

# Lee County Community Food Security Assessment

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# Lee County Community Food Security Assessment

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## INTRODUCTION

The purpose of this assessment is to evaluate the condition of community food security in Lee County, Alabama, with a specific focus on the ability of low-income households to meet their food needs. In conducting this assessment we hope to better understand food availability, food access, and food utilization in Lee County and identify ways to improve food security for the benefit all local residents.

We believe that the results of this community food security assessment will provide a starting point for a more comprehensive examination of food security in Lee County involving a wide range of stakeholders in the local food system. If the problems with and opportunities for improving local food security are identified, we believe that Lee County residents and policymakers are capable of constructing a socially and economically vibrant local food system.

## BACKGROUND

### Understanding Food Security and Community Food Security

As defined by the World Food Summit of 1996, food security is a condition existing “when all people, at all times, have access to sufficient, safe, nutritious food to maintain a healthy and active life” (FAO 1996). The condition of food security is satisfied when adequate amounts of food are available on a regular and consistent basis, when there are sufficient resources to obtain nutritious food, and when food consumption and use is informed by an understanding of basic nutrition and food safety (WHO 2012). The Food and Agricultural Organization (FAO) identifies three pillars of food security:

- food availability,
- food access, and
- food utilization (WHO 2012).

One can assess food security at various levels: individual, household, community, region, state, and nation. This particular assessment will evaluate food security among the households and communities within Lee County, Alabama.

When food security is considered in the context of the community, the term *community food security* is often used. The most cited definition of community food security is that of Hamm and Bellows (2003):

Community food security is a condition in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice.

Growing interest in community food security has led to analytical and methodological tools to address barriers and opportunities. As such, community food security addresses a wide range of problems through a systems approach, unites disparate sectors and individuals in both conversation and action, promotes integrative and collaborative solutions, and embraces democratic decision-making processes (Hugh 1995; Winne 2004).

The United States Department of Agricultural (USDA) consolidates the two understandings of community food security—condition and methodology—to define it as a prevention-oriented concept that embraces sustainable and community-based strategies that function to

- improve the ability of low-income households and individuals to access adequate amounts of nutritious and culturally appropriate food,
- better the ability of communities to satisfy their own food needs, and
- promote integrative and holistic approaches to issues of local food, agriculture, and nutrition (Andrews 2010).

This study represents a starting point for a more comprehensive community food security assessment that will involve the participatory and collaborative processes unique to community food security. Though many people contributed to this study, it will take an engaged citizenry to truly fulfill the objectives of community food security.

### Geography of Lee County

Lee County is located in East Alabama and is adjacent to Macon, Russell, Tallapoosa, and Chambers counties. It shares its eastern border with the state of Georgia. The cities of Auburn and Opelika are situated within the county.

Figures 1 and 2 are recent maps of Lee County. Figure 1 shows roads, communities, and metropolitan areas. Figure 2 shows census tracts and block groups.

Census tract and block group divisions function as important reference boundaries in this assessment. By evaluating the socio-economic profiles of census tract and block groups, we are able to identify the physical locations of households that are the most and the least food secure.

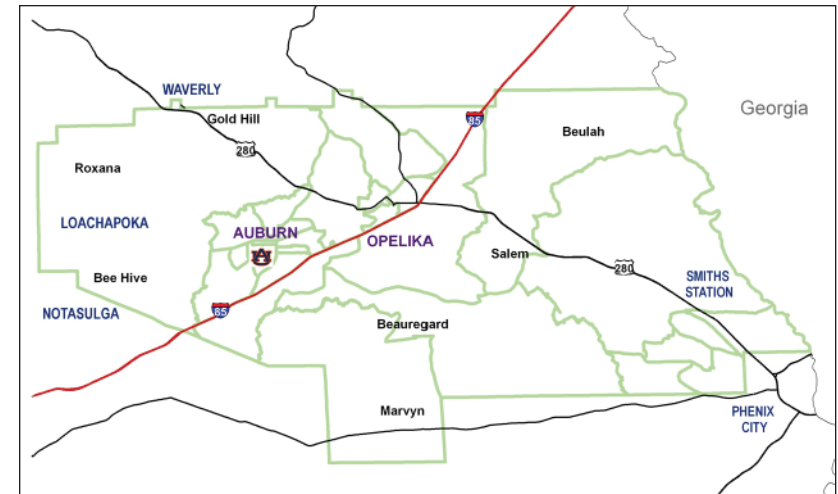


Figure 1. Major landmarks in Lee County

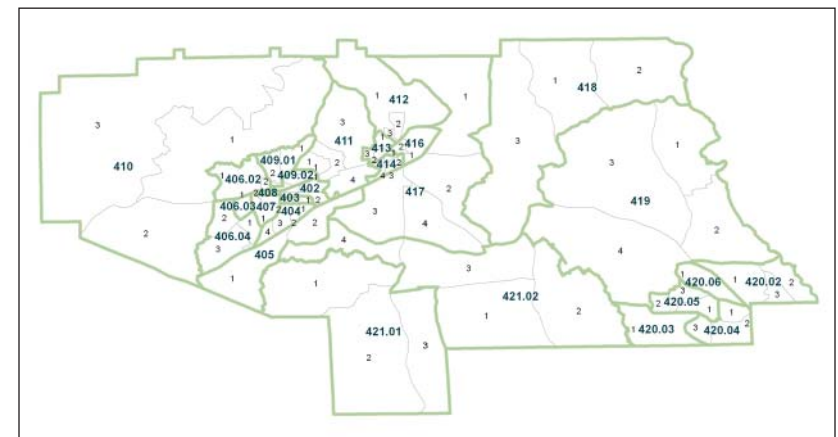


Figure 2. Census tracts and block groups in Lee County

In Lee County there are 27 census tracts and 76 block groups. Census tracts, according to the U.S. Census Bureau (2000), are “small, relatively permanent statistical subdivisions of a county.... Census tract boundaries are delineated with the intention of being maintained over a long time so that statistical comparisons can be made from census to census.” Census tracts in Lee County have numbers ranging from 402 to 421.02.

Block groups are smaller divisions of census tracts. “A census block group is a cluster of census blocks having the same first digit of their four-digit identifying numbers within a census tract” (U.S. Census Bureau 2000). In Lee County the largest number of block groups in any one census tract is four.

### **Feeding America’s Map the Meal Gap Assessment**

In 2011 Feeding America conducted Map the Meal Gap, a nationwide quantitative study to generate county and state level estimates of food insecurity. These estimates are publically available via Feeding America’s Map the Meal Gap interactive map at [feedingamerica.org/mapthegap](http://feedingamerica.org/mapthegap).

The Map the Meal Gap data provide a cursory understanding of individual and household food insecurity in Lee County. The estimates acquired from Feeding America’s Map the Meal Gap allow us to compare food insecurity in Lee County relative to other counties in the state of Alabama. Though the rate of food insecurity in Lee County is below the state-level average of 17.8 percent, the number of food insecure individuals in Lee County is among the largest when compared with other counties in the state. Of the 67 counties in Alabama, Lee County has the seventh largest number of food insecure individuals at approximately 22,550 people. Jefferson, Mobile, Montgomery, Madison, Tuscaloosa, and Baldwin counties are the only six counties in the state with a larger number of food insecure individuals. Jefferson County, the most populated county in the state, has the most food insecure individuals—approximately 118,630.

Feeding America’s Map the Meal Gap data also reveal a figure for the percentage of food insecure individuals who are not eligible for federal nutrition assistance. These individuals come from households with incomes above the nutrition assistance threshold of 185 percent of the federal poverty level. Approximately 32 percent of food insecure individuals in Lee County are not eligible for federal nutrition assistance. This is the sixteenth highest rate in the state of Alabama; Shelby County has the largest rate at 56 percent.

The statistics revealed from the Map the Meal Gap study justify a further exploration of food insecurity in Lee County. Why and how are more than 22,500 Lee County residents struggling to meet their food needs? Who are these people and where do they live? The following sections on food availability and food access attempt to answer these questions.

## **FOOD AVAILABILITY**

### **Food Availability in the United States**

In 2006, the USDA calculated that the U.S. food supply is capable of providing 3,900 calories per citizen each day—1,900 more than the average daily recommended allowance (USDA Economic Research Service 2009). Obviously, the lack of adequate food supply does not contribute to food insecurity in the United States as it does in some other parts of the world.

Despite overly sufficient food production, farmers account for less than 1 percent of the total U.S. population (USDA Economic Research Service 2010). Of these farmers, 9 percent grow and produce more than 66 percent of the nation’s food supply (USDA Economic Research Service 2009). These farmers practice large-scale, high-efficiency, industrial farming. Although industrial farming practices facilitate the high production capacity that feeds our nation, these farms are located only in certain parts of the country where agronomic conditions encourage industrial agriculture. The concentration of production in these areas means that many other parts of the country, including Lee County, have experienced significant reductions in the amount of food grown locally. Renewed interest in local food systems across the nation is beginning to reverse this pattern.

While the quantity of food available in the United States is more than enough to provide for our nation’s population, this larger food availability does not affect the state of community food security in Lee County. Community food security depends on the capacity of the community to achieve self-reliance through the local and sustainable production of sufficient quantities of food (Hamm and Bellows 2002). For this reason, this section on food availability will focus only on local food availability and production within Lee County.

### **Commercial Food Production in Lee County**

Commercial food production in Lee County is limited. According to the county Extension agent, approximately 70 to 75 percent of county land is forested and

slightly more than 20 percent of the land is designated as residential and commercial. This leaves less than 5 percent of the land for agricultural use, amounting to roughly 63,000 acres (Brown 2012, USDA Census of Agriculture 2007).

According to the most recent USDA Census of Agriculture (2007), only 7,556 acres of this agriculture land is harvested cropland. The majority of the agricultural land, more than 49,000 acres, is used for raising beef cattle, sheep, hogs, and/or poultry (Brown 2012; USDA Census of Agriculture 2007). The average net income per farm in Lee County amounts to approximately \$5,500 each year.

Though commercial agricultural production of crops accounts for a very small percentage of Lee County's economy and land use, the number of growers' permits issued each year has more than doubled the last five years to more than 50. While the majority of these growers harvest small plots of land averaging 1 acre in size, there are approximately seven larger growers in the county that harvest 10 or more acres of land (Brown 2012).

These individuals possessing grower's permits are allowed to sell the crops they harvest. Due to generally small production output, Lee County growers typically sell their food products at local farmers' markets and roadside stands. There are two major farmers' markets in Lee County—the Market at Ag Heritage Park and the Opelika Farmers' Market—and between six and eight roadside stands. Both of the markets are seasonal and operate only during the summer months. Presently there are also talks of starting a third seasonal market in Notasulga (Brown 2012).

Lee County is far from being able to satisfy its own food needs and, due to environmental restrictions, it is highly unlikely that Lee County will ever support large-scale industrial farming. However, striving to increase local food production is not a fruitless endeavor. Expanding local food production could enhance community food security, generate income and employment opportunities, promote local economic growth, and foster meaningful relationships between producers and consumers.

Fortunately, there is considerable potential for increased agricultural production within the county limits. It is speculated that 40 percent of the land in the county is suitable for agricultural production. Most of this land, comprised of sandier soil, is situated in southern part of the county. The land in the northern part of the county is largely undesirable for agricultural production due to its high red clay and rock content (Brown 2012). Soil profiles of Lee County are

available to growers, producers, and the general public at the offices of the Natural Resources Conservation Services located on Skyway Drive in Opelika.

### **Residential Food Growing**

Perhaps one of the more interesting trends concerning local food production is that more and more Lee County residents are becoming interested in backyard food growing. According to the county Extension agent, 25 percent of the people who contact his office have questions about growing food for personal consumption. Recognizing the growing interest in backyard food growing, the county Extension office has started to offer workshops to the public that address everything from raising poultry and honey bees to growing the perfect tomato. These workshops are presented through a series called "Home Grown." More than 200 Lee County residents attended the last four workshops through the Home Grown series (Brown 2012). Local Master Gardeners help to promote local gardening for both food and enjoyment.

