



COMPREHENSIVE URBAN AGRICULTURE PLAN

City of Dallas

Office of Environmental Quality & Sustainability

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Opening

Land acknowledgment

The City of Dallas' Office of Environmental Quality & Sustainability (OEQS) acknowledges the traditional territory of north Texas occupied by multiple American Indian communities because of the Trinity River which provided seasonal homes and trading exchanges. Most notably, it was inhabited by the Arkikosa, Caddo, Wichita, and nomadic tribes such as the Comanche and Kiowa, and ancestral tribes including the Atakapa, Karankawa, Tawakoni, and others.

We recognize the American Indian peoples as original stewards of this land and all the relatives within it. The acknowledgment is a small gesture, to a larger commitment to showing respect through ongoing awareness and action.

Special thanks to:

The City of Dallas would like to thank the many members of the public who participated in the planning process by offering their time, ideas, concerns, suggestions, and support.

A special thanks to the business, educational, finance, local, state and federal agencies; neighborhood, environmental, and social justice organizations who participated in the Public Engagement Sessions.

A full list of stakeholders is provided in **[Appendix A](#)**.

Abbreviations

AG	Agriculture
ATSDR	Agency for Toxic Substances and Disease Registry
BIPOC	Black, Indigenous and People of Color
B2C	Business-to-Consumer
CDC	Centers for Disease Control and Prevention
CEA	Controlled Environment Agriculture
CECAP	Dallas Comprehensive Environmental & Climate Action Plan
CO	Certificate of Occupancy
COD	City of Dallas
COMP PLAN	Comprehensive Plan
CSA	Community Supported Agriculture
CUAP	Comprehensive Urban Agriculture Plan
DART	Dallas Area Rapid Transit
DFW	Dallas Fort Worth
DISD	Dallas Independent School District
EPA	United States Environmental Protection Agency
FSA	Farm Service Agency
GHG	Greenhouse Gas
GIS	Geographic Information System
GUSNIP	Gus Schumacher Nutrition Incentive Program
HUD	U.S. Department of Housing and Urban Development
IFAS	University of Florida, Institute of Food and Agricultural Sciences Extension
LFPP	Local Food Promotion Program
NRCS	Natural Resources Conservation Service
OEQS	Office of Environmental Quality & Sustainability
PUD	Planning & Urban Design
RISD	Richardson Independent School District
SNAP	Supplemental Nutrition Assistance Program
SVI	Social Vulnerability Index, as defined by CDC
UA	Urban Agriculture
UAAC	Urban Agriculture Advisory Council
UAPAS	Urban Agriculture Priority Areas
USDA	U.S. Department of Agriculture

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1.
INTRODUCTION.

Introduction

Today's cities are experiencing rapid urbanization, climate change, and numerous other stresses. Food supplies are vulnerable to disruptions from extreme weather, labor shortages and a lack of diversified production. Food is traveling farther to reach consumers, and is coming from [fewer, increasingly large farms](#). Although it is projected that [80%](#) of our food will soon be consumed in cities, few municipal governments have established plans to ensure their food system is sustainable and resilient in the face of these mounting climate and societal challenges.

In May 2020, the City of Dallas formally recognized the risks associated with climate change by adopting the Comprehensive Environmental and Climate Action Plan (CECAP), which aligns with the goals of the [2015 Paris Climate Agreement](#). Based upon principles of mitigation, adaptation, environmental quality, and social equity, the [CECAP](#) includes 97 actions supporting eight different goals, including 14 actions related to Food and Urban Agriculture (See Figure 1 & 2).

Goal seven states, "All Dallas' Communities Have Access To Healthy, Local Food". This goal includes a total of five objectives and 14 action items. Action item three of this goal is to develop a Comprehensive Urban Agriculture Plan. The development of this

plan addresses gaps in the resiliency of Dallas' food system by providing five key recommendations to increase local production, food sourcing and access through increased agricultural activities. While this plan alone will not undo the systemic barriers challenging food access to many of Dallas' lower income residents, especially those of color, its recommendations for targeted funding and capacity building are meant to lay an equitable foundation for better collaboration between the City and residents for years to come.

A Comprehensive Urban Agriculture Plan (CUAP) is about more than individual farms or community gardens. A CUAP is about fostering a thriving, equitable, and resilient local food system that empowers individuals, unites communities, creates economic opportunity, and provides affordable, fresh, and nutritious local food. In collaboration with local stakeholders, the City of Dallas and its Project Team have developed this CUAP to outline the current conditions of Urban Agriculture (UA) in Dallas and describe a roadmap to achieve a stronger, more resilient urban agriculture ecosystem in the years to come.

CECAP Food & Urban Agriculture

SECTOR TARGETS:

Healthy Affordable Access:



Increase urban garden acreage:



Increase local commercial food sourcing:



5 GOALS, WITH 14 ACTIONS

- + Build organizational capacity and partnerships around urban agriculture
- + Improve food access in vulnerable neighborhoods
- + Reduce food miles from farm-to-table by encouraging local production and consumption
- + Prepare food system to be more resilient to extreme weather events
- + Prevent food waste through donations, recovery, diversion, and composting

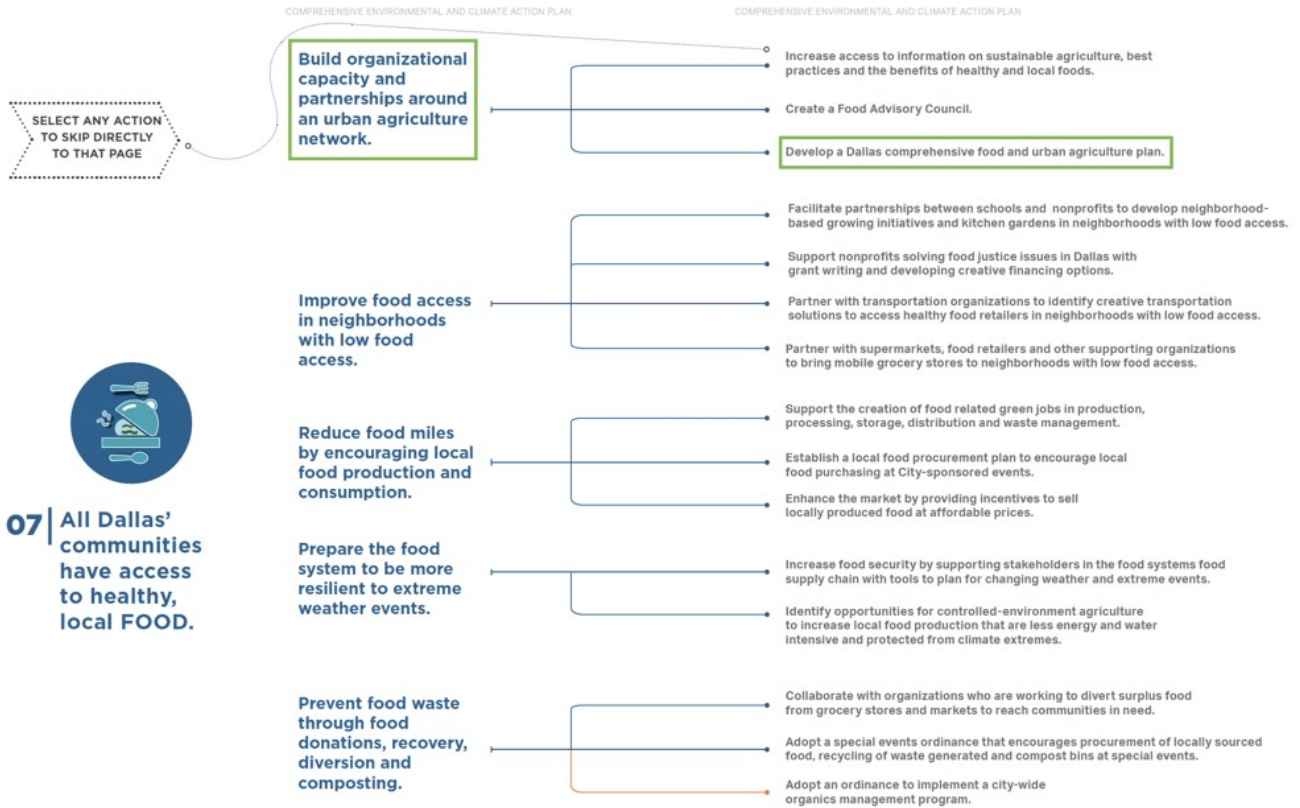


Figure 1. Goal 7 of Comprehensive Environmental And Climate Action Plan (CECAP)

This plan is not, however, a singular fix to all of Dallas' food system issues, especially the financial barriers that prevent many residents of color, including those in Southern Dallas, from accessing fresh, affordable food. Urban agriculture (UA) has the potential to increase jobs and economic opportunities, and the funding recommended in this plan is intentionally directed to areas of high need and opportunity. However, UA is just one tool available to address the current inequitable landscape.

What is Urban Agriculture?

For many, community gardens might be the first to spring to mind when thinking of urban agriculture, yet the term can encompass many more production systems and desired outcomes. According to the U.S. Department of Agriculture ([USDA](#)), “Urban agriculture generally refers to the cultivation, processing, and distribution of agricultural products in urban and suburban settings, including things like”:

- + Vertical production
- + Warehouse farms
- + Community gardens
- + Rooftop farms
- + Hydroponics
- + Aeroponics
- + Aquaponic facilities
- + Other innovations

Urban farmers and gardeners work among diverse populations to expand access to nutritious foods, foster community engagement, provide jobs, educate communities about farming, and expand green spaces.” There is a long, but fragmented history of UA in Dallas, which is described in more detail in the Building on Past Work section of this report.

Many of the benefits of UA are shown in the table below.

Environment	Health	Economic	Social
<p>(1) Heighten awareness of Food Systems Ecology from production to disposal of waste materials.</p> <p>This can:</p> <ul style="list-style-type: none"> + Increase efforts to reduce greenhouse gas emissions & air pollution + Improve temperature regulation in urban areas + Reduce energy & resource inputs 	<p>(1) Allow participants a healthy & therapeutic form of physical activity</p> <p>This can:</p> <ul style="list-style-type: none"> + Improve mental health through therapeutic benefits + Reduce the prevalence of obesity-related diseases 	<p>(1) Stimulate local economic activity</p> <p>This can:</p> <ul style="list-style-type: none"> + Attract capital & create business opportunities + Increase property values + Create job growth + Make food more affordable 	<p>(1) Provides green space for community members to gather</p> <p>This can:</p> <ul style="list-style-type: none"> + Create community cohesion + Provide safe spaces for community members + Reduce crime, drug abuse and vandalism in urban areas
<p>(2) Improve biodiversity & habitats in surrounding areas</p> <p>This can:</p> <ul style="list-style-type: none"> + Increases number of species present + Increase habitat options for pollinators + Create positive ecological feedback loops 	<p>(2) Increase access to nutritious and culturally appropriate food</p> <p>This can:</p> <ul style="list-style-type: none"> + Mitigate food & nutrition insecurity + Increase food system resilience by maintaining access in times of crisis + Reduce food-related financial burdens 	<p>(2) Create opportunities to learn about agriculture, nutrition, and sustainability</p> <p>This can:</p> <ul style="list-style-type: none"> + Generate employment and training options around agriculture, nutrition, and sustainability + Improve job readiness 	<p>(2) Increase socially integrated aging</p> <p>This can:</p> <ul style="list-style-type: none"> + Strengthen intergenerational relationships + Improve youth development & education
<p>(3) Encourage conservation and stewardship of land.</p> <p>This can:</p> <ul style="list-style-type: none"> + Improve soil quality + Increase carbon sequestration by vegetation & crops + Improve stormwater management 	<p>(3) Promote food-health literacy</p> <p>This can:</p> <ul style="list-style-type: none"> + Increases preferences for & consumption of fruits & vegetables + Reduce diet-induced diseases + Reduce burdens on health care system 	<p>(3) Reduce food miles and associated wastage</p> <p>This can:</p> <ul style="list-style-type: none"> + Decrease costs associated with food packaging & waste + Improve nutrition received, thus decreasing costs of food-related illnesses 	<p>(3) Allow immigrants & minority communities to maintain cultural identity</p> <p>This can:</p> <ul style="list-style-type: none"> + Help immigrants to gain a sense of belonging + Increase expression & maintenance of cultural heritage + Improve empowerment & mobilization in minority communities

Table 1: Benefits of Urban Agriculture. Adapted from: IFAS Extension and Design Trust for Public Space

What is a Comprehensive Urban Agriculture Plan?

Given Urban Agriculture's wide range of production systems and target audiences, incorporating thoughtful and proactive UA planning into municipal policy can generate an abundance of public health, social cohesion, economic and ecological benefits.

Indeed, UA is increasingly being recognized as a key component in helping cities across the world

adapt to their changing environmental, social, and nutritional needs. Beyond the production of highly nutritious produce for residents who may otherwise struggle to find it, UA provides critical green space to help people reconnect with the natural world, reduce potentially deadly heat-island effects, provide important habitat for pollinators and wildlife, and filter stormwater during extreme weather events.

Goal 7 Target:

Increase by 20%, 50%, and 75% the acreage of urban gardens producing foods by 2030, 2040, and 2050.



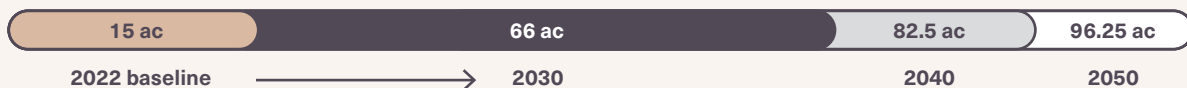
2022: Baseline of 15 acres* under production

2030: Expand by 3 acres from 2022 levels, for a total of 18 acres

2040: Expand by 7.5 acres from 2022 levels, for a total of 22.5 acres

2050: Expand by 11.25 acres from 2022 levels, for a total of 26.25 acres

It should be noted that Samuell Farms, a City of Dallas owned and managed property, is well suited for UA and can far exceed the goals stated above if placed under comprehensive management and production. The portion of Samuell Farms that can possibly be allocated for Ag production is estimated to be roughly 48 acres. Considering this, as well as both the technical analysis provided in [Appendix C](#) (which describes the amount of vacant City-owned land) and identified gaps in the Dallas food system that overlap with community health & food access disparities, there is reason to expand the above CECAP defined acreage targets. With the incorporation of Samuell Farms, the following adjustments to the acreage targets would be recommended:



2030: Expand by 51 acres from 2022 levels, for a total of 66 acres

2040: Expand by 67.5 acres from 2022 levels, for a total of 82.5 acres

2050: Expand by 77.25 acres from 2022 levels, for a total of 96.25 acres

* This estimation includes 54 urban agriculture sites. DISD school gardens and [Samuell Farm](#) are not included in this number.

City	How they incorporated urban agriculture into municipal policies & governance structures
Atlanta	<ul style="list-style-type: none"> + First major city to hire an Urban Agricultural Director + Adoption of 2021 farm stand ordinance, that allows urban farms to sell direct to consumers, increasing access to fresh and affordable food + Many of the city's 28 urban farms will now be able to serve as fresh food access points in their neighborhoods, advancing the administration's goal to ensure at least 85% of Atlanta residents live within a half-mile of fresh food by 2022
Detroit	<ul style="list-style-type: none"> + The city implemented an urban agriculture ordinance in 2013 with the aim to use abandoned lots to grow local food + The ordinance provides easy access for land based projects which use land for urban agriculture, gardening, beautification and other productive uses, whether for profit or as a community based activity + The city now has nearly 1,400 community gardens
Toronto	<ul style="list-style-type: none"> + The city offers 12 outdoor and one indoor allotment gardens. + The city uses density bonuses used as incentive for a community garden and a grocery store for seniors. + 166 active Canadian AgriFoodTech startups were recognized by AgFunderNews in 2019, many headquartered in the Greater Toronto Area
San Francisco	<ul style="list-style-type: none"> + Signed Urban agriculture ordinance into law in 2011, officially recognizes and permitting urban farms and gardens + Passed a law in 2014 that provides tax breaks for properties that engage in urban farming
New York	<ul style="list-style-type: none"> + In 2021, the Mayor released the New Agrarian Economy, a policy blueprint for the future of urban agriculture. + The Mayor's Office of Urban Agriculture was created in 2022 + NYC has over 550 community gardens on city property, over 745 school gardens, and over 700 gardens at public housing developments
Philadelphia	<ul style="list-style-type: none"> + The city passed a zoning code in 2012 that recognizes four types of urban agriculture as new land use categories in the zoning code: community gardens, market or community-supported farm, horticulture nurseries and greenhouses, and animal husbandry + Urban Agriculture Subcommittee of the Food Advisory Council guides innovative laws and policies to leverage vacant and underutilized lands into sustainable community assets that increase food security and sovereignty for all Philadelphia residents. + Farm Philly is the urban agriculture program of Philadelphia Parks & Recreation since 2014 and supports 60 agriculture projects on Parks & Rec land.
Boston	<ul style="list-style-type: none"> + City adopted Article 89 into their zoning code in 2013, which focuses on providing structure for developing urban agriculture while also helping to promote its growth. + Before the zoning amendment, there was nothing in city code that expressly allowed or discouraged urban agriculture in the city. + The City has 40 food truck companies, a pilot residential composting program, 200 community gardens, 100 school gardens and 28 farmer's markets.

Table 2: Cities with urban agriculture municipal policies & government structures.

Increased UA acreage also helps mitigate the loss of [11 million acres of farmland](#) to recent urban and suburban sprawl, providing another resilient source of fresh food production to offset increasing food miles and [farm consolidation](#). Increasingly, access to healthy food has also been tied to a [reduction of violent crime](#) in many cities.

Encouraged by their local gardeners and farmers, [cities](#) such as Atlanta, Detroit, Toronto, San Francisco, Philadelphia, and Boston have incorporated Urban Agriculture into their municipal policies and governance structures (see Table 2 on previous page).

Delivering guidance and protection for UA in this comprehensive manner has many benefits, chief among which are enhanced legal clarity surrounding UA activities, and enhanced collaboration and organizational capacity stemming from better organizing coalitions of UA stakeholders.

The Dallas Comprehensive Urban Agriculture Plan is a long-term framework to build organizational capacity and partnerships around the urban agriculture ecosystem. This CUAP lays the groundwork for the next 5-10 years of UA development in Dallas by recommending a range of ordinance updates, program development activities, and equitable resource distribution to ensure COD reaches and exceeds its CECAP targets listed in Goal 7.

Per CECAP	Per CUAP
Perform a comprehensive review of policy and regulatory barriers to growing local food for personal consumption or economic development, and plan to remove barriers.	Recommendation 1 readily addresses the policy and regulatory issues and provides recommendations to the City to remove those barriers.
Evaluate demographic and community specific needs.	The City of Dallas Urban Agriculture and Community Health Explorer web app and District Reports illustrate the community-specific needs, and recommend targeted interventions to foster equitable UA growth.
Work with the Food Advisory Council that represents stakeholders from across the food system	The CUAP was developed through multiple series of stakeholder interviews, meetings, and public engagements that solicited direct feedback from the Food Advisory Council and additional stakeholders.
Identify incentives to support agriculture that provides carbon sequestration benefits	Although opportunities for meaningful soil-based carbon sequestration are more limited in urban areas when compared to rural ones, Recommendation 3 addresses valuable contributions that can be made through carbon sequestration education and outreach.
Equity considerations: Policies developed within the plan will focus on improving food access for under-served neighborhoods	In addition to targeted equity measures in the Recommendations, The Project Team developed Urban Agriculture Priority Areas (UAPAs). UAPAs are census tracts with an above City average of equitable need and opportunities. The CUAP recommends that COD prioritize implementation funding and resources to these areas

Table 3: CECAP and CUAP comparison chart.

Purpose and Need

This Comprehensive Urban Agriculture Plan is borne from the directives of the 2020 CECAP as well as a desire to acknowledge and address past, present and future inequities, risks, and challenges related to agriculture and food security in Dallas. As stated above, CECAP comes from global climate directives, such as the 2015 Paris Climate Agreement, that recognize the need to adapt our systems and societies in order to live within our planetary capacities and support our social foundations.

In Dallas, there are numerous social, political, economic, and environmental reasons to strengthen Urban Agriculture activities in order to achieve increased equity, resiliency, and sustainability.

Historically, Dallas has issues with food insecurity and food-related health issues that resulted in significant economic strain on the surrounding health care system. [A 2015 study](#) found that 49% of Dallas County children were either overweight or obese. The study also found that the region’s diet-related health issues could be reduced by increasing access to fresh food in lower-income and marginalized communities. The Project Team evaluated diabetes

and coronary heart disease data from the Centers for Disease Control and Prevention (CDC) and found similar results (see figures 3 and 4).

The stark need for grocery stores in southern Dallas has been mentioned by various stakeholders throughout the interview process and cannot be ignored as a piece of the solution to these food-related diseases. The primary directives of this plan, however, are to increase local food production, food access and local commercial food sourcing through increased UA production. Grocery stores, although critical to any conversation about a regional food system, are mostly outside the scope of this work. Effective distribution strategies for UA production are considered in the later-stage recommendations, including coordinating with Racial Equity Plan efforts towards mobile food markets and fresh food access points.

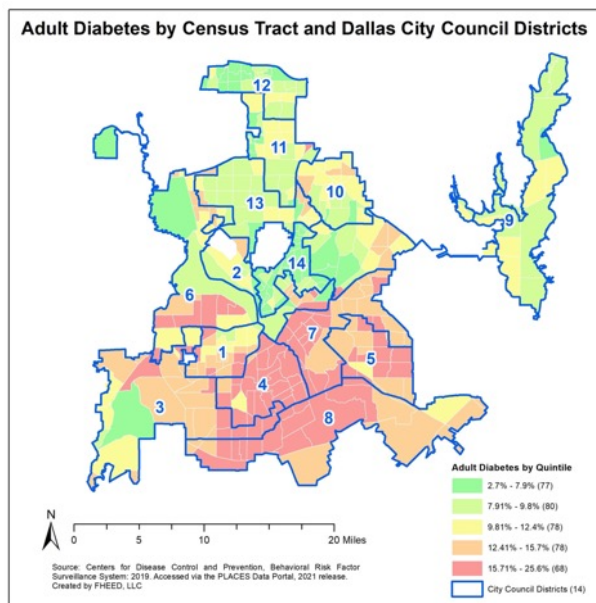


Figure 3: The Prevalence of Adult Diabetes for Dallas City Council Districts by Census Tracts

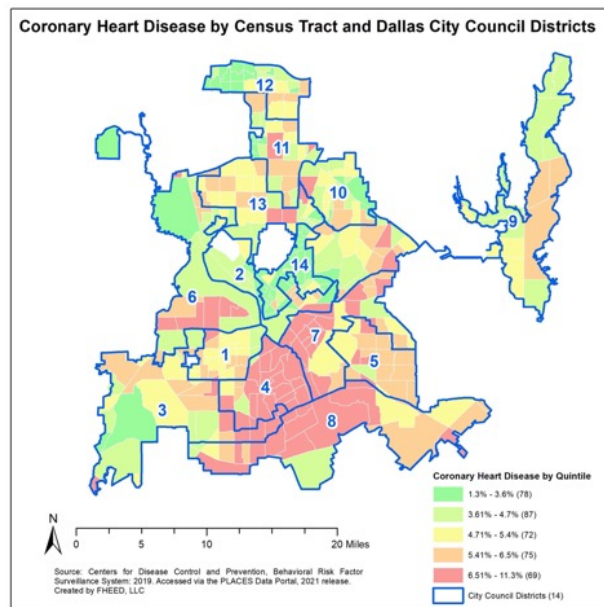


Figure 4: The Prevalence of Adult Coronary Heart Disease for Dallas City Council Districts by Census Tracts

Climate change threats to food supply chains and aggregated industrial farming

The North Texas region is at [increasing](#) risk of more severe and frequent wildfires, droughts, floods, freezes and tornadoes in the coming years that will disrupt crop production in conventional farms as well as supply chains from other locations facing these threats as well. Further, extreme weather events such as Winter Storm Uri in 2021 [showcase](#) just how vulnerable the Texas food system is to dangerous weather events. These risks and supply chain shocks point to the need to increase and diversify the sources of food production, including both local commercial and community efforts.

The North Texas Food Bank and other non-profit emergency food organizations across the region have done their utmost to respond to these extreme events nimbly and effectively. However, in the face of increasingly frequent and severe weather events such as winter storms, wildfires and tornadoes, cities cannot rely on their emergency food system (i.e., nonprofits) to supplant their actual food system indefinitely. Moreover, line waiting times, inadequate cooking infrastructure, feelings of social embarrassment and lack of culturally appropriate food are also [commonly cited as problems](#) with relying too heavily on emergency food system entities to achieve long-term food security.

Human-induced climate change, in part driven by conventional, large-scale agriculture, disrupts a range of biogeochemical cycles (e.g. water cycle, nitrogen cycle, carbon cycle etc.), thereby threatening our ability to continue producing sufficient healthy, nutritious food to support our population.

Dallas' food supply is heavily reliant on the conventional, industrial agrifood system, with food coming from other regions and countries, thereby making Dallas' food supply both vulnerable to climate impacts and a contributor to greenhouse gas emissions. Re-localizing Dallas' food supply with increased local and urban production provides an opportunity to mitigate climate impacts through reduced food miles and enhanced carbon sequestra-

tion through local agro-ecological and regenerative production practices.

As CECAP states, "food production, distribution and land use accounts for 30% of global GHG emissions" ([CECAP](#), p. 153). Although debate remains about the GHG emission [savings](#) from local [food systems](#), increased exposure to urban agriculture is very likely to increase awareness and energy around climate change, food systems, healthy eating, and the importance of natural ecosystems. This type of education is incorporated throughout this plan, and especially in Recommendation 3.

Food prices in the Dallas-Fort Worth-Arlington area [rose](#) 13% percent from July 2021 to July 2022.

This represents the highest single-year increase since 1979. [Lingering effects](#) of the COVID-19 pandemic, combined with the Russian invasion of Ukraine, have caused energy and fertilizer prices to soar, rippling supply chain disruptions and worldwide grain shortages. Strengthening local food networks and increasing purchasing power through agricultural job creation has [become imperative](#) to a host of cities across the United States, and Dallas is no exception.

It is expected that the Dallas-Fort Worth area will soon [overtake](#) Chicago as the third-biggest metro area in the U.S.

As more people move to the Dallas area, planning for UA and associated green spaces is a powerful tool to improve urban quality of life. As stated before, in addition to healthy, delicious food, UA provides critical stormwater and heat island mitigation as well as opportunities for ecological connection for residents. Proactively incorporating UA into City policy, as other surrounding municipalities [have done](#), will help attract residents to live within City Limits.



Restorative Farms, Dallas. (Photo courtesy of Restorative Farms.)

Urban Agriculture as an important piece of the solution to Food System Vulnerability

In planning for a more productive and resilient UA system, it is important to consider all the ways that UA can enhance the local food supply, thereby insulating against food security impacts. Lower cost measures such as raised beds, which help alleviate urban soil contamination and compaction, can help provide critical fresh fruits and vegetables to urban residents. More expensive, larger scale solutions, like soilless and controlled environment agriculture (CEA), can help insulate the wider food supply from the variability of extreme weather events and also save vital water resources. These solutions all provide different benefits, and carry varying associated costs. In this plan, the full spectrum of UA technologies and production systems is considered.

Overall, when the **increased weather events** (stemming from climate change), **supply chain issues** (due to political, public health and economic instability), and **fiscal challenges** (caused by the rise of inflation and market uncertainty) are taken into account, **the need for cities to take more control of their local food production and access becomes starkly apparent.**

CUAP Planning Process

The City of Dallas Comprehensive Urban Agriculture Plan was researched and developed in seven main tasks, displayed in Figure 5 below.

These steps were generated based on the request for proposal (RFP) released by the City of Dallas in the spring of 2021, a review of best-in-class urban agriculture plans from other cities/regions and Urban Agriculture planning resources gathered by the [American Planning Association](#).

The methodology used in this plan built on lessons gathered from the [2016 Dallas Local Food Local Places Report](#), to leverage past work and time that community members had dedicated to building local organization capacity around food production. The project team received notice to proceed in August of 2021 and began work on the tasks beginning in September of 2021. A general timeline of activities conducted throughout the planning process can be seen in Figure 6 below.

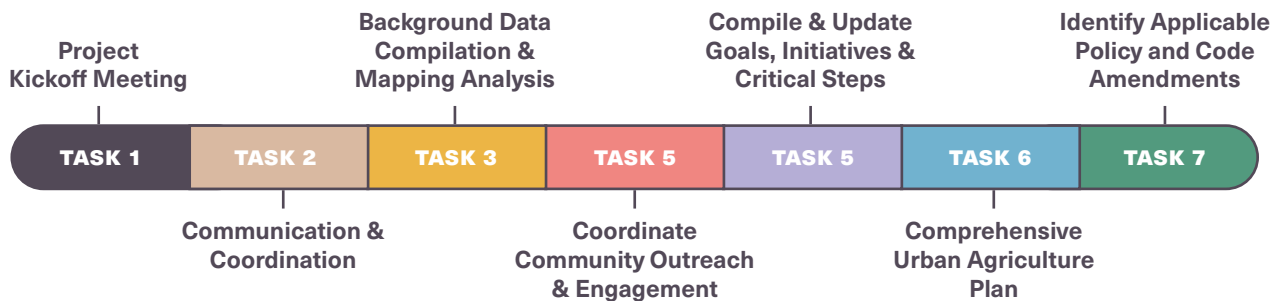


Figure 5: Dallas Comprehensive Urban Agriculture Planning process tasks

Timeline of Activities Conducted throughout the CUAP planning process

The project team received notice to proceed in August of 2021 and began work on the tasks beginning in September of 2021. A general timeline of activities conducted throughout the planning process can be seen below.

