



Cultivating Food Equity in Glassboro, NJ:

A Vision Plan

Submitted to
Glassboro Health Equity Coalition

Undergraduate Planning Studio 2021 | Rowan University

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Executive Summary

This vision plan is based on Rowan University's undergraduate planning studio project 2021---Cultivating Food Equity in Glassboro, NJ---which addressed issues related to food equity and food access in this small college town. Based on research and stakeholder outreach, this vision plan provides strategies to help overcome food equity barriers and ensure Glassboro has an equitable food environment.

Food equity is the idea that all people have the geographic, economic, and informational access and opportunity to grow and consume healthy, affordable, and culturally appropriate food. Health equity, on the other hand, is defined as the concept of people being able to achieve their highest level of health, without characteristics such as race, age, sex, income, or sexual orientation hindering them from doing so. Food and health equity are closely related, given that if someone is not nourishing their body with whole foods and proper

nutrients due to lack of access then it will directly affect their physical health. There are several methods of reaching individuals who struggle with the traditional means of accessing food by grocery stores. This may include community gardens, urban farms, home gardens, healthy corner stores, farm to table programs, farmers' markets, food co-ops, food pantries, gleaning, and foraging. Each of these initiatives are designed to reduce the grocery gap between high- and low-income individuals.

Using census data tracts to analyze the needs of Glassboro residents, areas of need were identified. A low-income neighborhood will generally yield more people in need of grocery assistance than those in more affluent communities. Although it is not possible to identify which parcels of land are low income using census data, it still provided the project team with a general idea as to which areas are most in need. We were also able to mark the locations of pre-existing grocery stores which helped us determine the areas that could benefit the most from projects such as community gardens or healthy

corner stores. When considering the issues of accessibility, one of the biggest issues in food equity, it is important to consider the meandering road networks that make Glassboro difficult to navigate by foot. If someone does not have access to personal transportation, it may make it more difficult to purchase fresh and healthy groceries due to increased travel time. Glassboro, however, has multiple community assets which could help distribute food to those in need, namely several public schools, churches, health organizations, non-profit agencies, and Rowan University.

Through community outreach, preliminary research, and mapping technologies, the project team recommends several interventions for Glassboro to use to help address local food equity issues. Methods used to collect relevant community data included a survey that asked residents to express their opinions and experience with food supply in the borough, a survey with questions regarding residents' comfortability around growing their own food, and several interviews with important stakeholders

who are familiar with food equity issues. Subsequently, the project team devised opportunities for improving food access and recommendations that would not only help the most vulnerable community members but also encourage Glassboro residents to cultivate their own food.

Recommendations are grouped into three categories: projects, programs, and policies. The proposed projects are designed to increase the healthy food supply throughout Glassboro by empowering residents to cultivate their own food and participate in the process. This would involve pop-up farmers' markets, community fridges, community gardens, and edible landscaping. The programs focus on reinforcing local food systems and community food security by engaging community institutions, increasing cross-sector collaborations, and empowering residents through various programs such as healthy food pantries, foraging, emergency home delivery services, and a communication hub for food assistance. Lastly, the policies aim to provide financial and legislative assistance to establish healthy food

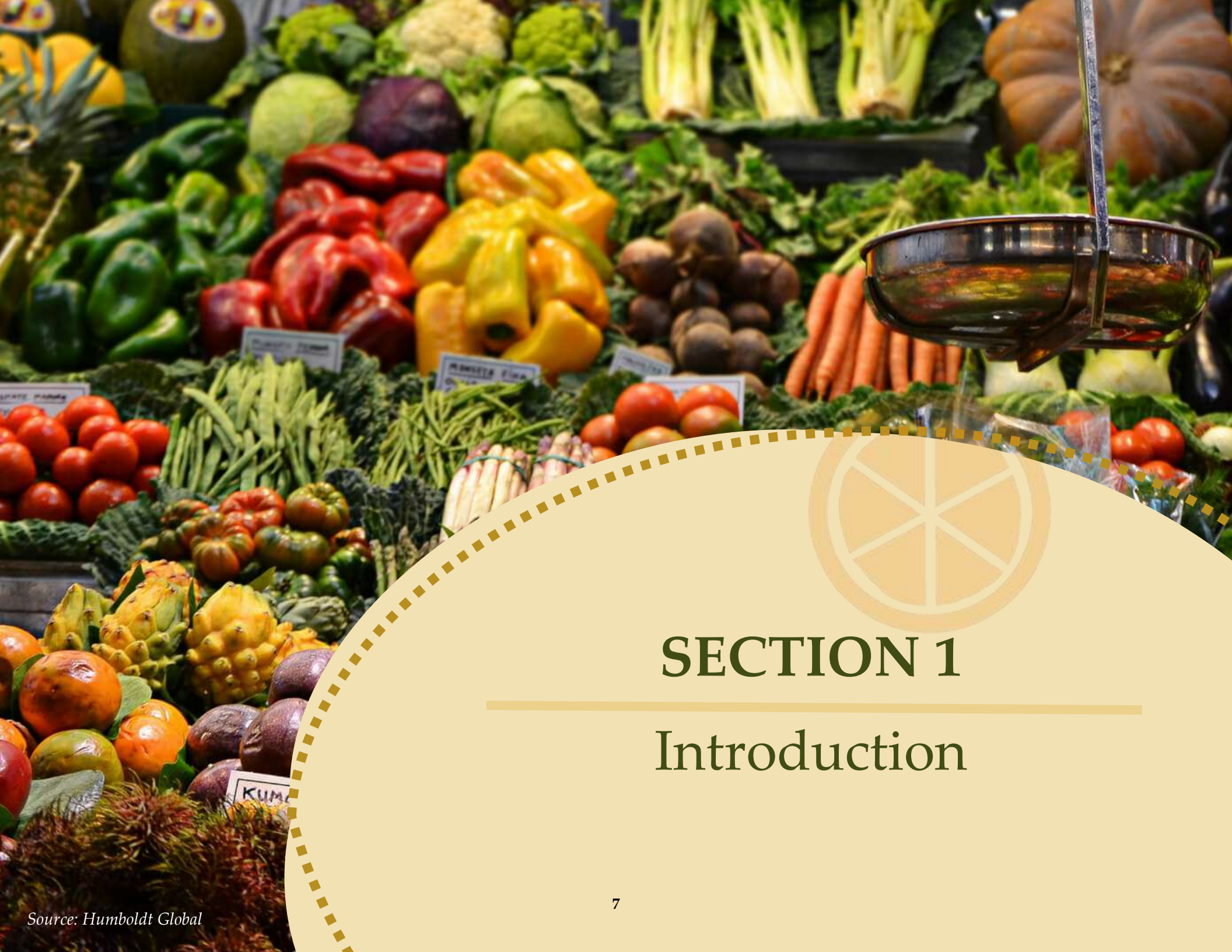
programs and increase healthy and affordable food access. This could include allowing chicken coops on residents' properties or allowing front yard gardening throughout the borough.

The proposed recommendations for Glassboro will better serve its entire community's needs based on food access. Through a multitude of programs, policies, and projects, Glassboro could become a poster child for success in eliminating hunger amongst underserved residents. However, change of this magnitude will take time and involves many moving parts, such as the various stakeholders,

from the Glassboro Health Equity Coalition to Rowan University and its affiliates. With the detailed plan laid out by the project team, Glassboro could make major strides in improving the overall health and wellbeing of its citizens within the next decade.

www.planviz.org/planningstudio2021





SECTION 1

Introduction



Source: Hatfield Community Garden

About the Plan

This vision plan, Cultivating Food Equity in Glassboro, NJ, addresses food inequity within the Borough of Glassboro in Southern New Jersey. Developing in the later half of the nineteenth century, Glassboro emerged as a quasi-industrial hub within the Southern New Jersey region, specifically revolving around the glass blowing industry. During this time, agriculture had always been prominent in the area, especially in surrounding regions. Eventually the industry slowed, and the town's growth stagnated. Simultaneously, suburbanization led many farms to sell their land for development, which left few farms within the municipality's boundaries.

Compounding this issue, racial disparities resulted in many populations of color living without access to many of the food sources. This plan describes these inequalities and proposes solutions for improving food equity in Glassboro.



Source: Robert Wood Johnson Foundation

In order to achieve food equity, all people must have the geographic, economic, and informational access and opportunity to grow and consume healthy, affordable, and culturally appropriate food. An equitable approach provides assistance based on the residents' specific needs,

formulating diverse solutions to address these unique needs. This vision plan recommends strategies to improve food equity by fostering access to healthy food, improving the overall well-being of Glassboro residents.

Rowan University undergraduate students developed this vision plan as part of Planning Studio, a course offered by Rowan University's Community and Environmental Planning program, in the Spring of 2021. Over the course of more than 15 weeks, ten students performed a literature review, conducted original research, and developed and presented recommendations with the support of various Glassboro and university groups, including: the Glassboro Food and Health Equity Project, Rowan University Community Planning + Visualization Lab, and Bullock Garden Project, Inc. These groups provided valuable information and input on the food environment within Glassboro, contributing to the development

of recommendations. This plan was submitted to the Glassboro Health Equity Coalition, a program supported by the New Jersey Health Initiatives, that promotes innovation and collaboration to build healthier communities across New Jersey.

The Process

The development of this vision plan occurred in four phases: Understanding Concepts, Collecting and Analyzing Data, Capturing Community Voices, and Drafting Recommendations. This ensured that our plan contained the necessary background information and research to craft viable solutions that

could serve stakeholders. By combining original research and outside literature, recommendations are supported by both research and stakeholder input.

Understanding Concepts

During the Understanding Concepts phase, an extensive literature review gathered background information on food and health equity. To do so, small teams of students developed narratives on 17 different topics; these topics primarily revolved around food and health equity, with the concepts of local and regional food systems also playing a large role. After providing the necessary background information on

the topic, the group also included case studies for each concept to serve as an example of the concept in practice.

Collecting and Analyzing Data

During the Collecting and Analyzing Data phase, students collected the relevant geographic information systems (GIS) and non-GIS data within Glassboro. This involved multiple weeks of collection, cleaning, and depiction of socio-demographic data, local food environment characteristics, existing food resources and projects, land use, zoning, and other regulations. The resulting maps and figures grounded an assessment of Glassboro's

THE PROCESS



Understanding concepts

Food equity, health equity, community food access, local food system, community food projects, programs, and policies.



Collecting & analyzing data

Socio-demographic data, local food environment, existing food resources and projects, land use, zoning and other regulations.



Capturing community voices

Two online surveys (48 and 24 responses), interviews with 21 local stakeholders, two focus groups with 20 participants.



Drafting recommendations

Recommendations for potential food-related projects, programs, and policy changes, along with the visualization of sample projects.

socioeconomic context and the existing food environment.

Capturing Community Voices

The Capturing Community Voices phase involved gathering stakeholder input to ensure the plan serves the entire Glassboro community. To understand the feelings and opinions of these stakeholders, multiple community outreach strategies, including online surveys, stakeholder interviews, and focus groups, collected stakeholder opinions and suggestions. By interacting with residents, Glassboro municipal representatives, as well as representatives of local farms, churches, nonprofit organizations, businesses, and Rowan University, students learned what food equity means to the Glassboro community, identified what level of food inequity exists in Glassboro, and heard about the types of projects and policies stakeholders felt should be prioritized to address these issues.

Drafting Recommendations

Following the three separate phases of data collection, students developed recommendations for projects, programs, and policy changes to promote food equity in Glassboro. These recommendations reflect a thorough review of literature, data, and community voices captured in earlier phases. Based on informal, asynchronous discussion, the project team created goals, classified as project, program, or policy based, and identified multiple objectives that provided detailed strategies seeking to achieve the goal.



SECTION 2

Concepts

Overview

Research on the concept of food inequity preceded an investigation of Glassboro's food equity issues. Beginning with the development of topics related to this issue, the project team gathered relevant case studies to evaluate the effectiveness of these concepts, and identify real-world examples of their impact.

Food and Health Equity


Health disparities are “systematic, plausibly avoidable health differences adversely affecting socially disadvantaged groups. Whether or not a causal link exists, health disparities adversely affect groups who are already disadvantaged socially, putting them at further disadvantage with respect to their health” (Braveman et al., 2011). Health equity represents the concept that everyone can achieve their highest level of health, regardless of race, age, sex, income, sexual orientation, or ability. Reaching one's highest level of

health may look different from person to person. For example, someone born with Cystic Fibrosis will physically not be able to reach the same level of health and wellness in their lifetime as someone who was born without these conditions. Regardless, poor health can lead to underperformance throughout a person's lifetime. Poor health can result in potential suffering, disability, and/or loss of life, while also threatening one's ability to earn a living. It can also act as an obstacle to fully expressing one's views and engaging in the political process (Braveman et al., 2011).



Source: John Hopkins Alliance for a Healthier World





Environmentally, land use results in inequitable health outcomes based on socioeconomic factors including race and income. For example, in the Waterfront South neighborhood of Camden, New Jersey a predominantly Black and Hispanic community has suffered the effects of toxic industrial land uses, including the Camden County Municipal Utilities Authority, a facility responsible for decades of toxic fumes. The people subject to these substandard living conditions suffered higher instances of cancer and other diseases resulting from toxic chemicals such as formaldehyde (Fan et al., 2006).

While it may be unsettling to see the inequalities of attaining high levels of health, these differences have become more apparent due to the ongoing coronavirus disease 2019 (COVID-19) pandemic (McLoughlin, 2020). Throughout this health crisis, people of color, specifically Black and Latinx populations, have experienced higher rates of death and serious disease. This has brought health equity to the forefront of discussions surrounding social justice.

Health equity is closely related to the food equity in that food inequity can have a strikingly similar effect on communities across the nation. Studies have shown that health inequities are partly driven by the substantially lower cost of diets with added sugars and fats, compared to the higher prices of healthier diets consisting of fruits, vegetables, whole grains, and lean meats. Food equity can be defined as all people having the ability to grow, procure, and/or consume healthful, affordable, and culturally preferred foods, regardless of identity, positionality or power (Mui et al., 2020). Having access to whole foods that nourish the body and help prevent illness would contribute to both food equity and health equity. Foods that are highly processed, such as canned goods and fast food, can be detrimental to the body. So, what makes fresh food like fruits and vegetables harder to buy for some people than others?

Food deserts, or areas that do not have reasonable access to fresh food, are common in disinvested areas ranging from rural communities to inner cities. Communities within food deserts must either drive or take transit a considerable distance to obtain quality foods. This is not a practical solution for those who are struggling to make ends meet, and oftentimes the easiest way to obtain food is to visit smaller-scale corner stores that mostly sell highly processed foods. This creates an unequal distribution of healthy foods; some people are able to buy and consume a variety of foods, while others are left with limited options.

While limited options contribute to food inequities, food swamps, defined as a region that is filled with blatantly unhealthy food choices (e.g., fast food chains that are notorious for being extremely unhealthy when consumed regularly), are equally problematic. Healthy corner store initiatives, increased public transportation, and well-connected regional systems all aim to reduce these inequities.

Example: In a case study performed between 2013-2017 in Richmond, VA by students at Virginia Commonwealth University, it was found that transportation was the main barrier for sustainable food accessibility. The poor transportation allowed for this community to become isolated and vulnerable to economic degradation and social expansion. In order to get to the closest bus stop to go to a grocery store, community members have to walk as far as 30-45 minutes. Initiatives to resolve these issues acted as a trial run for a “pilot” transportation program that included a shopper trolley which “was offered free of charge for the riders from the East-End”, in hope that interest and demand would increase. In the future, a fee schedule would be adapted to cover the cost of the transportation, including the trolley service itself, maintenance, and insurance, thus making this service “sustainable”. Food education was also offered in this case study to test the maxim “give people a fish – feed them for a day, teach people to fish – feed them for a lifetime”. The finding results of this case study were “participants cooked for themselves, at home, on average two to three times per week (up from zero, on average, before the classes). The VCU team also received consistent feedback that at least 90 percent of participants were able to successfully cook their meal at home each week (typically receiving positive reinforcement from their families)”.



Source: CulEpi

Local and Regional Food Systems

The main distinction between the local and regional food systems is the steps taken for the food to reach the consumer. The local food system consists of a direct-to-consumer (DTC) process in which farmers sell produce directly to consumers (Cumming, Kelmenson, & Norwood, 2019). “Regional food initiatives represent strategic linkages over greater geographic distances, to satisfy market needs or mission-driven mandates that cannot be adequately fulfilled within local geography” (2019). These include pick-your-own operations, farmer markets, and roadside stands. Regional food systems are typically involved in a longer supply chain, which implies that farmers supply produce for entities such as grocery stores, restaurants, and institutional buyers. This type of intermediate supply chain is beneficial to the farmer because it decreases transportation costs and creates a more efficient and steady supply chain. A relevant example of a successful regional food system is Food Solutions New England, a regional plan that encompasses the food systems in all six states of the New England region (2019).

Key Dimensions of an Equitable Regional Food System

Mui et al. (2020) identified six key dimensions of an equitable regional food system planning. The authors argue that food equity extends equity planning, which was originally advocated by Krumholz (1982) in the 1970s. The key dimensions are: (1) nutritional adequacy of food; (2) food affordability for all people; (3) cultural preferences of food for all people; (4) social equity in the food system; (5) spatial equity in the food system; and (6) people's agency in the food system (Mui et al., 2020). For a regional food system to be equitable, all people must have adequate access to nutritious, affordable, and culturally appropriate food.

Community Gardens



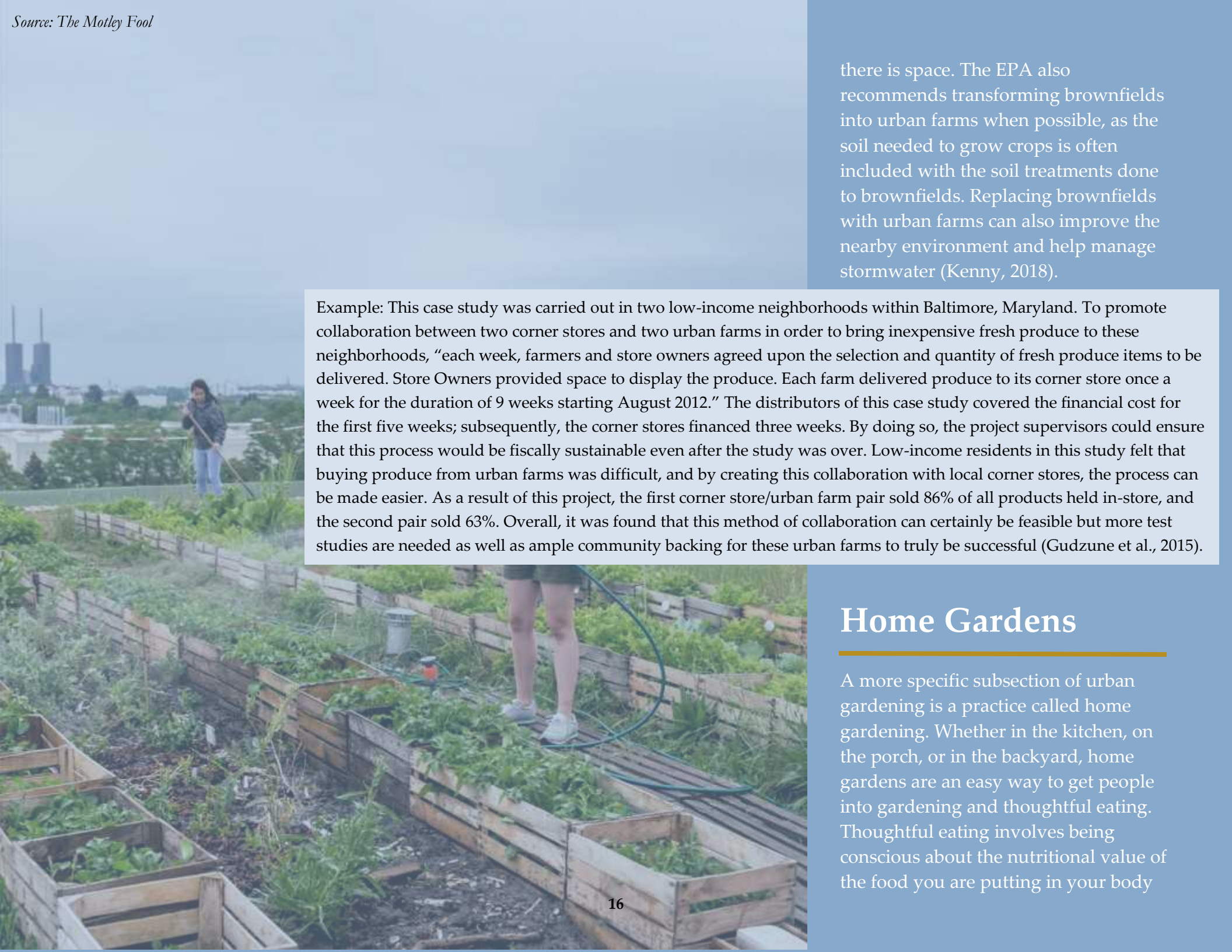
Community gardens are a popular strategy in urban areas, as they can be a tool for the beautification of vacant and land. These gardens foster connections between residents and encourage better health within a community. Many grassroots organizations are working to spread this practice to communities with health issues, typically in neighborhoods with many low income or minority residents. An organization has worked specifically with the Navajo nation to address their health issues and one of their strategies was implementing large scale community gardens within their land. The main reason for this intervention was to reduce the rate of diabetes in the Navajo Nation, and community gardens were one of the numerous health initiatives that took place (Lombard, 2006).