Informal backyard food growing, though typically small scale, can function as an important support mechanism for community food security. Backyard food growing contributes to household food security at all income levels by providing opportunities for convenient access to nutritious produce (Kortwright and Wakefield 2009).

Residential food growing is a logical solution for bolstering the availability of nutritious food in Lee County. However, particularly in the more densely populated regions of the county, barriers exist to successful backyard food production. A 2009 study (Kortwright and Wakefield) found that secure access to suitable land is one of the greatest hindrances to individuals wishing to grow their own produce. Many people either do not own the land on which they live or, if they do own it, there is insufficient space or soil quality to effectively grow produce. Fortunately, these are surmountable barriers. Auburn University rents small garden plots to students and faculty who are interested in growing their own food, and communities in Lee County could do the same thing for local residents.

Another significant barrier to home food growing is lack of gardening skills (Kortwright and Wakefield 2009). Fortunately, the Home Grown series sponsored by the county Extension office is taking the first steps to overcome this barrier. There are also a number of individuals employed in schools across the county that are taking active measures to teach children basic gardening skills.

## FOOD ACCESS

### Food Access in the United States

When considering the three pillars of food security—food availability, food access, and food utilization—food access asserts itself as the greatest barrier to universal food security in the United States. As we discovered on the previous pages, there is more than enough food available in the United States to provide for all. Food insecurity exists in our country largely due to socio-economic constraints operating at the household level (Nord 2001).

The following pages will evaluate food access in Lee County at the household level. In addition to exploring socio-economic indicators of food security, we will also look at the efforts of federal food assistance programs to minimize the prevalence of food insecurity.

### Household Food Security

Household food security is the cornerstone of community food security. Assessing household food security allows us to fully comprehend the needs of low-income community members and the problems that they face in obtaining adequate amounts of safe, nutritious, and culturally appropriate food. As the definition of community food security reminds us, meeting the needs of these low-income individuals is paramount (Hamm and Bellows 2003).

In the United States the ability of a household to meet its food needs and maintain food security is primarily dependent on economic indicators of well-being, namely, household income and incidence of poverty (Nord 2001). Due to this relationship, this assessment of food security in Lee County relies on income and poverty as the principle indicators for evaluating the prevalence of household food insecurity. The 2010 U.S. Census provides block group level data for these two indicators. These data are mapped in Figures 3 and 4, which reveal the physical distribution of high- and low-income households. The location of the largest number of households with incomes at or below 130 percent of official poverty rates is highly variable in Lee County. Generally speaking, the highest incomes and the lowest number of households at or near poverty are to be found in and around the City of Auburn. That said, there are large parts of Auburn that have the lowest incomes and the largest numbers of households at or near poverty. With some variation, it can be said that incomes are lower and the number of households at or near poverty are higher in Opelika and in surrounding rural areas.

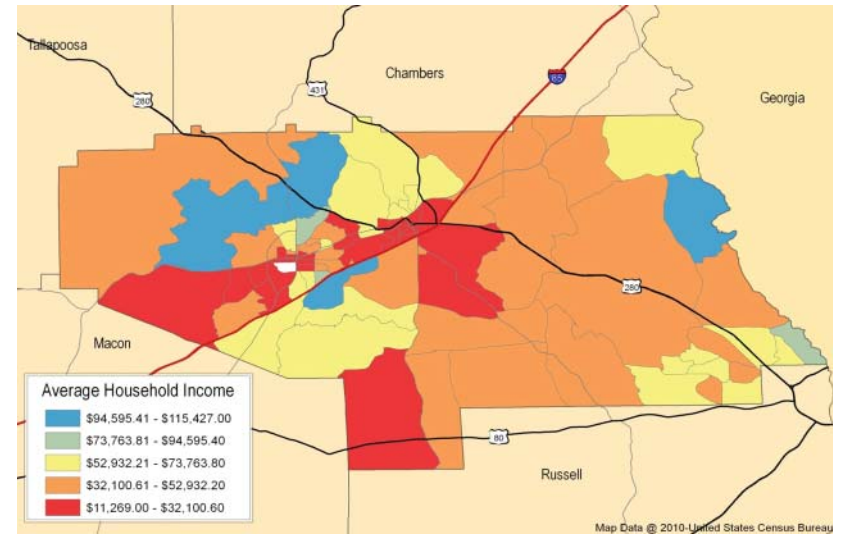


Figure 3. Average median household income by block group (U.S. Census Bureau 2010)

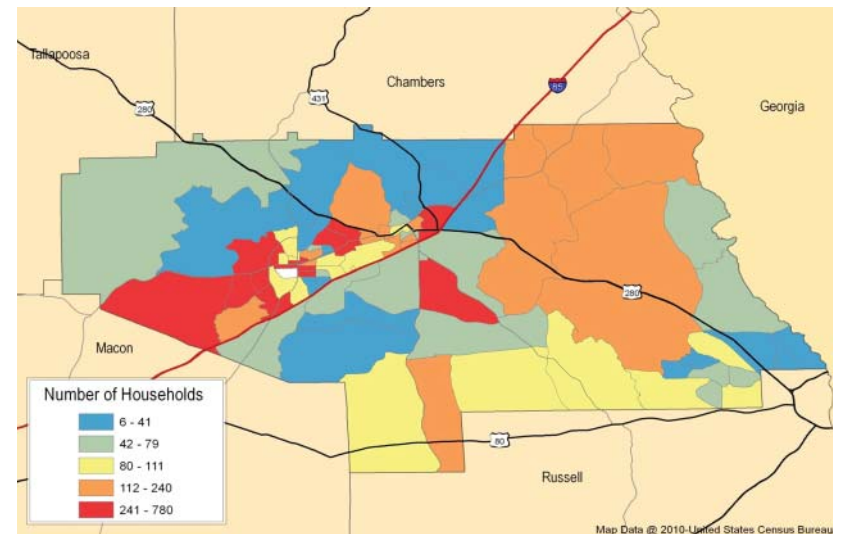


Figure 4. Number of households below 130 percent of the federal poverty level by block group (U.S. Census Bureau 2010)

Figure 5 considers both median household income and incidence of poverty to determine the most and the least vulnerable block groups. Relative vulnerability was determined by assigning a rank to all block groups for each indicator. The ranks—two for each block group—were then added together to establish a figure for relative vulnerability.

From this map we see that there are 15 block groups that are considered as highly vulnerable to experiencing food insecurity. The six most vulnerable block groups are located within the City of Auburn. These groups are

1. block group 2, census tract 408,
2. block group 1, census tract 406.04,
3. block group 2, census tract 406.04,
4. block group 1, census tract 408,
5. block group 3, census tract 409.02, and
6. block group 1, census tract 406.03.

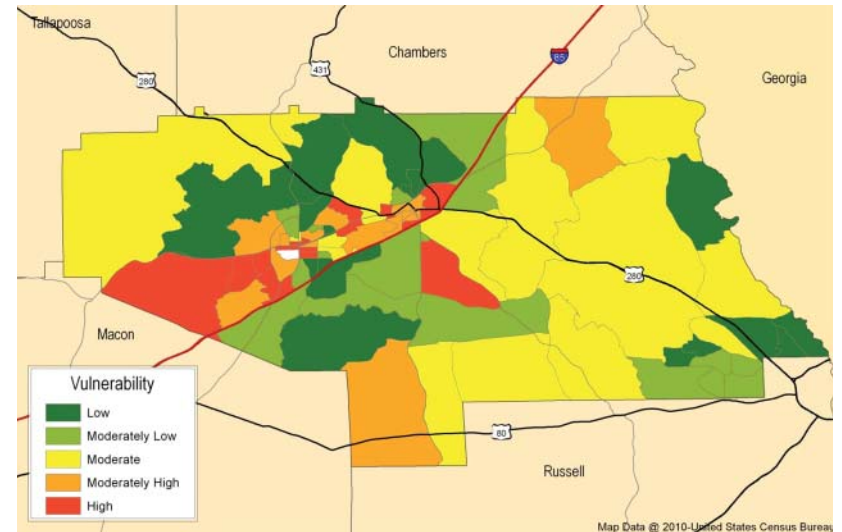
Of the remaining block groups classified as highly vulnerable, three more are located in the City of Auburn, four are located in the City of Opelika, one is located in the community of Notasulga, and one is located in the community of Salem.

There are another 15 block groups classified with a moderately high level of vulnerability. These block groups are highlighted in orange in Figure 5. Seven of these block groups are located in the City of Auburn, six in the City of Opelika, one in the community of Marvyn, and one in the community of Beulah.

Census tracts 408, 406.04, and 406.03 of Auburn and census tracts 414 and 416 of Opelika are the only five census tracts that have all block groups classified with a high or moderately high level of vulnerability. The consistently high rate of vulnerability within these census tracts is important when considering future allocation of resources and assets to food security.

Figures 6 and 7 are enlargements of Figure 5 and focus on the block groups that are ranked with high or moderately high vulnerability. Figure 6 enlarges the block groups located near Auburn University and within the City of Auburn. Figure 7 enlarges the block groups located within the City of Opelika.

Though median household income and incidence of poverty possess a strong association with food security, these economic indicators alone are not the only factors influencing the ability of households to meet their food needs. Studies have shown (Rose 1998; Nord 2009) that household food security also possesses a negative correlation with the following household characteristics:



**Figure 5. Relative vulnerability for experiencing food insecurity based on economic indicators block group (U.S. Census Bureau 2010)**

- Householder did not graduate from high school;
- Householder is unemployed;
- Householder is a single-parent with dependents;
- Householder is black or Hispanic; and
- Household contains more than two people.

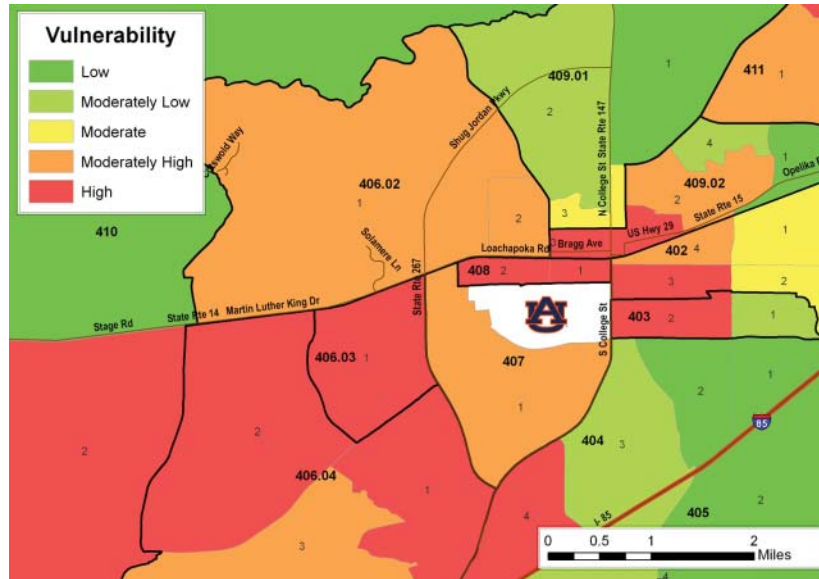
Appendix A: Lee County Household Characteristics includes census tract level maps of the first four household characteristics listed above.