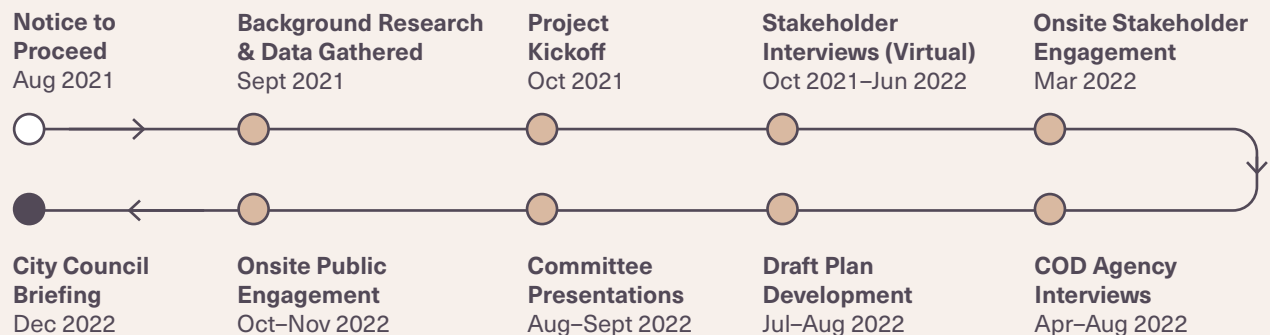


Figure 6: Timeline of activities conducted throughout the CUAP planning process

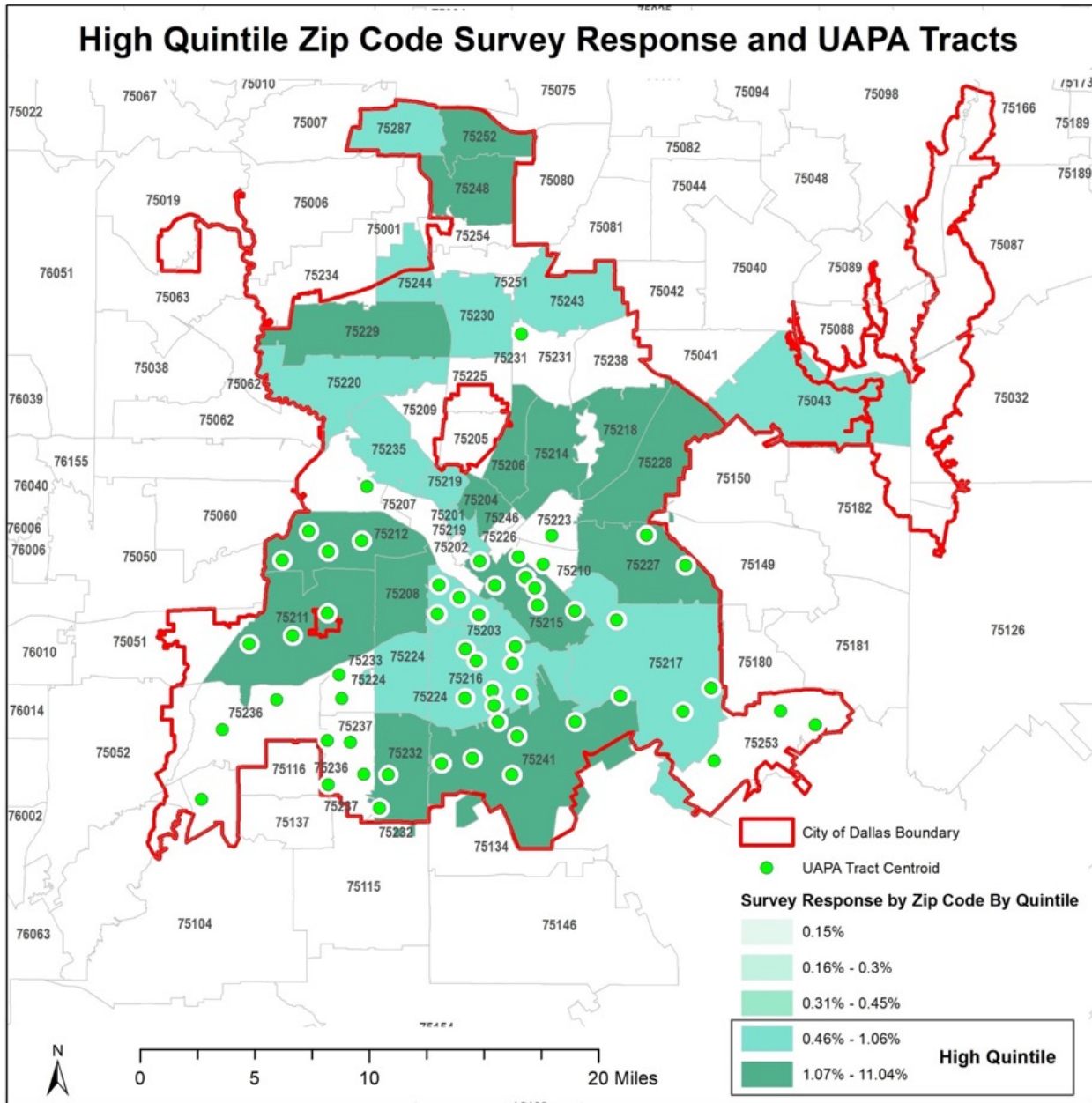


Figure 7: Zip Code Breakdown of Public Survey Respondents

Data Collected

Content Analysis of UA plans from other local government entities, 1:1 conversations, in-person site visits, an online public survey, stakeholder recommendation feedback meetings, public engagement sessions and desktop research were all used to gather insight on the past work, existing agriculture policies, stakeholder challenges and needs, and geographic assets in the Dallas UA landscape.

Figure 7 displays the zip code response rates from Dallas residents that lent their time to complete the public survey. Areas marked with green dots represent populations of high social vulnerability, as [defined](#) by the CDC.

Appendix D provides further information on the data collected throughout this process. A summary of learnings from this data, an analysis of how they shape the recommendations given in this plan, and geographic data and corresponding map tool, can be found in Appendix D.

2.

CURRENT CONDITIONS OF URBAN AGRICULTURE IN DALLAS.

Building on Past Work Supporting Urban Agriculture in Dallas

The data compiled and analyzed in this report builds upon the past work of many other groups, including the 2015 EPA/USDA Local Food Local Places Report, the Dallas Coalition for Hunger Solutions' database of community gardens, and numerous efforts by local organizations and individuals in recent years. Throughout this project, it has been a priority to respect the years of work and lived experience that local stakeholders represent, while adding value by introducing global best practices for Urban Agriculture planning and policy. In our preparation and execution of this work, we reviewed the few published UA plans that are publicly available, including Strathcona County in Canada and East Point in Atlanta, GA. Although they stray somewhat beyond the scope of this work, we also reviewed several relevant food policy plans, including NYC Food Forward and preliminary notes from the Austin Food System Plan.

Agritecture and its project partners pulled from both domestically and internationally experience to inform the recommendations of this plan. Expertise in horticulture, urban planning, public policy, landscape architecture, geographic information system (GIS), and food systems transformations were all incorporated to conduct this inherently interdisciplinary work. Key project members from the Dallas and Houston areas were crucial for their contributions in understanding the Texas context.

The Project Team recognizes the ongoing and long-term nature of this work, and as such sought specifically to co-create the recommendations and action items with local stakeholders so that this plan could be as actionable and implementable as possible. This collaboration included 1:1 interviews, surveys, on-site visits, and in-depth virtual workshops to ensure that local organizations and individuals involved with UA in Dallas felt represented by the plan and committed to its long term success. The overarching goal of this engagement has been to lay the foundation for a more productive and collaborative Urban Agriculture ecosystem in the City of Dallas.



Bonton Farms, Dallas



Owenwood Farm, Grow North Texas, Dallas

Overview of Urban Agriculture in Dallas Today

As part of this plan's data collection and analysis process, the project team developed the “[City of Dallas Urban Agriculture and Community Health Explorer](#),” otherwise referred to as a “GIS web map” in this plan (shown in Figure 8 below). This tool is an interactive online map that displays the following items:

- + City Council District Boundaries
- + Urban Agriculture Sites
- + DART Rail: Rail Routes and Stops
- + Farmers Market Stands and USDA listed Farmers Markets

The purpose of this map is to (1) help estimate the current acreage of UA production and (2) increase transparency of the Urban Agriculture landscape and (3) serve as a foundation upon which for other groups to expand upon in the future. It is meant for use by stakeholders across the board, including, but not limited to, policymakers, grant writers, food system non-profits, urban farmers, and academics. This map will be housed online through OEQS.

As stated before, Dallas has around 15 acres of UA production. This does not include any acreage at

[Samuell Farm](#), a sizeable City-owned park, because it is not producing food. This acreage estimation also does not include school gardens for privacy and safety reasons. The in-progress Master Plan for Samuell Farm may include UA activities, which could significantly increase future acreage targets in subsequent updates to this plan.

The current landscape of UA production in Dallas is led by nonprofit farms, with few commercial farms operating within city limits. Spanning the range of production systems from outdoor, soil-based, to indoor, controlled environments, these organizations represent a solid foundation of UA activity upon which to build. While some groups are dedicated to maximizing food production, others prioritize community services like job training, rehabilitation, and economic development. This range of production systems and program priorities represent the many types of benefits that urban agriculture provides to a city and its residents.

The following section contains summaries of some of the most common challenges and opportunities encountered by various UA operations.

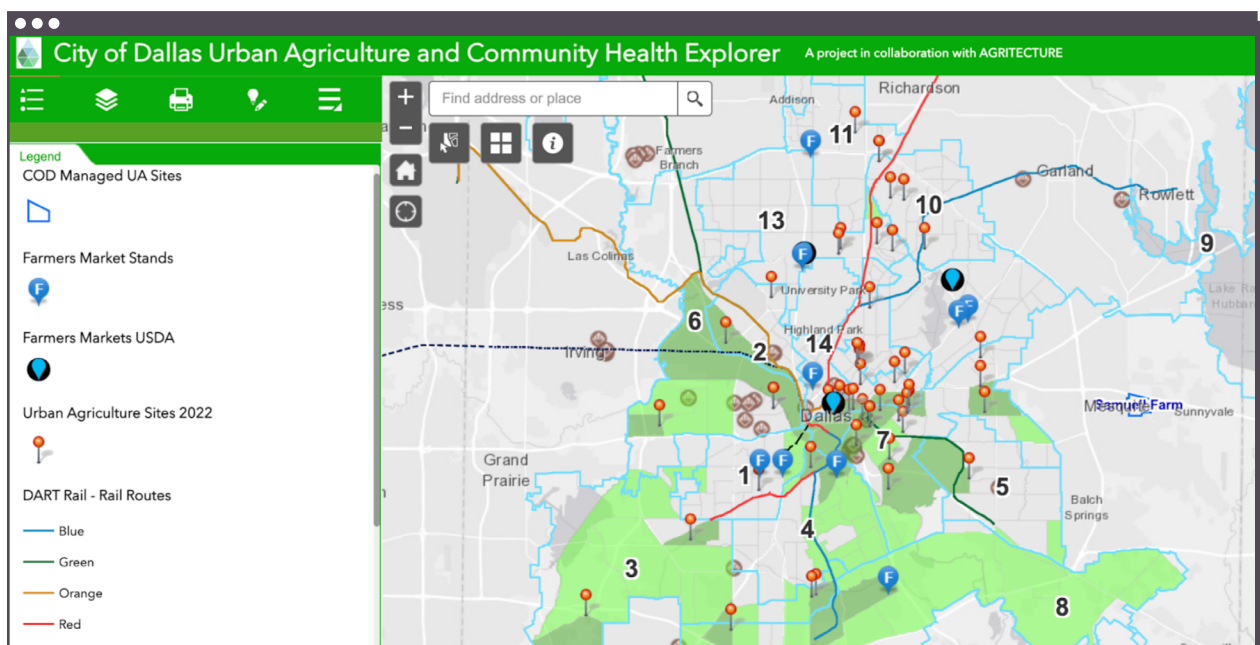


Figure 8: City of Dallas Urban Agriculture and Community Health Explorer.

Dallas Story: Direct-to-Consumer Farm

During an in-person site visit to one small, direct to consumer farm, the owner reported that he had a long wait list for new customers, and always quickly sold out after making his shares available via text message list.

This type of informal marketing is incredibly attractive to small growers because it eliminates the two main challenges of successful farmers market sales, which is the other principal distribution method for growers of this type. This farmer further suggested that based on his conversation with neighbors and acquaintances, the Dallas market could support many more similarly sized operations in other neighborhoods across Dallas.

Water access is a major challenge for this farm, as well as other UA operators throughout Dallas. Currently there is no gray water rate for agricultural uses within city limits, so farms must pay the higher residential rate for their water. In the case of this farm, there is not even a water main available to connect at his property, which is located on a partially completed residential development.

The owner has inquired about extending the water main to his property, but has found that it would be a prohibitive expense for a largely self-funded operation. To supply his farm with water, he drives 5 gallon water jugs over from his house a few miles away. Despite this challenge, the owner is dedicated to continuing production and hopefully expanding in the near future.



Half Acre Farms, Dallas

Commercial Farms

Commercial farms operating inside city limits benefit from proximity to a large population of customers, but face steeper financial challenges, especially around land access, than those in rural areas.

By focusing on direct to consumer marketing, small commercial farms are able to control their distribution and logistics costs, keeping a greater margin of revenue for themselves than if they were selling through wholesale channels. Opportunities to expand the scale of individual business-to-consumer (B2C) operations are eventually limited, however, and most community supported agriculture (CSA)* style programs [rarely exceed 1,000 members](#), with typically successful sizes ranging from 100-500 members.

A network of these farms throughout the Dallas area could significantly enhance the supply of local, fresh produce and improve the resiliency of the Dallas food system.

Specifically, CSA-type distributions can help reduce (1) the fees, operational expenses and significant time required to attend market, as well as (2) the unpredictable demand from not knowing precise attendance or buying preferences on any given day. The challenges of this distribution method are in scaling up customer acquisition, as most customers are unwilling to accommodate the inconsistency and unpredictability of the supply offered by most small farms.

* There is a long history of cooperative and community-supported farming, both in the US and globally. Today, CSAs, or community-supported agriculture, generally refer to subscription-based programs where members pay an up-front fee before the growing season begins, allowing farmers to buy necessary seeds and equipment. Customers then receive a weekly share of food throughout the season. Today's CSAs range from single farm to multi-farm cooperatives, and can include everything from fruits, vegetables, meats, dairy, and value added goods.

Nonprofit Farms

Expanding funding streams beyond solely produce sales has allowed non-profit farms to incorporate a diversity of social and environmental outcomes that traditional commercial farms are often unable to.

Non-profit farms located in urban areas tend to be funded from a variety of sources, including philanthropic donations, state and federal grants, and revenue generated by produce sales and agro-tourism. One farm and food hub just outside Dallas remarked that they generate more annual revenue from six high-end farm dinners than they do from all of their produce sales combined. Weddings, farm to table dinners, and annual galas can frequently raise just as much, if not more, funding for an organization than can produce sales. Farms considering such events should make sure to comply with all relevant municipal, state, and federal laws surrounding food safety, site occupancy, and charitable contributions.

Education and job training is another major focus of nonprofit farms in Dallas. Many farms specialize in certain demographics, such as veterans or young people, which allows them to more effectively tailor marketing and programming. To expand programming locations or seek new participants, groups often develop mutually-beneficial partnerships.

In Dallas, non-profit farms use a variety of production systems to mitigate issues related to [soil contamination](#) and compaction, such as implementing generous compost amendments for permanent in-ground beds, using raised beds filled with imported potting mix, and using methods such as soilless cultivation, hydroponics or controlled environments, like greenhouses. All these methods provide greater control over the plant growing environment, with CEA systems offering the most control, and the greatest price tag. Establishing a collaborative job-training program between some of the most established non-profit farms is the subject of Recommendation 3.

Community Gardens

Community gardens are typically the first thing to come to mind when considering UA. They provide highly-beneficial, low-cost access to fresh fruits and vegetables, green space, and community interaction to urban residents. There are about 54 community gardens in Dallas, a city of 1.2 million as of 2021. That represents a rate of .420 gardens per 10k residents. Cities such as Austin and Houston have rates of .80 and .76 gardens per 10k residents, for comparison.*

Community gardens have been shown to [improve](#) the mental and physical health of participants, [re-](#)

Dallas Story: Using Farming to Rehabilitate

One well-known non-profit farm in southern Dallas proudly states that growing produce is not their main objective, but rather the farm serves as a powerful tool to rehabilitate residents of the historically redlined and socio-economically depressed area. During an in-person site visit, the founder spoke personally and profoundly to the power that the farm has to instill a sense of belonging and meaning in community members who are struggling with diseases of addiction and mental health.



Bonton Farms, Dallas

* Based on publicly available information at the time of writing from the [City of Austin](#) and [City of Houston](#), as well as local nonprofits the [Coalition for Austin Community Gardens](#) and [Urban Harvest](#).

[duce](#) surrounding urban temperatures, and [stimulate](#) environmental stewardship. Additionally, as the City of Dallas is a designated Welcoming City, serving immigrants coming from more than 200 other countries and languages, community gardens can provide added feelings of security through access to familiar foods.

The most successful community gardens have clear governing structures and conflict resolution processes [documented](#), as well as ongoing communication and events to keep members engaged. As with all organizations, clear communication and transparency around the goals, priorities, and capacity of garden members is essential. Many community gardens receive technical support from local County Extension offices, who offer free, evidence-based horticulture training and information. Gardens also often coordinate to form coalitions or associations, such as [in Austin](#), so that they can better advocate for resources or funding.

Although the City currently does not have a program allowing community gardens on vacant city land, an alignment of City departments and monetary resources focusing on a program of this type could facilitate the process. Water meters and hookups regularly cost \$5,000 or more, so funds must usually be raised to help with initial garden construction. Lease rates for gardens on city-owned land may reflect another major barrier, as it's currently unclear whether UA qualifies as a satisfactory "public purpose", allowing the City to lease out its land at below-market rates. One of the goals of this plan is to clarify this legal standing and ensure that the City encourages community gardens.

Farmers' Markets

In terms of Farmers Markets, there are both longstanding and recently introduced efforts, including the Dallas Farmers Market and the For Oak Cliff Farmers Market, respectively. These markets are supplied by a network of growers, producers, and artisans from within and outside the city limits. During an on-site visit, one market manager reported that the demand for fresh, locally grown produce far outstrips current supply, especially in the off-peak season, and that the Dallas region has a substantial need for additional produce growers. Throughout the region, fresh-market produce growers are challenged by extreme fluctuations in daily temperatures and rainfall patterns, and current real estate prices within city limits can present an even greater barrier. This shortage of fresh fruit and vegetable growers represents a great opportunity for investment and capacity development, as our public input survey also shows a significant unmet demand for locally grown food.

The main barriers to starting new farmers markets relate to securing a suitable space (and associated permitting), the overhead expenses involved, and identifying and partnering with a well-balanced mix of vendors that will synergistically increase, rather than compete for, total sales. These types of legal and management overhead expenses can be a challenge for small entities to support, as grants often prohibit their resources from going toward salaries or other ongoing operating expenses. Other setup challenges include navigating and coordinating with other existing markets, which may have non-competes in their contracts with the City, or have operation times that would force customers to choose between the two. Effective collaboration between Dallas UA stakeholders and the City is the subject of Recommendation 4 in this plan.

Summary of Existing Urban Agriculture Policies

The City of Dallas first adopted an urban agriculture ordinance in a 2010 code amendment that allowed community gardens on vacant lots. In that update, Dallas City Council passed some community garden policies to begin to address barriers associated with restrictive zoning code requirements, land use, and health code regulations.

The growth of urban agriculture after this amendment was not as strong as hoped, and in 2014 the Dallas Coalition for Hunger Solutions' Urban Agriculture Action Team identified building permit requirements and restrictions on produce sales as the largest legal obstacles for potential urban farmers. A wide coalition of stakeholders attempted to address these concerns through the passage of a [2015 code amendment](#), which added new allowances for hens and aquaponics at urban gardens. During the development of this plan, however, stakeholder feedback indicated that more work remains to be done. Costs and procedural complexity associated with the permitting and development process, including fees for engineering and site planning, appeared to be some of the largest remaining deterrents for expansion of urban agriculture in Dallas.

Depending on the type of urban agriculture, acquiring a Certificate of Occupancy (CO) and certain construction permits may be required for operating a new site if there are changes to building or land use. In particular, a new CO is needed for:

- + The first use of land or a building
- + A change of use of land or a building
- + A change of tenant on an existing CO, or
- + An existing use increases or decreases floor area
- + Construction of non-exempt structures*

Obtaining a CO requires a payment of \$280, a building permit application if applicable, a plat map, a site plan, a tree survey, and a parking analysis. An inspection must take place before the new land use can be implemented on site.

Dallas presently has few codes and ordinances in place to explicitly promote and support urban agriculture. Crop production is allowed on residentially-zoned land; however, commercial selling is often prohibited, especially on-site. No codes or systems exist for special leasing opportunities, [such as those](#) in other cities, subjecting urban farmers to leasing costs that regularly surpass their annual revenue. Additionally, there is no formal support in place by the City to connect current and potential urban farmers to agricultural education and resources.

* Relevant exemptions to permitting requirements for urban agriculture use may include the erection of shade structures, small storage buildings for non-commercial use, and bed cover such as high tunnels and hoop houses.



The Incredible Edible Garden at the Dallas Arboretum

In 2015, the City of Dallas Office of Environmental Quality and Sustainability requested assistance through the Local Foods, Local Places program to develop an action plan for broadening urban agriculture in the City, with specific focus on creating more economic opportunities for local farmers and businesses and improving access to healthy, local food, especially for disadvantaged groups. The group published Local Foods, Local Places – A Community-Driven Action Plan for Dallas, TX in November 2016 that set 5 sweeping goals:

Goal 1. Expand healthy, affordable food access and education for all.

Goal 2. Create places that successfully support food production and education.

Goal 3. Create a culturally relevant local food marketing/communication strategy.

Goal 4. Strengthen the local food network in Dallas to increase food independence.

Goal 5. Create a food policy committee comprising local residents to build awareness of local food initiatives.

While none of the five goals set in the action plan include specific tasks related to developing recommendations to update ordinances, Goal 5 calls for the creation of a food policy committee.

As of 2022, there is now a provision in the City Code allowing for Neighborhood Markets in certain locations (Sec. 42A-22), including in residential districts if the site has a CO for a nonresidential use. This may allow farmers' markets to operate on urban agriculture sites.

Summary of Key Themes From Stakeholder Engagement

Recognizing the ongoing work that has already and will continue to take place outside of this engagement, the project team has sought to meaningfully collaborate with local stakeholders from the outset of this project. Over 50 one-on-one interviews were conducted with key local stakeholders (**see Appendix A**), including organizers of community gardens, founders of commercial farming operations, leaders of non-profit advocacy and resource groups, food bank leaders, community activists, and relevant City officials. Nine site visits were conducted by the project team, and further ones were conducted by OEQS. A public survey was released, and resident input was incorporated into the recommendations. Finally, four public feedback sessions on the draft plan were held and edits were made to the plan based on community input.

Some of the challenges and concerns most commonly cited during our engagement included (in order of frequency encountered):

1. The siloed or competitive nature of stakeholders
2. A lack of transparency around costs and allocation of City resources
3. The need to make the plan actionable and assign responsibility for continuity and follow through
4. Limitations with plan efficacy if action items are not supported with interrelated factors (i.e. job development, education, utility use, infrastructure)
5. Feeling that there is a lack of discernment of different community needs
6. Wariness of some stakeholders to unpaid expertise due to previous work put in that never materialized

Above all else, the siloing within both COD agencies and private sector organizations, and the mistrust between the two, was identified by stakeholders as the first and most prominent barrier in the Dallas UA landscape. Similarly, many voiced a lack of clarity around COD-required processes and fees to set up and/or conduct UA activities as a substantial obstacle. Barriers to equitable access to UA were also identified as a key stakeholder issue, especially given the stark divides in healthy food access between predominantly white communities and historically disadvantaged communities in Dallas. The recommendations laid out in this plan are centrally focused on addressing these key stakeholder concerns and structural barriers to increased urban agriculture activity in the City of Dallas.

Table 4 (following page) details the best models of Urban Agriculture organizations, resources, and programming according to Dallas stakeholders. While not directly mentioned by stakeholders, the project team also recommends those interested in starting in Urban Agriculture consult the USDA's [Urban Agriculture ToolKit](#), which provides a comprehensive guide on "common operational elements that most urban farmers must consider as they start up or grow their operations."

Best Models According to Stakeholders Interviewed

Location

Urban Farms	Restorative Farms , Hatcher Farm and Seedling Farm	Dallas
	Bonton Farms	Dallas
	Oak Cliff Veggie Project	Dallas
	Big Tex	Dallas
	Half Acre Farm	Dallas
	Jubilant Fields Farm	DFW Area
Community Garden	East Dallas Community Garden	Dallas
	Highland Park Community Garden	Dallas
	Joppy Momma's Farm	Dallas
Educational Programs	GrowDat Farms	New Orleans
	Mockingbird Elementary	Dallas
	Dallas College	Dallas
	Grow North Texas	Dallas
	UNT Dallas- Urban Agriculture & Renewable Resources	Dallas
	UTD Eco Hub	Dallas
	Farmers Assisting Returning Military (F.A.R.M)	DFW Area
	Truth and Reconciliation Group	Dallas
	Indigenous Land Stewardship	Dallas
Edible Schoolyard	National	
Farmers Markets	Dallas Farmers Market	Dallas
	Good Local Markets	Dallas
	For Oak Cliff Farmers Market	Dallas
Technical Assistance	Texas A&M Agrilife	Texas
Advocacy	BC Workshop	Texas
	Child Action Poverty Lab	Dallas
	North Texas Food Bank	North Texas
Marketing Events Competitions	Profound Foods	DFW Area
	Food Equity Innovation Challenge	DFW Area
	Dallas Farmers Market Events Calendar	Dallas

Table 4 continued on following page.

Best Models According to Stakeholders Interviewed		Location
Zoning	San Antonio Zoning for Urban Farming	San Antonio
	Fort Worth Urban Agriculture Zoning Ordinance	DFW Area
	Austin Food Programs	Austin
Composting Programs	Fort Worth Composting Program	DFW Area
	City of Plano Composting Program	DFW Area
	Turn Compost	DFW Area
Restaurants	Taste Project	DFW Area
	Cafe Momentum	DFW Area
Funding	Harris County Health Food Financing RFP	Houston Area
	USDA/NRCS/FSA: High Tunnel Initiative , Local Food Promotion Program , Regional Conservation Partnership Program , Non-Insured Crop Disaster Assistance Program (NAP) , etc.	National
	Communities Foundation of Texas	Texas
Coalitions	USDA FSA Urban County Committee	Dallas
	North Texas Food Policy Alliance	North Texas
	Dallas Coalition for Hunger Solutions	Dallas
Value-Add/ Processing	Fresh point (Sysco) – value added center	National
Resources	Dallas Seed Library	Dallas
	DART GoLink	DFW Area
	Local Food Purchasing Agreements	National

Table 4: Best models according to stakeholders interviewed.

In terms of public survey responses (see Figures 9 and 10 on following page), results showed that 71% of respondents (495 persons) showed interest in volunteering, learning or working in gardening or farming, indicating there is a high community interest in getting involved in UA activities. Further, when asked how the City of Dallas can support urban agriculture, 31% of respondents chose “provide money or resources to start a farm or garden.”

Finally, City of Dallas residents were surveyed on their rankings of UA benefits. The most frequent top five ranking, as shown in green in Figure 10 (following page), is (1) Personal Health (Mental/Physical),

(2) Environmental Health, (3) Building Community, (4) Job and Business Opportunity, (5) Making the City Desirable. Interestingly, when the various order rankings for each benefit are added up as shown in Table 5, Environmental Health consistently ranks in the top four choices, indicating that although Personal Health (Mental/Physical) is the most important benefit to a majority of respondents, the importance of Environmental Health benefits resulting from UA to Dallas residents is consistently high.

Are you interested in volunteering, learning, or working in gardening or farming?

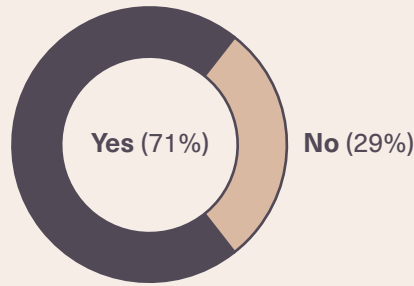


Figure 9: Percent of Dallas residents surveyed interested (or not) in volunteering, learning or working in gardening or farming

How should the city support urban agriculture?