Example: A pilot community gardening program was established in Shenandoah, Virginia in response to the increase in refugee migration. According to refugee resettlement workers, these minority populations face a large nutritional gap. In this case study, researchers established a coalition within the apartment complex and developed a garden project to produce a more cohesive community for the refugees that reside in the complex. The project manager delegated jobs to the members of the coalition and they produced food throughout the growing season. This pilot project resulted in an increase in vegetable and fresh food consumption as well as an increased sense of community (Eggert et al., 2015).

Urban Farms

Urban farms can take many different forms depending on the way they operate, the amount of food produced, and whether or not the farms are for profit or are a nonprofit entity. Essentially, any food cultivated in an urban or peri-urban environment can be considered urban farming or urban agriculture. This type of farming can be done in backyards, balconies, rooftops, or anywhere in a city landscape where





there is space. The EPA also recommends transforming brownfields into urban farms when possible, as the soil needed to grow crops is often included with the soil treatments done to brownfields. Replacing brownfields with urban farms can also improve the nearby environment and help manage stormwater (Kenny, 2018).

Example: This case study was carried out in two low-income neighborhoods within Baltimore, Maryland. To promote collaboration between two corner stores and two urban farms in order to bring inexpensive fresh produce to these neighborhoods, “each week, farmers and store owners agreed upon the selection and quantity of fresh produce items to be delivered. Store Owners provided space to display the produce. Each farm delivered produce to its corner store once a week for the duration of 9 weeks starting August 2012.” The distributors of this case study covered the financial cost for the first five weeks; subsequently, the corner stores financed three weeks. By doing so, the project supervisors could ensure that this process would be fiscally sustainable even after the study was over. Low-income residents in this study felt that buying produce from urban farms was difficult, and by creating this collaboration with local corner stores, the process can be made easier. As a result of this project, the first corner store/urban farm pair sold 86% of all products held in-store, and the second pair sold 63%. Overall, it was found that this method of collaboration can certainly be feasible but more test studies are needed as well as ample community backing for these urban farms to truly be successful (Gudzune et al., 2015).

Home Gardens

A more specific subsection of urban gardening is a practice called home gardening. Whether in the kitchen, on the porch, or in the backyard, home gardens are an easy way to get people into gardening and thoughtful eating. Thoughtful eating involves being conscious about the nutritional value of the food you are putting in your body

and where the food comes from. Home gardens take many different forms, leaving multiple options for how to incorporate it into their lifestyle. There are a multitude of health benefits that come from gardening at home, which include lowering the risk of dementia in older age by 36% (Simons, 2006).

Example: In a case study done in the rural community of Hood River, Oregon, a community-based participatory research project was conducted. This project was designed to alleviate the food insecurity rate in this area by creating community gardens. The objectives of the Harvest Fiesta project were to create a network of peers in the Hispanic community that can support the home gardening activities, document the vegetable intake of families, and construct a self-sufficient community. This project aided 40 families in the creation of at-home gardens. They also held community meetings at the beginning of every month to discuss gardening techniques such as plant choice and composting. In this study, all participants were given gardening materials and seeds. Following this project, 94.9% of participants stated that the garden aided the overall family health. Before the community gardening project, 31% of the families considered themselves food insecure; after the gardening project, only 3% of families were food insecure (Carney et al., 2012).

Healthy Corner Stores

Healthy corner store initiatives can be a vital method for communities to combat food inequity and access issues. These initiatives entail stocking corner stores with healthy foods like fruits, vegetables, multigrain bread, and low sodium canned goods. By doing so, the projects supplement corner stores with healthier options so the customers who frequent the stores have a myriad of nutritious choices (Dannefer et al., 2012).

Example: In a case study done in the eastern portion of North Carolina, the North Carolina Department of Agriculture allocated funds to support the North Carolina Healthy Food Small Retailer Program and involved 16 corner stores. Consumers' purchases were examined by analyzing shopping patterns, self-reported diet, and the healthy food store environment. "Promoting healthy foods and beverages in corner stores can positively impact population-level dietary behaviors, since corner stores often stock and promote unhealthy foods and beverages, and customers frequently

purchase these unhealthy foods and beverages" (Jilcott-Pitts et al., 2017). Ultimately, this study found an increase in healthy food purchases among customers.



Source: The Food Trust

Gleaning

Gleaning, or the process of volunteer-based harvest for donation, is a beneficial way to counteract food waste and food insecurity (Lee et al., 2017). As a result of the USDA's high produce standard, tons of food that is deemed too misshapen for the grocery store is disposed of. The practice of gleaning is a tool that can be used for food recovery on farms; however, it is not without its challenges. For example, it can be complicated to schedule because it is largely volunteer based; additionally, there is a small window of time after

which farmers harvest the ‘acceptable’ crops (2017). Nevertheless, gleaning can be used as a beneficial element to supply food to food banks and counteract the impact of excessive food waste and insecurity.

Example: A case study was performed analyzing the effect of gleaning on the Food Bank of the Southern Tier; indeterminate factors including volunteer eagerness, farmer surplus and calls, and collection resources we're all considered. The State of New York gives farmers tax credits when they donate food to entities such as food banks. This study found that expanding the range and eagerness of gleaners largely increases the amount of gleaned food for the food bank. With this increase in produce, the process was able to tackle food insecurity in the surrounding communities and mitigate food waste. This food bank is approximately four hours away from Glassboro.



Source: Community Food Rescue

Farm to Table

Beneficial farm-to-table initiatives include farm-to-school (FTS) or farm-to-institution (FTI) programs where midscale farmers connect with institutions and supply them with locally/regionally grown produce (Conneret al., 2011). Partnerships between farmers in the region and institutions can be beneficial to the regional economy while also producing the health benefits that come from eating locally. Schools that are taking part in this initiative also have to plan accordingly and construct seasonal menus based on the products that they receive. Fruits and vegetables were easiest to obtain from these mid-scale farmers, but sourcing regional protein that can be cut and processed did prove to be a challenge for this school district (2011). Another benefit these programs present is the ability to sell the ‘misfit’ produce, which is nutritionally fine, but physically unacceptable for resale at a grocery store.

Example: As alternative supply chains rise in popularity, interest in farm-to-school initiatives has also increased. In a case study done at the Midwestern

Community School District in Wyoming, researcher Brandi Janssen explored the barriers that can develop from the structural challenges of these initiatives. Janssen found that the structural barriers of these programs include the cost of produce, supply/demand, and the delivery of the food. Remedies for these barriers include federal support and volunteer engagement. Farm-to-school initiatives can be successful if these barriers are removed, and the food service workers plan the menus accordingly in order to mitigate food waste. Since these programs occur during the growing season, the menu should be updated seasonally. Nevertheless, this farm-to-school program successfully increased the students’ fresh food intake and aided the local community of food producers.



Farmers Markets

Farmers markets provide a venue for local vendors to sell their produce to communities. These provide a great method of aid to localities that lack fresh produce as they are temporary and can be run on any open space where permitted. This type of intervention also only requires a permit, vendors willing to spend a Saturday working, and good weather. Farmers markets can sell a variety of products that are not just limited to produce. The Scotch Plains Farmers' Market in Scotch Plains, New Jersey, has a wide variety of vendors that sell a unique selection of foods. Their vendors include a vegan bakery, a gourmet nuts and seeds company, and a pickled foods vendor, just to name a few. Having the ability to involve local businesses while also bringing diet-friendly products to an area is a great feat, and farmers markets offer endless opportunities to complete these tasks and tackle local food insecurities.

Example: A case study was performed on the Williamsburg Farmers Market (VFM) in Williamsburg, Virginia. This farmers market contained produce, specialty items, livestock, value-added products, plants, and non-edible item vendors. The WFM runs from the beginning of May to the end of October. Researchers found that product diversity can increase sales through the convenience of one-stop shopping. If there is a greater choice of products, the consumer will be able to have a wider variety of purchasing options. In this added diversity, there needs to be a small margin of vendor overlap. Ultimately, this farmers market proved to be a vital source of fresh produce and is very influential in alleviating food insecurity within Williamsburg (Archambault et al., 2020).



Source: Bloomberg

Food Co-ops

Food co-ops serve as an alternative to the monopolizing effect grocery stores have on the food systems. A food co-op is owned by the people who shop there and are democratically run (Steinman, 2020). Traditionally, these businesses buy and resell locally/regionally produced food. Farmers who produce at a local scale have a difficult time supplying high quantities of food for larger groceries. Food co-ops are a useful way to stimulate the local food economy by creating a venue in which local food producers can sell their products.

Example: The Sussex County Food Co-op (SCFC) was established in 1980 as a non-profit food store. This co-op has around 300 patrons that reside in the Sussex County, New Jersey and in the neighboring state of Pennsylvania. This food co-op specializes in providing the surrounding community with fresh organic produce sourced from local producers. In addition to food, the co-op also sells locally made artisan crafts and handmade pottery. They serve a diverse range of customers, so their products include allergen-friendly products such as gluten-free loaves of bread and other dairy-free products. Their mission statement is “The Sussex County Food Co-op believes in the positive association between good food and good health. We are dedicated to providing our members and customers with high-quality products — with emphasis on organic, Biodynamic, and locally-produced food suitable for a wide range of dietary needs.” This co-op consists of 9 board members and is located in New Jersey approximately 2 and ½ hours from Glassboro.



Source: Sussex County Food Co-op

Food Banks and Food Pantries




Source: Bibliotheca Alexandria

Food banks and pantries provide means of addressing food insecurity; however, they largely rely on donations. In a study done by Loopstra, Lambie-Mumford, and Fledderjohann (2019), they discovered that food banks “have been found to provide an inadequate supply of dairy foods, and insufficient amounts of calcium, and vitamins A and C.” Alongside the large amount of donated non-perishable items, food banks need to be supplementing their shelves with fresh fruits and vegetables in order to supply the community with an ample amount of healthy food options. This can be achieved by partnering with farmers and using tools such as gleaning.

Example: A case study conducted in Texas analyzed the effects of the Brighter Bites fresh food distribution program. “Brighter Bites is a 16-week, multicomponent, school-based program combining continuous access to fresh [fruits and vegetables] with nutrition education to increase demand for and intake of [fruits and vegetables] in low-income children and their families” (Sharma et al., 2017). The program spanned eight weeks in the fall and eight weeks in the spring, providing students with 50-60 servings of fresh fruits and vegetables. This program utilizes volunteers such as parents to aid in the distribution of the produce sourced from food banks. This program is only offered to schools when at least 75% percent of enrolled students are eligible for a reduced or free lunch. This study concluded that parents and school participation are vital in order for this program to be successful. The study also showed that receiving these fresh fruits and vegetables positively influenced their consumption habits. “Brighter Bites links the school and the home, the [two] environments that a child spends a majority of their time in, and provides opportunities for parents to engage in a healthy activity at their child's school” (2017).

Edible Landscaping, Fruit Trees, and Food Forests

Edible landscaping is becoming increasingly popular, though the concept of blending traditional landscaping techniques with produce and herb cultivation is not completely novel. Edible landscaping can be used in public and quasi-public environments to beautify public spaces and encourage longer visits to these places; however, this practice does not need to be limited to public areas. Edible landscaping is gaining traction around the world amongst residential abodes as well. Edible gardens are a great hobby for many individuals and can increase the level of fresh produce readily available.



Example: The Picasso Food Forest in Parma, Italy was constructed in 2012 as the first public food forest in the county. This forest was created as a response to “peak oil, climate change, biodiversity loss, the unsustainable ecological footprint of western lifestyles, and the enormous impact of current food production systems on the environment” (Riolo, 2019). This food forest is run by 15 activists who plan a weekly schedule that includes events, nutritional programs, and workshops. The Picasso Food Forest includes, “32 varieties of fruit trees, 24 varieties of fruit shrubs, 76 aromatic and medicinal herbs, and 78 volunteer plants plus 7 species of mushrooms” (2019). Located in a residential area, this forest gives residents the opportunity to consume locally grown fruits and vegetables. This project also increases community ties, as residents are responsible for the maintenance and harvesting of the produce from the forest. The Picasso Food Forest benefits the community by fighting food insecurity and community segregation. Although Parma, Italy is on a separate continent from Glassboro, they are only one growing zone apart (i.e., they can grow similar types of produce at relatively the same time).

Source: Medium

Foraging

Of all the ways that low income families can become connected to fresh foods, foraging is one of the least expensive methods to get people to eat healthier. While foraging can be rather limited in the amount of food you can actually consume, it is a great way to encourage cooking fresh, locally sourced produce. Many common plants around us are edible. Wild garlic, otherwise known as onion grass, is a common weed that grows on lawns nationwide but specifically is very common in South Jersey. Wild onion can be cooked and consumed safely from the bottom bulb of the plant to the top. It is easy enough to find that someone without access to transportation would be able to forage this in almost any location.

Example: In a case study conducted within a neighborhood park in Oakland, California, researchers studied the Phat Beets organization and their contribution to the local park. The Phat Beets Produce organization is a food justice collective that serves the North Oakland community. They are dedicated to achieving food equity for the POC community. They host weekly farmers markets in the area and source their produce from black farmers. “The produce at Phat Beets looks great, is well-cared for, and absolutely free to anyone who wants to harvest it. And harvest it they do: vegetables and fruits are being utilized by people coming from around the park” (Galt, Grey, & Hurley, 2014). This type of free public foraging is very beneficial in aiding the fight towards food equity. By creating edible landscapes, it connects people to nature and makes them experience a less privatized field of food. The Phat Beets produce organization creates a space for locally grown fruits and vegetables that can support the low-income residents in the area.





Source: Food Tank

Educational Programs

Teaching nutrition in schools is a crucial method to convince children to consider healthy food choices. In a study done by the Integrated Nutrition Project, special resource teachers educated children in grades two through four about nutrition and monitored their eating habits at lunchtime (1999). The study found that following this education, students ate 60% more of the fruits and vegetables served to them. In addition, there was an increase in preference towards healthier food options from the students who participated in the program. The barriers that were faced during this program were the lack of funding, class time, and role modeling. In order for the success of the program, teachers need to emphasize that being conscious of nutrition is critical to a healthy diet.

Example: Child nutrition programs are an integral part of the education system. Food and Fun for Everyone is a nutrition program designed by the Expanded Food and Nutrition Education Program for low-income school environments. Encompassing only third and fourth grade students, “Lesson topics for third grade included MyPyramid, whole grains, fruits and vegetables, dairy food, breakfast, and food safety. Topics for fourth grade included MyPyramid, digestion with emphasis on fiber-rich foods, use of the food label, breakfast, food safety, and healthful snack and fast food choices” (Hildebrand, Jacob, & Garnad-Foster, 2012). As a result of this program, students took a survey to indicate the “goodness of fit” changes that they’ve experienced after completing this nutrition program. After completing this program, there was a significant increase in healthy behaviors demonstrated by the third and fourth graders.

Roles of the Government

Local governments can play an important role in achieving food and health equity through innovative and supportive policies, laws, and ordinances (Meenar et al., 2017). In addition, local governments can create partnerships with businesses and nonprofit organizations while offering incentives to businesses and other entities to promote food equity. In 2015, the City of Minneapolis was the first municipality in the US to approve a staple food ordinance which required all food retailers to stock minimum quantities of healthy food options such as bread, milk, fruits and vegetables and whole grains (Caspi, Winkler, Lenk, et al., 2020). Policies such as these allow for retailers to supply consumers with healthier food options. Although this initiative was created to combat the food insecurity in these communities, researchers note several challenges, most notably a lack of compliance by retailers and policy enforcement on the part of the city (2020). The lack of

adequate store infrastructure (e.g., refrigerated storage) also proved problematic.

Roles for-profit and nonprofit agencies

Numerous food access initiatives operate across the country. Feeding America is a very large organization, operating over 200 food banks and food rescue programs. The organization has helped feed many Americans, and is especially important following economic disruptions brought about by the COVID-19 pandemic. While these organizations cannot fix the problem of food insecurity and inequity, they can help those who are suffering from lack of access to fresh food. Unfortunately, food banks often bring canned goods which are not as nutritious as fresh fruits and vegetables.

A nonprofit organization based out of Philadelphia, PA, called Farm-to-City bridges the gap between local farmers and the urban food markets. Their goal is to connect the city with the regional and local producers through food hubs,

markets, and community supported agriculture. This non-profit is a regional leader in supporting the sustainable food economy in the area.



