

2015

Greensboro Fresh Food Access Plan



Prepared by the City of Greensboro
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Agriculture

DRAFT

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Executive Summary

Food scarcity in Greensboro manifests itself in three ways:

- high rates of residents that are unable to afford food;
- the number of residents in “food deserts” where high poverty levels and a lack of stores makes it difficult for many to buy healthful foods;
- and pieces missing from our food system that make our local food economy less efficient.

This plan focuses on increasing retail access to fresh, local produce in Greensboro’s food deserts. The plan was made possible by a grant from a US Department of Agriculture (USDA) program aimed at supporting local food business enterprises that connect farmers with consumers. This includes expanding entrepreneurial opportunities both for local farmers and for residents that are interested in starting local food-related businesses.

This plan takes into consideration all parts of the food system, though it does not contain recommendations for helping feed people with immediate needs. This plan focuses on strengthening the local food system with elements that are economically viable and sustainable as business enterprises, particularly in food deserts. This is one step in a long journey to a healthier food system for Greensboro and the region.

The plan’s key findings include:

- Consumers in food deserts have access to a variety of convenience stores that do not carry healthful food options; programs that encourage these stores to stock fresh produce require a comprehensive and careful approach to be successful.
- Greensboro is lacking in the local food business enterprises that connect growers with consumers, such as food hubs, commercial kitchen space and local-food distributors.
- A wide variety of community groups are working together to feed those affected by food scarcity, and a wide range of tools is becoming available to help do this more efficiently.
- Despite the fact that agriculture is an important industry in North Carolina, there are not many economic incentives for farmers to grow produce for local sales. Most of what is grown are commodity crops.
- Consumers need to be better educated on how to prepare and cook fresh produce.

This plan makes a number of recommendations. These six recommendations received the most public support:

- Establish a Local Food Product Entrepreneurship Program.
- Establish a retail fresh food incentive program for existing retail venues in food deserts.
- Conduct a comprehensive, targeted, consumer education campaign.
- Conduct a ‘Know Your Farmer’ campaign.
- Establish a food hub.
- Build market acceptance of imperfect food products.

Background and Definitions

Purpose

The City of Greensboro created this plan to focus on Greensboro's 17 census tracts identified as food deserts. The plan builds on food desert data previously compiled by the Guilford County Health Department. The plan identifies strategies to

- 1) improve retail access to fresh local foods in these neighborhoods;
- 2) expand existing local food business enterprises; and
- 3) create new local food business enterprises that address identified gaps in food access.

Funding

The plan was produced with grant funding from the U.S. Department of Agriculture's (USDA) Local Food Promotion Program (LFPP). The program's goal is "...to support the development and expansion of local and regional food business enterprises to increase domestic consumption of, and access to, locally and regionally produced agricultural products, and to develop new market opportunities for farm and ranch operations serving local markets."

Scope

The USDA defines a "food business enterprise" as an entity that gets food from the producer, such as a farmer, to the consumer or retailer. Examples of this type of business include

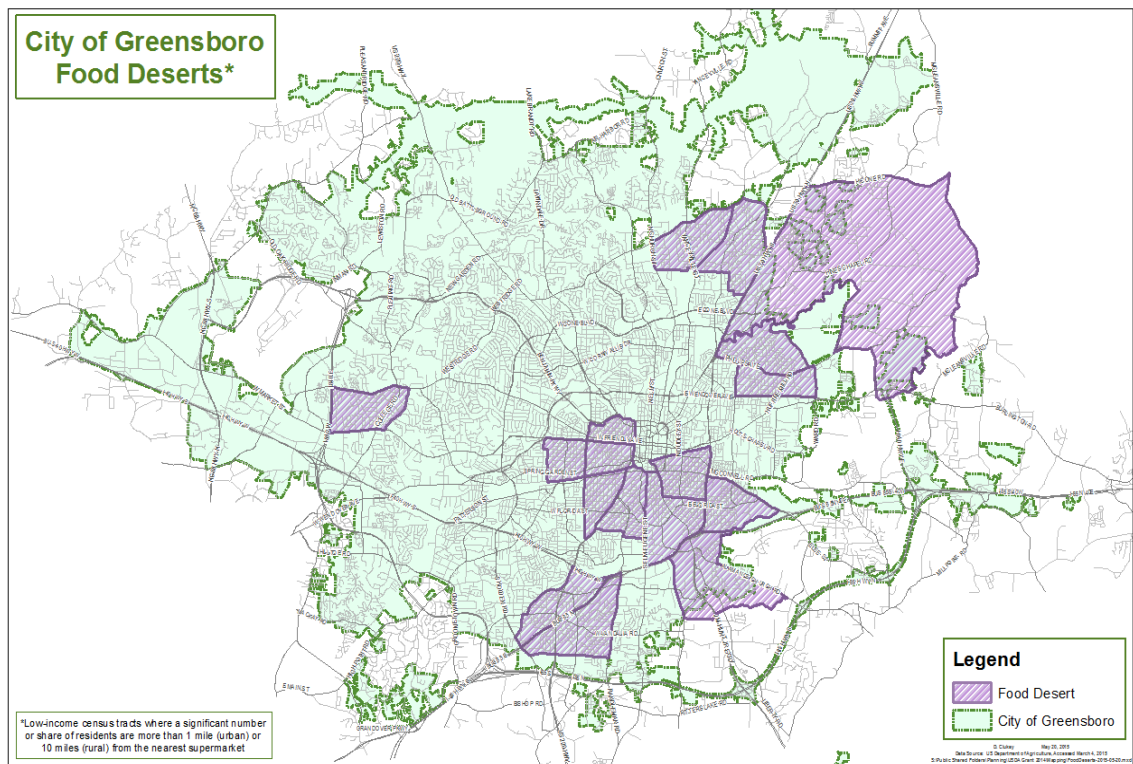
- Aggregators, such as food hubs which take produce from multiple farms and making them easier and more profitable to sell.
- Commercial Kitchens, which allow a more efficient work space for community cooking events or for new businesses.
- Distributors, ranging from large, national chains, to small, local distributors are better able to handle local produce.

The USDA focuses the LFPP program on these enterprises since they can create a stronger local food economy by reducing the financial risk for local farmers by taking on the responsibilities of marketing, sales, and storage of perishable food items.

This plan includes information on the Greensboro food system as a whole, and includes recommendations for parts of the food system beyond the local food business enterprises that are of broader USDA interest. This leverages opportunities by considering the entire system, and serves as a resource for others interested in addressing similar problems in other communities.

Analysis of Greensboro's food system highlighted several key issues that this plan seeks to address:

- **Gaps in our local food economy.** A healthy local food system includes everything from the farm to the table. This includes businesses that are USDA defined "local food business enterprises" that get food from producers to consumers. The Greensboro food system is deficient in some of these, including food hubs and commercial kitchens. This gap results in a disincentive to local farmers interested in selling to the local market unless they are willing to take on marketing and sales in addition to production.
- **Poor retail access to fresh food in food deserts.** The USDA defines food deserts as census tracts that meet two criteria: they are "low-income communities", based on having a poverty rate of 20 percent or greater, or a median family income at or below 80 percent of the area median family income; and they are "low-access communities", based on the determination that at least 500 persons and/or at least 33% of the census tract's population live more than one mile from a supermarket or large grocery store. In Greensboro, 17 census tracts meet this definition. These tracts have 69,695 residents, 28% of whom live below the poverty line. In comparison with other cities, Greensboro has slightly fewer food deserts per capita than Winston-Salem or Chattanooga, and slightly more than Raleigh and Charlotte.



- **Food insecurity.** Changes in Greensboro's economy have increased the level of poverty in the community and created issues with food security for many, regardless of where they live. The Greensboro/High-Point area has consistently ranked high among MSAs in the nation for food hardship, ranking first in 2014 (1), with a rate of 27.9% and second 2011-2012, with a rate of 23%.(2) This represents the percentage of respondents that answered "yes" to a poll asking

“Have there been times in the past twelve months when you did not have enough money to buy food that you or your family needed?”

Many residents in these areas lack regular access to a vehicle which further limits their access to fresh food retail establishments. The only convenient food in many areas is unhealthy snack and fast food found at convenience stores, often at higher prices. Greensboro’s transit system limits the number of bags that residents can bring on-board to four, which further limits shopping convenience.

The lack of food access is a public policy concern for several reasons:

- Studies show that residents of food deserts have increased health problems including obesity and diabetes, adding a burden to the health care system.
- Children are frequently unable to secure adequate nutrition, causing problems with health and educational attainment.
- As with any good that is imported, the local economy would grow by replacing imported food products with those grown and made locally.

Greensboro's Local Food System

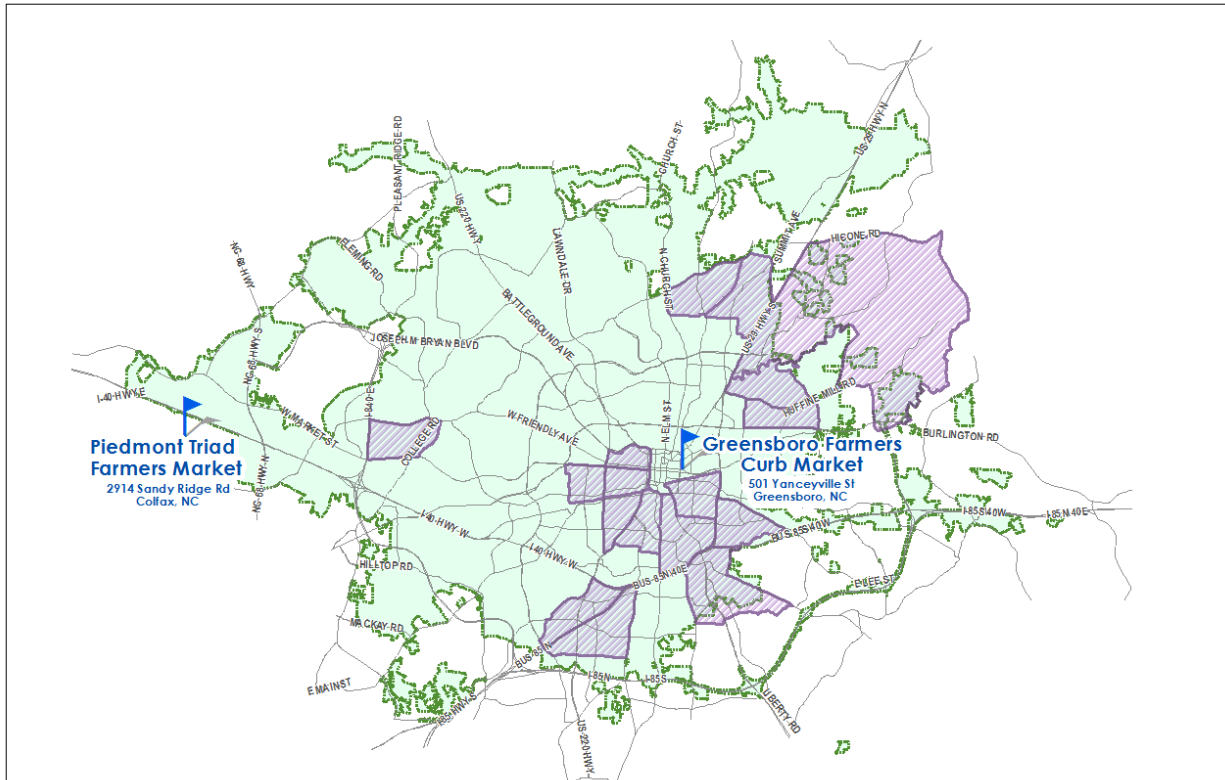
Description

There are different definitions for what constitutes the “local” food system. For the purposes of the LFPP planning and implementation grants, the USDA defines “local and regional” foods as those coming from within 400 miles. From Greensboro, this extends north to the southern edge of New York State, south to the northern portion of Florida, and west to the middle of Tennessee.



