
- Urban heat island reduction
- Public health improvements
- Greenhouse gas reduction

## Get Involved!

### Residents:

- Participate in the Texas Power Switch and sign up for a 100% renewable electricity plan
- Install appliances with the Energy Star or WaterSense logo

### Businesses:

- Utilize the Property Assessed Clean Energy (PACE) program to finance building efficiency upgrades

## Sustainability Spotlight

LED lightbulbs use a fraction of the energy and last significantly longer than traditional and fluorescent lights, meaning that LEDs provide considerable cost savings.

These financial and environmental benefits are the reason why the City retrofitted the Manske Library and Recreation Center with LED light bulbs.





# Transportation

## Reducing pollution and congestion in the transportation system

The ability to travel conveniently and efficiently within Farmers Branch and throughout the region is vital to maintain economic strength. The current dependence on personal vehicles for travel has created significant air pollution and traffic congestion. Providing convenient, multi-modal transportation alternatives and the adoption of less polluting vehicles is paramount to creating a sustainable transportation system.

There are two main goals within the Transportation focus area

- **Reduced Single Occupancy Vehicle (SOV) Trips:** Reducing the number of vehicles on the road to lessen traffic congestion and air pollution.
- **Reduced Vehicle Emissions:** Reducing tailpipe emissions from the vehicles that have to be driven

| Goal   | Actions  |
|--|--|
| Reduced Single Occupancy Vehicle (SOV) Trips | Increase DART ridership  |
|  | Increase the mileage of trails, sidewalks, and bike lanes                          |
|  | Adopt a complete streets policy  |
|  | Reduce employee commuting through remote working and flexible schedules            |
|  | Increase convenient access to transit  |
| Reduced Vehicle Emissions                    | Increase the number of electric vehicles in Farmers Branch                         |
|  | Increase the amount of publicly available charging stations                        |
|  | Collaborate with vehicle operators to reduce emissions from large trucks and buses |





# Transportation

## How Farmers Branch will measure success

- DART ridership numbers
- Shifting transportation mode share
- Vehicle Miles Traveled (VMT)
- Number of electric vehicles (EVs) registered in Farmers Branch
- Number of EVs in the City fleet
- Number of publicly available charging stations

## Co-Benefits

- Greenhouse gas reduction
- Improved air quality
- Cost savings
- Equitable access to transit
- Increased connectivity
- Faster commute times
- Public health improvements
- Reduced traffic congestion

## Get Involved!

### Residents:

- Utilize public transportation
- Consider purchasing an electric vehicle when it's time to replace your current car

### Businesses:

- Install EV charging stations
- When applicable, allow employees to work from home or commute during non-peak hours

## Sustainability Spotlight

In addition to light rail and traditional bus service, a large portion of the City is serviced by DART's GoLink.

GoLink is an on-demand service, somewhat similar to ride-sharing applications, that picks you up and drops you off anywhere in the designated zone.



# Natural Resources

## Practicing environmental stewardship to conserve natural resources

We are reliant on a number of resources to achieve an expected quality of life. However accelerated usage of these resources have polluted our air, soil, and water. Preventing unnecessary resource use can not only save individuals and businesses money, but can improve the health of our urban environment.

There are three main goals within the Natural Resources focus area

- **Improved Air Quality and Reduced Emissions:** Strategies for limiting the release of air pollution and greenhouse gas emissions
- **Water Conservation:** Providing conservation opportunities for municipal and community water use.
- **Pollution Prevention:** Preventing damage to our natural resources and maintaining a beautiful community.

| Goal                                       | Actions   |
|--|---|
| Improved Air Quality and Reduced Emissions | Implement air pollution reduction strategies to reduce ozone levels                               |
|  | Increase the tree canopy  |
|  | Conduct a baseline greenhouse gas (GHG) inventory and create a science based target for reduction |
|  | Undertake actions to reduce greenhouse gas emissions  |
| Water Conservation                         | Reduce water use at City facilities   |
|  | Reduce citywide water use   |
| Pollution Prevention                       | Decrease the amount of litter   |
|  | Reduce pollution from entering creeks   |
|  | Decrease the amount of fats, oils, and grease entering sewer pipes                                |