SECTION 3

Context

Glassboro: A Historical Overview

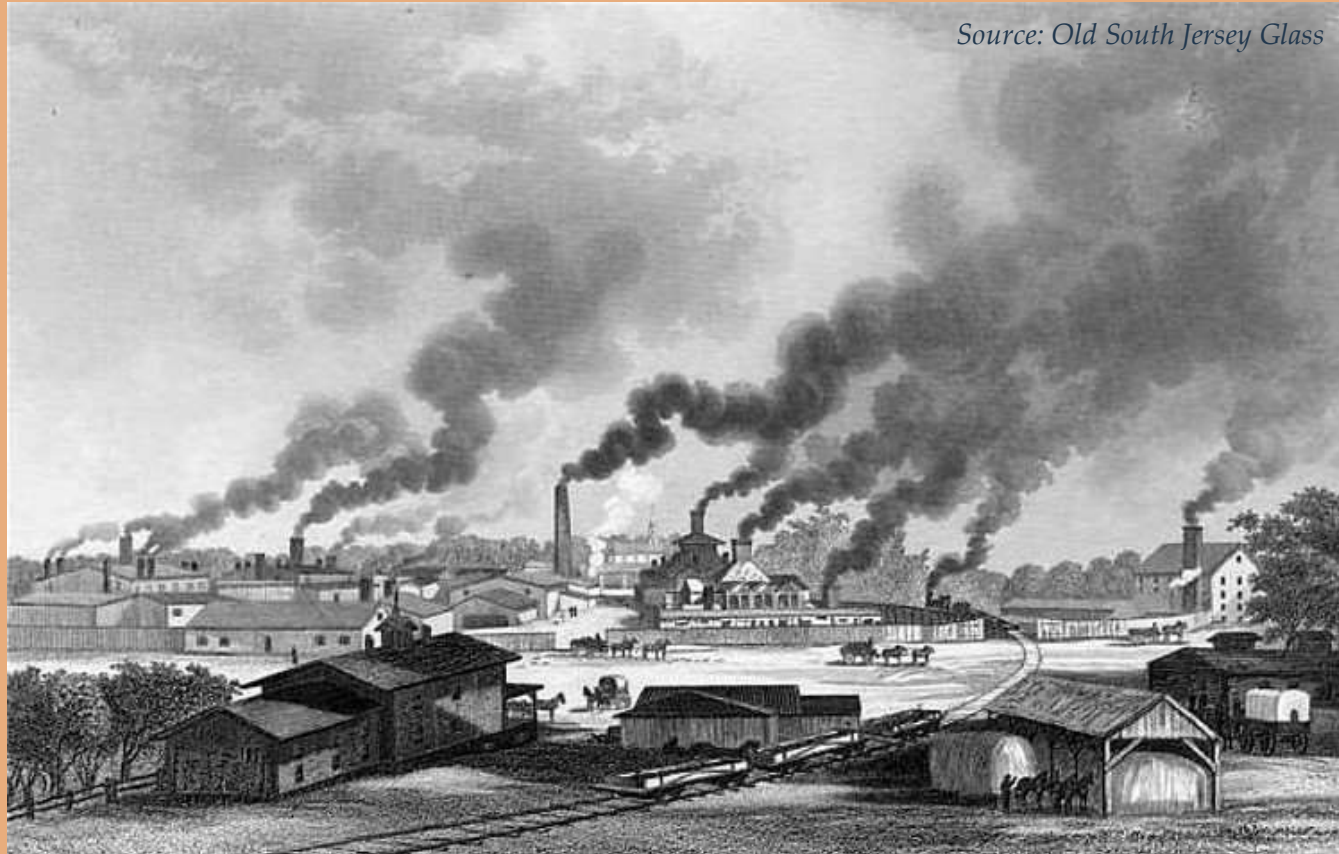
Gloucester County's Borough of Glassboro, located in southern New Jersey, and was first envisioned in 1799 by a man named Solomon Stanger. Solomon had a vision for the land and called the area "Glass Works in the Woods". His plan for a glass manufacturing company in the woods of South Jersey turned out to be a success and he would go on to sell adjacent plots of land to his six brothers, starting a community around his "Glass Works in the Woods". This industry is the namesake of the town and is honored by the glassblower statue in the town square. Glassboro subsequently grew as an industrial town with the first general store opening in 1881. Other enterprises developed alongside glass production such as the New Jersey Packing Company, founded in 1892, canning fruits and vegetables and employing over 100 residents. Eventually like many other manufacturing hubs, the glass blowing industry saw a reduction in financial viability and the town was left with unemployed residents. As a result, farms and fruit orchards became a major industry within this town and in the greater southern

New Jersey region. At the turn of the century, Glassboro was a typical industrial town, with an economy based on the production of crops and distribution of manufactured goods.

By looking at southern New Jersey from an agricultural and agrarian perspective, the project team was able to obtain better insight into the history of Glassboro itself and the issues it faces with food security today. Farming and other agricultural practices started in southern New Jersey in

the early 1600s; at first, the crops were simple, including an array of pumpkins, melons, squash, and beans, but as time went on, New Jersey started to grow more fruits, thus developing a reputation for fruit production. In the 1800s, specifically in the Pinelands region, cranberry and blueberry crops became a staple industry for the state. Many of the state's regions have always featured local, smaller to mid-sized farms that provided crops and produce for residents. Glassboro, like most towns in southern New Jersey, has developed the

Source: Old South Jersey Glass

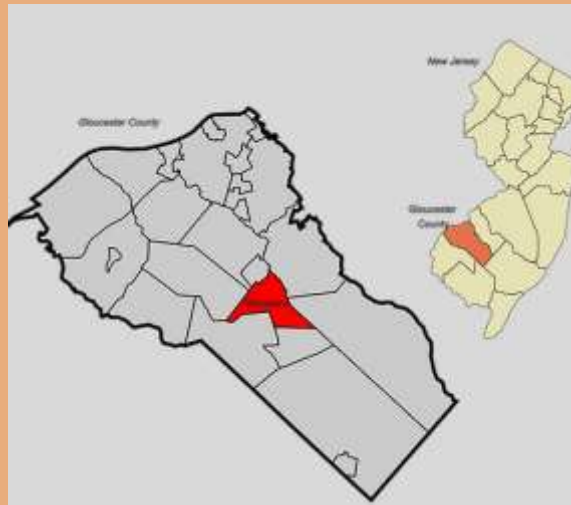


same way with many local small and mid-sized farms cultivating for various crops.

Throughout the latter half of the twentieth century, many farmers sold their land to developers, bringing about suburbanization. This led to a reduction in the number of operational farms. Further contributing to the decline of agriculture in the area, it is very expensive to own and operate a farm in New Jersey as property taxes are high; consequently, the children of many generational farmers, often chose alternate professions. One such example can be seen with Summit City Farms which was founded in 1922 by Italian immigrants, Gaetano DeEugenio and his wife Pasqueta. The farm started with the acquisition of 7.5 acres on University Boulevard in the Ridge section of Glassboro, NJ. Apples, asparagus, grapes, mushrooms, and peaches were among the early crops grown here; however this land would eventually be sold and developed for residential properties.

Food inequality has plagued the United States for years and can be traced back to before the institution of slavery. The inhumane treatment that many Black people faced can still be seen in many of the food systems that are in place today. For instance, in Glassboro there was a major divide within the community throughout the '40s to the mid/late '60s. This divide becomes apparent when examining the differences between the Black and White

communities of Glassboro. After speaking with Felicita Johns, she stated that when she was growing up, many of the main food sources (butcher, baker, large scale grocery stores) were located in the “white section of town”. During this time there was one major convenient store located in the Black Community which she said was similar to the modern-day Wawa.



Location Map of Glassboro, NJ

Following a 100-million-dollar donation from Henry Rowan in 1992 to Glassboro State College, the college changed its name to Rowan University. At the time, this donation was the largest individual cash gift to a public university or college. This donation fueled the expansion of Rowan University and further increased development within Glassboro. Alongside the benefits of a newly burgeoning university came the typical downsides of a

college town; an influx of students raised the price of living and attracted food establishments that were not meant to be healthy, but rather affordable, like Jimmy Johns or McDonald's. With increased prices and a lack of accessibility, Glassboro now faces a scarcity of healthy affordable foods.

Socio-Economic Environment

Data gathered from the Delaware Valley Region Planning Commission as well as the US Census Bureau provided the project team with an understanding of the demographics in the town of Glassboro.

According to the US Census Bureau American Communities Survey (2019), Glassboro is home to 20,288 residents. An estimated 17.2% of the population is under the age of 18, while 12.1% of the population is over 65. Approximately 64.6% of the population own the place where they live with a median owner cost of \$1,952 per month. Of those who rent, the median gross rent between 2015 and 2019 was \$1,242.

Of the 6,068 households in Glassboro, 15.1% speak a different language at home. The average number of persons per household is 2.87. Approximately 92.1% of the population has a high school diploma, while 36.8% have a bachelor's degree or

higher. Of those who are above the age of 16, 61.4% are part of the civilian workforce. Of those who are under the age of 65, 11.6% have a disability. The median household income is \$74,222. A dichotomy of people exists in Glassboro through the various groups residing within it, including college students, middle class, and those below the poverty line.

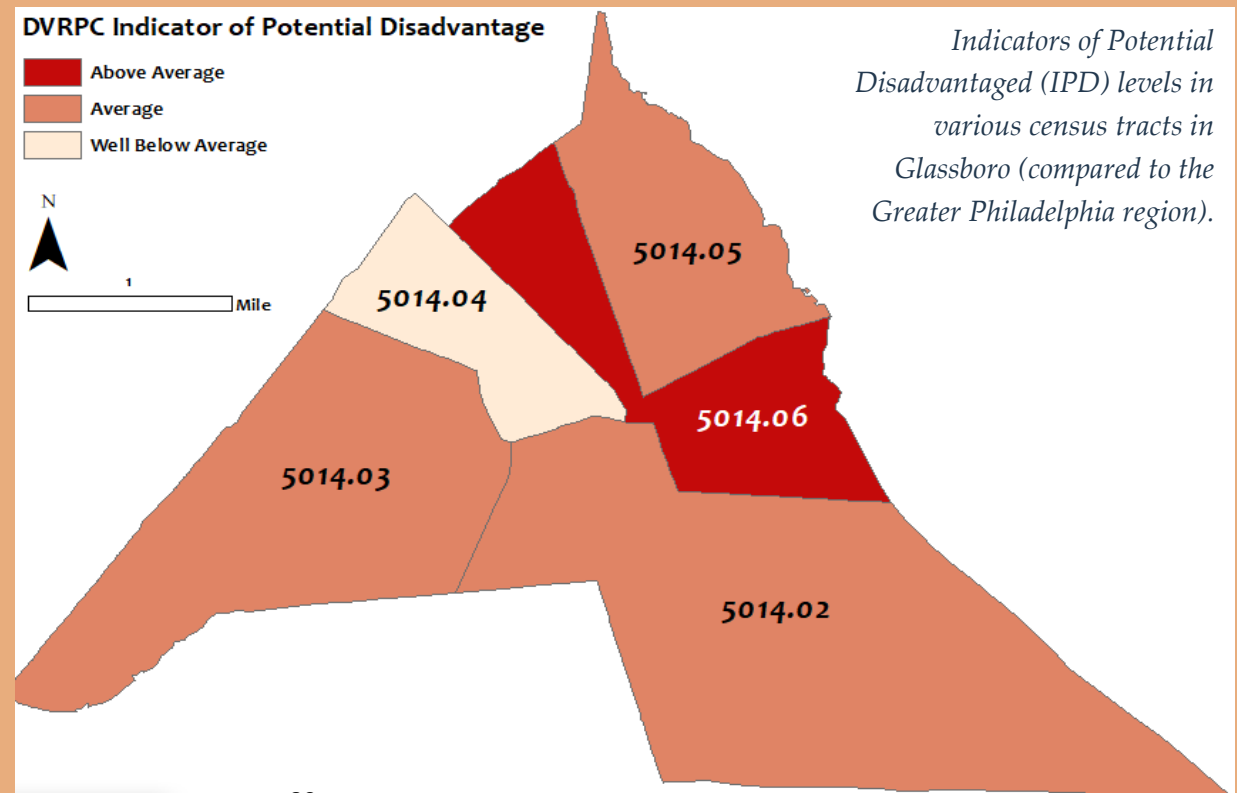
Of the nearly 20,000 residents, 22% live below the poverty level, compared to 7.6% of Gloucester County residents (US Census Bureau, 2019). Additionally, the majority of people in this statistic do not have adequate access to healthy food. Glassboro is being planned for part-time resident college students, not low income families. Due to the school contributing to a significant portion of the town's population and traffic, most of the business and food venues appeal to college students. These types of venues are not always economically and nutritionally viable for a low-income family.

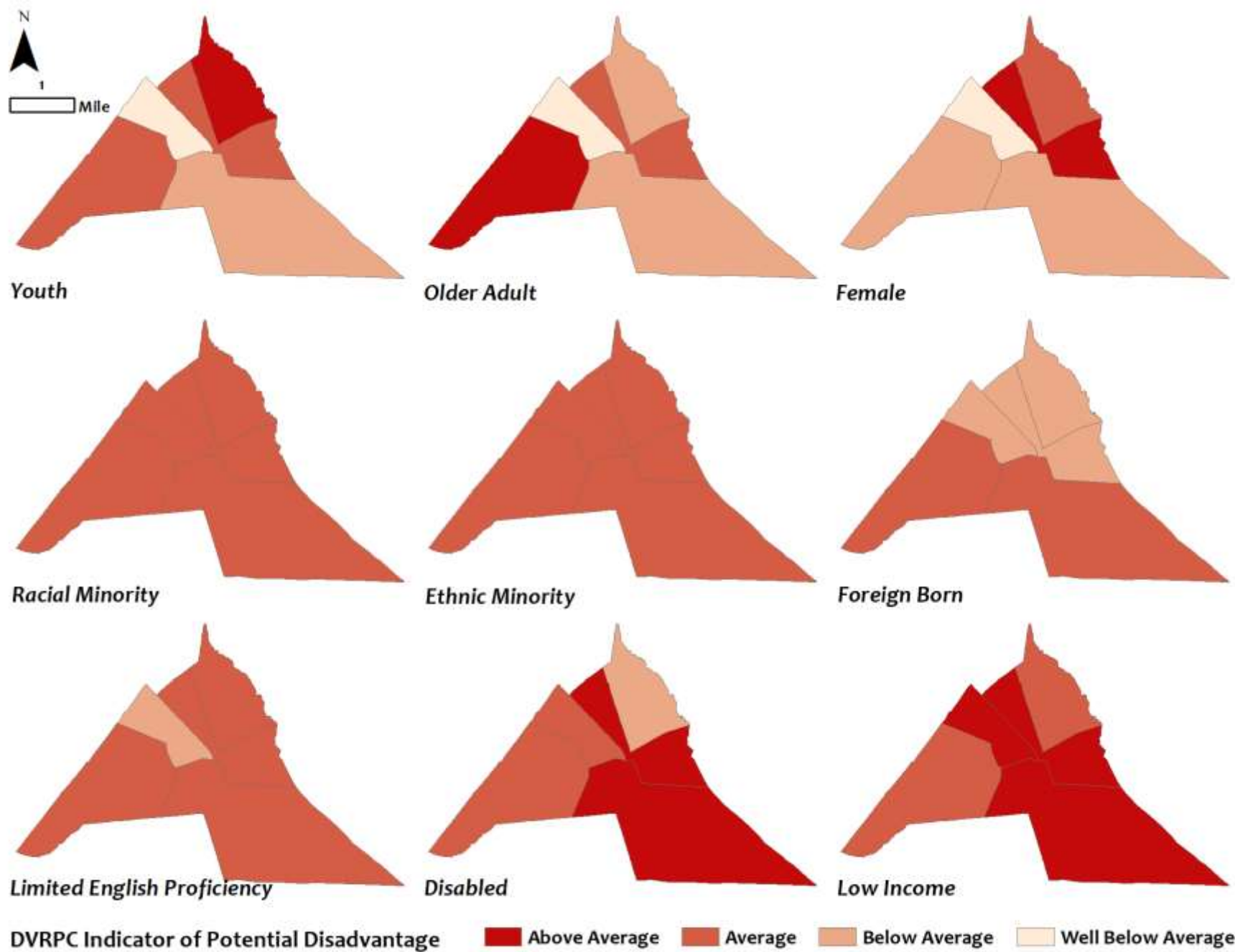
The Indicators of Potential Disadvantage (IPD) maps created by the Delaware Valley Regional Planning Commission identify the local populations that are potentially disadvantaged. This composition is an important series of maps that helps to understand the equity issues in Glassboro. These were developed by assessing populations of interest under Title VI of the Civil Rights Act and Environmental Justice using U.S. Census American Community

Survey 2014-2018 five-year estimates. Each population group is an "indicator" in the analysis and includes multiple categories of disadvantage.

The maps showed valuable information about the potential disadvantages in Glassboro. We made 11 maps in total, which were divided into three groups. These maps were formed into a single composition map, showing the "score" of disadvantaged people in Glassboro per census tract. It scores each tract with three representing the most disadvantaged and zero representing the least disadvantaged. The map on the next page is a set of nine

maps which highlight the presence of youth, older adults, females, racial minorities, ethnic minorities, foreign born, disabled, limited English proficiency, and low income. Based on this assessment, the least disadvantaged tract is that containing Rowan University, while the most disadvantaged tracts were located along Delsea Drive. This road also acts as a barrier within the town, due to the substantial traffic volumes and the lack of safe and comfortable crossing opportunities. Therefore, it's important to understand which populations have access to vehicles, as they are necessary to reach certain parts of the town.





Built Environment

This section provides an overview of Glassboro's built environment as it relates to the food environment. The zoning and land use patterns, as well as public transportation networks are studied and analyzed, specifically identifying their relevance to food resources within the area.

Zoning

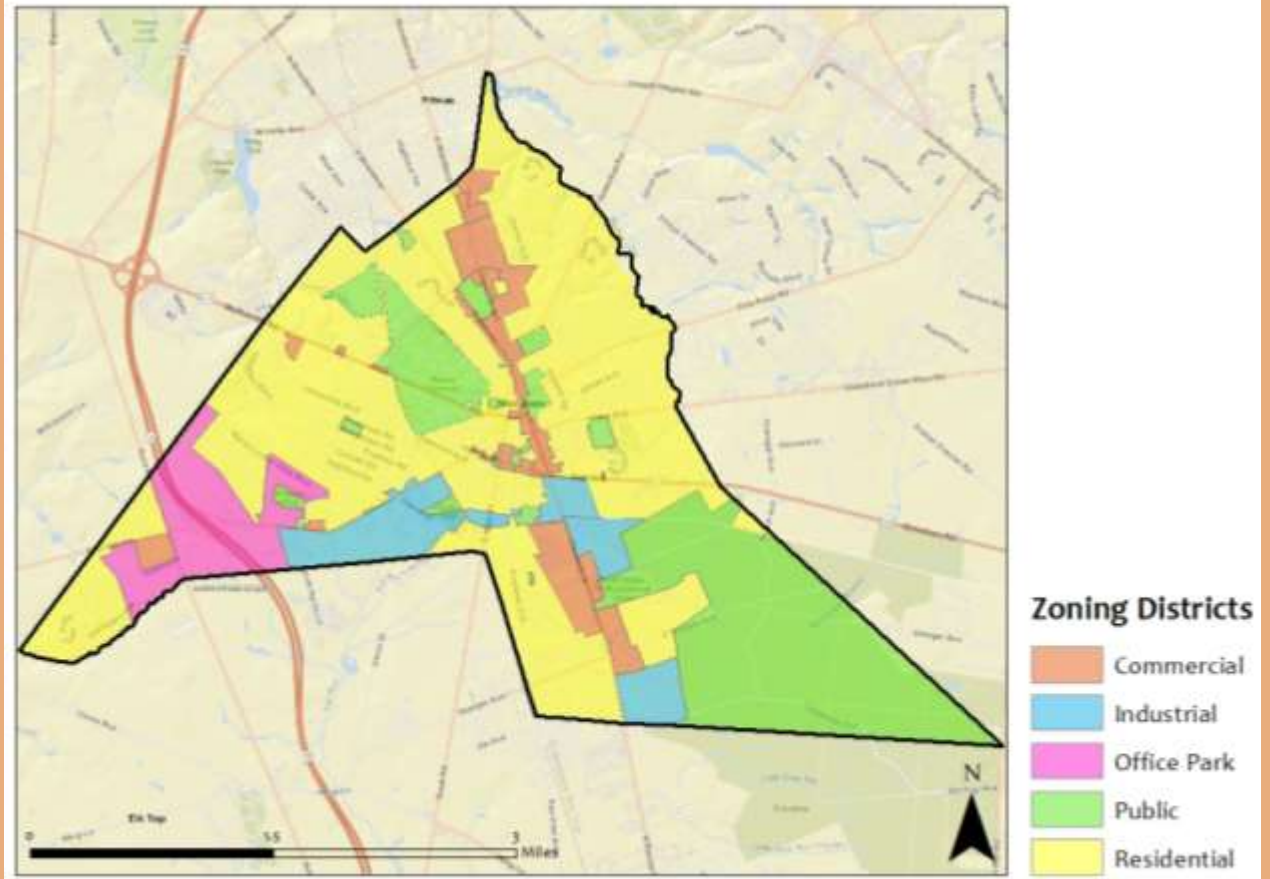
Glassboro contains a large amount of public land. Rowan University and the Glassboro Wildlife Management Area are the two largest examples of this land, covering the central and southeastern parts of the municipality. There are other smaller examples scattered throughout the Borough, mainly consisting of schools and parks.

