

An Examination of Northeast Florida Food Desert Areas: Geographic & Demographic Descriptors, SNAP Expenditures, & Purchasing Behaviors

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Abstract

Many residents of food deserts rely on small convenience stores to obtain all of their groceries. Food deserts are often located in economically distressed areas where much of the population relies on the supplemental assistance provided by the Federal Supplemental Nutrition Assistance Programs (SNAP). Duval, Clay, Putnam, and St. Johns Counties, Florida, have over 200,000 residents who receive food stamps valued at over 340 million dollars on an annual basis. Prices of fresh food are significantly more expensive when purchased in food deserts, which present a lower value of purchase to individuals who are already economically stressed. Fresh, locally-grown foods are available at farmers markets but very few of the markets are located in food deserts, making their access difficult for economically disadvantaged consumers.

Three of these counties (Clay, Putnam, and St. Johns), which are rural in nature with some clusters of urbanized pockets, are home to over 35,000 acres of on-going agricultural food crop production as well as many other agriculturally-related businesses. Much of the crops that are produced are grown under contract and shipped out of Northeast Florida when harvested. Many of the growers market their crops through brokerage systems, which often purchase commodities at below wholesale prices. The downturn of the economy, pressure on open land by development, the shifts in weather and the quality of ground water have continued to put pressure on agricultural enterprise. Many farms in the area which have been managed through multi-generations are seeing levels of debt unparalleled in their business history and are experiencing levels of risk which have become intolerable (Kirshenmann, et al. 2012).

The need to realize a new set of solutions to change the current economic trends in fresh food production has dictated examining markets in a different light. This research reviews these food desert areas, including their geographic and social characteristics, and examines whether there are potential markets significant enough to encourage regional growers to engage in the necessary production and mobility activities.

Introduction

Though the US produces enough food agriculturally to meet the caloric needs of the nation, many families suffer food shortages due to a lack of physical or economic access. All types of families are affected by food shortage and hunger, though minority and single parent households are disproportionately affected. Food shortage and hunger also vary regionally and by population density. Many public and private programs exist to combat food shortage and hunger. Private programs include soup kitchens, food banks, and community gardens. Three primary federal programs provide food assistance to families: the Supplemental Nutrition Assistance Program (SNAP), the National School Lunch Program, and Women, Infants, and Children (WIC). Over half of very low food secure households reported using at least one of these three major federal food and nutrition assistance programs in 2010. These programs, along with private sector efforts, have become the primary means for addressing hunger in America.

Background

Federal Programs

The Supplemental Nutrition Assistance Program (SNAP), or “food stamps,” is the most prominent anti-hunger program in the country serving over 40 million Americans annually. The program is intended to assist households with the cost of purchasing nutritionally adequate food for their families. Over 75 percent of households using SNAP are households with children and nearly one-third are households with elderly or disabled individuals. SNAP is only available to households in which the income to poverty ratio is equal to or less than 130 percent (a “poverty line” of about \$23,800 annually for a three person family in 2010), assets are limited, and the *net* income is less than or equal to the poverty line ([Supplemental Nutrition Assistance Program](#)).

A family is considered “food secure” when all members always have physical and economic access to enough safe and nutritious food to meet their dietary needs and food preferences to lead an active and healthy life. “Food insecurity” implies limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire desired foods in socially acceptable ways. The United States Department of Agriculture (USDA) measures food security on a four-point scale ranging from “high food security” to “very low food security.” USDA does not measure hunger *per se* because hunger is an individual-level physiological condition while food insecurity is a household-level economic and social condition. Hunger is therefore a *condition* included in the USDA measurement of very low food security ([Hunger and Poverty: Definitions and Distinctions](#)).

The American Institute of Nutrition defines food insecurity as the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways (Anderson 1990).

Research demonstrates the importance of access to an adequate diet as an essential element in lifetime health outcomes for children and adults. Persistent, long-term hunger results in serious health threats, including undernourishment or malnutrition. A 2007 study postulated relationships between increased obesity, food insecurity, and dependence on SNAP, stating that “...obesity may result from an adaptive physiological response to episodic food insecurity, which can lead to binge eating habits when food is plentiful” (Dinour, Bergen, and Yeh 2007:1958). This continuing study examines the role of the Supplemental Nutrition Assistance Program (SNAP) in promoting the roller coaster effect of the feast or famine cycle that is so detrimental to the maintenance of healthy lifestyles. The research indicated that in many cases the three-week cycle when food stamps are available is often followed by a weeklong fasting cycle as the stamps are depleted and not reissued until the end of the month (Dinour et al. 2007). Additional stress is also placed on those individuals who do not have access to stores that have the highest level of choices of affordable, healthy foods. A 2009 study in the *American Journal of Preventive Medicine* examined the disparity of food access on the neighborhood level and found that:

Supermarkets, as compared to other food stores, tend to offer the greatest variety of high-quality products at the lowest cost. In contrast, convenience stores sell mostly prepared, high-calorie foods and little fresh produce, at higher prices. Studies of adults and adolescents have examined associations between neighborhood access to food stores and intake of fruits and vegetables, calories from dietary fat

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and overall diet quality. The majority of these studies suggest that neighborhood residents with better access to supermarkets and other retail stores that provide access to healthful food products tend to have healthier food intakes. (Larson, Story, and Nelson 2009:75)

Increased food costs have out-paced the ability of SNAP and similar programs to provide adequate resources for a healthy diet. The increasing cost of food for the consumer and declining household income have reduced food expenditures. USDA's Economic Research Service reports that median spending on food by US households declined by 12 percent relative to the rising cost of USDA's Thrifty Food Plan and by six percent relative to the rising Consumer Price Index for Food and Beverages for the period 2000-2007. The incidence of very low food security increased in the same period, and food security deteriorated the most in the second-lowest income quintile, in which very low food security increased by about half. Not only poor households reported decreased spending. According to the U.S. Bureau of Labor Statistics' Consumer Expenditure Survey, there were similar declines in food expenditures in middle- and low-income households (Nord 2009). Food Spending Declined and Food Insecurity Increased for middle-income and low-income Households from 2000 to 2007 (Nord 2009).

Food Deserts

There are various indicators of food shortage at the national, regional, or local scale. Food shortage in America tends to be local, related more to physical and economic access to safe, affordable, and nutritious food than to issues of agricultural productivity. The presence of "food deserts" can serve as an indicator of food shortage locally. Food deserts are areas or communities that lack physical and/or economic access to sources of food that comprise a healthy diet. Most measures of food deserts are based on the distance to a food store, factors that might affect accessibility such as income or vehicle availability, and neighborhood-level factors such as availability of public transportation (Thayer, et al. 2008).

The challenge of increasing availability of and access to fresh, healthy foods in food deserts can be approached in several ways. Traditional food market channels are weak in many disadvantaged urban communities (Larson et al. 2009; Powell et al. 2007). Limited access to supermarkets affects the cost, quality and availability of fresh produce (Algert, Agrawal, and Lewis 2006; Liese et al. 2007). Poor, African-American and Hispanic communities suffer the greatest disparities (Ackerman and Tellis 2001; Bodor et al. 2010), but access for the aging population is a potentially serious problem (Mojtahedi et al. 2008). Supermarket density is positively related to consumption of fresh fruits and vegetables, dietary quality and health outcomes, including childhood obesity (Beydoun and Wang 2010; Black et al. 2010). Strengthening these traditional market channels has received relatively little attention, but has yielded some promising results (Pothukuchi 2005).

The research reports few studies of interventions designed to lower the price and improve the quality, affordability and availability of fresh produce in other existing alternatives to supermarkets, such as convenience stores, but some results are positive (Freedman and Bell 2009). Mobile markets (food trucks or food busses) are a more recent market innovation, but their efficacy and impacts have not been evaluated. Farmers' markets and community gardens have received the greatest attention as supplements to traditional market chains, but the body of reliable scientific evidence about the impact

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of these alternatives is limited (Brown and Jameton 2000; DeMarco and Thorburn 2009). A review of the research results from 1980 to 2009 showed that 9 of 16 studies showed some positive impact on nutrition (McCorkmack et al. 2010). Farmers' markets may be relatively inaccessible for many (Racine et al 2010). The working poor have time constraints and the aging and disabled have physical constraints to participation in community gardens (Martin et al. 2003), and the economic sustainability of community gardens often depends on continued donor support (East and Dawes 2009).

Food deserts are simply defined as areas that lack access to affordable fruits, vegetables, whole grains, low-fat milk, and other foods that make up the full range of a healthy diet ([CDC: Food Deserts](#)). The [USDA Food Access Research Atlas](#) (accessed July 2013) identifies the neighborhood areas nationally by census tracts that are both low income (li) and limited access (la), as measured by the different distance demarcations for food access.

The Food Access Research Atlas provides researchers and other users multiple ways to understand the characteristics that can contribute to food deserts, including income level, distance to supermarkets, and vehicle access. The data are derived from the 2012 report, *Access to Affordable and Nutritious Food: Updated Estimates of Distances to Supermarkets Using 2010 Data* (ver Ploeg et al. 2012). The data on population are reported at the Census tract level from the 2010 Census of Population and Housing. These data were aerielly allocated down to half-kilometer-square grids across the United States.

Low income tracts are defined as tracts with either a poverty rate of 20 percent or more, or a median family income less than 80 percent of the State-wide median family income; or, tracts in a metropolitan area with a median family income less than 80 percent of the surrounding metropolitan area median family income.

Limited access tracts are defined using several attributes such as limited access to supermarkets, supercenters, grocery stores, or other sources of healthy and affordable food. There are many ways to measure food store access for individuals and for neighborhoods, and many ways to define which areas are food deserts—neighborhoods that lack healthy food sources. Most measures and definitions take into account at least some of the following indicators of access:

- Accessibility to sources of healthy food, as measured by distance to a store or by the number of stores in an area.
- Individual-level resources that may affect accessibility, such as family income or vehicle availability.
- Neighborhood-level indicators of resources, such as the average income of the neighborhood and the availability of public transportation.

With a significant body of research pointing to the health implications of food insecurity, the inability of current SNAP levels to maintain the steady flow of healthy foods and the identification of neighborhood (Census tract) areas where healthy food is both expensive and at times inaccessible, concerned groups and individuals face a number of challenges to provide remediation.

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In a 2012 CDC study that examined a sample intervention methodology designed to increase the availability of fresh foods to urban food deserts, recommendations were made to create a community-based dialog, using survey research of proprietors and customers to identify needs and develop potential intervention strategies (Larson et al. 2013).

The challenge of placing a wider selection of fresh healthy foods in food desert areas can be approached in several ways: encouraging existing large grocery stores in moving into the affected areas (market limitations may limit this); encouraging existing small convenience stores already positioned in affected areas to increase the amount of fresh foods they provide (this may not solve the cost issues); creating farmers markets (this may not solve the transportation issues); and, developing alternative methods such as mobile “food busses” or other mobility systems which can move the fresh food to the consumer and potentially provide competitive prices.

This analysis examines the food desert areas of Clay, Duval, Putnam and St. Johns Counties, all situated in the geographic area described as Northeast Florida. The four county areas contain a mix of densely populated urban areas and rural land devoted to agricultural production. Duval County, which encompasses the consolidated City of Jacksonville, has 29 Census tract areas, Putnam has five, Clay has two, and St Johns has seven, that are classified by the USDA as urban food deserts where the residents do not have easy access to supermarkets and lack the transportation resources to reach area where nutritious and fresh food can be purchased affordably.

The analysis examines each of the Census tracts defined in the USDA Food Access Research Atlas (2010) as food deserts within the four-county area. It explores the size characteristics and determines geographic location descriptions for each of the areas defined as single census tracts or clusters of tracts. Additionally, we attempt to gain a sense of the degree of potential market income by looking at the county level SNAP expenditures.

Methodology

In the preparation of this analysis, the initial Census tracts used in the four county areas to define areas of low access to food were derived from the [USDA Food Access Research Atlas](#), which reviews 2010 Census data and presents it on an interactive map. The Atlas provides information by presenting a spatial overview of food access indicators for low-income and other Census tracts using different measures of supermarket accessibility by providing food access data for populations within Census tracts; and offering Census-tract-level data on food access that can be downloaded for community planning or research purposes.

The original definition of food deserts (as defined in the original USDA Food Desert Locator) was used to determine which tracts to review. In the original Food Desert Locator, “low-access” was measured as living far from a supermarket, where 1 mile was used in urban areas and 10 miles was used in rural areas to demarcate those who are far from a supermarket. In urban areas, about 70 percent of the population was within 1 mile of a supermarket, while in rural areas over 90 percent of the population was within 10 miles (see [Access to Affordable and Nutritious Food: Updated Estimates of Distance to Supermarkets Using 2010 Data](#)). Updating the original 1- and 10-mile low-access measure shows that an estimated

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18.3 million people in these low-income and low-access Census tracts were far from a supermarket in 2010.

In Duval County there are 29 areas defined as food desert areas. These areas appear on the map as representing a pattern of seven distinct groupings or clusters.

For the purposes of our examination, we treat those Census tract areas that have contiguous borders as a single cluster area, even though they have not been defined as such by the USDA. Through their proximity, however, they share certain market dynamics which make this designation useful for this report. This type of “cluster” grouping will also simplify the confusion of trying to define where each of the 29 Census tracts begins and ends.