The Yanceyville curb market, a long-standing local farmer's market located near downtown, defines local as coming from within 100 miles. This market requires that farmers grow all of the produce they offer for sale.

The Robert G. Shaw Piedmont Triad Farmers Market, located on Sandy Ridge Road just out of Greensboro near I-40, requires farmers be certified as North Carolina farmers, and allows vendors up to 49% of their sales to be from another certified North Carolina farmer.

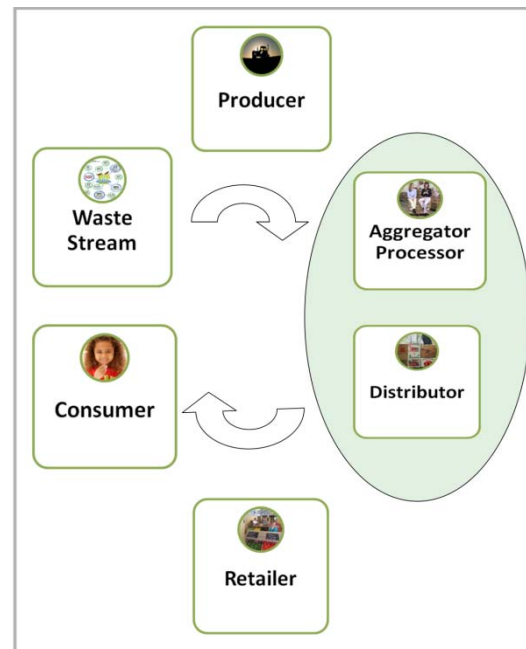


System Components

For this plans recommendations, the steering committee looked at a model of the food system that involves six distinct pieces: producers, aggregators and processors, distributors, retailers, consumers, and the waste stream. Although the LFPP program focus on “local food business enterprises” which includes only aggregators and distributors in this model, this plan takes a broader look at the entire food system. Addressing gaps across the entire food system helps to resolve issues facing local food business enterprises; and creates more opportunities for synergy.

Producers

Producers include farmers, but also urban farmers and community gardens. Agriculture plays an important role in North Carolina’s economy, but the majority of crops grown are commodity crops such as tobacco, soy beans or cotton instead of locally-consumed produce. Statistics in Guilford County are similar, despite the county having two urban areas to serve as markets for produce and a lack of larger farms (3).



2012 Farms by Type						
	North Carolina			Guilford County		Difference
	Number	Percent		Number	Percent	
Total Farms	50,218	100		962	100	
Other Crops	12,039	24		261	27.1	3.2
<i>Tobacco</i>	1,046	2.1		30	3.1	1
<i>Cotton</i>	528	1.1		3	0.3	-0.7
<i>Sugarcane, Hay, other</i>	10,465	20.8		228	23.7	2.9
Beef Cattle	13,909	27.7		269	28	0.3
Oilseed and Grain	5,723	11.4		75	7.8	-3.6
Animal aquaculture and other	5,190	10.3		140	14.6	4.2
Poultry and Egg	3,404	6.8		24	2.5	-4.3
Greenhouse, nursery, flouriculture	3,072	6.1		57	5.9	-0.2
Vegetable and Melon	2,022	4.0		30	3.1	-0.9
Sheep and Goat	1,922	3.8		45	4.7	0.9
Fruit and Nut	1,494	3.0		42	4.4	1.4
Hog and Pig	1,170	2.3		10	1.0	-1.3
Cattle Feedlots	10	0.0		-	0.0	0.0
Dairy	263	0.6		9	0.9	0.4

Farm size is an important factor in determining what crops will make a farm financially viable. Because of capital and operating costs, farms of over 100 acres generally focus on commodity crops. Farms of less than 60 acres are more able to focus on produce for their local market. Farms between 60 and 100 acres generally have a more difficult time staying financially viable (4).

Guilford County Farm Size				
Year	2007	1997	1992	1987
Number of Farms	963	920	970	1,141
Total Acres	96,519	111,882	113,654	126,369
Average Size	100	122	177	111

Aggregator/Processors

Aggregators and processors cover a wide variety of businesses that take fresh produce and add value to the product by a range of actions from cleaning and minimal preparation, to packaging and combining food from multiple farmers for sale, to turning them into cooked or canned products for sale.

Aggregators and processors are a vital part of the food system, allowing producers to focus on growing food rather than marketing and retail aspects.

Distributors

Distributors deliver produce to retail outlets and restaurants. In some instances distributors control much of the shelf space in a store, particularly in smaller convenience stores. In this area, distributors are typically large, nation-wide companies which make it difficult for small, local farms to participate. There are smaller, local distributors that are looking to access more local produce.

Retailers

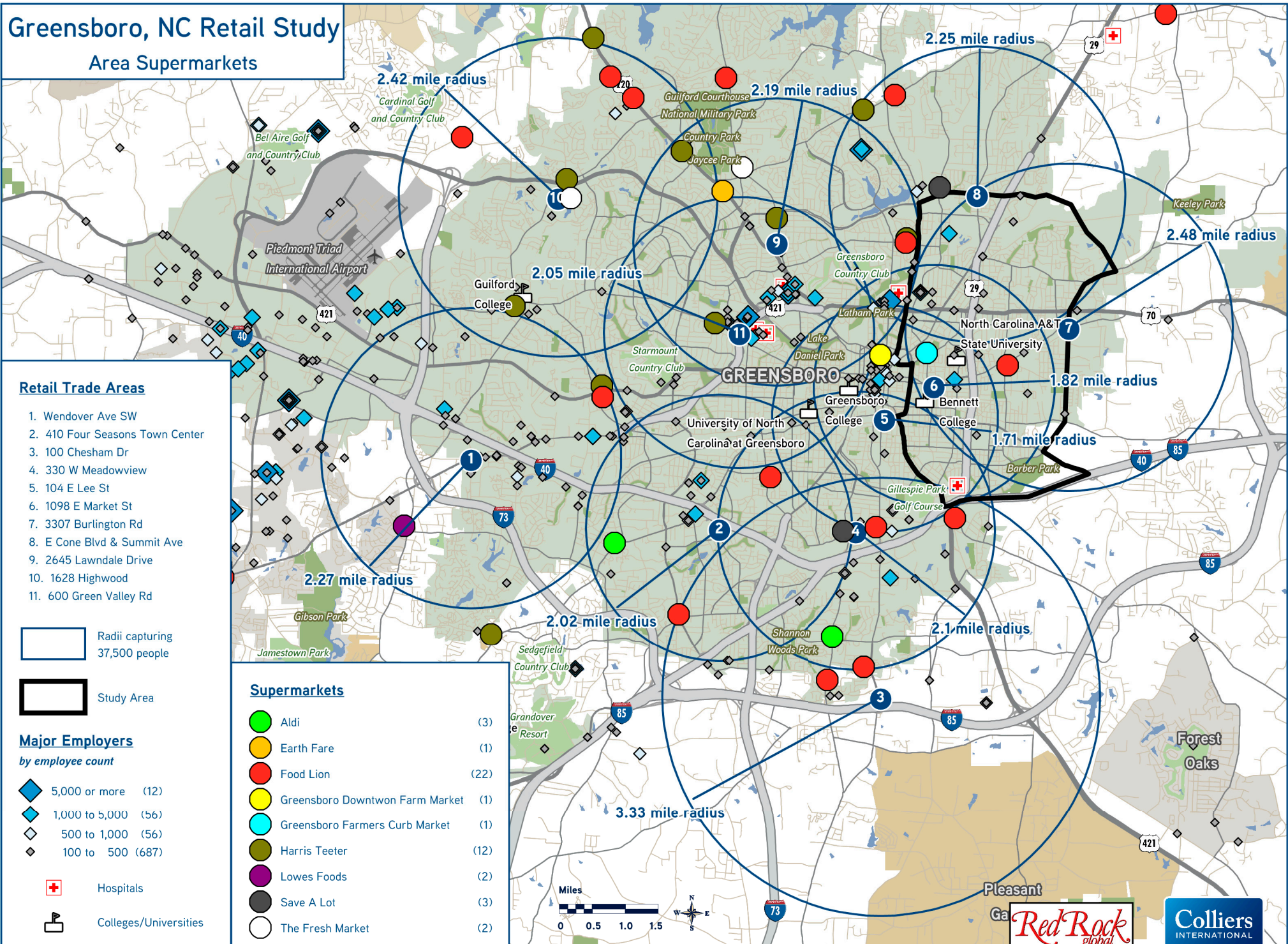
Retailers vary greatly in size and business type. Like most retailers, grocery stores tend to cluster near each other and locate in areas of Greensboro that offer the best competitive advantage based on demographics, transportation, and their own business models. Food deserts in Greensboro also lack in other retail and economic development in general. The map shows the location of grocery stores from a 2011 study which provided detailed analysis of retail supply and demand in 11 retail clusters. Since that time, Deep Roots, a local grocery coop, has opened up a grocery store on the northwestern corner of downtown.

Convenience stores, including dollar stores and general merchandise retailers, are a possible source for selling fresh local produce, since these stores are located in food deserts. Produce available is limited in variety and often expensive.

Mobile markets are another solution that is becoming more prominent. Mobile markets are food trucks selling fresh produce and they offer several advantages to brick-and-mortar business locations, including lower start-up capital needs, the ability to test the market in various locations, and being able to serve a broader geographic area with one investment, reducing the financial risk to opening a new retail outlet.

Greensboro, NC Retail Study

Area Supermarkets



Consumers

Being able to better serve consumers in food deserts is the desired outcome of this plan. However, consumers vary widely in level of interest in, knowledge of, and ability to use produce. In Greensboro, the wide variety of ethnic groups and food cultures influence fresh food demands. These differences exist at every income level but are more pressing for residents with limited time and resources.

Waste Stream

According to a 2011 United Nations report, about one third of all food produced world-wide is thrown away (5). Reducing food waste is a way to strengthen the economic base of our food system and provide produce at a lower price point. One local example is the reuse of leftover cooked food that has not been served at events or in schools; part of the “Rock and Wrap It Up” food donation program.

Another source is “imperfect” food that does not fit the size and appearance criteria for typical retail sale or restaurant use. This food does not taste different from other produce and could be a source for produce sales with appropriate pricing and marketing.

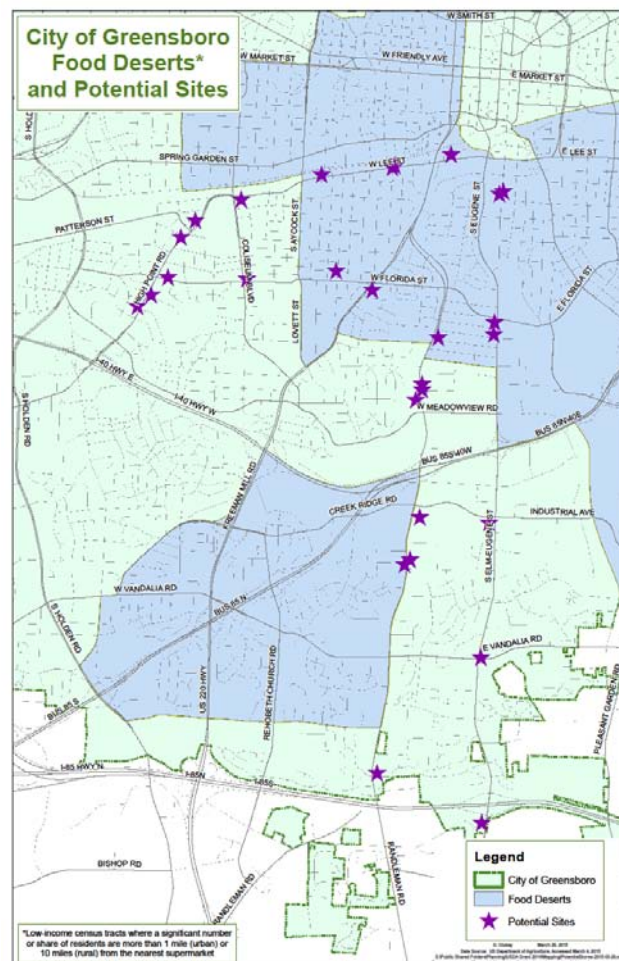
Barriers to Food Access

There are a variety of reasons why households lack access to healthful food. Based on interviews with stakeholders and residents and a broader study of economic issues in the Greensboro food economy, the following issues were identified as the most significant barriers to both accessing food and to increasing local production of food in Greensboro:

Lack of Retail

Lack of access to food is part of a larger issue of a lack of retail. Most of the retail stores in Greensboro are clustered together, and grocery store locations are similar. A windshield survey of select commercial corridors in food deserts showed multiple vacant store fronts that could be used to sell food.