Commercial land uses are largely concentrated on Delsea Drive, specifically near the western part of Route 322 and around the Rowan Boulevard/High Street area. Industrial zones are concentrated in the southern portion of the borough and residential zones make up a sizable portion of the total area. These residential zones are concentrated along the main roads aforementioned with the commercial zones between them. These residential areas also closely border certain sections of the University.

There are several plots of unused land scattered throughout the Borough. One of the most sizable of these is the lot on the corner of Higgins Drive and Lincoln Boulevard. This lot used to be the location of the Bentley Woods Apartments, a low income housing development that was razed sometime between 2014 and 2019. This lot abuts another low income housing complex: Whitney Crescent.

The most notable public green spaces are New Street Park (adjacent to Dorothy L Bullock Elementary School), Glassboro Town Square, and the Parks and Recreation area on Delsea Drive. Additionally, there is a small public lot on Park Avenue. There is another small park on Looney Road but it is in the R-1 Zone and may be privately owned by the adjacent housing development. The large majority of wooded

Glassboro Zoning Districts



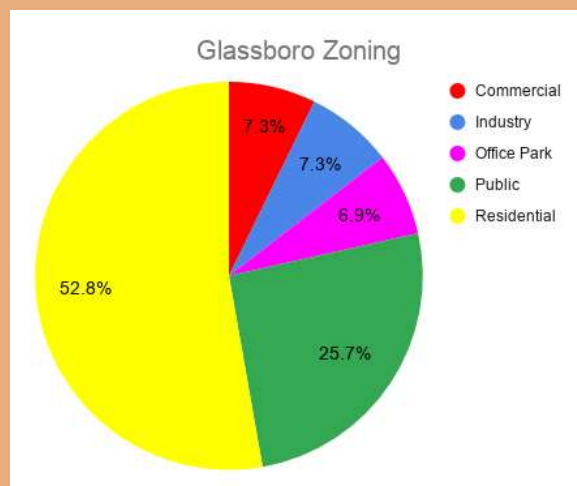
areas are scattered throughout the Borough in different residential zones.

Zoning ordinances restrict agricultural activities in certain areas, mainly prohibiting the use of community gardens and greenhouses. Some zones have stricter restrictions than others in regard to the growing and sale of crops. Table 3.1 explains which areas allow the growing/sale of crops for the purposes of this project and which areas prohibit it.

Though agricultural uses are permitted in residential zones, there are restrictions in the zoning ordinance in terms of housing animals and livestock in one's backyard. To summarize the ordinance, only those on lots four acres or larger are permitted to keep live animals. The parcels of land that meet these criteria must also ensure that the proper setback requirements are followed.

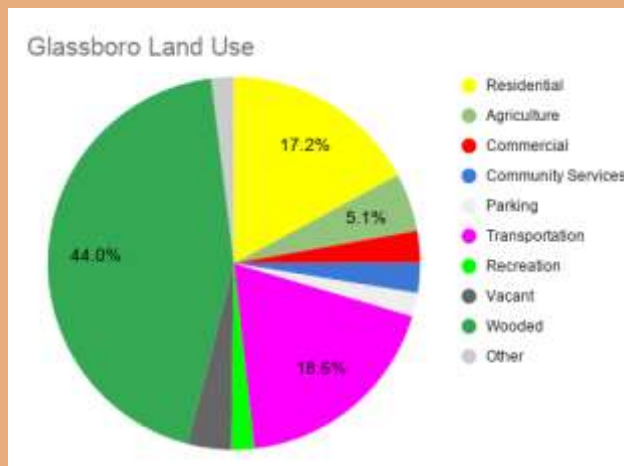
| Label | Name | Allows Agriculture-related Uses? |
|-------|-------------------------------------|---|
| C-1 | Neighborhood Convenience | No |
| C-2 | Central Business | No |
| C-3 | South Delsea Drive | Mobile Vendors are permitted conditional uses |
| C-4 | Highway & Automotive | Mobile Vendors are permitted conditional uses |
| C-5 | Shopping Center | Mobile Vendors are permitted conditional uses |
| C-6 | Highway Business | Mobile Vendors are permitted conditional uses |
| I-1 | Office Park & Light Industrial Park | Mobile Vendors are permitted conditional uses |
| I-2 | Industrial | Mobile Vendors are permitted conditional uses |
| OP | Office Park | Mobile Vendors are permitted conditional uses |
| P | Public | With approval from corresponding organization |
| R | Single Family & Senior Citizen | Permitted Accessory Use |
| R-1 | Single Family | Permitted Accessory Use |
| R-2 | Medium Density Residential | Permitted Accessory Use |
| R-3 | High Density Residential | Permitted Accessory Use |
| R-4 | Garden Apartment | No |
| R-5 | Low Density Residential | Permitted Accessory Use |
| R-6 | Low Density Residential | Permitted Accessory Use |

Table 3.1: Glassboro zoning categories and their agriculture-related uses



Land Use

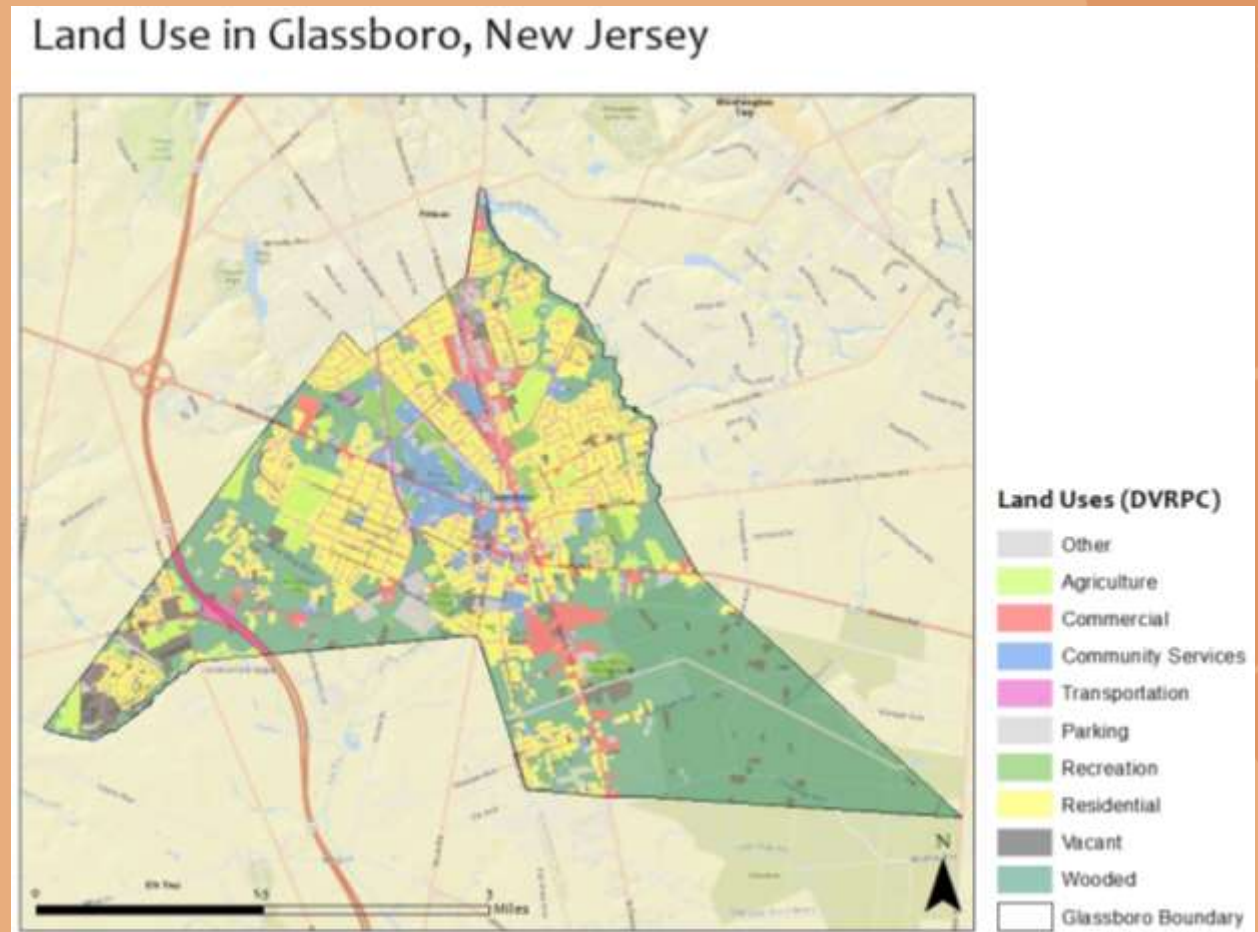
Land use is relatively consistent with the municipality's zoning; however, there are several things to consider. Wooded land is the primary land use within the Borough, with close to half of the municipality identified as such. A large portion of this land can be found in the Glassboro Wildlife Management Area, a publicly zoned area located in the southeast region of the municipality. Other heavily-wooded sections can be found in the southwest portion of the borough, which consists of residential, office, and industrial zones.



Most of the existing agricultural land in Glassboro can be found in residential zones. This is because agricultural uses are considered permitted accessory uses in most of the residential zones. Consistent with the locations of the residential zones in the borough, the agricultural uses are

located mostly in the western and northeastern portions of the area. The land used for community services is primarily concentrated near the center of the borough where Rowan University's campus is located. There are additional pieces of community service land uses scattered throughout Glassboro but these are generally smaller plots. Glassboro has numerous small plots of vacant land scattered throughout, with the highest

concentration being found in the southwest and southeast portions of the borough.



Public Transportation

Buses are the main form of public transportation. Based on the “Bus Transportation in Glassboro” map, the bus routes typically utilize the major roads in the borough, such as Main Street, Delsea Drive and Route 322. These routes mainly run through the center of the municipality, traveling in the northern and southern directions of the municipality. The routes intersect the borough, leaving the areas west and east of the main routes relatively devoid of public transportation options.

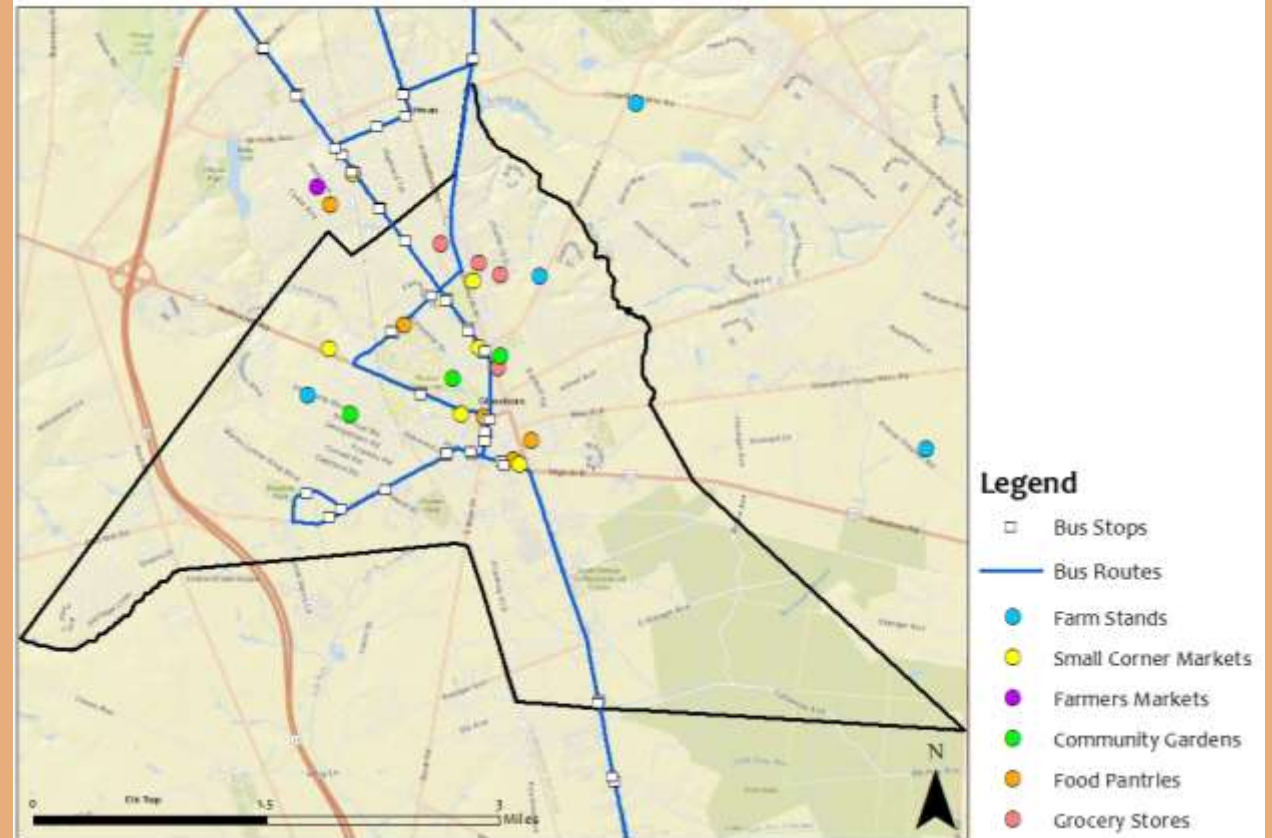
The majority of bus stops can be found on Main Street, but there are also additional stops in the center of town on High Street. The bus route follows Ellis Street and loops back near the low-income housing of Whitney Crescent, providing those residents with numerous bus stops.

Many of the food assets in Glassboro are located relatively close to a bus stop; however, there are some exceptions. The Heritages on Route 322, the Summit City Farm and Winery, and the Chestnut Ridge Garden of Love are about $\frac{3}{4}$ of a mile walk from the nearest bus stops whereas the Shoprite, Aldi, and Lidl are around a $\frac{1}{2}$ to $\frac{3}{4}$ mile walk. Unfortunately, the main commercial area that hosts these grocery stores is distanced from bus stops. Rowand’s Farm Market, which is adjacent

to this commercial area, is also slightly over 1 mile away from the nearest bus stop.



Bus Transportation in Glassboro



Food Environment

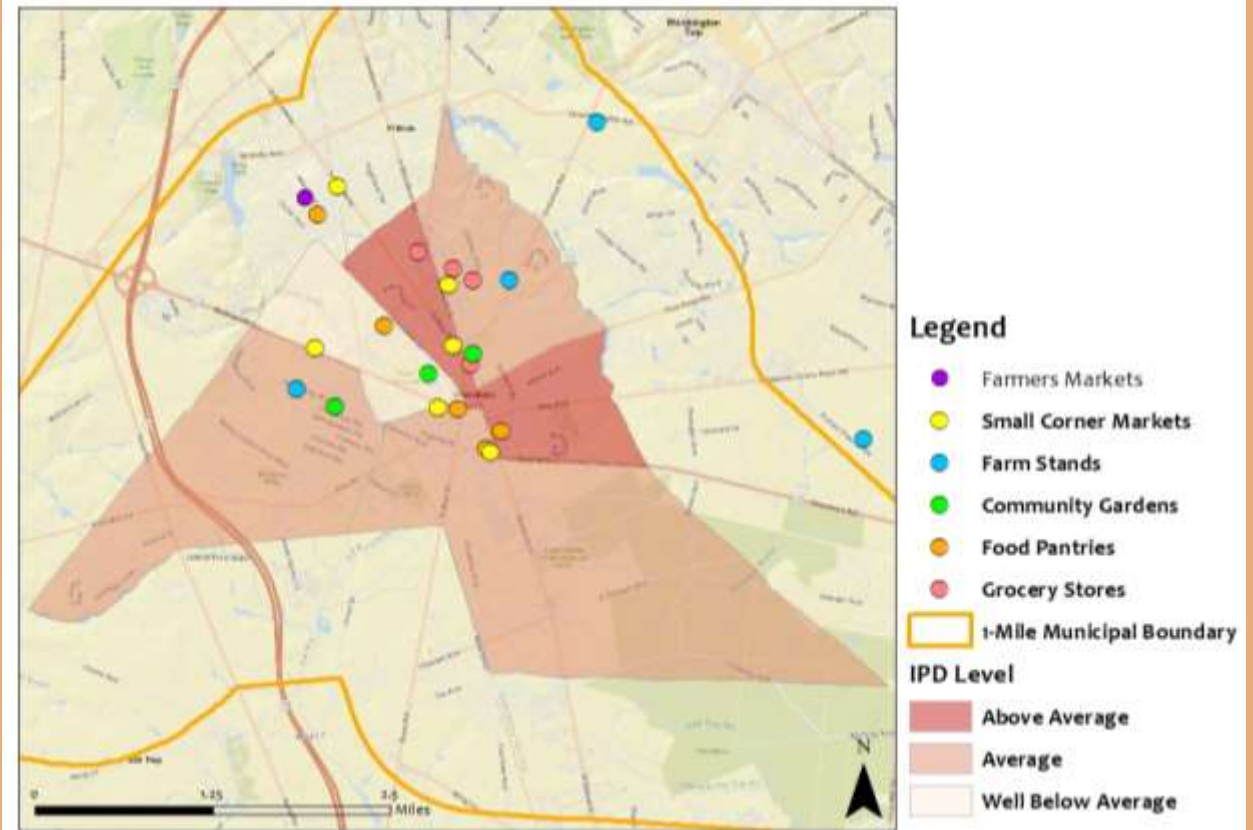
Existing Conditions

Glassboro is home to a wide variety of food sources, ranging from grocery stores to fast food restaurants. Historically, these sources have developed along the Delsea Drive Corridor, with all of the grocery markets being located along this stretch; however, with the recent development of Rowan Boulevard, more restaurants have opened in this central location. While many options exist, not all provide for healthy and affordable options. According to the City Health Dashboard, 70.3% of Glassboro residents had limited access to healthy food in 2015. Generally, it seems there is a higher concentration of fast food restaurants and small markets/delis that only provide snack and buyable meals, with fewer venues providing a full-range of groceries. Glassboro's food environment is also highly dependent on its geography and infrastructure layout, with many locations being difficult to access for certain groups of people. Delsea Drive, specifically, acts as a divider within the town, requiring a vehicle to get across safely in many locations, especially for elderly and disabled populations. This can become an issue as the grocery locations become less accessible to certain residents living on the opposite side of the road.