In Clay, Putnam, and St Johns counties, similar areas were identified and also grouped into clusters.

Zip codes were then identified for each Census tract (<http://www.unitedstateszipcodes.org/fl/>). The boundaries of Census tracts and zip codes do not readily overlay as zip code boundaries are often larger than single Census tracts and often may lie in several tracts. Zip code areas are based on population and are designated by the US Postal Service and are subject to change. The identification of zip codes is important to this analysis, though, as it provides a way to examine the location of other services such as churches, schools, and community service agencies by address.

Once the geographic location of each food desert tract cluster was determined, we examined the number of total population, number of persons who were low income, and the number of households in each cluster to enable us to identify the most densely populated cluster with the highest number of individuals classified at low income. We also reviewed the access to transportation in each cluster to better understand the severity of functional access to stores outside of the cluster. We documented that access by looking at the raw numbers of low access persons in each tract and designating tracts that numerically had at least a 10 percent level of “low access.”

We also used the US Census Bureau American Fact Finder to extract data from the American Community Survey (ACS 2008-2012, 5-year estimates) on the total number of households and the number of households utilizing food stamp assistance (SNAP) per tract. We then combined these numbers with the USDA Economic Research Service estimate of the average monthly SNAP benefits per participant for each county to calculate a rough estimate of the dollar value of food stamps available for expenditure in each food desert cluster of tracts. For the purposes of this examination, we felt that the rough estimates had value to our understanding of the potential revenue ranking of the various clusters. The exactness of this measurement has a moderate confidence level, but lends itself to a basic understanding of the clusters.

Food Desert Tracts in Duval County

The 29 Census tracts in Duval County identified as food deserts can be effectively sorted into seven clusters. Within the 29 areas designated as food deserts there are 140,068 individuals living in 55,020 households. Of those, 25,361 individuals (18.5%) are designated as low-income with limited access to food stores within that area. All Census tracts in Duval County are identified with the numbering system on the County level of 120-310 plus the individual census track number (for example 120-310-14401).

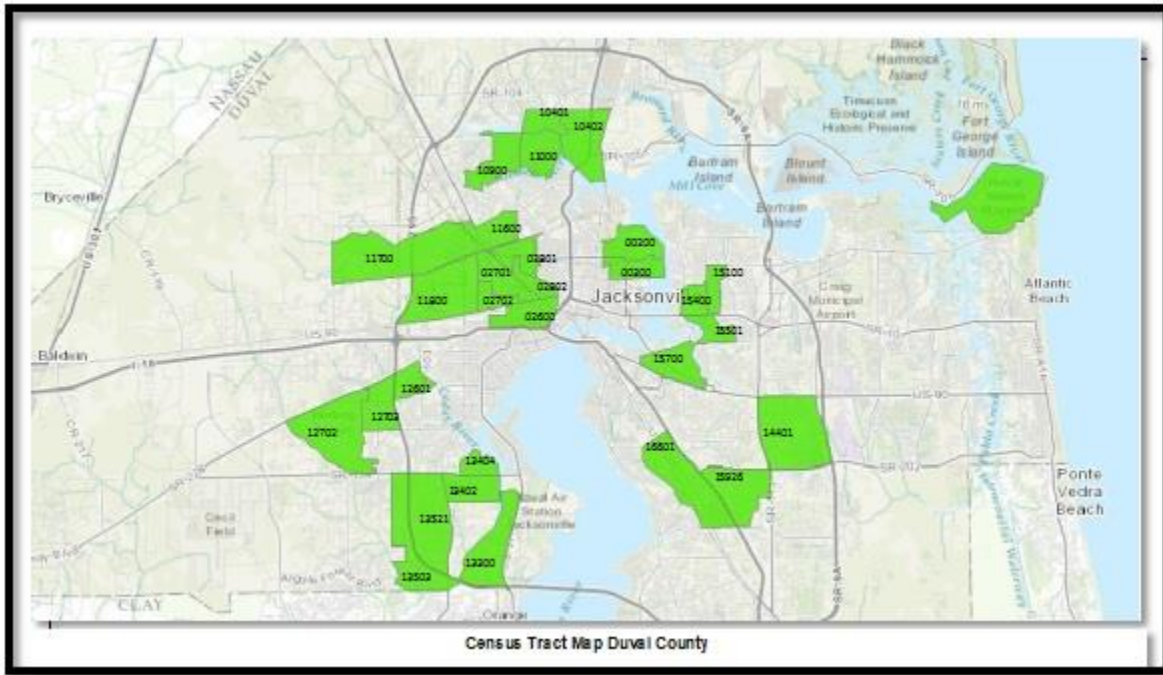


Figure 1: Overview of the 29 Food Desert Census Tracts in Duval County

Duval Census Tract Cluster One

Cluster one is comprised of tracts 10401, 10402, 11000, and 10900 and is geographically defined as located in the north end of the City of Jacksonville south of Interstate-295. It is bordered on the north by State Road 104, to the east by North Main St., to the west by Gibson Ave., and to the south by the Ribault River.

There are 2,692 low-income and low-access individuals who reside in this Census cluster which represents 17.69% of the overall population of 15,210 persons who reside in 5,910 households. The percentage of low-income and low-access individuals on a per tract basis ranges from a low of 11.55% in tract 10401 to a high of 25.69% in tract 11000.

This Census tract cluster contains portions of zip codes 32218 and 32208. A sampling of the neighborhoods within this Census tract cluster includes Osceola, Riverview, and Hollyford, although other named areas may be present.

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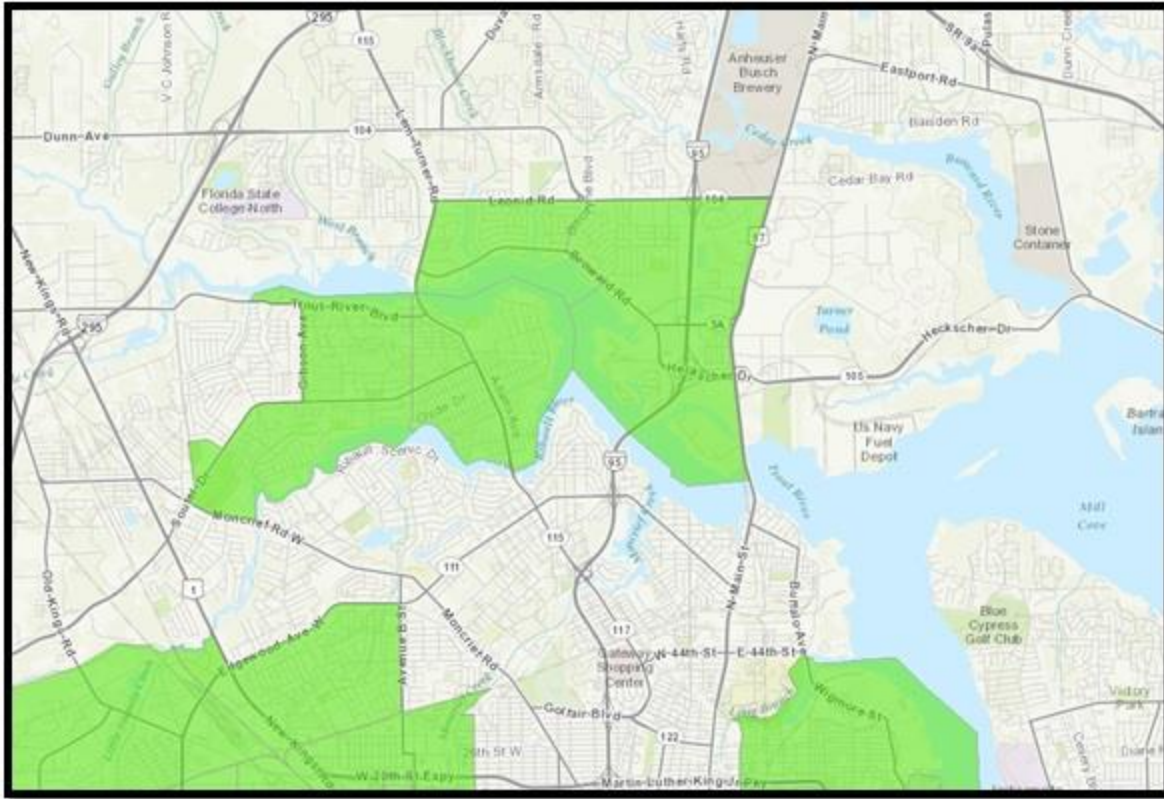


Figure 2: Duval Census Cluster One (10401, 10402, 11000, and 10900)

Table 1: Duval Census Cluster One

Census Tract	Total Population	Total Households	# Individuals LA/LI	% of Population LA/LI	Lack of Transportation in Excess of 10% VA
120-310-10401	3240	1194	584	18.02%	Yes
120-310-10402	3955	1635	572	14.46%	No
120-310-11000	3998	1534	1072	25.69%	No
120-310-10900	4017	1547	464	11.55%	No
Cluster Totals	15210	5910	2692	17.69%	No

Duval Census Cluster Two

This Census tract cluster, located in western Jacksonville, is comprised of Census tracts 11600, 11700, 02701, 02801, 02802, 02600, 02702, and 11800. This area is geographically defined as straddling US 1 and is bordered on the north by Edgewood Avenue West, on the west by Interstate-295 to County Road 117, on the south by Beaver Street West and I-10, and to the east by Interstate-95, Myrtle Avenue North, and Avenue B Street.

This Census tract cluster is home to 31,995 individuals residing in 10,947 households. This Census tract cluster contains the highest percentages of individuals who lack access to transportation, which ranges by tract from 10% to 30%. Seven thousand four hundred and seventy-eight (7,478) of the residents of this cluster are low-income and low-access individuals representing 23.40% of the total cluster, ranging from 8.17% in tract 11800 to 55.25% in tract 11700. Of note is the fact that four out of eight tracts in this cluster have percentages higher than 25 percent of the population representing low-income and low-access individuals. This cluster is comprised of the largest area and the second highest population total of the food desert Census tract clusters presented in this report.

This Census tract cluster contains portions of zip codes 32209, 32254, and 32220. A sampling of the neighborhoods includes Bulls Bay, Biltmore, Paxton, College Gardens, Commonwealth, Woodstock, Robinson's Addition, Allendale, Magnolia Gardens and Grand Park, although other named areas may be present in the area.

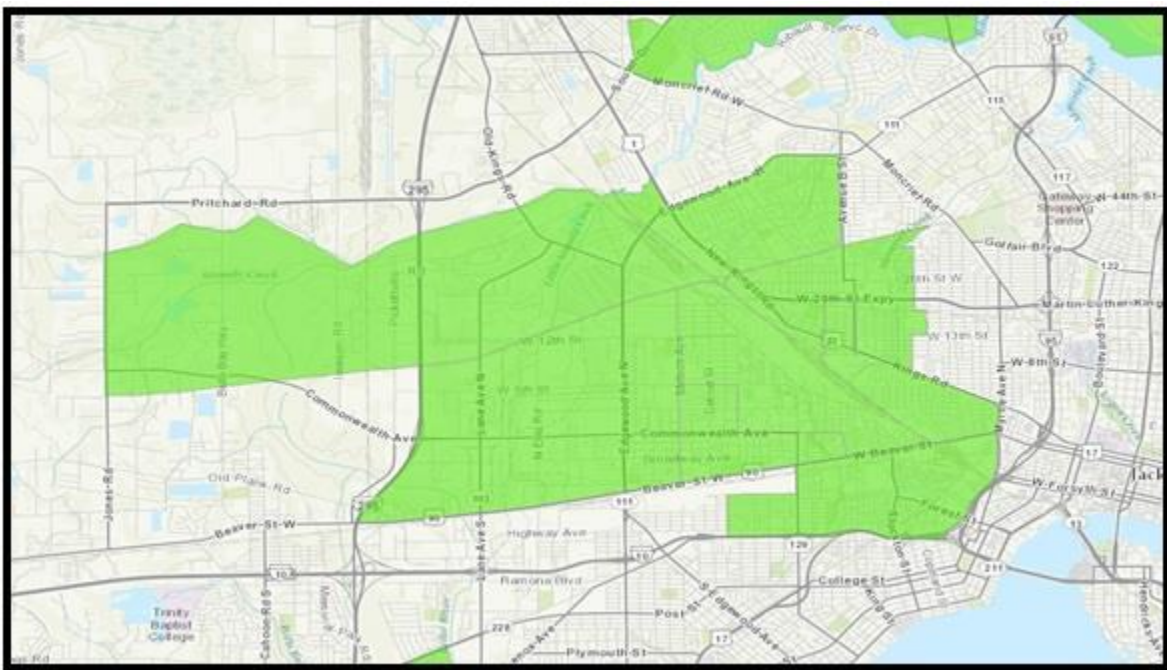


Figure 3: Duval Census Cluster Two (11600, 11700, 02701, 02801, 02802, 02600, 02702, and 11800)

Table 2: Duval Census Cluster Two

Census Tract	Total Population	Total Households	# Individuals LA/LI	% of Population LA/LI	Lack of Transportation in Excess of 10% VA
120-310-11600	3850	1533	623	15.18%	30%
120-310-11700	2554	956	1411	55.25%	No
120-310-02701	3422	1226	1218	35.59%	20%
120-310-02801	4777	1885	1363	28.53%	20%
120-310-02802	4147	1702	375	9.04%	20%
120-310-02600	3795	1332	1865	49.14%	30%
120-310-02702	6329	1209	368	10.14%	10%
120-310-11800	3121	1104	255	8.17%	No
Cluster Totals	31995	10947	7478	25.53%	High

Duval Census Cluster Three

This Census tract cluster contains Census tracts 00200 and 00300. The cluster is bordered to the east by the St. Johns River, to the north by the Evergreen Cemetery and Jennings Park and Wigmore Park, to the south by East 8th Street, and to the west by the SCL railroad tracks.