Residents in food deserts buy groceries and shop for food, yet these areas are called food deserts because grocery stores are not located there. To better understand how grocery chains make site selection decisions, the City compared the demand for food-retail in food deserts and the rest of Greensboro. The data was provided by Community Analyst, a service that



performs basic market analysis using similar data sources as major retailers when looking for new locations. This is not the only data that is used when grocery stores select a site, but it is a significant part.

The Community Analyst data does not show demand for more food retail in food deserts, with the exceptions of full-service restaurants and specialty retailers which they define as mobile food sources. This does not match the experience of many shoppers in food deserts that travel to buy groceries, but from this perspective retailers would be unlikely to see many locations in food deserts as good locations for investment. (Appendix B)

Lack of Certainty for Farmers

Farmers are unlikely to plan and invest in producing food for the local market if they are not confident that they will be able to sell their produce. Currently, there is not enough quantifiable demand to provide a strong incentive for growing produce locally. Though agriculture is an important part of North Carolina's economy, most of it is geared towards crops such as tobacco, soybeans, and corn as commodities, not small-scale farms serving the local food system. The statistics for Guilford County are the same as for the state as a whole, despite the county being in a metropolitan area with several potential avenues to support retail sales.

Research shows that farms of different sizes are successful when they target different parts of the agricultural market, due to the significant capital costs involved in farming. The size of farms that successfully supply the local produce market is less than 60 acres; farms of 100 acres or more need to supply the commodity market in order to be successful (5).

Lack of Demand

The demand for local and fresh produce is not well tested. Across all income levels, there is increasing demand for prepared foods either in retail stores, restaurants or through delivery services. There are multiple explanations for this.

Time

Shopping for and preparing fresh ingredients takes more time than pre-packaged foods; retail outlets increasing package even raw produce already cut and cleaned and ready to cook. This is particularly true in food deserts, where proximity to stores is limited.

Knowledge

Many households are not knowledgeable about cooking, especially with raw ingredients. This is not limited to food desert areas, but for those with limited resources, the time and potential waste associated with learning a new skill can discourage them from trying.

Money

In many instances, fresh local food is more costly than pre-packaged items, which are a less expensive but less healthful alternative.

Transportation

For households without access to a vehicle, accessing fresh food in stores takes more time and coordination. City's bus routes do not necessarily serve as a direct route from neighborhoods to food shopping locations, and limit the number of bags that passengers are allowed.

Product mix in existing stores in food deserts

Small retail stores in food deserts do not carry significant produce due to a variety of reasons, including physical set up, supplier control of shelf space, and limited connections to local food producers.

Not in current business plan

Most small retail businesses are not in business to sell produce. Even for major grocery chains, produce is frequently a loss leader, and the lower margins at which groceries operate makes it difficult for smaller retailers to compete on price. The perishable nature of produce is another source of revenue loss.

Distributor demands/shelf space

Many get the product from distributors that manage their shelf space and product mix and do not provide fresh produce options.

Difficulty retrofitting stores

For stores that decide to carry produce, a capital investment is required to properly market and store perishable items. This takes away space from more reliable, shelf stable merchandise.

Gaps in Our Food System

Greensboro's food system is deficient in some of the elements of a complete food system as previously described. The gaps make the local food system less efficient and overall, less productive. The barriers described in the previous section make it difficult for some consumers to find fresh food, and for some producers to sell to the local market. The gaps noted in this section show where Greensboro is lacking in sufficient numbers of the local food business enterprises that get food from producers to consumers.

Distribution Points

There are few markets, retail outlets or other distribution points for local produce. On a national level there is a growing trend to respond to the need for convenience by stocking more fresh foods in stores that are not grocers but are in places where consumers with time constraints shop. More stores are crossing boundaries of merchandise to capture convenience purchases. The items stocked need to be packaged in convenient sizes and with some preparation already done; refrigeration is also a concern. The market for this in Greensboro has not been studied closely.

Food Hubs

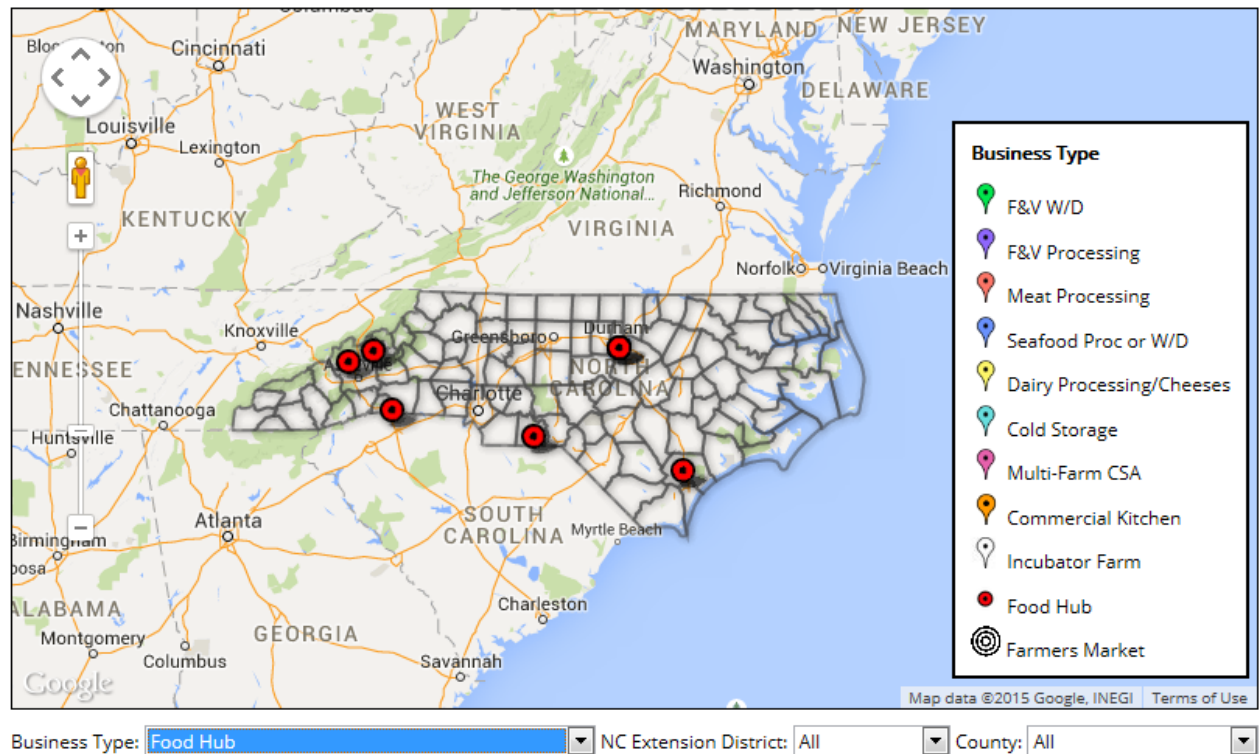
Our local food system does not have facilities to aggregate produce from different farms, to coordinate the growing of different crops, or to repackage goods or create value-added products. Food hubs do this by combining foods from multiple farms for a market, packaging or doing some preliminary preparation to the foods, or by canning, preserving, or cooking foods.

The USDA defines a food hub as "A business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand." USDA further states that "By offering a combination of production, aggregation, distribution, and marketing services, food hubs make it possible for producers to gain entry into new and additional markets that would be difficult or impossible to access on their own."

Food hubs are among the most important pieces in the local food supply chain. They provide a source of stability and sales for local producers as well as for consumers and restaurants. They can play a role in relieving food hardship as well by providing an additional source of food donations and as a place for local community gardens to process or store excess harvested food for later distribution. There are a variety of models, but common characteristics include (7):

- Carrying out or coordinating the aggregation, distribution and marketing of local/regional foods from multiple producers to multiple markets.
- Considering producers as valued business partners instead of interchangeable suppliers.
- Using product differentiation strategies such as identity preservation, group branding or sustainable production practices to add value and get good prices for producers.
- Work closely with producers and provide technical assistance to meet buyer requirements.
- Aim to be financially viable while also having positive economic, social, and/or environmental impacts within their communities.

Food hubs are also capital-intensive businesses to start, and require careful planning and execution to be successful. North Carolina currently has 6 operating food hubs, with the closest one being in Durham (8).



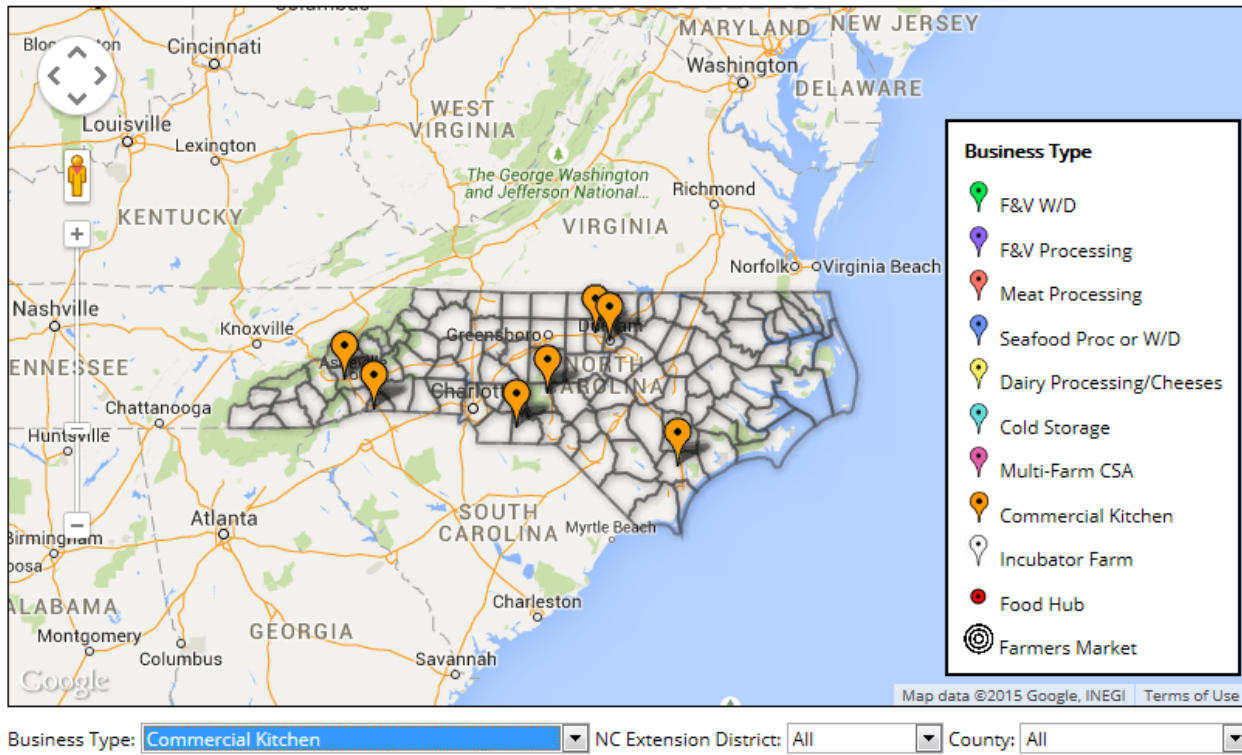
Commercial Kitchens

We have few commercial kitchens that would allow farmers or entrepreneurs the opportunity to turn local produce into other products; retail or wholesale sales are the main outlet for these goods. They can also serve as community gathering locations for nutritional or educational purposes, and for group cooking that can make efficient use of resident's time, storage space and knowledge.