Most commercial activity within Glassboro is located along main roads such as Delsea Drive, Route 322, and in the downtown area near High Street. These larger commercial areas typically host most of the food venues within the municipality. Throughout Glassboro, there are three large supermarkets located in close proximity to each other on Delsea Drive: Shoprite, Lidl, and Aldi. Shoprite and Aldi are both located on the eastern side of the main road, with Lidl being on the west. This

concentration requires most residents to travel by car to these locations, as they are distanced from most residential areas within Glassboro. Unfortunately, these grocery stores are also located away from most of the low-income populations. Only one of the grocery stores is located within above average IPD tracts, Lidl, which was recently built. However, it still is a fairly distant location from most residential areas, especially in terms of walking access. A Save A Lot was historically located further

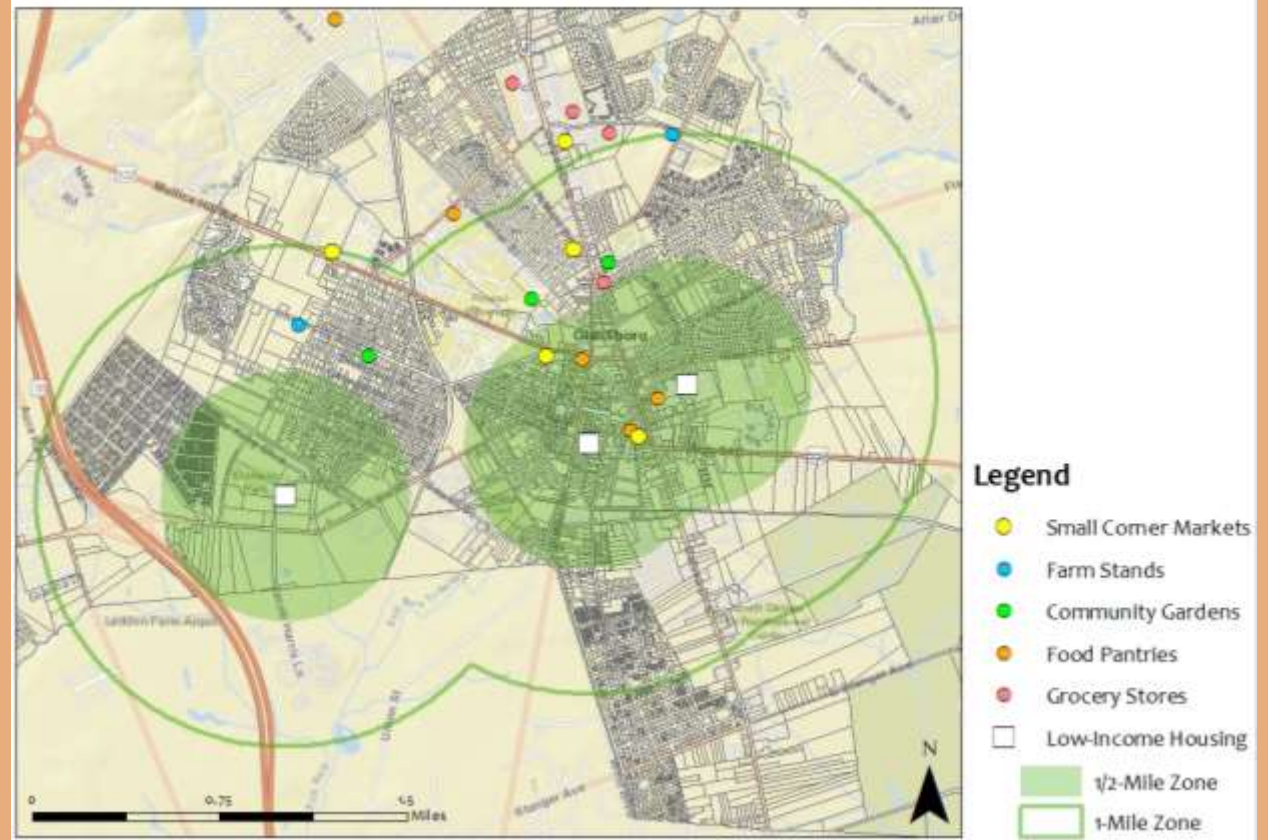
Glassboro Food Sources with IPD Scores



south on Delsea Drive, but this has since closed. There is also an Acme located further south on Delsea Drive toward Clayton, but this location also requires a car or bus to reach.

Glassboro has a large number of smaller markets and delis that provide snack and lunch options; however, they generally lack the necessary inventory for residents to shop for their weekly groceries. Like most of the food sources in Glassboro, a lot of these small markets are located along Delsea Drive near the commercial developments. Wawa and Glassboro Deli and Produce are placed along this route with a number of other small delis and markets. One Stop Shop, Xpress Mart, and Heritage's are also located closely along Delsea Drive. There is another Heritage's on Route 322, with the Bagel Express and Mini Mart located on this road as well. Near Rowan Boulevard, there is a 7-Eleven that is mainly used by students. On the nearby High Street, there is also Casa Rocies, a small Mexican grocery store. Although these small markets are abundant in Glassboro and spread throughout the municipality, none of them are truly considered viable resources for healthy food. The small markets mentioned are usually visited for quick food and unhealthy snacks, due to their convenience and variety of offerings. These can be healthier than fast food restaurants depending on what the customer decides to

Low-Income Housing Spatial Food Access



eat there, but it wouldn't be healthy nor economically sustainable for residents to shop for groceries at these places. Additionally, these markets tend to be located closely to more disadvantaged areas and low-income tracts. Most of the options within a mile distance of low-income housing developments are small corner markets.

There are many chain fast-food restaurants on Delsea Drive, including Wendy's,

McDonald's, Smashburger, Pancheros, Burger King, Taco Bell, Saladworks, Popeyes, Jimmy Johns, Crown Fried Chicken & Gyro, and Checkers. These restaurants are cheap and quick, but are generally unhealthy and are located in areas that would require residents to travel by car. Located in Glassboro are two diners, Angelo's Glassboro Diner and Monarch Diner, located on North Main Street and Delsea Drive respectively. Throughout the municipality, there are a decent amount of

take-out and dine-in restaurants located on Delsea Drive, High Street, and Rowan Boulevard. Again, these range in price and do not always offer healthy food options. The only two restaurants that are near the west side of Glassboro on Route 322 are Ciconte's Pizza and Hunan Wok.

Unfortunately, both these fast-food chains and small markets tend to be located within the lower-income tracts of Glassboro, highlighting that these populations generally have less access to healthy food options. Low-income and low-access neighborhoods are primarily located along Delsea Drive where most of these fast food restaurants are placed. The grocery stores are as well, but are concentrated on the northern section of Delsea, in tracts that have average IPD levels.

Healthy Food Options

When searching for healthier food sources in Glassboro, there are currently three community gardens: the Rowan University Community Garden located on campus near the Edgewood Park Apartments; the Chestnut Ridge Garden of Love on University Boulevard; and the Bullock Garden Project on Market Place. Rowan's Community Garden has existing plots that are available for students to grow their own produce, though they are not popular and rarely see any use. The Garden of Love Community Garden is run by the Mercy

Hill Presbyterian Church and available to church members and nearby residents growing their own food. The Bullock Garden Project works through multiple locations, including the Dorothy L Bullock Elementary School and the upcoming Glassboro Community Garden on South Academy. Additionally, the group provides education for Glassboro residents on home gardening. There is also a produce wholesaler, Eastern Propak LLC, on Ellis Street near Whitney Crescent.

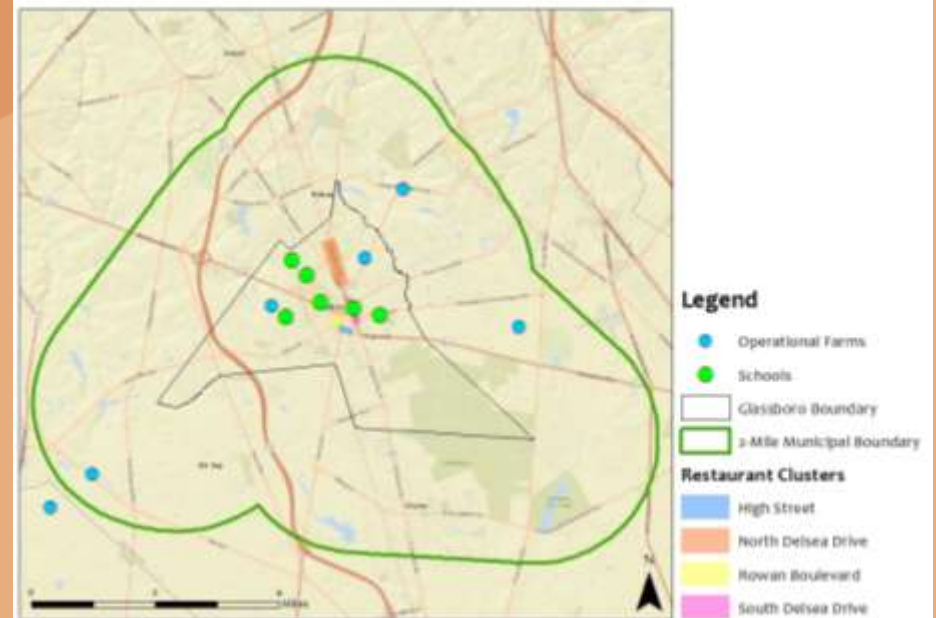
Numerous community organizations operate food pantries in Glassboro: the Glassboro Food Bank on High Street, the Hollybush Neighborhood Center in Hollybush Gardens, the SHOP Food Pantry and Resource Center in the Rowan Boulevard Apartments on Redmond Drive, and Philabundance Food for All in Lot D of Rowan University. Each of these operations aim to gather food donations and ensure that they are provided to nearby families in need.

Farmer's markets may supplement these food sources, and the nearby town of Pitman

has an operational farmer's market. Additionally, the Borough of Glassboro is attempting to start their own farmers' market, but COVID-19 delayed this project.

There are a number of farms located in and around Glassboro, with most located in the lower-density outskirts of the municipality. Within Glassboro there are two farms, Rowand's Farm and Summit City Farm. Rowand's Farm is located on the east side of Delsea Drive, close to the local grocery stores and commercial areas. Summit City Farm mainly operates as a winery, but still grows some produce and fruits. This farm is located near the end of University Boulevard, with a large residential area nearby. Both of these Glassboro farms host

Farm-to-School/Restauarnt Opportunities



farm stands and shops for residents to buy their products. Outside of Glassboro, there are a few larger farms whose operations produce higher quantities of fruits and vegetables than those inside the boundary. These outside farms are still decently close to the municipality and could easily be included in any future farmers markets or farm-to-table programs. These include the Muth Family Farm and Duffield's Farm, both of which are located within two miles of Glassboro and have stands and markets to sell their goods. There are also two farms located southwest of the municipality in Monroeville, Fruitwood Farms and Cassaday Farms. These both have farm stands open for selling their goods when weather permits.

New Initiatives

The Borough of Glassboro has been taking steps to improve the food environment within the town, focusing on programs and projects that aim to spread food equity. First, through a partnership with the Bullock Garden Project, the Borough established a community garden close to the High Street area of Glassboro on South Academy Street. This garden features 31 plots that are available for purchase at a price of \$40 dollars each, with five plots set aside for seniors and disabled individuals. The plots are owned through this annual membership fee and are open to all; however, Glassboro residents are given

priority for plot reservations. The garden will be open from April 1st to November 30th.

The Borough has also created partnerships with Rowan University with a goal of tackling food insecurity within Glassboro. Through the "Rowan-Glassboro Neighbors Table: Partners Sharing Food to Build Community," food made by Rowan's Gourmet Dining is delivered to families in need by Rowan students. The program prepares up to 200 meals each week. This builds upon "Food Recovery Network" run by Rowan Students in coordination with Gourmet Dining. The dining hall staffers pack up the perishable food and student volunteers deliver it to four different shelters serving families in-need. In the Fall 2020 semester, nearly 2,000 pounds of food was donated through the program. The university also hosts the "Fresh for All" program which is led by Philabundance to provide free fresh fruits and vegetables. The weekly drive-thru at Rowan's parking lot D serves up to 185 families a week. Rowan's Community Engagement & Commuter

Services also leads the "Adopt a Family" program, which provides full Thanksgiving food baskets, plus gift cards, to up to 180 families each year. These baskets are donated by Rowan community members and distributed to local families through multiple community organizations.



Community Assets

Glassboro has several schools of varying grade levels scattered throughout the borough. The J Harvey Rodgers School, which is a pre-kindergarten and kindergarten school, is located on Georgetown Road in the middle of a large residential area just south of Route 322. The Dorothy L Bullock Elementary School is located on New Street in the eastern side of the municipality, adjacent to the New Street Park. The Thomas E Bowe School is located on Ruth Mancuso Lane and teaches 4th-6th grade students. The Glassboro Intermediate School is located just to the east of the town center on Delsea Drive and teaches 7th and 8th grade students. The Glassboro High School is located on Joseph L Bowe Boulevard, just west of Rowan University's Campus.

Rowan University's main campus is located in the center of the municipality just north of Route 322. According to Rowan University's website, the school has about 19,678 students currently enrolled and according to collegedata.com, 63% of students either commute or live off of the nearly 200-acre campus. In recent years, Rowan has expanded their campus size with the Rowan Boulevard Project. Rowan Boulevard is a road located off of the Route 322 circle that features mixed-use

development with commercial storefronts on the ground floor and student housing/offices on the upper levels.

Rowan University also has a plan known as the "University of the Future," which outlines how the university will be changing in upcoming years. This includes new renovation and construction projects around the campus, as well as pricing models. The "Flexible Workforce" section outlines the University's plans for a more flexible work environment, specifically in terms of telecommuting. This will not only have an impact on campus traffic, but also on the Glassboro community at large. The Diversity, Equity, and Inclusion Scholarship will also allow more financial aid to students and more representation to minority groups.

The University is an asset to the community and serves as an anchor institution for the Glassboro area, having provided employment and educational opportunities to the community. The University has been working with the community for years, establishing a relationship between those on campus and those permanently living off campus in the Glassboro area. The implementation of Rowan Bucks, which is a form of currency exclusive to Rowan Students, is accepted in many off-campus businesses, which is just one example of the University's effect on consumers and businesses throughout the borough.

Glassboro also has a large number of churches scattered throughout the borough which can be found primarily in residential areas. Although some can be found on main roads and on bus routes, a large concentration of churches can be found in the center of town in the area south of Route 322 and Rowan Boulevard. Some examples of these include Mount Olive Christian Community Church, Saint Thomas' Episcopal Church, Trinity Bible Church, Greater Promise, and New Philippian Baptist Church. The Glassboro Public Library, located in the center of the borough on Center Street adjacent to the fire department, has been connecting Glassboro residents with educational and entertainment resources for over 60 years.

Glassboro has a number of public parks, including the New Street Park on New Street adjacent to the Dorothy L Bullock Elementary School. This park has multiple large sports fields as well as a wide variety of open grassy areas. The Glassboro Parks & Recreation Area is located on Delsea Drive in the southeast corner of the municipality, and it features numerous sports fields and playgrounds. Though not necessarily a park, the Glassboro Town Square, located in the middle of the borough near Rowan Boulevard, has a decent amount of public space with seating and landscaping.

There are several health services in the area for both physical health and mental health.

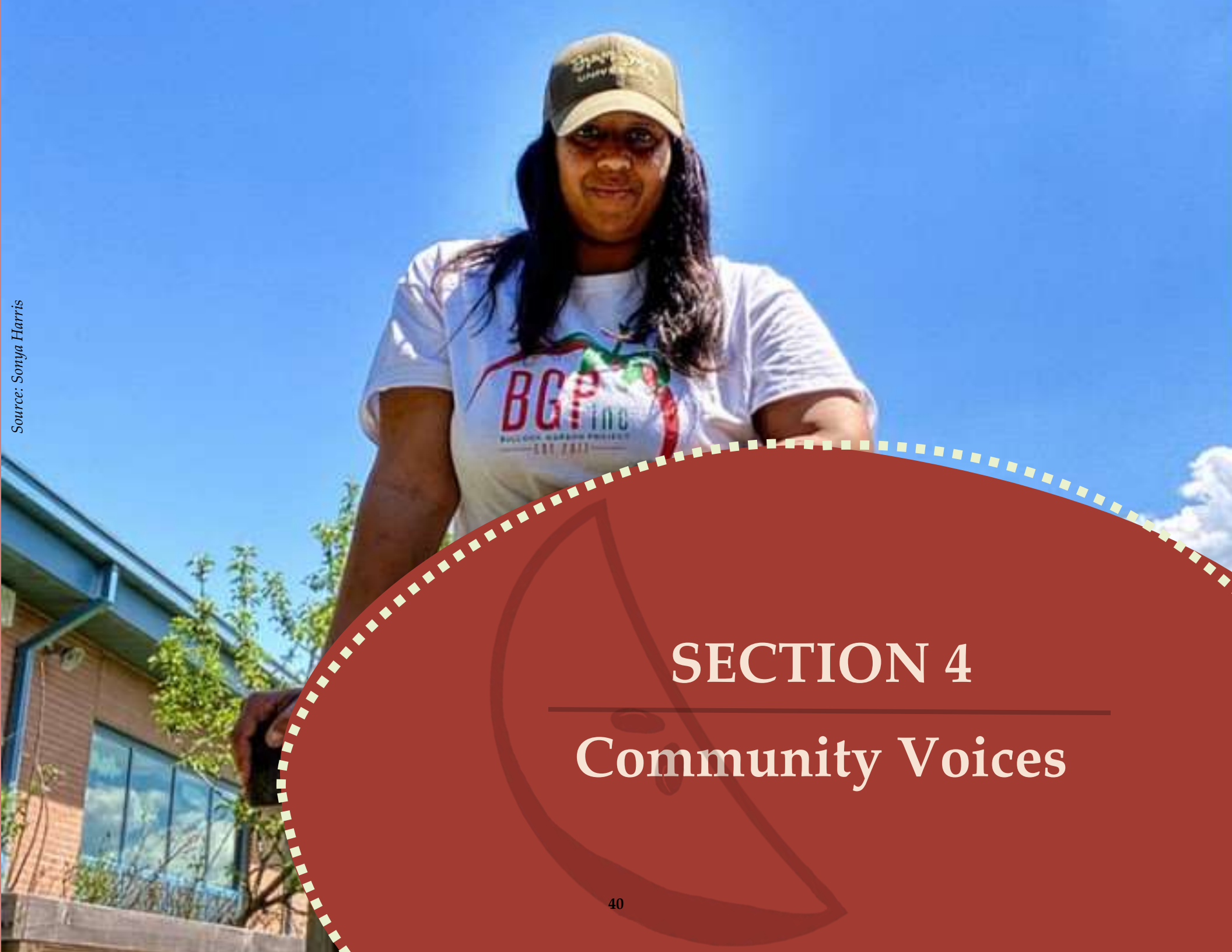
For physical health, there is the Inspira Urgent Care and Inspira Health Care on Rowan Boulevard, the Happy Healthy You Family Medicine medical clinic on North Main St., the Acenda Integrated Health Community Health Center on Ellis St., and the Care Right There Home Health Care Center on Market Place. For mental health, there is the Artemis Center for Guidance on North Main St., the Acenda Integrated Health mental health service on Delsea Drive, and Doors of Growth Counseling on Market Place. Rowan University students also have access to the Rowan University Health and Wellness Center for physical and mental health needs.

Finally, several non-profit organizations serve as community assets:

- The Bullock Garden Project, located on Market Place, helps to provide the community with healthy and affordable food options by planting community gardens while also educating the public on growing healthy foods;
- The Glassboro Boys and Girls Club on Ellis Street provides programs and activities for children in the community;
- The Southwest Council LLC on Main Street encourages drug and alcohol abuse prevention; and
- The American Relief Foundation Car Donation on Grove Street provides the community with affordable cars.

Concluding Remarks

Glassboro residents may face when searching for healthy food sources. Based on sociodemographic analyses, Glassboro contains pockets of poverty and other indicators of disadvantage; simultaneously, these areas also lack the prevalence of grocery stores, which generally provide the most access to healthy food and use and zoning maps indicate that Glassboro lacks large amounts of agricultural land and has lost potential plots to expanding development. Therefore, we hope to urge residents to participate in home gardening and local community gardens, as well as a variety of food education programs. As there are a small number of community gardens in Glassboro, these are the main projects we are pushing going forward.