This Census tract cluster contains 1,886 low-income and low-access individuals which represents 38.48% of the total cluster population of 4,901 persons who are contained in 1,747 households. The percentage of low-income and low-access individuals ranges between tract 00300 at 22.58% and tract 00200 at 53.81%. This is considered a high “lack of transportation access” Census tract cluster with percentages ranging between 20% and 30%.

This cluster contains a portion of zip code 32206, and the neighborhoods of Tallyrand, Longbranch, Phoenix and Fairfield, although there may be other named areas not identified.

Table 3: Duval Census Cluster Three

Census Tract	Total Population	Total Households	# Individuals LA/LI	% of Population LA/LI	Lack of Transportation in Excess of 10% VA
120-310-00200	2496	961	1343	53.81%	30%
120-310-00300	2405	786	543	22.58%	20%
Cluster Totals	4901	1747	1886	38.48%	High

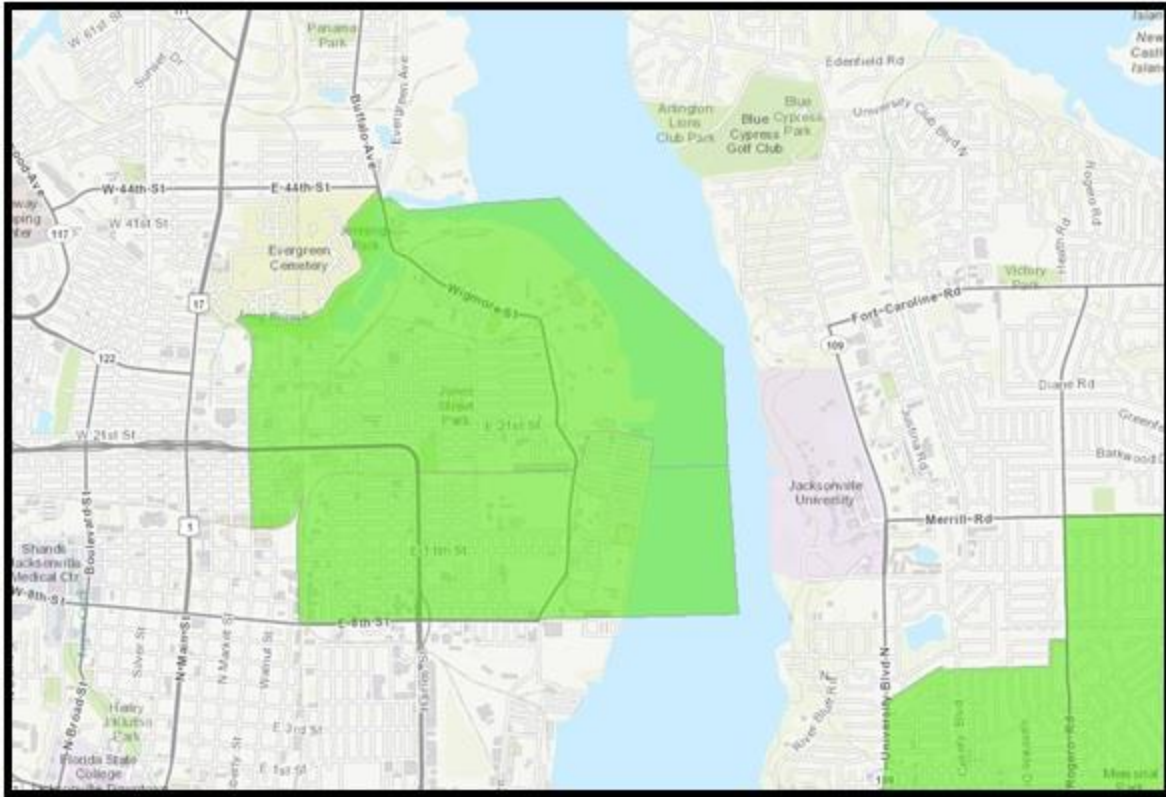


Figure 4: Duval Census Cluster 3 (00200 and 00300)

Duval Census Tract Cluster Four

This Census tract cluster contains Census tracts 15100, 15501, 15400 and 15700. Beach Boulevard borders the cluster to the south and Atlantic Boulevard and the St. Johns River border it to the west. It is bordered on the north by Merrill Road and on the east by North Arlington Road and Townsend Boulevard. Interstate-10 intersects this cluster.

This Census tract cluster contains 1,385 low-income and low-access individuals which represents 9.23% of the total population of 15,013 who are contained in 6,153 households. The percentage of low-income and low-access individuals ranges from tract 15501 at 7.49% to tract 15400 at 11.07%. This is not considered a “low access to transportation” Census tract cluster as, with the exception of tract 15700 with a 20% ranking, the tracts contained in the cluster do not meet the minimum of 10%.

This Census tract cluster contains portions of zip codes 32211, 32216, and 32207, and the neighborhoods of Arlington, Woodland Acres, Empire Point, Spring Glen, Atlantic Boulevard, and Love Grove/Riviera Manor, although there may be other named areas identified.

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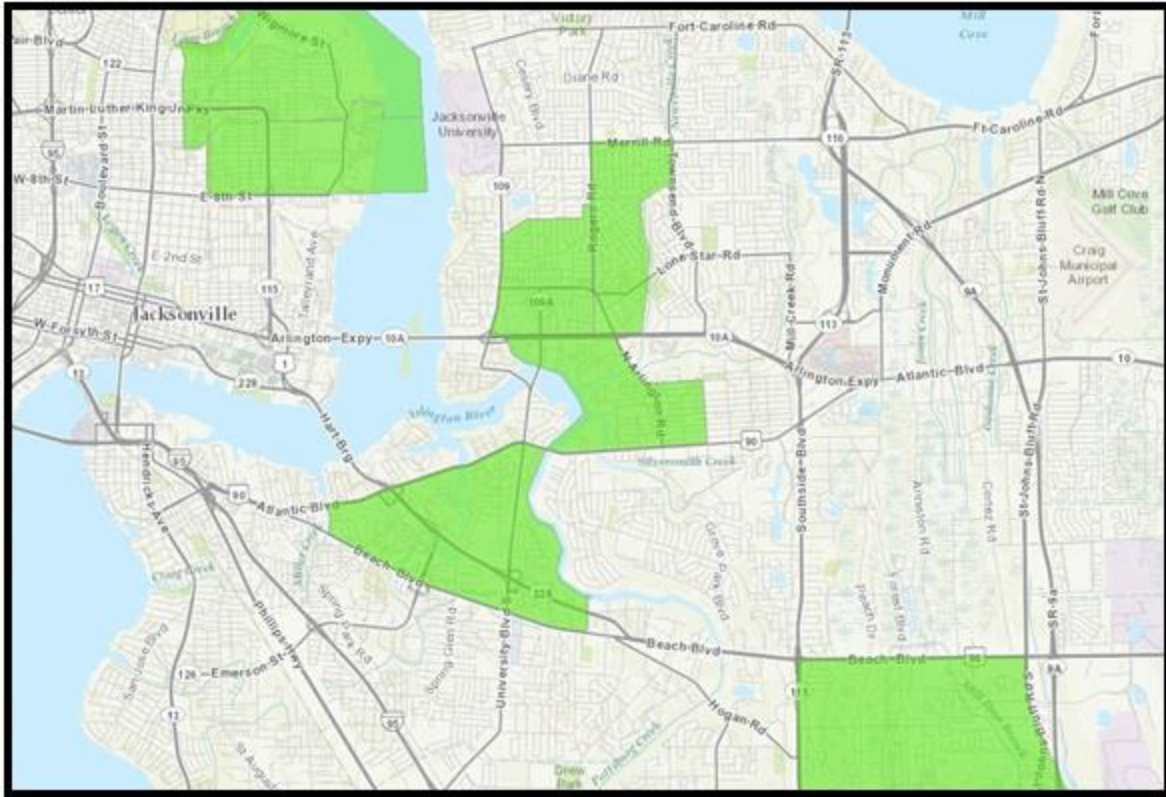


Figure 5: Duval Census Tract Cluster 4 (15100, 15501, 15400, and 15700)

Table 4: Duval Census Cluster Four

Census Tract	Total Population	Total Households	# Individuals LA/LI	% of Population LA/LI	Lack of Transportation in Excess of 10% VA
120-310-15100	3898	1519	308	7.90%	No
120-310-15501	3412	1315	255	7.47%	No
120-310-15400	2440	941	270	11.07%	No
120-310-15700	5263	2378	552	10.49%	20%
Cluster Totals	15013	6153	1385	9.23%	No

Duval Census Tract Cluster Five

This Census tract cluster contains Census tracts 14401, 15926, and 16601. This is an irregularly shaped cluster, generally bordered on the north by US 90, to the east by State Road 9A, to the west by US 1 (extending past), and to the south by Baymeadows Road.

This Census tract cluster contains 2,986 low-income and low-access individuals which represent 12.49% of the total cluster population of 23,901 persons who are contained in 11,112 households. The percentage of low-income and low-access individuals ranges between tract 14401 at 5.37% and tract

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16601 at 24.23%. This is not considered a “low access to transportation” Census tract cluster with none of the tracts reaching 10%.

This cluster contains a portion of zip codes 32246 and 32216 and the neighborhoods of Bowden, Southpoint, Deerwood Center, Barkham Woods, Baymeadows, and Windy Hill, although there may be other named areas not identified.

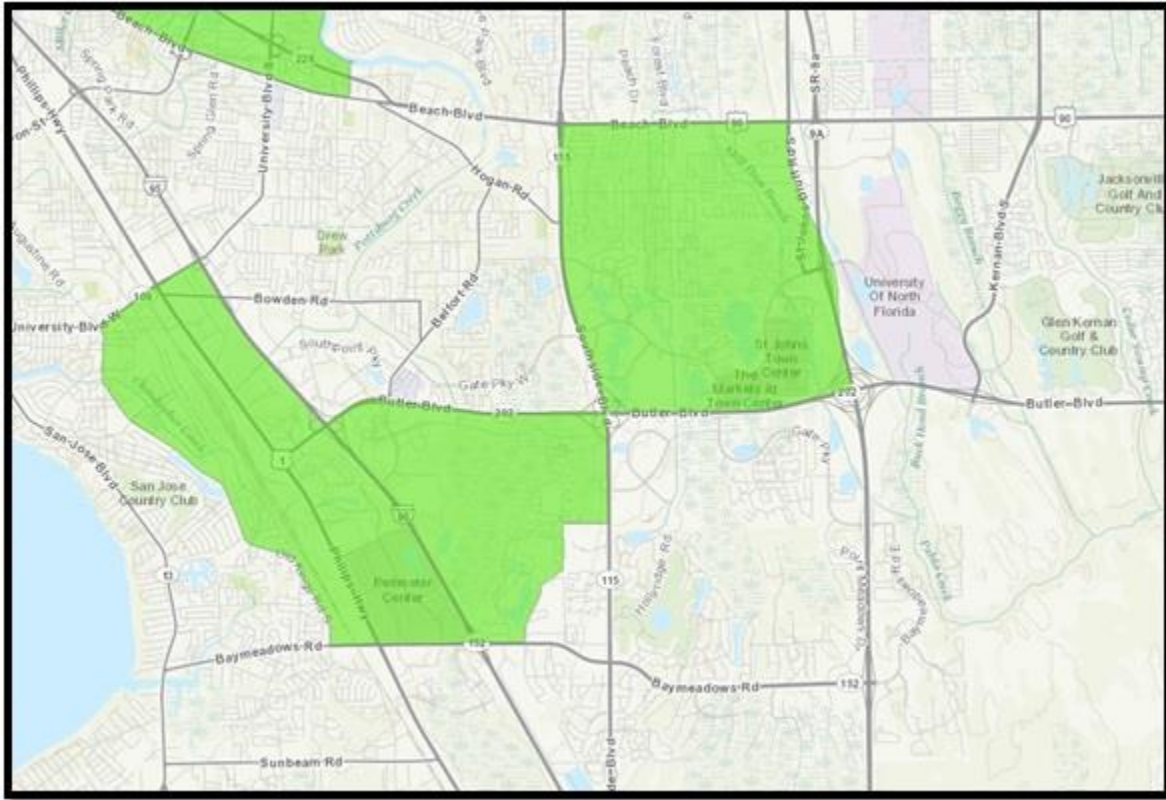


Figure 6: Duval Census Tract Cluster 5 (14401, 15926, and 16601)

Table 5: Duval Census Cluster Five

Census Tract	Total Population	Total Households	# Individuals LA/LI	% of Population LA/LI	Lack of Transportation in Excess of 10% VA
120-310-14401	12821	5677	688	5.37%	No
120-310-15926	4555	2545	717	15.74%	No
120-310-16601	6525	2890	1581	24.23%	No
Cluster Totals	23901	11112	2986	12.49%	No

Duval Census Tract Cluster Six

This Census tract cluster contains Census tracts 13404, 13402, 13503, 13300, and 13521. This is a doughnut shaped cluster generally bordered on the north by Timuquana Road, Fishing Creek and the Cedar River. It is bordered by Interstate-295 and the Clay County line to the west, by Ricker Road to the east, and by Roosevelt Boulevard on the south.