There are two basic types of commercial kitchens. One is permitted through the North Carolina Department of Agriculture and Commerce, and primarily used for pastries and limited cooking. The second type is permitted through the local health department. This allows full use of the kitchen for savory items, catering and a full range of kitchen products. Facilities are required to have a grease trap, stronger ventilation and other equipment and are more costly to open and operate.

City of Greensboro and US Department of Agriculture

Currently, there are few or no commercial kitchens certified by the health department that are available for use by the public in Greensboro. There is one certified by the Department of Agriculture and Commerce in the newly opened YWCA on Wendover Avenue. An internet search of several websites shows three available within 50 miles of Greensboro, two in Orange County and one in Henry County, Virginia. Some sources list up to 10 across the state; the North Carolina Agriculture Extension Agency map shows 7. (8) A 2013 report on commercial-grade kitchens available for rental use by the public found 135 such kitchens across the country. (9)



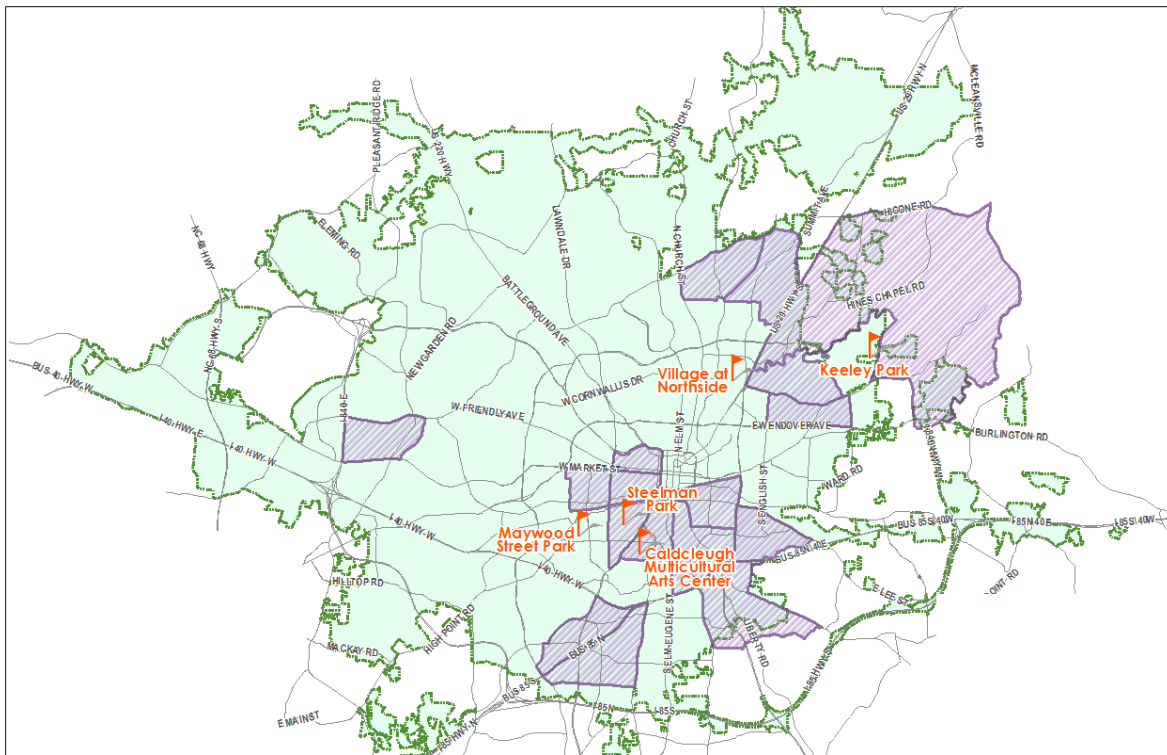
Current Programs

A wide variety of programs and organizations across the City and region are actively working to improve the food system. While not exhaustive, key organizations and programs are highlighted below.

City of Greensboro

The City of Greensboro has a variety of programs, primarily through the Parks and Recreation Department that address food insecurity.

- **Facilitating opportunities for the development of public and private lands for the purpose of producing food**
 - In December 2013 City Council adopted a revision to the Land Development Ordinance (LDO) which establishes a framework for the creation of free-standing community gardens and urban farms within the city limits, making it easier for private entities to initiate these types of uses. The text amendment allows community gardens and urban farms to be the primary use of a property.
 - The City is currently involved in the maintenance and oversight of 5 community gardens located on city owned parcels within food deserts: Steelman Park, the Village at Northside, Keeley Park, Maywood Street Park, and at the Caldcleugh Multicultural Arts Center.



- **Providing free or low-cost educational opportunities and resource information to those interested in sustenance-related topics**
 - The Greensboro Public Library and Parks and Recreation offer classes throughout the year on a variety of food-related topics such as healthy eating, permaculture, sustainable agriculture, gardening basics, and growing produce.
 - Parks and Recreation facilitates resident access to garden mentors provided by the Cooperative Extension service.
 - Parks and Recreation staff provide technical assistance to anyone interested in forming community gardens or urban farms.
- **Operating or facilitating the operation of venues for children and families to acquire healthy foods in underserved areas**
 - Parks and Recreation coordinates the donation of produce which is unclaimed from the City's community gardens to organizations such as Share the Harvest in an effort to aid in food distribution to needy families. In 2013, over 400 pounds of produce was donated to Share the Harvest.
 - Parks and Recreation provides free breakfast, lunch, and healthy snacks to qualifying children in the citywide summer day camp program offered at 11 community recreation centers, as well as the summer playground program. In 2013, over 33,000 meals were provided.
 - Parks and Recreation works with the non-profit Out of the Garden Project to offer a summer camp at Folk Community Recreation Center which provided breakfast and lunch to youth, educated participants about gardening and healthy eating, and served as a food pantry location.
 - Parks and Recreation works with Greensboro Farmers Market Inc. to operate the City-owned Farmers Curb Market, a venue selling local produce which utilizes the SNAP (Supplemental Nutrition Assistance Program) EBT initiative which matches customers' withdrawal amounts dollar per dollar up to \$20.
 - The City has supported and facilitated the redevelopment of the City-owned Renaissance Shopping Center, ensuring that a grocery store will provide access to healthy foods within a food desert.
- **Providing in-kind services or resources to individuals or groups in order to address food insecurity**
 - Examples include providing the vacant Folk Community Recreation Center for the use of the Out of the Garden Project (referenced above). In lieu of a rental payment, Out of the Garden completed a much needed painting project at the facility valued at \$6,190.

- In 2013, Parks and Recreation staff contributed over 1,100 total work hours assisting with community garden efforts in Greensboro.
- **Created the Community Food Task Force to initiate and promote actions which increase food access in the greater Greensboro area and develop and implement a 10-year strategic plan to end hunger in Greensboro.**
 - The task force is a network of residents and community organizations.
 - Initial goals are to
 - Address immediate community needs by increasing the number of free meals provided to those in need and coordinating marketing of free meal locations,
 - Develop and maintain a comprehensive database of who in the community working on food related issues,
 - Develop additional education programs around nutrition, gardening, and related topics.
 - Additional goals include
 - Increasing retail options in food deserts,
 - Creating a strategic plan to end hunger and increase food access to include
 - an annual food-access summit,
 - grant writing,
 - identifying commercial kitchens,
 - working with farmers to distribute Grade B produce,
 - working with Guilford Food Council to strengthen food system.

Guilford County

The Guilford County Department of Public Health and Human Services has done significant survey work on corner stores in food deserts, and is supporting the Mobile Oasis Farmer's Market. The Department received a \$100,000 grant through the Food Insecurity Nutrition Incentive (FINI) program to help participants in the Supplemental Nutrition Assistance Program (SNAP) increase their purchase of fruits and vegetables through the Guilford Mobile Oasis Farmers Market. The goal of this program is to increase consumption of fruits and vegetables by SNAP/EBT participants.

Guilford's Mobile Oasis Farmers Market project offers two forms of incentives, a Double Bucks program that doubles the value of SNAP purchases up to \$20, and a customer rewards program that rewards repeat visits to the market through food-related or fitness incentives and entries into bi-monthly drawings for prizes.

Community Organizations

Renaissance Community Coop

The Renaissance Community Coop (RCC) is taking an active role in bringing a grocery store back to an area that is now a food desert. The Coop was formed with the goal of developing a full-service grocery

store with a coop ownership structure on a site that once housed a traditional grocery store. The RCC is planning to open their store in the Renaissance Plaza at 2509 Phillips Avenue.

Guilford Food Council

The Guilford Food Council is working to become, in its own words, “A communication launch pad for the Guilford County food community”. The Food Council would like to serve as a way to facilitate conversations and connections between people and organizations active in improving the food system, rather than being a separate organization with its own agenda. To be sustainable and avoid becoming vulnerable to budget cuts, the Council strives to keep an operating budget of zero and an all-volunteer membership.

YWCA Kitchen

The newly opened YWCA on East Wendover Avenue has a commercial kitchen. The kitchen is used to prepare healthful foods for shelter participants and for educational programming such as cooking, the best way to spend EBT funds, and other food related programming such as nutrition for new mothers. The Y uses the space to hold community dinners as a way of getting to know area residents.

The Y is interested in renting the kitchen to business start-ups. The kitchen is licensed by the North Carolina Department of Agriculture and Commerce, so can be used to produce a limited range of foods, such as baked goods, and can only sell food produced in the kitchen 2 days a month. They would like to see food produced in their kitchen sold at the Renaissance Community Coop.