SECTION 4

Community Voices

Introduction

To understanding the Glassboro community's outlook on food equity, security, and the overall access to food and healthy foods, the project team captured community voices using the following five methods:

- **Community survey:** The Glassboro Food Equity Survey, developed in February of 2021, assessed local experiences with Glassboro's food supply and opinions on their perceived food situation (47 respondents). Glassboro Grows participant survey: The project team partnered with the Glassboro Food and Health Equity Project to analyze an online survey conducted in February 2021 with participants of their Glassboro Grows program (20 participants).
- **Stakeholder interviews:** Stakeholder interviews with various experts working in the Borough including Rowan students and staff, as well as members of Glassboro boards and programs throughout the town. The goal of these interviews was to gain

an expert's view on the current food situation throughout Glassboro and to find out what suggestions these community members could offer us.

- **Stakeholder focus group:** The project team partnered with the Glassboro Health Equity Coalition to attend a focus group-style meeting to discuss the problems Glassboro residents face and the possible solutions to address these issues. The Glassboro Health Equity Coalition consists of community members, local organization/business representatives, and individuals involved in local and county governments.
- **Student focus group:** The project team conducted a focus group with five Rowan University students and one professor. The discussion revolved around food and information equity in Glassboro, specifically from the view of Rowan students.

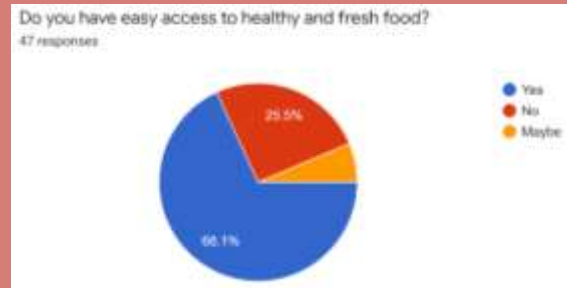


Community Survey

The Glassboro Food Equity Survey gathered input from Glassboro residents on their current food situation and Glassboro's food supply. This survey evaluated public perceptions of food accessibility, specifically with regard to healthy food. The chosen questions were geared towards understanding individual food security and public opinion on the town's food supply.

The plurality of survey respondents (48%) were between the ages of 46-65. The next largest cohort (21%) were between 31-45. About 63% of respondents own their home, indicating that they do not have to ask a landlord or owners association if they can grow food on their own property. Approximately 21% of respondents rent their homes, meaning they may have to request permission to plant and grow food outside. Additionally, three people live with other relatives that pay the cost of the home. A large majority of respondents (73.7%) report income below \$50,000, with 36.8% making under \$25,000. Remaining respondents (26.3%) report income between \$51,000 and \$75,000. All responses came from

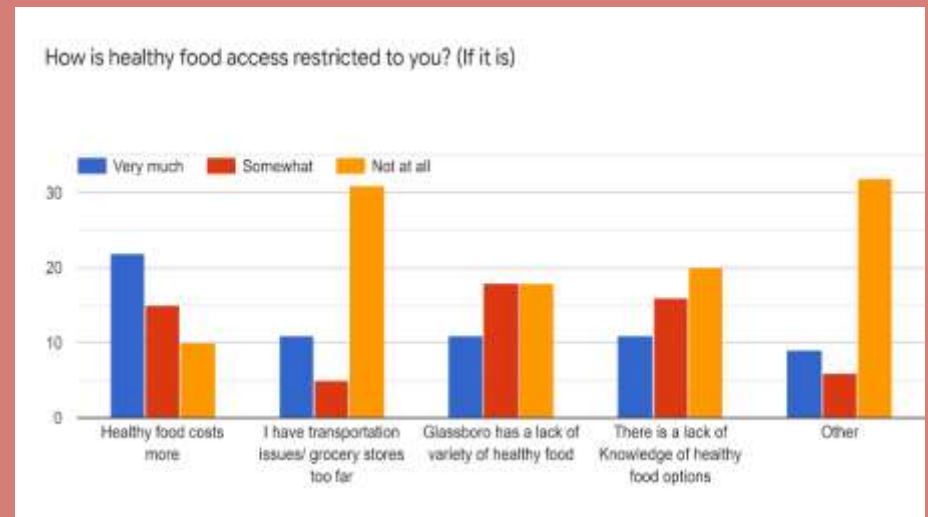
individuals with annual household income below the median of New Jersey (\$85,751). Fourteen respondents identified as White (non-Hispanic), three respondents identified as Black or African-American, and two responded as Hispanic or Latino.



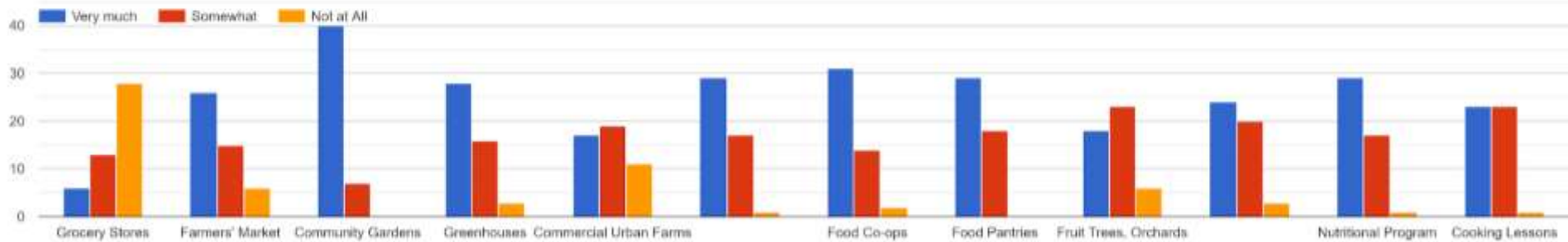
Of the 47 respondents, 12 (25.5%) indicated that they do not have access to healthy and fresh food, and three (6.4%) indicated that they may not have access to healthy and fresh food.

The most prevalent barrier residents face in accessing healthy food is cost; 22 respondents (46.8%) indicated they were very restricted and 15 respondents (31.9%) indicated they were somewhat restricted. Transportation

seemed to be the least prevalent issue, with only 11 respondents (23.4%) indicating they were very restricted and five respondents (10.6%) indicating they were somewhat restricted. A lack of variety and a lack of knowledge brought roughly the same results, though respondents were slightly more restricted in terms of variety. Those who responded "other" indicated that food pantries only offer canned foods and not necessarily healthy foods. Some also brought up the fact that school lunches are not very healthy as well. Another common response highlighted the lack of healthy food stores in Glassboro, with the current venues not accommodating all diets. One person also mentioned that community gardens do not give access to everyone.



What projects or programs are needed for Glassboro in order to achieve food equity?



The next question depicts respondents' opinions on the programs and projects needed to promote food equity in Glassboro; a large majority of respondents (40 respondents, 85.1%) indicated that Glassboro needs community gardens. Other projects and programs that respondents felt Glassboro needs to incorporate are food co-ops (31 respondents), nutritional programs (29 respondents), food pantries (29 respondents), home gardens (29 respondents), greenhouses (28 respondents), and farmers' markets (26 respondents). The project that respondents indicated as least needed was grocery stores followed by commercial urban farms and fruit tree orchards.

Twenty-three respondents recommended other programs and projects that they felt could achieve food

equity in Glassboro. Several respondents indicated a need for schools to become more involved, whether it be through farm-to-school programs, healthier school lunches, educational programs for growing food, or Rowan University expanding their food equity efforts beyond their students with the SHOP program. Other respondents indicated a need for restaurants and farms to donate unused food instead of letting it go to waste. Ideas to address concerns with transportation were also shared, with one resident suggesting "transportation options--ride sharing, sponsored shopping trips, delivery services." Some other common themes were community fridges, educational programs, and midsize healthy grocery stores.

Respondents had a wide variety of suggestions, with many of them

mentioning "educational programs on nutrition and fitness in all schools" as well as "convenient nutritional 1:1 consultations and healthy soul food alternatives". It was clear that education programs and community food knowledge was an important topic as well as the incorporation of many "farm-to-school" and "farm-to-table" programs throughout Glassboro. The popularity of school programs and education programs highlights the need to educate the youth and other members of the community in order to increase awareness of healthy food production.

One interesting response was "New programs to divert farm food losses into the community. Earned Revenue models like BGP's are innovative and ready to learn from and scale. This is another opportunity to demonstrate state-wide leadership." This response is

unique in that it presents how a local organization's model can serve as an example for other organizations in and around Glassboro.

Based on the responses received from the survey, it is evident that community gardens are widely regarded as effective projects throughout the community. Many respondents noted that these community gardens could be placed throughout various areas around Glassboro. This could also be bolstered by the inclusion of healthy food stores and farmers' markets around the town. Many residents also expressed a belief that educational programs would be highly beneficial to the town, suggesting that culinary and agriculture classes should be implemented throughout the community. By doing so, residents could form a better understanding of the local food supply and organic food production throughout Glassboro.

When asked if they had any additional comments about food equity in Glassboro, many respondents emphasized the importance of protecting the children of Glassboro from food insecurity; one respondent observed: "people like me don't like to talk about it but experience food

insecurity all the time. I think food is a right but many people and many children in our community don't have access to food (let alone healthy food) all the time, kids go hungry and we need to do more collectively." Many other respondents indicated the need for educational programs that teach about healthy food choices and home gardening. A lack of cold storage for some residents was also mentioned as a concern.

Another common theme that emerged from these responses was the role of local farms, specifically through farm-to-table and farm-to-school programs, stating that they could help address food insecurity in the area. This would also include supporting local farms so that these programs can be established in a sustainable and efficient way. Though not everyone that responded to the survey faces food insecurity themselves, many expressed a willingness to help those that are. Though some responses mentioned specific ideas like a social network and peer group, one resident emphasized the broader goal of ensuring that each project serves a purpose and contributes to addressing food insecurity.

"Community gardens provide for community cohesion, physical activity and a fun and fulfilling way to spend time while enabling a less expensive way to provide healthy food choices."
– a resident

"Gardening is good for the body and soul, it yields not only food but strength and confidence. Growing something is a great experience for kids; a garden can be a family activity and kids are more likely to eat the things they grew."
– a resident

“Glassboro Grows” Participant Survey

In partnership with the Glassboro Food and Health Equity Project, sponsored by New Jersey Health Initiatives, an online survey, conducted in February 2021 with participants of their Glassboro Grows program, assessed residents’ food consumption habits and access to food resources in Glassboro. The Glassboro Grows survey received 20 responses.

Nearly 40% of respondents had shopped for groceries at Shoprite, 26% at Aldi, 13% at ACME, 8.7% at Sam’s Club, and 8.7% at grocery stores not listed on the survey. Approximately 4.35% of respondents have shopped at Bottino’s and 2.17% of respondents stated that they do not regularly shop at grocery stores. The popularity of Shoprite and Aldi may be credited to their central location in Glassboro as well as their proximity to public bus transportation routes.

Of the respondents who reported buying food from convenience stores, approximately 39% buy their food from Wawa and 21.75% from Heritage Farm. However, in terms of purchasing “healthy-food”, neither of these stores have an affordable price for healthy options to

purchase, and these stores are typically where you go to buy cheap, and mostly unhealthy food.

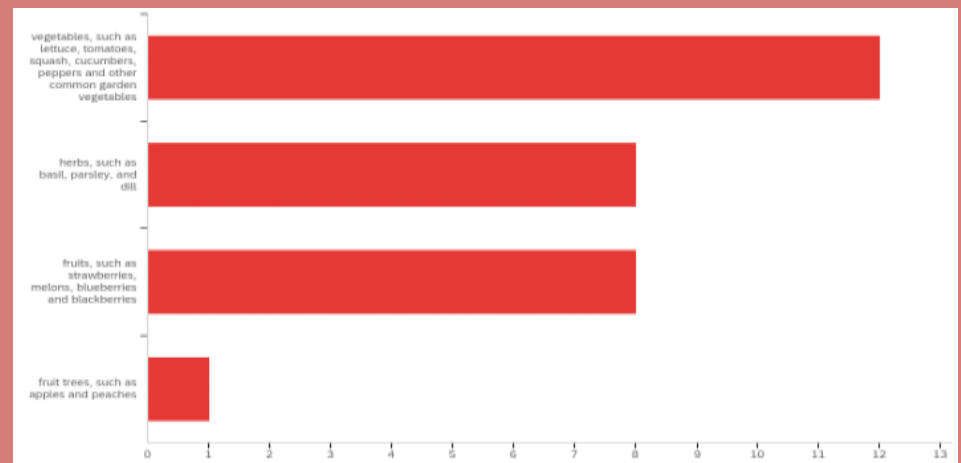
Six respondents indicated that they do not purchase produce regularly from farmers’ markets. Of the remaining participants, 28% shop at Duffields, 12.5% at Moods, 9% at Rowand’s and the Mullica Hill Amish Farmers Market, and 3% at the Pitman farmers’ market and Grasso Girls. Other farmers’ markets listed were Verchio’s Produce Outlet and the farmers’ market in Williamstown. The responses to this question indicate that the majority of respondents purchase food at a farmers’ market.


About 60% of respondents surveyed indicated that they do not use food pantries, though many families in Glassboro used food pantries in the last year as a way to make ends meet. Of the 40% that do utilize food pantries, 10% use the Samaritan Food Bank, 5% use the Pitman Pantry, and the remaining 25% use another food pantry. The pantries included in the written responses were: Healing wings church food pantry, Matt Blatt Food Distributions, the Senior Meal Program

at Rowan on Fridays during the month of December, and Philabundance.

The overwhelming majority of participants have access to a vehicle for their food shopping. These responses counter the responses that we have received from the interviews, asserting that transportation may not be an issue in terms of acquiring food equity.

Nearly 68% of respondents reported experience growing their own food. Twelve participants responded that they have been growing vegetables such as lettuce, tomatoes, squash, cucumbers, peppers and other common garden vegetables; eight respondents stated that they grow herbs, such as basil, parsley, and dill; eight respondents grow fruits, such as strawberries, melons, blueberries and blackberries; finally, one person indicated that they grew fruit trees, such as apples and peaches.





The majority of participants surveyed indicated that they have available outdoor space for food production. Twelve respondents have the ability to grow on their porch, deck or patio, while 18 can grow food in their backyard and six can grow food in their front yard. Only one respondent indicated that they lack the outdoor space to grow food. Eighteen participants indicated they are able to grow food inside their home near a window, using small containers to grow vegetables, fruit or herbs.

Stakeholder Interviews

Following resident surveys, the project team conducted stakeholder interviews, gathering responses from various members of the Glassboro community including Rowan professors, graduates, Glassboro board members, and long-time residents of the town. These 17 interviews took place in February and March of 2021. Our team focused on finding information about our interviewees' background, their connection to Glassboro, their opinions on the food system in Glassboro, as well as any Glassboro projects that they have personally participated in.

About the Interviewees

The participants in our stakeholders interviews represent a diverse pool of Glassboro residents including the program director for the Family Success Centers at Acenda Integrated Health, members of Glassboro First United Methodist Church, a member of the Board of Health Committee of Glassboro, a Glassboro councilwoman, the Director of Public Relations and

Business Development, and representatives from Nexus Properties, the Glassboro Boys and Girls Club, Creative Glassboro, and the Bullock Garden Project. Other interviewees include students and professors from Rowan University, several residents of various professional backgrounds (a tax assessing officer, an aid in the special needs department, a board of directors' member for Mosaic), and local farmers.

Interviewees were selected based on their experience working on projects addressing food equity issues in Glassboro. These include initiatives and projects that are bringing more farmers' markets to the community, working on better transportation to increase food access, having the health fair every year, working in and around the green team (green initiatives), putting fridges in Rowan buildings with free food for the public, food banks, container and raised bed gardening, and food preservation (i.e., canning and pickling). Some of the local farmers that we interviewed told us that they donate some of their excess crops to those in need, like senior homes. They allow residents in need to pick their own produce. One of the councilwomen interviewed worked to educate the public on healthy food

options around Glassboro. Most of the interviewees had many years of experience within Glassboro, and have lived or worked in the general area for decades. Alongside their experience, each have had their unique contributions to the town, with a wide variety of occupations and specialties.

Each individual has interacted extensively with the local public and has had experience with administering programs within the borough. A few participants have led their own projects in which they have grown their own food and distributed their product to various friends and family. Many of the participants have contributed to the Bullock Garden Project, focusing specifically on community gardens and food chain management. While each interviewee presents their own unique experiences, they have all made their positive contributions to Glassboro, improving the overall health and food stock throughout the town.

Understanding Food Equity

Throughout the interviews, the project team sought to gain an understanding of the overall knowledge of food equity from our participants. From the several

interviews that were conducted, we asked our participants for their definition of food equity. The responses to this question ranged in complexity, which has greatly helped in forming our understanding of food equity. The majority of participants felt that the term 'food equity' is the idea that every person within the community has an equal opportunity to acquire, obtain, grow and consume healthy food options. This question also brought the common assertion that food equity also involves equal access to knowledge and education of healthy food consumption. The farmers, residents, council members, and organization members stressed that food equity not only involves equal access to healthy food itself, but also equal access to educational resources that allow community members to make healthy food choices. Through a combination of the two, food equity could be achieved.

An interesting perspective on food equity that was shared during the interviews was "Food equity is twofold... On one hand there is a wide variety of healthful food options available located in a close proximity to someone, depending on the most common form of transportation within a

particular area (either walking or driving). Secondly the fiscal availability of that particular location, where the food cost is set appropriately for the median income of a particular area with or without subsidies."

Overall, many of the participants felt as though food accessibility should not be looked at as an amenity, but instead as a necessity. Another interviewee defined food equity as "the ability to acquire and consume an adequate quantity of nutritious food in a sustainable way." A Glassboro councilwoman discussed the food scene in America as a whole, specifically focusing on trends in low income communities. She explained that when you do not have the means to shop for healthy foods at the grocery store, you opt for cheaper options like fast food, which contributes to the obesity problem in the United States. Another important piece of input was the ability for people to access culturally relevant food, as these sources are not always readily available.

Food (In)Equity in Glassboro

To understand perceptions of Glassboro's food (in)equity, we asked participants whether they thought these inequities exist in Glassboro's food environment. A majority of the responses stated that food equity exists in Glassboro to a certain extent due to the several grocery stores like Shoprite, Aldi, and Lidl's located in the municipality, though the recurring theme within responses was the lack of transportation to these stores. As a result of their clustered location and lack of transportation access, these stores are mostly available to residents who own vehicles. A member of the First United Methodist Church stated, "...there are three big supermarkets right on Delsea Drive, also the Glassboro Deli and produce on Delsea. The issue isn't the availability, but it is the transportation and the affordability." According to the interviewees, there are little to no bus routes that lead to these grocery stores, making accessibility very difficult.

In addition, the low-income housing that is located in Glassboro is near a major road which creates accessibility

issues for the residents who need to acquire food by traveling on foot. Another recurring theme is the affordability of these items. Although there are a large number of options, the affordability of these stores can make food access a challenge. The councilwoman of Glassboro stated that "It is more expensive to shop at Shoprite than it was at a Save a Lot just for the basic needs".

In addition to the lack of affordability, there is only one food bank in Glassboro, which is located on High Street. Food banks also tend to have limited food availability and hours, which can become a barrier for someone who is food insecure. When accounting for Glassboro's history, an interviewee expressed the changes that Glassboro underwent in the past decades, stating, "...back then, everybody had gardens, people used to have chickens, and so they had fresh eggs, um, those kinds of things. So they were a little bit more self-sufficient, I believe, as far as food and vegetables." She then followed up by explaining how those self-sufficient traditions have disappeared as the community became disconnected from its agricultural past.