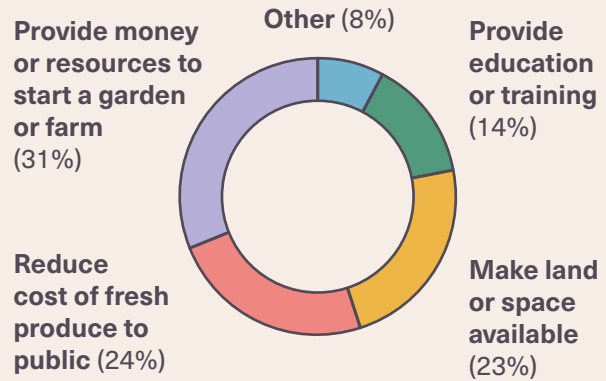
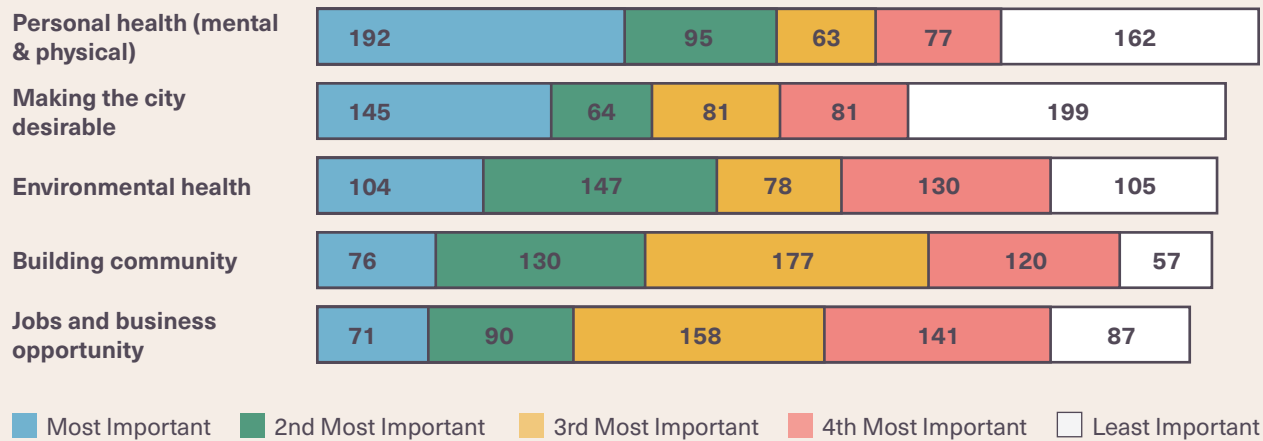


Figure 10: How Dallas residents surveyed feel the city can best support urban agriculture

Ranking of urban agriculture benefits by Dallas residents



Benefit	Rankings					Total
Personal Health (Mental/Physical)	1	2	5	5	2	15
Making the City Desirable	2	5	3	4	1	15
Environmental Health	3	1	4	2	3	13
Building Community	4	2	1	3	5	15
Job and Business Opportunity	5	4	2	1	5	17

Figure 11 (above): Ranking of urban agriculture benefits by Dallas residents surveyed

Table 5 (below): Top list rankings of five urban agriculture benefits by number of Dallas residents surveyed

Defining Urban Agriculture Priority Areas

Recognizing the legacies of inequality present within the Dallas food system today, Urban Agriculture Priority Areas (UAPAs) were identified as neighborhoods that should be prioritized for the resources, funding, and equitable and timely implementation of this plan. Given the over 385 square miles within the City of Dallas, identifying specific areas for priority implementation is critical to fulfilling the CUAP's mandate of catalyzing the transition to a more robust and resilient urban agriculture ecosystem. Using a custom-built GIS tool, "City of Dallas Urban Agriculture and Community Health Explorer" (shown in Figure 8 above), these areas were defined based on the prevalence of both above average need and opportunity (defined below), and represent locations where funding would have the most immediate impact on providing much needed fresh food, green space, and community investment. Utilizing equity measures like the Social Vulnerability Index (SVI) ensures that neighborhoods selected for funding are the ones that will benefit from it most.

Below is a summary of the methodology used to define UAPAs. A full technical analysis can be found in **Appendix C**. Need is defined by the SVI, a CDC measure of 15 different data points relating to community health, wealth, and resilience. Socially vulnerable populations are especially at risk for acute and chronic food insecurity because of disproportionate factors (socioeconomic status, household composition, minority status, housing type, and transportation) that affect their ability to afford and access healthy, culturally-appropriate foods.

Opportunities are defined as above-Dallas-average rates of existing UA activities, community assets, and land opportunities. These assets can include land owned by faith-based institutions, existing community gardens, food pantries, after-school meal sites, student summer meal sites, senior meal sites, and U.S. Department of Housing and Urban Development (HUD) buildings.* These sites were identified through a combination of existing databases, community input, and satellite verification.

Acknowledging that not all of these neighborhoods encounter the same challenges and opportunities,

UAPAs were further differentiated into two groups, Tier 1 and 2, to account for their varying level of current UA activity. The separation of tiers is not meant to prioritize one over the other, but rather to highlight the difference in the most impactful investment strategy for each.

Tier 1 tracts are defined as both meeting the high need and high opportunity criteria of Tier 2 tracts, as well as also having an above-city-average prevalence of existing UA sites. This means that solutions targeted toward these areas should leverage the already present network of gardens, farms, markets, and farm stands by focusing on capacity building with existing stakeholders.

Tier 2 tracts, on the other hand, are defined as having an abundance of non-UA related community assets, such as land owned by faith institutions, food pantries, and HUD buildings, but fewer existing UA sites compared to Tier 1. This means that funding directed toward Tier 2 tracts should focus on developing UA programming through community assets such as faith institutions and HUD buildings, rather than trying to find existing UA partners like in Tier 1. Like the Tier 1 tracts, Tier 2 tracts also have high levels of need.

It is also worth noting that UAPAs in central Dallas, especially in District 2 and 7, tend to overlap closely with historically redlined areas (areas in red). This can be seen in the figures below, as well as in the GIS web app, by toggling the layers of "UAPA Tract Tiers" and "Historically Redlined Areas" on top of one another.** Parallels can also be seen between these areas and those with high social vulnerability, as seen by toggling the "Tract Social Vulnerability" layer.

The noteworthy trend here is that these areas show a profound community and charitable response, as evidenced by the high proportion of faith-based institutions, food pantries and senior and school meal sites. With thoughtful funding allocation toward the many vacant land parcels in these areas, UA can be used as a powerful tool for long-overdue reinvestment in these neighborhoods.

* K-12 school gardens were not included in mapping work due to privacy and security concerns by DISD

** Redlining refers to color-coded maps of the City of Dallas published by the Home Owners' Loan Corporation in 1935 and 1940. The maps were used by financial institutions to restrict access to credit or terms of credit based on the credit applicant's race, color, national origin, or other prohibited characteristic(s). The maps referenced in this plan may be found at Mapping Inequality, the National Archives and Records Administration, and the Library of Congress.

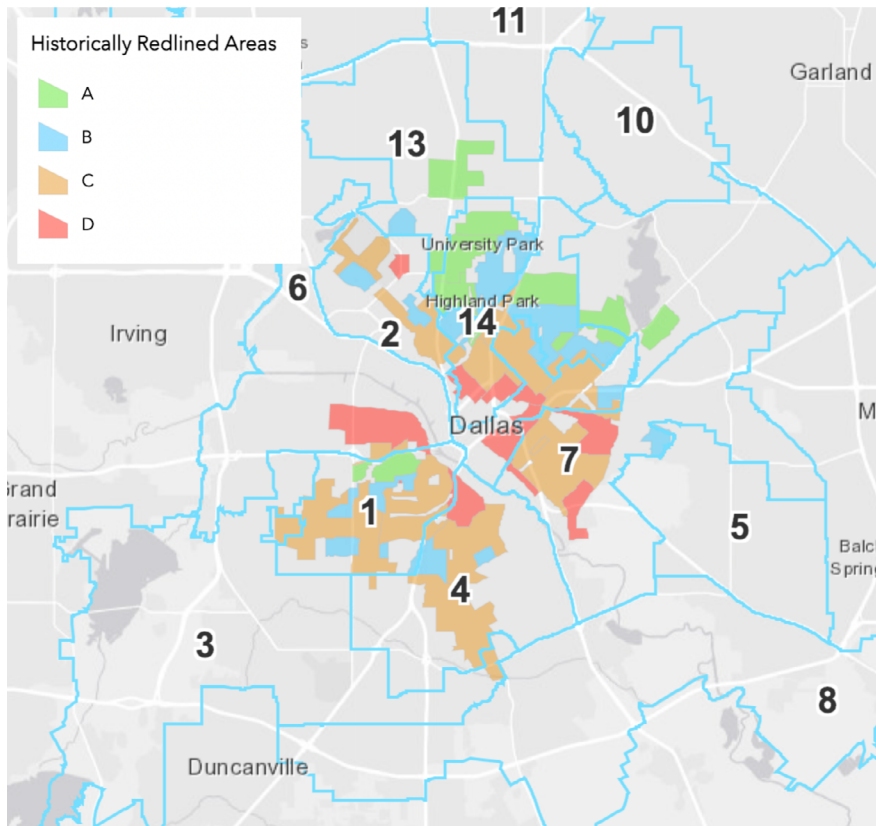


Figure 12: Historically redlined areas in Dallas. Redlining refers to the practice of “denying borrowers access to credit based on the location of properties in minority or economically disadvantaged neighborhoods” (NCRC). The Home Owner’s Loan Corporation (HOLC), formed in the 1930s, gave neighborhoods mortgage lending grades based explicitly on racial and class lines. An “A” grade was considered low risk for lenders; a “D” grade was considered “hazardous,” meaning securing a loan was all but impossible for residents in many areas. “D” grades were assigned based on demographic makeup—where neighborhoods were considered to be “infiltrated” with “undesirable populations,” which at that time included Black, Jewish, Asian, and Hispanic families. These “hazardous” lending areas were outlined in red on HOLC maps. The Fair Housing Act of 1968 outlawed this type of classification, but the health and wealth impacts of this systematic disinvestment are still seen today.

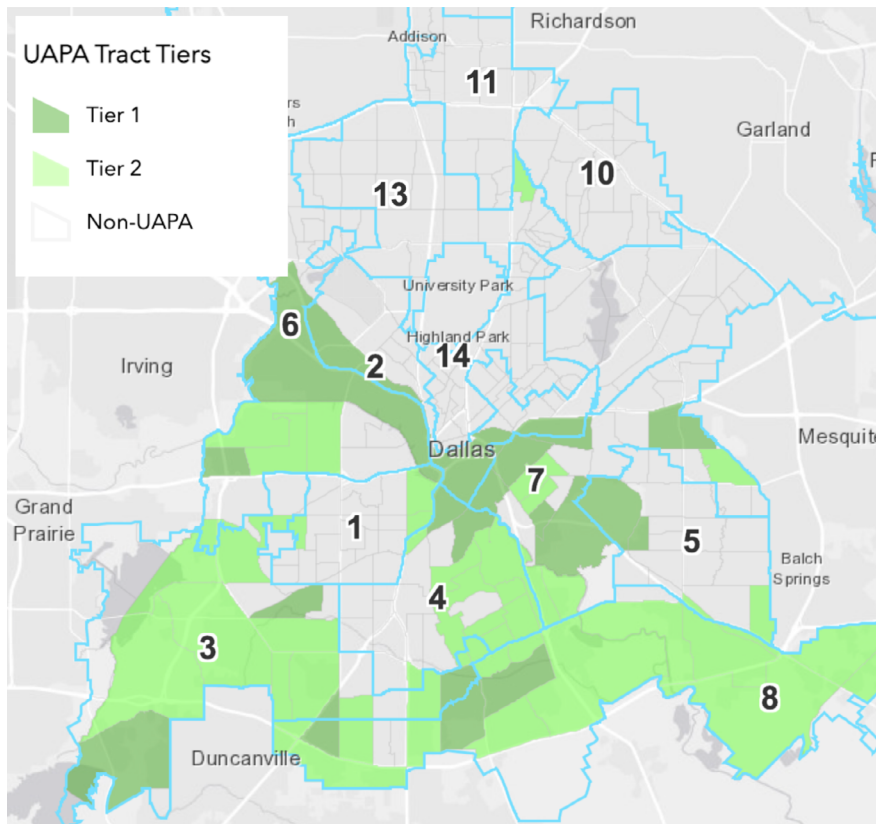


Figure 13: UAPA Tier 1 and 2 areas.



3.

**THE VISION FOR URBAN
AGRICULTURE IN DALLAS:
THE PLAN.**

Overall Vision, Goals, and Relationship to CECAP Goals

The following recommendations are the core of the Comprehensive Urban Agriculture Plan. These recommendations were developed based upon a careful review of existing efforts, best practices from other communities, and careful consideration of the initial feedback received from stakeholders in the Dallas food shed. The Comprehensive Urban Agriculture Plan focuses on five key recommendations, each encompassing several solutions and action items:

- 1 Reduce Regulatory Barriers**
- 2 Support Land Access**
- 3 Provide Urban Agriculture Education, Resources, and Support to Dallas Residents**
- 4 Facilitate Collaboration and Partnerships Among UA Stakeholders**
- 5 Build Market Opportunities**

These recommendations and subsequent actions items are described in more detail below, along with a suggested timeline for implementation. Some action items have already been initiated, both by OEQS, other City of Dallas departments, and local stakeholders, while others are projected to begin after the Plan's adoption by Dallas City Council. The implementation and execution of each recommendation will foster the growth and organizational capacity of urban agriculture in the City of Dallas.

The policy amendments in Recommendation 1 should be the first priority for implementation, as they will immediately reduce the regulatory barriers for new and expanding UA sites. This will significantly enhance the efficacy of the subsequent recommendations. Some recommendations are relatively quick action items, while others are strategic directions that will be enacted over years and decades to come.

There is a deliberate focus on equity throughout these recommendations. Wherever possible, attention and funding are directed towards Dallas' historically underserved residents and UAPAs (see definitions section for more information). Food can be a powerful tool for social change, and it is the goal of this plan to enable Dallas residents to take charge of their food system, and help shape its direction through improved collaboration with local policymakers and other stakeholders.

RECOMMENDATION 1.

Reduce regulatory barriers.





RECOMMENDATION 1.

Reduce regulatory barriers.

DESCRIPTION

Based on current The Dallas City Code, urban farmers and gardeners operate in a legal gray area and often have to petition for exemptions and SUPs through City Managers and/or City Council. This process discourages potential new growers from establishing new commercial and community-based UA projects. As in many cities, navigating the permitting and zoning process can be daunting for residents. There is a need for simplified and inclusive ordinances that provide farmers and City employees clear guidance on how to efficiently establish new UA sites.

SOLUTIONS

- 1 Update the [Dallas Development Code](#) to reduce the regulatory barriers in the urban agriculture landscape.
- 2 **Identify and establish incentives for developers to include urban agriculture** within new developments, especially those done by community development corporations. Evaluate synergies with other city initiatives to increase functional green and permeable surfaces within new and existing developments.

RELATED CECAP GOALS

Primary CECAP Goal Impacted: Goal 7 FA3 - Develop A Dallas Comprehensive Urban Agriculture Plan.

Goal 7 Targets: Increase Urban Agriculture Acreage: 20% by 2030 / 75% by 2050

Additional CECAP Goals Impacted:

- + Goal 7 FA8 - Support The Creation Of Food Related Green Jobs In Production, Processing, Storage, Distribution And Waste Management.
- + Goal 6 EG8 - Improve The Quality Of Urban Ecosystems In Dallas Through The Sustainable Appropriate Design, Creation And Planting Of Urban Habitats.
- + Goal 6 EG9 - Support Public And Private Partnerships Using Nature-based Solutions To Address Public Health Challenges.
- + Goal 1 B13 - Establish Urban Greening Factor Requirements For New Developments That Quantify How Projects Contribute To Urban Greening For Reduced Stormwater Runoff And Urban Heat Island Improvements.

Solution 1.1

Update the [Dallas Development Code](#) per recommendations noted in **Appendix A** to reduce the regulatory barriers in the urban agriculture landscape.

DESCRIPTION / RATIONALE

A comprehensive ordinance update will dramatically lower complexity and costs to starting an UA operation in Dallas. The suggested updates in **Appendix B** are based on extensive stakeholder feedback and a comprehensive review of the current code from the Project Team. These updates are intended to assist both community gardens and market farms.

COs were consistently named as one of the greatest barriers to new UA operators getting established. Easing the CO and development review process, including lowering or waiving fees for community or small-scale projects, will meaningfully help grow UA in Dallas and help achieve the CECAP targets

This solution will lead the way to the acreage increases mandated in CECAP and make the following recommendations and solutions more effective.

TIMELINE

1 – 3 Years

WHO LEADS/ WHO SUPPORTS

- + Office of Environmental Quality & Sustainability
- + Planning & Urban Design
- + Sustainable Development and Construction Department Building Inspection Division
- + City Attorney's Office

INITIAL ACTIONS

1. OEQS & PUD to review code recommendations noted in **Appendix B**
2. Solicit feedback on Development Code recommendations from relevant City of Dallas Departments (e.g. Planning and Urban Design, Office of Economic Development and Housing and Revitalization).
3. Provide updated recommendations to the City Planning Commission through Planning + Urban Design.
4. Incorporate recommendations into the Comprehensive Reform of the Dallas Development Codes.
5. Routinely update and maintain WebApp once a year by adding new UA assets and removing defunct ones.

MODEL(S) FROM OTHER CITIES

- + [2020 Advance Fort Lauderdale Comprehensive Plan: Policy FLU 2.6.2b](#)
- + [Atlanta, GA, Code of Ordinances §16-29.001\(83\)\(a-b\) \(2020\)](#)
- + [Detroit, MI, Code of Ordinances § 50-12-109 \(2019\).](#)
- + [Highland Park, MI, Code of Ordinances §1229 \(2011\).](#)
- + [St. Petersburg, FL, Code of Ordinances, On-site sale of produce allowed as an accessory use. Ord. No. 448-H, § 5, 2-11-2021](#)
- + [Lauderhill, FL, Code of Ordinances Sec. 5.14., Purpose and Intent for Community Gardens. Ord. No. 14O-05-120, § 7, 7-14-2014](#)
- + [City of Philadelphia Zoning Laws for Urban Farming and Community Gardens.](#)
- + [City of Pittsburgh Urban Agriculture Zoning Approval Process.](#)

Incentives: [Austin Functional Green Code](#), [NYC Requiring Green Roofs](#), and [Los Angeles County Urban Agriculture Incentive Zone Program](#)

SUCCESS METRICS/ INDICATORS

1. Code Changes Implemented

Solution 1.2.

Identify and establish incentives for developers to include Urban Agriculture within new developments. Evaluate synergies with other city initiatives to increase functional green and permeable surfaces within new and existing developments.

DESCRIPTION / RATIONALE

Developers have a significant influence on land use, stand to benefit from Urban Agriculture (amenity benefits, heat island reduction, stormwater infiltration, etc.) and have the capital resources to support the development of urban agriculture. Well-designed city development incentives can encourage more urban agriculture in CoD at no cost to the City.

TIMELINE

1 – 2 Years

WHO LEADS/ WHO SUPPORTS

- + Office of Environmental Quality and Sustainability
 - + Planning and Urban Design
 - + Development Services Department
 - + City Attorney's Office
-

INITIAL ACTIONS

1. Review proposed incentives in [Appendix B](#), Planning & Urban Design
2. Meet with PUD to determine acceptable incentives
3. Develop relationship with community land trust/ land bank
4. Design accountability process to ensure program achieves desired outcomes

MODEL(S) FROM OTHER CITIES

- + Burlington, VT [Urban Agriculture Density Bonus](#) (ZA-14-08 Sec. 4.4.5 D.7.E)
 - + California [Urban Agriculture Incentive Zone](#)
 - + Sacramento [Urban Agriculture Incentive Zone Ordinance](#)
-

SUCCESS METRICS/ INDICATORS

1. Number of projects using incentives
2. Number of UA projects created through this process
3. Percentage of developable property (using these incentives) placed in agriculture
4. **Equity:** Ensure community support and/or listening sessions for new developments, ratio of incentives used between community development corporations and traditional developers

RECOMMENDATION 2.

Support land access.



RECOMMENDATION 2.

Support land access.

DESCRIPTION Stakeholders in Dallas have consistently named lack of access to land as one of the greatest barriers to increasing local food production. Nationally, access to affordable, quality farmland is also the single greatest barrier facing aspiring young farmers, according to the [National Young Farmers Coalition](#). Especially for urban residents who have been disconnected from the production of their food, access to land to grow food is a critical public infrastructure that builds community resilience in the face of a rapidly changing climate.

As climate change accelerates, our global food supply chain will face more disruptions, making urban food security more vulnerable. Therefore, it behooves municipal governments and community partners to be creative and innovative about what kinds of land they consider appropriate for urban food production. Land opportunities may include areas within DART, HUD properties, government buildings, electrical utility easements, and Faith-Based Institutions. These land types offer opportunities for the full spectrum of urban agricultural activities: Indoor and outdoor growing, distribution-storage, marketing, education and demonstration, community events, and composting-soil building. Implementing both crowd-sourced and city-led urban agriculture land matchmaking systems could speed adoption and engage a wider audience than either solution alone.

SOLUTIONS

- 1 **Visualize the COD UA landscape** in geographic context, framed with equity.
- 2 **Establish a process for making high-potential City-owned vacant lots available** for UA projects.
- 3 **Match-making model** for connecting aspiring farmers and private landowners.

RELATED CECAP GOALS

Primary CECAP Goal Impacted: Goal 7 FA3 - Develop A Dallas Comprehensive Urban Agriculture Plan.

Targets: Increase Urban Agriculture Acreage: 20% by 2030 / 75% by 2050

Additional CECAP Goals Impacted:

- + **Goal 7 FA8.** Support The Creation Of Food Related Green Jobs In Production, Processing, Storage, Distribution And Waste Management.
- + **Goal 7 F12.** Identify Opportunities For Controlled-Environment Agriculture To Increase Local Food Production That Are Less Energy And Water Intensive And Protected From Climate Extremes.

Solution 2.1

Visualize the COD UA landscape in geographic context, framed with equity. Develop a GIS web app that displays high-potential UA parcels in Dallas (highlighting City-owned sites), and overlays public and private databases of community health determinants.

DESCRIPTION / RATIONALE

A visual representation of land opportunities suitable for UA (public and private land), overlaid with the existing UA infrastructure, community assets, and community social determinants of health such as the Social Vulnerability Index (SVI) can be used to equitably prioritize UA land opportunities and provide access to the areas in Dallas in most need of the benefits of UA, including green space, healthy food, and community reinvestment.

Additionally, this GIS web app can be used to compile data and build reports for public and private grant applications. These funds can be used to fund land acquisitions and transfers, provide start-up capital for UA site preparation, or provide technical assistance for current and aspiring urban agriculture practitioners.

TIMELINE

1–2 Months for COD transition, with updates/audits every year

WHO LEADS/ WHO SUPPORTS

- + Office of Environmental Quality & Sustainability
- + Other related City agencies and affiliates

INITIAL ACTIONS

1. Create GIS Web App using relevant local land information, national health data, and community input and verification.
2. Establish COD ownership of the GIS Web App intended for internal use, including identifying and providing initial training, and necessary ongoing maintenance resources.
3. Produce City-wide and City Council District reports describing highest UA potential sites in each Council District.

MODEL(S) FROM OTHER CITIES

The City of Baltimore, in partnership with the Department of Planning and the Johns Hopkins Center for a Livable Future, created [Food Environment Briefs](#) for the city and at the district-level. This format could be adapted for the COD for UA. This reporting system provides mutual education to City Council members, the public and nonprofits. The data behind these reports is a GIS database and mapping system that allows city staff to track food system indicators and activities.

SUCCESS METRICS/ INDICATORS

1. Annual updates to the internal map features:
 - a. Land opportunities
 - b. Community Assets
 - c. Existing UA activities
 - d. Social Vulnerability Index (SVI) Tract changes
 - e. Changes to CDC PLACES tract data for dietary health outcomes: Diabetes, Obesity, Stroke, and Heart Disease.
2. Community engagement with the public-facing GIS app.
3. Annual reports of UA activities and opportunities by City Council District and the COD as whole, derived by the internal GIS Web App.
4. **Equity:** Focused efforts, resources, and funding directed towards UAPAs.

Solution 2.2

Establish a process for making high-potential City-owned vacant lots available for UA projects. Share educational materials related to urban agriculture zoning and land use with UA practitioners and residents.

DESCRIPTION / RATIONALE

Providing access to land for UA is a first step towards building a network of climate resilient UA infrastructure. However, not all sites are the same. Some sites might be in residential districts (single family or multifamily), some in industrial areas, while others are on DART or DISD properties. Each site has a context which the intended UA activity should be sensitive to. In order to prevent unintended consequences such as causing nuisances, the COD could partner with residents and UA practitioners to understand land use and zoning guidelines for the diverse set of UA land opportunities.

The City of Dallas and its various partnering agencies and affiliates (such as DART and DISD) own many acres of vacant land. Utilizing these sites for either permanent or temporary agricultural use would meaningfully advance the CECAP targets of local food production and climate resilience. It is common for major US cities to have a dedicated staff member to oversee city garden programs. Leveraging the GIS data and web app collected to date could efficiently identify optimal city-owned parcels.

TIMELINE

2-3 years and requisite funding

WHO LEADS / WHO SUPPORTS

- + Office of Environmental Quality & Sustainability
- + Other related City agencies and affiliates, particularly Planning & Urban Design and Parks & Rec

INITIAL ACTIONS

1. Use identified Urban Agriculture Priority Area (UAPA) Tracts to narrow down equitable parcel options for UA activities such as growing, distribution-storage, selling, and soil building.
2. Develop a public version of the GIS Web App that allows users to select lots which are vetted by COD staff and decision makers. Market this tool by displaying it at community events and publishing its link on relevant COD websites.
3. Develop urban farm/garden programs to leverage high-UA potential lots, including selection criteria and management staff.
4. Share available City geodata on soil and water characteristics, brownfield sites, Municipal Setting Designations, and other regulatory clean-up programs. Integrate with GIS Web App if possible. For City sites where existing soil data is not available, use any available UA allocated funds to conduct soil health and quality testing before dedicating to UA. As necessary, seek or allocate other funding to facilitate testing.
5. Put in place an audit/ maintenance system to ensure these lots are productive.

6. Create appropriate incentive programs, [joint use agreements](#) and Interim-Use Agreements to attract community partners who can help maintain UA activities on city-owned lots. For reference, see **Funding Opportunities** section. Partners could be sourced from identified community assets such as leaders of faith centers, HUD properties, Dallas ISD, After school meal sites, and Food Pantries. Incentives could range from supplying expedited permitting, general or private/grant funds for water, utility connections, and fencing.
7. Create an additional process for creating UA sites on Parks Land, which has to be managed under special agreements. See **Appendix B** for relevant considerations and suggestions
8. Create a UA land opportunity workshop and guide in partnership with some of the City's leading UA operators. These initial educational products could focus on the permitting process, land use and zoning for existing UA activities in the city.

MODEL(S) FROM OTHER CITIES

- + [The City of Minneapolis](#) has an interactive mapping system that is part of a city owned leasing system. This could be applied for city owned and private lots.
- + [Atlanta's "Grows-A-Lot"](#) program and online interface is a City of Atlanta AgLanta initiative that invites entrepreneurs, non-profits, and residents to apply for a 5-year renewable license to adopt a vacant, city-owned property to start a new urban garden, urban farm, or food forest.
- + [Lots to Love Pittsburgh](#) is a public-facing, online resource guide for those who have an interest in transforming vacant lots in their neighborhoods into community green spaces. The website provides resources that help organizations and residents alike to build a successful project on a vacant lot.
- + City of Seattle's [P Patch Community Garden](#) program creates community-stewarded open spaces with plots that residents can sign up to grow on.
- + The Boston Redevelopment Agency (BRA) provides [educational material](#) to explain UA land opportunity profiles.
- + The Seattle P Patch Community Garden program has [tips and guidance](#) for choosing appropriate sites for UA. A [cheat sheet](#) establishes criteria for meeting City priorities. There is also guidance for design consideration, construction, and site management. For more information **see appendix C**.

SUCCESS METRICS/ INDICATORS

1. Track amount of land opportunities (count, % of land, and rate per 10K population) within Urban Agriculture Priority Areas that become utilized for UA activities.
2. Pounds of produce from city-owned lots and where it ends up: direct to consumers, pantries, waste.
3. Reduced carbon footprint of produce from lots.
4. Number of sustained joint-use agreements between the city and community partners for UA activities.
5. A scoring system that tracks the maintenance of UA activities.
6. **Equity:** number and proportion of participants who come from historically disadvantaged communities.
7. Number of participants in UA land opportunity education workshops.

Solution 2.3

Match-making model for connecting aspiring farmers and private landowners.

DESCRIPTION / RATIONALE

Collaborate with established UA practitioners to design a RFP for a decentralized database/matchmaking service between aspiring farmers and landowners, for private, non-COD owned land in the North Texas region. Different sections could be created for:

- a. City and other publicly authority owned land targeted for Ag licenses
- b. Private landowners looking to short-term (less than 10 years) license/lease for Ag
- c. Private landowners looking for long-term leases
- d. Landowners (public or private) looking for farm partnerships (e.g., private school wants an educational farm, hospital wants a teaching garden, developer wants a farm amenity)
- e. Public land looking to sell for permanent Ag
- f. Private land looking to sell for permanent UA

TIMELINE

3 – 4 Years and requisite funding

WHO LEADS/ WHO SUPPORTS

- + OEQS
- + Community Partner(s)

INITIAL ACTIONS

1. Reach out to existing farmland matchmaking services and inquire about best practices and operational expenses and challenges
2. Convene UA practitioners and peri-urban small farmers in focus groups to tailor the matchmaking service to local needs.
3. Determine the most feasible implementation plan, including a regional partner to operate and maintain the service.

MODEL(S) FROM OTHER CITIES

- + [New England Farmland Finder](#). This platform makes it easy for farm properties to be posted, and for farm seekers to search through them.
 - + [Grow Here](#). A digital matchmaking platform of Growers and landowners.
 - + [Farmland for a New Generation New York](#). This platform helps farmers seeking land and landowners wanting to keep their land in farming.
-

SUCCESS METRICS/ INDICATORS

1. Number of new UA matches: Practitioners to Lots.
2. Track growth of sustained matches from year to year.
3. Tenure of UA activities on the same lots.
4. Pounds of produce from partners participating in the matching program.
5. Reduced carbon footprint of food produced through UA activities.
6. **Equity:** number and proportion of participants who come from underserved populations.

A photograph of a tomato greenhouse. The image shows long, parallel rows of tomato plants on both sides of a central dirt path. The plants are lush green and have many tomatoes at various stages of ripeness, from green to red. The perspective is from a low angle, looking down the path towards the end of the greenhouse. The lighting is bright, suggesting a sunny day.

RECOMMENDATION 3.

**Provide urban
agriculture
education,
resources, and
support to Dallas
residents.**



RECOMMENDATION 3.

Provide urban agriculture education, resources, and support to Dallas residents.

DESCRIPTION

Stakeholders have stated the need for the City of Dallas to take a leadership role in promoting resources, and providing support to the UA community. This proposed role includes a centralized page on relevant regulations and resources, the facilitation of public-private education partnerships, and a UA training program.

