Creating More Robust Food Access:

A Health Impact Assessment of Healthy Retail Food Access in the South Volusia US 1 Corridor Encompassing the Cities of New Smyrna Beach, Edgewater, and Oak Hill, Florida




Sandra Whitehead, PhD

September 30, 2016

Acknowledgements

The author wishes to thank the following for making this HIA possible:

Malecia Harris, City of Edgewater
Kohn Evans, City of Oak Hill
Donna Banks, City of New Smyrna Beach
Kenneth Pinnix, PTW Consulting
Thomas Bryant, III and the Florida Department of Health in Volusia County
Risa Waldoks, The Food Trust
Kamryn Norris, The Food Trust
Miles Ballogg, Cardno, Inc.

Funding for this project provided by:

Executive Summary

According to a report prepared for Congress by the Economic Research Service of the US Department of Agriculture, about 2.3 million people (or 2.2 percent of all US households) live more than one mile away from a supermarket and do not own a car.[1] Studies have found wealthy areas have three times as many supermarkets as poor areas,[2] white neighborhoods contain an average of four times as many supermarkets as predominantly black ones do, and grocery stores in African-American communities are usually smaller with less selection.[3] People's choices about what to eat are severely limited by the options available to them and what they can afford—and many areas contain an overabundance of fast-food chains selling cheap "meat" and dairy-based foods that are high in fat, sugar, and salt. Processed foods (such as snack cakes, chips, and soda), typically sold by convenience and liquor stores, are also available.

Healthier foods are generally more expensive than unhealthy foods. For instance, while the overall price of fruits and vegetables in the US increased by nearly 75 percent between 1989 and 2005, the price of fatty foods dropped by more than 26 percent during the same period.[5] While such inflation has strained the food budgets of many families regardless of their financial status, the higher cost of healthy foods often puts them entirely beyond the monetary means of many lower-income people. While unhealthy eating may be economically cheaper in the short-term, the consequences of long-term constrained access to healthy foods is one of the main reasons low-income populations suffer from statistically higher rates of obesity, Type 2 diabetes, cardiovascular, and other diet-related conditions than the general population.[6] Whatever their age and ethnicity, obesity puts people at a greater risk for serious, even fatal, health disorders, particularly coronary heart disease and diabetes,[7] the first and seventh leading causes of death in the US respectively.[8]

Many nutritional professionals believe all Americans, regardless of income, should have access to a nutritious diet of whole grains, lean meats, and fresh vegetables and fruit. In reality, food prices pose a significant barrier for many consumers who are trying to balance good nutrition with affordability.[16] When incomes drop and family budgets shrink, food choices shift toward cheaper but more energy-dense foods. The first items dropped are usually healthier foods—high-quality proteins, whole grains, vegetables, and fruit. Low-cost energy-rich starches, added sugars, and vegetable fats represent the cheapest way to fill hungry stomachs.[17, 18] While the demographics of the three cities in this study would indicate most people have sufficient income and access to a car, there are pockets of the areas that can benefit from improved access to healthy food. This report recommends several solutions through a process called Health Impact Assessment.

Health Impact Assessment, or HIA, is a decision support tool used to provide data to leaders on an issue at hand through a health lens. This HIA provides baseline demographic and health data on the populations of Edgewater, New Smyrna Beach, and Oak Hill, Florida, specifically focusing on access to fresh and healthy food, and options to increase access by repurposing a designated brownfield site and policies to improve food options for residents.

This HIA was funded by the Environmental Protection Agency (EPA) through a Brownfield Assessment Grant awarded to the Southeast Volusia Corridor Improvement Coalition (SVCIC) as part of the public health monitoring function of the grant.

The goals of the HIA are to establish baseline demographic and health data for comparison in long-term monitoring; to determine the degree of need for new healthy food access options, and to make recommendations to SVCIC for increasing options to purchase healthy food. The strategies employed by the study to implement these goals were: an evaluation of the food environment by the Food Trust; a community survey that yielded a description of residents' food habits and barriers to access; and analysis of the current health status and how it might improve if healthier food were available.

A sample of the recommendations include the following:

- Healthy food financing, which is a tool for providing flexible financing to fresh food retailers serving lower-income, underserved areas.
- Healthy corner store program, which assists convenience store owners with training and incentives to carry fresh food.
- Policies and regulations to encourage mobile markets and hand cart sales of fresh fruits and vegetables.
- Expansion of existing food distribution sites and supplying the sites with coolers for transporting and freezers for storing fresh food through work with the Second Harvest Food Bank of Central Florida.
- Healthy food resolution with definitive actions to encourage healthy food.
- Inter-departmental team, working group, or advisory committee on food issues or a food policy council.
- Food access and health goals included in the comprehensive plan or neighborhood plans.

About Health Impact Assessment

According to the National Research Council of the National Academies, HIA is "a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population. HIA provides recommendations on monitoring and managing those effects." HIA identifies impacts on social determinants and health equity through engaging stakeholders and vulnerable populations in the process, and understanding how the potential effects of the policy, plan, program, or project of focus may disproportionately affect vulnerable populations or different population groups.[11] The HIA process requires six specific phases to ensure completeness: screening, scoping, assessment, recommendations, reporting, and evaluation (***Figure 1***). A brief description of each phase is included in ***Table 1***.

Figure 1: Phases of a Health Impact Assessment

Table 1 Description of Health Impact Assessment Phases[11]

HIA Phase	Description
Screening	Assess the utility, value, and feasibility of the HIA
Scoping	Determine potential health effects, draft research questions, identify research methods and existing evidence to be used, conduct stakeholder analysis, and establish the temporal scope of the HIA
Assessment	Provide baseline health conditions and characterize the expected health effects
Recommendations	Identify and prioritize recommendations with stakeholder input
Reporting	Document the process and results, and communicate the HIA to stakeholders and decision-makers
Monitoring and Evaluation	Monitor health determinants and outcomes overtime and conduct process, outcome, and impact evaluations of the HIA

HIA also includes the principles and values of Democracy, Equity, Sustainable Development, Ethical Use of Evidence, and a Comprehensive Approach to Health. This means that HIAs include input from the public. They also consider vulnerable populations, address inequities and determinants of health, examine short and long-term impacts, use a transparent and rigorous evidence-based process, and incorporate factors that affect not only physical health, but also mental and social health and well-being.[11]

The HIA Process

The next section of this report describes the HIA process as it was performed for this project. Each phase of the HIA is described and summarized.

Screening

In the screening phase of this HIA, the SVCIC conducted a meeting in preparation for applying for a Brownfields Assessment grant. Based on input from the community, SVCIC agreed for the need for an HIA to examine access to healthy food along the South Volusia Corridor and recommend policies and plans to redevelop one or more brownfield sites in the partner cities of Edgewater, New Smyrna Beach, and Oak Hill to assess the need for more food options.