Vision Tree

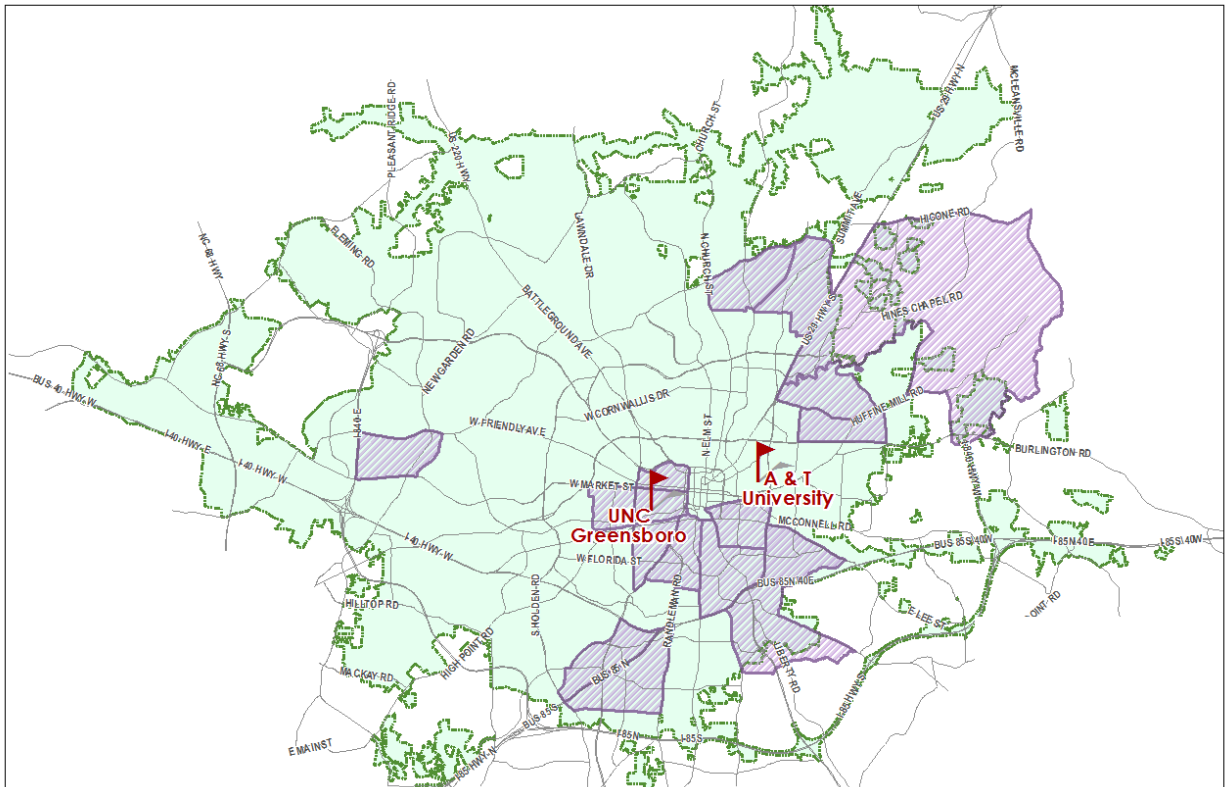
The Vision Tree organization has started a community garden and a mobile market that is selling produce in the Warnersville neighborhood and at the Guilford County Department of Health. The organization is partnering with the City, County, the Warnersville Neighborhood Association and the East Market Street Development Corporation to make the market operable but is aiming to be self-sufficient. Vision Tree’s ultimate goal is to have multiple mobile food markets, with produce provided primarily from a series of community gardens.

Guilford County Agricultural Extension Office

The mission of North Carolina Cooperative Extension is to partner with communities to deliver education that enriches the lives, land and economy of North Carolinians. Educational programs benefit farmers, rural and urban residents, families, community leaders, civic leaders, and youth. Cooperative Extension is a leader in programs focused on several aspects and components of this plan such as enhancing agricultural and food systems, food safety and quality, strengthening and sustaining families, developing responsible youth, building quality communities, and conserving and improving the environment and natural resources. For example Cooperative Extension is involved in some preliminary planning for a food hub, assisting farmers with Good Agricultural Practices (GAP) certification to secure school contracts for local foods, corner store research and maintaining the school and community garden network.

Area Colleges and Universities

Greensboro is home to seven colleges and universities, including two universities in the University of North Carolina system. Both are actively working on food access.



North Carolina Agricultural and Technical University (NC A&T)

As a University that focuses on agriculture, NC A&T can play a very important role in improving Greensboro's food system although the school does have a responsibility to work across the entire state. The school currently has several initiatives actively working or in the planning stage.

Research and Action for Empowering Food Desert Residents

The school is currently working with a number of community groups on a three-year program to engage residents of 12 minority communities of City Council District 2 to produce desirable health outcomes for residents. Steps in the program include the following.

- Investigate the influence of personal, social and cultural factors, and the structure of food deserts on eating habits and buying behavior of residents in food deserts with the intention of improving health related outcomes.
- Develop a nutrition education intervention program geared to using the information from objective one to train selected residents in making healthy choices, shopping wisely and incorporating healthy nutritious food in their daily diets.
- Work with community residents to establish community-based agricultural production units employing semi-intensive farming practices.

The project will build on a completed pilot study and employ a multi-prong approach. Researchers will compare food desert residents with a larger population and expand the understanding of the dynamics among affordable price, nutritional value, and freshness. By profiling the shopping behavior of urban food desert residents, researchers will have the information they need to design intervention programs, such as community led food production and nutrition education programs that allow residents to make better purchasing decisions and adjust meal preparation to support healthy eating habits.

Community Food and Health Initiative

The School of Agriculture and Environmental Sciences (SAES) Community Food and Health Initiative is aimed at increasing food production for urban audiences and expanding the University Farm for use as a multifaceted facility. The program includes revamped curricula in academic areas, interdisciplinary research and collaboration, expanded roles for Cooperative Extension, greater engagement with communities and other A&T academic disciplines.

Expansion plans for the 492-acre University Farm include community and student gardens, and a multipurpose pavilion. The pavilion is proposed as a 5,000-to-6,000 square-foot center that will be fully equipped with audiovisual and Internet access technologies making it prime meeting space seminars, public events and able to accommodate as many as 500 conference attendees. The pavilion will also have labs and office space.

Other Initiatives

- Community gardens and a student-run farm. The plan makes use of Cooperative Extension's established outreach experiences with community gardening for development of a plot at the University Farm that will be available to the immediate community.
- A Food Products and Technology Center, that will engage food and sciences faculty from throughout A&T to work collaboratively on value-added food processing and food safety. State-of-the-art food laboratories for testing new food products will be available to entrepreneurs without financial resources for costly R&D.
- A working dairy.
- An outdoor amphitheater to host agricultural events.
- A proposed food-processing center, where farmers can learn value-added production, marketing and business planning. As well, the unit can serve as a small business incubator fostering a mentoring relationship between established agribusinesses and emerging rural entrepreneurs. Agribusiness faculty will use the center to perform agribusiness-based research, including value-added production and processing, food value chain, and in analytical studies that involve wholesale and retail farm pricing, enterprise budgeting and gross margins.

University of North Carolina Greensboro

Recipe for Success

Recipe for Success in the anthropology department at UNCG receives grant funding from the USDA to implement SNAP-Ed to eligible families in Guilford, Randolph and Rockingham Counties. Recipe for Success teaches both a children's curriculum and an adult curriculum that focus on family health and well-being. Nutrition educators travel to teach healthy food choices, smart food shopping, physical activity and food safety in Title 1 public schools, youth education centers, community centers and

various facilities which serve adult populations. They offer nutrition education through monthly mailings, which includes lessons on healthy food choices, grocery shopping tips, and food safety.

Project Green Leaf

From its website, the mission of Project Green Leaf is to promote and support a local agro-food system. Project Green Leaf is dedicated to sustaining local agriculture by strengthening community between farmers and consumers, thus providing for better quality of living. Past projects include a project linking a community garden with the downtown Center City Market, and a project linking farmers participating in Community Supported Agriculture with households of limited financial resources.

Service Learning

The Office of Leadership and Service Learning has several programs dealing with food insecurity. These programs could be a resource for future outreach and education activities.

- AmeriCorps VISTA, built around working with issues of food insecurity and contributes over 1700 volunteer hours for students. These are actively involved in the programs below.
- Food Recovery Network, a student organization founded in the spring of 2015 that donates unused prepared food from the campus cafeteria and other catering events to community organizations in need.
- Farmers FoodShare, which connects people who grow food with people who need food by generating both monetary and produce donations and arranging pick-up by community organizations who serve low-wealth populations.
- Spartan Open Pantry, a community garden that provides the on-campus food pantry with fresh produce.
- Hunger and Homelessness Awareness Week.
- servGSO Summer Series which offers community service projects throughout the summer to students who are interested in learning about more sustainable food systems.

Public Engagement

This plan's recommendations and analysis of the local food system are based on interviews and surveys of community residents, businesses and food system stakeholders.

Steering Committee

The steering committee played a central role in creating this plan. The committee was composed of City and County staff familiar with food programming, residents from food deserts, an urban farmer, and a representative from the Guilford Food Council. The steering committee was important in understanding the elements of the local food system, creating the plans recommendations, and in guiding other public outreach activities and interviews.

Guilford County Department of Health Surveys

One of the data sources in hand at the beginning of this process was a survey of corner stores located in food deserts conducting by the Guilford County Department of Health (10):

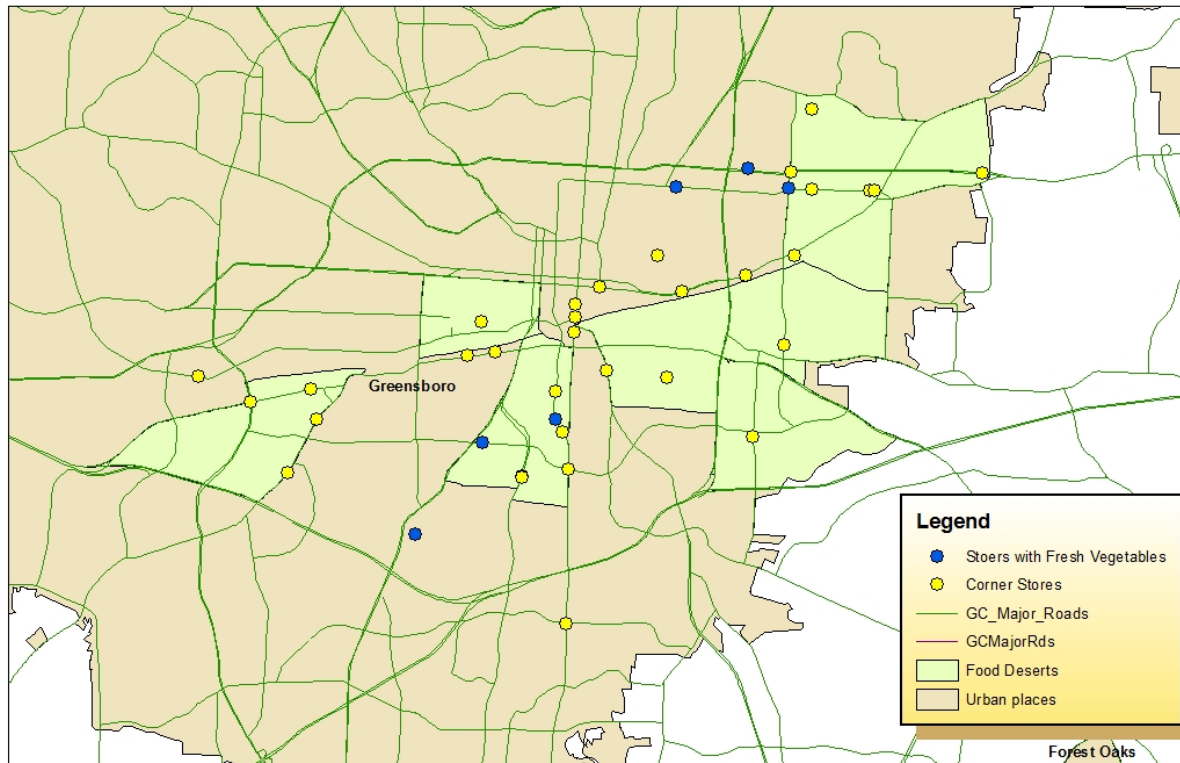
"While food desert neighborhoods lack supermarkets, these neighborhoods often have "corner stores," convenience stores and small grocery stores that accept SNAP/EBT (Supplemental Nutrition Assistance Program/Electronic Benefit Transfer) cards but which reportedly stock little in the way of fresh fruits and vegetables or other healthy food options. Consequently, one of the recommendations that emerged from the 2009-2010 Community Health Assessment was to conduct an assessment of food available at corner stores in low access areas. In the fall of 2012 the Guilford County Department of Public Health collaborated with faculty and students at UNC-Greensboro and NCA&T to conduct a survey of corner stores in food desert census tracts."

The project surveyed 48 stores in Greensboro. Key Findings included

- 48% of the stores were identified as convenience stores, 29% as gas stations, and 19% as small grocers.
- 79% accept SNAP/EBT cards
- 79% percent sold vegetables in some form, though only 15% had fresh vegetables, the rest were canned or frozen. The variety carried was very limited.
- Similarly, 77% carried fruit, but only 42% carried fresh as opposed to canned or frozen, and the variety was limited.