## How Farmers Branch will measure success

- Ozone Levels and Air Quality Index
- Number of trees planted
- Municipal water usage
- Per capita water usage
- Amount of litter collected

## Co-Benefits

- Cost savings
- Improved air quality
- Greenhouse gas reduction
- Resource conservation
- Public health improvements
- Community beautification
- Carbon sequestration
- Habitat protection

## Get Involved!

### Residents:

- Perform a self-audit on your sprinkler system
- Pick up litter in your neighborhood

### Businesses:

- Plant trees and other drought tolerant vegetation on your property

## Sustainability Spotlight

Farmers Branch is located in one of nine counties in North Central Texas that does not meet national standards for eight hour ozone levels.

It's important for residents to sign up for air pollution alerts and limit outdoor exposure during ozone exceedance days.



# Zero Waste

## Preventing the unnecessary creation of waste and building a circular economy

The residential sector of Farmers Branch creates over 20,000 tons of solid waste every year. Of this waste about 26% is diverted from the landfill through recycling and composting, meaning that residences are responsible for over 15,000 tons of waste deposited yearly in Camelot Landfill. This doesn't include the amount of waste created by the commercial and industrial sectors, which is likely much higher. As landfills in the region begin to close and the lifespan of Camelot landfill diminishes, Farmers Branch must provide additional avenues to divert materials from the landfill and take steps to reduce the amount of waste created in the first place.

There are two main goals within the Zero Waste focus area

- **Waste Reduction:** Decreasing the total amount of waste created and the amount of waste sent to the landfill.
- **Access to Recycling:** Provide additional opportunities to divert waste from the landfill.

| Goal                | Actions   |
|---------------------|---|
| Waste Reduction     | Increase the residential diversion rate   |
|                     | Create a City environmental purchasing policy for municipal operations  |
|                     | Promote the "Reduce" and "Reuse" attributes of the waste hierarchy  |
|                     | Undertake waste characterization and contamination audits to prioritize new recycling streams   |
|                     | Assess the current status of commercial recycling and construction & demolition recycling<br>- Identify strategies to increase waste diversion in these sectors |
| Access to Recycling | Increase access to recycling at multi-family and commercial properties  |
|                     | Increase the number of residential recycling participants   |
|                     | Update outreach to make recycling simple and consistent   |
|                     | Provide additional opportunities to divert organic waste  |
|                     | Identify opportunities to increase waste diversion at City buildings and facilities   |





# Zero Waste

## How Farmers Branch will measure success

- Diversion Rate
- Waste Tonnages
- Number of residents participating in recycling (set out rates)
- Recycling search users

## Co-Benefits

- Extended landfill lifespan
- Reduced collection and landfill costs
- Creation of local jobs
- Resources conservation
- Greenhouse gas reduction

## Get Involved!

### Residents:

- Only place accepted materials in your recycling cart to help reduce contamination.
- Drop off compostable materials at Citizens Collection Center

### Businesses:

- Participate in a recycling program
- Utilize materials with recycled content

## Sustainability Spotlight

Last year, the City collected over 17,000 cubic yards of brush.

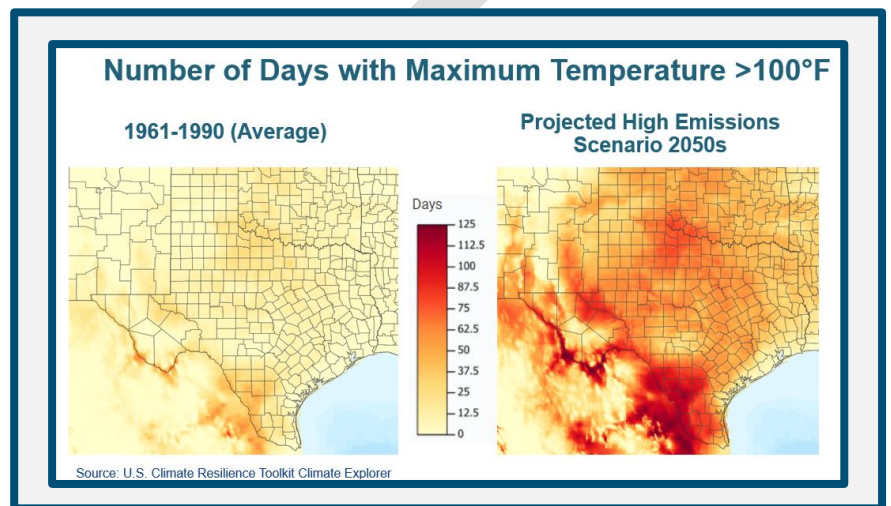
This material was diverted from the landfill and turned into mulch and compost locally.