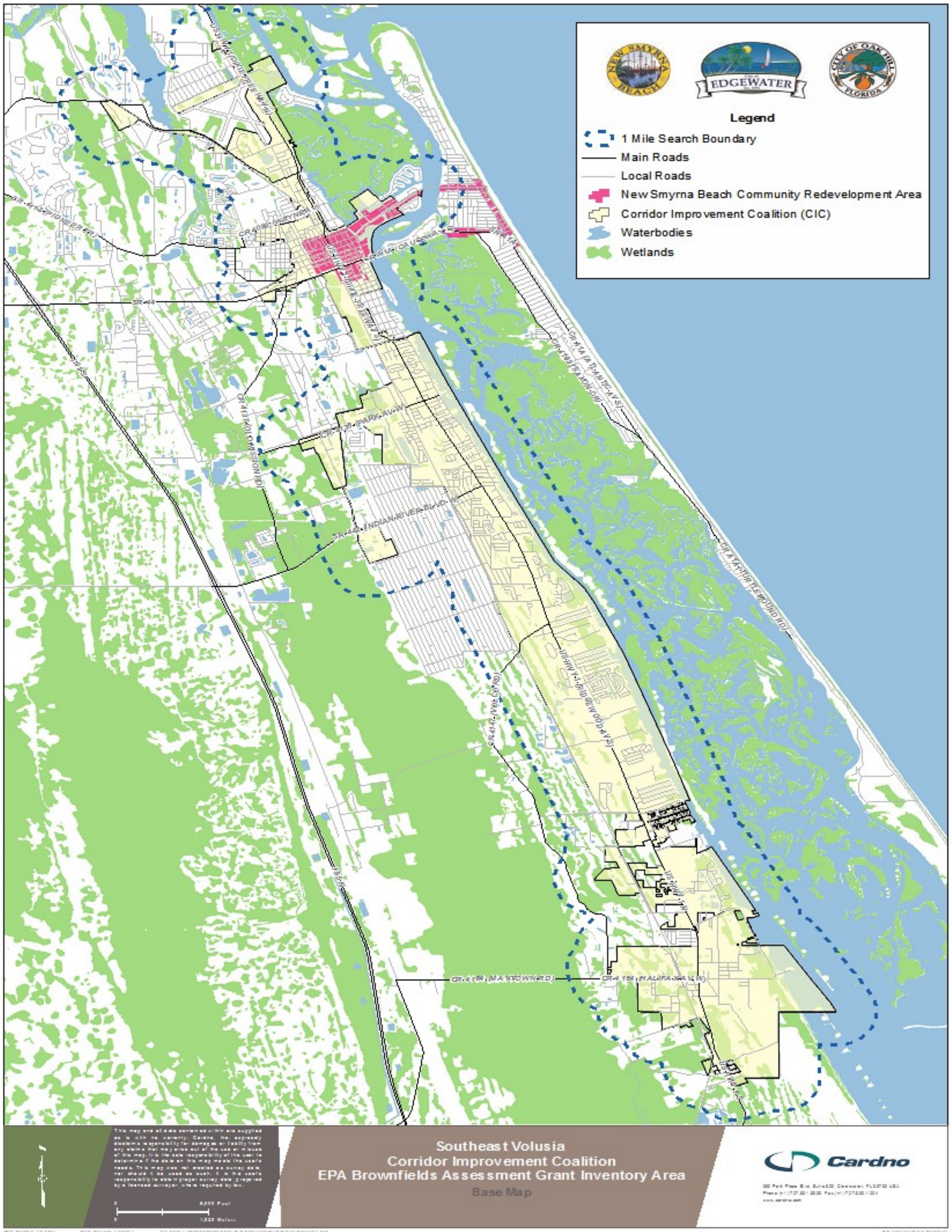
Funding for the HIA was approved by the EPA and a team was assembled to conduct the process.

The team consists of Sandra Whitehead, Lead Consultant to Cardno; the Food Trust; Kenneth Pinnix, PTW; Miles Ballogg, Cardno; and the Coalition Steering Committee. Dr. Whitehead conducted the analysis, provided the framework for the HIA, and worked with the Food Trust to assess the food environment of all three cities. Mr. Pinnix, along with the Coalition Steering Committee, conducted the community engagement and survey. Mr. Ballogg provided project management and oversight.

Scoping

The scope of the HIA was determined via teleconference with the representatives of the Coalition and the HIA team at the April 2016 meeting. At this meeting, the geographic, demographic, and policy boundaries of the HIA were set. The team would work within the confines of the cities of Edgewater, Oak Hill, and New Smyrna Beach along the US 1 corridor as laid out in the SVCIC's application for the Brownfields Assessment Grant. (See Map ***Figure 2***). The questions to be examined are: 1) Is there sufficient access to healthy food in the study area, 2) How does this access (or lack of) influence public health, and 3) Can the HIA recommend a healthy reuse of a brownfield site that improves access to healthy food? The decision makers are the city councils of the cities of Edgewater, Oak Hill, and New Smyrna Beach.

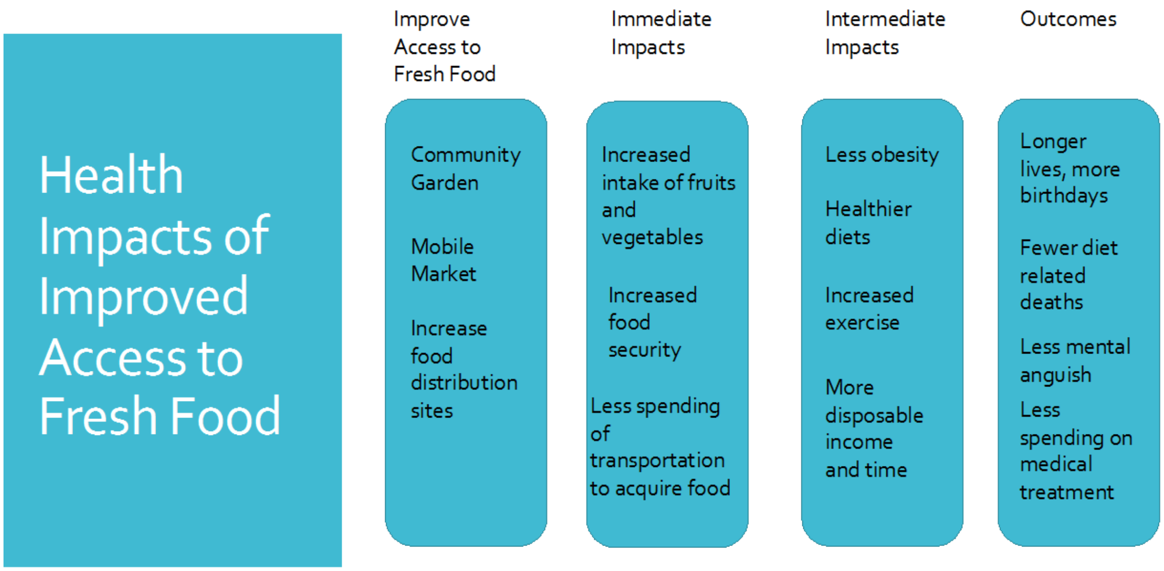
Figure 2, Map of SVCIC area



The populations of interest are the citizens of the three cities described in the Assessment Section. The HIA was conducted between April and August of 2016, which is a short time for a rapid HIA. The timeframe limited community engagement and the time for community surveys to be collected.