This Census tract cluster contains 6,405 low-income and low-access individuals which represent 18.08% of the total cluster population of 35,419 persons who are contained in 14,062 households. The percentage of low-income and low-access individuals ranges between tract 13300 at 4.89% and tract 13404 at 55.94%. This is not considered a “low access to transportation” Census tract cluster as none of the tracts reaches 10%.

It contains a portion of zip codes 32210 and 32244. The cluster includes the neighborhoods of Ortega Farms, Oak Hill, Country Roads, Jamestown Estates, Americana Mobile Home Park, Plantation Lakes, Argyle Forest and Ortega Hills, although there may be other named areas not identified.

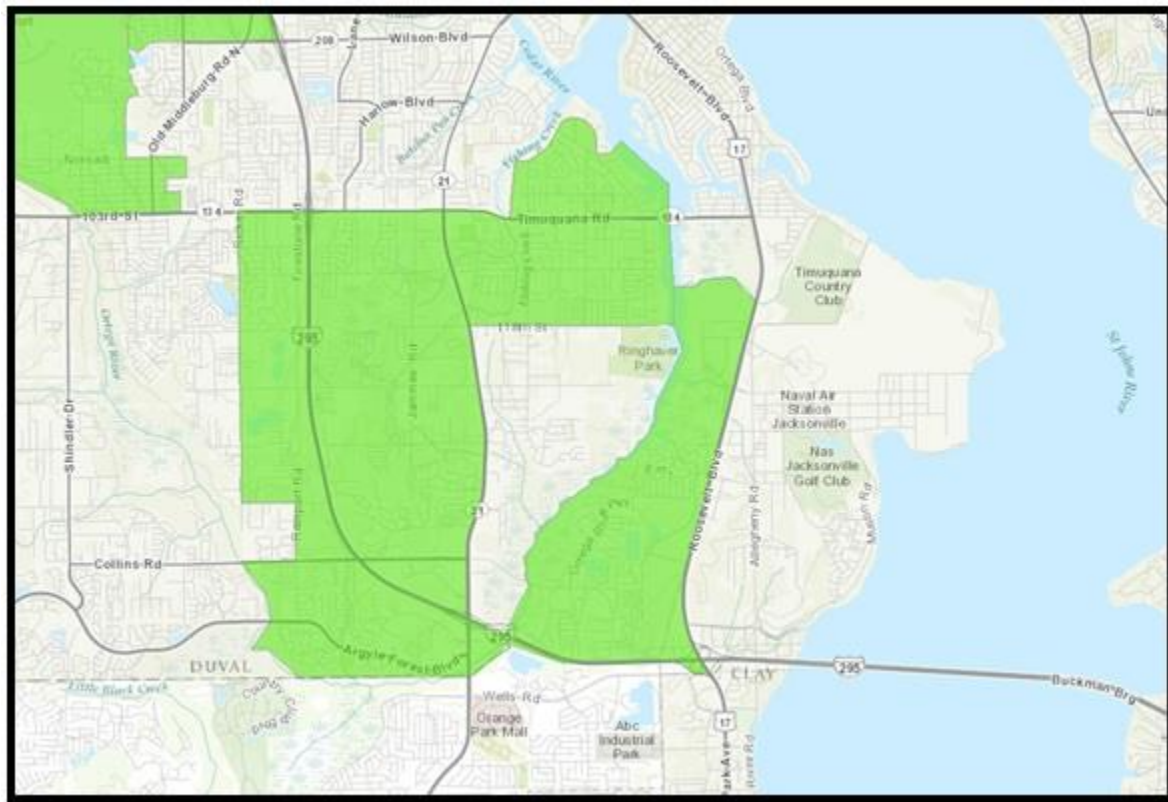


Figure 7: Duval Census Tract Cluster 6 (13404, 13402, 13503, 13300, and 13521)

Table 6: Duval Census Cluster Six

Census Tract	Total Population	Total Households	# Individuals LA/LI	% of Population LA/LI	Lack of Transportation in Excess of 10% VA
120-310-13404	3148	1374	1761	55.94%	No
120-310-13402	4772	1926	934	19.57%	No
120-310-13503	8449	3134	1108	13.11%	No
120-310-13300	7133	2856	349	4.89%	No
120-310-13521	11917	4772	2253	18.91%	No
Cluster Totals	35419	14062	6405	18.08%	No

Duval Census Tract Cluster Seven

This Census tract cluster contains Census tracts 12702, 12703, and 12601 and is bordered on the north by Normandy Boulevard, to the east by the Cedar River and Interstate-295, to the west by the Ortega River, and to the south by 103rd Street.

This Census tract cluster contains 2,529 low-income and low-access individuals which represent 18.56% of the total population of 13,629 persons who are contained in 5,089 households. The percentage of low-income and low-access individuals ranges between tract 12601 at 18.12% and tract 12702 at 18.78%. This is not considered a “low access to transportation” Census tract cluster with none of the tracts reaching 10%.

This cluster contains a portion of zip codes 32210 and 32221, and the neighborhoods of Parrish Cemetery Area, Herlong, Normandy Manor, Gravely Hill, and Hyde Park, although there may be other named areas not identified.

Table 7: Duval Census Cluster Seven

Census Tract	Total Population	Total Households	# Individuals LA/LI	% of Population LA/LI	Lack of Transportation in Excess of 10% VA
120-310-12702	5447	1937	1023	18.78%	No
120-310-12703	5235	1840	972	18.57%	No
120-310-12601	2947	1312	534	18.12%	No
Cluster Totals	13629	5089	2529	18.56%	No

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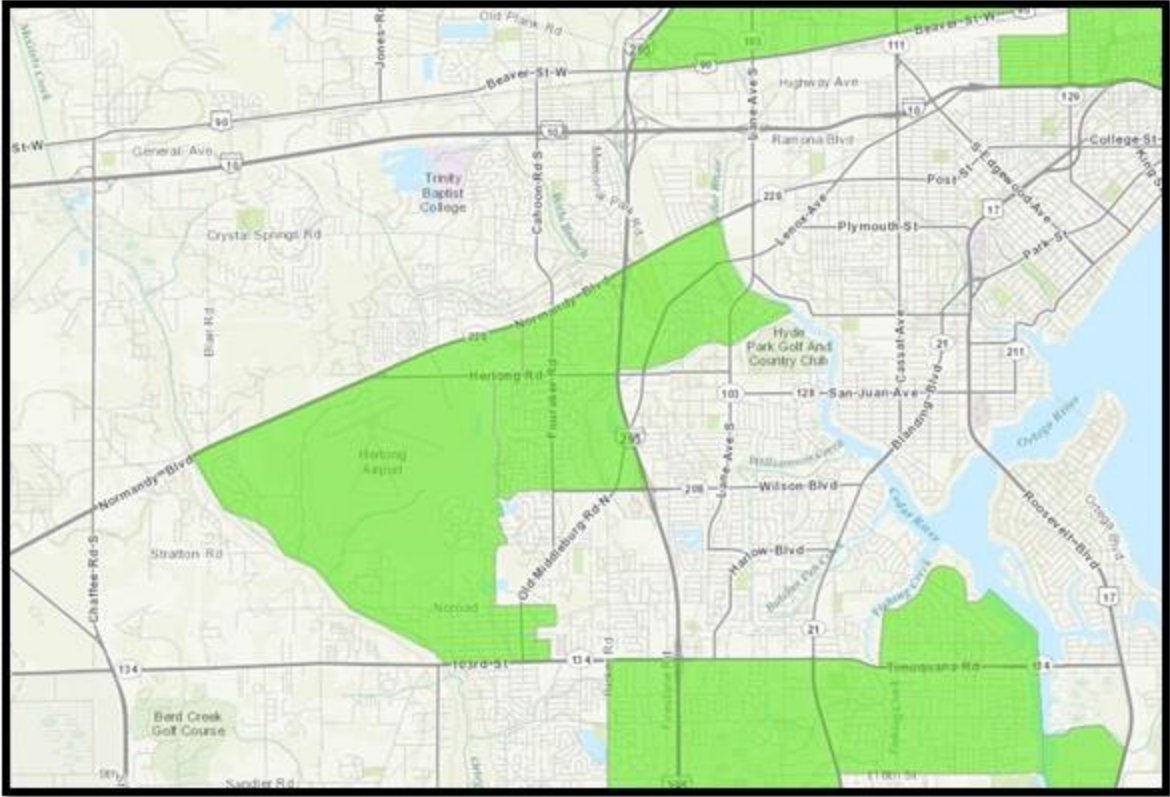


Figure 8: Duval Census Tract Cluster 7 (12702, 12703, and 12601)

Census Tracts in Putnam, Clay and St. Johns Counties

There are 14 Census tracts identified in the 2010 Census Food Atlas as food desert areas in Putnam, Clay and St Johns Counties.

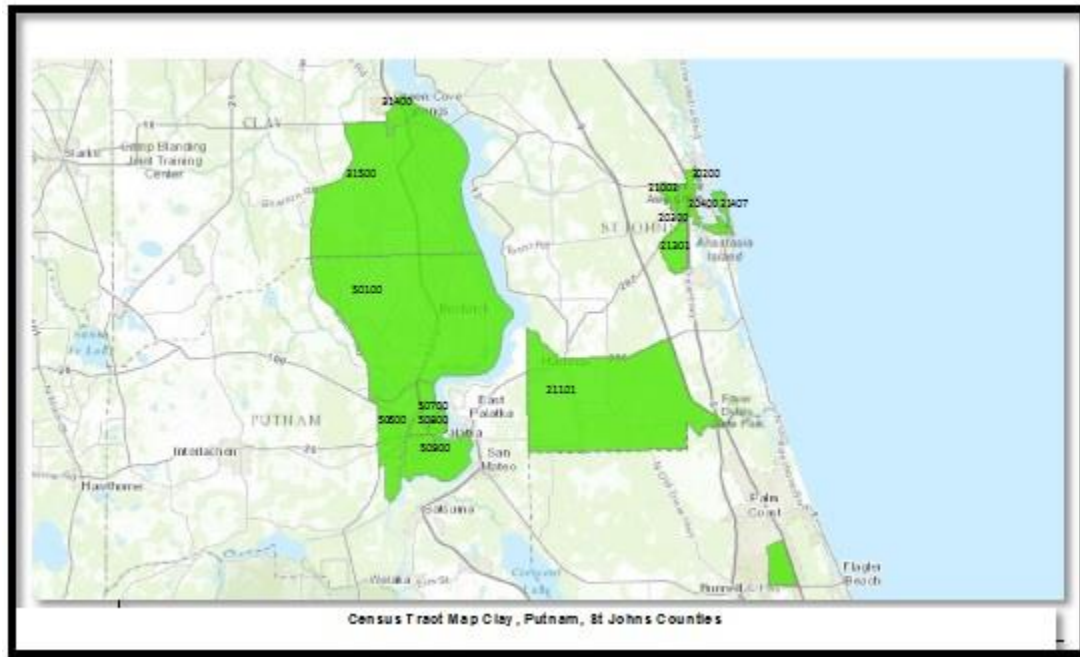


Figure 9: Overview of the Census Tracts in Clay, Putnam & St. Johns Counties

Census Tracts in Clay County

There are two Census tracts in Clay County identified in the USDA Food Atlas as food desert areas. They are tracts 31400 and 31500. They are contiguous and as such will be treated as a Census tract cluster and described as a single area. They are geographically described as being bordered on the east by the St. Johns River and on the north by the northern boundary of the City of Green Cove Springs and Penney Farms Road. The western boundary runs south along Peters Creek, Springbank Road, and Hogarth Road (Greens Creek) until the western boundary line reaches the Putnam County Line where the southern boundary runs east along the county line.

This Census tract cluster, although rural in appearance, is considered urban in nature and contains 8,562 individuals of which 3,347, or 39.09%, are considered low-income and low-access. There are 3,016 total households counted in the 2010 Decennial Census. Of the two tracts, Census tract 31400 (Green Cove Springs and the immediate area) contains the higher level of individuals who have low access to transportation at 20% and the higher percentage of low-income and low-access individuals at 44.96%. The southern tract in this cluster, 31500, contains 29.5% low-income and low-access individuals and does not meet the minimum 10% to be considered low access to transportation.

The census tract cluster lies within Zip Code 32043.