- A large percentage carried convenience items such as milk and bread, but the amount generally regarded as healthful due to fat or fiber content was low.

Corner Stores with Fresh Vegetables, SE Greensboro



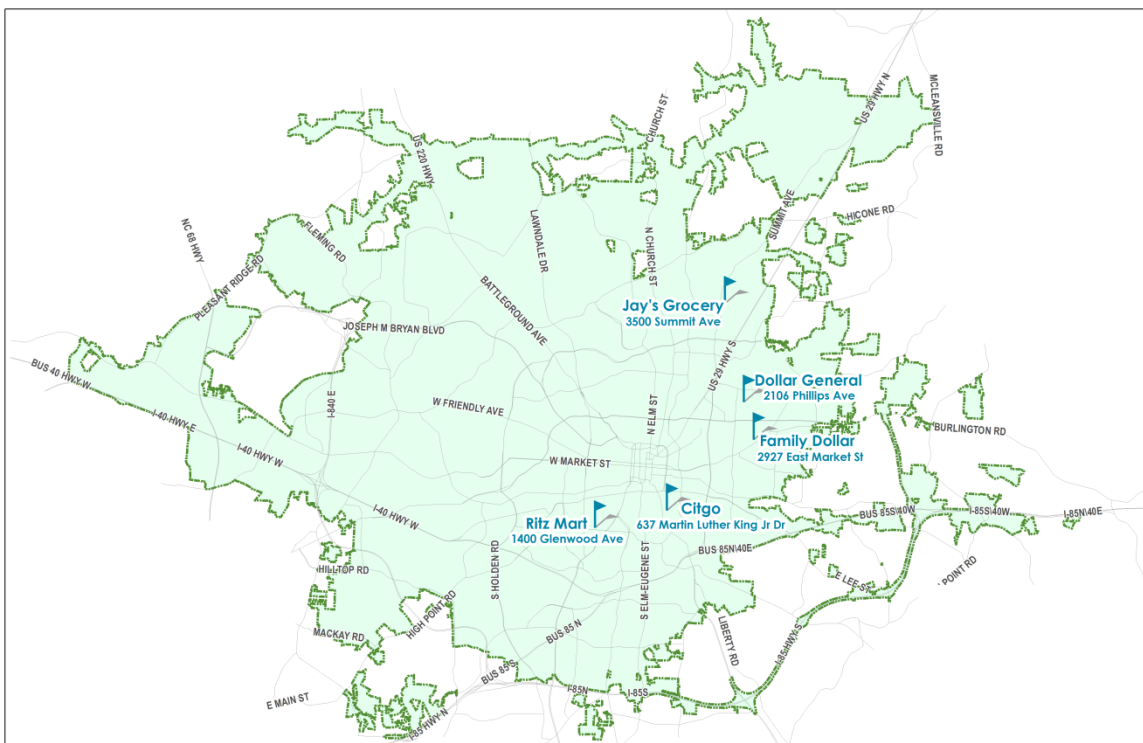
Source: USDA Economic Research Service Food Desert Locator; 2012 Corner Store Survey, Guilford County Department of Public Health

The survey was broken into three sections with the goal of finding stores willing to participate in future programs to carry fresh produce. In the third phase, Guilford County contacted 12 stores that had previously expressed an interest; four of these initially agreed one is currently moving in the direction of making some changes to their store to carry produce.

Convenience Store Customer Surveys

Customer surveys were conducted at five convenience stores located in food deserts to build on the data collected by Guilford County. The focus of the surveys was on where people shop, and where they buy produce. Surveys were conducted at the following locations:

- Dollar General, 2106 Phillips Avenue;
- Family Dollar, 2927 East Market Street;
- Citgo, 637 Martin Luther King Junior Drive;
- Ritz Mart, 1400 Glenwood Avenue;
- Jay's Grocery, 3500 Summit Avenue.



The results from the survey can be found in the appendix. These interviews yielded some important findings:

- 71% shopped for households and not just themselves.
- 48% shopped for children younger than 15.
- 90% had visited a grocery store in the past 6 months to buy food.
- 69% said that the grocery store was where they most often bought food; 11% said a dollar store.
- The top four reasons for shopping most frequently where they do were its proximity to their home, good prices, good quality and cleanliness.

- 76% said they typically bought fruit at a grocery store, 68% said they most typically bought vegetables in a grocery store. There was a wide variety of answers to how frequently people bought food at the store in which they were being surveyed. To the question why they shop there, 34% said “Close to Home” and 15% said “Good Prices”.
- 56% used their car or a friend’s car to get to the store, but 31% reported walking as well. 53% said they could get to the store in 5 minutes or less.
- As to why they did not buy fruits and vegetables at the store, 40% answered “Not in stock”, 33% answered “Like other food” and 18% answered “Too expensive”.
- 65% of respondents were between 21 and 49.

These responses suggest some existing consumer demand for produce in convenience stores based on the number of respondents that buy produce in grocery stores; the number that did not buy produce at the convenience stores due to lack of availability or expense.

Interviews with Producers

Outreach to producers included an online survey of participants in NC State University’s “Retail Ready” program for farmers, interviews with farmers at the Yanceyville Curb Market, conversations with community leaders involved with community gardens, the Guilford County Agricultural Extension Office, and an urban farmer serving on the steering committee.

Several issues were common to the conversations:

- The need for a food hub or commercial kitchen facility;
- Education for consumers on the benefits for fresh, local produce and how to use it are key;
- All participating farmers responded that “A consistent source of sales” would be helpful to operations.

Interviews with Businesses

Interviews were conducted with local businesses, including restaurants, distributors, and grocers that sell local produce or that are in areas that would be food deserts without their presence.

Although there were a wide variety of perspectives, some themes emerged:

- Selling produce is necessary for full grocery store, but it is a difficult section to make a profit in due to the perishable nature of produce.
- It is important to do market research and understand your niche.
- It is difficult to integrate local produce into existing distribution networks for larger chains, and it can be difficult for local stores to find consistent sources of local produce.
- Fresh produce is often more expensive and harder to procure; marketing needs to emphasize the value that buying local adds to the local economy and the increased quality of fresh produce.

Community Outreach Events

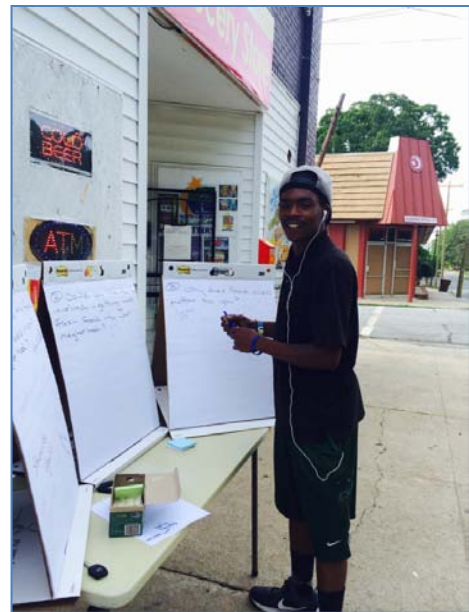
Interviews were conducted at a variety of community events that allowed for open conversation around a common set of questions. Locations included

- the Ritz Store in Glenwood;
- City Market and First Friday, city-wide events in downtown;
- 3 neighborhood association meetings in Benbow Park, Neal Town and Old L. Richardson;
- 3 food markets, the Corner Market in Lindley Park, Glenwood Farmer's Market, and the Mobile Farmer's Market.

Participants were asked what fresh food needs the community has, how community advocates want to be involved and why fresh food matters to the community.

There were several emerging themes.

- 1) What are the fresh food needs in your neighborhood?
 - Change 4 bag limit for buses
 - More mobile markets
 - Community gardens (develop, education, promotion)
 - Food prep and waste management
 - Organize food pick-up from farmers, package and redistribute
- 2) Would you like to be involved in getting more fresh food into your neighborhood?
 - Lead/work in a community garden or neighborhood farmer's market
 - Help with promotion
- 3) Why does fresh food access matter to you?
 - Support farmers/local businesses/keep money in neighborhood
 - Healthier/Fresh Food Prescription's
 - Good for the environment
 - Socio-economic equality



Recommendations

The steering committee selected these recommendations from among many best practices after reviewing and discussing the public input and evaluating strategies within the context Greensboro's food system. Recommendations were reviewed and vetted at a public meeting held on June 10, 2015 at the Peeler Recreation Center, and through an online survey that received over 100 responses. Recommendations are organized by local food system segment.

These recommendations are opportunities for the Greensboro community as a whole. The City may participate in these recommendations or partner with other organizations as implementation opportunities arise.

Producer

The plan recommendations focus on local farmers.

Recommendations

Conduct a *Know your Farmer* education and outreach campaign.

Purpose: Bring awareness of locally available fresh foods.

Details: Produce feature segments for farmers producing food in Guilford County to run on Channel 13 and other local access stations. The “Local Food Guide” is another local example of marketing local food sources that could include farmers that market directly to consumers.

Background: Helping farmer’s market their products can alleviate some of the burden that they face in selling directly to consumers instead of to wholesalers. Farms focusing on direct to consumer sales have higher survival rates, a particular problem especially with new farms, but they have slower growth rates due to the need to focus on marketing and potentially hire sales staff to work either directly selling produce or marketing the product. Assisting with marketing would help offset these costs. (Trends in U.S. Local and Regional Food Systems, pg 13-14, USDA Report to Congress, January 2015)

This campaign would also serve to broadly educate consumers and raise awareness of local farms, another plan recommendation. The USDA has launched a “Know Your Farmer, Know Your Food” (KYF2) campaign in response to the importance of the issue.

Resources needed: Program support and funding.

Conduct ongoing production - market gap research.

Purpose: Provide producers with reliable data about market demands and production levels to encourage the production of a broader range of in-demand local foods.

Background: Agriculture is an important industry in North Carolina, but most of what is grown are commodity crops and not produce for a local market. This is true in Guilford County as well. Growing food for a local market carries a higher level of risk, particularly if the market is not well understood. Market research into the types of produce consumers, restaurants and local businesses are interested in buying could remove some of the risk, encourage more farmers to sell produce, and make more farmers successful in the long term. Market research could also focus on the needs of businesses and restaurants, such as the timing of deliveries, the volumes needed, and any pre-delivery preparation needed to reduce the risk to buyers as well and encourage commitment to buying local produce.

Details: Using existing data sources, compile seasonal updates on market demand and production levels for the 12 county region.

Resources needed: Up-to-date production and market data; program support and funding.

Aggregator/Processor

Aggregators play an important part of any local food system, and a lack of a food hubs and commercial kitchens was identified as gaps in Greensboro. Several institutions are investigating creating a food hub. The new YWCA does have a commercial kitchen, though it is not certified for heavy commercial cooking beyond baking.

Establish a Local Food Product Entrepreneurship Program for youth and adults.

Purpose: Create jobs and markets for locally produced foods.

Details: Establish a training and support program for entrepreneurs interested in business start ups processing local foods into food products.

Background: Food businesses can be a source of economic development and employment that can have the additional benefit of providing a market for locally grown foods. These businesses do need the support of business and finance planning.

Resources needed: Commercial shared kitchen facility; curriculum; program partners.

Establish a Food Hub.

Purpose: Improve access to food aggregation services in the region.

Details: Establish a food hub to process and aggregate local food products.

Background: The lack of a food hub was noted as a critical gap in our food system during conversations with stakeholders and during public outreach. Several Greensboro institutions, including NC A&T and the Chamber of Commerce, have expressed interest in establishing a food hub.

Resources needed: Facility and operator, distribution partners, institutional and commercial consumers.

Establish Community Commercial kitchen facilities in food deserts.