Outcomes of interest in the HIA are to increase access to fresh, healthy food and thereby increase the intake of fruits and vegetables, increase food security, and reduce spending on transportation to purchase food. Based on literature, increasing access to fresh food increases intake of fruits and vegetables, which leads to decreased overweight and obesity, fewer diet-related deaths, longer lives, and less spending on health care costs.[13] These relationships are demonstrated in the Pathways Diagram on the next page (***Figure 3***).

Figure 3: Pathways Diagram



The Scoping Phase outlined the geographic area of the HIA, population of interest, and the health outcomes of interest in this study. The geography matches the SVCIC's area identified in their grant application to the EPA, and the population to be addressed are the 45,945 residents of the three cities. The health outcomes of interest were narrowed down by availability of information on a usable scale, regularity with which the indicator is measured by a reliable source, and the ability to connect it to intervention via the literature review.

Assessment

The assessment phase consists of: creating a baseline of health and environmental conditions of the study area; connecting the policy decision to health outcomes; and predicting the magnitude, severity, and distribution of possible health impacts.

Methodologies for the assessment phase of this HIA are:

- Health data gathered for the following zip codes: 32132, 32141, 32168, and 32759
- Health and demographic data for Volusia County and Florida for comparison
- Community surveys to assess baseline food access data
- Food Trust report to examine and define the food environment

Each of these strategies are described in detail below with the data for each.

Baseline Health Data for Volusia County Compared to the State of Florida

In Volusia County, Florida, diet-related disease and lack of access to healthy food are issues for many residents. According to the *Healthy Volusia Report*, 54% of adults in Volusia County are overweight or obese, compared to a state rate of 35.7%. The percentage of residents with high blood cholesterol levels and deaths from stroke and coronary heart disease is also higher in Volusia County than Florida as a whole,[13] however, heart disease is significantly more prevalent in New Smyrna Beach at 45% and one zip code in Edgewater at 30.6% according to the Census Bureau.[12]

Only 15.1% of adults in Volusia County report consuming three or more servings of vegetables daily, compared to 29.1% at the state level.[19] In general, Floridians have a higher prevalence of obesity when compared to other states as documented by several sources, including the Behavioral Risk Factor Surveillance System (BRFSS) and National Health and Nutrition Examination Study (NHANES).[20]

Availability of health data on the proper scale for comparability is often an issue when looking at population health at the city level. Where possible, data is displayed by zip code (zip codes 32132, 32141, 32168 and 32759). When zip code level data was unavailable, numbers for the three cities or Volusia County were used.

Baseline health data was captured from the County Health Roadmaps and Rankings.[12] Because statistically valid health data is not available at the sub-county level, Volusia County data was used and compared to Florida as a whole. On many health outcomes, Volusia County residents fare about the same as Floridians as a whole, but three indicators connected to diet stand out. Over 35% of Floridians are obese or overweight whereas residents of Volusia County have a 54% prevalence. Obesity costs Volusia County tax payers 9.3% more on average in additional hospitalization charges for obese Type 2 diabetics than non-obese Type 2 diabetics.[12] Diabetes is also often accompanied by several other chronic conditions such as: asthma, cardio-pulmonary disease, and hypertension. Volusia County hospitalization data reveal the county and sub-county cost of Type 2 diabetes to the Volusia County taxpaying community. In total, patients with Type 2 diabetes who were obese accrued $102,649,333 in charges.[14] On average, in 2012, obese Type 2 diabetes patients cost $3,747.62 more per visit than non-obese Type 2 diabetes patients.[14]

Volusia County adults are at greater risk for obesity-related chronic disease. They are more than two times the Healthy People 2020 recommended obesity target and 1.5 times greater than the U.S. obesity rate.[12]

The percentage of Volusia County residents who have high total blood cholesterol levels, stroke deaths, and coronary heart disease deaths (38.7%, 33.6%, 104.9%, respectively) are higher than for Florida residents (40.1%, 31.3%, 100.0%, respectively).[14] Volusia County adults exceeded the HP 2020 targets for high total blood cholesterol levels and stroke deaths, 13.5% and 33.85 respectively.[14] Additionally, the age-adjusted death rate due to heart failure, per

100,000 in Volusia County more than doubles the state rate.[10] Table 2 below shows some data for Volusia County and the state of Florida.

Table 2 Baseline Health Data:[12]

	Volusia County	Florida
Obese or Overweight	54%	35.7%
Adults consuming 3+ vegetables daily	15.10%	29.1%
Poor physical health days	16%	18%
Poor mental health days	4%	3.90%
Low birth weight babies	8%	9%
Physical inactivity	26%	20%

Even though 15% of Volusia County residents report consuming three or more servings of vegetables daily, in the Community Survey more than 25% of respondents report consuming vegetables four to six times per week which could be an indicator of a better-than-average diet. However, the number of persons in Volusia County who reported being physically inactive was 6% higher than the state average of 20%. Combined with the obese and overweight numbers, physical inactivity increases residents' probability of becoming obese or overweight.

Baseline Demographic Data

Baseline demographic data was gathered using the American Communities five-year estimates located via the world wide web[15], shown here in ***Table 3***.

Table 3 Baseline Demographic Data:

	Oak Hill	Edgewater	New Smyrna Beach	Florida
Population	1,787	20,938	23,938	19,100,000
Median Household Income	$44,411	$43,735	$48,189	$46,036
Median Age	51.3	47.5	55.7	41.5

The three cities are more similar to each other demographically and economically than to Florida as a whole. Oak Hill is by far the smallest in terms of population, and New Smyrna Beach has the highest median income at $48,189 (slightly above the state median of $46,036). The population of all three cities is older than the state median age by at least six years. Additional similarities include:

- The majority of residents identify as white
- Most housing units are owner-occupied with average values varying from $225,000 in New Smyrna Beach to $175,000 in Oak Hill to $125,000 in Edgewater
- The largest share of households has two cars and drives alone to work;
- Poverty is lower than the national average of 15.5% except in Oak Hill which is slightly higher at 15.8% (Edgewater 12.6%) (New Smyrna Beach14.1%)