SOLUTIONS

- 1 UA Resource Page:** Create clear, accessible documents that educate City of Dallas residents about relevant regulations and resources for starting and operating both commercial and community UA.
- 2 UA Education:** Develop a cohesive UA education strategy and implement it in relevant community programs.
- 3 UA Workforce Development:** Increase internship and traineeship opportunities in urban agriculture in Dallas.

RELATED CECAP GOALS

Primary CECAP Goal Impacted: Goal 7 FA3. Develop A Dallas Comprehensive Urban Agriculture Plan

Targets: This recommendation supports knowledge and resource sharing and thereby is crucial to ongoing improvements that indirectly support CECAP targets.

Additional CECAP Goals Impacted:

- + **Goal 7 FA1.** Increase Access To Information On Sustainable Agriculture, Best Practices And The Benefits Of Healthy And Local Foods.
- + **Goal 7 FA8.** Support The Creation Of Food Related Green Jobs In Production, Processing, Storage, Distribution And Waste Management.

Solution 3.1

UA Resource Page: Create clear, accessible documents that educate City of Dallas residents about relevant regulations and resources for starting and operating both commercial and community UA.

DESCRIPTION / RATIONALE

Creating a central one-stop-shop UA website will help reduce the siloing and lack of clarity stakeholders reported encountering from COD. Community members will know they can turn to this website to understand regulations, find available land and resources, learn about funding opportunities, identify UA training programs, and discover related events.

Much of the content and resources mentioned in other recommendations will be hosted on this site.

This site should include links to partnering organizations as well as internal and external resources.

TIMELINE

12 months for initial launch, to be updated regularly

WHO LEADS/ WHO SUPPORTS

+ Office of Environmental Quality & Sustainability

INITIAL ACTIONS

1. Invest in building an Dallas UA website under the OEQS department's domain
2. Establish event calendar, resources, programming, interactive map (a.k.a. City of Dallas Urban Agriculture and Community Health Explorer ARCGIS Web App), and contact landing pages
3. Establish equitable content submission and monitoring processes that is sustainable for OEQS staff and gives all UA entrepreneurs, volunteers, programs or otherwise space to share resources, leave suggestions or promote events.
4. Share more accessible information about Dallas Urban Agriculture news, sites, stakeholders, operations, policy, and events

MODEL(S) FROM OTHER CITIES

- + [AgLanta](#) is a digital food hub for all things urban agriculture from the City of Atlanta's One Atlanta Office and Department of City Planning
 - + [Fort Worth Ordinance](#) is a summary guide of the urban agriculture amendments to Fort Worth's zoning ordinance.
 - + [City of Boston Office of Food Justice landing page](#) is an urban agriculture resource page for Boston residents (note the funding section).
 - + [City of San Francisco](#) is an interagency program that supports and supplies the infrastructure for community members to steward our urban green spaces, on both public and private land.
-

SUCCESS METRICS/ INDICATORS

1. Landing page engagement metrics
2. The number of Dallas UA stakeholder organizations/ events showcased
3. Page updates
4. **Equity** measures:
 - a. Number of resources for WIC/SNAP, garden tool donations, funding for BIPOC and Women urban farmers.
 - b. Number of resources for Food Pantries.
 - c. Number of UA organizations featured (e.g. Farms, Market Gardens, Farmers Markets) that are located in or benefit historically disadvantaged areas
 - d. Website ADA features and second languages: Spanish, Vietnamese, Chinese.

Solution 3.2

UA Education: Develop a cohesive UA education strategy and partner with education organizations to establish or strengthen UA education networks in Dallas Communities.

DESCRIPTION / RATIONALE

Working with DISD, RISD, HUD, local colleges, established UA operators, and county extension programs to develop and implement UA programming will help:

1. Engage DISD, RISD, HUD, local colleges, established UA operators, and county extension programs to discuss areas of support, improvement, strengths from each entity and opportunities for partnerships
 2. Increase community-wide knowledge on the optimal growing practices for the region. This should include regenerative and agro-ecological systems, which are shown to [positively effect](#) carbon sequestration and soil health. Indigenous practices should serve as the foundation in this effort. Strengthen educational collaborations between farmers, master gardeners, extension programs, and indigenous organizations within Dallas communities.
 3. Encourage residents to engage in UA activities
 4. Increase familiarity with the benefits of UA
 5. Provide individuals with more experience for job opportunities in UA
-

TIMELINE

1 – 3 Years

WHO LEADS/ WHO SUPPORTS

- + Office of Environmental Quality & Sustainability
 - + Office of Equity and Inclusion
 - + Texas Agri-Life Extension
 - + DISD
 - + RSID
-

INITIAL ACTIONS

1. Create Pilot education program with CityLab (DISD) school
2. Identify experts and institutions who can add value to this process through desktop research and community engagement
3. Convene local experts through community engagement to develop community-specific UA best practices.
4. Establish a means of circulating UA information to and from communications and programming partners to promote accessibility with an in-person (or “offline”) UA information channel.

MODEL(S) FROM OTHER CITIES

- + [Grow NYC](#) helps youth and their educators foster a lifelong appreciation of nature, healthy food, and sustainability.
-

SUCCESS METRICS/ INDICATORS

1. Completion of pilot education programming with CityLab (DISD).
2. Community engagement metrics for programming
3. Number of secured communication and programming partnerships
4. **Equity:** Number of programs or partnerships established in historically disadvantaged communities

Solution 3.3

UA Workforce Development: Increase UA internship and traineeship opportunities in Dallas.

DESCRIPTION / RATIONALE

A shortage of well qualified growers and farmers is known to be a barrier to expansion for new farms across the US. Additionally, the [average age](#) of farmers in the US is 57.5 years old and rising. Texas has the most farms and the [most producers](#) of any state and leads in the number of beginning farmers. However, some current Dallas UA stakeholders doubt the availability of skilled labor is available to match expanded UA production in Dallas. Increasing internship and traineeship opportunities in UA, will build a pipeline of talent to support local nonprofit and for profit farms.

TIMELINE

1– 2 Years

WHO LEADS/ WHO SUPPORTS

- + Office of Environmental Quality & Sustainability
 - + Office of Equity and Inclusion
 - + Small Business Center
-

INITIAL ACTIONS

1. Consult with established UA Operators to collect relevant needed positions and their qualifications.
2. Consult with Small Business Center to develop workforce development training initiatives
3. Set up pilot internship program (paid) with local UA stakeholders who are able to fund positions
4. Solicit and advertise local UA job postings on the UA website from Recommendation 3, Solution 1

MODEL(S) FROM OTHER CITIES

[Grow NYC](#) Teaching Garden at Governors Island is a one acre urban farm that aims to engage, excite, and educate its visitors in all aspects of urban farming.

[Green City Force](#) Service Corps is GCF's flagship AmeriCorps service and training program. Corps Members serve full-time to gain the skills, certifications, and experience required to launch sustainable career pathways while serving NYC public housing communities.

[Food Corps](#) (part of AmeriCorps) partners with schools and communities to nourish kids' health, education, and sense of belonging.

SUCCESS METRICS/ INDICATORS

1. Number of opportunities listed
2. Number of vacancies filled through site
3. Number of interns/trainees who receive full-time paid positions
4. **Equity:** Participation share from historically disadvantaged populations

RECOMMENDATION 4.

**Facilitate
collaboration and
partnerships among
UA stakeholders.**



RECOMMENDATION 4.

Facilitate collaboration and partnerships among UA stakeholders.

DESCRIPTION

Reports of siloing and feelings of competition for resources were reported widely by urban agriculture stakeholders throughout the engagement process of the CUAP. Community and network knowledge is critical for UA industry innovation, market management, and, thus resiliency. Establishing and maintaining a shared Dallas UA language is crucial to continued community collaboration. As such, it is recommended that the City elevate existing Dallas UA stakeholder voices and aid partnership development.

SOLUTIONS

- 1 **Formalize and maintain a Urban Agriculture Advisory Council** that represents a range of UA stakeholders in the City of Dallas.
- 2 **Showcase and organize UA events** focused on knowledge sharing, resource support and partnerships for UA stakeholders.

RELATED CECAP GOALS

Primary CECAP Goal Impacted: Goal 7 FA3. Develop A Dallas Comprehensive Urban Agriculture Plan.

Targets: This recommendation fosters a sense of community and thereby is crucial to ongoing improvements that indirectly support CECAP targets.

Additional CECAP Goals Impacted:

- + **Goal 7 FA2.** Create A Food Advisory Council.
- + **Goal 7 FA3.** Develop A Dallas Comprehensive Urban Agriculture Plan.
- + **Goal 7 FA4.** Facilitate Partnerships Between Schools + Nonprofits To Develop Neighborhood-Based Growing Initiatives + Kitchen Gardens In Neighborhoods With Low Food Access

Solution 4.1

Formalize and maintain an Urban Agriculture Advisory Council that represents a range of UA stakeholders in the City of Dallas.

DESCRIPTION / RATIONALE

Continuing to build an Urban Agriculture Advisory Council that represents UA stakeholders, assures that there is a central entity within the Dallas community that can serve to strengthen collaboration amongst stakeholders and ease communication with City Departments and affiliates.

An active and well-maintained Urban Agriculture Advisory Council aims to connect a diverse group of people in the agriculture space. This council should seek to discuss emerging issues within the food system, facilitate policy discussion and provide a voice to local stakeholders in the City of Dallas.

TIMELINE

Active & Ongoing

WHO LEADS/ WHO SUPPORTS

- + Office of Environmental Quality & Sustainability
- + Urban Agriculture Stakeholders

INITIAL ACTIONS

1. Develop application process
2. Establish guidelines for operating and electing (co-)leaders
3. Solicit feedback from UA community
4. Develop an ongoing relationship with regional agricultural groups
5. Implement processes for auditing and receiving recommendations

MODEL(S) FROM OTHER CITIES

- + [Maricopa County's Urban Agriculture Work Group](#). This work group supports new and existing urban agriculture projects and advocates for sustainable solutions and practices.
- + [The City of Pittsburgh's Urban Agriculture Working Group](#). This group's goal is to influence policies and programs that help people to grow, share, and sell healthy food in urban settings.
- + [The City of Rochester's Urban Agriculture Working Group](#). This group cultivates leaders in Rochester's urban ag community to organize and empower urban growers to improve urban ag policy, resources, and education.
- + [Grassroots Gardens WNY](#). This community-led group shares knowledge, power, and resources on growing healthy food in urban spaces in Western NY.

SUCCESS METRICS/ INDICATORS

1. Attendance at meetings from UA stakeholders in all 14 City Council Districts
2. **Equity:** Ensure that historically disadvantaged participants are included and have active representation in the meetings. This may require multilingual outreach.

Solution 4.2

Showcase and organize UA events focused on knowledge sharing, resource support and partnerships for UA stakeholders.

DESCRIPTION / RATIONALE

Showcasing and organizing UA-related events and community efforts increases transparency to UA resources and knowledge. It can also build organizational capacity in the Dallas community by increasing awareness of stakeholder efforts in the UA space and strengthening networks among them. This can help UA stakeholders in the difficult-to-navigate areas of grant writing, shared distribution and/or locating processing infrastructure.

TIMELINE

Active & Ongoing

WHO LEADS/ WHO SUPPORTS

- + Office of Environmental Quality & Sustainability
 - + Office of Community Care
 - + Food Advisory Council
-

INITIAL ACTIONS

1. Create an event submission form on the UA Resource Website (as defined in Recommendation 3, Solution 1)
 2. Consult community leaders, that equitably represent all 14 districts, and promote recommended events (e.g., Food Safety Training, Business Administration, Grant Writing)
 3. Create an overarching event hosted by OEQS (e.g., "Harvest Fest") during slow season for UA stakeholders (winter months)
 4. Publish event information on the UA Resource Page mentioned in Recommendation 3, Solution 1
 5. Solicit feedback on which trainings and events are the most useful
-

MODEL(S) FROM OTHER CITIES

- + [City of Atlanta AgLanta Calendar](#): This calendar displays food and agriculture events in the Atlanta area, complete with descriptions, volunteer opportunities, COVID + garden safety information and weather policies.
 - + [Texas A&M Ag Extension Events](#): This calendar displays events and conferences around food and agriculture with location details, organizer contact information, cost and the ability to add the event to one's personal calendar.
-

SUCCESS METRICS/ INDICATORS

1. Community engagement metrics
2. Events offered per quarter
3. Community & stakeholder survey feedback on the success of the events given
4. **Equity:** Event promotion is channeled through trusted historically disadvantaged leadership organizations

RECOMMENDATION 5.

Build market opportunities.





RECOMMENDATION 5.

Build market opportunities.

DESCRIPTION

A robust and sustainable UA ecosystem relies on the coupling of responsible production practices with equitable access to a wide range of fair-price market channels. External financial support may be necessary during initial growth phases, but established UA businesses should be able to largely generate their own revenue to be financially sustainable long term. Expanding access to markets will help growers scale up production, and provide additional demand for new farms as they establish themselves.

Directing City of Dallas procurement dollars towards local sourcing, as well as encouraging the private businesses to do the same, could meaningfully help increase the viability of local small and medium-sized farms, and UA entrepreneurs of color, immigrant farmers, and other local distributors. Because local food purchases tend to have a strong multiplier effect, the City of Dallas could experience robust return of investment by creating more market opportunities for future farmers.

SOLUTIONS

- 1 **Reduce barriers to operating farmers markets.**
- 2 **Seek funding for nutrition assistance programs** to increase purchasing power of low-income consumers.
- 3 **Initiate or Partner with a “Buy Local” campaign** with consumer-facing, business-facing, and internal COD Agency-facing elements.
- 4 **Facilitate connections** between Dallas area producers and interested wholesale buyers such as restaurants, retailers, and institutions.

RELATED CECAP GOALS

Primary CECAP Goal Impacted: Goal 7 FA3. Develop A Dallas Comprehensive Urban Agriculture Plan.

Targets: Increase Restaurants, Farm Stands, Or Markets Sourcing From Local Producers By 10% 2030 / 50% 2050

Additional CECAP Goals Impacted:

- + **Goal 7 FA10.** Enhance The Market By Providing Incentives To Sell Locally Produced Food At Affordable Prices

Solution 5.1

Reduce barriers to operating farmers markets.

DESCRIPTION / RATIONALE

Prohibitive costs can limit the market potential for urban farmers. Reducing the costs and complexity of obtaining a market permit, and financially supporting UA farmers will help growers scale up production and allow new farmers to access new markets.

TIMELINE

In progress already, UAAC to support. 1 year timeline to address.

WHO LEADS/ WHO SUPPORTS

- + Office of Environmental Quality & Sustainability
 - + Urban Agriculture Advisory Council
 - + Planning & Urban Design
-

INITIAL ACTIONS

1. Ordinance change, SEC. 42A-22. LOCATION OF A NEIGHBORHOOD MARKET.a.2.
 2. Explore options for supporting farmers with marketing and distribution costs; including State and Federal grants for farmers market administration fees, food safety permits, cold storage, and signage.
 3. Explore options for reducing barriers or supporting mobile produce markets, especially those sourcing from local farms (coordinating with similar efforts through COD Racial Equity Plan).
 4. Provide at-cost/no-cost spaces (indoor/outdoor) for marketing on city-owned properties (e.g. DART and Parks land).
-

MODEL(S) FROM OTHER CITIES

- + [Farmers Markets of Minneapolis](#) is a market collaborative of over 20 farmers markets. Through shared branding, resources, and metrics tracking, the group supports a robust market network in the city.
 - + [The Farmers Market Coalition](#) is a national organization devoted to providing resources to farmers markets.
 - + [Grow NYC Greenmarkets](#) are the leading farmers markets in New York City, with over 50 locations across the five boroughs.
 - + [Foodlink Curbside Market](#) is a very successful mobile produce market that increases access to fresh produce to people in food apartheid areas in Rochester, NY.
-

SUCCESS METRICS/ INDICATORS

1. Tracked and measured attendance and reported sales at area farmers markets
2. Reduced net costs for participating farmers
3. **Equity:** Increased number of booths for women and BIPOC owned operations

Solution 5.2

Seek funding for nutrition assistance programs to increase purchasing power of low-income consumers.

DESCRIPTION / RATIONALE

Increasing enrollment and funding for nutrition assistance programs like SNAP and WIC could provide a significant source of demand for regional producers.

Existing programs like Double Up Bucks already demonstrate the power of coupling federal nutrition assistance funding with local food production. This win-win incentive should be scaled up quickly through additional funding. Studies consistently show an economic multiplier effect of SNAP investments, yielding between 1 and 2:1 in GDP returns.

TIMELINE

Active & ongoing

WHO LEADS/ WHO SUPPORTS

- + Office of Environmental Quality & Sustainability
 - + Office of Community Care
-

INITIAL ACTIONS

1. Understand current barriers to expansion (believed to be identifying financial matching partner).
 2. Explore possible grant or research funding opportunities, including:
 - a. LFPP grant
 - b. The GusNIP - Nutrition Incentive Program
 - c. Produce prescription programs
 3. Seek and/or allocate additional resources to facilitate enrollment in food assistance programs. See Best Practices from [No Kid Hungry](#), [State of Connecticut](#), [National Council on Aging](#), and [United Way](#).
 4. Find an appropriate partner to collaborate on a produce prescription program.
-

MODEL(S) FROM OTHER CITIES

Cultivate Kansas City's [Double Up Heartland](#) program is a successful and robust double-up SNAP program.

The [Rochester Public Market](#) (NY) has one of the most successful SNAP farmers market programs in the U.S., fueled in part by its FreshConnect bonus (similar to [Double Up](#)).

SUCCESS METRICS/ INDICATORS

1. Number of markets and/or farmers accepting SNAP and Double Up
2. **Equity:** Dollar value of SNAP redemptions and Double Up benefits distributed at Dallas farmers markets and farmer-vendors.

Solution 5.3

Initiate or partner with a “Buy Local” campaign with consumer-facing, business-facing, and internal COD Agency-facing elements.

DESCRIPTION / RATIONALE

By developing or supporting a “Buy Local” label or initiative, the City of Dallas can help give local UA producers a marketing and branding advantage, making them more competitive with less expensive producers outside the region. Encouraging a local purchasing brand may also retain more dollars in the local economy, helping sustain Dallas-based UA industries. Leveraging public procurement dollars to support local UA producers will create an additional meaningful source of demand, and help operations grow in scale and impact.

TIMELINE

Start in year 2, quarter 3. Active and ongoing from this point, and requisite additional budget

WHO LEADS/ WHO SUPPORTS

- + Office of Environmental Quality & Sustainability
- + Office of Procurement
- + Office of Economic Development
- + Dallas Regional Chamber

INITIAL ACTIONS

1. Establish relationship with existing local labels (e.g., Slow Food DFW) and regional food system organizations (e.g., Common Market and Sustainable Food Center).
2. Determine procedures to prevent abuse of the label and erosion of consumer faith.
3. Explore options for a local food procurement mandate, similar to North Carolina's [10% pledge](#). For example language, see [Cabarrus County Local Food Policy](#). Align this work with FA9 of the CECAP: *Establish a local food procurement plan to encourage FA9. Local food purchasing at City-sponsored events.*
4. Office of Environmental Quality & Sustainability to promote the purchase of local labels and brands on the UA resource page mentioned in Recommendation 3, Solution 1.

MODEL(S) FROM OTHER CITIES/STATES

- + [AgLanta Grown](#) (Atlanta) is a local food promotion program that is 1) developing a trusted brand for the local agriculture economy; 2) increasing access to market for both AgLanta Grown producers and consumers; and 3) building a broad coalition of producers, consumers, and advocates to stimulate the local food economy and increase revenue for farmers.
 - + [Kentucky Proud](#) is a statewide Buy Local campaign.
 - + [NYS Grown & Certified](#) is a certification for New York State agriculture operations. In addition to the geographic requirement, it also has food safety and environmental management requirements.
 - + [Taste the Local Difference](#) (Michigan) is a statewide Buy Local campaign, with listings for local growers and retailers (also relevant to Solution 1).
 - + GO TEXAN is a statewide Grown in Texas program
 - + [Slow Food DFW Snail of Approval](#) is an award given to food and beverage establishments in DFW that are pursuing and practicing Slow Food values in their business: restaurants, farms, ranches, fisheries, cafés, bars, food trucks, breweries, wineries, caterers, value-added food producers.
-

SUCCESS METRICS/ INDICATORS

1. Number of vendors participating in local brand campaign
2. Sales of locally grown products
3. **Equity:** Increased number of labels given to women and BIPOC owned operations.

Solution 5.4

Facilitate connections between Dallas area producers and interested wholesale buyers such as restaurants, retailers, and institutions.

DESCRIPTION / RATIONALE

Helping small and mid-size growers access wholesale customers is one of the most impactful ways to build a robust local and regional food system. Institutions (such as schools and hospitals) and commercial operations (such as restaurants and grocers) present meaningful opportunities to change the food procurement landscape in Dallas and decrease reliance on food grown outside the region. Especially for those without the economic means to purchase directly from producers at farmers markets and CSAs, institutional scale buying can provide significant quantities of local food to Dallas residents.

TIMELINE

5 – 10 Years

WHO LEADS/ WHO SUPPORTS

This solution should be enacted through a close partnership between COD and community partner(s), such as a regional food hub. To support local producers' ongoing access to market, it is recommended that the City allocates or seeks funding for an aggregator and distributor of local food products, especially those located in or sourcing predominantly from historically disadvantaged communities.

- + Office of Environmental Quality & Sustainability
 - + Third Party
 - + Small Business Center
 - + Office of Economic Development
-

INITIAL ACTIONS

1. Host an event to convene restaurant, K-12 school and private institutional chefs with local growers to discuss challenges with current procurement strategies and opportunities for collaboration.
 - a. Develop a list of active producers and interested buyers in the Dallas area; make this list publicly available to relevant stakeholders.
 - b. Provide an option for producers to self-identify as historically disadvantaged, and note this status on relevant documents, so that procurement buyers are able to support them specifically if desired.
 - c. Evaluate supply-chain effectiveness of providing an option for buyers to identify their willingness to accept "seconds", or blemished, but still fresh and edible products.
2. Share best practices for institutional and commercial sales, including delivery minimums and schedules, food safety requirements, pack size specifications, and order management and communication.
3. Seek or allocate funding to subsidize aggregation and distribution, especially for historically disadvantaged producers or those located in UAPAs.
4. Host a section on the UA Resource Web Page (Recommendation 3, Solution 1) about Dallas-MSA procurement opportunities and providers.

MODEL(S) FROM OTHER CITIES

- + The [Riverside Food Hub](#) is a partnership between Riverside ISD and Riverside University Health System to help bridge the gap between local farms and schools. The Food Hub operates as an aggregator and distributor for local foods, in addition to providing educational programming.
 - + [Local Food Purchasing Cooperative Agreement](#) is a non-competitive grant process from the USDA that provides funds to municipalities and local governments to purchase locally produced foods.
-

SUCCESS METRICS/ INDICATORS

1. Number of new purchasing relationships between local growers and chef.
2. Number of producers and buyers listed in the active producers/buyers list.
3. Number of local institutions adding “Local Purchasing” programs.
4. Equity: Share of providers who are operated by historically disadvantaged communities.

Urban Agriculture Plan

Recommendations Timeline

RECOMMENDATIONS	YEAR 1				YEAR 2				YEAR 3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Reduce regulatory barriers												
1 Update the Dallas Development Code to reduce the regulatory barriers in the urban agriculture landscape.												
2 Identify and establish incentives for developers to include urban agriculture within new developments.												
2. Support land access												
1 Visualize the COD UA landscape in geographic context, framed with equity.												
2 Establish a process for making high-potential City-owned vacant lots available for UA projects.												
3 Match-making model for connecting aspiring farmers and private landowners.												
3. Provide UA education, resources, and support to Dallas residents												
1 UA Resource Page: Create clear, accessible documents that educate City of Dallas residents about relevant regulations and resources for starting and operating both commercial and community UA.												
2 UA Education: Develop a cohesive UA education strategy and partner with education organizations to establish or strengthen UA education networks in Dallas Communities.												
3 UA Workforce Development: Increase UA internship and traineeship opportunities in Dallas.												
4. Facilitate collaboration & partnerships among UA stakeholders												
1 Formalize and maintain an Urban Agriculture Advisory Council that represents a range of UA stakeholders in the City of Dallas.												
2 Showcase and organize UA events focused on knowledge sharing, resource support and partnerships for UA stakeholders.												
5. Build market opportunities												
1 Reduce barriers to operating farmers markets.												
2 Seek funding for nutrition assistance programs to increase purchasing power of low-income consumers.												
3 Initiate or partner with a “Buy Local” campaign with consumer-facing, business-facing, and internal COD Agency-facing elements.												
4 Facilitate connections between Dallas area producers and interested wholesale buyers such as restaurants, retailers, and institutions.												

YEAR 4				YEAR 5				YEAR 6				YEAR 7				YEAR 8				YEAR 9				YEAR 10			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
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Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
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Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
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Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
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Funding Opportunities

United States Department of Agriculture funding opportunities

There are numerous organizations and institutions that provide a variety of funding programs for farmers. Below is a list of funding sources that are relevant for Dallas and North Texas growers, but is by no means an exhaustive list of all opportunities.

Development and Innovation

USDA Urban Agriculture and Innovation Production (UAIP) is a competitive grant program that funds Planning Programs (PP) and Implementation Projects, two different kinds of projects that encourage the growth of urban agriculture and innovative production activities (IP). Nonprofit groups, municipal or tribal governments, and educational institutions that offer K-12 instruction may be in charge of these initiatives. Projects may focus on issues including food access, education, start-up expenses for new farmers' businesses, and the creation of zoning rules and other requirements for urban farming. These grants can increase the efforts of farmers, gardeners, residents, citizens, public officials, educational institutions, and other stakeholders in suburban and urban areas.

Microloans Program. The focus of Microloans is on the financing needs of small, beginning farmer, niche and non-traditional farm operations, such as truck farms, farms participating in direct marketing and sales such as farmers' markets, CSA's (Community Supported Agriculture), restaurants and grocery

stores, or those using hydroponic, aquaponic, organic and vertical growing methods.

Nutrition and Food Security

USDA Team Nutrition Training Grants for School Nutrition Professional Readiness and Retention

is a federal assistance program that provides up to \$1,000,000 per state agency in funding for healthy and nutritious meals that adhere to the weekly dietary requirements and meal pattern requirements of the National School Lunch and Breakfast Program. This program supports states' strong school nutrition workforces. Grants fall into three categories: coaching and mentoring for school nutrition professionals, incentivized training for professionals, and nutrition education for professionals, students, and families.

USDA National Institute of Food and Agriculture (NIFA)

offers a range of research prizes and money through a combination of grants that are awarded on a competitive basis to states. The Community Food Projects Competitive Grant Program (CFPCGP) is an example of a well-known grant program. It offers financing (e.g., \$10,000-\$400,000) for community food projects that fight food insecurity and encourage the self-sufficiency of low-income communities by enhancing their access to fresher, healthier food supply. The grant's preferred projects encourage comprehensive responses to regional food, farm, and nutrition issues, develop creative marketing strategies that benefit both low-income consumers and agricultural producers, encourage entrepreneurship, and support ongoing discussions between

New USDA Office and Resources

The USDA is set to open a new Urban County Office in Dallas as part of its recent expansion under the Office of Urban Agriculture and Innovative Production. Representatives from the Farm Service Agency (FSA), growers, and community members are coming together to help increase outreach of the USDA's programs, and provide ongoing feedback to the agency as it continues to develop its programming in UA. The office can be reached at:

County Executive Director

Stefen Tucker
stefen.tucker@usda.gov
972-552-5254 ex. 2

Kaufman-Dallas-Rockwall FSA Office

8628 FM 741
Forney, TX 75126
(972)552-5254 x2

Tarrant-Dallas County - Natural Resources Conservation Service

320 Westway Pl, Ste. 511
Arlington, TX 76018
Phone: 817-467-3867

communities, food policy councils, and municipal organizations about food and agricultural issues.

Waste

USDA Composting and Food Waste Reduction (CFWR) is a competitive funding program that awards cooperative agreements to local and municipal governments to support their local composting, food waste reduction, and food waste diversion initiatives. Through this program, local governments can test or pilot efficient and scalable planning and implementation methods for municipal composting and food waste reduction initiatives. This grant program offers producers a way to contribute farm surplus and trash, divert food waste from landfills, and improve soil quality. It also has the ability to boost access to compost for agricultural producers and distribute it to them.

Research and Education

USDA Farm to School Grant is a grant program that encourages development, creation, and execution of farm-to-school initiatives. These competitive awards are intended to increase qualifying schools' access to local foods by sponsoring initiatives including training, operations, planning, equipment, forming partnerships, and putting farm to school programs into place. With the help of this funding, educational institutions can launch, develop, and institutionalize farm-to-school initiatives.

Food Safety Certification for Specialty Crops (FSCSC): This program provides financial assistance for specialty crop operations that incur eligible on-farm food safety program expenses related to obtaining or renewing a food safety certification. It helps to offset costs to comply with regulatory requirements and market-driven food safety certification requirements. FSCSC provides up to \$200 million to specialty crop operations that incur eligible on-farm food safety program expenses related to obtaining or renewing a food safety certification. For each year, FSCSC will cover a percentage of the specialty crop operation's cost of obtaining or renewing their certification, as well as a percentage of their related expenses.

USDA NRCS

The Environmental Quality Incentives Program (EQIP) is NRCS' flagship conservation program that helps farmers, ranchers and forest landowners inte-

grate conservation into working lands. EQIP provides technical and financial assistance to agricultural producers and forest landowners to address natural resource concerns, such as: improved water and air quality; conserved ground and surface water; increased soil health; reduced soil erosion and sedimentation; improved or created wildlife habitat; and mitigation against drought and increasing weather volatility.

The Conservation Stewardship Program (CSP) helps you build on your existing conservation efforts while strengthening your operation. Whether you are looking to improve grazing conditions, increase crop resiliency, or develop wildlife habitat, we can custom design a CSP plan to help you meet those goals. We can help you identify natural resource problems in your operation and provide technical and financial assistance to solve those problems or attain higher stewardship levels in an environmentally beneficial and cost-effective manner.