### Federal Food Assistance Programs

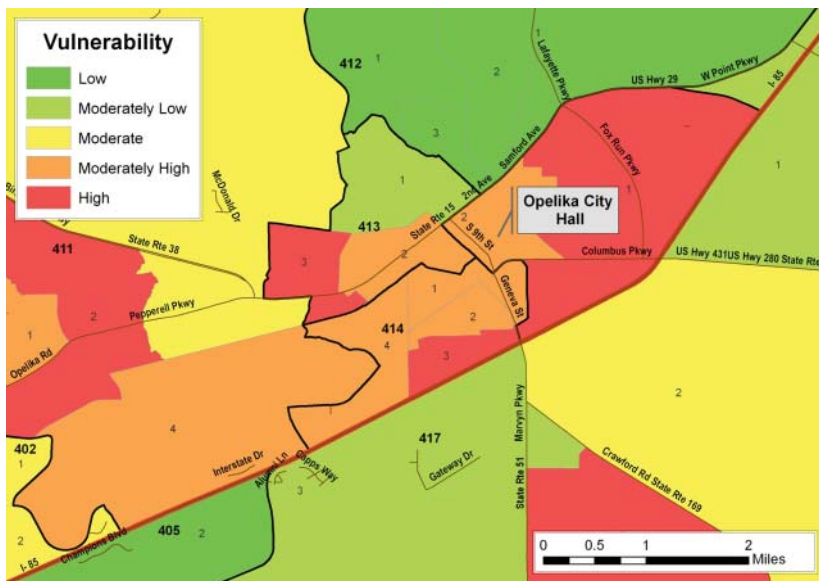
With the understanding that food insecurity and hunger are realities faced by a significant number of Americans, the U.S. government has set up safety nets in the form of federal nutrition assistance programs.

These federal nutrition assistance programs include:

- Supplemental Nutrition Assistance Program (SNAP)
- National School Lunch Program (NSLP)
- School Breakfast Program (SBP)
- Special Milk Program for Children



**Figure 6. Relative vulnerability for experiencing food insecurity based on economic indicators within Auburn by block group (U.S. Census Bureau 2010)**



**Figure 7. Relative vulnerability for experiencing food insecurity based on economic indicators within Opelika by block group (U.S. Census Bureau 2010)**

- Child and Adult Care Food Program (CACFP)
- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)
- Summer Food Service Program (SFSP)
- The Emergency Food Assistance Program (TEFAP)
- Commodity Supplemental Food Program (CSFP)
- Food Distribution Program on Indian Reservations (FDPIR)
- WIC Farmers’ Market Nutrition Program
- Nutrition Services Incentives Program (NSIP)

More information about each of these nutrition assistance programs is available at [www.fns.usda.gov/fdd](http://www.fns.usda.gov/fdd).

In our community food security assessment, we focused on the two largest programs—the Supplemental Nutrition Assistance Program (SNAP) and the National School Lunch Program (NSLP). Of eligible households in 2009, nationwide participation for each of these programs was 35.2 percent and 34.1 percent, respectively (Nord, Coleman-Jensen, Andrews, and Carlson 2009).

**Supplemental Nutrition Assistance Program (SNAP)**

The Supplemental Nutrition Assistance Program (SNAP) is the largest federal nutritional assistance program in the United States. Known as the Food Stamp Program prior to October 2008, SNAP allows for eligible households to receive benefits to purchase or receive approved food items at authorized food stores, restaurants, and group feeding sites (Cohen 2002). Eligibility for receiving SNAP benefits is based largely on household size, income relative to the federal poverty level, basic expenses, and assets. Households receiving Temporary Assistance for Needy Families (TANF) or Supplemental Security Income (SSI) are automatically eligible for receipt of SNAP benefits (Food and Nutrition Services 2012). In 2009 the average monthly benefit received per SNAP participant was approximately \$124 (Nord, Coleman-Jensen, Andrews, and Carlson 2009). In 2011, the average monthly benefit received by Alabama residents participating in SNAP was \$135.18 (FNS 2011).

Table 1, also available at the USDA Food and Nutrition Service website, is used to determine eligibility for SNAP benefits. Gross income refers to a household’s total, non-excluded income before any deductions are made. In order for a household to qualify and maintain eligibility for SNAP benefits, gross household income must not exceed 130 percent of the federal poverty level. Exceptions apply for those who are unemployed, disabled, or elderly. The income eligibility figures listed in the chart will remain applicable until September 30, 2012 (Food and Nutrition Services 2012).



**Table 1: Income and Household Size Requirements for Determining SNAP Eligibility**

Household Size	Gross Monthly Income <sup>1</sup>
1	\$1,180
2	\$1,594
3	\$2,008
4	\$2,422
5	\$2,836
6	\$3,249
7	\$3,663
8	\$4,077
Each additional member	+\$414

<sup>1</sup> 130 percent of official poverty rate.

The 2010 American Community Survey estimates that there are approximately 4,377 households in the Lee County that had received SNAP benefits in the twelve months prior. This amounts to approximately 8.1 percent of total households; 2,513 of the households receiving SNAP benefits reported incomes below the SNAP eligibility threshold of 130 percent poverty. These households account for 40.4 percent of all eligible households, a figure that is approximately 5 percent higher than the national average (Nord, Coleman-Jensen, Andrews, and Carlson 2009).

Figure 8 shows the number of people by census tract receiving SNAP benefits in 2010 (American Community Survey).

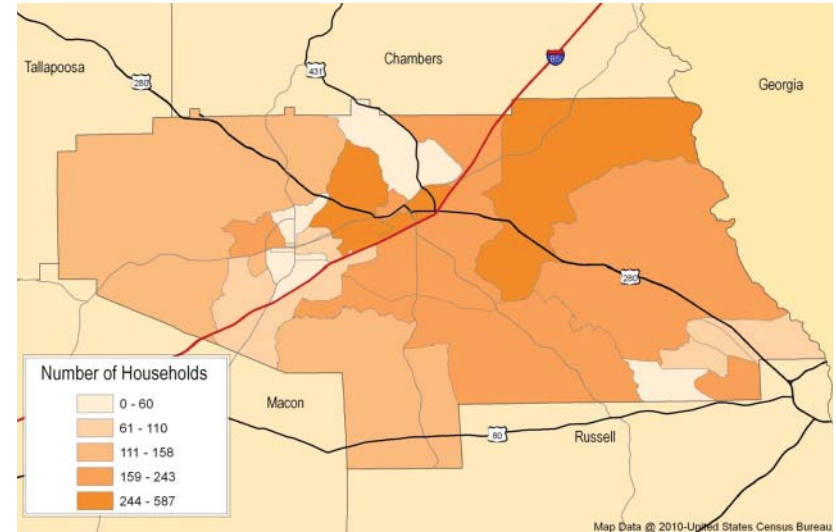
As seen in this map, the majority of SNAP recipients in Lee County reside in the City of Opelika and the community of Beulah.

Though there are more than 4,000 eligible Lee County households participating in SNAP, there are substantially more eligible households not participating in the program. This trend is not unique to Lee County. Hundreds of thousands of households in Alabama and nationwide do not receive SNAP benefits despite eligibility.

Recent research has attempted to quantify the reasons why these eligible households do not receive SNAP benefits. A 2003 study (Farrell et al.) found that there are three primary reasons:

- The household is already receiving other means-tested benefits (i.e. SSI, Medicaid, WIC, Housing Assistance, cash public assistance, or TANF);
- The household is experiencing a short-term drop in income that temporarily places it below the SNAP eligibility level of 130 percent poverty; and
- The householder faces barriers to application and participation, such as illiteracy, lack of awareness, or physical or mental disability.

There also exists a possibility that some eligible households choose not to receive SNAP benefits because they feel there is a stigma associated with receiving

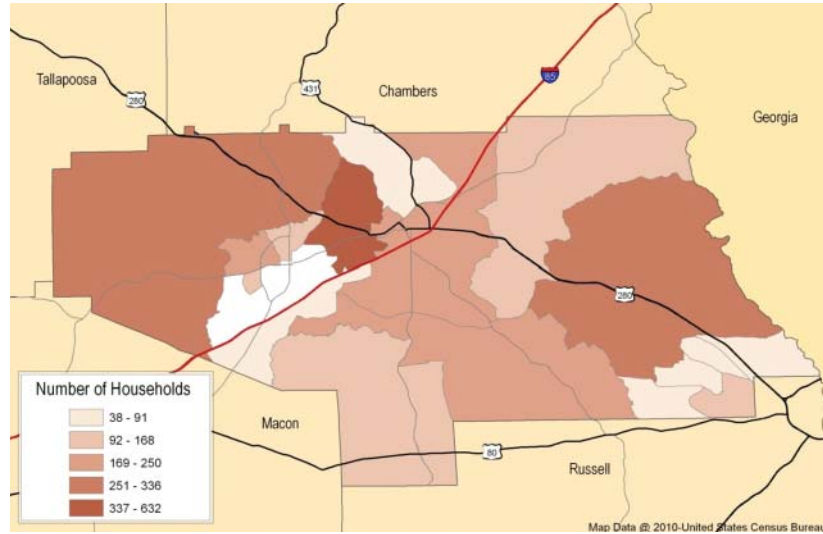


**Figure 8. Number of households receiving SNAP benefits by census tract (U.S. Census Bureau 2010)**

welfare assistance (Farrell et al. 2003). Though this is an oft-cited cause of low SNAP participation rates, an analysis of the National Food Stamp Survey (Dion and Pavetti, 2000) found that a small percentage of people—approximately 7 percent—claim welfare stigma as the most important reason for not participating in the SNAP program.

Figure 9 illustrates the number of households with incomes below the federal poverty level that are not receiving SNAP benefits at the level of the census tract. It indicates that the majority of eligible households reside within the city limits of Opelika. However, there are two particularly significant conclusions to draw from this map that are easy to overlook as they are made in the context of relative vulnerability (see Figure 5). First, a large number of eligible households in Census Tract 10 are not receiving SNAP benefits. These households are concentrated in the community of Notasulga. And second, though relative vulnerability in Census Tract 419 is moderate, there are a substantial number of households that could benefit from the assistance of SNAP.

In Lee County, there are 82 stores authorized to accept SNAP benefits. These stores range from supermarkets, to small grocers, to convenience stores, to specialty stores. Presently no restaurants or group feeding sites exist in the county that are authorized to redeem SNAP benefits.

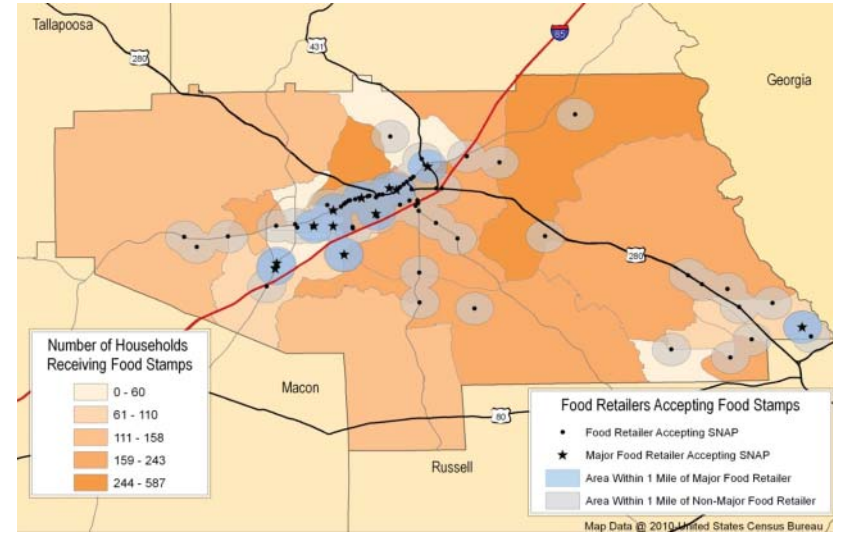


**Figure 9. Number of households below 130 percent poverty level not receiving SNAP benefits by census tract (U.S. Census Bureau 2010)**

NOTE: Data from the census tracts shaded white have been intentionally omitted from this map. These census tracts have populations consisting of largely Auburn University students. The majority of these students are financially dependent on their parents and are food secure.

Figure 10 shows the location of retailers authorized to accept SNAP benefits relative to the number of SNAP recipients per block group. Buffers indicating a one-mile radius are placed around each food retailer. Presumably, SNAP recipients living within these buffer areas are capable of walking to a food retailer that is authorized to accept SNAP benefits. From this map we see that many Lee County SNAP recipients do not have easy access to a food retailer authorized to redeem their benefits and that a majority of these households are located in northern census tracts of Opelika and in the community of Beulah. Also indicated on this map are the locations of major food retailers, i.e. supermarkets. We see from the map that supermarkets in Lee County are concentrated in the city limits of Auburn and Opelika.