The Community Survey: Appendix A

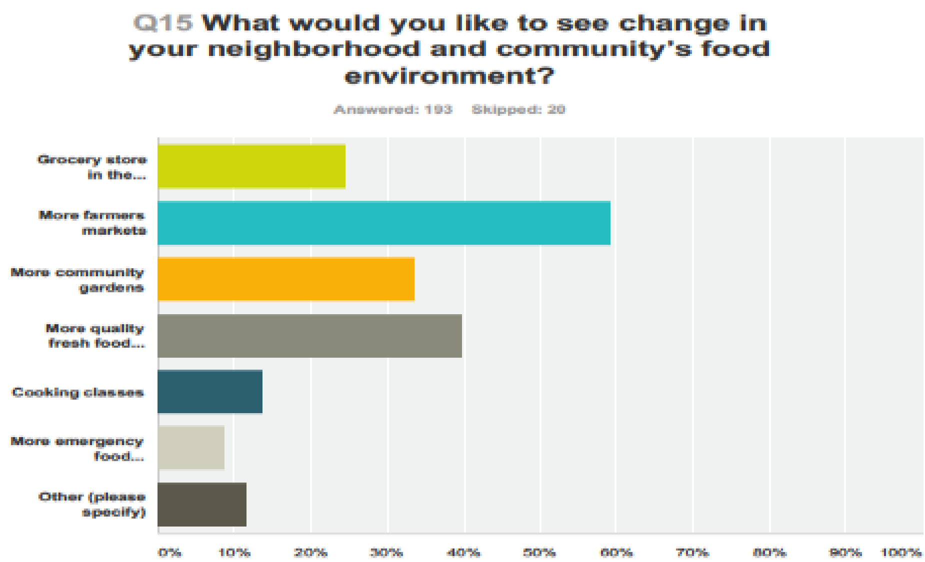
As part of the assessment process, a community survey was distributed both via paper and online. More than 200 residents from all three municipalities responded, with the most respondents from Edgewater. The respondents were representative of the three cities in terms of their age, income, and ethnicity. The surveys were handed out at the following meetings:

- April 19, 2016 – Health Fair sponsored by City of New Smyrna Beach from 9:30 am to1:30 pm held at the Alonzo James Community Center
- April 20, 2016 – Environmental Justice Workshop sponsored by the City of New Smyrna Beach from 9:00 am to1:00 pm at the Alonzo James Community Center
- June 21, 2016 – Health Department Town Hall Meeting in New Smyrna Beach at the Alonzo James Community Center from 6 to 8 pm

All other surveys were completed online by residents responding to emails from coalition members or physically distributed at other community gatherings or meetings.

In the surveys, the most respondents reported going to the grocery store one to three times a week. While this might be a burden in other communities, in all three cities, residents own, on average, two cars. Over 50% stated that, in addition to the grocery store, they purchase food at a farmer’s market. Only 14% said they purchased food at a convenience store. When asked what change they would like to see in their neighborhood and community’s food environment, 59% said a farmer’s market; 39% said more quality fresh food vendors, and 32% said more community gardens. These answers are shown in ***Figure 4*** Question 15 From the Community Survey below.

Figure 4: Question 15 from the Community Survey



More than 60% of respondents said that cost was the major barrier to getting the kinds of foods they want and need. Over 90% stated that they shop at a grocery store in the area. This would lend credence to the theory that the issue in the area is not *physical* access to fresh food, but the affordability of the food being offered in the local grocery stores. This was a major consideration when recommendations were proposed.

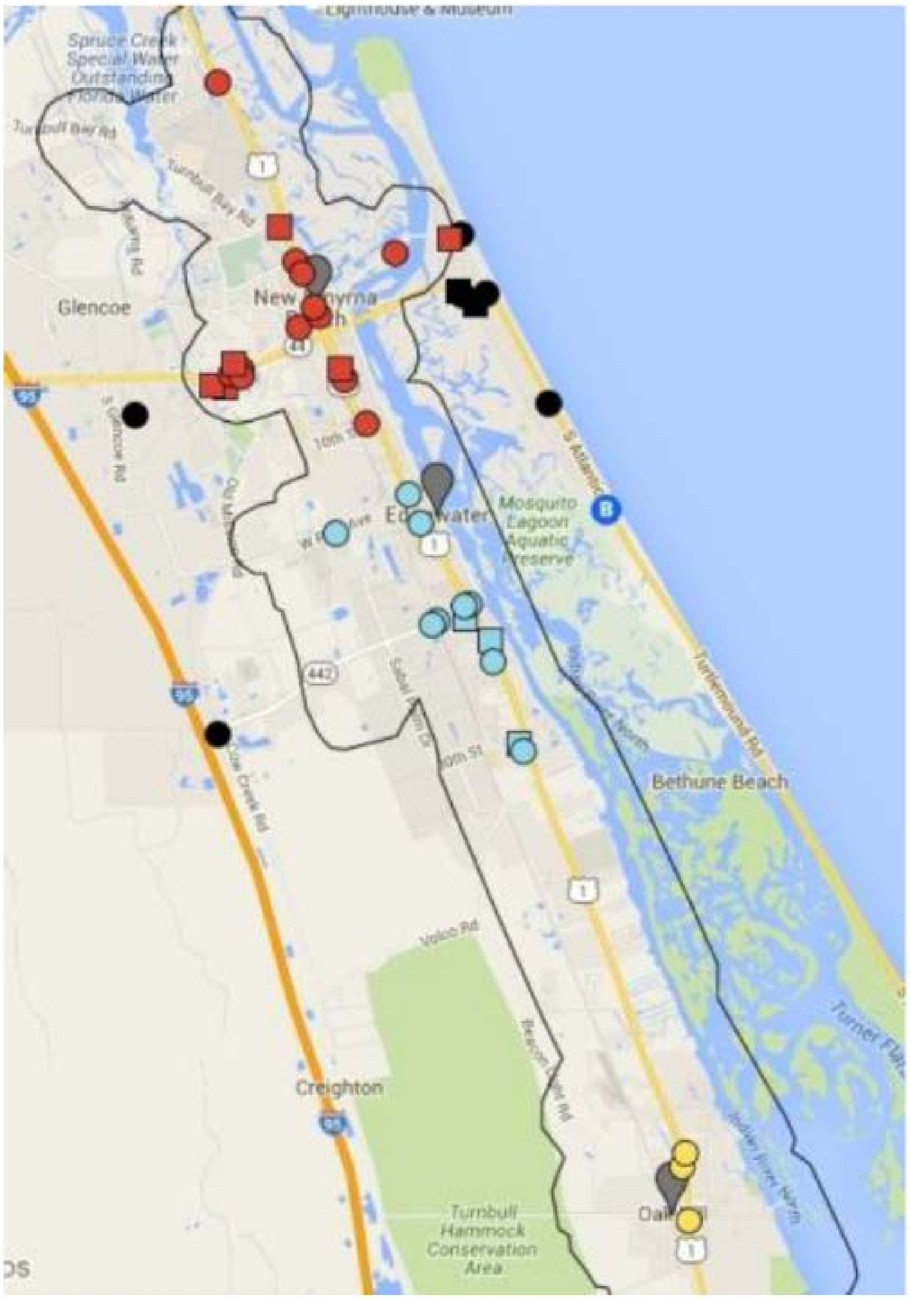
The Food Trust Report: Appendix B

As part of the assessment, Food Trust examined the food retail landscape across the three cities to identify unique challenges and opportunities as well as interventions that may improve access to residents these areas. Across the three cities, residents appear to be primarily middle income, with more affluent areas along the eastern coast in New Smyrna Beach and Edgewater. The lowest-income block groups are located in one concentrated area of New Smyrna Beach and in Oak Hill; these areas are clearly underserved by food retail. While there are relatively high levels of car ownership in this region, for lower and medium income residents without access to a car, the local public transit system, Votran, provides limited transportation options. Transportation was listed as a key barrier to accessing healthy food in stakeholder interviews for all three cities. The following map in ***Figure 5*** shows the locations of all convenience stores and supermarkets in the three cities.