The Regional Conservation Partnership Program (RCPP) is a partner-driven approach to conservation that funds solutions to natural resource challenges on agricultural land. By leveraging collective resources and collaborating on common goals, RCPP demonstrates the power of public-private partnerships in delivering results for agriculture and conservation.

RCPP projects fall under two different categories: RCPP Classic and RCPP Grants. RCPP Classic projects are implemented using NRCS contracts and easements with producers, landowners and communities, in collaboration with project partners. Through RCPP Grants, the lead partner must work directly with agricultural producers to support the development of new conservation structures and approaches that would not otherwise be available under RCPP Classic.

Conservation Innovation Grants (CIG) is a competitive program that supports the development of new tools, approaches, practices, and technologies to further natural resource conservation on private lands. Through creative problem solving and innovation, CIG partners work to address our nation's water quality, air quality, soil health and wildlife habitat challenges, all while improving agricultural operations.

USDA Rural Development

USDA Rural Development offers numerous grant and loan programs for clean energy infrastructure, housing construction and renovations, and other economic development opportunities. Current funding opportunities can be found [here](#).

Environmental Protection Agency

EPA's Brownfields Program provides direct funding for brownfields assessment, cleanup, revolving loans, environmental job training, technical assistance, training, and research. A variety of funding opportunities are available [here](#).

Additional EPA resources relating to Agriculture and Brownfields can be found [here](#).

U.S. Department of Health and Human Services

Agency for Toxic Substances and Disease Registry (ATSDR) Land Reuse Program helps communities incorporate health considerations in land reuse decisions by providing technical assistance, facilitating community outreach, and tracking public health indicators. Land reuse sites are sites that are slated for redevelopment but may have chemical contamination. It may be difficult to redevelop or reuse these sites due to the potential or confirmed presence of a hazardous substance, pollutant, or contaminant. ATSDR works with the U.S. Environmental Protection Agency (EPA), state and local officials, developers, and communities to include health in these types of projects.

State funding opportunities

The Texas Department of Agriculture provides the following grants and services for agricultural producers. Below are several grants relevant to urban agriculture producers. A full list of grants and services can be found [here](#).

Young Farmers Grant

Pursuant to the Texas Agriculture Code, Section 58.091, the Texas Department of Agriculture (TDA) administers the Young Farmer Grant program (YFGP). The YFGP is administered by TDA under the direction of the Texas Agricultural Finance Authority (TAFA). The program is offered twice a year (fall and spring).

The purpose of this program is to provide financial assistance in the form of dollar-for-dollar matching grant funds to young agricultural producers that are engaged or will be engaged in creating or expanding an agricultural business in Texas.

TAFA's Young Farmer Grant Program aims to:

- + Grow and support Texas agriculture
- + Help meet a financial need that is otherwise not met
- + Help grow an operation that also impacts the community
- + TAFA funds will not be used to support hobby farming. A hobby farm is a small-scale farm that is primarily for pleasure instead of being a business venture.

Young Farmers Interest Rate Reduction Program

The Young Farmer Interest Rate Reduction (YFIRR) Program is intended to facilitate a lower interest rate to agricultural producers or agribusiness owners who are between 18 and 46 years of age through a commercial lender. The YFIRR program provides an interest reduction to the borrower on a qualifying bank loan for an eligible project. The Comptroller of Public Accounts for the State of Texas deposits funds in a bank (which must be a state approved depository) at a below market interest rate. The bank issues a loan of like amount, at no more than 4% above the interest rate on the state's deposit. The program does not offer a guaranty or participation by the Authority in the loan.

Young Farmers Interest Rate Reduction Program

The Young Farmer Interest Rate Reduction (YFIRR) Program is intended to facilitate a lower interest rate to agricultural producers or agribusiness owners who are between 18 and 46 years of age through a commercial lender. The YFIRR program provides an interest reduction to the borrower on a qualifying bank loan for an eligible project. The Comptroller of Public Accounts for the State of Texas deposits funds in a bank (which must be a state approved depository) at a below market interest rate. The bank issues a loan of like amount, at no more than 4% above the interest rate on the state's deposit. The program does not offer a guarantee or participation by the Authority in the loan.

Specialty Crop Block Grant Program

The purpose of the Specialty Crop Block Grant Program (SCBGP) is to enhance the competitiveness of specialty crops by:

1. leveraging efforts to market and promote specialty crops;
2. assisting producers with research and development relevant to specialty crops;
3. expanding availability and access to specialty crops; and
4. addressing local, regional, and national challenges confronting specialty crop producers.

TDA encourages organizations to develop projects to solely enhance the competitiveness of specialty crops pertaining to the following issues affecting the industry:

- + Food Safety
- + Marketing
- + Nutrition
- + Plant Health
- + Value Added/Industry Development

Specialty crops are defined as fruits and vegetables, dried fruit, tree nuts, horticulture, nursery crops (including floriculture). See lists of eligible and ineligible crops from the USDA Agricultural Marketing Service (AMS) website.

Local & national funding opportunities from philanthropic partners

W. W. Caruth, Jr. Fund

[The Food Equity Innovation Challenge](#) aims to bring more fresh, affordable food to neighborhoods in and around Dallas using collaborative, system-focused approaches. The Challenge was created by the W.W. Caruth Jr. Fund team at CFT in partnership with the City of Dallas and the State Fair of Texas to incubate projects that operate strategically across the food ecosystem, break down silos between organizations working in the food space, and elevate the perspectives of residents who navigate food desert communities everyday. It is a unique effort that reflects CFT's commitment to adaptive, participatory grantmaking.

The Social Impact Funds

[Bernard J. Tyson Impact Fund](#)

[Dallas Coalition for Hunger Solutions](#)

2022 Community Garden Grant Application- "SEEDING the Dream"

Up to \$1,000 was made available for either production-focused community gardens, or aspiring gardens who have already secured land access.

[National Young Farmers Coalition](#)

With funding from Chipotle, the NYFC provided \$5,000 "Young Farmer Grant(s)" to several dozen young farmers across the country in 2022. Details of future grants are yet to be released, and the organization's website has lots of relevant information for new and aspiring farmers.

[Toyota Foundation](#)

In 2018, students from UNT Dallas transformed a donated DART bus into a mobile food market. Supported by a \$268,000 grant from Toyota, the bus sells fresh fruits and vegetables sourced from local community gardens to residents throughout southern Dallas. Along with funding the retrofit of the bus and scholarships for students, Toyota is also sharing its knowledge and expertise with students to help guide the effort.



APPENDICES.

Appendix A. List of Stakeholders Interviewed

Organization	Category
City of Dallas Office of External Affairs	City Agency
City of Dallas Office of Economic Development	City Agency
City of Dallas Park & Recreation	City Agency
City of Dallas Code Compliance	City Agency
City of Dallas Office of Community Care	City Agency
City of Dallas Office of Environmental Quality & Sustainability	City Agency
City of Dallas Code Department	City Agency
City of Dallas Park & Recreation	City Agency
Dallas Area Rapid Transit (DART)	City Affiliate
City of Dallas District 7	City Council
City of Dallas District 14	City Council
City of Dallas District 8	City Council
City of Dallas District 9	City Council
Dallas Coalition for Hunger Solutions	Coalition
Dallas County	County Agency
USDA FSA Urban County Committee Dallas	Federal Coalition
Half Acre Farm	For Profit Farm
Elmwood Garden	Community Garden
USDA - NRCS	Federal Agency
American Heart Association	Nonprofit Agency

Table A1: List Of Stakeholders Interviewed By Project Team (continued on following page)

Organization	Category
Dallas College	Higher Education
Global Venture	Investor/Developer
Big Tex Urban Farms	Non Profit Farm
Restorative Farms	Non Profit Farm
Bonton Farms	Non Profit Farm
Communities Foundation of Texas	Community Foundation
BC Workshop	Non-profit Agency
Indigenous Institute of the Americas	Non-profit Agency
North Texas Food Bank	Non-profit Agency
Grow North Texas	Non-profit Agency
Innercity Community Development Corporation (ICDC)	Non-profit Agency
FEED Oak Cliff	Non-profit Agency
Child Action Poverty Lab	Non-profit Agency
F.A.R.M.	Non-profit Farm
SMU Hunt Institute	Higher Education
Common Market	Non-profit
Texas A&M Agrilife Extension	Research/Education
University of North Texas – Dallas	Higher Education
North Texas Food Policy Alliance	Nonprofit Coalition
Dallas Farmers Market	Farmers Market
Profound Foods	Urban Farm
Oak Cliff Veggie Project	Nonprofit farm
Joppy Momma's Farm	Urban Farm

Table A1: List Of Stakeholders Interviewed By Project Team

Appendix B. Interfacing with City of Dallas Departments

As part of the CUAP, OEQS and the project team identified City of Dallas [departments](#) that have some purview or interaction with urban agriculture. OEQS and the Project Team sought feedback from these departments regarding policies, procedures, and codes that would benefit from adjustment or change. The following action items are based on their feedback and comments relative to how to incorporate relevant changes into City policy and procedures.

City Attorney’s Office

- + **Action Item:** Explore establishing UA as a suitable “public purpose,” allowing City-owned land to be leased out to farmers and gardeners at below-market rate leases.
 - > For reference: COD Dept of Economic Development [document on guidelines for establishing “public purpose”](#) and public private partnerships
 - > For reference: Example language [from NY](#)
- + **Action Item:** Work with OEQS and PUD to review changes to the Development Code and identify any potential red flags for implementation.

Dallas Housing Acquisition And Development Corporation (DHADC/ Land Bank Program)

- + **Action Item:** OEQS to initiate meeting to discuss land access & conversation around urban agriculture involving the Urban Land Bank Demonstration Program.

Data Analytics & Business Intelligence

Action Item: Work with OEQS to incorporate and host the [City of Dallas Urban Agriculture and Community Health Explorer](#) ARCGIS Web App into the City Domain.

Development Services, Building Inspection Division

Arborist

Action Item: Update Article X and the supplemental [Landscape and Tree Manual Code](#) to include the following:

- + Edible plant species may be used to satisfy the landscaping and tree conservation requirements of Article X, including approved plant materials (10.103), landscape design options (10.126) and tree replacement (10.132) with species selection).
- + Add suitable edible tree species to the [Landscape and Tree Manual, Appendix A](#) with separations for small and large tree categories.
- + Create a new section dedicated to Urban Agriculture.

Permitting

Per Recommendation 1, Solution 1, updating the CO process for urban agriculture is a highly requested step based on extensive stakeholder feedback and a comprehensive review of the current code from the Project Team. This solution will lead the way to the acreage increases mandated in CECAP and make the following recommendations and solutions more effective.

Certificate of Occupancy

- + Develop a fast-tracked review process for UA projects including minimum threshold of UA (¼-acre crop production).
- + Recommend that the City of Dallas waive the certificate of occupancy (CO) fee for urban agriculture (UA) site applications—either in all of Dallas or in UA Priority Areas (UAPA).*
- + In the case of a parcel where a plat map is needed to obtain a CO, the Project Team recommends

* UAPAs are census tracts where there is geographic convergence of above average need, and opportunities for expanding urban agriculture. UAPAs are census tracts with an above city average of equitable need and opportunities.

the City of Dallas waive or provide funds to cover costs associated with platting.

Alternative Solutions:

- + Recommend that the City designate a limited amount of annual funds to pay CO fees for UA in [Tier 1 & 2 locations](#)* (\$280 per property, suggested \$6,000/year).
- + Allow for a non-certified, drawn-to-scale map of proposed UA activities.

Office of Community Care

Expand utilization of local Farm Stands at WIC Clinics. If necessary, source additional produce from other local growers beyond current partnerships. If necessary, seek additional funding to expand programming.

Office of Economic Development

Explore opportunities and incentives to attract commercial CEA to Dallas, especially in UA Opportunity Zones.

Office of Equity and Inclusion

The Office of Equity and Inclusion's 2022-2023 Racial Equity Plan notes several Action Targets as it relates to agriculture in their Big Audacious Goals.

Co-develop and report on equity metrics and targets for the implementation of Recommendation 2 Solutions 2 and 3.

* UAPAs are census tracts where there is geographic convergence of above average need, and opportunities for expanding urban agriculture. UAPAs are census tracts with an above city average of equitable need and opportunities.

Per Racial Equity Plan	Per CUAP
ECONOMIC, WORKFORCE, & COMMUNITY DEVELOPMENT	
Action Target 1.7: Invest in community gardens and urban agriculture with capacity for meaningful production of produce and edible goods.	+ Recommendation 1, Solution 1 + Recommendation 2, Solution 2 + Recommendation 3
Action Target 1.8 Support alternative community-based retail, like community farmers markets, corner stores, community-owned/co-op food stores, etc	+ Recommendation 5
Action Target 1.9 Increase access to quality, affordable, nutritious options for food and meals by aligning social services, nutrition education, urban agriculture, and financial investments in communities with greatest barriers to access.	+ Coordination with stakeholders in UAPAs + Recommendation 2, Solution 1 + Recommendation 5, Solution 2
FOOD ACCESS PROBLEM	
Action Target 2.8: Implement actions to increase both access to local health food and local production.	Overall directive of CUAP is to increase local food production
Action Target 2.14: Support the local urban agriculture ecosystem in communities overburdened by environmental pollution. [Ei 58]	+ Coordination with stakeholders in UAPAs + Recommendation 2, Solution 1
Progress Measure OEQS.3: Increase acreage of neighborhood growing sites (e.g. commercial, community, and resident gardens) serving equity priority areas [with high minority populations] from 7 acres to 17 acres by December 2027. [Ei 58]	2022: Baseline of 17 ac under production 2030: Expand by 4 ac from 2022 levels, for a total of 21 ac 2040: Expand by 9 ac from 2022 levels, for a total of 26 ac 2050: Expand by 13 ac from 2022 levels, for a total of 30 ac <i>Note: Acreage target subject to change. See Page 12.</i>

Table B1: CECAP and CUAP comparison chart

Park & Recreation

Collaborate on Recommendation 2, Solution 2: Tree Tops Down approach, exploring opportunities for non-commercial growing on Parks-owned land.

Propose that the Parks Department works with OEQS to:

- + Survey existing parcels identified in the [City of Dallas Urban Agriculture and Community Health Explorer](#) that fall under Parks jurisdiction to be made available for urban agriculture activities
- + Develop “management agreements” with local non-profits or community groups for urban ag implementation on existing Parks-owned parcels.
 - > Samuell Farms has been mentioned several times by stakeholders as a viable candidate for urban agriculture. Utilizing the significant acreage at this site would meaningfully advance the CECAP goals of increasing fresh food access, mitigating urban heat islands, and absorbing excess stormwater.
- + Develop an urban agriculture policy for the Parks Department ([See example from Vancouver, BC](#)). Important considerations include:
 - > Ensure that produce from parkland can be sold on and off-site
 - > Specifying general criteria that an agriculture project in a city park must meet:
 - > Should operate at no cost to the Parks Board
 - > Specifying when and how produce grown on park lands can be sold
 - > Specify that the standard term for a license agreement is 5 years
 - > Land should be restored to its original state if the lease is abandoned or broken
 - > Potential need for a comprehensive vegetation maintenance agreement including all adjacent ROWs
 - > Mitigating O+M costs and complexity for Parks staff
- + Establish criteria for what types of projects need public consultation (i.e., over a certain size or on certain parks).
- + Establish requirements for how the project operates (not violating any local or state ordinances, noise restrictions, hours of operation, etc.).

- + Determine and establish definitions of what types of agriculture are supported/encouraged on Parks land (organic practices, allowance of hydroponics, animals, etc.).

Planning & Urban Design

The Project Team is suggesting several updates to the Dallas Development Code. These updates are based on feedback from stakeholders and aims to alleviate confusion for residents and City agencies. These code recommendations must be accounted for as the City moves to conduct a comprehensive reform of the Dallas Development Codes in the next two to three years.

In the [SEC. 51A-4.201. AGRICULTURAL USES.](#), review the following:

- + (3) (A) Create a new definition for URBAN AGRICULTURE
 - > The cultivation, processing, distribution, sale and consumption of agricultural products in urban and suburban settings, by individuals, businesses, non-profits, and community groups, including components like in-ground commercial fruit and vegetable production, vertical production, warehouse farms, community gardens, shared plots, rooftop farms, hydroponic, aeroponic and aquaponic facilities, other similar agricultural innovations, educational events, agro-tourism and other community programming.
- + (iv) Update COMMUNITY GARDEN definition. See Table B2 (next page) and review best practice links noted in Recommendation 1, Solution 1, Model(s) from other Cities (also noted in Table B2).
 - > (3) (vi) Update URBAN GARDEN definition. See Table B3 (next page) and review best practices links noted in Recommendation 1, Solution 1, Model(s) from other Cities (also noted in Table B3).
- + (3) (A) Add in new definition: HYDROPONICS
 - > Hydroponics is the technique of growing plants using a water-based nutrient solution rather than soil, and can include an aggregate substrate, or growing media, such as vermiculite, coconut coir, or perlite. Hydroponic production systems are used by small farmers, hobbyists, and commercial enterprises. ([Source](#))

COMMUNITY GARDEN CODE DEFINITION BEST PRACTICES	
Atlanta, GA, Code of Ordinances §16-29.001(83)(a-b) (2020)	Urban (or Community) Garden: A lot, or any portion thereof, managed and maintained by a person or group of persons, for growing and harvesting, farming, community gardening, or any other use, which contributes to the production of agricultural, floricultural, or horticultural products for beautification, education, recreation, community use, consumption, off-site sale, or off-site donation. No on-site sales are permitted.
Detroit, MI, Code of Ordinances § 50-12-109 (2019)	Urban (or Community Garden): A zoning lot, as defined in this article, up to one acre of land, used to grow and harvest food or non-food crops for personal or group use. The products of an urban garden may or may not be for commercial purposes.
City of Philadelphia Zoning Laws for Urban Farming and Community Gardens	Community Garden: a garden managed and maintained by a group of individuals. The main purpose of this type of plot is to grow food for the people who maintain it, not to sell food for profit. However, occasional sales of surplus food are allowed. This type of garden can be located on a roof or within a building.
Other best practice examples to consider (also mentioned in Solution 1, Recommendation 1):	
<ol style="list-style-type: none"> 1. Highland Park, MI, Code of Ordinances §1229 (2011) 2. St. Petersburg, FL, Code of Ordinances, On-site sale of produce allowed as an accessory use. Ord. No. 448-H, § 5, 2-11-2021 3. Lauderhill, FL, Code of Ordinances Sec. 5.14., Purpose and Intent for Community Gardens. Ord. No. 14O-05-120, § 7, 7-14-2014 4. City of Pittsburgh Urban Agriculture Zoning Approval Process 	

Table B2: Community Garden Code Definition Best Practices

URBAN GARDEN CODE DEFINITION BEST PRACTICES	
Atlanta, GA, Code of Ordinances §16-29.001(83)(a-b) (2020)	Market (or Urban) Garden: A lot, or any portion thereof, managed and maintained by a person or group of persons for growing and harvesting, farming, community gardening, or any other use, which contributes to the production of agricultural, floricultural, or horticultural products for community supported agriculture or on-site sales. All products sold on-site must be grown on-site.
Detroit, MI, Code of Ordinances § 50-12-109 (2019)	Market Garden (or Urban Garden): A zoning lot, as defined in this article, over one acre, used to grow and harvest food crops and/or non-food crops for personal or group use. An orchard or tree farm that is a principal use is considered an urban farm. An urban farm may be divided into plots for cultivation by one or more individuals and/or groups or may be cultivated by individuals and/or groups collectively. The products of an urban farm may or may not be for commercial purposes.
City of Philadelphia Zoning Laws for Urban Farming and Community Gardens	Market Farm (or Urban Garden): a farm that is maintained by an individual or group with the purpose of growing food for sale. This can also be located on a roof or within a building.
Other best practice examples to consider (also mentioned in Solution 1, Recommendation 1):	
<ol style="list-style-type: none"> 1. Highland Park, MI, Code of Ordinances §1229 (2011) 2. St. Petersburg, FL, Code of Ordinances, On-site sale of produce allowed as an accessory use. Ord. No. 448-H, § 5, 2-11-2021 3. Lauderhill, FL, Code of Ordinances Sec. 5.14., Purpose and Intent for Community Gardens. Ord. No. 14O-05-120, § 7, 7-14-2014 4. City of Pittsburgh Urban Agriculture Zoning Approval Process 	

Table B3: Urban Garden Code Definition Best Practices

- + (3) (A) Add in new definition: CONTROLLED ENVIRONMENT AGRICULTURE
 - > Controlled Environment Agriculture (CEA) is an advanced and intensive form of hydroponically-based agriculture where plants grow within a controlled environment to optimize horticultural practices. ([Source](#))
- + [SEC. 7-7.2. SALE OF ANIMALS FROM PUBLIC PROPERTY.](#)
 - > Verify allowance in residential zoning, update to include if needed.
- + [SEC. 42A-22. LOCATION OF A NEIGHBORHOOD MARKET.](#)
 - > Updated to include “except if the location has a valid certificate of occupancy for a non-residential use or by a waiver granted by the director in accordance with subsection (b);”
- + [ARTICLE X. LANDSCAPE AND TREE CONSERVATION REGULATIONS.](#)
 - > Division 51A-10.100. In General. SEC. 51A-10.101. DEFINITIONS.
 - > Include fruit/orchard tree category
- + [SEC. 51A-4.201. AGRICULTURAL USES.](#)
 - > Amend [51A-4.201](#) (Agricultural Uses) to:
 - > Reduce minimum size for animal production use in A(A) zones from 3 acres to 1 acre (1.E.i)
 - > Remove required off-street parking for all ag use types for farms under 1 acre
 - > Allow bed covers to cover more than one bed (3.E.v)
 - > Allow bed covers to be taller than 4' from grade (3.E.vi)
 - > Allow on-site sales in all districts (3.E.vii)
 - > Remove minimum size (3.F.i)
 - > Include beekeeping as an allowed use in Crop Production and Animal Production uses (subject to Title IX §90.02)
- + Amend [51a-4.111](#) (Ag district zoning) to:
 - > Require the preservation of some agricultural land when the zoning designation is changed to other uses.*
- + Amend [Chapter 52-301.2.1 Building Item 34 \(Construction\)](#) to:
 - > Allow open air wash/pack facilities and walk in coolers as exempted from construction permits as long as they are under the maximum allowable size
 - > Refer to [SEC. 51A-4.201. AGRICULTURAL USES.](#) definitions
 - > Apply to all zoning types (not just residential)
 - > Allow Ag structures to be primary structures (not only as accessory use)
- + Amend [ARTICLE X. LANDSCAPE AND TREE CONSERVATION REGULATIONS.](#) to:
 - > Amend to exempt UA sites from [Article X Sec. 51A-10.121.d](#)
 - > Ensure that any land previously required to comply with Article X is no longer required to do so when primary land use is changed to UA
 - > Allow for Landscape design option (10.126) and alternative tree mitigation provision (10.135) measures for developments that include some UA (similar to Sustainable Development Incentives)

Developer Incentive to Support Urban Agriculture

As real estate development has a powerful influence on land use and is typically well capitalized, this plan recommends that a density incentive be offered in exchange for the incorporation of urban agriculture into the development project. In addition to the code amendment below, it is recommended that the City amend its Community Land Trust Program to include preservation and/or development of Urban Agriculture as a qualifying mission for Community Land Trusts.

Incentive 1 (to amend Dallas Code of Ordinances, Chapter 51A)

* The percentage of land preserved should be determined through discussion with relevant COD departments.

Definitions:

- + **Cultivated Space:** The square footage at the ground plane or rooftop that is dedicated directly to the production of fruits and vegetables. This may be in one contiguous space or distributed in multiple locations on the property, as long as the minimum square footage of any individual Cultivated Space is 32 square feet for the purposes of calculating total Cultivated Space.
- + **Associated Agricultural Space:** The square footage at the ground plane that is dedicated to the associated needs of Urban Agriculture, including but not limited to: washing and packing facilities, cold storage, circulation paths, tool and material storage, etc.
- + **Community Land Trust:** A Community Land Trust that has been determined to be eligible by the City through its Community Land Trust Program.

The limitations in 51-4.410 may be exceeded in the following manner;

- + the required Minimum Lot Area Per Dwelling Unit may be reduced by #% in zones #, and;
- + the maximum allowed density per acre may be increased by #% in zones #, and;
- + the maximum allowed FAR may be increased by #% in zones #

when;

- + 30 square feet of Cultivated Space plus an additional 5 square feet of Associated Agricultural Space per residential unit (including those gained by using this program) are permanently reserved for agriculture, and;
- + all Cultivated Space and Associated Agricultural space are permanently dedicated to agriculture through deeding the property or granting a permanent agricultural easement to a Community Land Trust, and;
- + the developer funds the initial capital improvements for Urban Agriculture that are accepted by the Community Land Trust, and;
- + the developer lists the agricultural site on the City's Urban Agriculture matchmaking database or otherwise has a written commitment from an agricultural operator (individual, business, or non-profit).

New Parking Ordinance

Offer parking requirement reductions for developers who include urban ag components (community orchards, community gardens, crop production).

Coordinating with other Master Plans

Collaborate with OEQS to incorporate UA into Forward Dallas Comp Plan and Hensley Field Master Plan

Public Works

OEQS to engage Public Works on possible pollinator garden installations for Sidewalk Master Plan

- + Explore drought tolerant, low maintenance installations, including native plants, wherever possible

Water Utilities

- + Action Item: OEQS to work with DWU to waive or cover water meter fees for UA sites and provide more affordable water rates for agricultural irrigation
 - > Recommend that the City designate a limited amount of annual funds to pay for water tap and deadhead conversion fees for UA in Tier 1 locations (\$1000-4000 per tap, suggested \$20,000/yr)
 - > Establish a separate water rate for agricultural irrigation (when drip and limited overhead irrigation is used). This rate should be more affordable than the lawn irrigation rate that they currently offer. (Perhaps 50% of the irrigation rate)
 - > (Currently a one-acre vegetable plot in Dallas would incur a \$1,000/month water bill in peak summer months even on an irrigation meter.)

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Appendix C. Urban Agriculture Priority Area: Technical Analysis

Overview

This appendix was created to assist with fulfilling CECAP's Goal #7: All Dallas Residents Have Access to Healthy, Local Food. The first challenge for meeting Goal 7 is to select specific areas for implementing policies and programs proposed in the CUAP.

This appendix contributes to that goal by identifying census tracts that should be prioritized based on the geographic convergence of above average need, and opportunities for expanding UA.

This document provides a city-wide overview, while subsequent documents provide analysis specific to each of the 14 City Council Districts.

CECAP GOAL 7

"ALL DALLAS RESIDENTS HAVE ACCESS TO HEALTHY, LOCAL FOOD"

Urban Agriculture Sector Targets:

- (1) Healthy Affordable Access: 50% by 2030 | 100% by 2050
- (2) Increase urban garden acreage: 20% by 2030 | 75% by 2050
- (3) Increase local commercial food sourcing: 10% by 2030 / 50% by 2050

5 Goals, with 14 Actions:

1. Build organizational capacity around urban agriculture.
2. Improve food access invulnerable neighborhoods.
3. Reduce food miles from farm-to-table by encouraging local.
4. Prepare food system to be more resilient to extreme weather events.
5. Prevent food waste through donations, recovery diversion & composting

Urban Agriculture Priority Areas: Equity Prioritization Model

THE SOCIAL VULNERABILITY INDEX (SVI)

The Social Vulnerability Index (SVI) comprises of 15-census tract measures, organized into four vulnerability "themes" such as Socioeconomic Status, Household Composition & Disability, Minority and English Proficiency Status, and Housing and Transportation within a community.

The SVI was created by the CDC. The SVI scale goes from zero (0) to one (1) with 1 being the most vulnerable. A score of 0.58 indicates moderate to high vulnerability. The average overall SVI for all over COD's census tracts is 0.47. The CUAP uses SVI data to prioritize areas in Dallas for more expedited UA funding.

Urban Agriculture Priority Areas (UAPAs) are viable areas in the City of Dallas for implementing CUAP recommendations. Specifically, UAPAs are census tracts where there is geographic convergence of above average need, and opportunities for expanding UA.

Need is defined by the Social Vulnerability Index (Figure C1). Socially vulnerable populations are especially at risk for food emergencies and climate change disruptions because of the confluence of disproportionate factors (socioeconomic status, household composition, minority status, or housing type and transportation) that affect these populations more where they live than other areas.

Opportunities within UAPAs are defined by census tracts with above city average rates for existing UA activities, community assets, and land opportunities (parcels of land that could be utilized for future urban agriculture activities such as growing, selling, storing, or composting).

UAPAs are located by using techniques in Geographic Information Systems (GIS) for tracts where above average need and opportunities overlap. *Figure C2* below explains the model guiding the GIS process.

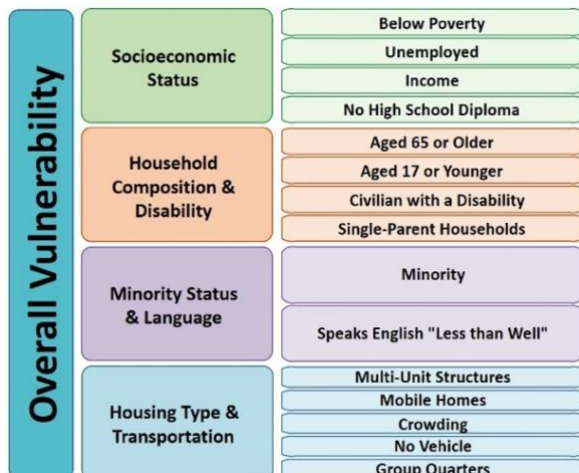


Figure C1: Components of the Social Vulnerability Index.
Source: CDC/ATSDR

Tier 2 UAPAs have an overlap of Opportunities and Need without urban agriculture activities.

Tier 1 UAPAs have UA activities such as urban gardens and farmers markets.

For need, the SVI average across all the COD's census tracts is 0.47, which comprises 48% of all 381 census tracts that intersect with City Council Districts. Most of the above average SVI tracts are in southern Dallas (Figure C3, Figure C4).