Not all food retailers authorized to accept SNAP benefits are equal. Depending on the type of retailer (supermarket, convenient store, etc.), the availability and affordability of the food varies considerably. For this reason, we have also conducted a survey of SNAP authorized food retailers in Lee County. Results from this survey are presented in Appendix B-1, Lee County Food Store Survey: Evaluating Food Items Available to Lee County SNAP Recipients; Appendix



**Figure 10. Location of food retailers accepting SNAP benefits relative to SNAP recipients by census tract (U.S. Census Bureau 2010)**

B-2 Thrifty Food Plan Market Basket; and Appendix B-3 Availability of Thrifty Food Plan Items by Store Type.

**National School Lunch Program (NSLP)**

The National School Lunch Program (NSLP) is a federally assisted program operating nationwide in approximately 101,000 public and non-profit private schools and residential childcare institutions. In 2009 it was estimated that 31.3 million children in the United States participated in the program each day (Nord, Coleman-Jensen, Andrews, and Carlson 2009). School districts and private schools choosing to participate in the NSLP receive cash subsidies and food from the USDA for each meal they serve. In order to participate in the program, schools must ensure that all of the lunches served satisfy the Dietary Guidelines for Americans and offer free or reduced priced meals to eligible children (FNS 2011).

Similar to SNAP, eligibility for free and reduced priced meals through the NSLP is dependent on household size and gross household income. Free meals are available to children from households with incomes at or below 130 percent of the federal poverty level. Reduced priced meals are available to children from

households with incomes between 130 percent and 185 percent of the federal poverty level (Tribiano 2012).

All three school districts in Lee County—Auburn City Schools, Lee County Schools, and Opelika City Schools—participate in the NSLP. These school districts also participate in the School Breakfast Program and the Special Milk Program for Children.

Table 2 lists all of the public schools within Lee County and the percentage of the student body receiving free or reduced breakfast and lunch. Schools within each school district are listed in order from greatest percentage of students to least percentage of students. These data are valuable because they reveal which schools service the county’s most vulnerable populations. We see from this table that Loachapoka Elementary School, the Opelika Learning Center, and Loachapoka High School have the three highest rates for receipt of free or reduced school lunch.

While the NSLP offers subsidized meals to all children in participating schools, children from food insecure and marginally food secure households reap the greatest benefits from the program. These benefits are particularly evi-

**Table 2: Students Receiving Free/Reduced Lunches through the NSLP in Lee County**

School	Percentage of Student Body Receiving Free/Reduced Lunch
<i>Auburn City Schools</i>	
Richland Elementary School	31.4%
Yarborough Elementary School	31.2%
Wright’s Mill Road Elementary School	28.3%
Auburn Early Education Centers	28.3%
Cary Woods Elementary School	27.0%
JF Drake Middle School	26.7%
Dean Road Elementary School	26.0%
Auburn Junior High School	25.6%
Auburn High School	22.8%
Ogletree Elementary School	17.5%

continued

**Table 2: Students Receiving Free/Reduced Lunches through the NSLP in Lee County (continued)**

School	Percentage of Student Body Receiving Free/Reduced Lunch
<i>Lee County Schools</i>	
Loachapoka Elementary School	91.4%
Loachapoka High School	89.3%
Beauregard Elementary School	54.8%
Sanford Middle School	54.2%
Beulah Elementary School	52.0%
East Smiths Station Elementary School	44.9%
Beauregard High School	44.6%
Beulah High School	42.3%
Smiths Station Freshman Center	N/A
Smiths Station High School	29.7%
Wacoochee Junior High School	42.1%
Smiths Station Intermediate	43.7%
Wacoochee Elementary School	N/A
Smiths Station Primary School	43.7%
<i>Opelika City Schools</i>	
Opelika Learning Center	89.6%
West Forest Intermediate School	85.7%
Carver Primary School	86.2%
Morris Avenue Intermediate School	62.1%
Opelika Middle School	62.1%
Southview Primary School	59.9%
Jeter Primary School	52.1%
Opelika High School	52.1%
Northside School	51.3%

dent when considering nutrient intake. Studies have shown that children from food insecure and marginally food secure households receive a larger portion of their daily food and nutrient intakes at school than do their peers from food secure households (Potamites and Gorden 2010). Additionally, participation in the NSLP is proven to reduce behavioral problems among children experiencing hunger (Dunifon and Kowaleski-Jones 2001). These data support an observation made by a guidance counselor at Carver Primary School who said that when children are hungry, they tend to require more attention and disciplinary action from teachers and administrators (Lowe 2012).

Though the NSLP is proven to reduce incidence of hunger among food insecure children, national debate over the quality of meals provided through the NSLP has become increasingly prevalent in recent years. With rapidly increasing rates of childhood obesity and diabetes, many are demanding that the nutritional requirements of the NSLP be reevaluated.

Local school authorities (i.e. school lunchroom managers and school system nutrition coordinators) are responsible for meeting the nutritional guidelines established by the NSLP but have flexibility to decide which foods are served and how they are prepared (FNS 2011). In Lee County, Auburn City, and Opelika City schools there are decentralized lunch menus. This means that every school in the county has a lunchroom manager. Lunchroom managers are responsible for constructing a weekly menu based on recipes provided by the USDA. Nutrition coordinators are asked to ensure that menus meet the nutritional guidelines of the NSLP (Page 2012).

As suggested in Table 3, the overwhelming majority of food served to Lee County students is purchased by the State of Alabama from the USDA. However, this does not mean that school systems and individual schools are prohibited from purchasing food from other entities. In fact, at the national level there is a growing initiative that encourages school systems to purchase their fresh fruits and vegetables from local and regional farmers. This initiative is commonly referred to as “farm-to-school.”

In Alabama, there are very few school systems that have embraced the farm-to-school movement. However, Opelika City Schools are an exception. Under the direction of recently retired Nutrition Coordinator Melanie Paine, Opelika City Schools made a cohesive effort to bring better nutrition to Opelika students. In 1994 Paine “shut off all of the fryers” in the cafeterias and initiated a switch from traditional food-based menu planning to nutrient standard menu planning (Paine 2012). In simple terms, nutrient standard menu planning fo-

cuses on the nutritional quality of food served, whereas traditional food-based menu planning focuses on the quantity, or volume, of food served (USDA 2000).

With the switch to nutrient standard menu planning, Paine began incorporating more fresh fruits and vegetables into Opelika school lunch menus. During her tenure as Opelika City School Nutrition Director, Paine established a partnership with the New North Florida Cooperative to obtain fruits and vegetables from farmers local to the Southeast. Farmers affiliated with the New North Florida Cooperative focus on harvesting fruits and vegetables strictly for school systems in the Southeast. For this reason, schools that purchase through the New North Florida Cooperative are assured that the products they purchase fulfill the safety and nutritional standards of the NSLP. For more information on the New North Florida Cooperative visit <http://www.farmtoschool.org/state-programs.php?action=detail&pid=32>.

Many school systems, like Opelika City Schools, obtain their fresh and local produce from cooperative entities as opposed to independent local farmers. This is because maintaining a lasting relationship with an unaffiliated local farmer can be extremely difficult. Many small farmers do not possess the ability or desire to single-handedly produce sufficient quantities of food for an entire school system. In Lee County there are no farmers that regularly provide fresh produce to any school despite the presence of high demand (Paine 2012). In attempting to bring more local fruits and vegetables into Opelika City Schools, Paine found that the majority of the farmers in Lee County and surrounding counties are willing to the sell only surplus produce to the school system. Due to safety restrictions,

**Table 3: Decision-Making Scheme within the NSLP and Lee County School System**

USDA Food and Nutrition Services establishes nutritional guidelines for the NSLP



The State of Alabama purchases food from the USDA. This food includes frozen meat, canned and frozen vegetables, fresh and frozen fruit, cheese, and pasta



This food is distributed weekly to each school system. Nutrition coordinators divide food among school.



Lunchroom managers construct weekly menus based on available food items



Nutrition coordinators review menus for compliance and purchase any additional food items

school systems are not able to serve such surplus produce to children. In this context, surplus produce refers to produce that was taken to market but could not sell for a price premium.

The USDA, among other state, federal, and private organizations, recognizes that the farm-to-school initiative is mutually beneficial for both local farmers and students. However, implementing a successful farm-to-school program requires complete commitment and cooperation from nutrition directors, school administrators, school boards, and lunchroom managers (Paine 2012). According to Paine (2012), success is also dependent on allocation of work. Farm-to-school programs are more likely to succeed if the only job of the school lunchroom managers is to construct healthy menus. In some schools, including Lee County Schools, lunchroom managers have to commit a considerable amount of time to completing administrative paperwork.

Sample lunch menus from Lee County, Auburn City, and Opelika City schools are shown in Table 4. Because these schools participate in the School Breakfast Program, daily breakfast menus are also listed. Breakfasts listed were served on the same day as the sample lunch. Sample schools and menus were selected at random.

These menus help illustrate the flexibility that lunchroom managers and nutrition coordinators have in constructing menus that meet the guidelines of the NSLP. Notice the difference in the types of food served in each school district. These differences ultimately influence the health and well-being of students.

### Food Pantries and Soup Kitchens in Lee County

Food pantries and soup kitchens function as direct providers of emergency food assistance. Food pantries distribute unprepared food for offsite use. Soup kitchens provide prepared food for consumption onsite. It comes without surprise that use of food pantries and soup kitchens is strongly correlated with food insecurity. Food insecure households are fifteen times more likely to receive food from a food pantry than food secure households and nineteen times more likely to receive a prepared meal from a soup kitchen (Nord, Coleman-Jensen, Andrews, and Carlson 2009).

In Lee County, there are approximately 50 known food pantries and 42 known soup kitchens. Eleven of the known food pantries also serve prepared food onsite. These numbers are based on agencies (food pantries or soup kitchens) that are authorized to purchase food from the Food Bank of East Alabama.

**Table 4. Sample Breakfast and Lunch Menus from Schools in Lee County**

Lee County Schools (Lochapoka High School)	Auburn City Schools (J.F. Drake Middle School)	Opelika City Schools (Morris Avenue Intermediate School)
<i>Breakfast</i>		
Sausage biscuit with jelly, or cereal cracker Juice or milk	Strawberry pancakes Juice or milk	Oatmeal, or cereal Fruit pastry, or choice of fruit Juice or milk
<i>Lunch</i>		
Hot dog with chili Baked beans Coleslaw Fruit Milk	Chicken nuggets Taters n' gravy Lima beans Roll Fresh fruit Gram dots	Grilled chicken Whole wheat bun Whole kernel corn Pineapple

The Food Bank of East Alabama is one of eight food banks in the Alabama Food Bank Association. In addition to Lee County, the Food Bank of East Alabama services Chambers, Russell, and Barbour counties as well as parts of Macon, Tallapoosa, and Bullock counties.

Supermarkets and food companies provide the majority of food distributed by the Food Bank of East Alabama. Rather than wasting their surplus food products, supermarkets and food companies donate it to the Food Bank. The Food Bank then distributes the food to member agencies. Agencies achieve and retain membership by fulfilling five criteria:

- The agency must provide food for needy people free of charge;
- The agency must maintain a regular feeding program;
- The agency must be a 501(c)(3) nonprofit or a church;
- The agency must participate in the shared maintenance fee for food received from the Food Bank; and
- The agency must give Civil Rights Assurances to all clients served.

Agencies operating food pantries that purchase food from a food bank are required to interview and approve all households that seek food assistance. In order for a household to receive food aid from an agent authorized to purchase food from the Food Bank, the household must either (1) receive WIC or TANF, (2) receive SNAP benefits, (3) receive SSI, or (4) have an income that is below

130 percent of the federal poverty level. Often households are referred to food pantries or soup kitchens by housing assistance agencies, health practitioners, WIC, elderly services, or the Department of Human Resources (Community Market 2012).