Figure 5: Convenience Store and Supermarkets in all Three Cities

Key: Red = New Smyrna Beach, Blue = Edgewater, Yellow = Oak Hill

Squares = supermarkets, Circles = convenience stores



This map demonstrates that most of the population of the three coalition cities lives near a store. According to the Food Trust report, only one convenience store sells fresh food and one section of Oak Hill is 8.2 miles away from the nearest grocery store, a Publix. In addition to the cost of food, the cost of transportation to the store may also be a barrier in parts of the community.

New Smyrna Beach is relatively well-served by fresh food retail, with four full-service supermarkets in the city: Two Publix, a Winn-Dixie, and a Walmart Supercenter. There is also a produce market, Perrine's, in northern New Smyrna Beach and a Save-A-Lot on US 1 that recently opened. However, several block groups in New Smyrna Beach are moderate income and somewhat underserved by fresh food retail.

Block group #121270829031, located just northwest of the intersection of Lytle Ave and US 1, is about 0.8 miles north of the new Save-A-Lot. That block group also has the largest non-White population in the study area, a relatively high population density and rate of diabetes, and a lower rate of vehicle ownership compared to the rest of the city, state, and country. A nearby block group south of Lytle Ave, #12170829021, is also moderate income and highly underserved (some residents must travel two to three miles to the nearest supermarket). Of the entire study area, the starkest income disparities appear in New Smyrna Beach, where incomes are high along the east coast and lower directly to the west, across US 1 and the railroad tracks. The Save-A-Lot mentioned above just opened in March 2016 on US 1, south of route 44. Save-A-Lot is a limited assortment discount supermarket, but most Save-A-Lots now have full produce departments and other healthy and affordable offerings. This store will likely serve the lower income residents of Edgewater and Oak Hill who have, until recently, been underserved.

Edgewater is similar in size to New Smyrna Beach, but has two major supermarkets: Publix and Winn Dixie. There are no low-income census tracts in Edgewater, but tract #12127083008, along route US 1, is distressed according to the federal New Markets Tax Credit and Community Reinvestment Act programs. This census tract is, however, located 1.9 miles south of the new Save-A-Lot and 1.6 miles north of Winn-Dixie. One block within this census tract (block group #121270830081) also has a relatively low rate of vehicle ownership, so residents may benefit from alternate ways to get to the grocery store, such as a sponsored vanpool or jitney to take residents to the store.

Oak Hill has no full-service supermarkets. The closest supermarket is the Publix in Edgewater, which is up to 8.2 miles away from some Oak Hill residents. There are only three food retail stores within the city: Dollar General (which does not sell perishable items), Sunoco Gas Station, and Scragg's Grove & Gift Shop, north of the Dollar General on US 1. Scragg's has a sizable selection of fresh fruits and vegetables and accepts Electronic Benefit Transfer (EBT) cards. There is a flea market that occasionally sells limited food on the weekends. Additionally, there are two food banks in Oak Hill, which may be the only source of fresh food for some residents.

In addition to its smaller population, Oak Hill's wastewater treatment system's limitations are a major barrier for new businesses. Commercial and residential structures receive their water supply from individual wells and sanitary sewer service is limited along US 1. The closest sewer lines are seven miles away, according to stakeholders. There are, however, public rights of way in zip code 32132 that could be used to extend the sewer lines to the area of Florida Shores, which has the density to support it. Based on the community surveys, many people from Oak Hill travel to Edgewater for grocery shopping because of the lack of a full service supermarket in the areas of highest density in Oak Hill.

Recommendations of the Food Trust Report

The Food Trust made several recommendations based on their findings:

- Healthy food financing is a tool for providing flexible financing to fresh food retailers serving lower-income, underserved areas. Through this model, loans and grants are available to both new and existing stores and can assist with store upgrades and renovations. In the case of the underserved pockets mentioned above, there may not be the market and population to support the development of a new, large full-service supermarket. Financing for a new small-scale supermarket, the renovation/expansion of existing stores, or alternative models such as mobile markets or farmers' markets may help residents access food in the areas that were identified as underserved, such as Oak Hill or the pockets on the west side of the railroad tracks in New Smyrna Beach.
- Healthy Corner Store: These programs help convenience store owners introduce a wider variety of healthy food, and they often include incentives (such as equipment), store owner training, and support with distribution. There are numerous convenience stores throughout New Smyrna Beach and Edgewater, including four Kangaroo Express stores and two Circle K stores that would qualify for this program.

In reviewing the demographic and geographic conditions that affect food access in this area along US Highway 1, the following health impacts were considered: number of overweight and obese residents, number of diet related deaths, and a reduction in stress due to food insecurity. The predicted impacts are discussed in the next section.

Likelihood, Direction and Severity of Health Impacts

Based on the pathways diagram and the methods used for the HIA, the likelihood, direction and severity of health impacts predicted are shown in ***Table 4*** below.

Table 4: Likelihood, Direction, and Severity of Health Impacts

Health Impact	Likelihood	Direction	Severity
Overweight	Very likely	Positive	Not severe
Obesity	Very likely	Positive	Not severe
Diet related deaths	Somewhat likely	Positive	Not severe
Less stress	Somewhat likely	Positive	Not severe

Providing several alternatives to access fresh food in the three cities will positively influence all health outcomes for residents. Any one intervention by itself will not have high impact, but the adoption and integration of several of the recommendations over time will positively affect the health of the entire area, reducing overweight and obesity and diet related deaths as well as providing relief of stress for residents who have to travel long distances (more than 2 miles) to an access point. Reducing these factors will, over time, increase life expectancy, create a healthier community and improve overall quality of life.

Recommendations

The recommendations for this HIA are in three parts: 1) immediate actions that can be taken at little to no cost; 2) policies and programs to institutionalize access to healthy food into each city's business practices; and 3) long-term actions to consider.