There are three categories for opportunities: (1) Existing UA Sites, (2) Community Assets, and (3) Land Opportunities.

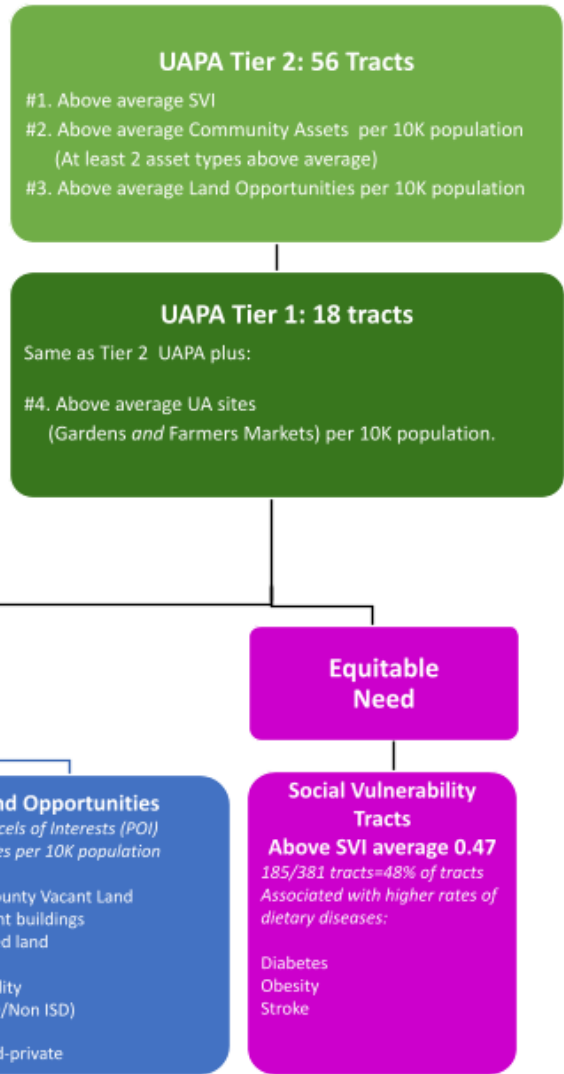


Figure C2: Model for Determining Urban Agriculture Priority Areas

Opportunities are calculated per tract population, adjusted per 10,000 population. For example, if a tract has three community gardens and a population of 3,054 then the adjusted rate of gardens for a 10K population would be 9.82 gardens per ten thousand people: $9.82 = (3/3,054) \times 10,000$. Table C1 provides these threshold rates across the city for opportunities and need modeled in Figure C2.

The rate per 10K population is calculated for each opportunity type per tract. A tract that has a Tier 2 UAPA has above average SVI, at least two (2) of the six Community Assets that are above average and overall parcel land opportunities above average. A tract that has a Tier 1 UAPA has all the qualifications of Tier 2, but also *must have* above average rates for combined community gardens and farmers markets. All 56 Tier 1 and 2 UAPAs contain approximately 279,601 residents, representing 15% of the total population and tracts (based on ACS 5year, 2019).

Community Assets and Land Opportunities are vital for expanding and sustaining Urban Agriculture. For example, Faith Based and Community Centers have land, water, shelter, and network of volunteers that can manage urban food production, hold trainings for urban farming techniques, and possibly store crops, seeds, and equipment. The City of Dallas has approximately 1,293 parcels that have a structure classified as a “Church Building.” This is an example of an asset that is widespread throughout the city and could serve as an organizing point for expanding urban agriculture. Organized into a system with other land opportunities, this asset class could poise the COD for

funding opportunities with the USDA. For example, the USDA's Center for Faith-Based and Neighborhood Partnerships, works with faith-based organizations to assist communities to connect with USDA priorities and programs. In 2021 the Center held a program to highlight best practices and innovative examples of faith-based organizations, houses of worship, and civic society partners that have focused on nutrition security, resilient food systems, and food justice.

There are approximately ninety (90) food pantries, with 48% of them in UAPAs. Food pantries have a mission to directly address food insecurity and are therefore well positioned to assist with expanding urban agriculture through growing, nutrition education, and directly feeding. Some food pantries may have cold storage capacity which could assist with the storage and distribution of COD urban agriculture produce.

HUD low-income housing developments is another large, widespread community asset. There are approximately 686 HUD buildings throughout the COD, with 45% of them in UAPAs. In collaboration with Housing Authority of the City of Dallas, the City could partner with housing-based urban agriculture programs at these sites where the residents are already designated as vulnerable.

Urban Agriculture Priority Areas: Mapping and Data

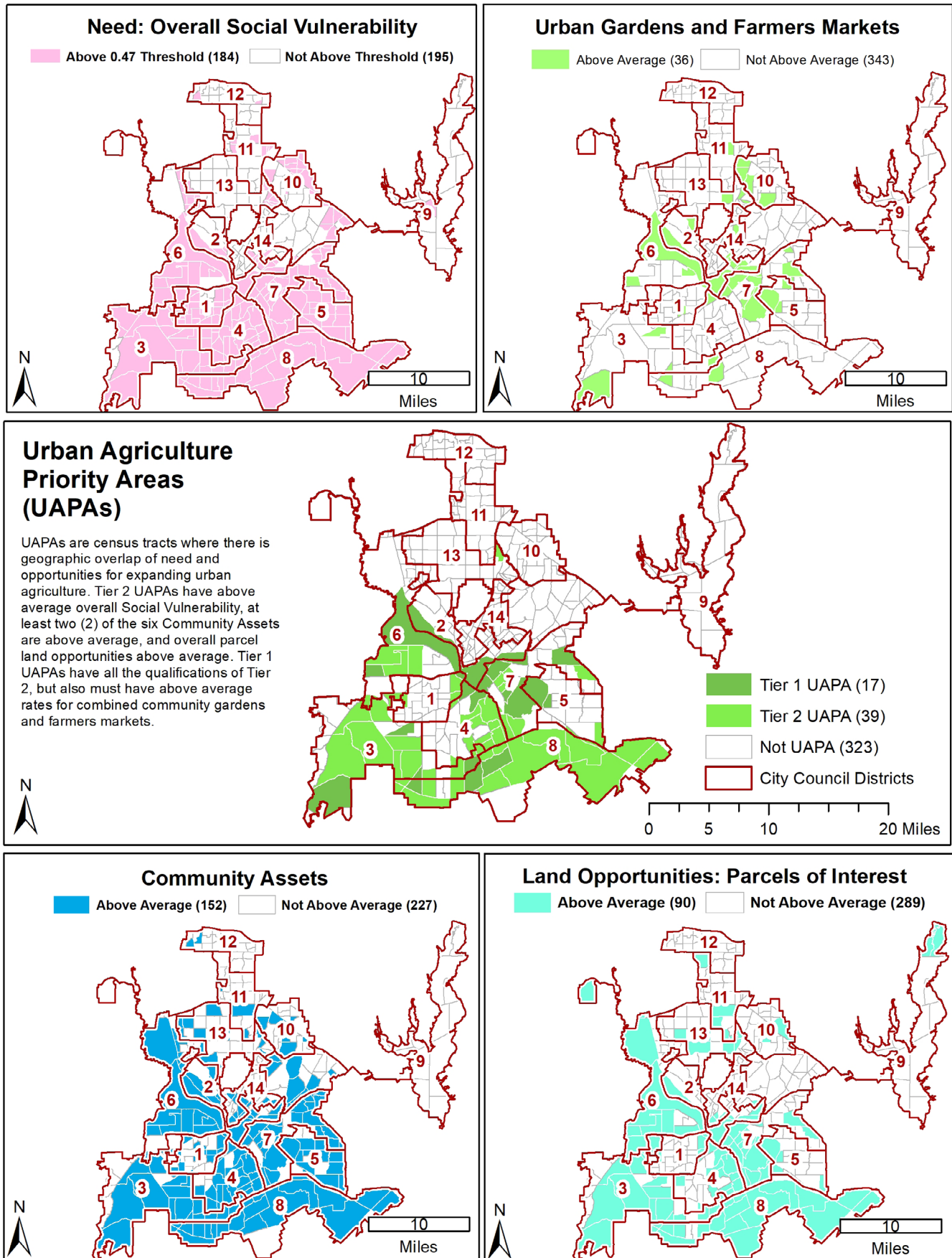


Figure C3: Geographic Overlay for Urban Agriculture Priority Areas

The distribution of UAPAs is illustrated in *Figure C3* as the geographic overlap of urban agriculture factors such as tract-level social vulnerability, urban agriculture activities (gardens and farmers markets), community assets and land opportunities from the parcels of interest listed in the UAPA model, *Figure C2*. Table C1 below provides the counts, and *threshold rates* that determine tract UAPA status. The threshold rate (bottom number *in italics*) represents the rate of the urban agriculture factor per 10K population across all tracts. Let's discuss each map overlay in *Figure C3* involved in determining the distribution of UAPAs along with these thresholds.

		Factors for viable urban agriculture									
Tract aggregation	Tract Count	Need	Urban Agriculture Activities		Community Assets						Land Parcels of Interest
			Urban Gardens	Farmers Markets & Stands	Faith Sites	Food pantries	Afterschool meal sites	Student Summer Meal Sites	Senior Meal sites	HUD Building Sites	Combined Parcels
All Tracts <i>Threshold</i>	381	0.47	52 count 0.38 <i>rate</i>	12 0.09	1,293 15.48	90 0.56	378 2.11	742 4.45	10 0.09	686 4.05	32,036 193.43
UAPA Tiers 1 & 2	56	0.82	23 1.10	3 0.12	603 37.58	44 2.05	136 5.46	263 10.91	6 0.41	309 11.84	15,900 594.48
UAPA Tier 2	39	0.83	0 0	0 0	446 43.42	29 1.76	91 4.83	180 10.12	5 0.50	255 11.83	11,169 584.07
UAPA Tier 1	17	0.80	23 3.62	3 0.39	157 24.19	15 2.71	45 6.89	83 12.70	1 0.19	54 11.86	4,731 618.38

Table C1: Counts and Thresholds determining UAPAs. NB: Top value is the count, while the bottom value is the 10K population rate. For example, for gardens, there are 52 gardens throughout the city within 381 tracts, with a mean rate of 0.38 gardens per 10,000 population.

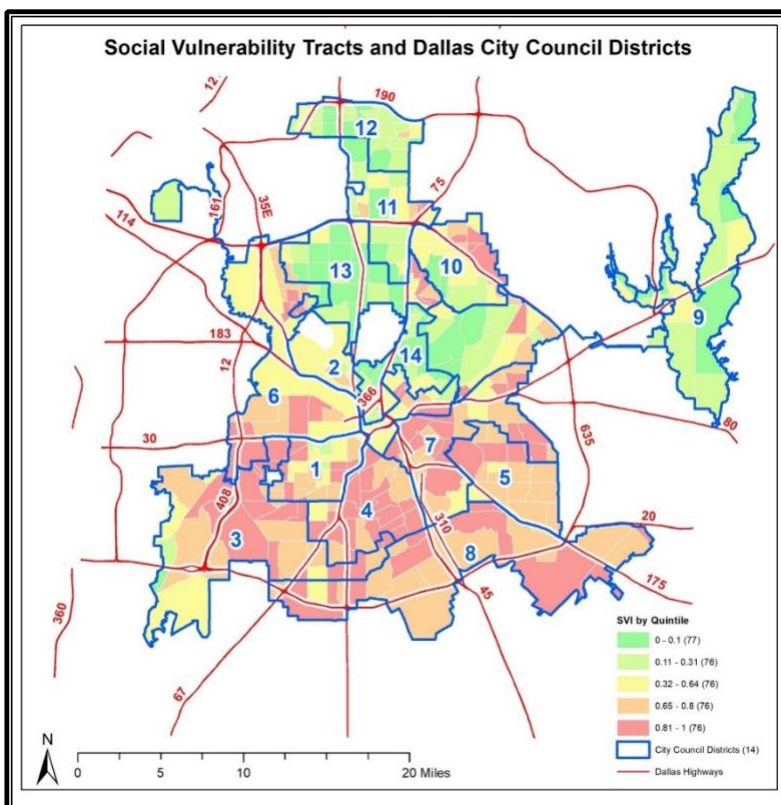


Figure C4: SVI by Quintile in Dallas with City Council Districts

Social Vulnerability. The SVI mean across all Dallas’ 381 tracts is 0.47, which is within the 3rd quintile of the SVI data as seen as in the map in *Figure C4*. The overwhelming majority of tracts above this mean threshold are within southern Dallas and are contained within City Council Districts 1,3,4,5,6,7, and 8. The footprint of above SVI mean tracts in the upper left “need” map in *Figure C3* matches the area of the yellow, orange, and red tracts in *Figure C4*.

Because UAPAs are defined by above average need, the SVI mean for UAPAs is much higher than the city threshold mean. For example, Tier 2 UAPAs have a mean SVI of 0.83 which is 77% higher than the overall mean of 0.47 (Table C1). UAPAs have an Overall SVI score mean 103% higher than non-UAPAs (Table C2).

In general, UAPA tracts have greater poverty, with households headed by vulnerable groups, are non-white, and have challenges with transportation and housing.

For example, UAPA tracts have 100% higher rate of socioeconomic vulnerability, and close to 52% higher vulnerability for Minority Status (Table C2).

Another measure of vulnerability is the Community Resilience Estimate (CRE) from the U.S. Census. The CRE provides estimates of the total number and percent of people living in a tract by the number of risk factors such as Income-to-Poverty Ratio, seniors, disability, no health insurance, and no vehicle access. A tract is considered “high risk” if its population faces above average rates of three or more of the ten risk factors. UAPA tracts have a CRE rate of 36%, which is 54% higher than non-UAPA tracts (Table C2).

Tract Types	Tract Count	SVI1: Socioeconomic status	SVI2: Household composition & disability	SVI3: Minority status & language	SVI4: Housing type & transportation	Overall SVI	% Population With 3 or more Risk Factors	Diabetes Prevalence
Non-UAPA	325	0.41	0.31	0.54	0.44	0.41	23.51%	10.78
UAPA (Tier 1 & 2)	56	0.83	0.68	0.82	0.68	0.82	36.28%	17.95
Percent Difference		+100.93%	+122.40%	+51.95%	+55.24%	+103.35%	+54.33%	+66.52%

Table C2: SVI means for UAPA tracts versus non-UAPA Tracts, percent difference by SVI type and diabetes

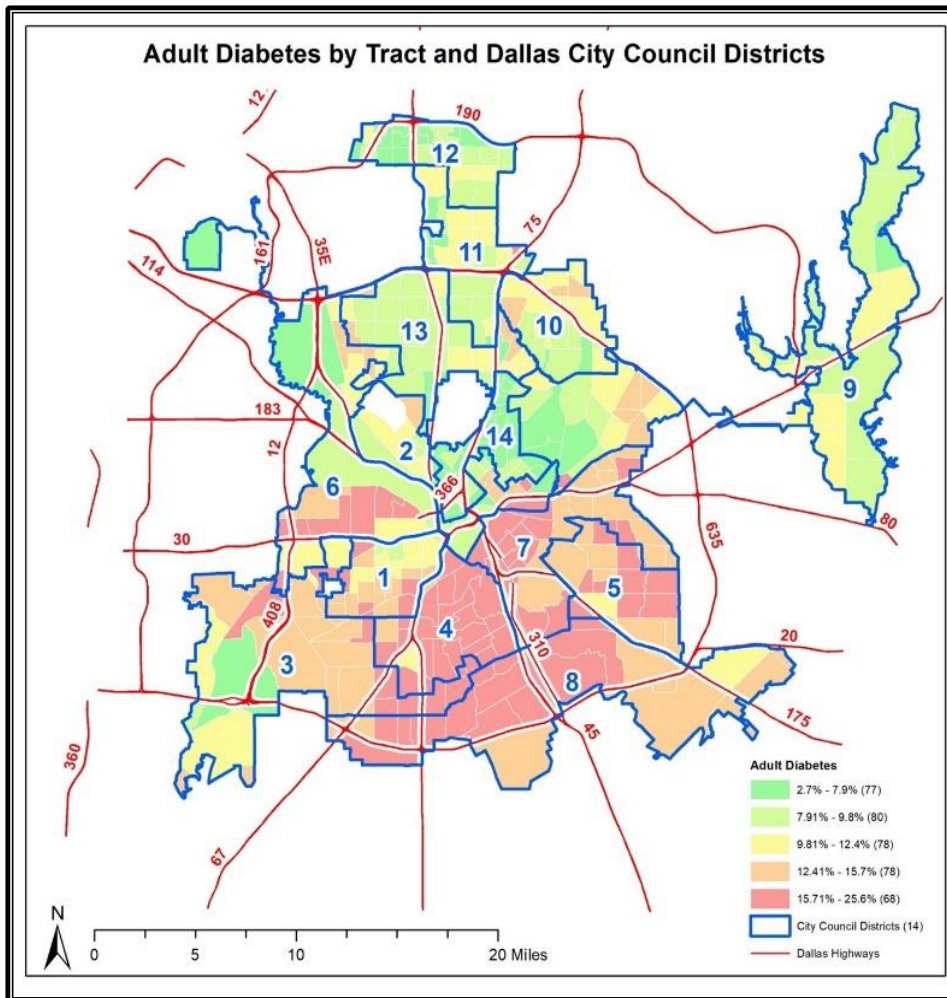


Figure C5: Adult Diabetes Prevalence by Tract in Dallas

Diabetes and SVI. The areas with the highest social vulnerability tend to be also the areas with highest rates of preventable, dietary diseases such as diabetes, which has important implications for urban agriculture. The map of diabetes by quintile (Figure C5) and SVI by quintile (Figure C4) are nearly identical. Since UAPAs are defined by SVI, the mean diabetes prevalence of 17.95% in UAPA tracts is 66.52% higher than in non-UAPA tracts (Table 2). The correlation between overall SVI and diabetes across Dallas is 0.78, which is a high correlation.

Because higher social vulnerability tends to be associated with poorer dietary health outcomes with low-income populations of color, UAPAs are appropriate locations for targeting equitable urban agriculture. Planned with equitable land access and resources, urban agriculture in UAPAs may help residents to be more resilient to food disruptions that are to be more frequent with climate change-induced supply chain disruptions.

Land Opportunities, Parcels of Interest. Although UAPAs have high social vulnerability and high nutritional health disparities, they also have higher rates of land opportunities for expanding UA. For Land Opportunities, (lower right map, Figure C3), if a tract has a combined Parcels of Interest (POI) rate above 193.43 acres per 10K population (Table C1), then the tract is colored teal, and coded as having an above average rate of land opportunities for urban agriculture expansion. Interestingly, the spatial distribution of these tracts tends to be more clustered in the southern portion of the city and has a pattern like high SVI tracts. Numerically, tracts with above mean SVI account for 74% of all POI acres, and 85% of all private vacant parcel acres (Table C3). This spatial correlation between SVI and vacant land might reflect a pattern of economic disinvestment, common with socially vulnerable areas that tend to have high poverty, and rates of historically marginalized populations.ⁱ This example illustrates how including even a modest SVI threshold to qualify tracts as UAPAs lends the analysis to capture greater opportunities associated in areas that face a confluence of disinvestment and health outcome associated food with food insecurity.

Tract Stratification by SVI	Parcels of Interest (POI) Acres	Acres of Private Vacant Land	Percent of POI Acres	Percent of Private Vacant Land Acres
Below SVI Mean (0.47)	8,302	2,550	26%	15%
Above SVI Mean	23,734	14,896	74%	85%
Total	32,036	17,446		

Table C3: Proportion of Vacant Parcel Acres by tract SVI stratification, aggregated into tracts.

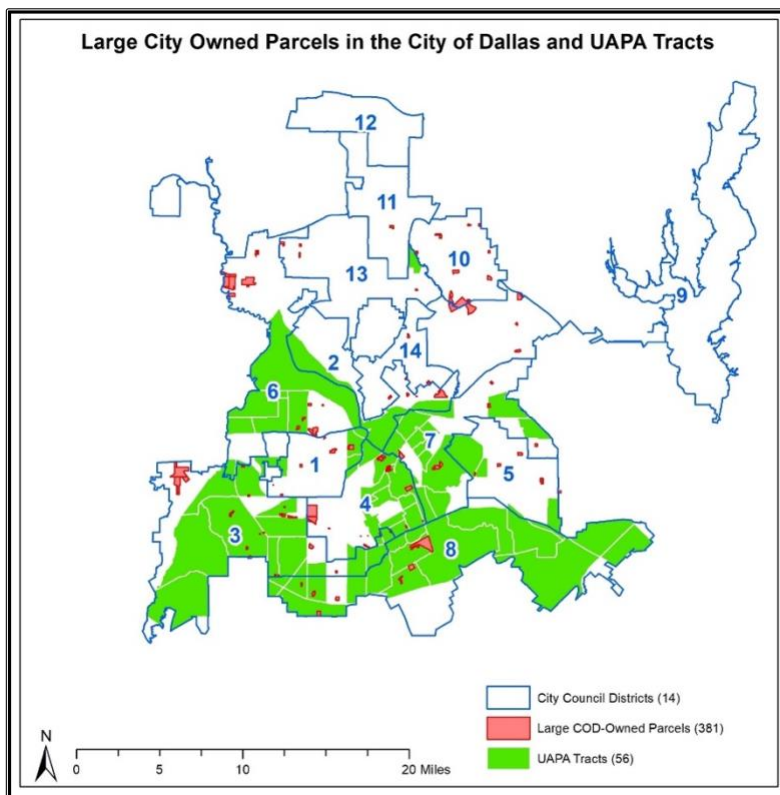
Identifying Parcels of Interest (POI) for Urban Agriculture

Parcels from the COD parcel database were acquired for 2021 via a data request. Any parcels that intersected a floodway or floodplain were removed. The following remaining parcel types were then coded as a POI for urban agriculture:

- City and County Vacant Land
- DART
- Electric Utility
- School (ISD/Non ISD)
- Park land
- Vacant land (private)

Each parcel type was spatially joined to the 381 tracts to acquire the count and total acres per tract. Rates of parcels acres per tract population, were adjusted per 10,000. This calculation was then used to determine the mean parcel 10K population rate per tract.

An additional analysis identified parcels within the POI that have the greatest potential for larger scale urban agriculture that could be potentially managed by the city. These are 381 city-owned parcels that are at least five acres and more. They are the red outline area in the map to the left (Figure C6). Approximately 89% of them (341) are within the southern Dallas region within UAPAs, which is promising for the city to create opportunities in the highest SVI areas.



An important class of POI consists of large (5 acres plus) city-owned parcels, which the majority are vacant. Some of these parcels are smaller than five acres but are included if they are part of a contiguous group that make up at least five acres together.

There are 381 of these parcels across Dallas, totaling 4,037 acres with a mean of 10 acres (Table C4). Of these, 341 are vacant with 2,266 acres (56% of all acres in this class). Most of these were with the Taxpayer Name as the City of Dallas, and the building class, "Land Only."

The majority (291, 76%) of these city-owned vacant parcels are located within 1,000 feet of an UAPA tract (Figure C6). This class of parcels could be the "low-hanging" fruit to for a city-led initiative for offering land opportunities in priority tracts.

Figure C6: Urban Agriculture Land Opportunities in Dallas by Tract and Large (5+Acres) City Owned-Parcels

Building Class	Parcel Count	Acres	Percent of Parcels
LAND ONLY(Vacant)	341	2,266.39	56%
SPECIAL	3	651.82	16%
RECREATION BUILDING	7	565.09	14%
GOVERNMENTAL BUILDING	12	264.59	7%
CANOPY	5	106.58	3%
STORAGE WAREHOUSE	3	76.79	2%
AUTOMOTIVE SERVICE	1	30.63	1%
OFFICE BUILDING	2	29.63	1%
CONVERTED RESIDENCE (BRICK EXTERIOR)	1	24.50	1%
TENNIS COURT (A=CLAY, B=ASPH, C=CONCRETE)	1	9.37	0%
UTILITY BUILDING	2	7.24	0%
SCHOOL	1	4.27	0%
2	1	0.31	0%
SPECIAL	1	0.17	0%
TOTAL	381	4,037.38	100%

Table C4: Building Class Types for City-Owned Parcels that have Urban Agriculture Potential, not aggregated into tracts.

Property Class	Parcels	Acres	Percent of Acres
COMMERCIAL - VACANT PLOTTED LOTS/TRACTS	152	1,901.31	47%
COMMERCIAL IMPROVEMENTS	38	1,770.51	44%
INDUSTRIAL - VACANT PLOTTED LOTS/TRACTS	9	206.58	5%
RURAL VACANT - LESS THAN 5 ACRES	7	96.32	2%
SFR - VACANT LOTS/TRACTS	174	62.35	2%
SINGLE FAMILY RESIDENCES	1	0.31	0%
TOTALS	381	4,037.38	100%

Table C5: Property Class Types for City-Owned Parcels that have Urban Agriculture potential, not aggregated into tracts.

City-Owned Parcels

Within the Parcels of Interest (POI) for urban agriculture are 381 city-owned parcels which total 4,037 acres (Table C4).

The majority (56%) of these acres have the building classification as vacant, "Land Only." Not all this vacant land is classified only as governmental land.

For example, in Table C5, the city owns 1,901 acres classified as vacant commercial, which is 47% of the acres from the 381 parcels. There are another 26 acres that are classified as industrial, and 62 acres that are Single-Family-Residential (SFR). This diversity of vacant land types could mean a diversity of UA activities beyond growing such as the storage, distribution, processing, and composting of UA produce.

For storage, the parcel data reveals that the city may own approximately three parcels classified as "Storage Warehouse" consisting of nearly 77 acres. Industrial sites may be able to host composting activities.

A parcel-by-parcel analysis of this inventory could lead to a network of city-owned land types that are able to accommodate the full spectrum of UA activities across the city, especially in areas of high need.

The online map application, which has these parcels visualized as polygons, points and hot spots could assist with such an analysis. Each parcel polygon has a hyperlink to the official city data.

Urban Agriculture Activities. In the Urban Agriculture activity map (Figure C3, upper right map), if a tract has a mean rate of Community Gardens above 0.38 per 10K population, or Farmers Markets above 0.09 per 10K population (Table C1), then it is colored green and coded as a tract with a higher-than-average rate for urban agriculture activities. The pattern of high urban agriculture activities tends to be distributed in almost every quadrant of the city. Figure C7 provides a closer view of these activities with the underlying tract calculation. Urban gardens tend to cluster in the city core, where is greater population density.

UAPAs contain 41% of the total urban agriculture activity sites (urban gardens, USDA-registered farmers markets and farmers market stands) and tend to have higher concentrations of UA activities. For example, the 10K population rate for urban gardens in non-UAPAs is 0.25 (Table C1). Non-UAPAs are tracts with low need.

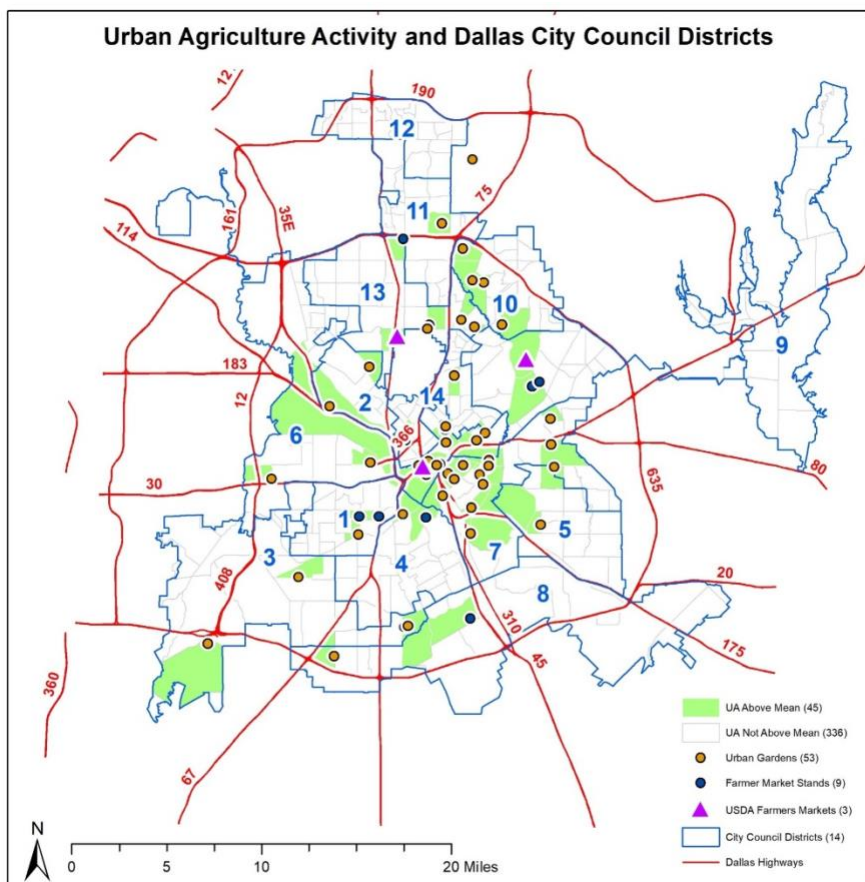


Figure C7: Urban Agriculture Activity by Tract and Sites in Dallas

However, the urban garden 10K population rate for UAPAs is 1.10, which is 333% higher than low need, non-UAPA tracts (Table C6). This means that there are more gardens per population in UAPAs, which are defined by need through the SVI. This is an indication that the citizens of the City of Dallas have been addressing food insecurity need in the appropriate locations. The current GIS analysis merely corroborates this finding.

Methods for Identifying Urban Agriculture Sites

GIS shapefiles for the locations of approximately eighty-eight (88) urban gardens were obtained from the COD from the timeframe of 2017 to 2019. The attributes for this data had outdated and incomplete contract information. Therefore, verification of the gardens has been a challenge. Many gardens had websites and a social media presence that helped determine if they were still active.

To verify the existence and acreage of gardens without any contact information, we employed NearMap, which has current aerial imagery. Once a garden was identified via NearMap, its acreage was calculated by tracing a polygon around the garden footprint. Thirty-two (32) sites had successful acre estimation.