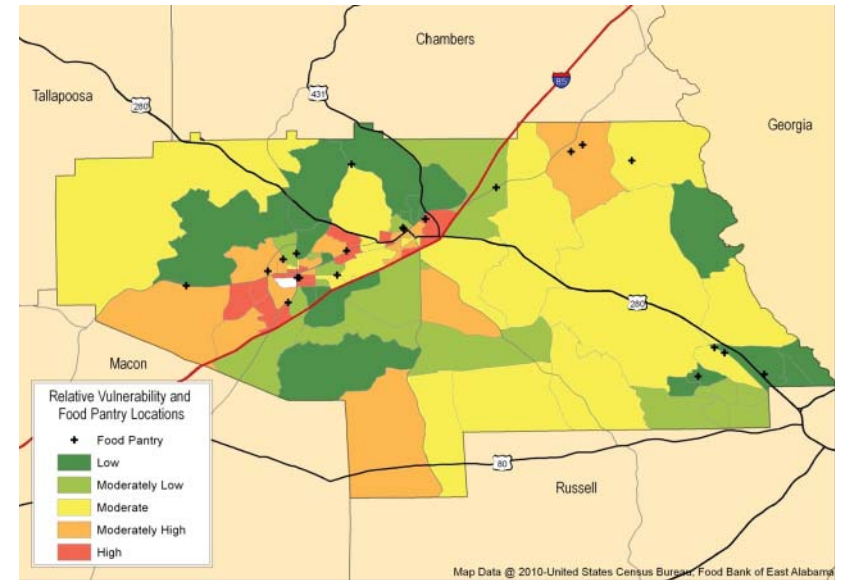
Figure 11 shows locations of food pantries in Lee County administered by agencies registered with the Food Bank of East Alabama. Only the 24 food pantries that accept client referrals are indicated on the map. The other 26 food pantries distribute food only to individuals affiliated with the agency. Often times these agencies are churches and provide emergency food assistance only to their congregation. From this map we see that open food pantries are notably absent from a number of highly vulnerable block groups.

Lee County food pantries range in the number of individuals and households they are capable of serving. The pantry serving the most individuals is the Community Market of East Alabama. Located between Auburn and Opelika on Pepperrell Parkway, the Community Market serves approximately 1,030 households per month. Lakeview Baptist Church and Christian Care Ministries operate the second and third largest pantries. These pantries serve approximately 470 and 345 households per month, respectively. Of the food pantries that accept client referrals, the median number of households served is approximately 66. Excluding the three largest pantries, the mean number of households served by the pantries that accept client referrals is approximately 89.

It is important to note that many of the individuals accounted for in these statistics are receiving food from multiple food pantries. Particularly among the larger pantries, there is a limit to how many times each individual can receive food in a twelve-month period. For example, at the Auburn United Methodist Church food pantry, individuals can receive food only four times every twelve months. After people reach their maximum number of visits at one pantry, they must rely on the donations of other pantries. Each food pantry establishes its own figure for number of allowable visits per individual per twelve months.

Each food pantry also distributes food a different number of times per week or per month. While some pantries distribute one day each week, others distribute only once or twice each month. With the variation between number of allowable visits, distribution days, and distribution times, it is extremely difficult for people needing emergency food assistance to determine the food pantry to which they should go.

The Community Market of East Alabama, which is by far the largest food pantry in Lee County, is directly affiliated with the Food Bank of East Alabama



**Figure 11. Location of food pantries that accept client referrals relative to number of households most vulnerable for experiencing food insecurity**

and opened its doors in 2003. The Market is open six days a week, maintains regular business hours, has a full-time staff, and is “client choice,” which means that individuals receiving food from the Community Market are allowed to select all of the items they place in their shopping carts.

In 2011, the Community Market served 3,001 Lee County households and distributed 921,082 pounds of food. Compiling all client demographic information, we know that 41 percent of households were from Lee County, 39 percent were from Opelika, and 20 percent were from Auburn while 55 percent of households served were Caucasian, 40 percent were African-American, and 5 percent were classified as “other.” According to the 2010 Census, Lee County’s population was 71 percent white and 23 percent African American.

Several soup kitchens operate in Lee County, but very few are open to individuals not associated with the administering agency. Only eight soup kitchens accept client referrals. Seven of these eight soup kitchens operate in conjunction with a food pantry that accepts client referrals. The soup kitchen serving the largest number of people is that administered by Christian Care Ministries, which also operates the second largest food pantry in the county.

Several groups in Lee County that operate food pantries or soup kitchens are not registered as agencies with the Food Bank of East Alabama. Because they are not registered agencies, these groups cannot purchase food from the Food Bank. With no parent organization monitoring these groups, there is no way of definitively identifying all of them and their distribution capacities. One example of these groups is Feeding God's Children.

Feeding God's Children is built around a summer feeding program. The summer feeding program operates for eleven weeks each summer and is designed to supplement the five subsidized breakfasts and lunches that children receive during the school year through the School Breakfast Program and the National School Lunch Program. In the summer of 2009, Feeding God's Children provided approximately 23,000 meals to 240 children between the ages of 5 and 17. These children all lived in residential districts administered by the Opelika Housing Authority.

### Transportation and Food Security in Lee County

Transportation has a powerful influence on food security in Lee County. In 2011, 51 percent of the 3,001 households served by the Community Market of East Alabama did not have access to a working vehicle (Community Market of East Alabama 2011). This figure stands in relation to the 1.9 percent of all Lee County households that do not have a vehicle (US Census Bureau American Community Survey 2010).

Households that do not possess a vehicle must rely on alternative means of transportation, such as carpooling or public transportation to commute to work, to get food, and to carry out other important tasks. From the American Community Survey (2010), we know that in Lee County more than 7,000 workers carpool to work and more than 500 workers use public transportation. Table 5 lists the 32 most vulnerable block groups within the county along with the number of individuals in each block group that either carpool or take public transportation to work. Appendix C: Primary Means of Transportation of Employed Lee County Residents presents maps illustrating the countywide distribution of individuals who carpool and take public transportation to work.

In Lee County there are only two public transportation systems. These systems are Tiger Transit, a service provided by Auburn University, and Lee-Russell Public Transit (LRPT). Though Tiger Transit is, in fact, not a public transportation system and is intended for use only by Auburn University faculty, staff, and students, there is no mechanism in place for drivers to verify that passengers are

employed by, or attend, Auburn University. Subsequently, individuals unaffiliated with the University take advantage of the free service. For more information on the Auburn areas serviced by Tiger Transit visit [http://www.auburn.edu/administration/parking\\_transit/transit/index.php](http://www.auburn.edu/administration/parking_transit/transit/index.php).

Lee-Russell Public Transit services all of Lee County and Russell County. It is a curb-to-curb, dial-a-ride service that operates Monday through Friday between 8:00 A.M. and 2:00 P.M. Central Time. "Curb-to-curb" means that LRPT passengers are responsible for getting themselves from their homes to the street curb for pick-up. Passengers with physical disabilities must make their own arrangements for assistance to the curb if necessary. "Dial-a-ride" means that LRPT is a demand response service. Passengers must schedule rides in advance. Rides are given on a first-come, first-served basis and are dependent on the availability of space. One-way fares range anywhere from \$1.00 to \$6.00.

**Table 5. Most Vulnerable Block Groups and Primary Means of Transportation by Employed Individuals**

Rank	Census Tract	Block Group	Number Carpooling	Number Using Public Transportation
1	408	2	87	2
2	406.04	1	11	0
3	408	1	28	0
4	406.04	2	158	15
5	409.02	3	308	0
6	406.03	1	60	0
7	404	4	117	0
8	416	1	43	0
9	403	2	28	0
10	402	3	205	15
11	411	2	98	0
12	413	3	46	0
13	414	3	183	0
14	410	2	167	0
15	417	4	30	0
16	402	4	259	0

continued

**Table 5. Most Vulnerable Block Groups and Primary Means of Transportation by Employed Individuals (continued)**

Rank	Census Tract	Block Group	Number Carpooling	Number Using Public Transportation
17	414	4	12	0
18	411	1	101	3
19	406.02	1	105	0
20	406.02	2	2	15
21	414	2	58	4
22	407	1	169	0
23	409.02	2	30	0
24	416	2	92	0
25	406.04	3	47	3
26	418	1	46	0
27	413	2	69	0
28	421.01	2	46	0
29	411	4	83	15
30	414	1	134	0
31	421.01	3	125	43
32	402	2	195	0

The limited service area of Tiger Transit and the various restrictions of the dial-a-ride, curb-to-curb LRPT make public transportation a less than desirable way to travel about the county for food insecure households lacking access to a reliable vehicle. From Table 5 we see that many individuals residing in Lee County's most vulnerable block groups do not use the services provided by the available transportation systems. Observations made at local food pantries suggest that many food insecure individuals instead rely on family and friends for transportation when they must visit a food pantry or shop at a local food retailer. This dependency often adds considerable stress and uncertainty to the processes of obtaining food.

## FOOD UTILIZATION

### Food Utilization in the United States

The Standard American Diet (SAD) is a diet pattern that is defined by excess consumption of calories from refined carbohydrates and fat-laden animal products and insufficient consumption of the nutrients found in whole grains, fruit, and vegetables. Improper utilization of available food by the majority of Americans has resulted in rapidly increasing rates of diet-related diseases and conditions. Such diseases and conditions include type 2 diabetes mellitus, hypertension, certain cancers, metabolic dysfunctions, and heart disease (Grotto and Zied 2010).

Consumption of calorically dense and nutrient-poor diets among Americans is largely the result of behavioral changes. Increased snacking among adults and children, increased participation in food-related activities, and increased consumption of food away from home all function as contributing factors. According to a recent study, Americans spend on average nearly 45 percent of their food budget on dining way from home. Food purchased while dining out typically comes in larger portion sizes and is calorically dense (Grotto and Zied 2010).

### Food Utilization in Lee County

Because there has been no assessment conducted to specifically evaluate food utilization among Lee County residents, we must assume that local food consumption patterns mimic the trends identified at the national level. It is likely that a majority of Lee County residents maintain calorically high and nutrient-poor diets.

Despite the absence of data on typical food consumption patterns in Lee County, we are able to quantify some of the diet-related health effects experienced by the local population. The U.S. Center for Disease Control and Prevention (CDC) monitors these health effects. In this section we will look closely at the diet-related health effect of diabetes and the two primary risk factors for diabetes: obesity and physical inactivity (CDC 2009).

In 2009 the CDC estimated for each U.S. county the percentage and number of adults who are obese. In Lee County an estimated 29.8 percent of the adult population, amounting to approximately 29,282 individuals, is obese. In the same survey the CDC also estimated physical inactivity among the adult population. In Lee County approximately 27.4 percent of the adult population, or 26,745 individuals, is considered physically inactive.



Obesity and physical inactivity are risk factors for diabetes. In 2009, 11.3 percent of the adult population in Lee County was diagnosed with diabetes (CDC 2009). In Alabama, the correlation between obesity and diabetes has grown stronger in the past fifteen year. Today, 55.4 percent of Alabama adults diagnosed with diabetes are obese (CDC 2011). In 1995 that percentage was only 38.2 percent.

Diabetes is a disease with life-altering and life-threatening complications. Figure 12 illustrates the percentage of deaths caused by diabetes in Lee County. We see from this chart that incidence of death due to diabetes has increased in the past 20 years.

### Health Consequences of Food Insecurity

Food insecurity is a circumstance experienced by a significant number of Lee County households. For this reason, it is necessary to consider the diet-related health effects that are unique to food insecure populations. Two notable consequences independently related to food insecurity include increased incidence of obesity among adult women, increased incidence of diabetes, and increased incidence of psychosocial problems among school-aged children (Olson 1999).

SNAP participation possesses a positive correlation with obesity among non-elderly adult women. However, obesity among food insecure women is not dependent on SNAP participation. Household food insecurity—independent of socioeconomic status, poverty, or SNAP participation—is proven to directly relate to a higher body mass index (BMI) among women (Olson 1999). A 1999 study conducted by the Division of Nutritional Sciences at Cornell University (Olson 1999) revealed that women who live in food insecure households are shown to have an average BMI of 28.2 while women who live in food secure households are shown to have an average BMI of 25.6. BMI, as defined by the CDC (2011), “is a number calculated from a person’s height and weight... [that] provides a reliable indicator of body fatness for most people and is used to screen for weight categories that lead to health problems.” As such, a lower BMI is healthier than a higher BMI.