Immediate Actions:

- Further engage the communities to solicit public input and buy in for the kinds of healthy food access interventions the public will support
- Pass a healthy food resolution that shows intent to address this issue and can be used as a springboard for future action planning
- Create an inter-departmental team, working group, or advisory committee to address food-related policies and create a work plan
- Work with Florida Food Policy Council (https://flfpcdotorg.wordpress.com/) or establish a local council to make possible the resilient, sustainable local community food shed that lead to food security
- Pass a resolution to identify grocery retail as an economic development strategy in the high-need zip codes
- Facilitate the use of vacant public and private land for community gardens
- Work with the School Board and the University of Florida Institute for Food and Agricultural Sciences to create school gardens year round

Policies and Programs that Institutionalize Access to Healthy Foods:

- Include food access criteria (e.g. proximity to food retail) in development checklists and zoning codes, transportation project prioritization
- Include food access and health goals into the comprehensive plan or neighborhood plans
- Ensure small-scale healthy food retail has an appropriate zone and definition
- Designate grocery stores or food retail as an allowable activity in all/most zoning categories
- Allow or reduce barriers for mobile produce markets/roadside carts
- Define or clarify community garden land use on public and private lands through passing a policy, resolution, or ordinance
- Encourage community gardens in the design of public and private multi-family units (new and existing)
- Define or clarify urban agricultural land uses and activities
- Allow food production in residential areas without restricting to designated community gardens

Longer-Term Policies and Actions:

- Healthy food financing through grants and incentives
- Healthy corner store program
- Facilitate small retailer knowledge of financing for healthy food options
- Expand existing food distribution sites and supply the sites with coolers for transporting and freezers for storing fresh food, working with the Second Harvest Food Bank of Central Florida
- Mobile markets that would go to the high need census blocks
- Offer density bonuses for new grocery retail in economic development policies
- Assess suitable lands for community gardens including public parks and vacant land and identify groups who want to use each parcel
- Establish or support a community garden program with city funding
- Provide design guidelines and incentives to developers who allocate space for food production and food enterprise
- Partner with community land trusts and land banks to further identify opportunities to create access to fresh food
- Work with Votran to consider transit accessibility to stores, based on routes and time of day
- Establish a walkability standard for access to retailers of fresh produce in land use regulations for permitting new retail
- Work with grocers, paratransit, or senior centers to establish a supermarket shuttle

Community Gardens and Urban Agriculture

Cities are increasingly recognizing that urban food production can help provide food security for their residents, reduce greenhouse gas emissions, and help meet their goals to become sustainable cities. Some communities use the phrase urban agriculture as an umbrella term to encompass a wide range of activities—including community gardens—involving raising, cultivating, processing, marketing, and distributing food in urban areas. Communities may create separate definitions for urban farms and community gardens and regulate them separately. For example, they may allow community gardens in certain areas, such as residential districts, where they would not permit an urban farm. Community members and planners should work together at the local level to customize this model to fit local needs.

There are a number of ways to fund community gardens. Examples and guides for implementing these strategies are listed in the Resources section of this report. In the Community Surveys, residents specifically named farmer's markets as what they would like to see change in their neighborhood to increase food access. Their second choice for direct intervention was more community gardens. Two brownfield sites were assessed for suitability for these uses. The first is in New Smyrna Beach, located at 551 and 553 Julia Street. Cardno performed a phase one assessment of the land and no known contamination was found. It is an unimproved lot in a neighborhood with ease of walkability and would be large enough to house a farmer's market or community garden. Soil tests would be needed to confirm the specific site is safe.

The second site suggested by Cardno is on Flamingo Road in the City of Oak Hill. It is owned by the City and currently zoned residential, which is a possible barrier to a farmer's market, but could be an appropriate site for a community garden. Other sites that could be considered for community gardens in Oak Hill (which is the only city with a census tract more than five miles from a grocery store) would be schools and public parks.

Reporting

The initial reporting of results of the HIA was a presentation by the HIA consultant to the SVCIC September 13, 2016 in the form of a verbal report and submission of a PowerPoint presentation at the September 20, 2016 full coalition meeting. This report will also serve as a form of reporting and was submitted September 30, 2016.

Evaluation and Monitoring

There are two kinds of evaluation: process and outcome. The process evaluation consists of measuring the effectiveness and efficiency of the HIA process. Outcome evaluation consists of monitoring health data and trends over time to see if the predicted changes in population occur based on the recommendations adopted.

Process evaluation, in this case, consists of the following:

Community participation and engagement

- Number of surveys as a percentage of total population: 200/45,945 = .4% (good = 25%)
- Number of community meetings where the HIA was discussed: 7
- Number of public comments received to date on the HIA: 2

Participation by leaders/decision makers

- Consistent attendance by leaders at HIA meetings: yes
- Input on HIA products and reports given: yes
- Recommendations adopted: TBD
- Post-HIA survey of decision makers: TBD

Overall, the HIA process could have benefitted from wider community participation and involvement. However, limitations on funding and time (five months to conduct the entire HIA) abridged the team's reach to community members. Additional insight would also have benefitted the lead HIA consultant if travel funding was included in the contract. Future HIA work in this area should include a travel budget and a longer timeframe to hold broader community meetings and present interim HIA findings to receive input.

Outcome evaluation will be revisited by SVCIC in conjunction with the Health Department, should funding become available. Monitoring will be conducted as funding is available to see if the interventions chosen are effective.

Citations

[1] “Access to Affordable and Nutritious Food: Measuring and Understanding Food Deserts and Their Consequences.” United States Department of Agriculture Economic Research Service. 2009. Retrieved 3/15/2013 from http://www.ers.usda.gov/media/242675/ap036_1_.pdf

[2] Walsh, Bryan. “It’s Not Just Genetics.” Time. June 12, 2008. http://www.time.com/time/magazine/article/0,9171,1813984,00.html (3/05/11)

[3] Morland, K., Wing, S., et al. “Neighborhood characteristics associated with the location of food stores and food service places.” American Journal of Preventive Medicine. January 2002, vol. 22(1): p. 23-29 http://www.ncbi.nlm.nih.gov/pubmed/11777675 (3/05/11)

[4] Bullard, Robert D. (editor). Growing Smarter: Achieving Livable Communities, Environmental Justice, and Regional Equity. The MIT Press. 2007. p. 173. ttp://books.google.com/books?id=NAcmSchlTOYC&pg=PA173&lpg=PA173&dq=It+has+been+shown+that+… (3/05/11)

[5] Walsh, Bryan. “It’s Not Just Genetics.” Time. June 12, 2008. http://www.time.com/time/magazine/article/0,9171,1813984,00.html (3/05/11)

[6] Gallagher, Mari. “Examining the Impact of Food Deserts on Public Health in Chicago.” Study commissioned by LaSalle Bank. 2006. http://www.marigallagher.com/site_media/dynamic/project_files/1_ChicagoFoodDesertReport-Full_.pdf (9/05/16)

[7] “NHANES data on the Prevalence of Overweight Among Children and Adolescents: United States, 2003–2006.” CDC National Center for Health Statistics. 2010. http://www.cdc.gov/nchs/data/hestat/obesity_child_09_10/obesity_child_09_10.htm (9/05/16)

[8] “Deaths and Mortality.” Centers for Disease Control and Prevention. 2011.http://www.cdc.gov/nchs/fastats/deaths.htm (9/05/16)

[9] “Type 2 diabetes: Causes.” Mayo Clinic. 2011. http://www.mayoclinic.com/health/type-2-diabetes/DS00585/DSECTION=causes (9/05/16)

[10] Volusia County Community Health Assessment, 2013.

[11] Minimum Elements and North American Practice Standards of HIA. Bhatia, Farhang, Heller, Lee, Orenstein, Richardon, & Wernham, 2014.