Table 8: Clay Census Tracts

Census Tract	Total Population	Total Households	# Individuals LA/LI	% of Population LA/LI	Lack of Transportation in Excess of 10% VA
120-190-31400	5311	1797	2388	44.96%	20%
120-190-31500	3251	1219	959	29.50%	No
County Totals	8562	3016	3347	39.09%	

Census Tracts in Putnam County

There are five Census tracts that are designated as food deserts located in Putnam County. All are classified as urban tracts. The northern most tract, 50100, is bordered to the north by the Clay County line and to the east by the St Johns River. The remaining four tracts (50700, 50600, 50800, and 50900) are clustered around the City of Palatka, contiguous to tract 50100 and also bordered by the St. Johns to the east and south as the river turns west. On the west, the tracts are bordered by Bardin Road running south, jogging east for a short distance on Reid Street, then turning south again on County Road 309C, jogging east again on Silver Lakes Road (below State Road 20), and finally running south again on Stokes Landing Road until reaching the St. Johns River.

The five Putnam County tracts have a total population of 23,786 of which 7,796 are classified as low income and low-access. This is 32.78% of the resident population in the tract grouping. The individual tract percentages range from a low of 17.63% in tract 50900 to a high of 52.71% in tract 50100. Only tract 50800 is designated as a “low access to transportation” tract (40%), while the rest of the tracts do not meet the minimum 10% to qualify.

Table 9: Putnam Census Tracts

Census Tract	Total Population	Total Households	# Individuals LA/LI	% of Population LA/LI	Lack of Transportation in Excess of 10% VA
121-079-50100	4176	1623	2201	52.71%	No
121-079-50800	3107	1119	1634	52.59%	40%
121-079-50700	4031	1487	1138	28.23%	No
121-079-50600	6158	2344	1710	27.77%	No
121-079-50900	6314	2484	1113	17.63%	No
County Totals	23786	9057	7796	32.78%	

Census Tracts in St. Johns County

There are seven Census tracts that lie within St. Johns County which have been identified by the USDA Food Atlas (2010) as being food desert areas. One tract, 21101, lies to the south of the county. It is geographically described as being bordered on the north by State Road 207 and State Road 206, to the west by the Putnam County line, to the east by Interstate-95, and to the south by the Flagler County line. This tract includes the town of Hastings. It is considered as an urban tract by the Census.

The other six Census tracts in St. Johns County are located in the vicinity of St. Augustine and form an irregularly shaped cluster around the city. This grouping of Census tracts will be treated as a Census tract cluster and will be described as a single area. This cluster of Census tracts is geographically described as having a north boundary which runs along State Road 16 then jogs north along US 1 and east again along Robertson Creek to the St Augustine Inlet. The west boundary is described as Woodlawn Road (south of 16) with Four Mile Road south to North Volusia St., where it jogs east along West 6th Street then turns south along the Florida East Coast Railroad track until intersecting State Road 207, and finally running along Moultrie Creek. The southern boundary continues along Moultrie Creek until it intersects with US 1. The eastern boundary runs from the intersection of Moultrie Creek and US 1, north along US 1. It jogs east along CR 312 to the Atlantic coast including the Anastasia State Recreational Area then jogs south of (and excluding) Vilano Beach then north again along the west shore of the St Augustine Inlet.

The combined Census tracts in St. Johns County are home to 5,931 individuals who are low-income and low-access and represent 22.73% of the 26,089 total individuals residing the tracts in 10,495 households. The two tracts with the highest concentration of low-income and low-access individuals are tract 21407 (39.97%) and tract 21101 (38.47%). The tracts with the lowest percentages of low-income and low-access individuals are tract 20200 (7.86%) and tract 24200 (10.62%). Tracts 21002, 20300, and 24200 have the highest rates of low access to transportation at 20% while the remaining tracts do not meet the 10% minimum cutoff.

Tract 21101 lies in zip code 32145 and the other tracts lie in a majority of zip code 32084 and the north portion of zip code 32080. St Augustine is the largest town in this cluster.

Table 10: St. Johns Census Tracts

Census Tract	Total Population	Total Households	# Individuals LA/LI	% of Population LA/LI	Lack of Transportation in Excess of 10% VA
121-090-21407	1351	643	540	39.97%	No
121-090-21101	5462	1923	2101	38.47%	No
121-090-21002	4155	1706	973	23.42%	20%
121-090-21301	6060	2426	1166	19.24%	No
121-090-20300	3518	1505	630	17.91%	20%
121-090-20400	3088	1060	328	10.62%	20%
121-090-20200	2455	1232	193	7.86%	No
County Totals	26089	10495	5931	22.73%	

Supplemental Nutrition Assistance Program (SNAP) Participation

Poverty levels and areas of low access to stores are illustrated in the county-level maps below (from [Economic Research Service \(ERS\), U.S. Department of Agriculture \(USDA\), Food Environment Atlas](#)).

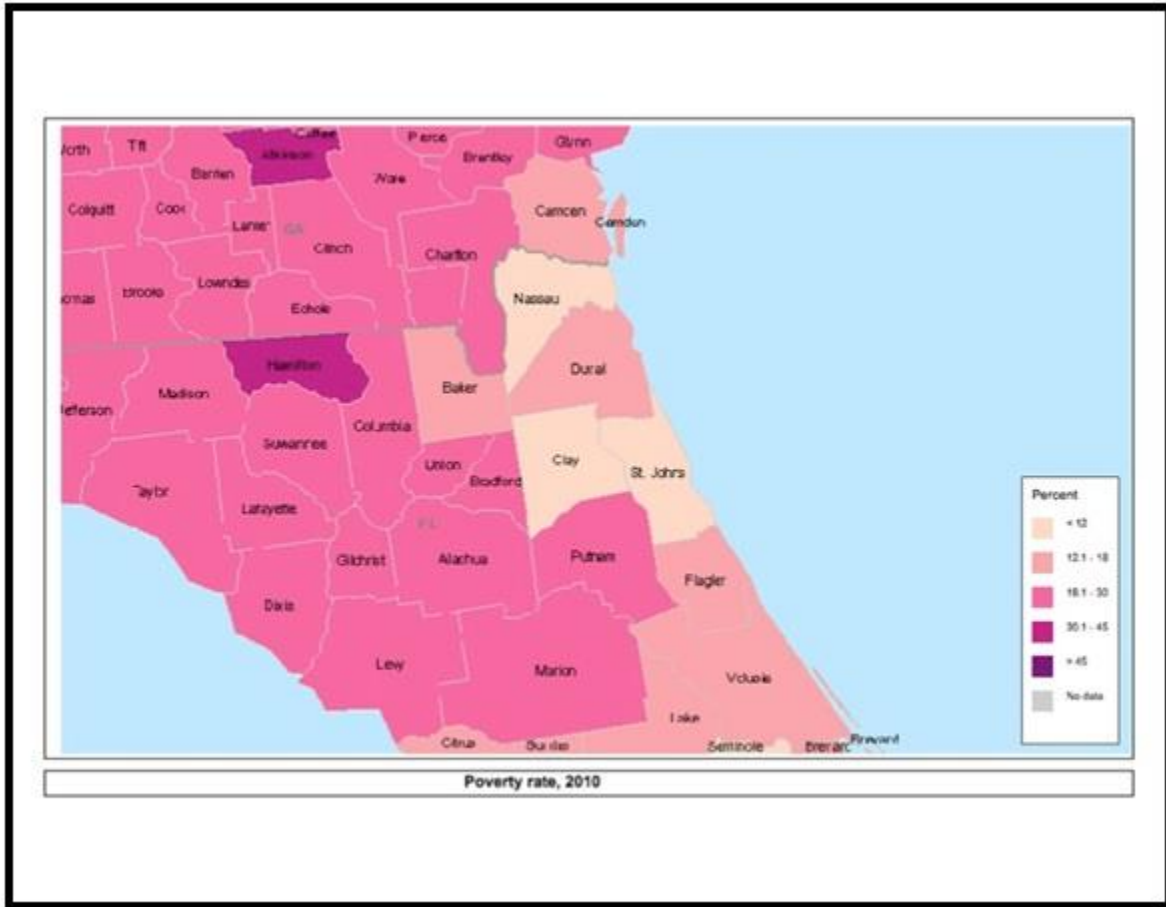


Figure 10: County Poverty Rates, 2010

Northeast Florida Food Deserts

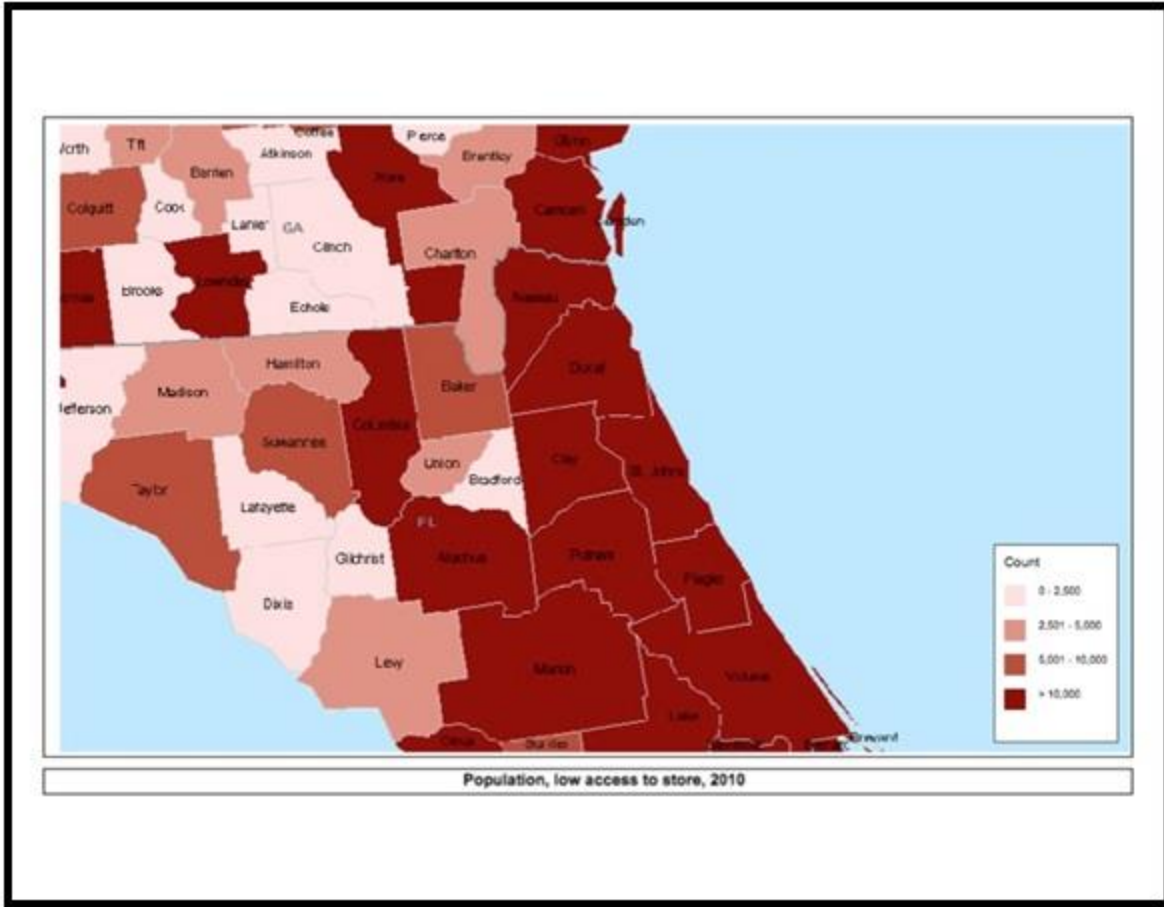


Figure 11: Population, Low-Access to Store, 2010 by County

Analysis of Potential SNAP Expenditures by County

In an attempt to gain a general idea of the SNAP income that might be available per food desert tract, a rough extrapolation of a potential distribution of benefits attributed by population was calculated by multiplying the estimated average monthly benefits per participant over the course of the year¹ by the number of households in the area receiving benefits (per US Census Bureau ACS data).

The USDA tracks Supplemental Nutrition Assistance Program (SNAP) expenditures on a county-by-county level. Table 11 estimates potential level of SNAP benefits by population distributed in the 10 food desert areas. The total available expenditures across all the areas is \$27,380,732.40 per year. The highest estimated SNAP expenditures are available in Duval Cluster 2 at over \$6 million annually, and none of the clusters shows estimated expenditures below \$1 million.

This calculation is only intended to provide the reader with a loose impression of the potential SNAP revenue that could be available in each food desert. It is also important to note that within any given tract, individuals who were not receiving SNAP benefits could potentially also purchase fresh fruits and vegetables if they were available.