Type 2 diabetes mellitus is another health consequence that displays an independent association with food insecurity (Sligman et al. 2007). An assessment of the 1999-2002 National Health Examination and Nutrition Examination Survey (Sligman et al. 2007) suggests that adults experiencing food insecurity are more likely to consume inexpensive foods that are often calorically dense and

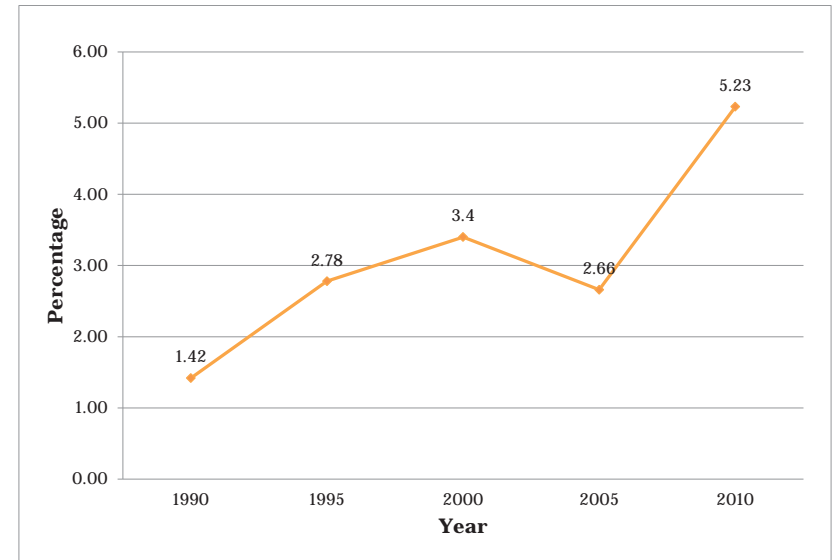


Figure 12. Percentage of deaths due to diabetes in Lee County, 1990-2010

nutritionally poor. Regular consumption of such foods has been associated with the development of both obesity diabetes.

Another significant health consequence of food insecurity is increased incidence of psychosocial problems among school-aged children. Again, this consequence is independent of socioeconomic status and poverty. Examples of psychosocial problems among school-aged children include fighting with other children, having trouble with a teacher, and taking things from other children that do not belong to him/her (Olson 1999).

### NEXT STEPS

The findings of this report reveal that there are a number of food-related problems in Lee County. The majority of these problems function as constraints to the ability of low-income households to access nutritious food on a regular and consistent basis. However, within these problems lie opportunities—opportunities for collaborative action and positive change. Lee County residents, organizations, and policymakers have the ability to not only overcome the problems associated with household food insecurity but also expand upon a vibrant and viable local food system.

This assessment is a first step in identifying constraints and opportunities to community food security. A more comprehensive evaluation that involves a wide spectrum of stakeholders is the next step. Among stakeholders who should be involved are current and past clients of food pantries; religious, civic, and political leaders; health professionals; school nutrition directors; and university researchers familiar with local food systems. This more comprehensive evaluation should follow a collaborative and participatory methodology that ensures all local voices are heard.

A comprehensive evaluation of Lee County's food system is one that will require both organization and leadership. Following the precedent established by numerous communities across the United States, the creation of a food policy council within Lee County is suggested. Such a council would facilitate an evaluation of Lee County's food system and would work to implement resulting recommendations. Creation of a food policy council with broad representation of stakeholders interested not only in food security but also in local food systems at large is a pressing need of our community.

### Understanding Food Policy Councils

The North American Food Security Coalition (2012) has this to say about food policy councils:

Food Policy Councils (FPCs) bring together stakeholders from diverse food-related sectors to examine how the food system is operating and to develop recommendations on how to improve it. FPCs may take many forms, but are typically either commissioned by state or local government, or predominately a grassroots effort. Food policy councils have been successful at educating officials and the public, shaping public policy, improving coordination between existing programs, and starting new programs.

The North American Food Policy Council is a service of the Community Food Security Coalition and functions to develop local food policy councils and provide support to those already in existence. More than 100 food policy councils nationwide are connected through this network and the services of the North American Food Policy Council.

Though each of the more than 100 FPCs nationwide differs in its origin, structure, practices, and policies, they all are motivated by four primary objectives:

- to coordinate all elements of the local food system by bringing together stakeholders from diverse sectors on a regular and consistent basis,
- to identify problems and opportunities within the local food system,
- to work to educate and engage policy makers and citizens in food-related matters, and
- to influence and develop food-related policy (Winne 2012).

With these objectives, FPCs across the country have achieved significant results. Here are just a few examples of the changes and contributions facilitated by FPCs.

- *The City of Hartford Advisory Commission on Food Policy:* This Advisory Commission is known for its consistent monitoring of local hunger and food insecurity via its Hunger Task Force. The Hunger Task Force conducts a quarterly survey of participation in public and private assistance programs such as WIC, school meals, and emergency food agencies. The figures are then reported to city leaders, community leaders, and church groups (Biehler et al. 1998).

- *The Austin-Travis County Food Policy Council:* This FPC has taken active measures to overcome transportation constraints contributing to household food insecurity. After assessing transportation demand in areas of high food insecurity, the FPC pushed for the addition of a bus route that circulates from public housing units to supermarkets and other community resources. This bus route is still in service today (Biehler et al. 1998).

- *Knoxville Food Policy Council:* Created in 1977, the Knoxville Food Policy Council is known as the first FPC in the United States. Since its establishment, this FPC has been particularly active in advocating for and facilitating nutrition education. More specifically, this FPC advocated for the addition of a nutrition educator to the Knoxville Public School Districts and created the Calorie Conscious Consumer award. The Calorie Conscious Consumer award is designed to honor and promote local food businesses that offer displays or written material to assist consumers in making healthier food choices (Biehler et al. 1998).

- *St. Paul-Ramsey County Food and Nutrition Commission:* Since 1985 this Commission has devoted considerable time and resources to disseminating information on the local food system and encouraging a public dialogue about local food-related issues. The Commission publishes an annual directory of food-related agencies, promotes community gardens by publicizing

relevant information, and organizes an annual Hunger Forum to stimulate public discussion about local issues of hunger and food insecurity (Biehler et al. 1998).

- *Berkeley Unified School District Food Policy Collaborative*: The objective of this Collaborative is to fully integrate the school district into the local food system. In pursuit of this objective the Collaborative has taken active measures to develop self-sustaining networks between schools cafeterias, school gardens, and local growers and producers (Biehler et al. 1998).

All of the food policy councils named above serve as examples for the positive change that can occur when people prioritize food. However, before taking action to promote and facilitate change, each of these food policy councils had to fully assess the food systems that they hoped to better. Conducting a comprehensive community food security assessment is critical to the success of any food policy council. It is for this reason that we have recommended that the first action of a local food policy council in Lee County be a collaborative and participatory evaluation of the food system and community food security.

Appendix D: Literature and Resources on Food Policy Councils presents a literature and resource guide on food policy councils. The items listed in this guide are broad in their consideration and, together, present an excellent overview of food policy councils, their purpose, and their various structures, practices, and policies. Though there are numerous publications and resources that address issues of food policy, the few items presented in this Appendix have been specifically selected to assist in the creation of a food policy council that is appropriate for Lee County.

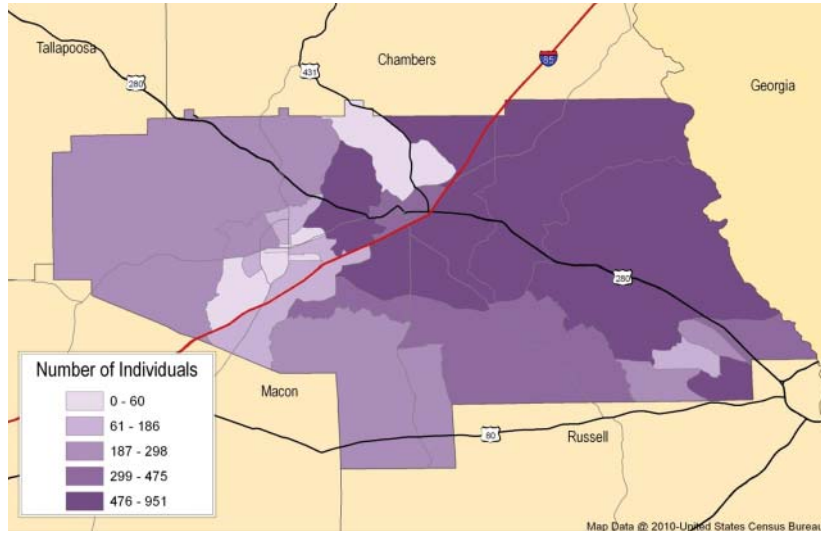
### **Moving Forward in Lee County**

Creation of a food policy council is the next logical step in the promotion of community food security in Lee County. A food policy council will provide a forum to address often overlooked problems and opportunities within our food system. Currently, no such forum exists though some individuals in Lee County have held several exploratory meetings and have interacted with food policy councils that have been established or are in the process of formation in Huntsville, Birmingham, and Montgomery.

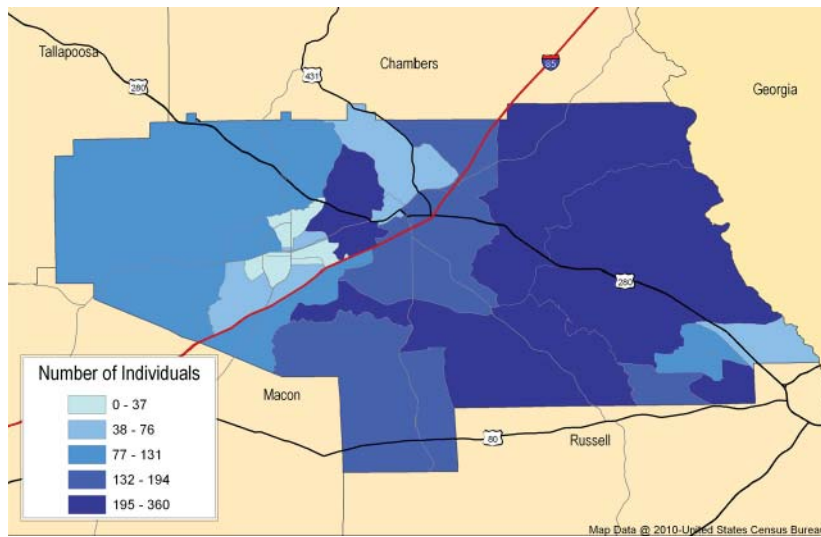
Developing a local food policy council demands the commitment of time, energy, and resources by a diverse body of stakeholders within Lee County's food system. It is our hope that this assessment inspires readers and residents

of Lee County to understand the need for a food policy council and take active measures in creating one. Lee County has a well-educated population with a strong commitment to meeting the food needs of local residents. We have many organizations working to meet these needs, and we have the potential to expand production of local foods that would improve local diets and, thereby, health of Lee Countians, including those who are food insecure. We are poised for the next step.