Purpose: Improve access to appropriate kitchen facilities for processing and program implementation.

Details: Establish locations for community kitchen facilities to support food entrepreneurs and consumer education programs in locations with the greatest needs.

Background: Commercial kitchens offer space, storage, equipment and licensing to small businesses that otherwise might not be able to make these necessary capital investments. They can also offer space to residents that would like to cook together to better leverage resources. Smaller producers can also use them to preserve or prepare excess produce during the growing season rather than having it go to waste.

There are two types of certification for kitchens. One is through the Department of Agriculture and it allows the production of baked goods and some light cooking. The second is through the Health Department which allows a wider range of uses but also requires more costly components such as a grease trap and better ventilation systems. Health Department certification is necessary for savory items, catering, and many bottled and canned foods.

Resources needed: Facility and operator, distribution partners, institutional and commercial consumers.

Distributor

Distributors aggregate and deliver produce. Most distributors operating in the Greensboro market are national in scope and may be difficult for local growers to work with. There are some local entrepreneurs trying to distribute local foods.

Build and sustain relationships between producers, distributors and institutional customers.

Purpose: Provide structure to support ongoing relationships between distributors, growers and institutional consumers to create a sustainable market demand for local fresh foods.

Details: Convene the representatives of the local food system on a regular basis to provide on-going opportunities to build relationships and establish a sustainable market for local products. Events include information fairs, dialogue sessions, and local food business events like a local food dining week, seasonal recipe contests, etc.

Background: Institutions such as hospitals, educational facilities and large businesses provide a steady and predictable market for local foods and by reducing risk to growers they can help build the local food system. Creating an informal business networking opportunity to establish points of access for local growers could create opportunities for new farmers.

Resources needed: Program support and funding.

Retailer

Incentivizing retail may seem like the most obvious solution to the food desert problem; if access to groceries is an issue, persuading grocers to locate in those areas solves much of the problem. However, grocers and other retailers make location decisions based on a complex mix of demographic information, transportation networks and other factors that they choose based on store performance. Greensboro has been working on increasing retail availability and economic development opportunities in east and south Greensboro, areas that also have the most food deserts.

Greensboro residents in the Phillips Avenue area have worked on opening a coop grocery, with assistance from Guilford County and the City of Greensboro. This approach requires a great deal of coordination and support from area residents as well as significant financial investments from the broader community, but it does have real promise to provide community building, economic development and better quality foods.

An additional approach is a mobile food market, which is small van or truck that visits neighborhoods on a scheduled basis to sell produce. This approach has the advantage of much lower initial capital investment, the ability to test market locations, and greater flexibility in product mix. Greensboro currently has one operating mobile market that has received support from the City, County and the East Market Street Development Corporation. The parent organization is Vision Tree, and their goal is to have a series of mobile markets supplied primarily by community gardens, called “Urban Oases”. Private mobile markets do occasionally operate in the city, with produce either from an individual farmer or purchased from wholesalers.

Establish a retail fresh food incentive program for existing retail venues in Food Deserts.

Purpose: Reduce risk for losses related to fresh food retail space to increase the number of retail outlets offering fresh foods in food deserts.

Details: Provide financial incentives based on the increase of fresh food retail space to cover revenue losses when items go unsold.

Background: One approach that has been tried in many cities is to encourage existing retailers, typically convenience stores, to carry fresh produce in addition to the normal offerings. Cities working to increase access to healthy food frequently focus on this approach. Not all such stores are willing to participate, but the Guilford County Department of Health has worked to identify stores that may be interested in Greensboro.

Cities that have tried to encourage convenience stores to carry produce have met limited results in changing the eating habits of residents; results from existing programs in other cities suggest that they work better when paired with educational outreach to consumers and neighborhoods. A variety of tool-kits have been put together to help the programs have an impact on the eating habits of residents. The programs that are successful include education and a partnership between the community and the stores.

The Guilford County Department of Health has spent time surveying stores to determine which might be candidates for such a program.

Resources needed: Pool of participating retailers, program support and funding.

Conduct ongoing retail - market gap research.

Purpose: Provide farmers and prospective retailers with reliable data about retail market demand in food desert locations.

Details: Using existing data sources and local field research, compile seasonal updates on retail opportunities in food desert locations.

Background: The level of demand for fresh produce in food deserts is not well known, and using local produce to supply the market further complicates the issue. Providing research on consumer needs would help reduce the burden and level of possible waste, a major produce cost.

Resources needed: Reliable retail data; program support and funding.

Consumer

Conduct comprehensive, targeted consumer education campaign.

Purpose: Increase consumer awareness of, comfort with, and demand for fresh foods in food deserts.

Details: Comprehensive education campaign would include media components and hands on opportunities to learn to prepare fresh food items. Campaign elements should include specific targets and themes, including youth, cultural relevance, and seasonal awareness.

Background: Consumer education is a key piece to making other recommendations in this plan successful. If consumers are not comfortable with the produce being offered then they are unlikely to buy it.

Eating and cooking are very personal matters, and education has to take into account the desired outcome of the target audience. Some are more focused on health, some on eating on a limited budget, and there is a wide variety of interest in and knowledge of cooking across all income levels. There are also many immigrant communities that have different wants when it comes to food and cooking.

Resources needed: Funding for media components, access to commercial kitchen facilities, program curriculum and support.

Waste Stream

Reducing food waste has a direct impact by getting food to people that otherwise would not get it, and also by strengthening the food system as a whole so that it is more efficient. This can present a good opportunity to help feed people with limited incomes in a sustainable way; much of the food that gets wasted does not fit the appearance standards for food sale and is part of a steady supply.

Build market acceptance of ‘imperfect’ local food products.

Purpose: Prevent usable local, fresh food with blemishes from entering the food waste stream by improving consumer acceptance of usable items.

Details: Educate retailers and consumers through a comprehensive education and outreach campaign. Provide market incentives for retailers that reduce the risk of losses for unsold items.

Background: Retailers and wholesalers want produce that fits certain parameters for size, shape, color and other purely visual measures. Food that does not fit these parameters can be donated, or marketed and sold at a lower price point. One example is a French grocery chain that created an “Inglorious Fruits” campaign to market and sells this type of produce.

Resources needed: Pool of participating retailers, media campaign components, program support and funding.

Support food waste reduction entrepreneurship.

Purpose: Reduce the amount of food waste entering the waste stream by supporting the creation of new business opportunities that utilize these local food resources, including unsold retail items, seasonal over production and institutional unsold items.

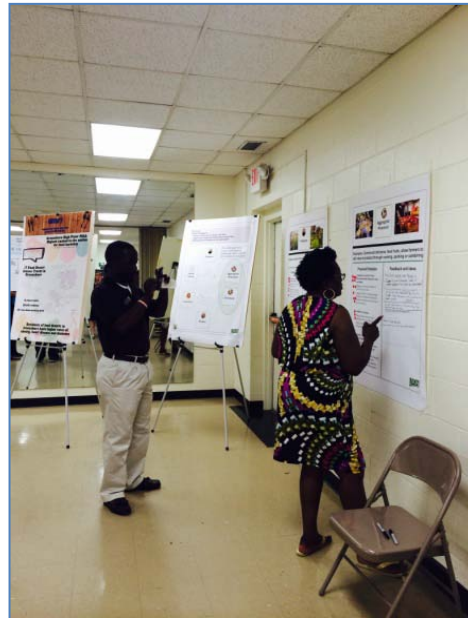
Details: Working with workforce development partners, identify and support entrepreneurship opportunities.

Background: There may be business opportunities to improve the efficiency of businesses, such as the recently developed “Spoiler App” that helps connect businesses with food on the verge of being wasted with organizations that can use them.

Resources needed: Program support and funding.

Public Feedback on Recommendations

Recommendations received public comments in two venues. A public meeting was held on June 10, 2015 at the Peeler Recreation Center on Phillips Avenue. This drop-in style meeting was attended by approximately 40 people, representing a wide range of interest. The goal of the meetings was to vet the proposed strategies, get further suggestions and feedback, and to bring people concerned about food access together to make connections and discuss ideas.



Attendants were given 3 sticky dots and asked to put them on the recommendations they thought would have the most impact. Top vote getters included:

- | | |
|----------|---|
| 13 votes | Establish a Local Food Product Entrepreneurship Program.
Establish a retail fresh food incentive program for existing retail venues in food deserts. |
| 12 votes | Conduct comprehensive, targeted, consumer education campaign. |
| 10 votes | Conduct a Know Your Farmer Campaign. |
| 9 Votes | Establish a food hub.
Build Market acceptance of imperfect food products. |

From the other comments received, some common themes emerged:

- There needs to be better and more consistent connections between producers and distribution points.
- Education is key, about a variety of topics including nutrition, cooking, and farming
- The community needs to be more aware of available resources such as the Agricultural Extension Agency
- Innovation is important, for example with aquaponics (growing produce in water)

An online survey garnered 103 responses. The survey asked some general questions about food access and then asked respondents to rate the plan's recommendations. Here is a summary of responses:

- 96% said they ate fresh vegetables; 3 respondents did not due to their high cost, and 1 because they do not like them.
- 15% reported having difficulty accessing fresh fruits and vegetables; 8 respondents said this was due to the high cost, and 3 each said this was due to not having stores that sell them near where they live and that they do not have adequate transportation.

75 respondents ranked 8 of the strategies. The rankings demonstrate general support for all of the strategies.

Strategy	Average Ranking
Conduct a "know your farmer" campaign so that people will have more access to fresh foods.	5.87
Establish a program to help youth and adults start businesses with local food products.	5.03
Save food from being wasted by saving and using food that is good but does not look perfect enough for stores.	4.55
Establish community commercial kitchens in food deserts to support food education, business ideas and community cooking events.	4.30
Establish a fresh-food incentive program for existing stores in food deserts.	4.2
Educate residents in food deserts on how to economically shop, cook, and store fresh, local foods.	4.16
Establish connections between growers, food distributors and schools hospitals and other institutions to create more demand for local food.	3.57
Establish a food hub to give local farmers and growers a place to package and sell their product and increase the supply of local foods.	3.54

End Notes

1. “How Hungry is America”, Food Research and Action Center, April 2015, Page 3.
2. “Food Hardship in America 2012”, Food Research and Action Center, February 2013, Page 4.
3. 2012 Census of Agriculture - NC County Data - Table 44. Farms by North American Industry Classification System: 2012
4. USDA National Agricultural Statistics Service, 1997 Census of Agriculture; Agricultural Statistics-Summary of Commodities by County (2012), North Carolina Department of Agriculture and Consumer Services.
5. “Farm Size and the Organization of U.S. Crop Farming”, US Department of Agriculture, Economic Research Report Number 152, August 201.
6. “Food Wastage Footprint Impacts on Natural Resources” Summary Report, Food and Agriculture Organization of the United Nations (FAO), 2013, Page 6
7. “Regional Food Hub Resource Guide”, US Department of Agriculture, April 2012, Page 4.
8. Center for Environmental Farming Systems. (2013). NC Local Food Infrastructure Inventory. Retrieved June 7, 2105, from <http://www.cefs.ncsu.edu/statewide-infrastructure-map.html> .
9. “U.S. Kitchen Incubators: An Industry Snapshot”, Econsult Solutions, August 2015, Page 3.
10. “Corner Store Assessment, 2012” Guilford County Department of Public Health.