Table 11: Estimated Potential SNAP Expenditures in Food Deserts

Food Desert	SNAP HH	Average Monthly SNAP \$	SNAP \$ per Month	SNAP \$ per Year
Duval Cluster 1	1151	\$141.51	\$162,878.01	\$1,954,536.12
Duval Cluster 2	3577	\$141.51	\$506,181.27	\$6,074,175.24
Duval Cluster 3	609	\$141.51	\$86,179.59	\$1,034,155.08
Duval Cluster 4	1235	\$141.51	\$174,764.85	\$2,097,178.20
Duval Cluster 5	1213	\$141.51	\$171,651.63	\$2,059,819.56
Duval Cluster 6	2725	\$141.51	\$385,614.75	\$4,627,377.00
Duval Cluster 7	968	\$141.51	\$136,981.68	\$1,643,780.16
Clay	653	\$135.32	\$88,363.96	\$1,060,367.52
Putnam	2178	\$136.72	\$297,776.16	\$3,573,313.92
St. Johns	1982	\$136.90	\$271,335.80	\$3,256,029.60
Total	16291	\$139.95	\$2,281,727.70	\$27,380,732.40

- SNAP Households from US Census Bureau, ACS 2008-2012 5-year estimates
- Average monthly SNAP Expenditures from ERS, USDA 2011

¹ ERS USDA variable “AMB_PAR11,” calculated as the ratio of the total average monthly program benefits issued to all participants in an area to that area’s count of program participants.

Consumption Averages of Fruits and Vegetables Based on Study Figures in 2006

In a 2006 study commissioned by the U.S. Department of Agriculture, the Thrifty Food Plan was examined to determine both the prevailing cost of certain food items and levels of consumption by individuals receiving food stamps (SNAP) benefits. The Thrifty Food Plan (TFP) is described in the study as a fundamental part of the U.S. food guidance system and the basis for maximum food stamp allotments. The TFP provides a representative healthful and minimal cost meal plan that shows how a nutritious diet may be achieved with limited resources. The Plan assumes that all purchased food is consumed at home.

The TFP is one of four official USDA food plans (the others being the Low-Cost Plan, the Moderate-Cost Plan, and the Liberal Plan) maintained by the Department. The TFP “market baskets” specify the types and quantities of foods that people could purchase to be consumed at home to obtain a nutritious diet at a minimal cost (Carlson et al. 2007).

For the purposes of this analysis, we have examined the purchase habits statistics in the report that list the amount, by pounds per week, of fresh fruits and vegetables that were purchased by the studied sample within the trial weeks. We combined the data by gender and age and developed averages of purchases, which we then divided by the number of individuals in each of the food desert areas and clusters of areas. The method of determining purchase quantities constitutes a medium reliability of information as it does not take into consideration either the specific buying habits of individuals that actually live in the food desert areas (who may have limited access to food at the cost levels displayed in the study) or the buying habits of non-SNAP supported individuals who may also reside in the areas under study in this analysis.

However, for the purpose of targeting potential market levels, this analysis appears to be slightly more exact than the estimates of market revenue streams in the SNAP benefits estimates in Table 11. These estimates of purchase quantities should be helpful as a strategic planning tool when determining a distribution/sales plan when considered with other demographic information. It is important to keep in mind that the figures in the Table 12 below are reflective of the market in 2006. As such, when considered in light of current population increases and the radical increase of the pool of people who are now receiving SNAP benefits, these data should provide some helpful information.

Table 12: Thrifty Food Plan Market Baskets, Quantities of Food Purchased for a Week (in pounds), by Age-Gender Group, 2006

	Female					Male					Average pounds purchased per person
	12-13 years	14-18 years	19-50 years	51-70 years	71+ years	12-13 years	14-18 years	19-50 years	51-70 years	71+ years	
Vegetables	6.18	7.2	7.4	8.44	11	8.25	8.55	9.27	9.62	7.96	8.387
Fruit	5.53	5.49	5.62	8.4	4.29	5.99	7.51	8.41	8.14	5.47	6.485
Total pounds per week	11.71	12.69	13.02	16.84	15.29	14.24	16.06	17.68	17.76	13.43	14.872

Table 12 shows an average weekly purchase of 14.87 pounds of fresh fruits and vegetables per week. The next analysis, presented in Table 13, uses this average purchase to determine a potential level of purchase within each food desert cluster.

When the combined fresh vegetable and fruit weekly purchase data (14.87 pounds) is multiplied by the number of persons living in each food desert cluster or food desert tract and then extrapolated over 52 weeks, the total amount of targeted food purchases equals 79,144 tons of food purchased per year (2006 purchase-level with 2010 food desert populations).

This quantity is best compared to the potential production of fruits and table vegetables in the rural areas in Clay, Putnam, and St. Johns Counties being targeted for analysis.

Table 13: Estimated Potential Fruit & Vegetable Purchases by Food Desert Clusters and County

	Total Population	Individuals LA/LI	Average Pounds Purchased per Person per Week	Total Average Pounds Purchased per Cluster per Week	Total Average Pounds Purchased per Cluster per Year (in Tons)
Duval Cluster 1	15,210	2,692	14.82	225,412	5,860
Duval Cluster 2	31,995	7,478	14.82	474,166	12,328
Duval Cluster 3	4,901	1,886	14.82	72,633	1,888
Duval Cluster 4	15,013	1,385	14.82	222,493	5,785
Duval Cluster 5	23,901	2,986	14.82	354,213	9,210
Duval Cluster 6	35,419	6,405	14.82	524,910	13,647
Duval Cluster 7	13,629	2,529	14.82	201,982	5,252
Duval All Clusters	140,068	25,361	14.82	2,075,808	53,971
Clay All Clusters	8,562	3,347	14.82	126,889	3,299
Putnam All Clusters	23,786	7,796	14.82	352,509	9,165
St. Johns All Clusters	26,089	5,931	14.82	386,639	10,053
Total				2,941,845	76,488

Strategic Partnerships within the Food Deserts

Churches

To determine the number of churches in Northeast Florida food desert areas, we examined data from two sources. The first was “[ChurchPick.Com](#),” which maintains a comprehensive directory that allows for zip code based searching. The second was “[USA Church](#),” a data base of community churches that allows for zip code sorting and further sorting by church size. Both sites had a considerable number of churches, which list zip codes associated with food deserts as their primary address zip. The number of churches per zip code is presented in Table 14.

Table 14: Number of Churches per Food Desert Zip Code

County	Area Name	Zip Code	# Of Churches Per Zip Code
Duval	Jacksonville	32218	37
Duval	Jacksonville	32208	47
Duval	Jacksonville	32209	89
Duval	Jacksonville	32254	37
Duval	Jacksonville	32220	12
Duval	Jacksonville	32206	45
Duval	Jacksonville	32211	39
Duval	Jacksonville	32216	30
Duval	Jacksonville	32207	50
Duval	Jacksonville	32246	14
Duval	Jacksonville	32210	43
Clay	Green Cove Springs	32043	6
Clay	Penney Farms	32079	1
Clay	Middleburg	32050	1
Clay	Middleburg	32068	1
Putman	Palatka	32177	57
St. Johns	St. Augustine	32084	43
St. Johns	Hastings	32145	6

Schools

Public schools can be an important resource to any effort to move fresh foods into food desert areas. In 2010, 47 percent of all participants receiving supplemental nutrition assistance (SNAP) were under 18 years of age and at least half of all SNAP households had at least one child. Households with children received 71 percent of all benefits in the SNAP program, with about 56 percent of those households being single parent households ([Building a Healthy America: A Profile of the Supplemental Nutrition Assistance Program 2012](#)).

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Table 15 below shows the distribution of schools by level in each county and the number of schools that qualify as Title I schools. The Title I program provides financial assistance to local educational agencies (LEAs) and schools with high numbers or high percentages of children from low-income families to help ensure that all children meet challenging state academic standards ([US Department of Education](#)). The number of students enrolled in the free and reduced lunch program determines low-income students. For an entire school to qualify for Title I funds, at least 40 percent of students must enroll in the free and reduced lunch program.

The Title I School designation can be used as an indicator of the percentage of households who are low income and may suffer from food insecurity.

Table 15: Number Schools per Level by County

County	Elementary Schools	Middle Schools	High Schools	Number of Title I Schools
Duval	104	26	26	77
Clay	27	7	9	23
Putnam	12	7	4	14
St. Johns	18	7	7	13

*[Data from Duval County School Board](#); [Clay County Schools](#); [Putnam County School District](#); [St. Johns County School District](#)

Social and Community Services

Another important source of support for the distribution of fresh foods is through social and community service agencies. In most cases, community services are located and well positioned to serve both their target populations and the areas where they reside. We reviewed the information available on the Internet and extracted the names, addresses, and service areas/target populations/core services information for social and community services in the counties under study and have presented this information in Appendix 2 of this report.

Table 16 below provides an overall count by county of available service delivery agencies. It is not presented as an exhaustive list, but rather to provide the reader with a general idea of the approximate volume of agencies, which could become partners in the marketing and distribution of fresh food.

Table 16: Number of Community-Based Social Service Agencies by County

County	Number of Community-Based Agencies
Duval	74
Clay	16
Putnam	19
St. Johns	30

Summary

Many alternative marketing models have been researched (Goodman 2004; Hinrichs 2000), and those which seem to have the biggest impact display methods which result in a higher economic value to the prime producer through direct marketing vehicles. Many of the “best value” models involve a high level of support from the scientific/technical community, sales directly to the end consumer, alternative marketing approaches, and the development of niche markets. Additionally, growers who process what they grow into added-value products appear to increase their revenue opportunities but also incur higher risk at the onset.

The challenge ahead appears to be the development of evidence-based best practices that can connect the existing resources within the community of practice to the markets with the greatest demand.

This research examined the potential fresh food markets within the areas designated as food deserts, which lie within a relatively close proximity to the agricultural producers in the rural surrounding areas. Through several perspectives, we find an emerging market, which in its core designation lacks access to the products being produced locally. Additionally, a focus on food deserts as markets appears to have the potential to impact a population of consumers who experience a high level of food insecurity. As such, not only can these new markets solve a problem for growers, they can also help people with the greatest needs.

Several next steps should be considered:

- A full examination of the supply side of fresh food production should be undertaken to determine to what extent market needs can be met;
- A review of the existing agriculturally-related business structure in Clay, Putnam, and St. Johns Counties to identify business capacity;
- Rural producers in Flagler should be included in both the market and supply analyses.
- Stakeholder input should be collected through intercept surveys and analyzed to fully understand the buying habits of consumers;
- The development of cooperatives and other forms of agricultural business should be encouraged and supported;
- Marketing and business plans should be developed to approach the consumer need from an informed direction;
- Case studies of mobility models such as food buses should be generated and used to develop evidence-based operations;
- Business capacity and development training should be made available to businesses that want to explore new markets.

Today’s business climate presents a question of how a catalytic shift can be undertaken in the current regional agricultural system to redefine business structure, encourage new enterprise start-ups, provide technical and business support, and identify new markets and revenue streams which will create an improved business climate for the farm industry.

APPENDICES

Appendix 1

List by Zip Code of the Five Largest Churches Serving Each Food Desert Area

Duval County

Zip Code 32218 (Cluster 1)

- Amazing Grace Full Gospel, 5518 Dunn Ave., Jacksonville, FL 32218
- Believers in Christ Christian Center, 11565 N. Main St., Jacksonville, FL 32218
- Cavalry Baptist Church, 4040 Dunn Ave., Jacksonville, FL 32218
- Cavalry Temple Baptist Church, 168 Duval Station Rd., Jacksonville, FL 32218
- Cedar Bay Baptist Church, 11553 N. Main St., Jacksonville, FL 32218

Zip Code 32208 (Cluster 1)

- All People Church of God in Christ, Inc., 1973 Edgewood Ave. W., Jacksonville, FL 32208
- Beverly Hills Baptist Church, 9714 Ridge Blvd., Jacksonville, FL 32208
- Beverly Hills Church of God, 9113 Ridge Blvd., Jacksonville, FL 32208
- Church Fellowship, 9117 Lem Turner Rd., Jacksonville, FL 32208
- East 44th Street Baptist Church, 281 E. 44th St., Jacksonville, FL 32208

Zip Code 32209 (Cluster 2)

- 7th Day Adventist Church, 2750 Edgewood Ave. W., Jacksonville, FL 32209
- All People Church of God in Christ Westside, 2072 Commonwealth Ave., Jacksonville, FL 32209
- Apostolic Church of God in Christ, 2030 Benedict Rd., Jacksonville, FL 32209
- Asbury United Methodist Church of West Jacksonville, 1075 Almeda St., Jacksonville, FL 32209
- Bowden United Methodist Church, 2025 Pullman Ave., Jacksonville, FL 32209

Zip Code 32254 (Cluster 2)

- Bethesda Baptist Church, 422 Luray St., Jacksonville, FL 32254
- Biltmore Baptist Church, 3525 Norman E. Thagard Blvd., Jacksonville, FL 32254
- Church of God North Lane Avenue, 2956 Lane Ave. N., Jacksonville, FL 32254
- Cornerstone Baptist Church, 3436 Lane Ave. N., Jacksonville, FL 32254

Zip Code 32220 (Cluster 2)

- Bethel Temple Assembly of God, 8380 Devoe St., Jacksonville, FL 32220
- Blessed Faith Missionary Baptist Church, 7941 Nevada St., Jacksonville, FL 32220
- Christian Life Church, 400 Cahoon Rd. S., Jacksonville, FL 32220
- Jones Road Baptist Church, 2506 Jones Rd., Jacksonville, FL 32220
- Marietta Church of Christ, 8150 Driggers St., Jacksonville, FL 32220

Zip Code 32206 (Cluster 3)

- Agape New Life Christian Church, 2030 Phoenix Ave., Jacksonville, FL 32206
- All People Church of God in Christ East Side Ministries, 1177 E. 14th St., Jacksonville, FL 32206