Further verification included visiting garden sites and using Google Maps for street view verification. **As a result, 53 gardens have been verified with an estimated total of 15.23 acres.** Gardens are included if they are publicly accessible. This means nearly all public schools gardens are currently excluded from the inventory.

NB: Not all garden sites on the map are contained by a COD Census Tract. Notice the garden just to the right of district 12, which is not within a tract. Therefore, the map in Figure C7 shows 53 urban gardens and not the 52 which are contained in tracts and used for calculations in Table C1.

Community Assets. The threshold for Community Assets per tract has more nuance. Each community asset has its own mean rate per 10K population. For example, there are 1,293 centers of Faith within the 381 tracts throughout the city. The city mean rate for Faith Sites is 15.48 per 10K population (Table C1, Table C6). For a tract to be coded as an UAPA, it must have *at least two of any six Community Assets above the city's mean rate*. Therefore, the combination of community asset types that are above the city rate will vary per tract. Notably, as seen in the map in Figure C8 below, and the calculation in Table C1 and Table C6, the data shows that Community Assets tend to be clustered more in UAPAs relative the city overall and even more so compared to non-UAPAs.

For example, although there are fewer faith sites in UAPAs, their rate is much higher (Table C1) in UAPA tracts. Faith Sites in UAPAs are 37.58 per 10K population, which is 222% higher than the non-UAPA rate of 11.67 per 10K population.

Community Assets and Urban Agriculture Activities: Rates per 10K Population									
Tract Status	Tract Count	Faith Sites	Pantries	Senior Meal Sites	Student Summer Meal Sites	Student After School Meal Sites	HUD Buildings	Urban Garden Sites	Farmers Market Sites
All Tracts	381	15.48	0.56	0.09	4.45	2.11	4.05	0.38	0.09
Non UAPA	325	11.67	0.30	0.04	3.34	1.53	2.71	0.25	0.09
UAPA Tier 1&2	56	37.58	2.05	0.41	10.91	5.46	11.84	1.10	0.12
Percent Change: Non-UAPA to UAPA	NA	+222%	+581%	+1,037%	+227%	+257%	+337%	+333%	+36%

Table C6: Percent change of Community Asset population rates from non-UAPA to UAPA-T2 tracts

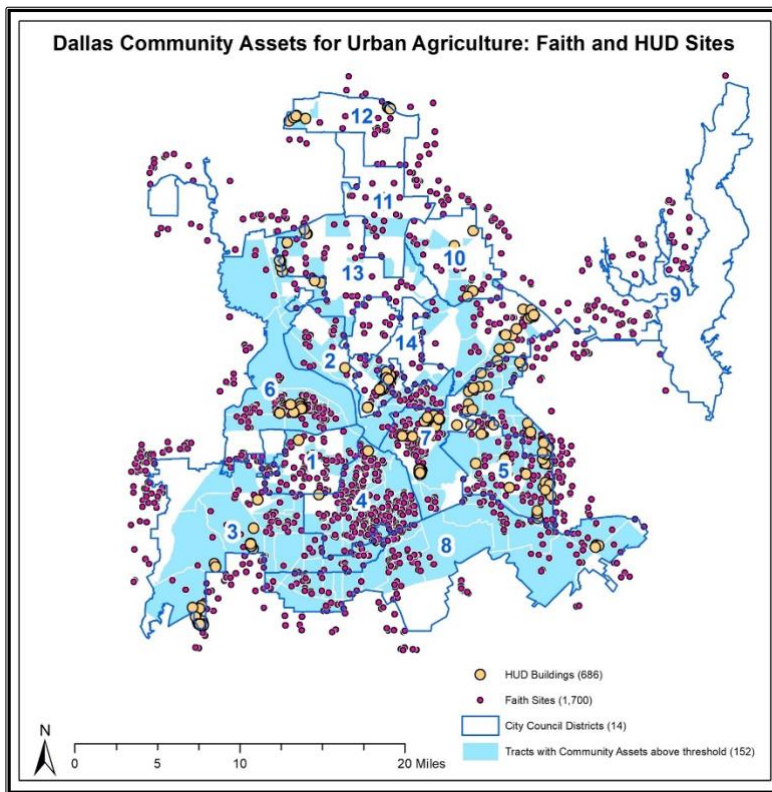


Figure C8: Community Assets in the City of Dallas, above tract threshold

Across all the Community Assets, UAPAs have magnitudes higher concentrations (Table C6) compared to non-UAPAs. The highest rate differences are with Pantries and Senior Meal sitesⁱⁱ. Pantries are 581% higher in UAPAs compared to non-UAPAs. Senior Meal Sites are 1,037% higher in UAPAs. As mentioned earlier, rates of UA activities such as urban gardens and farmers markets are also much higher in UAPAs. This is another indication that that the citizens of Dallas have been building food security infrastructure and programs in areas of need.

Because community assets are numerous (there are 3,264), mapping them in the minimal space available in this report would yield a map that is incomprehensible. The map in Figure C8 illustrates how crowded a static map becomes with two of the most numerous assets, 686 HUD buildings and 1,700 Faith sites. This point-level map although visually crowded, illustrates the concentration of these two assets in southern Dallas. By aggregating assets by tract population (the blue color), much of this visual noise can be eliminated. However, the online

map application does allow one to visualize point-level assets at various scales, which greatly diminishes cluttering and lends to clearer insights as to how they are distributed and relate to each other spatially.

In summary, UAPAs are tracts where there is an overlap of above rates of Need (SVI above 0.47), Community Assets (at least two above the city mean rate), and Land Parcels of Interest (above 193.43 per 10K population). The intersection without requiring Urban Agriculture Activities results in thirty-nine (39) “Tier 2” UAPA tracts. Seventeen (17) Tier 1 UAPAs tracts have all the same qualifications as Tier 2, but in addition, must have above rates for Urban Agriculture activities such as urban gardens (0.38 per 10K population) and farmers markets (0.09 per 10K population). Both Tiers make up fifty-six (56) UAPA tracts.

A comprehensive plan for UA in the City of Dallas may find the most potential for successful policy, systems, and environmental changes in UAPAs, which have a confluence of high need, opportunities and the civic community assets that are needed to sustain the full spectrum of urban agriculture activities. The data indicates that Dallas residents have been building a response to food insecurity in these areas. A city plan can fortify these efforts.

Urban Agriculture Priority Areas: City Council District Potential

The focus of this appendix is to provide an overview of UA potential in the City of Dallas. More detailed analysis for tracts will be available in the City Council District briefs. This section closes the overall city view with a primer on the City Council Districts that have the greatest need and opportunities for UA. Figure C9 is a close-up map of the distribution of UAPAs with City Council Districts.

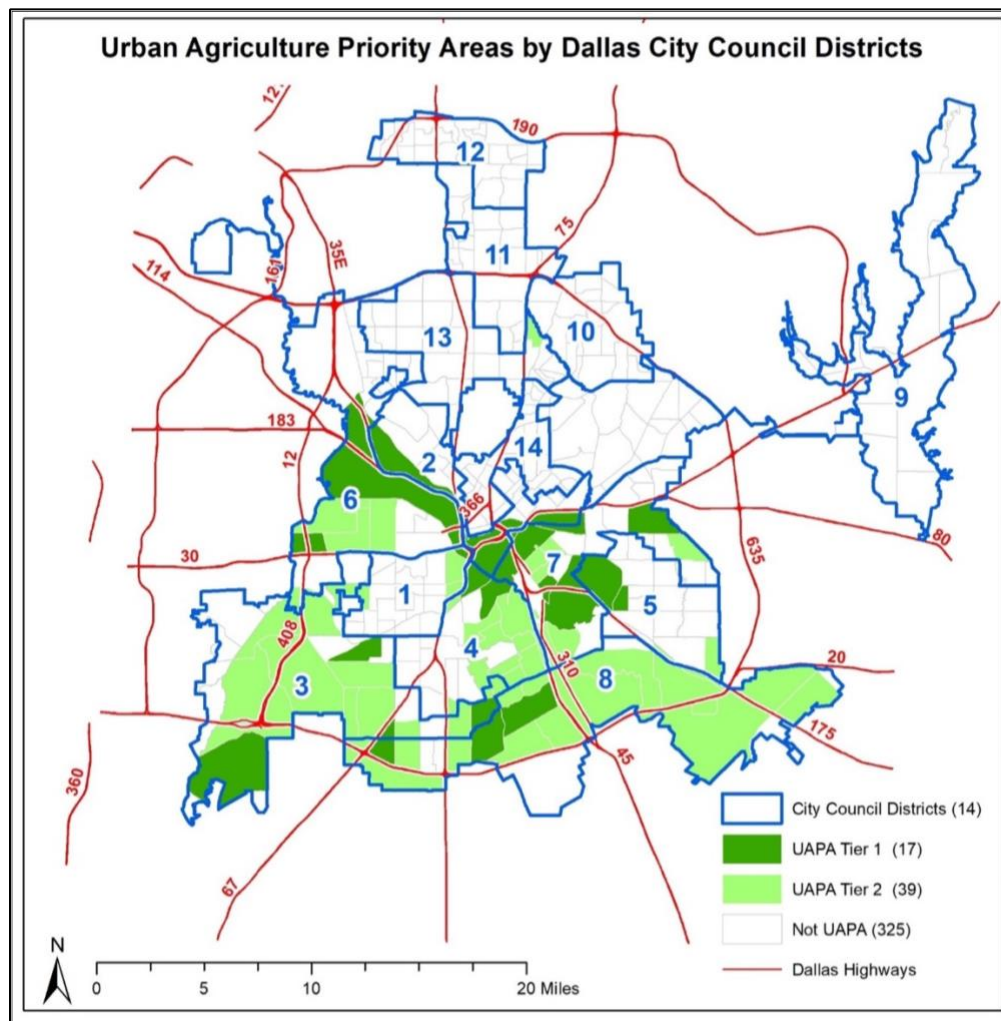


Figure C9: Urban Agriculture Priority Areas in the City of Dallas

Visually, we can see that several City Council Districts (CCDs) have a high concentration of UAPAs. However, Table C7 provides the counts of these tracts, which assists with interpreting the map. The CCDs in Table C7 are sorted by average SVI (highest to lowest). We can see that the three top highest CCDs are all in southern Dallas (#4, #8, #7), and they also tend to have concurrent high dietary health disparities compared to CCDs to the north

District	Tier 1 UAPA Tracts	Tier 2 UAPA Tracts	Population	Average SVI	Sum of SVI tracts above threshold	Percent of population with 3 or more risk factors ⁱⁱⁱ	Average Diabetes Prevalence	Average obesity Prevalence	Average Stroke Prevalence
4	2	8	97,725	0.87	21.00	40.66	21.40	43.30	6.79
8	3	11	148,482	0.79	23.00	34.05	16.93	40.84	5.13
7	5	4	119,770	0.76	24.00	35.86	17.75	40.55	5.40
5	1	1	89,670	0.74	13.00	34.16	15.75	39.28	4.08
3	2	9	155,386	0.69	20.00	28.75	14.11	36.68	3.80
1	0	2	99,834	0.68	17.00	32.65	13.59	35.32	3.10
2	2	0	111,884	0.53	12.00	28.18	10.95	32.69	2.62
10	0	0	101,307	0.49	12.00	23.55	10.59	31.83	3.02
6	2	3	167,643	0.37	14.00	23.42	10.77	30.11	2.77
11	0	0	125,035	0.33	7.00	23.91	8.87	28.45	2.54
9	0	0	276,577	0.32	10.00	18.47	10.21	30.95	2.92
13	0	1	98,161	0.28	6.00	20.94	9.46	27.29	2.80
12	0	0	152,738	0.20	2.00	16.50	8.29	30.67	2.28
14	0	0	79,873	0.13	2.00	15.36	5.92	25.07	1.65

Table C7: City Dallas Council Districts: Urban Agriculture Priority Areas, Social Vulnerability and Dietary Health by tract

The CCD with the highest SVI average is District 4, which has an average SVI of 0.87 and contains 10 of the 56 UAPA tracts or 18%. According to the Census Bureau's Community Resilience Estimates (CRE), nearly 41% of CCD#4's 97,725-population face three or "risk factors" for vulnerability. Earlier, we established that correlation between SVI and dietary health outcomes is high (0.78), which manifests again at the district level. CCD#4 has the highest diabetes rate, with slightly over 1 in 5 adults with diabetes. It also has the highest adult obesity rate with 43.30%. Finally, it has the highest rate of stroke at nearly 7%, compared to only 1.65% in CCD#14. The next two CCDs (#8, #7) have similarly high rates of populations facing several risk factors and high rates of adverse dietary outcomes.

The top three most vulnerable CCDs make up nearly 58% of the UAPAs mainly because of their high SVI. However, they also have higher rates of land opportunities and community assets, which could make UA more viable in these districts (Table C8). For example, CCD#4 has 22% of all parcels owned by Faith institutions (the highest share), the second highest share of community assets (14%) and fourth highest share of city-owned vacant parcel (13%). CCD#8, the second highest SVI district, has 24% of all land opportunities, 29% of city-owned vacant parcels, and the third highest share of community assets. This analysis reveals that where there is need for UA in Dallas, opportunities are also plentiful. This fortunate geographic confluence provides fertile ground for policies to coordinate and activate the land and communities for a robust network of urban agriculture in Dallas.

CCD	Average Overall SVI	Sum of Total Land Opportunity Acres	Percent of Acres	Sum of city-owned Vacant acres	Percent of city-owned vacant acres	Sum of Faith Parcels	Percent of Faith Parcels	Sum of Total Community Assets	Percent of Assets
4	0.87	2,194.12	7%	155.88	13%	279	22%	443	14%
8	0.79	7,728.18	24%	354.94	29%	153	12%	316	10%
7	0.76	2,256.38	7%	71.72	6%	173	13%	456	14%

5	0.74	1,266.41	4%	42.14	3%	92	7%	230	7%
3	0.69	4,964.69	15%	246.01	20%	97	8%	264	8%
1	0.68	813.06	3%	8.37	1%	68	5%	163	5%
2	0.53	1,546.36	5%	66.43	5%	85	7%	282	9%
10	0.49	659.84	2%	42.90	3%	24	2%	100	3%
6	0.37	4,111.11	13%	188.59	15%	147	11%	494	15%
11	0.33	773.75	2%	3.43	0%	24	2%	49	2%
9	0.32	3,590.06	11%	19.92	2%	49	4%	116	4%
13	0.28	1,049.88	3%	12.85	1%	41	3%	113	3%
12	0.20	462.37	1%	0.00	0%	20	2%	84	3%
14	0.13	619.8	2%	29.09	2%	41	3%	154	5%
		32,036.01		1,242.28		1,293		3,264	

Table C8: Land Opportunities and Select Community Assets within tracts by City Council District, sorted by SVI

UAPAs are areas of priority, first defined by high need determined through the SVI city mean threshold of 0.47 from 52 gardens across all tracts. Because southern Dallas has a disproportionately higher rate of several social vulnerabilities, it also has the highest concentration of UAPAs. As seen in the overlay map (Figure C3), disinvestment in southern Dallas, has most likely led to it having more land opportunities. It is also likely that this area has a higher rate of community assets in the form of social support services (e.g., HUD, meal programs, and faith sites) because of this confluence of disinvestment and social vulnerability. UAPAs are the recommended priority areas for UA, *but they are not the only areas for UA.*

If we take out the SVI requirement built into UAPAs, we can find many more tracts that could be potentially viable for UA. For example, Figure C10 below shows that every City Council District has acres available for UA expansion. The tracts outlined in orange have above average community assets.

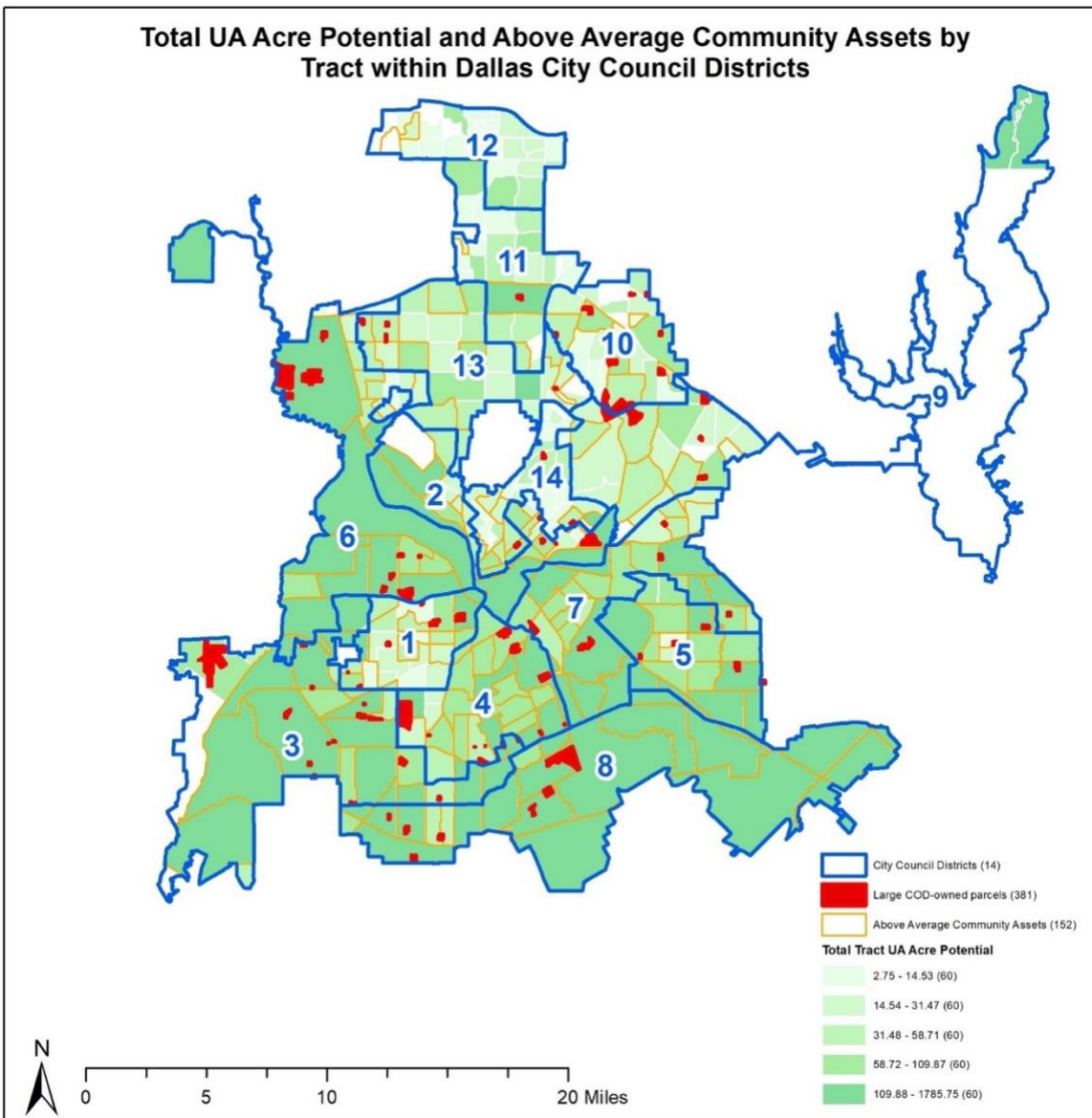


Figure C10: Total urban agriculture acre potential and above average community assets by tract within Dallas City Council Districts.

The saturation of acres is clearly in the southern portion of Dallas, but there are several high-quintile tracts in northern CCDs such as 6, 12, 13, 11 and 9 (going left to right). Tracts with above community assets also extend to northern CCDs such as 13, 11, 12, and 10. Within many of these tracts with available acres and community assets. There are also clusters of larger (5 acres+) city-owned parcels (in red) in northern Dallas districts (6, 13, 11, and 10).

Table C9 below provides a breakdown of the number of acres within tracts per CCD along with the number of community assets. The CCDs are sorted by total land opportunity acres.

Table C9 shows that despite several northern CCDs not having UAPAs, they do indeed have a high potential for hosting UA with land opportunities, and possibility supporting UA with community assets. For example, CCD #11, has potentially 773 acres, of which, 84 are owned by Houses of Faith, an important community asset. There are approximately 78 acres within electric utility land that could also be activated. To support future UA, there are approximately 49 Community assets, half of which are indeed faith sites, and 17 summer student meal sites (see original data in the online map for the breakdown).

CCD	Sum of Total Land Opportunity Acres	City-owned Vacant acres	County Owned Vacant Acres	Park Acres	Dart Acres	Electric Utility Acres	Faith Acres	Government Building Acres	Private Acres	DISD Acres	Total Community Assets
8	7728.18	354.94	0.27	215.31	19.64	68.56	362.48	23.25	6034.55	602.69	316
3	4964.69	246.01	0.00	555.03	25.63	220.63	380.81	15.30	3222.27	276.07	264
6	4111.11	188.59	5.98	327.75	27.66	79.43	91.87	96.79	2987.54	190.26	494
9	3590.06	19.92	0.00	123.77	8.40	26.89	156.57	5.29	127.19	147.39	116
7	2256.38	71.72	0.00	453.82	62.80	31.20	154.52	24.73	1101.58	330.14	456
4	2194.12	155.88	0.42	257.53	22.40	73.98	225.77	7.06	935.81	326.22	443
2	1546.36	66.43	0.00	204.75	86.06	22.50	90.11	54.02	871.71	121.85	282
5	1266.41	42.14	0.00	132.84	35.11	21.96	166.67	8.43	511.46	339.06	230
13	1049.88	12.85	0.00	70.19	9.67	84.02	189.74	10.93	437.58	230.74	113
1	813.06	8.37	0.00	138.24	10.71	30.46	74.49	19.76	302.83	195.48	163
11	773.75	3.43	0.00	47.88	0.00	78.37	84.27	8.09	413.73	72.40	49
10	659.84	42.90	0.66	47.02	25.53	35.96	83.76	14.18	186.70	0.00	100
14	619.80	29.09	0.92	87.69	35.33	47.42	68.98	25.79	242.30	60.81	154
12	462.37	0.00	0.00	189.07	25.01	18.75	43.08	0.89	70.52	0.00	84
Grand Total	32,036.01	1,242.28	8.25	2,850.89	393.95	840.13	2,173.12	314.51	17,445.77	2893.11	3,264

Table C9: Tract aggregated Acre potential per City Council District and total community assets. NB: Several categories such as miscellaneous county land are not shown to save space.

More in-dept calculations by asset type per district shall reveal greater detail as to where UA potential are in these districts both within UAPA and beyond them.

Ensuring a Safer, Equitable Urban Agriculture

This overview has focused on the opportunities for expanding UA for the most vulnerable populations in the City of Dallas. It was noted in several sections that historically disadvantaged communities have a history of redlining, neglect, and disinvestment that have produced vacant and derelict land (VDL), which could be revitalized through UA activities. It is well documented that VDL tend to be concentrated in highly vulnerable communities of color and that this land has a higher chance for contamination from prior or current toxic activities. This means that UA efforts in vulnerable, marginalized communities could potentially place a legacy of environmental injustices directly into the lives of present residents^{iv}.

Because UA production requires that people are in closer contact with the soil, for longer time periods, the risk to exposure to toxins could be especially high. Exposure risk could also be incurred when crops uptake containments and are then consumed. For these reasons, it is important that UA efforts follow policy and practice guidelines to minimize risk, which could be disproportionate in highly vulnerable communities^v.

In this section, we provide an overview of the locations of environmental risk sites, which tracts and districts they are concentrated and the current urban gardens that may be most at risk for exposure. Recommendations for mitigating risk should be acquired by consulting with national and local guidance.

Types of EPA Contamination sites. Data for EPA-regulated contaminated sites throughout Dallas was acquired from the EPA's [Geospatial Data Download Service](#), which has geospatial databases for facilities and sites subject to environmental regulation. The following three contamination sites were chosen, because of their soil risks tend to be more localized (as opposed to more dispersed such as with water or air contamination sites):

1. [Brownfields](#): A property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.
2. Superfund sites on the [National Priorities List \(NPL\)](#): Site with hazardous waste being dumped, left out in the open, or otherwise improperly managed such as manufacturing facilities, processing plants, landfills and mining sites.
3. Superfund sites that are [Non-NPL](#)

Distribution of site types within Historically Redlined Areas and CCDs. There are 123 EPA contamination sites across the City of Dallas, of which, Brownfields number 33, or approximately 72% of sites. As the map in Figure C9 illustrates, there are concentration of these sites within historically redlined areas. While 28% of sites of all sites are within redlined areas, 35% of Brownfields are within redlined areas.

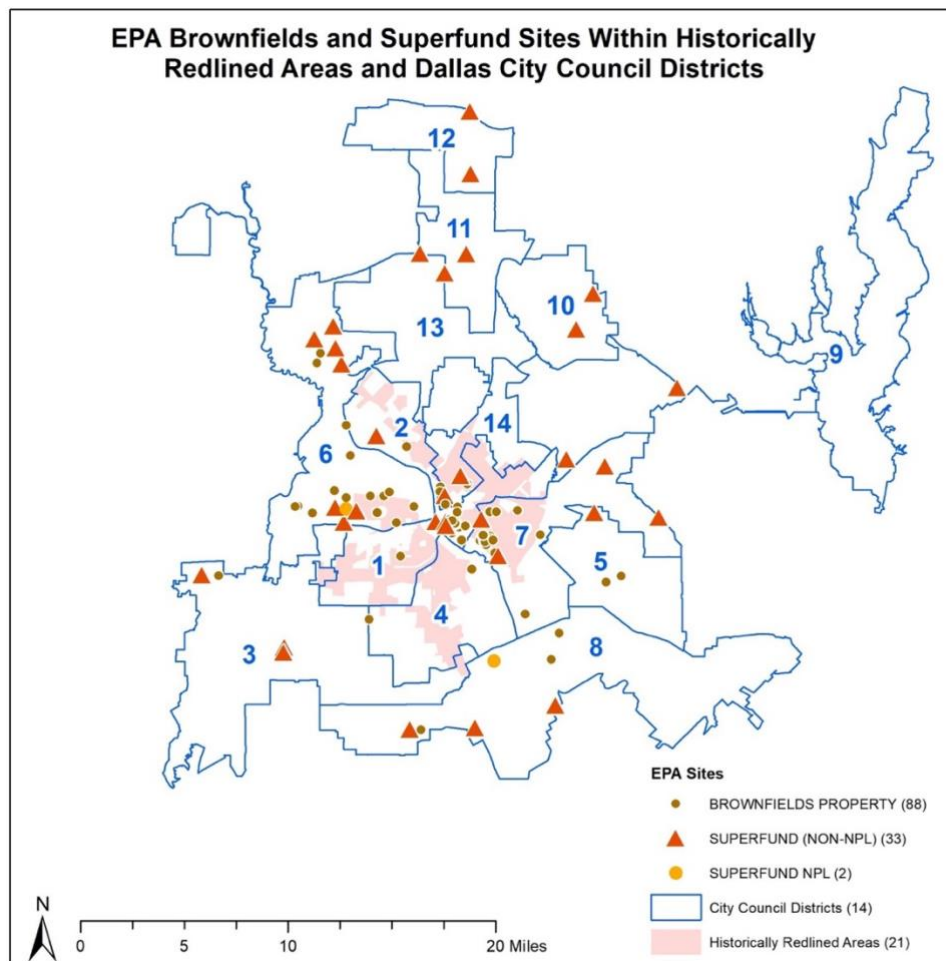


Figure C11: EPA Contamination sites within Dallas City Council Districts and Historically Redlined Areas

Note: Redlining refers to color coded maps of the City of Dallas published by the Home Owners' Loan Corporation in 1935 and 1940. The maps were used by financial institutions to restrict access to credit or terms of credit based on the credit applicant's race, color, national origin, or other prohibited characteristic(s). The maps referenced in this plan may be found at Mapping Inequality, the National Archives and Records Administration, and the Library of Congress.

CCD	EPA Site Count	Percent of Sites
6	33	27%
2	30	24%
7	27	22%
8	7	6%
14	6	5%
3	4	3%
11	3	2%
5	3	2%
1	2	2%
10	2	2%
12	2	2%
4	2	2%
9	2	2%
Total Sites	123	

CCDs share a disproportionate share of the EPA sites. Only three CCDs (6, 2, and 7) contain nearly 73% of the EPA sites as shown in Table C9.

Within these districts, the map in Figure C9 shows the sites tend to be within the southern portion of Dallas. For example, CCD 2 has a west northern, central-south, and east-northern section, much like a shape of a boomerang.

Most sites in this district tend to be within the central south portion. While CCD6 has a large section within the northern portion of the city, its EPA sites tend to be concentrated along its southern boundary.

Table C10: EPA Sites by City Council District

Distribution of site types by Tract Social Vulnerability Status.

Consistent with the literature on environmental justice, EPA regulated contaminated sites tend to be associated more with moderate to high social vulnerability. In Figure C10, the number of sites and their tract population rate are stratified by the tract SVI quintile (low, lowest, moderate, high, highest). Approximately 86% of the sites are associated with moderate to highest SVI tracts.^{vi} The rate of sites by tract population tends to be higher for "Highest" SVI tracts compared to all other SVI ranks.