Appendix A: Convenience Store Shopper Survey

Questions

Survey Location

		Dollar General	Family Dollar	Citgo	The Ritz	Jays	Total	
3. For how many people do you typically do the shopping?								
	Just Me	3	7	8	7	2	27	29%
	2 to 4	7	9	10	5	13	44	47%
	4 to 5	6	3	2	1	3	15	16%
	6 or More	2	1	0	3	2	8	9%
4. How many of the people that you do the food shopping for are children younger than 15?								
	None	5	13	13	8	8	47	52%
	1	2	1	5	1	5	14	15%
	2 to 3	11	5	2	7	5	30	33%
	4+	0	0	0	0	0	0	0%
5. Which of the following have you visited in the past six months to buy food? (Select all that apply)								
	Grocery Store	15	19	74	13	19	140	46%
	Corner Store	8	4	14	10	10	46	15%
	Drug Store	6	7	4	2	3	22	7%
	Dollar Store	15	13	8	8	7	51	17%
	Farmer's Mkt	1	4	4	1	6	16	5%
	Garden	0	0	3	1	3	7	2%
	CSA	0	0	2	0	1	3	1%
	Food Pantry	2	0	5	1	1	9	3%
	Church	2	1	3	1	1	8	3%
	Other	1	0	1	0	0	2	1%
6. Of the places mentioned above, where do you most frequently get food? (Check only one)								
	Grocery Store	15	20	17	12	18	82	69%
	Corner Store	1	0	2	1	0	4	3%
	Drug Store	2	1	0	0	0	3	3%
	Dollar Store	6	4	0	3	0	13	11%
	Farmer's Mkt	1	2	0	0	3	6	5%
	Garden	0	0	0	0	0	0	0%
	CSA	0	0	0	0	0	0	0%
	Food Pantry	2	1	0	0	0	3	3%
	Church	4	1	0	0	0	5	4%
	Other	1	0	0	0	1	2	2%

Appendix A: Convenience Store Shopper Survey

Questions

Survey Location

		Dollar General	Family Dollar	Citgo	The Ritz	Jays	Total	
7. Think about the store in which you shop most often (your answer to number 6) and select the reasons why you shop there. (Select all that apply)	Close to residence	14	13	12	13	16	68	27%
	Close to work	1	1	3	0	4	9	4%
	On way	2	2	3	3	3	13	5%
	Meet friends	0	1	1	0	0	2	1%
	Good Prices	13	6	11	7	7	44	18%
	Good Quality	10	5	4	4	6	29	12%
	Good Service	5	2	2	0	6	15	6%
	It is clean	9	3	3	3	6	24	10%
	Credit available	1	0	0	0	0	1	0%
	Good selection	4	7	3	2	2	18	7%
	Accepts SNAP, WIC	8	1	3	2	1	15	6%
	Familiar	4	2	2	1	0	9	4%
	Other	0	0	0	0	2	2	1%
8. Where do you typically buy fruit (Pick 3)?	This store	5	3	0	2	2	12	11%
	Grocery Store	17	17	19	13	17	83	76%
	Corner Store	0	0	0	0	0	0	0%
	Drug Store	0	0	0	0	0	0	0%
	Dollar Store	2	0	0	0	0	2	2%
	Farmer's Mkt	0	2	0	0	3	5	5%
	Garden	0	0	0	1	2	3	3%
	CSA	0	1	0	0	0	1	1%
	Food Pantry	0	0	0	1	0	1	1%
	Church	0	0	0	0	0	0	0%
	Other	0	1	0	0	1	2	2%
9. Where do you typically buy vegetables (pick 3)?	This store	3	1	0	3	2	9	8%
	Grocery Store	16	16	19	12	14	77	68%
	Corner Store	1	0	0	1	0	2	2%
	Drug Store	0	1	0	0	0	1	1%
	Dollar Store	3	0	0	1	1	5	4%
	Farmer's Mkt	0	5	1	2	5	13	11%
	Garden	0	1	0	2	1	4	4%
	CSA	0	1	0	0	0	1	1%
	Food Pantry	0	0	0	1	0	1	1%
	Church	0	0	0	0	0	0	0%
	Other	0	1	0	0	0	1	1%

Appendix A: Convenience Store Shopper Survey

Questions

Survey Location

		Dollar General	Family Dollar	Citgo	The Ritz	Jays	Total	
10. About how often do you shop for food at this store or a similar one?	Never	0	3	2	3	6	14	16%
	Few a year	3	1	1	0	3	8	9%
	Once a mnth	2	3	1	2	5	13	15%
	Every 2 weeks	1	3	5	5	0	14	16%
	1-2 per week	7	8	4	1	0	20	24%
	5+	4	0	6	4	2	16	19%
11. Why do you shop here?	Close to residence	14	11	11	6	14	56	34%
	Close to work	0	4	2	2	0	8	5%
	On way	4	0	2	1	1	8	5%
	Meet friends	0	0	0	3	1	4	2%
	Good Prices	7	5	10	2	0	24	15%
	Good Quality	5	4	3	3	0	15	9%
	Good Service	4	1	1	3	0	9	5%
	It is clean	5	6	3	0	0	14	9%
	Credit available	0	0	0	1	1	2	1%
	Good selection	3	3	3	1	0	10	6%
	Accepts SNAP, WIC	5	0	3	3	1	12	7%
	Familiar	0	0	1	0	0	1	1%
	Other	0	1	0	0	0	1	1%
12. How do you usually get to this store? (Select all that apply)	Walk	6	3	14	10	1	34	31%
	Bike	1	1	2	2	0	6	5%
	Your Car	11	11	7	3	8	40	36%
	Friend Car	2	6	4	2	8	22	20%
	Bus	1	0	0	3	1	5	5%
	Taxi	0	0	0	1	1	2	2%
	Other	0	0	1	1	0	2	2%
13. How many minutes does it normally take you to get to this store?	1 to 5	3	8	10	5	14	40	53%
	6 to 10	1	5	7	2	2	17	23%
	11 to 15	4	3	2	4	0	13	17%
	16 to 20	1	0	1	1	0	3	4%
	21 to 30	0	1	0	1	0	2	3%
	30 or more	0	0	0	0	0	0	0%

Appendix A: Convenience Store Shopper Survey

Questions

Survey Location

		Dollar	Family		The Ritz	Jays	Total	
		General	Dollar	Citgo				
14. If you don't buy your fruits and vegetables from this store, what are the main reasons? (Select	Like other food	5	4	5	6	7	27	33%
	Too expensive	2	1	6	3	3	15	18%
	Don't know to prepare	0	0	1	0	0	1	1%
	No time to prepare	0	1	2	0	0	3	4%
	Poor quality	0	0	2	1	1	4	5%
	Not in stock	9	10	1	6	7	33	40%

What is your age?	Under 15	0	0	0	1	0	1	1%
	15 to 17	0	0	1	2	1	4	4%
	18 to 21	1	0	1	0	1	3	3%
	21 to 29	5	3	3	3	7	21	23%
	30 to 39	3	1	4	3	7	18	20%
	40 to 49	5	5	7	1	2	20	22%
	50 to 59	2	1	4	2	2	11	12%
	60 to 69	2	6	0	4	0	12	13%
	70+	0	2	0	0	0	2	2%

Gender	Male	5	8	14	13	12	52	56%
	Female	13	11	6	3	7	40	43%
	NA	0	0	0	0	1	1	1%

Ethnicity	White	1	1	1	3	5	11	12%
	AfAm	16	18	19	12	15	80	86%
	AmerIndian	0	0	0	0	0	0	0%
	Asian	0	0	0	1	0	1	1%
	Pacific	0	0	0	0	0	0	0%
	Hispanic	0	0	0	0	0	0	0%
	Other	1	0	0	0	0	1	1%



Retail MarketPlace Profile

City of Greensboro

Area: 133.21 square miles

Summary Demographics

2015 Population	278,063
2015 Households	115,582
2015 Median Disposable Income	\$33,309
2015 Per Capita Income	\$26,505

Industry Summary

	Demand (Retail Potential)	Supply (Retail Sales)	Retail Gap	Leakage/ Surplus Factor	Number of Businesses
Total Retail Trade and Food & Drink	\$2,901,160,343	\$4,268,766,944	-\$1,367,606,601	-19.1	2,644
Total Retail Trade	\$2,585,235,751	\$3,756,925,676	-\$1,171,689,925	-18.5	2,092
Total Food & Drink	\$315,924,591	\$511,841,268	-\$195,916,677	-23.7	552

Industry Group

Food & Beverage Stores	\$399,140,846	\$416,063,935	-\$16,923,089	-2.1	282
Grocery Stores	\$376,830,141	\$354,497,955	\$22,332,186	3.1	202
Specialty Food Stores	\$7,002,377	\$9,759,808	-\$2,757,431	-16.5	64
Beer, Wine & Liquor Stores	\$15,308,329	\$51,806,172	-\$36,497,843	-54.4	16
Gasoline Stations	\$278,162,187	\$362,211,138	-\$84,048,951	-13.1	57
Food Services & Drinking Places	\$315,924,591	\$511,841,268	-\$195,916,677	-23.7	552
Full-Service Restaurants	\$116,268,984	\$220,134,259	-\$103,865,275	-30.9	207
Limited-Service Eating Places	\$167,470,183	\$224,365,303	-\$56,895,120	-14.5	229
Special Food Services	\$6,982,517	\$43,553,372	-\$36,570,855	-72.4	29
Drinking Places - Alcoholic	\$25,202,907	\$23,788,335	\$1,414,572	2.9	87

Data Note: Supply (retail sales) estimates sales to consumers by establishments. Sales to businesses are excluded. Demand (retail potential) estimates the expected amount spent by consumers at retail establishments. Supply and demand estimates are in current dollars. The Leakage/Surplus Factor presents a snapshot of retail opportunity. This is a measure of the relationship between supply and demand that ranges from +100 (total leakage) to -100 (total surplus). A positive value represents 'leakage' of retail opportunity outside the trade area. A negative value represents a surplus of retail sales, a market where customers are drawn in from outside the trade area. The Retail Gap represents the difference between Retail Potential and Retail Sales. Esri uses the North American Industry Classification System (NAICS) to classify businesses by their primary type of economic activity. Retail establishments are classified into 27 industry groups in the Retail Trade sector, as well as four industry groups within the Food Services & Drinking Establishments subsector. For more information on the Retail MarketPlace data, please view the methodology statement at <http://www.esri.com/library/whitepapers/pdfs/esri-data-retail-marketplace.pdf>.

Source: Esri and Dun & Bradstreet. Copyright 2015 Dun & Bradstreet, Inc. All rights reserved.

Food Deserts

Area: 33.81 square miles

2015 Population	71,804
2015 Households	28,284
2015 Median Disposable Income	\$25,231
2015 Per Capita Income	\$16,493

	Demand (Retail Potential)	Supply (Retail Sales)	Retail Gap	Leakage/ Surplus Factor	Number of Businesses
Total Retail Trade and Food & Drink	\$480,882,402	\$485,188,338	-\$4,305,936	-0.4	422
Total Retail Trade	\$429,065,523	\$392,170,515	\$36,895,008	4.5	331
Total Food & Drink	\$51,816,879	\$93,017,823	-\$41,200,944	-28.4	91

Food & Beverage Stores	\$67,381,474	\$76,455,211	-\$9,073,737	-6.3	57
Grocery Stores	\$63,730,216	\$71,633,678	-\$7,903,462	-5.8	45
Specialty Food Stores	\$1,181,152	\$894,796	\$286,356	13.8	10
Beer, Wine & Liquor Stores	\$2,470,106	\$3,926,738	-\$1,456,632	-22.8	2
Gasoline Stations	\$47,998,424	\$93,977,348	-\$45,978,924	-32.4	11
Food Services & Drinking Places	\$51,816,879	\$93,017,823	-\$41,200,944	-28.4	91
Full-Service Restaurants	\$19,144,309	\$10,368,155	\$8,776,154	29.7	25
Limited-Service Eating Places	\$27,600,189	\$45,914,389	-\$18,314,200	-24.9	42
Special Food Services	\$1,122,159	\$33,160,657	-\$32,038,498	-93.5	8
Drinking Places - Alcoholic	\$3,950,222	\$3,574,623	\$375,599	5.0	16