[12] County Health Roadmaps and Rankings, University of Wisconsin, http://www.countyhealthrankings.org/app/florida/2016/rankings/volusia/county/outcomes/overall/snapshot (9/15/2016)

[13] Florida Department of Health, Volusia County. “Overweight and Obesity in Volusia County.” Healthy Volusia 1.3, 2014.

[14] Florida Agency for Health Care Administration, Hospital Dataset, 2012.

[15] American Communities Survey, five year estimated data. (https://datausa.io/profile/geo) (9/15/2016)

[16] Drewnowski, A., & Eichelsdoerfer, P. (2010). Can Low-Income Americans Afford a Healthy Diet? *Nutrition Today*, *44*(6), 246–249. http://doi.org/10.1097/NT.0b013e3181c29f79

[17] Darmon N, Briend A, Drewnowski A. Energy-dense diets are associated with lower diet costs: a community study of French adults. Public Health Nutrition.2004;7:21–27.

[18] Andrieu E, Darmon N, Drewnowski A. Low cost diets: more energy, fewer nutrients. Eur J Clin Nutr. 2006;60:434–6.

[19] Ver Ploeg, M, et al. “Access to Affordable and Nutritious Food: Updated Estimates of Distance to Supermarkets Using 2010 Data.” Economic Research Report No. (ERR-143) 54 pp, 2012.

[20] Bell J., Mora, G., Hagan E., et al. (2013) Access to Healthy Food and Why It Matters. Oakland (CA): PolicyLink and The Food Trust.

Resources

Alexandria’s Green Food Resolution: http://eatbettermovemore.org/SA/policies/pdftext/201004211410100.AlexandriaGreenFoodResolution.pdf (8/25/2016)

Model Healthy Food System Resolution, ChangeLab Solutions, http://www.changelabsolutions.org/publications/food-system-resolution (8/14/2016)

Model general plan language for improving healthy food access, reducing the availability of less healthy food, improving walkability and bikeability, parks and open space, and public transportation to food sources can be found in *General Plans and Zoning: A Toolkit for Building Health, Vibrant Communities, development and redevelopment.* Retrieved from: http://www.phlpnet.org/sites/phlpnet.org/files/EcDevToolkit.pdf (8/14/2016)

Community Gardens on Vacant Public and Private Land: The City of Escondido, California, has an “Adopt-a-Lot” policy allowing community gardens to be operated as an interim use on both publicly and privately owned vacant land. A city employee works with landowners and the community to develop an agreement for the conditions and tenure of use of the land as a garden. http://www.escondido.org/community-gardens-program.aspx (9/1/2016)

How to Create Healthy Stores in your community: http://www.changelabsolutions.org/news/new-tools-library-create-healthy-stores-your-community (8/14/2016)

Getting to Grocery: Tools for Attracting Healthy Food Retail to Underserved Neighborhoods http://www.changelabsolutions.org/publications/getting-grocery (8/14/2016)

Health on the Shelf: A Guide to Healthy Small Food Retailer Certification Programs http://www.changelabsolutions.org/publications/health-on-the-shelf (8/14/2016)

The City of Los Angeles launched a package of economic incentives for healthy food retail projects: file:///Users/sandrawhitehead/Documents/Los%20Angeles%20Healthy%20Foods%20Incentive%20Memo_PHLP.pdf (9/1/2016)

American Community Gardening Association – "Starting a Community Garden" https://communitygarden.org/resources/ (9/1/2016). Produced by the American Community Gardening Association, this guide presents similar information to the guide from the University of California Cooperative Extension, but provides more information on managing community gardens, including sample application form questions and sample garden guidelines and rules.

Establishing Land Use Protections for Community Gardens, Public Health Law and Policy, 2009. http://www.michigan.gov/documents/mdch/communitygardenpolicies_303374_7.pdf (9/1/2016)

Community Garden Barriers, UF IFAS, http://ufdc.ufl.edu/UFE0043032/00001 (9/1/2016)

Appendix A:

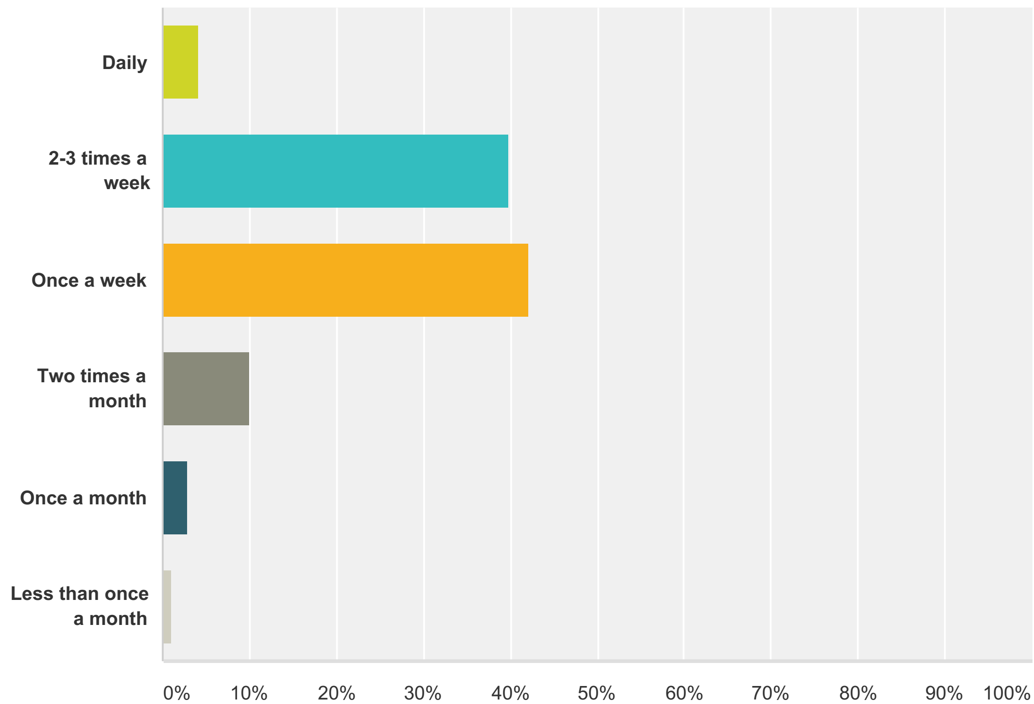
The Community Survey

Q1 Where do you go to buy most of your groceries?

Answered: 210 Skipped: 3

Q2 How often do you go food shopping?