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- Antioch Baptist Church, 513 Odessa St., Jacksonville, FL 32206
- Central Christian Baptist Church, 121 E. 8th St., Jacksonville, FL 32206

Zip Code 32211 (Cluster 4)

- Abundant Life Church of God in Christ, 855 Townsend Blvd., Jacksonville, FL 32211
- Arlington Christian Church, 8075 Lone Star Rd., Jacksonville, FL 32211
- Arlington Presbyterian Church, 1300 Sprinkle Dr., Jacksonville, FL 32211
- Arlington United Methodist Church, 1400 University Blvd. N., Jacksonville, FL 32211
- Changed by Grace Community Church, 49 N. Bowlan St., Jacksonville, FL 32211

Zip Code 32216 (Cluster 4)

- 7th Day Adventist Church, 3208 Herring Rd., Jacksonville, FL 32216
- Apostolic School of Perfection, 7301 Beach Blvd., Jacksonville, FL 32216
- Belford Road Baptist Church, 2950 Belfort Rd., Jacksonville, FL 32216
- Cavalry Baptist Church, 3266 Southside Blvd., Jacksonville, FL 32216
- Christ Community Church Education, 6004 Terry Rd., Jacksonville, FL 32216

Zip Code 32207 (Cluster 4)

- All Saints Episcopal Church, 4171 Hendricks Ave., Jacksonville, FL 32207
- Assumption Catholic Church, 2403 Atlantic Blvd., Jacksonville, FL 32207

Zip Code 32246 (Cluster 5)

- Christ Church, 2226 St. Johns Bluff Rd. S., Jacksonville, FL 32246
- Cornerstone Assembly of God, 9767 Ivey Rd., Jacksonville, FL 32246
- Cross Road Church, 10005 Gate Parkway N., Jacksonville, FL 32246
- Harmony Community Church, 2135 Forest Blvd., Jacksonville, FL 32246
- Liberty Community Church, 11417 Saints Rd. #A , Jacksonville, FL 32246

Zip Code 32210 (Cluster 6)

- 103rd Street Church, 10356 103rd St., Jacksonville, FL 32210
- Agape Baptist Church, 3880 Old Middleburg Rd., Jacksonville, FL 32210
- Agape Christian Church, 4401 Georgetown Dr., Jacksonville, FL 32210
- Bethel Missionary Baptist Church, 2538 Firestone Rd., Jacksonville, FL 32210

Zip Code 32244 (Cluster 6)

- 7th Day Adventist Church, 5545 Firestone Rd., Jacksonville, FL 32244
- Acts 2 Church, 6200 Lake Gray Blvd., Jacksonville, FL 32244
- Bibleway Church of God in Christ, 8033 Renault Dr., Jacksonville, FL 32244
- Christ is the Way Community Church, 7441 Morse Ave., Jacksonville, FL 32244

Zip Code 32221 (Cluster 7)

- 7th Day Adventist Church, 7951 Lenox Ave., Jacksonville, FL 32221
- Blair Road Baptist Church, 10343 Normandy Blvd., Jacksonville, FL 32211

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- Church of God Marietta, 8076 Ramona Blvd. W., Jacksonville, FL 32221
- Church of God of Prophecy Westside, 1862 Fouraker Rd., Jacksonville, FL 32221
- Crystal Springs Assembly of God, 89 Crystal Springs Rd., Jacksonville, FL 32221

Clay County

Zip Code 32043

- St. Margaret's Episcopal Church, 6874 Old Church Rd., Green Cove Springs, FL 32043
- Russell Baptist Church, 2299 Sandridge Rd., Green Cove Springs, FL 32043
- Lake Asbury Baptist Church, 2674 Henley Rd., Green Cove Springs, FL 32043
- Orange Avenue Baptist Church, 1106 N. Orange Ave., Green Cove Springs, FL 32043
- Hickory Grove Baptist Church, 310 Oakridge Avenue S., Green Cove Springs, FL 32043
- Decoy Baptist Church, 671 Decoy Rd., Green Cove Springs, FL 32043

Zip Code 32079

- First Black Creek Baptist Church, PO BOX 826, Penney Farms, FL 32079

Zip Code 32050

- Vineyard Christian Fellowship, PO BOX 862, Middleburg, FL 32050

Zip Code 32068

- St. Peter's Lutheran Church, 1614 Blanding Blvd., Middleburg, FL 32068

Putnam County

Zip Code 32177

- First Presbyterian Church of Palatka Westminster Hall, 126 2nd St., Palatka, FL 32177

St. Johns County

Zip Code 32084

- 7th Day Adventist Church, 151 Martin Luther King Ave., St. Augustine, FL 32084
- 7th Day Adventist Church, 555 State Road 16, St. Augustine, FL 32084
- Ancient City Baptist Church Fellowship Hall, 28 Sevilla St., St. Augustine, FL 32084
- Antioch Baptist Church, 833 Pearl St., St. Augustine, FL 32084

Zip Code 32145

- Church of God by Faith, 706 N. Main St., Hastings, FL 32145
- Hastings Community Church, 307 E. Cochran Ave., Hastings, FL 32145
- Mt. Olive Baptist Church, 8250 County Rd. 13 S., Hastings, FL 32145
- Out Reach Holiness Church, 518 Dallas St., Hastings, FL 32145
- Pompey's Temple Church, 611 Pompey Miller St., Hastings, FL 32145

Appendix 2

Social and Community Based Agencies by County

Organization	Address	City	Area Served	Type of Organization
<i>Duval County</i>				
YMCA	221 Riverside Ave	Jacksonville	Brooklyn	Non-Profit Organizations, Health Clubs & Gyms, Recreation Centers, Business Organizations, Community & Social Services
YMCA	9119 Merrill Rd Suite 36	Jacksonville	Regency, Greater Arlington	Youth Organizations, Health Clubs & Gyms, Business Organizations, Community & Social Services, Child Care
Jewish Family & Community Svc	6261 DuPont Station Ct	Jacksonville	Southeast, San Jose	Other Social Services, Community & Social Services, Non-Profit Organizations, Counseling, Marriage Counseling
Cerebral Palsy-NE FL	3311 Beach Blvd	Jacksonville	St. Nicholas, Greater Arlington	Non-Profit Organizations, Community & Social Services, Community
Consumer Credit Counseling SVC	1639 Atlantic Blvd	Jacksonville	San Marco, Southeast	Non-Profit Organizations, Community & Social Services, Other Social Services
San Marco Club	1423 San Marco Blvd	Jacksonville	San Marco, Southeast	Non-Profit Organizations, Community & Social Services, Other Social Services
Family Foundations	1639 Atlantic Blvd	Jacksonville	Southeast, San Marco	Non-Profit Organizations, Community & Social Services, Counseling, Marriage Counseling, Other Social Services
Corporate Care Works	8665 Baypine Rd Suite 100	Jacksonville	Southeast, Deerwood Center	Educational Services, Non-Profit Organizations, Other Social Services, Adult and Continuing Education, Vocational Schools
Justice Coalition	1935 Lane Ave S. Suite 1	Jacksonville	Hyde Park, Southwest	Other Social Services, Community & Social Services, Non-Profit Organizations, Government Contractors
One Jax	1022 Park St Suite 302	Jacksonville	Northwest, Riverside	Community & Social Services, Non-Profit Organizations, Other Social Services, Government Contractors
Boys' Home Assn	2354 University Blvd N	Jacksonville	Monterey, Greater Arlington	Non-Profit Organizations, Community & Social Services, Other Social Services

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Organization	Address	City	Area Served	Type of Organization
BrightStar LifeCare	12187 Beach Blvd	Jacksonville	Greater Arlington, Sandalwood	Alzheimer's Information, Nurses, Home Health Care, Geriatrics, Senior Citizens' Services
Lutheran Social Svc Of Florida	1502 Jessie St	Jacksonville	East Jacksonville, Urban Core	Other Social Services, Community & Social Services
Lutheran Social Svc	4615 Phillips Hwy	Jacksonville	Southeast, Englewood	Other Social Services, Community & Social Services, Adoption Agencies, Community Organizations, Government Contractors
Salvation Army	10940 Beach Blvd	Jacksonville	Windy Hill, Southeast	Stocked exclusively with donated goods, thrift store contributes all earnings to Bible-based rehab programs throughout the world.
Northeast Florida Safety Council	1725 Art Museum Dr.	Jacksonville	St. Nicholas, Greater Arlington	Educational Services, Addiction Treatment, Alcoholism Treatment, Non-Profit Organizations, Driving Instruction
Greenfield Center	3 Shircliff Way Suite 640	Jacksonville	Northwest, Riverside	Drug Abuse Treatment, Addiction Treatment, Alcoholism Treatment
Allen Children Center	1804 St. Johns Bluff Rd S	Jacksonville	Greater Arlington, Southside Estates	Child Care, Recreation Camps, Day Care Centers, K-12 Schools
ComForCare Senior Services	8825 Perimeter Park Blvd	Jacksonville	Secret Cove, Southeast	Home Health Care, Nurses, Alzheimer's Information, Senior Citizens' Services
Mandarin Christian Counseling	9770 Baymeadows Rd Suite 139	Jacksonville	Southeast, Royal Lakes	Marriage Counseling, Family Counseling, Psychotherapists, Counseling
Women's Resource Center - Jax	12456 Sago Ave W	Jacksonville	Northside, Duval	Abortion Alternatives, Health Clinics, Information & Referral Services, Pregnancy Information
Family Support Services	4057 Carmichael Ave	Jacksonville	Greater Arlington, St. Nicholas	Adoption Agencies, Community & Social Services, Family Planning Information, Other Social Services, Foster Care
Salvation Army	15 E Church St	Jacksonville	Urban Core, Downtown Jacksonville	Other Social Services, Community & Social Services
My Support Jax	4690 Great Western Lane South	Jacksonville	Southeast, Mandarin Station/ Losco	Community & Social Services, Other Social Services

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Organization	Address	City	Area Served	Type of Organization
City Rescue Mission	426 McDuff Ave S	Jacksonville	Lackawanna Northwest	Churches, Missions, Community & Social Services, Other Social Services
AAA Non-Profit HIV/STD Testing	3636 University Blvd S	Jacksonville	Southeast, Englewood	Non-Profit Organizations
Boy Scouts Of America	521 Edgewood Ave S	Jacksonville	Murray Hill, Northwest	Youth Organizations, Non-Profit Organizations, Government Contractors
Arlington Lions Foundation	6523 Commerce St	Jacksonville	Greater Arlington, Arlington	Philanthropy, Bars & Clubs, Community Organizations, Lions, Non-Profit Organizations
Jewish Community Alliance	8505 San Jose Blvd Ste B	Jacksonville	Southeast, Goodby's Creek	Non-Profit Organizations, Recreation Camps, Government Contractors
Jacksonville Regional Chamber	3 Independent Dr	Jacksonville	Downtown Jacksonville, Urban Core	Chambers Of Commerce, Business Consultants, Chambers of Commerce, Non-Profit Organizations, Government Contractors
Woman's Club Of Jacksonville	631 Oak St	Jacksonville	Riverside	Community Organizations, Non-Profit Organizations
Life Center	819 Park St	Jacksonville	Northwest, Riverside	Non-Profit Organizations, Churches, Methodist Churches
Arlington Community Services	1450 Rogero Rd	Jacksonville	Arlington, Greater Arlington	Non-Profit Organizations
In God & Jesus Christ Ministries	13859 Fish Eagle Dr W	Jacksonville	The Cape, Northside	Churches, Non-Profit Organizations, Covenant and Evangelical Churches, American Express, Discover
United Way	555 W 25th St	Jacksonville	Brentwood, Urban Core	Non-Profit Organizations
Loyal Order Of Moose	9703 Lem Turner Rd	Jacksonville	Riverview, Northwest	Fraternal Organizations, Loyal Order Of Moose, Non-Profit Organizations
Early Learning Coalition	6850 Belfort Oaks Pl Ste 102	Jacksonville	Southpoint, Southeast	Non-Profit Organizations, Education Centers
American Legion	5443 San Juan Ave	Jacksonville	Hillcrest, Southwest	Community Organizations, Veterans Affairs, American Legion, Non-Profit Organizations
Vision Is Priceless	3 Shircliff Way Suite 546	Jacksonville	Northwest, Riverside	Non-Profit Organizations
Diocesan Center-Family Life	2577 Park St	Jacksonville	Northwest, Riverside	Non-Profit Organizations, Adult and Continuing Education