# Hazards and Risks

Farmers Branch's location in North Central Texas "is susceptible to a wide range of natural hazards, including but not limited to drought, extreme heat, hail, and winter storms. These life-threatening hazards destroy property, disrupt the economy, and lower the overall quality of life for individuals." (Dallas County Hazard Mitigation Action Plan)

The risks presented by these existing hazards are amplified by the warming of the climate system. "Climate change creates new risks and exacerbates existing vulnerabilities in communities across the United States, presenting growing challenges to human health and safety, quality of life, and the rate of economic growth." (Fourth National Climate Assessment)



Selected hazards are listed below.

| Hazard                                    | Impact  |
|---|---|
| <b>Extreme Heat</b>                       | Rising temperatures will increase the number of heat-related illnesses, especially among vulnerable populations, outdoor laborers, and outdoor recreation participants. An increase in the number of extreme heat days will increase energy costs, especially for low income populations and residents living in older homes. |
| <b>Increased Urban Heat Island Effect</b> | The further replacement of natural landscapes with urban infrastructure will increase local temperature, compromising human health and thermal comfort.   |
| <b>Poor Air Quality</b>                   | Hotter temperatures will increase the formation of ozone and the number of poor air quality days, negatively impacting public health  |
| <b>Severe Storms</b>                      | Increased frequency and intensity of severe storms will damage the built environment leading to high repair and replacement costs.  |
| <b>Drought</b>                            | Severe drought events will negatively impact ecosystem health while deteriorating streets and building foundations.   |
| <b>Flooding</b>                           | Increased intensity of heavy precipitation events will place a heavy burden on stormwater infrastructure, increase erosion, and reduce safety on roadways.  |
| <b>Vector Borne Illnesses</b>             | Warmer temperatures can increase the incidence of infectious diseases and extend "mosquito season".   |

# Levels of Involvement

Farmers Branch covers 12 square miles and has a population of 48,158. While these statistics mean Farmers Branch is not one of the larger communities in North Texas, the City still uses a large amount of resources and creates thousands of tons of solid waste. Farmers Branch's place in the large DFW metroplex also places pressures on resources that differ from other smaller cities that are located outside of heavily urbanized regions. The North Central Texas region where Farmers Branch is located has a population of over 7.7 million, a higher populous than 38 states. Consequently this means we must work at the individual, local, regional, state, and national levels in order to achieve the goals in this document.

| Levels of Involvement |   |
|-----------------------|---|
| <b>Individual</b>     | Distinct actions for residents, employees, and local employers          |
| <b>Local</b>          | Municipal and community efforts   |
| <b>Regional</b>       | Regional Integration of Sustainability Efforts (RISE) Coalition         |
|                       | North Central Texas Council of Governments (NCTCOG): Various committees |
| <b>Statewide</b>      | Collaboration on statewide initiatives                                  |
|                       | SPEER City Efficiency Leadership Council                                |
| <b>National</b>       | Urban Sustainability Director's Network                                 |

## Future Needs Assessment

This document provides a living framework for the next five years of municipal and community sustainability actions. It establishes a foundation that will be built upon to address longer term sustainability issues that require vast transformations from the status quo. The efforts proposed in this plan will also identify limitations that municipal governments have to achieve sustainability goals. Farmers Branch must continue to work with other municipalities, regional utilities, and identify necessary policies at the state and federal level.

# Acknowledgements

*Insert names and organizations that contributed to the development of the plan.*



## Sources

- [2020 Dallas County Hazard Mitigation Action Plan](#)
- [Climate Explorer: U.S. Climate Resilience Toolkit](#)
- [University of Texas at Arlington: Climate Change/Extreme Weather Vulnerability and Risk Assessment for Transportation Infrastructure in Dallas and Tarrant Counties](#)
- [USGCRP: Fourth National Climate Assessment, 2018](#)







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