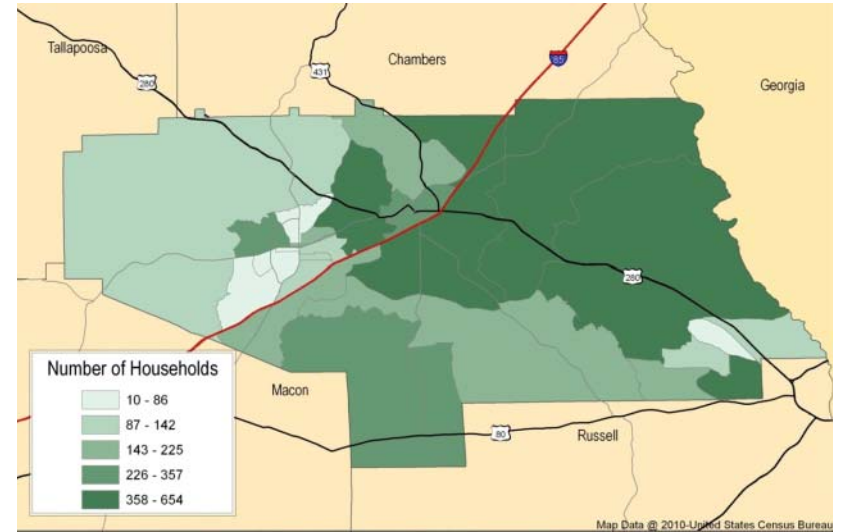
**APPENDIX A. LEE COUNTY HOUSEHOLD CHARACTERISTICS**



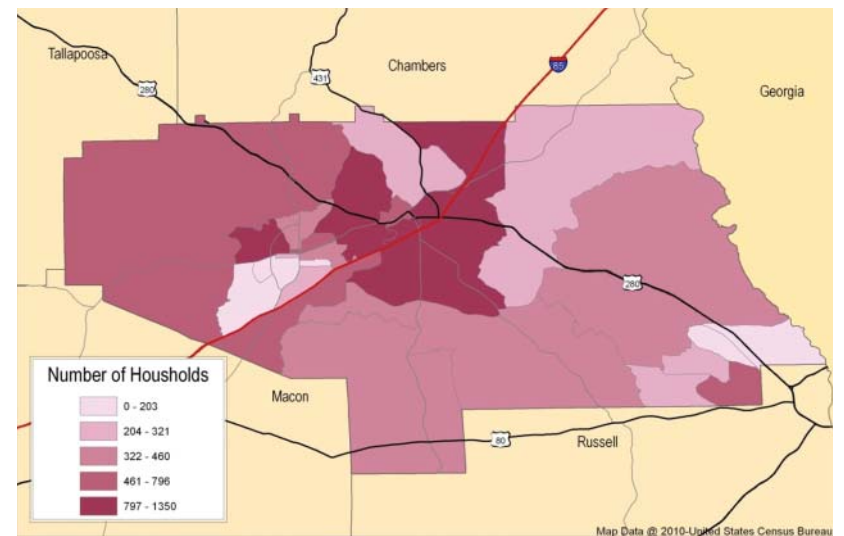
**Figure A-1. Number of individuals over age 25 without a high school diploma or equivalent by census tract (U.S. Census Bureau 2010)**



**Figure A-2. Number of unemployed individuals by census tract (U.S. Census Bureau 2010)**



**Figure A-3. Number of single parent households with children under age 18 by census tract (U.S. Census Bureau 2010)**



**Figure A-4. Number of black, Hispanic, and Latino households by census tract (U.S. Census Bureau 2010)**

**APPENDIX B-1. LEE COUNTY FOOD STORE SURVEY: EVALUATING FOOD ITEMS AVAILABLE TO LEE COUNTY SNAP RECIPIENTS**

In 2002 the USDA Economic Research Service (ERS) published a Community Food Security Assessment Toolkit (Cohen 2002). Included in the toolkit is a survey instrument that assists in the assessment of the availability and affordability of Thrifty Food Plan (TFP) food items sold at stores within a community. The TFP is a product of the USDA Center for Nutrition Policy and Promotion (CNPP) and “serves as a national standard for a nutritious diet at minimal cost and is used as the basis for [SNAP benefit] allotments” (USDA 1999). Combined,

**Table B-1. Mean Availability of Thrifty Food Pantry Food Items by Food Group**

Food Group	Mean Availability
Fruits and Vegetables	34.1%
Meat and Meat Alternatives	40.8%
Dairy Products	50.9%
Breads, Cereals, and Other Grain Products	52.9%
Sugars and Sweets	55.6%
Spices and Condiments	56.4%
Fats and Oils	62.2%

all TFP food items amount to what is commonly referred to a Thrifty Food Plan market basket. For a list of all TFP market basket items, refer to Appendix B-2: Thrifty Food Plan Market Basket.

The food store survey conducted in Lee County is based, in part, on the survey instrument designed by the USDA ERS. The Lee County Food Store Survey assesses strictly the availability of TFP food items at food stores accepting SNAP benefits. Due to limited time and resources, this Food Store Survey evaluated food availability at stores accepting

SNAP benefits that are located in census tracts in which greater than 12.6 percent of households have incomes below 130 percent of the federal poverty level and/or greater than 6.1 percent of households receive SNAP benefits.

In Lee County, ten census tracts meet one or both of the economic selection criteria. Within these ten census tracts are 46 stores that accept SNAP benefits. These stores range anywhere from gas stations, to convenience stores, to pharmacies, to supermarkets. Of these 46 stores, student volunteers surveyed 38. Students surveyed each store by recording all of the TFP market basket items available for purchase. After completing the each survey, students calculated the percentage of available TFP market basket items relative to the total number of TFP market basket items. Calculations were made for each food group.

Results found that, on average, these food stores offer approximately 48 percent of TFP food items (see Table B-1).

Table B-2 places the figures for median availability along a spectrum. From this spectrum we see that, when visiting the Lee County food retailers that accept SNAP benefits, shoppers are most likely to find TFP food items that classify as fats and oils and least likely to find TFP food items that classify as fruits and vegetables. Refer to Appendix B-3: Availability of Thrifty Food Plan Items by Store Type to see the percentage of TFP food items available at each of the surveyed food stores.

The general lack of availability of fruits and vegetables and meat and meat alternatives in food retailers that accept SNAP benefits is a problem. Through interviews with Lee County SNAP recipients we know that fresh fruits and vegetables and meat are the most sought after food items by these individuals. In the majority of the stores where these individuals shop and redeem their SNAP benefits, they are unable to purchase many of the items that they desire most.

**Table B-2. Median Availability of Thrifty Food Pantry Items by Food Group**

	Food Item						
	Fruits Vegetables	Meats Meat Alternatives	Grain Products	Dairy products	Sugars Sweets	Spices Condiments	Fats Oils
Percent Availability	22.7%	27.3%	42-49%	50.0%	55.6%	62.2%	75.0%
	<b>Least Likely to be Available</b> →				<b>Most Likely to be Available</b>		

**APPENDIX B-2. THRIFTY FOOD PLAN MARKET BASKET**

<i>Fresh Fruits and Vegetables</i>
Apples, any variety
Bananas
Grapes (green/red)
Melon (cantaloupe, honeydew, watermelon, other)
Oranges
Carrots
Celery
Green pepper
Lettuce, loose-leaf (green/red)
Onions, yellow
Potato, any variety
Tomatoes, any variety
<i>Canned Fruits and Vegetables</i>
Oranges, mandarin, juice or light syrup
Peaches, juice or light syrup
Mushrooms, pieces
Spaghetti sauce
Tomato sauce
<i>Frozen Fruits and Vegetables</i>
Orange juice, concentrate
Broccoli, chopped
Green beans, any variety
Green peas, any variety
French fries, any variety
<i>Dairy Products</i>
Milk, 1% lowfat
Milk, whole
Cheese, cheddar, any variety
Cheese, cottage, lowfat
Cheese, mozzarella, part skim, not shredded
Evaporated whole milk

continued

**Thrifty Food Plan Market Basket (continued)**

<i>Breads, Cereals, Other Grain Products</i>
Bread, white, enriched
Bread, whole wheat, enriched
Hamburger buns, enriched
Dinner rolls, enriched
French or Italian-style bread, enriched
Bagels, plain, enriched
Bread crumbs, plain
Ready-to-eat cereal, corn flakes
Ready-to-eat cereal, toasted oats
Macaroni, elbow style, enriched
Noodles, yolk-free, enriched
Popcorn, microwave, unpopped
Rice, white, long grain, enriched
Spaghetti, any variety, enriched
<i>Meat and Meat Alternatives, Fresh</i>
Beef, ground, lean
Chicken fryer, cut-up or whole
Chicken thighs, boneless, skinless
Turkey, ground
Pork, ground
Turkey ham
<i>Meat and Meat Alternatives, Frozen or Canned</i>
Fish, flounder or cod, frozen
Tuna fish, chunk style, water packed, canned
Beans, garbanzo, chickpeas, canned
Beans, kidney, canned
Beans, baked, vegetarian, canned

continued

**Thrifty Food Plan Market Basket (continued)**

*Sugars and Sweets*

Sugar, brown (dark or light)

Sugar, powdered

Sugar, white, granulated

Jelly, grape

Molasses, any type

Pancake syrup, any type

Chocolate chips, semi-sweet

Fruit drink, refrigerated, any flavor

Fudgesicles, ice milk

*Spices and Condiments*

Baking powder

Baking soda

Chili powder

Cinnamon

Cumin

Onion powder

Garlic powder

Italian herb seasoning

Oregano

Paprika

Black pepper, ground

Salt, any type

Vanilla, any type

Chicken bouillon, reduced sodium, cubes

Catsup, any type

Soy sauce, reduced sodium

Lemon juice, bottled

Gelatin, powdered, unflavored

Chocolate drink mix, powdered

continued

**Thrifty Food Plan Market Basket (continued)**

*Fats and Oils*

Margarine, stick style

Shortening, vegetable

Salad dressing, mayonnaise type

Vegetable oil, any type

**APPENDIX B-3. AVAILABILITY OF THRIFTY FOOD PLAN ITEMS BY STORE TYPE**

Store Type	TFP Market Basket Items Available	TFP Market Basket Items NOT Available	TFP Market Basket Items Available	Fruits, Vegetables Available	Breads, Cereals, Grain Products Available	Dairy Products Available	Meat, Meat Alternatives Available	Fats, Oils Available	Sugars, Sweets Available	Spices, Condiments Available
	number		percent							
Discount General Store	53	32	62.4%	22.7%	100.0%	66.7%	0.0%	75.0%	88.9%	73.7%
Discount General Store	46	39	54.1%	22.7%	14.3%	50.0%	45.5%	75.0%	66.7%	63.2%
Discount General Store	35	50	41.2%	31.8%	50.0%	33.3%	27.3%	75.0%	55.6%	42.1%
Discount General Store	49	36	57.6%	9.1%	78.6%	66.6%	36.4%	100.0%	88.9%	84.2%
Discount General Store	45	43	51.0%	22.0%	42.9%	83.3%	36.4%	75.0%	88.9%	94.7%
Discount General Store	47	41	53.0%	22.7%	42.9%	83.3%	36.4%	50.0%	88.9%	94.7%
Discount General Store	46	42	54.0%	22.7%	42.9%	66.7%	45.5%	50.0%	88.9%	89.5%
Gas Station	17	68	20.0%	0.0%	42.9%	16.7%	18.2%	25.0%	22.2%	26.3%
Gas Station	43	45	48.9%	36.4%	57.1%	50.0%	45.5%	50.0%	44.4%	68.4%
Gas Station	18	70	20.5%	9.1%	14.3%	33.3%	27.3%	50.0%	33.3%	21.1%
Gas Station	27	58	31.8%	18.1%	42.9%	16.7%	18.2%	75.0%	55.6%	21.0%
Gas Station	16	69	18.8%	9.1%	28.6%	16.7%	18.2%	50.0%	22.2%	15.8%
Gas Station	17	68	20.0%	0.0%	28.6%	33.3%	18.2%	50.0%	55.6%	10.5%
Gas Station	35	53	39.0%	18.1%	21.4%	50.0%	27.3%	75.0%	33.3%	73.7%
Gas Station	19	66	22.4%	4.6%	35.7%	33.3%	9.1%	50.0%	33.3%	26.3%
Gas Station	24	61	28.2%	13.6%	28.6%	33.3%	27.3%	50.0%	44.4%	31.6%
Gas Station	22	63	25.9%	13.6%	35.7%	16.7%	18.2%	75.0%	33.3%	26.3%
Gas Station	35	53	39.0%	18.2%	42.9%	50.0%	27.3%	75.0%	33.3%	68.4%
Gas Station	44	44	50.0%	22.7%	64.3%	66.7%	54.5%	0.0%	33.3%	57.9%
Gas Station	10	78	11.4%	13.6%	14.3%	16.7%	9.1%	25.0%	11.1%	5.3%
Gas Station	50	38	56.8%	45.5%	35.7%	50.0%	72.7%	75.0%	66.7%	79.0%
Small Grocer	35	53	39.8%	36.4%	57.1%	33.3%	36.4%	75.0%	66.7%	21.1%
Small Grocer	41	44	48.2%	31.8%	78.6%	50.0%	27.3%	50.0%	44.4%	57.9%
Small Grocer	46	42	52.0%	13.6%	50.0%	66.7%	27.3%	75.0%	66.7%	89.5%
Small Grocer	42	46	47.0%	18.2%	50.0%	66.7%	36.4%	75.0%	66.7%	73.7%
Small Grocer	29	59	33.0%	31.8%	28.6%	16.7%	27.3%	75.0%	55.6%	31.6%