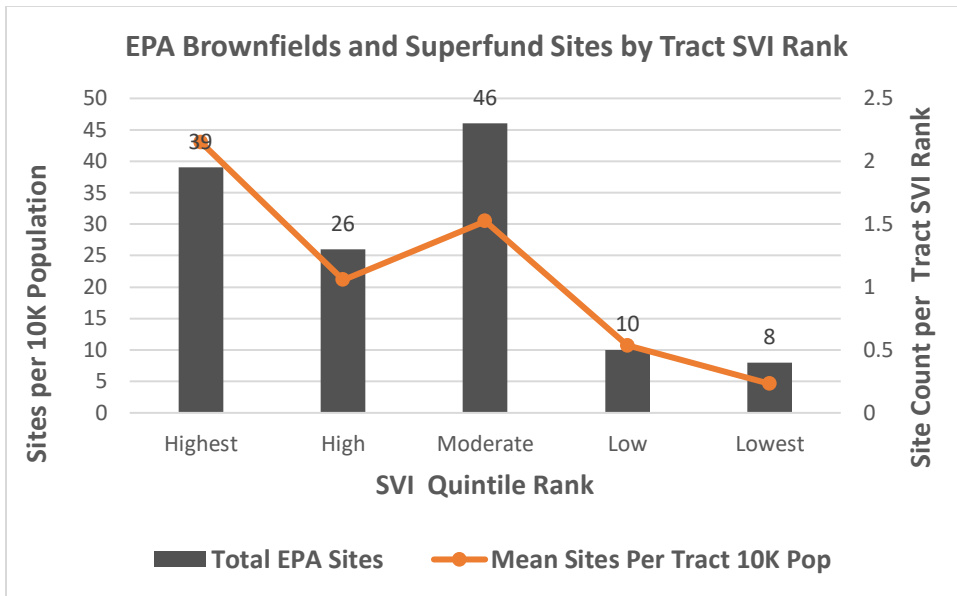


Figure C12: EPA Sites by Tract Social Vulnerability Rank

Distribution of site types by Tract Population Rate and Urban Gardens.

In this section, we explore their tract rate distribution and the location of urban gardens.

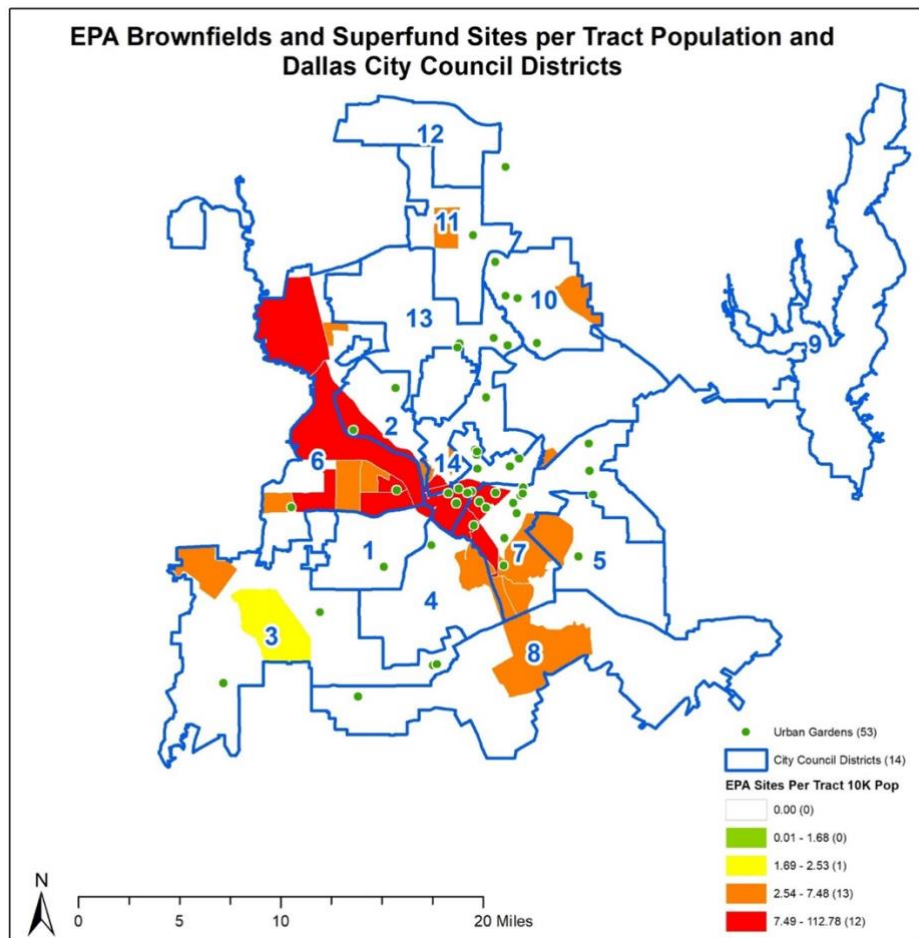


Figure C13: EPA Sites per Tract 10K Population and Location of Urban Gardens

The map in Figure C11 shows the rate of EPA sites per 10,000 people per tract, stratified by quintile. The green tracts represent the lowest rate of sites, while the red tracts represent the highest. The green dots represent the locations of the known 53 urban gardens. Of these gardens, only 15 or 28% of them are within tracts that have high to highest rates of EPA sites. What about UAPAs?

Across Dallas there are 47 tracts with at least one EPA site. For UAPA tracts, the map in Figure C12 below shows the distribution of EPA site locations within. Visually, one can discern that most of the EPA sites tend to overlap with an UAPA. In fact, 60% or 74 of the 123 sites intersect with an UAPA. Because UAPAs are derived from higher SVI scores, this kind of spatial association should be expected. It is confirmation that most EPA sites do indeed occur more often in UAPA. Of the 56 UAPAs, 17 of them, or 30% contain at least one EPA site.

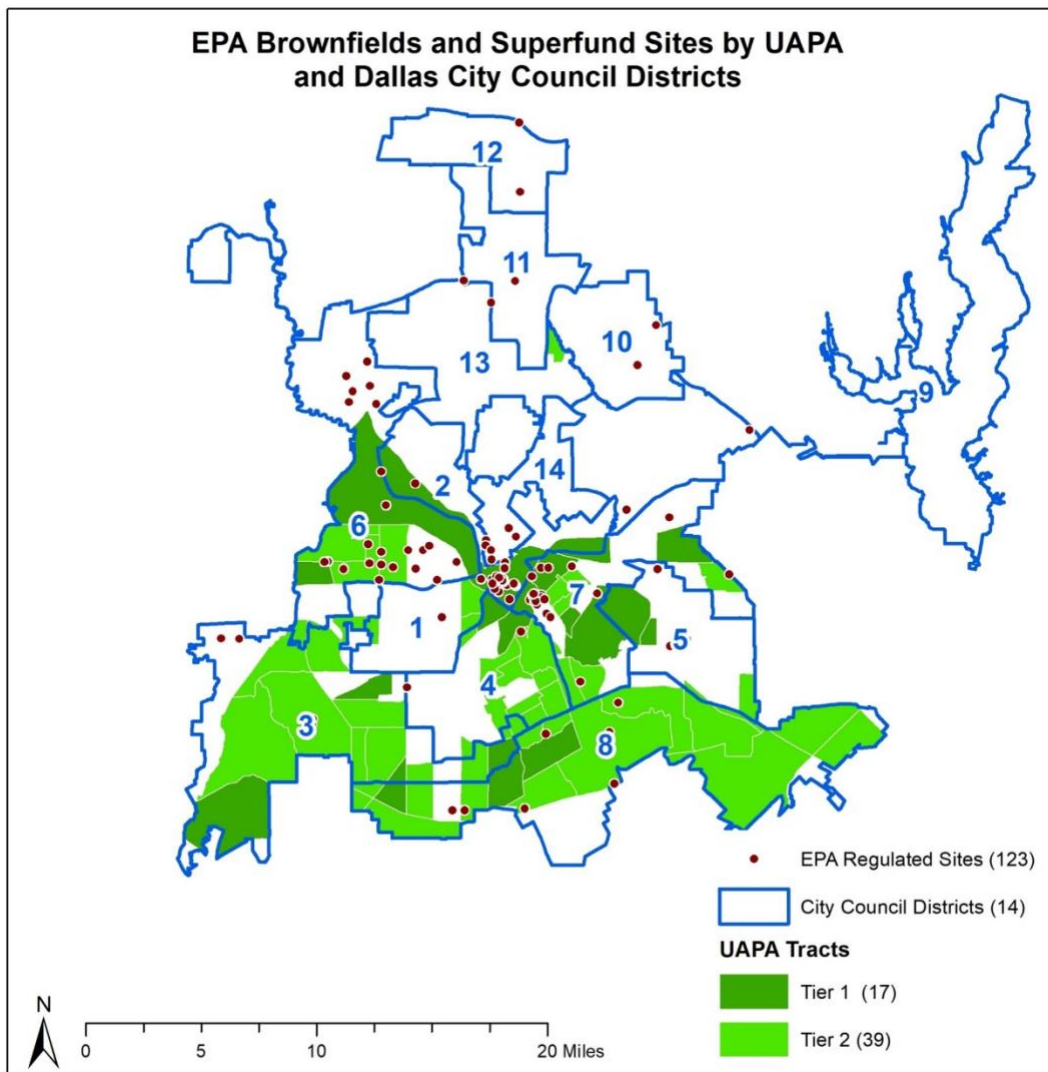


Figure C14: EPA Sites and UAPAs

The UAPA tracts with EPA sites are listed in the Table C10 below, sorted by highest rate of EPA sites per tract 10K population. It is recommended that one use the online map application to inspect these tracts further.

Tract Name	UAPA Status	Overall SVI	Garden Count	Garden Rate 10K Pop	EPA Site Count	EPA Site Rate
34	Tier 1	0.95	1	7.52	15.00	112.78
204	Tier 1	0.49	5	8.84	20.00	35.37
100	Tier 1	0.64	1	2.78	5.00	13.90
203	Tier 1	0.84	4	13.10	4.00	13.10
105	Tier 2	0.80	0	0.00	4.00	12.03
205	Tier 2	1.00	0	0.00	4.00	7.48
86.03	Tier 2	0.76	0	0.00	1.00	6.78
202	Tier 2	0.76	0	0.00	3.00	6.66
115	Tier 1	0.94	1	2.70	2.00	5.41
106.02	Tier 1	0.93	1	2.73	1.00	2.73
165.20	Tier 2	0.95	0	0.00	2.00	2.53
87.01	Tier 2	0.97	0	0.00	1.00	1.89
116.01	Tier 2	0.89	0	0.00	1.00	1.80
121	Tier 2	0.82	0	0.00	1.00	1.52
106.01	Tier 2	0.70	0.00	0.00	1.00	1.41
167.01	Tier 2	0.76	0.00	0.00	1.00	1.37
112	Tier 2	0.96	0.00	0.00	1.00	1.36

Table C11: UAPA tracts with EPA Sites with Gardens and rates

Urban Gardens in Proximity to EPA-Regulated Sites.

As the table above shows, it is estimated that that a significant number of EPA-regulated sites do occur in areas recommended for UA expansion. This last table below lists the current urban gardens that are within at average walking distance to an EPA site, a quarter of mile or five to ten-minute walk.

Urban Garden Site	Address	Tract	District	Acres	Contact Name	Phone	Email
City Square Community Garden, Dallas	2641 Jeffries St, Dallas, Texas, 75215	203	7	0.05			
Encore Park Community Garden	508 Park Ave, Dallas, Texas, 75201	204	2	0.19	Sam Marriot	469-371-6044	encoreparkgarden@gmail.com
My Community Garden (at St. Philips)	1609 Panama Street, Dallas, TX, 75215	34	7	0			

Table C12: Urban Gardens with 1/4 mile to an EPA Site

While it is fortunate that only a small number of current gardens are within proximity to EPA regulated sites, it is recommended that any UA production site has a thorough environmental risk exposure assessment. The current analysis uses larger EPA-regulated sites. However, there can be non-point air and water contamination that may affect potential UA projects that are not within immediate proximity.

ⁱ Lynch, E.E., Malcoe, L.H., Laurent, S.E., Richardson, J., Mitchell, B.C., & Meier, H.C. (2021). The legacy of structural racism: Associations between historic redlining, current mortgage lending, and health. *SSM - Population Health*, 14.

ⁱⁱ There may be some double counting with pantries and faith site since some pantries do occur at places of faith. An GIS *select by location* test finds that approximately 27 of the 98 food pantries intersect a faith parcel within 300 feet.

ⁱⁱⁱ Community Risk Factors are from the U.S. Census Bureau's 2019 Community Resilience Estimates (CRE) dataset. Community resilience is the capacity of individuals and households within a community to absorb the external stresses of a disaster. Modeled estimates are based on 10 resilience-related risk factors. A tract with three or more risk factors is considered the highest vulnerability. Current estimates are modeled using 2019 American Community Survey 1-year data and displays the number and percentage of residents living with zero, one-two, and three or more risk factors for the nation, states, counties, and tracts. The SVI and CRE can be used together to acquire an accurate measure of equity and vulnerability. While the SVI provides an intuitive score (0-1), the CRE provides the count and percent of population at risk within a tract.

^{iv} Maantay JA, Maroko AR. Brownfields to Greenfields: Environmental Justice Versus Environmental Gentrification. *Int J Environ Res Public Health*. 2018 Oct 12;15(10):2233. doi: 10.3390/ijerph15102233. PMID: 30321998; PMCID: PMC6210586.

^v In June of 2022, the EPA published, [Brownfields and Urban Agriculture: Interim Guidelines for Safe Gardening Practices](#), a condensation of the input of 60 experts from academia, state and local government, and the nonprofit sector on the range of issues which need to be addressed in order to safely grow food on former brownfields sites.

^{vi} The 123 EPA sites were spatially joined to census tracts. However, since some sites are on the boundary of some tracts, the spatial join produces overcounts. In this case, there is an overcount of 6 sites, making the total 129 in the tract calculations.

Appendix D. Data Collection

Data Collection

Throughout **Task Three** (Background Data Compilation & Mapping Analysis) and **Task Four** (Coordinate Community Outreach and Engagement) both quantitative and qualitative data were collected to inform the recommendations developed for this plan.

The data were categorized into two groups:

- + **Qualitative Data** represents information that cannot be easily expressed in numbers. Examples in this plan include, but are not limited to: sentiments, preferences, observations, and recommendations.
- + **Quantitative Data** represents information that can be expressed in numbers. Examples in this plan include, but are not limited to: demographic information, urban agriculture sites, and risk factors.

Data is further categorized into type, method and related task(s). **Secondary data** refers to data gathered by individuals or organizations other than the project team at various points in time. **Primary data** refers to data gathered by the project team throughout the duration of the planning process. In all planning processes, it is crucial to incorporate both qualitative and quantitative primary and secondary data to ensure a robust and representative effort to incorporate past and present perspectives and statistics.

Breakdown of Secondary & Primary Qualitative Data Collected and Related Tasks

Data Type	Method	Related Task	Count
Secondary	Content Analysis of UA Plans from other local government entities	Task 3: Background Data Compilation & Mapping Analysis	9
		Task 7: Identify Applicable Policy Codes and Amendments	
Primary	1:1 Conversations	Task 2: Communication & Coordination	56
		Task 4: Coordinate Community Outreach & Engagement	
	In-person Site Visits	Task 4: Coordinate Community Outreach & Engagement	9
	Online Survey	Task 4: Coordinate Community Outreach & Engagement	661
	Urban Agriculture Advisory Council Recommendation Feedback Meetings	Task 3: Coordinate Community Outreach & Engagement Task 6: Comprehensive Urban Agriculture Plan	5
Public Engagement Feedback Sessions	Task 6: Comprehensive Urban Agriculture Plan	4	

Table D1. Breakdown of Secondary & Primary Qualitative Data Collected and Related Tasks

Qualitative Data

1. Content Analysis of Best-in-Class UA Plans

In preparing for this work, we evaluated existing urban agriculture plans that were publicly available at the time of writing were reviewed, including ones from Strathcona County in Canada and East Point in Atlanta, GA. Further, we took into account several relevant food policy plans, including NYC Food Forward, and UA ordinances, such as the City of San Francisco's, were also taken into account while creating this plan.

- + [Local Foods Local Places, Dallas TX](#)
- + [Food Forward NYC](#)
- + [East Point City Agriculture Plan](#)
- + [Strathcona County Urban Agriculture Strategy](#)
- + [Urban Agriculture Ordinance- City of Detroit](#)
- + [Urban Agriculture Ordinance: City of San Francisco](#)
- + [growTO Urban Agriculture Action Plan: Toronto](#)
- + [Growing from the Root: Philadelphia's Urban Agriculture Plan](#)
- + [Urban Ag Visioning: City of Boston](#)

2. 1:1 Conversations

The Project Team reached out to 78 individuals, on the recommendation of both the OEQS and subsequent UA stakeholders. The Project Team held 56 1:1 conversations with various stakeholders in the Dallas UA sector in order to gain a robust understanding of the current conditions of the sector as well as challenges, needs, and any in-progress efforts. Three main questions were asked:

1. What Are Your Thoughts On The Urban Ag Landscape In Dallas?
2. What Should The City's Role Be In The Urban Ag Landscape?
3. What Would You Like To See Come Out Of The Urban Ag Plan?

To ensure a diverse perspective on the UA landscape in Dallas, the project team aimed to gather insights from a variety of sectors. Table 4 below displays the frequency of the 14 categories of stakeholder sectors that were included.

Category	Count of Interviewees in Sector
Non-Profit	14
City Department	12
Education/Research	8
UA Site	8
City Council	4
County Agency	2
Federal Agency	2
Development	1
Farmers Market	1
Foodservice distributor	1
Outreach Coordinator	1
Real Estate	1
Transit Agency	1
Grand Total	56

Table D2. Frequency of Sector Representation in 1:1 Interviews

3. In-Person Site Visits

Nine in-person site visits were conducted during AGR's first trip to Dallas in March of 2022. The purpose of these visits was to assess the day-to-day operations of recognized UA operations in Dallas and delve deeper into the bottlenecks they face. Following each visit, the Project Team summarized and assessed each operation to clearly define both the challenges and opportunities associated with these organizations.

4. Online Survey

A public engagement survey was administered to gauge public demand in the City of Dallas for local foods, as well as interest in Urban Farming and awareness of its benefits.

The survey included 11 questions. 8 Mandatory Questions, including one question for zip code, three questions regarding local food demand, and four questions regarding interest in Urban Agriculture. The 3 additional optional demographic questions on age, language, and email for Dallas Urban Ag Newsletter.

Events distributed at:

- + OakCliff Earth Day*: April 2, 2022
- + EarthX: April 20-24 2022
- + Juneteenth Event: June 18, 2022
- + Community Event: June 25, 2022
- + Community Event: July 23, 2022

**Trial survey was run and edits were made after.*

Other methods of distribution:

- + Flyers in Community Centers
- + Link hosted on the Dallas Climate Action website
- + Link included in community Newsletters
- + Link forwarded to relevant stakeholder groups

Figure D1 (opposite page) displays the percent of respondents by zip code. 44% of the data is within City Council Districts, 56% is outside the Districts. As the figure shows, response rates of people living in zip codes within the city boundary are higher than response rates of people living in zip codes outside the city boundary, despite the number of respondents outside the city being higher. Districts 12, 9, and 14 were shown to have the highest response rates. The green dots indicate UAPA zones, which are those with high social vulnerability.

5. Food Advisory Council Feedback Meetings on each Recommendation were held.

The Urban Agriculture Advisory Council comprises farmers, food security experts, non-profit professionals and various other food system and UA actors. Gaining their feedback early on in the drafting process was essential to ensuring the recommendations were actionable and appropriate.

Fifteen individuals provided extensive feedback on an initial draft of the recommendations.

6. Four official CUAP Public Engagement Feedback Sessions were held.

- + November 7, 2022: West Dallas Multipurpose Center
- + November 10, 2022: Tommie M Allen Recreation Center
- + November 17, 2022: Pleasant Oaks Rec Center
- + November 19, 2022: Vickery Park Library

The CUAP plan was also presented at various community events, including:

- + October 7 -23 , 2022: Texas State Fair - Big Tex Urban Farms
- + October 27, 2022: Park in the Woods Recreation Center
- + November 1, 2022: Hiawatha Williams Recreation Center
- + November 2, 2022: J. Erik Jonsson Library
- + November 4, 2022: Dallas College Brookhaven Campus
- + November 5, 2022: Forest Green Library
- + November 5, 2022: The 4DWN Experience
- + November 7, 2022: Shady Grove Primitive Baptist Church
- + November 12, 2022: Holy Cross Catholic Church
- + November 15, 2022: District 8 Neighborhood Services Center

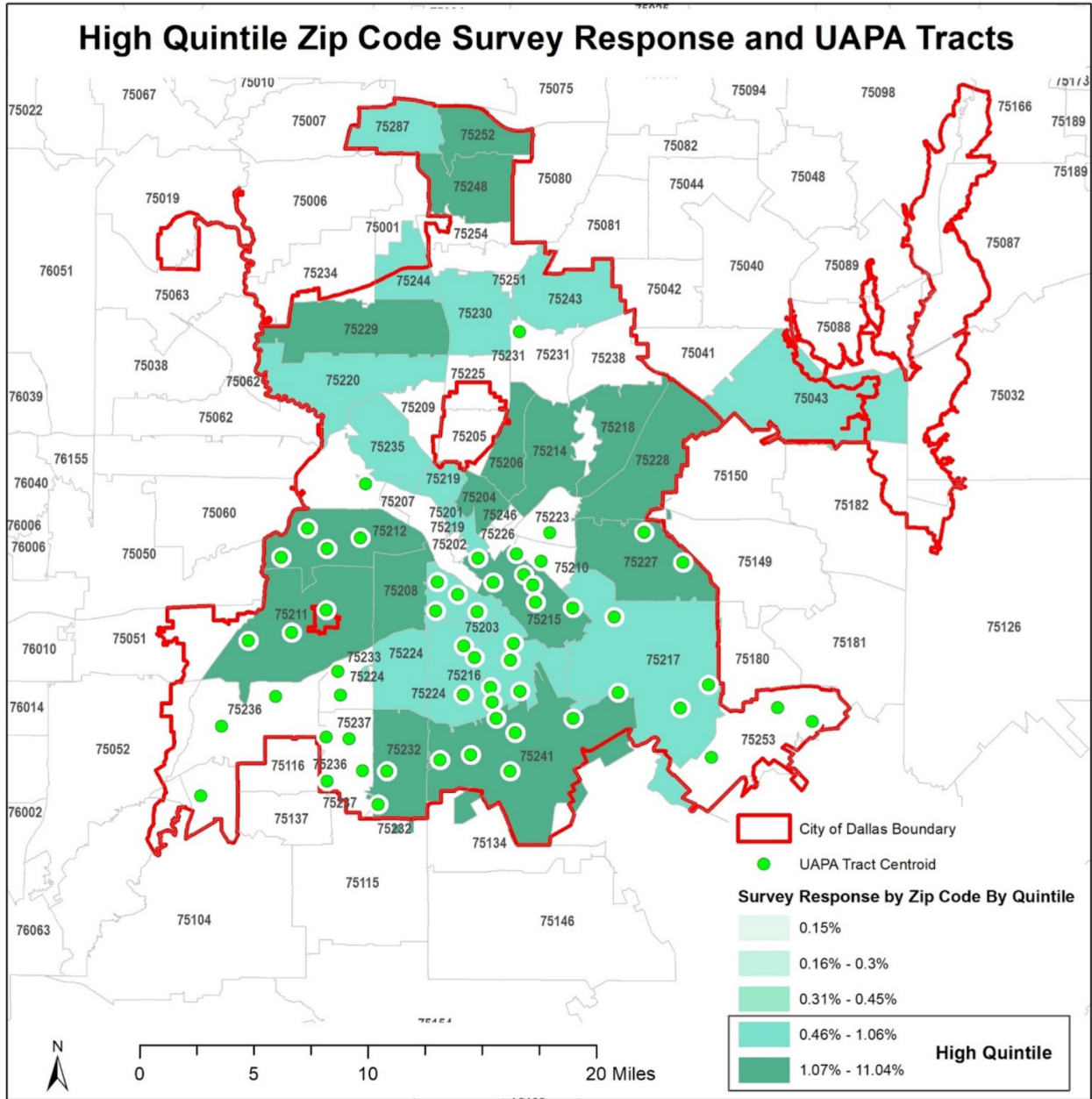


Figure D1: Zip code breakdown of public survey respondents.

Breakdown of Secondary & Primary Quantitative Data Collected and Related Tasks

Data Type	Data	Related Task	Count
Secondary	Social Vulnerability	Task 3: Background Data Compilation & Mapping Analysis	CDC/ATSDR
	Community Resilience Risk Factors		U.S. Census Bureau
	Dietary Health		CDC
Secondary/ Primary	Community Garden Data Verification		Dallas Food Equity Innovation Challenge map 2019 City of Dallas
Primary	City of Dallas Community Food Assessment Data (2017)		City of Dallas

Table D3: Breakdown of Secondary & Primary Quantitative Data Collected and Related Tasks

Quantitative Data

Quantitative Data gathered for this project is housed in the ARCGIS Urban Agriculture and Community Health Explorer for the COD Map. The purpose of this map application is to assist COD stakeholders to explore, identify, edit, and add UA projects in Dallas. The map allows people to see UA projects in the context of layers such as their community social vulnerability, dietary health, and their distribution within City Commission Districts.

The widgets in this map app allow one to:

- + Change layer order and transparency
- + Filter tracts by their level of diabetes and social vulnerability
- + Select layers
- + Export layer data into spreadsheets
- + Edit and add urban agriculture projects
- + Make comments about opportunities and resources not reflected in the map
- + Customize and print your own map

Further information detailing culture, technical, policy and general background of the City of Dallas and Urban Agriculture related topics were also collected, parsed and archived according to section relevance to ensure a robust analysis to support this plan.

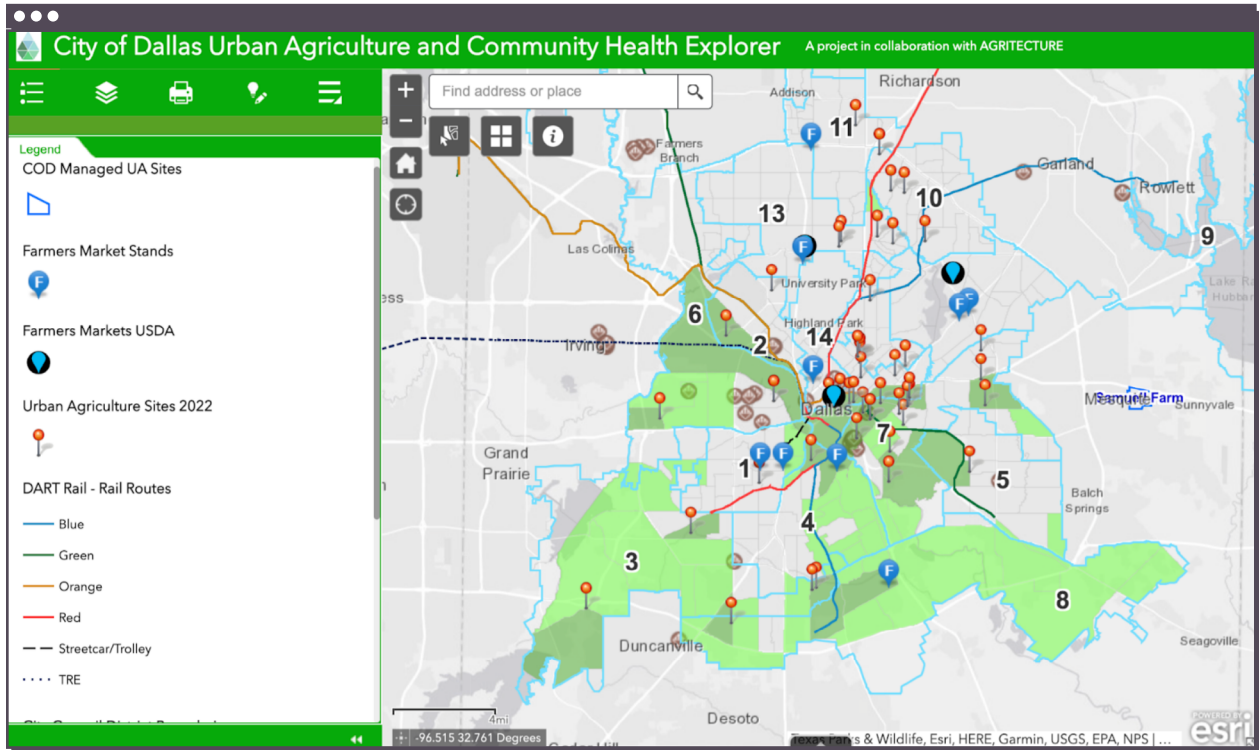


Figure 8: City of Dallas Urban Agriculture and Community Health Explorer.

Appendix E. Project Team



Agritecture is an advisory services and technology firm focused on climate-smart agriculture, particularly urban and controlled environment agriculture (CEA). Our Mission is to accelerate and empower the transition to smarter and more resilient agriculture. Our Vision is a new era where sustainable agriculture is economically feasible, resilient to climate change, and powered by data-driven strategies.

Project Team: Jeffrey Landau, Brakeley Bryant, & Christian Kanlian



TBG has over 100 visionary minds, reshaping raw space into livable places across the country and abroad. A critical combination of 30 year industry veterans paired with dynamic, young talent, collectively composing, calculating, and anticipating the tendencies of living systems. From four offices, our disciplined designers and their strategic partners together refine earth into art, allowing complex sites to evolve.

Project Team: Mikel Wilkins, Jordan Clark, & Avery Smothermon



FHEED LLC specializes in geographic assessments of food access and health disparities, program design for healthy food access initiatives, and public speaking about food access and health equity.

Project Team: Anthony Olivieri



Founded as Karp Resources in 1990, **Karen Karp & Partners (KK&P)** is the nation's leading problem-solver for food-related enterprises, programs, and policies. Based in New York City and working nationally and internationally, KK&P's clients include corporations, government agencies, small businesses, non-profits, and educational organizations.

Project Team: Ben Kerrick



Scott Snodgrass is a Founding Partner of **The Edible Group** and each of its child companies (Agmenity, Loam Agronomics, Edible Earth Resources, Meristem Communities). With more than a decade of experience in the industries, Scott has found his life's work at the nexus of sustainable agriculture and real estate development. His passion for entrepreneurship, land care and food lead him to envision a more regenerative and equitable food system.

Project Team: Scott Snodgrass



Profound Foods was created with a mission to build a connected and resilient food system in North Texas. Starting with the question: "where does your food come from?" Profound encourages and guides its clients to grow their own food, and connect with the local North Texas food community, including farmers, chefs, and educators.

Project Team: Jeff Bednar

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