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Organization	Address	City	Area Served	Type of Organization
New Horizon Community Outreach	10960 Beach Blvd # 631	Jacksonville	Southeast, Windy Hill	Non-Profit Organizations
Christ In Action Intl Corp	11627 Jerry Adams Ct	Jacksonville	Garden City, Northside	Churches, Religious Organizations, Non-Profit Organizations
Sisters With Game Inc.	8549 Turkey Oaks Dr S	Jacksonville	Greater Arlington, Arlington Hills	Non-Profit Organizations
Jacksonville Marine Charities	8203 Heckscher Dr	Jacksonville	Pumpkin Hill, Northside	Non-Profit Organizations, Community Organizations, Charitable Institutions
Riverside Foundation	9090 Barrister Ct	Jacksonville	Southeast, Craven	Philanthropy, Community Organizations, Non-Profit Organizations
Northwest Jacksonville CDC	1122 Golfair Blvd	Jacksonville	Urban Core	Non-Profit Organizations, Housing Authorities, Government Contractors
Jacksonville Downtown Dev	220 E Bay St Suite 1400	Jacksonville	Downtown Jacksonville, Urban Core	City Legislators, City Offices, Non-Profit Organizations
Northeast Florida Community	4070 Boulevard Center Dr # 200	Jacksonville	St. Nicholas, Greater Arlington	Community & Social Services, Non-Profit Organizations
Elk's Lodge	1855 West Rd	Jacksonville	Sans Souci, Southeast	Fraternal Organizations, Elks Lodge, Non-Profit Organizations
Baptist Mission To Forgotten	3787 Old Middleburg Rd N	Jacksonville	Jacksonville Heights, Southwest	Churches, Baptist Churches, Religious Organizations, Community Organizations, Non-Profit Organizations
NCCD-Girls & Young Women	1022 Park St # 207	Jacksonville	Riverside, Northwest	Non-Profit Organizations
Veteran Reintegration Center	1701 Powhattan St	Jacksonville	Urban Core, Mid-Westside	Non-Profit Organizations, Community Organizations
Episcopal Children's Svc	100 Bell Tel Way Suite 100	Jacksonville	Holiday Hill, Greater Arlington	Child Care, Non-Profit Organizations, Government Contractors
Jacksonville 4-H Program	1010 McDuff Ave N	Jacksonville	Woodstock, Northwest	Youth Organizations, General Government Offices, City Legislators, Non-Profit Organizations

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Organization	Address	City	Area Served	Type of Organization
Nonprofit Center-Ne Florida	1301 Riverplace Blvd # 301	Jacksonville	Southside, Urban Core	Non-Profit Organizations, Government Contractors
Episcopal Children's Services	8443 Baymeadows Rd	Jacksonville	Deerwood Center, Southeast	Non-Profit Organizations, Child Care
Seniors On A Mission	2050 Art Museum Dr # 102	Jacksonville	St. Nicholas, Greater Arlington	Religious Organizations, Churches, Non-Profit Organizations
United Congregations for Comm.	1061 Line St	Jacksonville	Northwest, Robinson's Addition	Community & Social Services, Halls & Auditoriums, Other Social Services
River Region Human Services	3723 Franklin St	Jacksonville	Urban Core, Longbranch	Community & Social Services, Other Social Services
Kid's Cafe	1502 Jessie St	Jacksonville	Urban Core, East Jacksonville	Other Social Services, Community & Social Services
Meals On Wheels- Riverside	849 Park St	Jacksonville	Riverside, Northwest	Community & Social Services, Other Social Services
Goodwill Donation Center	12200 San Jose Blvd Ste 19	Jacksonville	Julington Creek, Southeast	Community Organizations, Community & Social Services, Charitable Institutions, Other Social Services
American Red Cross	744 Riverside Ave	Jacksonville	Riverside, Northwest	Other Social Services, Community & Social Services
Gateway Community Services, Inc.	1283 E 8th St	Jacksonville	Urban Core, Phoenix	Medical Schools, Addiction Treatment, Drug Abuse Treatment, Other Social Services
Traveler's Aid Society	134 E Church St	Jacksonville	Downtown Jacksonville, Urban Core	Other Social Services, Community & Social Services
Jacksonville Urban League	903 Union St W	Jacksonville	Urban Core, LaVilla	Employment Agencies, Community & Social Services, Child Care, Other Social Services, Government Contractors
First Coast Family Center	1965 Beachway Rd # 109	Jacksonville	Greater Arlington, St. Nicholas	Other Social Services, Community & Social Services
JFCS	Century Plaza	Jacksonville	Woodland Acres, Greater Arlington	Community & Social Services, Other Social Services

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Organization	Address	City	Area Served	Type of Organization
Kid Power Program	9775 Ivey Rd	Jacksonville	Southside Estates, Greater Arlington	Other Social Services, Community & Social Services
Jacksonville Youth Sanctuary	1233 Ingleside Ave	Jacksonville	Urban Core, Avondale	Other Social Services, Community & Social Services
Bridge of Ne Florida INC	1824 N Pearl St	Jacksonville	Urban Core, Springfield	Other Social Services, Community & Social Services
Operation New Hope	1321 N Main St	Jacksonville	Springfield, Urban Core	Other Social Services, Community & Social Services, Government Contractors
Jacksonville Community Foundation	121 W Forsyth St	Jacksonville	Downtown Jacksonville, Urban Core	Other Social Services, Community & Social Services
Bridge Multi-Service Center for Youth	1824 N Pearl St	Jacksonville	Urban Core, Springfield	Youth Organizations, Community & Social Services, Other Social Services
Hispanic Ministry	134 E Church St # 2	Jacksonville	Downtown Jacksonville, Urban Core	Other Social Services
Clay County				
Farmworkers Ministry	207 S Palmetto Ave	Green Cove Springs		Non-Profit Organizations, Religious Organizations, Community & Social Services, Other Social Services
Clay County Council On Aging	604 Walnut St	Green Cove Springs		Non-Profit Organizations, County Offices, Human Resource Programs, Senior Citizens' Services
Lake Asbury Community Association	282 Branscomb Rd	Green Cove Springs		Business Organizations, Community & Social Services, Community Organizations, Other Social Services
Clay County Victim Serv.	1403 Idlewild Ave	Green Cove Springs		Other Social Services
Village Improvement Association Federated	17 N Palmetto Ave	Green Cove Springs		Community Organizations, Bars & Clubs, Business Organizations, Community & Social Services, Other Social Services
Clay County Food Bank	506 S Highland Ave	Green Cove Springs		Food Banks, Community & Social Services, Other Social Services
Food Pantry Of Green Cove Springs	1107 Martin Luther King Jr Blvd	Green Cove Springs		Other Social Services, Community & Social Services

Northeast Florida Food Deserts

Organization	Address	City	Area Served	Type of Organization
Haiti Hope Fund, Inc.	428 Walnut St	Green Cove Springs		Community Organizations, Charitable Institutions
Salvation Army	2795 County Rd 220	Middleburg		Other Social Services, Churches, Community & Social Services
American Legion	3939 County Road 218	Middleburg		Non-Profit Organizations, Veterans Affairs, Community Organizations, Fraternal Organizations, American Legion
Veterans Of Foreign Wars	2296 Aster Ave	Middleburg		Community Organizations, Veterans Affairs, Fraternal Organizations, VFW, Non-Profit Organizations
Agape House Clothes & Food	2645 Blanding Blvd	Middleburg		Non-Profit Organizations
Weigel Senior Center	3916 Section St	Middleburg		Senior Citizens' Services, Community & Social Services, Other Social Services
First Coast Women's Services, LLC	2555 County Road 220	Middleburg		Community & Social Services, Abortion Alternatives, Other Social Services
Challenge Enterprises of N FL	3530 Enterprise Way	Green Cove Springs		Community & Social Services, Other Social Services, Vocational Rehabilitation
Loyal Order of Moose	1932 Long Bay Rd	Middleburg		Fraternal Organizations, Loyal Order Of Moose
Girl Scouts Gateway Council	4375 Lazy Acres Rd	Middleburg		Youth Organizations
Putnam County				
YMCA	141 Kelley Smith School Rd	Palatka		Youth Organizations, Child Care, Halls & Auditoriums, Other Social Services
RCMA	120 Main St	Palatka		Non-Profit Organizations
Veterans Of Foreign Wars	3201 Reid St	Palatka		Community Organizations, Bars & Clubs, Veterans Affairs, Fraternal Organizations, VFW
Christian Palatka Service Center	Po Box 2465	Palatka		Other Social Services
Nefi Community Action Agency	820 Reid St	Palatka		Other Social Services, Community & Social Services

Northeast Florida Food Deserts

Organization	Address	City	Area Served	Type of Organization
Lee Conlee House, Inc.	PO Box 2558	Palatka		Community & Social Services, Other Social Services, Government Contractors
Putnam Habitat For Humanity	1605 Westover Dr	Palatka		Community & Social Services, Christian Ministries, Business Organizations, Community Organizations, Other Social Services
Bread Of Life	320 N 5th St	Palatka		Other Social Services, Community & Social Services
Palatka Housing Authority	400 N 15th St	Palatka		Housing Authorities, Community & Social Services, Housing Assistance, Government Contractors
United Way	Po Box 981	Palatka		Community & Social Services, Other Social Services
Catholic Charities Bureau	1000 Husson Ave	Palatka		Other Social Services, Community & Social Services
Community Partnership For Children	1910 Reid St	Palatka		Other Social Services
Christian Service Center	820 Reid St	Palatka		Other Social Services, Community & Social Services
Edgar Johnson Senior Center	1215 Westover Dr	Palatka		Senior Citizens' Services
Worksource	400 N State Road 19 Suite 33	Palatka		Job Training, County Offices, State Offices, County Legislators, State Legislators
North FL Community Action Agency	1201 Madison St	Palatka		Community & Social Services
George Wilson's Children Center	401 N 13th St	Palatka		Child Care
Door-Hope Women's Transitional	1920 Washington St	Palatka		Community Organizations
Soup For The Soul	Po Box 595	Palatka		Charitable Institutions, Community Organizations
Suwannee River Economic Dev.	600 College Rd	Palatka		Community Organizations

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Organization	Address	City	Area Served	Type of Organization
St. Johns County				
St Johns County Council Aging	180 Marine St	St Augustine		Senior Citizens' Services, Community & Social Services, Non-Profit Organizations, Other Social Services, Government Contractors
YMCA	500 Pope Rd	St Augustine		Youth Organizations, Business Organizations, Community & Social Services, Halls & Auditoriums, Other Social Services
Women's Refuge-St Johns County	PO Box 1430	St Augustine		Non-Profit Organizations
St John's County Chamber of Commerce	1 Riberia St	St Augustine		Chambers Of Commerce, Chambers of Commerce, Non-Profit Organizations
Orthodox Christian Mission Center	85 S Dixie Hwy	St Augustine		Non-Profit Organizations, Churches, Eastern Orthodox Churches
Hogan's Harvest, Inc.	67 S Dixie Hwy	St Augustine		Non-Profit Organizations
Communities In School of St. John	85 S Dixie Hwy	St Augustine		Non-Profit Organizations, Government Contractors
American Legion	1 Anderson Cir	St Augustine		Community Organizations, Veterans Affairs, American Legion, Non-Profit Organizations
St Augustine Youth Svc	50 Saragossa St	St Augustine		Non-Profit Organizations
Fraternus, Inc.	24 Cathedral Pl # 602	St Augustine		Other Social Services, Community & Social Services
Newstart With Worknet Career	300 S Ponce De Leon Blvd	St Augustine		Charitable Institutions, Community & Social Services, Community Organizations, Other Social Services, Career Counseling
Catholic Charities	225 W King St	St Augustine		Other Social Services, Churches, Catholic Churches, Community & Social Services, Adoption Agencies
Emergency Services & Homeless	62 Chapin St	St Augustine		Information & Referral Services, Community & Social Services, Other Social Services

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Organization	Address	City	Area Served	Type of Organization
Caring Hands-Caring Community	161 Marine St	St Augustine		Other Social Services, Community & Social Services
Northeast Florida Comm. Action	79 Bridge St	St Augustine		Other Social Services, Community & Social Services
Habitat For Humanity	7 Hopkins St	St Augustine		Other Social Services, Christian Ministries, Community & Social Services, Government Contractors
United Way	117 Bridge St	St Augustine		Other Social Services, Business Organizations, Community & Social Services, Community Organizations
St Johns Food Pantry	12 Madeore St	St Augustine		Community & Social Services, Other Social Services
Retired Senior Volunteer Program	10 Hildreth Dr	St Augustine		Community & Social Services, Other Social Services
Council On Aging	180 Marine St	St Augustine		Senior Citizens' Services, Home Health Care
Young Life of St John County	65 Valencia St	St Augustine		Youth Organizations
W E Harris Community Center	400 E Harris St	St Augustine		Community & Social Services
Big Brothers Big Sisters	1400 Old Dixie Hwy Suite B	St Augustine		Other Social Services, Community & Social Services, Non-Profit Organizations, Mentoring
Salvation Army Service Center	1850 State Road 207	St Augustine		Other Social Services, Community & Social Services
Salvation Army Food Bank	1731 Dobbs Rd Suite 8	St Augustine		Food Banks
Orthodox Christian Mission Center	220 Mason Manatee Way	St Augustine		Churches, Non-Profit Organizations
First Coast Community Services	2600 Us Highway 1 S	St Augustine		Other Social Services, Community & Social Services
American Red Cross	2730 US Hwy 1 S Suite M	St Augustine		Other Social Services, Red Cross, Community & Social Services

Northeast Florida Food Deserts

Organization	Address	City	Area Served	Type of Organization
Clearer Vision Ministries	415 N Main St	Hastings		Other Social Services, Community & Social Services
W E Harris Community Center	6150 S Main St	Hastings		Halls & Auditoriums
Hastings Potato Growers Assn	101 E Ashland Ave	Hastings		Business Organizations, Community Organizations

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