continued

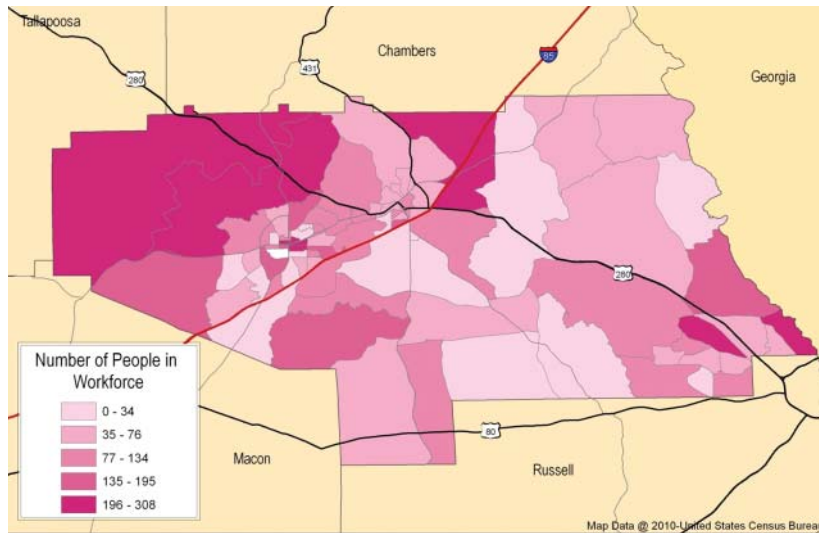


**Availability of Thrifty Food Plan Market Basket Items by Store Type (continued) <sup>1</sup>**

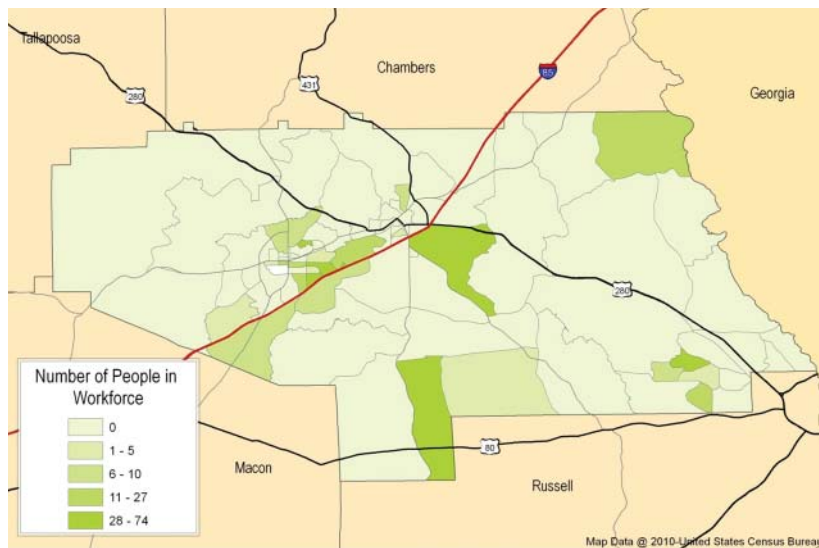
Store Type	TFP Market Basket Items Available	TFP Market Basket Items NOT Available	TFP Market Basket Items Available	Fruits, Vegetables Available	Breads, Cereals, Grain Products Available	Dairy Products Available	Meat, Meat Alternatives Available	Fats, Oils Available	Sugars, Sweets Available	Spices, Condiments Available
	<i>number</i>		<i>percent</i>							
Specialty Store	35	50	41.2%	86.3%	14.3%	16.7%	27.3%	50.0%	33.3%	15.8%
Specialty Store	34	51	40.0%	13.6%	64.3%	33.3%	36.4%	50.0%	33.3%	57.9%
Specialty Store	16	72	18.0%	0.0%	0.0%	33.3%	90.9%	0.0%	0.0%	31.6%
Specialty Store	9	79	11.0%	4.6%	42.9%	0.0%	0.0%	0.0%	11.1%	5.3%
Specialty Store	18	67	20.5%	63.6%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Specialty Store	40	48	45.0%	22.7%	64.3%	50.0%	27.3%	50.0%	22.2%	79.0%
Supercenter	85	0	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Supercenter	54	31	63.5%	41.0%	78.5%	83.3%	45.5%	100.0%	88.9%	68.4%
Supercenter	84	1	98.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	94.7%
Supermarket	83	85	97.6%	91.0%	92.9%	100.0%	91.0%	100.0%	100.0%	100.0%
Supermarket	86	2	97.0%	100.0%	92.0%	100.0%	100.0%	100.0%	88.9%	100.0%
Supermarket	87	1	100.0%	100.0%	92.0%	100.0%	100.0%	100.0%	100.0%	100.0%

<sup>1</sup> See Appendix B-2 for a list of Thrifty Food Plan Market Basket items.

## APPENDIX C. PRIMARY MEANS OF TRANSPORTATION OF EMPLOYED LEE COUNTY RESIDENTS



**Figure C-1. Number of people in workforce carpooling to work by block group (U.S. Census Bureau 2010)**



**Figure C-2. Number of people in workforce using public transportation to get to work by block group (U.S. Census Bureau 2010)**

## APPENDIX D. LITERATURE AND RESOURCES ON FOOD POLICY COUNCILS

### Literature

Harper, Althea, Annie Shattuck, Erik Holt-Gimenez, Alison Alkon, and Frances Lambrick. 2009. "Food Policy Councils: Lessons Learned." Oakland, CA: Food First: Institute for Food and Development.

This report presents tips and case studies for successful food policy councils and includes additional resources for individuals, organizations, and local governments interested in establishing a food policy council.

Biehler, Dawn, Andy Fisher, Kai Siedenberg, Mark Winne, and Jill Zachary. 1998. "Getting Food on the Table: An Action Guide to Local Food Policy." Venice, CA: Community Food Security Coalition and California Sustainable Agriculture Working Group.

This guidebook discusses how to conduct an inventory of existing food policy, presents case studies on successful food policy councils, and provides guidance on organizing food policy councils.

Southern Sustainable Agriculture Working Group. 2005. "Chapter 4: How Food Policies Operate and Are Organized." Fayetteville, AR: Southern Sustainable Agriculture Working Group.

This is a chapter in a handbook entitled *Food Security Begins at Home: Creating Community Food Coalitions in the South*. It highlights the vital role of food policy councils.

Dahlberg, Kenneth, et al. 1997. "Strategies, Policy Approaches, and Resources, for Local Food System Planning and Organizing." Minneapolis, MN: Minnesota Food Association.

This compilation provides analyses and discussion of the elements needed for organizing local food policy councils.

### Resources

**The Alabama Sustainable Agriculture Network:** Alabama Sustainable Agriculture Network (ASAN) is a network of farmers, consumers, and agriculture-related organizations in Alabama. Its membership consists of individuals and organizations

committed to promoting sustainable agriculture in the state. ASAN has promoted and supported the creation of the Birmingham-Jefferson Food Policy Council. More information about ASAN can be found on its webpage at <http://asanonline.org/>.

**Greater Birmingham Community Food Partners:** Greater Birmingham Community Food Partners (GBCFP) is a grassroots organization with the mission of promoting community food security. GBCFP has helped establish the Birmingham-Jefferson Food Policy Council, the first food policy council in the state of Alabama. GBCFP has also conducted a number of smaller assessments of food security in the Greater Birmingham region. More information about GBCFP and the Birmingham-Jefferson Food Policy Council can be found at <http://www.gbcbfp.org/>.

**North American Food Policy Council:** The North American Food Policy Council provides support, free of charge, in the development and operation of current and emerging food policy councils. It is a service of the Community Food Security Coalition. More information about the North American Food Policy Council can be found at <http://www.foodsecurity.org/FPC/>. This webpage includes sample documents from existing food policy councils, such as mission statements, by-laws, membership guidelines, and information on meetings and agendas.

**P.L.A.C.E.:** Promoting Local Agriculture & Cultural Experience, more commonly known as P.L.A.C.E. is a non-profit organization based in Athens, Ga. With the mission of promoting a strong, accessible food culture in Athens, P.L.A.C.E. serves as a fascinating model for how individuals can unite around food-related social, economic, and environmental opportunities. More information about P.L.A.C.E. can be found at <http://localplace.org/>.

**Southern Sustainable Agriculture Working Group:** The Southern Sustainable Agriculture Working Group (Southern SAWG) is a regional entity that advocates for a more sustainable farming and food system that is ecologically sound, economically viable, socially just, and humane. Southern SAWG works to build partnerships, share information, and conduct analyses in thirteen southern states. More information about Southern SAWG can be found at <http://www.ssawg.org/>.

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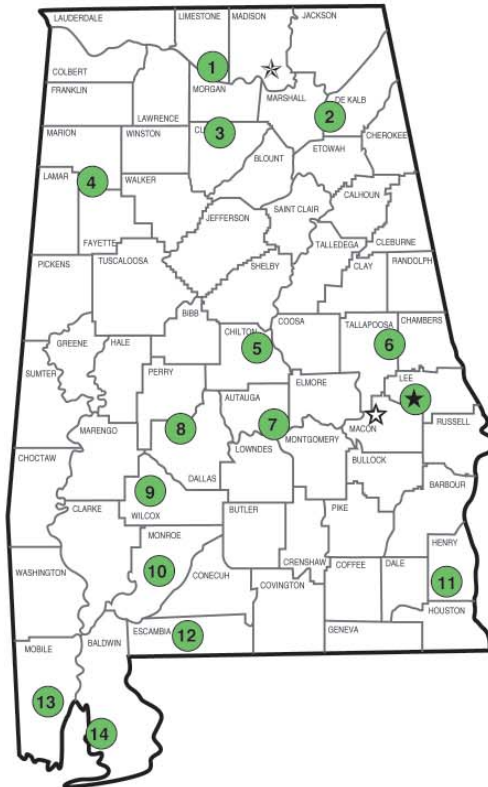
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## Alabama's Agricultural Experiment Station AUBURN UNIVERSITY

With an agricultural research unit in every major soil area, Auburn University serves the needs of field crop, livestock, forestry, and horticultural producers in each region in Alabama. Every citizen of the state has a stake in this research program, since any advantage from new and more economical ways of producing and handling farm products directly benefits the consuming public.



### Research Unit Identification

- ★ Main Agricultural Experiment Station, Auburn.
- ☆ Alabama A&M University.
- ☆ E. V. Smith Research Center, Shorter.

1. Tennessee Valley Research and Extension Center, Belle Mina.
2. Sand Mountain Research and Extension Center, Crossville.
3. North Alabama Horticulture Research Center, Cullman.
4. Upper Coastal Plain Agricultural Research Center, Winfield.
5. Chilton Research and Extension Center, Clanton.
6. Piedmont Substation, Camp Hill.
7. Prattville Agricultural Research Unit, Prattville.
8. Black Belt Research and Extension Center, Marion Junction.
9. Lower Coastal Plain Substation, Camden.
10. Monroeville Agricultural Research Unit, Monroeville.
11. Wiregrass Research and Extension Center, Headland.
12. Brewton Agricultural Research Unit, Brewton.
13. Ornamental Horticulture Research Center, Spring Hill.
14. Gulf Coast Research and Extension Center, Fairhope.