One interviewee stated that there used to be a large issue with food insecurity in Glassboro, but the work of the community and the advancement of technology has helped reduce the problem throughout the years. A representative from Glassboro stated "We used to certainly have problems like anybody else did. But, you know we've been part of resolving the food inequities for some time now. We have multiple large format grocery stores here, they all offer delivery, curbside pickup."

Most of the interviewees asserted that food inequities exist in Glassboro, but there are differing opinions on what is causing it. Some interviewees indicated that there is a shortage of affordable food available in Glassboro, whereas others felt that the borough has healthy food options available but not all residents have adequate transportation to access them. An interviewee also indicated that there is a lack of food banks in the area, while another stated that the restrictions on growing food in yards is impacting the community in terms of food equity. Regardless of the cause, most interviewees recognize that food inequity exists in Glassboro.



Potential Projects for Glassboro Food Equity

From the interviews that the project team conducted, several project/program ideas were proposed by multiple stakeholders:

- More farmers markets were proposed to increase access to local and fresh produce. These markets could also provide greater options at a reduced cost, while also supporting local farmers and the local food system.
- An improved transportation system, with direct routes to grocery stores and other food access points. This would be a method to supplement

low income individuals and families in Glassboro who do not have access to transportation.

- Educational programs centered on the preparation of healthy food. While the Samaritan Center in Glassboro offers classes on growing and preparing your own food, multiple stakeholders pushed for additional resources to educate residents on food preparation and growing methods. Either this current location is not well known or its resources are exacerbated. Increased collaboration with other community agencies could also benefit the community tremendously and expand education on these topics.
- Community gardens; though a new community garden was established in Glassboro in March of 2021, many of the interviewees felt the borough needs more initiatives within the area as only a limited number of individuals can buy a plot of land in the current garden. These gardens serve to enhance community socialization and comradery. If partnered with other community agencies like the United Methodist Church, assistance can be offered to

build garden beds and other useful resources.

- One interviewee also stressed the importance of farm-to-institution programs, suggesting that Glassboro would benefit from establishing such programs, especially in schools. The interviewees from the Glassboro Boys and Girls Club provided similar ideas as other interviewees, but they also brought up the possibility of implementing a health screening system. This would gauge the health of community members so that specific nutritional needs can be addressed.



| Idea | Potential Benefit/Needs | Potential Challenges/Unknown |
|--|--|--|
| Farmers markets | Local/Fresh produce at reduced price Supporting local farmers/local food systems Lots of local farms | Location Frequency during the year |
| Public transportation | Ease of access to not only grocery stores but other important locations as well such as doctors' offices. | Bus stops Cost Frequency of use |
| Community garden | People from Methodist Church will assist in building the garden beds. Access to free/fresh produce Social Sustainability Increase healthy food in schools | Who will take care of the garden?/ Maintenance Location Types of vegetables/fruits to grow |
| Allow backyard chickens | Free/fresh eggs Fertilizer for gardens Drives local food system | Changing policy May be a hindrance to neighbors |
| Teaching of how to grow/prepare healthy food | Way to form a relationship between Rowan's Nutrition students and community Allows for everyone to know how to practice self-agriculture School children can learn to grow food paired with academics | Who will lead this program Funding |
| Farm-to-institution programs | Provides students of schools and members of institutions with healthier food options Provides farmers with an increased source of business Can be beneficial for the local economy increases collaboration between community assets and enhances the overall sense of community | Takes time to establish programs and find interested parties |
| Health screenings | Allows to gauge health of the public so specific nutritional needs can be addressed Helps spread knowledge about healthy foods to those in need | Funding Ensuring community members know this exists |

Potential role for Rowan University

Rowan University's continuing plans to grow are showcased in the school's "University of the Future" document. Although food and health equity was not explicitly mentioned in this document, the project team interviewed Joseph Campbell, vice president of facilities and Arijit De, an associate of facilities. They shared that Rowan is in negotiations with a group who offers organic food production through hydroponic and aquaponics agriculture. The amount of food this method can produce is said to be the same as 26 acres of farmland. It was proclaimed that these hydroponic/aquaponics farms be installed not only on Rowan's West Campus, but also at satellite locations with growers, greenhouses, and food training members. These satellite locations could produce food that would supplement food desserts and other locations where people cannot buy fresh fruits and vegetables. Facilities claim that this project strives to engage the surrounding community and Rowan students while promoting community food procurement.

Glassboro's anchor institution, Rowan University, is capable of providing

advantageous and resourceful services to the Glassboro community. The interviewed Glassboro stakeholders offered many suggestions to fuel collaboration between Rowan and the community. One proposition was to implement a food co-op on Rowan's campus. A connection between Rowan students and local farmers could be created to carry out this proposition. For example, the School of Business students could sort out the business and financial technicalities of operation, while the Department of Geography, Planning and Sustainability could design a method to implement and adjust the co-op for a sustainable food system.

Furthermore, through collaboration between the students of Rowan University and the community, student-taught educational programs were also proposed. For instance, Health and Nutrition students could demonstrate what food is healthy for the human body, how to prepare it for maximum nutritional intake, and how to properly preserve it. Rowan University possesses and often purchases large amounts of property for university development. Stakeholders proposed that these lots of unused land could be used to enhance food accessibility, with structures like

publicly accessible community gardens, greenhouses, and fruit trees.

Another key idea shared was based around community engagement that serves the residents by spreading the knowledge of healthy eating habits, mainly through the university's help. One popular idea in particular was to implement a community garden on a vacant town lot or on Rowan's property. This community garden will be a space where people can come and learn the benefits of self-grown food, how they can grow it, what it produces, and how beneficial it would be to their bodies. This could also involve children who attend schools in Glassboro, allowing them to come out during the growing season and learn how to grow their own food. This sharing of knowledge could also be done by collaborating with the Boys and Girls Club to understand where kids are within the moderate and low income levels. These children usually do not have the access to healthier food choices and therefore would benefit the most from such a project. Additionally, the use of flyers and newsletters can share information on how to preserve, grow, use, or even cook food.

Student Focus Group

The focus group was a student-led discussion where participants were provided questions to help gauge how they view food equity and access at Rowan. The participant panel consisted of five students and one professor from Rowan University. The format of this discussion was based around an organic open dialogue where anyone could voice their point of view or ask questions that they felt needed to be addressed. This format encouraged participation while those who were not as knowledgeable on the topic listened and observed, eventually asking questions for more clarity.

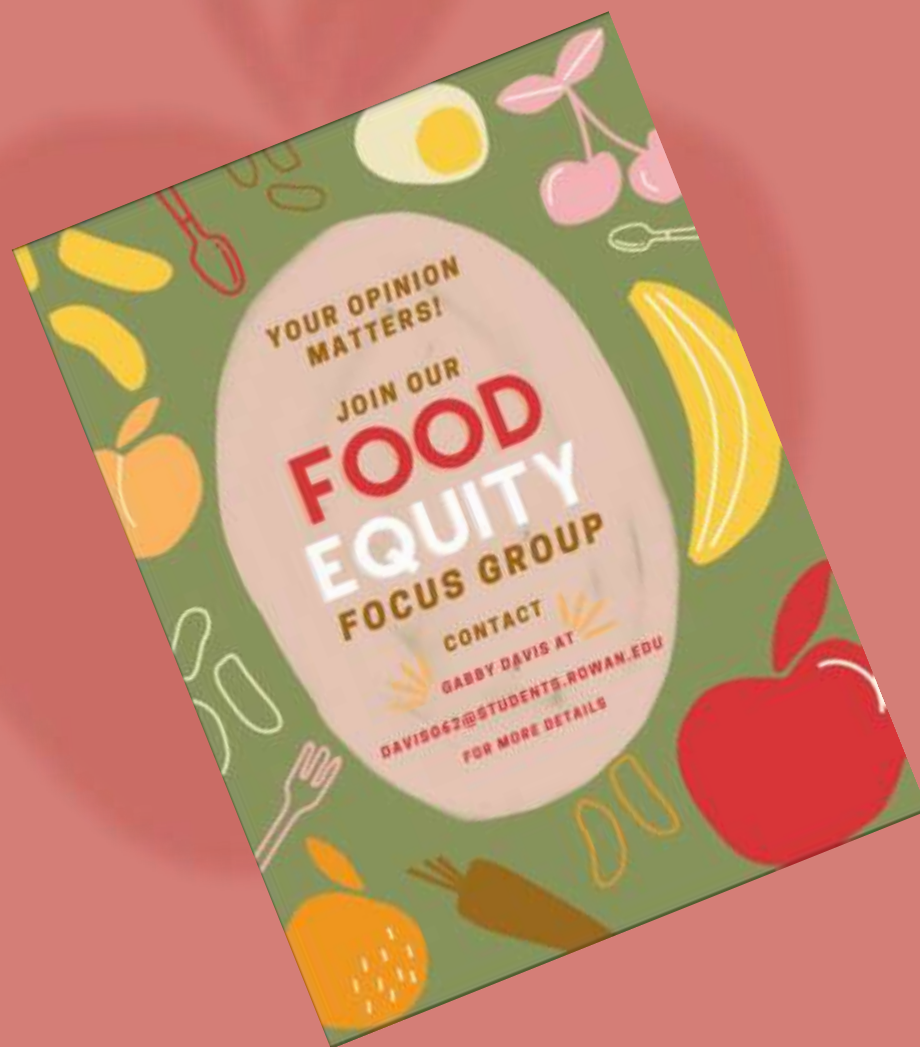
The themes discussed include how participants define food access and food equity, concerns around information equity, and the overall accessibility of healthy food options in Glassboro, including the impact of COVID-19 on campus. The need for more projects on campus similar to the SHOP or Philabundance, as well as the weekly diet of an average Rowan student. When we began to discuss the diets of our participants, we noticed that there are many factors that determine

whether or not these students cook at home or eat out were also discussed. Lastly, to relate the case study work of community gardening to students on Rowan's campus, so we asked our participants how they would feel about growing their own vegetables at home or at a community garden.

When asked about their definition of food equity and food access, students stated that "food equity kind of means having the access and the resources to be able to have at least three nutritional meals a day." This response to our initial question was a great opener and provoked more feedback for our next theme, which was about information equity at Rowan. One of the most prominent sources of information throughout Rowan is the Rowan Announcer. This method of information sharing has been noted to have minimal impact on students. However, during our focus group,

one attendee mentioned "Students come to college for certain things...then get a job and keep going. If you don't care about certain topics you're probably not going to care about the emails being sent out on those topics."

The discussion next addressed the overall accessibility of healthy food options in Glassboro, while also



considering the impact that COVID-19 had on the university. Many students were left hungry due to the pandemic, which resulted in people going out of their way to help provide for those in need. Students indicated that when COVID-19 hit, “the only food that they had available was heavy on carbs and heavy on sweeteners.” There were also students that did not have access to food because they were home and lacked access to their meal plan. They were hesitant to come on campus and go to the SHOP because of the “shame” associated with it.

As the focus group continued on, we referred to the SHOP and Philabundance to see if our participants felt that Rowan needed new food access programs. An interesting idea that emerged in the discussion was to put food-stocked refrigerators in each of the campus buildings for students to obtain in a more discrete manner. We also had the opportunity to speak with a representative from the Rogue Initiative on campus. This independent group is run by students and they address food insecurity in Glassboro. They also partner with South Jersey's Food Bank and Philabundance to provide free food

to people in need and food insecure students at rowan.

Lastly, we found that many of our participants preferred to eat out over cooking at home when asked about their weekly diet with the reason being primarily for convenience. With a packed school schedule, cooking and maintaining a healthy diet can be extremely challenging, hence the number of students who choose to eat out. Similarly, participants indicated that students might not have enough time to participate in growing their own food unless it were used toward community service hours. Students could volunteer to assist in the process, even using those who get in trouble on campus to actively participate in growing food as a form of disciplinary action/community service.

Stakeholder Focus Group

The project team partnered with the Glassboro Health Equity Coalition to attend a meeting to identify ideas for addressing food (in)equity in Glassboro. This meeting was held on March 26, 2021 via Zoom. The members of the board are people with varying backgrounds, ages, and ethnicities interested in improving health equity within Glassboro. Members of the board included a representative from Acenda/Mosaic Family Success Center, the Borough of Glassboro, the Bullock Garden Project, Creative Glassboro, First United Methodist Church, the Gloucester County Health Department,



Inspira Health, and the Glassboro Board of Health. There were also several community members on the board who were not affiliated with any organization.

The meeting began with the board members talking about how racism can be involved in the topic of health equity. They explained that the neighborhoods with the most minorities were also the neighborhoods with the least access to fresh foods. Subsequently, the meeting then broke out into three smaller groups to brainstorm ideas for the coalition.

Group one primarily discussed two ideas. The first idea was pop-up farmers' markets, which would be smaller in size and could be located within areas that lack access to fresh produce. Places like New Street Park, Whitney Crescent and High Street were areas of interest for this group, as they could draw in more people to these locations due to the at-risk populations in these neighborhoods. The group also suggested the idea of investing in a vehicle that could distribute food to those in need, thus leading to another idea. The second idea was a meal preparation service (similar to Blue Apron), where the customer receives

fresh ingredients at their doorstep that are portioned out for their meal that night alongside detailed instructions on how to prepare and cook the recipe. This idea was praised because it would eliminate the need for taking the bus to get groceries and going to the food pantry, therefore benefiting those without transportation.

Group two's discussion identified the need for changes in the laws and policies that restrict yard gardens and chicken coops within Glassboro. Another issue brought up by this group was developing a type of communication hub to help residents identify where they can access food. The final idea brought up by this group was to offer gardening classes at local organizations to help connect those in need to the tools necessary to grow their own food.

The third group had similar ideas. The initial discussion brought the idea of allowing residents to sell the produce that they grew, as well as teaching residents how to do this. This group also envisioned a delivery service, except the coalition could offer Rowan students a stipend to operate this project. Another idea from this group was to have faith

community members host gardens at their churches and harvest them so that people walking by could grab fresh produce. This is like a food pantry except the produce is fresh.

When all three groups reconvened, all the ideas were well received but participants identified the need to further develop them with additional discussions. The purpose of this meeting was to generate as many ideas as feasible, so the group decided to ponder over the proposed ideas and follow up on during their April meeting, with plans for a final decision regarding the direction of the coalition to be made at their June meeting. They will choose three projects to move forward with when those meetings occur.



Concluding Remarks

The Glassboro Community Survey provides a basis for understanding the community's concerns in reference to food insecurity, as well as their ideas for possible solutions. Through this survey, the project team confirmed found that a large number of residents face food insecurity, whether caused by the cost of produce, lack of transportation, or lack of knowledge on healthy foods. The survey also identified that many residents are concerned with the nutritional well-being of the children of Glassboro, citing farm-to-school and healthy school lunch programs as possible projects/policies to address it. Other common ideas from residents to address food insecurity include community gardens, mid-sized grocery stores, farm-to-table programs, food co-ops, gleaning programs, and educational programs related to healthy food. All of the responses to this survey were taken into consideration as the project team developed the recommendations provided in the next section of this document.

Similarly, the Glassboro Grows Participant Survey provided the project team with information about the experiences of Glassboro residents with

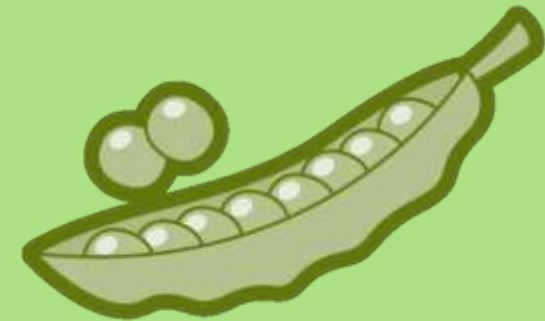
healthy food. Through this survey, the project team learned more about the demographics of Glassboro residents, the different places that residents obtain food, their available space to grow food at home and their experiences with growing their own food. Though many respondents indicated that they get food regularly from convenience stores, farmers' markets, and food pantries in Glassboro, a large number also indicated that they go elsewhere or do not go to these places at all. Finally, based on the responses, most residents have the space available to grow food at home, but a large number of people have never tried.

Stakeholder interviews provided the team with an in-depth perspective on food insecurity in Glassboro from a variety of community members with different professional backgrounds. Each interviewee gave a unique definition of food equity and proposed several potential projects to help address the issue, all of which the project team took into account when crafting recommendations.

Rowan University students and faculty make up a sizable portion of the Glassboro community and the Student Focus Group helped the project team acknowledge their perspectives on the

issue of food insecurity in Glassboro and on campus. We found that COVID-19 impacted the food security of students tremendously since many students who rely on meal plans for food and nutrition were staying at home and lacked these sources. We also found that some students are reluctant to utilize food pantries, like the SHOP, because there was a level of shame and embarrassment that students associate with it. Attendees brought up multiple ways to limit food insecurity on campus, such as the partnership between Rogue Initiative and Philabundance and offering community garden work as a volunteer service.

Finally, the Glassboro Health Equity Coalition meeting/focus group introduced the project team to the types of projects and policies that coalition members were thinking about implementing to address food insecurity in Glassboro. This meeting gave the project team valuable insight on the methods that can address food inequity in Glassboro and allowed us to hear a variety of perspectives from community members of different professional backgrounds.



SECTION 5

Recommendations

These recommendations address food inequity within Glassboro. Throughout the planning process, decisions have been influenced based on data that has been collected from various sources; critically, this includes input directly sourced from the community in the form of interviews, surveys, and focus groups. In addition, the project team generated original ideas based on feedback from the community and other sources.

Recommendations are grouped into: projects, programs and policies. The first category, projects, is designed to increase the healthy food supply throughout Glassboro by empowering residents to cultivate their own food and participate in the process. This section includes projects such as community gardens, home gardens, healthy corner stores, mid-size grocery stores or food co-op with a rooftop farm, pop-up farmers' markets, community fridges, edible landscapes, and fruit trees. The programs category focuses on reinforcing local food systems and community food security by engaging community institutions, increasing cross-sector collaborations, and

empowering residents through various programs. The programs category includes, opportunities such as healthy food pantries, Fresh for All, gleaning and foraging, emergency home delivery services, a communication hub, a community education and training program, and a farm to table program. Lastly, the policies category aims to provide financial and legislative assistance to establish healthy food programs and increase healthy and affordable food access. Within the policy section, urban agriculture and chicken ordinances, as well as the provision of financial support to establish healthy food programs and increase healthy and affordable food access are discussed.

Projects

Goal: Promote food equity through projects offering residents a variety of options to choose from in order to best suit their needs, affordability, and schedules. While some people have the ability to easily plan their trips to one of the many grocery stores in Glassboro, others have to carefully plan around tight schedules, lack of personal transportation and also whether or not they can afford groceries that week. Truly achieving these goals would mean that there are multiple methods for people to get fresh, healthy food to their families, even if they have a restricted budget or transportation issues.

Objective 1: Empower residents to cultivate their own food through both community and home gardens. Increase ease of access, equitable access for people of all abilities, and affordability.

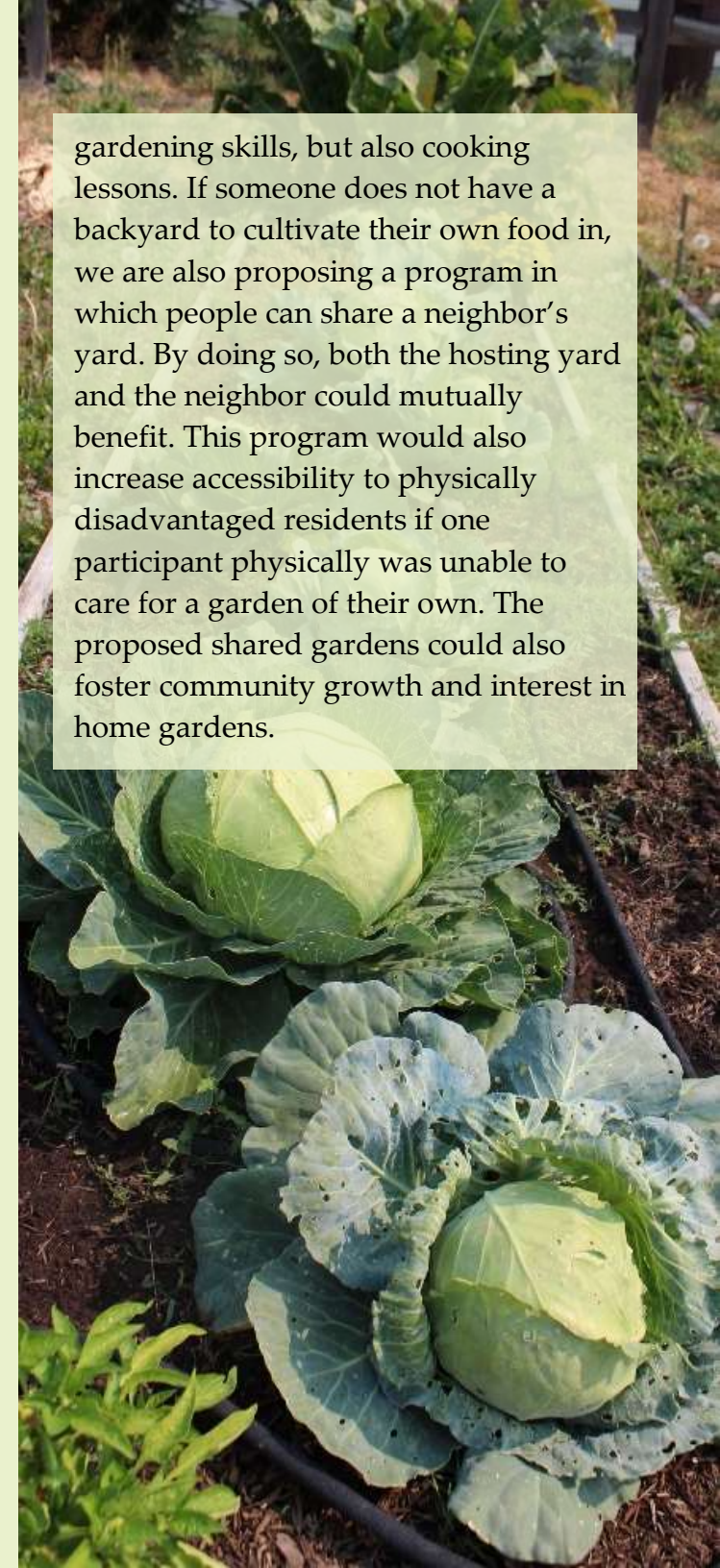


Community gardens: Glassboro is a town with several non-contiguous neighborhoods. Nevertheless, opportunities exist for implementing accessible community gardening. The Borough of Glassboro started its first community garden on South Academy Street, which is expected to greatly benefit the surrounding residents; however, other citizens of Glassboro would still have to drive to the location for access. Not only does this lack a fully-equitable access to fresh foods, the community garden also has limited number of garden beds and they are filling quickly. In order to address this lack of accessibility, the project team recommended that more community gardens are developed within disadvantaged neighborhoods and public housing developments. Specifically, placing a community garden near the Whitney Crescent development in the Elsmere neighborhood would be an excellent way of reaching more residents who may benefit greatly from growing their own food. In addition to targeting specific neighborhoods within the borough, the project team recommends that schools, churches and other

nonprofit organizations also allow community gardens on their properties. By doing so we can ensure that almost all Glassboro residents are able to garden locally, gaining access to fresh healthy foods at little to no cost.

Home gardens: While some may like the idea of gardening with their neighbors, many people may not want to or lack the capability of walking to their local community garden. Therefore we are advocating for a loosening of legal restrictions for home gardeners. Currently, local laws prevent residents from growing produce in their front yards. This is an issue because some residents do not have a backyard to cultivate in. Many residents only have a front or side yard or could be living in a multi-unit residence. In addition to the spatial aspect of home gardening, there are barriers for some individuals in their education of how to start and maintain a home garden. Using an online platform and partnering with groups such as the Bullock Garden Project and Mosaic Family Success Center, Glassboro citizens could be educated on how to successfully garden at home. Education would not only involve actual

gardening skills, but also cooking lessons. If someone does not have a backyard to cultivate their own food in, we are also proposing a program in which people can share a neighbor's yard. By doing so, both the hosting yard and the neighbor could mutually benefit. This program would also increase accessibility to physically disadvantaged residents if one participant physically was unable to care for a garden of their own. The proposed shared gardens could also foster community growth and interest in home gardens.



Objective 2: Increase healthy food supply through various initiatives such as healthy corner stores, a new mid-size grocery or food co-op, pop-up farmers' markets, and community fridges.

Healthy corner stores: The importance of developing healthy corner stores cannot be understated. Corner stores are the keystone of many communities, not only instilling a sense of community to those who patronize the stores, but also by deciding what the neighborhood eats. In many neighborhoods corner stores are the only venue available for food shopping. If these corner stores sell healthy food, then the nearby communities and neighborhoods would benefit directly. By stocking healthy food options the corner stores could increase access to nutritious, affordable food, thereby increasing the overall health of the neighborhood. There would also be an additional cost benefit to

consumers, because fresh food is usually cheaper at corner stores when compared to bigger super markets or chain corner stores. For example, the Philadelphia Healthy Corner Store Initiative enabled the city's local corner stores to be healthy and sell healthy food. This particular initiative was a massive success and can serve as an example for future projects. Projects to help incentivize healthy corner stores would include: creating more room for fresh products, connecting these stores with local farms and schools, and community centers to help educate younger kids and adults on healthy food. Glassboro could also potentially provide tax breaks for any local corner store that is able to participate in the Glassboro healthy corner store initiative, further reducing cost to the consumer. Additionally, this initiative could give their store a larger customer base with the local government helping them reach out to the community. Previously, the local

government had no involvement in advertising; however, by doing so, their actions could potentially bring the stores higher profits, while also providing healthier foods to the community.

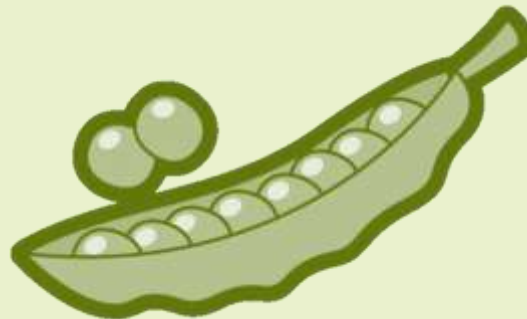
Pop-up farmers' markets: The Borough of Glassboro is currently implementing a farmers market. This project, however, will require financial assistance from an NCCP grant, which will aid the production and construction of the site. While a specific location has not yet been chosen, the project team has developed a set of suggestions for pop-up farmers markets throughout the town, especially in close proximity to low-income housing and elderly residences. These proposed locations intend to have the most inclusive access to fresh food for the widest variety of Glassboro residents, including those who are disadvantaged or have disabilities. The residents of the town will have increased access to locally grown



produce as well as healthier food options at an affordable cost. There are also local organizations throughout Glassboro that could greatly benefit the community through partnerships (e.g., the Rowand Farm Market and the Duffield's Farm Market). These proposed markets will provide lower income families with greater access to healthy food while simultaneously giving local producers new locations to sell their goods. An existing program that could be utilized as a template is the Food Trust Food Bucks program, which increases the incentive for local growers and increases the demand for these goods throughout various communities. The market locations suggested by various stakeholders include the New Street Park, Whitney Crescent, High Street, and other areas which would be very suitable for the local residents.

Mid-size grocery or food co-op with a rooftop farm: A co-op in Glassboro would be incredibly beneficial. The addition of a rooftop farm would enhance the benefits received from the site by increasing healthy food outputs. It would make this mid-sized grocery

store more sustainable and environmentally friendly than the other grocery stores within Glassboro. The green roof is a self-sustaining way to source fresh, local, and affordable produce. As shown with Weaver's Way and the Kensington Community Food Co-op, these grocery stores not only help the owners, but also the surrounding community by providing affordable, healthy and sustainable food. These examples show that each aspect (green roof and co-op grocery), are viable proposals. Combining a mid-sized grocery or food co-op with a rooftop farm in downtown Glassboro is essential and will greatly benefit the community in various ways.



Before



Academy & High Streets

After



Community fridges: The Philadelphia Community Fridges project focused on implementing 14 free community refrigerators around Philadelphia. These refrigerators are volunteer operations that give out free food to local residents in need. An idea like this, if implemented in Glassboro, could provide the lower income residents with easier access to free and healthy food while reducing the amount of food going to waste. These fridges could be placed throughout the borough, in locations such as municipal buildings or even the food stores themselves. A community fridge could be implemented along streets, buildings, or even houses as long as there is an electricity source and perhaps even a structure to protect other non-refrigerated foods from spoiling. Throughout Glassboro, shop owners, homeowners, and even restaurants could host these fridges to benefit the community and those who are disadvantaged.



Objective 3: Increase “free” access to healthy food by adding edible plants and fruit trees to Glassboro’s existing landscapes and streetscapes.

Edible landscapes: Projects involving edible landscapes in Glassboro could be led by the University. Rowan University serves as an economic and ideological influencer in Glassboro. With such status, the school has the ability to implement edible landscapes in the town's open areas. A combination of the staff and student body could participate through events like Rowan's *Back to the Boro*. Some edible landscapes that should be considered are tomatoes, carrots, peppers, and other perennial vegetables.

Fruit trees: Fruit trees should be incorporated into Glassboro’s existing and developing areas. The fruit trees should be located on quiet streets such as throughout the neighborhoods behind Rowan University. Some fruit trees that should be added are peach trees, apple trees, and others, which would harken back to Glassboro’s historical roots.

Before



After



Before



After



Programs

Goal: Reinforce local food systems and community food security by engaging community institutions, increasing cross-sector collaborations, and empowering residents through various programs.

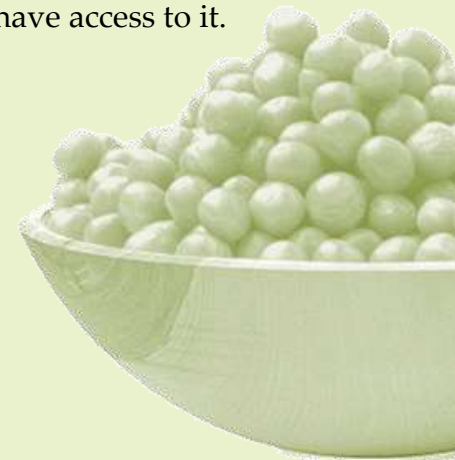
Objective 1: Serve food insecure residents by including healthy food options at existing charitable programs or creating/expanding such programs.

Healthy food pantries: A number of existing food pantries and food banks serve Glassboro, including the Glassboro Food Bank, The Hollybush Neighborhood Center, and even Rowan University's SHOP Food Pantry and Resource Center. However, residents of Glassboro indicated a lack of fresh produce and healthy options offered by these programs. These existing food pantries and food banks mostly focus on non-perishable and canned goods, many of which are not the healthiest options and do not provide the same nutritional benefit as fresh foods.

Food pantries can offer fresh produce and healthier food items through collaboration with local farmers and the implementation of on-site refrigerators. Ample Harvest is an organization that helps connect farmers and gardeners with local food pantries so that excess produce can be donated to the community. Currently, none of the food pantries or food banks in Glassboro are registered through this organization, which makes it more difficult for local gardeners and farmers to find them and donate their excess crops. Registering the food pantries in Glassboro through this organization is free, quick, and an important first step in providing healthy food options to those facing food insecurity. Through volunteer work, financial donations, and collaboration with local farms and restaurants, these food pantries can implement the necessary infrastructure to provide fresh produce to the community.

Fresh for All: Philabundance's *Fresh for All* program provides the community with healthy produce. They have several locations, but only one of which is in Glassboro. Located in parking lot D of Rowan University's main campus,

this program gives out fresh produce every Friday from 10:00 am to 11:00 am to those in need. Fresh for All also collaborates with the Vetri Community Partnership by providing the community with the "Mobile Teaching Kitchen". This program is designed to educate the public on healthy recipes using the produce offered at the location. This is a great way to bring healthy produce and health education to those facing food insecurity, and the project team suggests there could be more locations in Glassboro. There are people facing food insecurity in many different areas around the borough and not everyone has easy access to the current location. Expanding to more locations will not only allow for easier access to these resources, but also increase awareness of such resources. The project team believes that this is a valuable asset for fighting food insecurity in Glassboro and that more people should have access to it.



Gleaning and foraging: Gleaning could benefit Glassboro by gathering leftover food crops after harvest from agricultural producers. Potential gleaning initiative partnerships could be made with local farms like Rowand's Farm located at 295 Greentree Road in Glassboro. In addition, a partnership with Hill Creek Farms in Mullica Hill, NJ, which features a variety of fruit trees such as apples, peaches, nectarines, etc. With these partnerships, volunteers will have the ability to harvest local produce and donate it to the food banks or co-ops in Glassboro.

Foraging, or the act of harvesting wild edible plants that are grown naturally, can be a beneficial method to incorporate fresh produce into one's diet. Potential foraging partnerships can be formed with Scotland Run Park, Glassboro's Wildlife Management Area, and Tall Pines State Preserve. These wildlife areas are home to many edible plants. With the aid of Rowan University, tours of these areas can be formed to educate Glassboro residents on the identification of these edible species. By doing so, residents will be

more likely to utilize this source of food and potentially encourage gardening.

Emergency home delivery services:

Creating an emergency home delivery service will benefit the residents who are unable to travel to food pantries due to accessibility issues. This service could deliver food pantry, restaurant, or grocery excess to residents in need. Furthermore, creating a Meals on Wheels program in Glassboro could be instrumental in serving the senior population within the area. In addition, Rowan University can expand their SHOP program, a University run food pantry, to offer emergency delivery services.

Objective 2: Empower residents by increasing informational access and providing education and training programs on healthy food production, preparation, consumption, and business.

Communication hub: A communication hub would be beneficial to the Glassboro community as there is currently no method for public communication and announcements in

regards to food and health equity projects. This project would be an ideal collaboration between Rowan University students and the Glassboro community. For instance, graphic design majors or computer/graphic specialized majors could create the website and post information from different community members and community agencies. Marketing or communication majors could advertise the communication hub with the website link or QR code. This project could be funded by Rowan University and be incorporated into existing curriculums.

Community education and training program:

While Rowan's "University of the Future" document lacks a natural place for the topics of food equity and inclusion, a community education and training program can be incorporated into the "Flexible Workspace" and "Facilities and Infrastructure Needs" subsection. Under the "Flexible Workspace" section, it is stated that in order to achieve a flexible workspace, we must "determine how we assess work needs, shared services, and ultimately, how we work as we build on

the foundation of equity” (Rowan University, 2021, p. 6). Here, Rowan could implement classes or training programs such as smart and healthy grocery shopping, cooking vegetables for children and container gardening. Within the “Facilities and Infrastructure Needs” subsection, it is written that Rowan will “consider necessary changes to existing facilities and technology to meet the needs of a mega-university” (Rowan University, 2021, p. 6) as well as “identify and prioritize the facilities and infrastructure needs—both physical and virtual— for the future, including but not limited to flexible space....” (Rowan University, 2021, p. 6). This section could be adapted to demonstrate how to compost and how to forage for edible food in urban landscapes. Rowan could implement edible vegetation and guide community members through the do’s and don’ts of foraging and/or composting program as well for the environmental betterment of the campus itself as well as the outside community.

Objective 3: Foster cross-sector collaborations to promote equitable local/regional food systems.

Farm to institution program: By establishing relationships with local and

regional farms, the Borough’s Farm to Institution programs would give farmers the opportunity to develop new markets and sell to local K-12 schools, hospitals, colleges, cafeterias, or government agencies.

Policies

Goal: Provide financial and legislative assistance to establish healthy food programs and increase healthy and affordable food access.

Objective 1: Provide legislative support to food and poultry production as well as food programs.

Urban agriculture and chicken ordinances: Ordinances should be revised to allow residents to produce food in their backyard as well as their front yard. Also, a chicken ordinance should be written to allow poultry production in the backyards of these residential homes.

The Borough of Glassboro should address food insecurity in its master plan. With 24.5% of survey respondents indicating this is a problem they face, the borough needs to implement measures to mitigate its

prevalence. In the City of Camden, they created the “Food Trust’s Healthy Corner Store Network” which is an initiative that helps promote healthy food options within their stores. In order to produce change with food equity within Glassboro, it would be beneficial to station fridges around the community to promote healthy food access. There is also currently an organization by the name of “Rowan Rogue Initiative”, which is an independent group of students that addresses food insecurity and places food throughout Rowan’s campus. With the help of this initiative, as well as the changes in the zoning ordinance, there will be a long lasting impact on Glassboro as a whole.

Objective 2: Provide financial support to establish healthy food programs and increase healthy and affordable food access.

There are a number of methods that the Borough can offer for property owners within Glassboro. One in particular is a tax break for multi-unit housing authorities that allow community gardening within their complexes. This idea was brought to our attention as a way to increase the food accessibility to the groups residing in those multi-unit locations. By doing so, not only would the complex benefit from the tax break, but residents would mutually benefit as well.



SECTION 6

Concluding Remarks

The project team has had the privilege of working with many different people within the community of Glassboro. The hands-on experience of working with census tract data, gathering community input, and researching the history of Glassboro has been an invaluable experience for us. Many of the students in our class were not aware of the inequities in Glassboro until they started this project. Access to fresh food is something that people may not think about in their daily lives, however, it has proved to be very eye-opening for those working on the project. By understanding the daily struggles that are endured to find nourishing meals, we have become passionate about providing such resources to the Glassboro community.

Our class was given several opportunities to make connections with the Glassboro community members. Not only did we have the opportunity to attend meetings with the Glassboro Health & Equity Coalition, but we also collaborated amongst ourselves as a class. By combining the preliminary research, the tax and parcel maps, and

stakeholder interviews, our class had to collaborate while also being physically distant from one another. Bouncing ideas off of one another while also learning the material in a short amount of time was great practice for the real world.

Unfortunately, our class encountered many limitations that hindered our ability to make a bigger impact on Glassboro. COVID-19 had obviously made in-person activities very hard to coordinate, requiring most of our work to be completed online. The pandemic has also removed the personal feeling that our work could bring, as our project involves real people and their issues of obtaining access to fresh food. We could have done more meaningful work if we were able to visit homes or meet up as a class together. The other major limitation of this project was the time constraints. Our class only lasted for about four months, and most of the class semester was during cold weather, making it difficult to experiment with outdoor activities like gardening and foraging. The four-month timeline also made the process of gathering data,

writing a report, and presenting our findings much more difficult.

It is now up to the Borough of Glassboro to invest more time into food equity. Food equity is directly related to health equity; therefore the municipality must foster partnerships amongst public and private programs in order to improve access to fresh food. Involving Rowan University would also be a key strategy, as the University has a lot of influence over the town's activities. Improving the campus community gardens would increase both community and student involvement. Communication about food programs and community gardens should also be prioritized, such as creating an online hub for information on food and health equity for the community. Additionally, the Borough should consider expanding localized community gardens to reach the neighborhoods that lack access to the current garden. If our recommendations are considered, Glassboro should be able to greatly improve food and health equity.

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