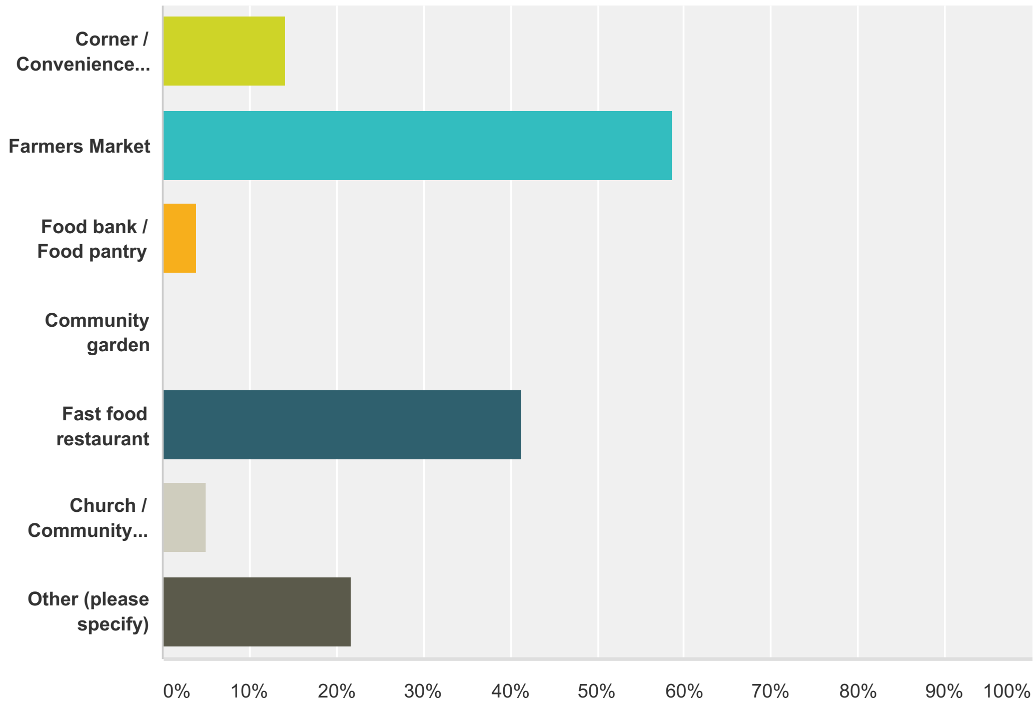
Answered: 211 Skipped: 2



Answer Choices	Responses	
Daily	**4.27%**	9
2-3 times a week	**39.81%**	84
Once a week	**42.18%**	89
Two times a month	**9.95%**	21
Once a month	**2.84%**	6
Less than once a month	**0.95%**	2
Total		**211**

Q3 Besides grocery stores, where else do you get food?

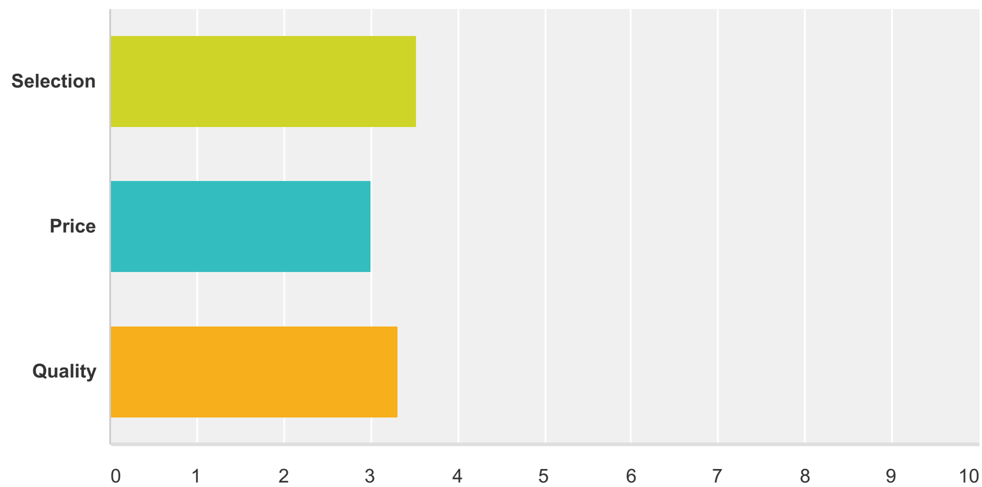
Answered: 198 Skipped: 15



Answer Choices	Responses	
Corner / Convenience store	**14.14%**	28
Farmers Market	**58.59%**	116
Food bank / Food pantry	**4.04%**	8
Community garden	**0.00%**	0
Fast food restaurant	**41.41%**	82
Church / Community organization	**5.05%**	10
Other (please specify)	**21.72%**	43
Total Respondents: 198		

Q4 At the store where you normally buy food, how would you rate the fruits and vegetables in terms of:

Answered: 197 Skipped: 16



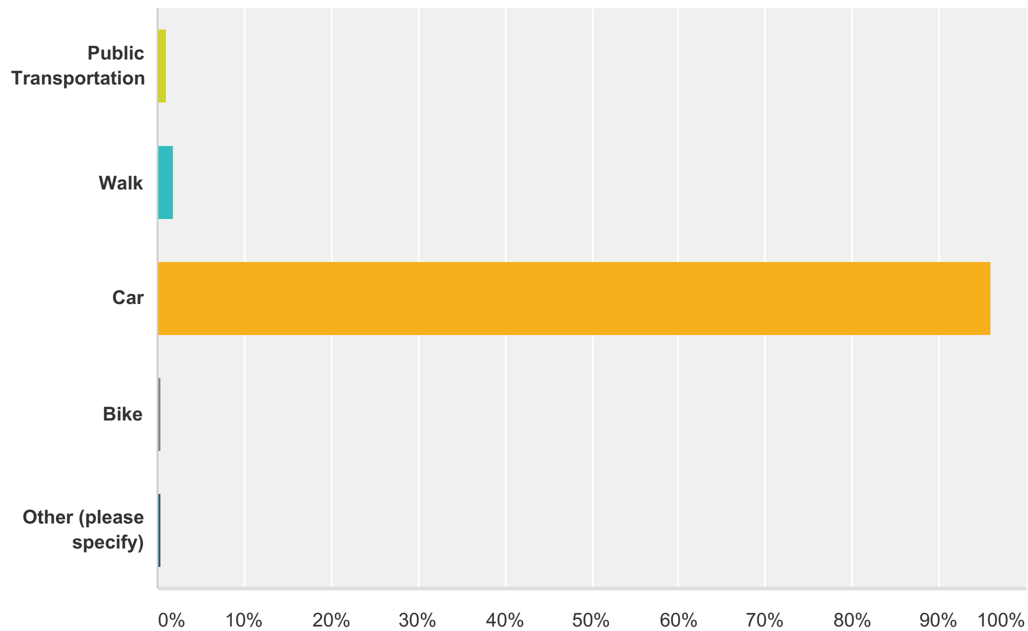
	Much worse	A little worse	About the same	A little better	Much better	Total	Weighted Average
Selection	**0.00%** 0	**12.76%** 25	**42.35%** 83	**24.49%** 48	**20.41%** 40	196	3.53
Price	**5.21%** 10	**27.60%** 53	**38.02%** 73	**20.31%** 39	**8.85%** 17	192	3.00
Quality	**3.14%** 6	**14.66%** 28	**43.98%** 84	**23.04%** 44	**15.18%** 29	191	3.32

Q5 How far do you travel to get to your regular full-service grocery store?

Answered: 204 Skipped: 9

Q6 How do you travel to locations where you purchase/receive food?

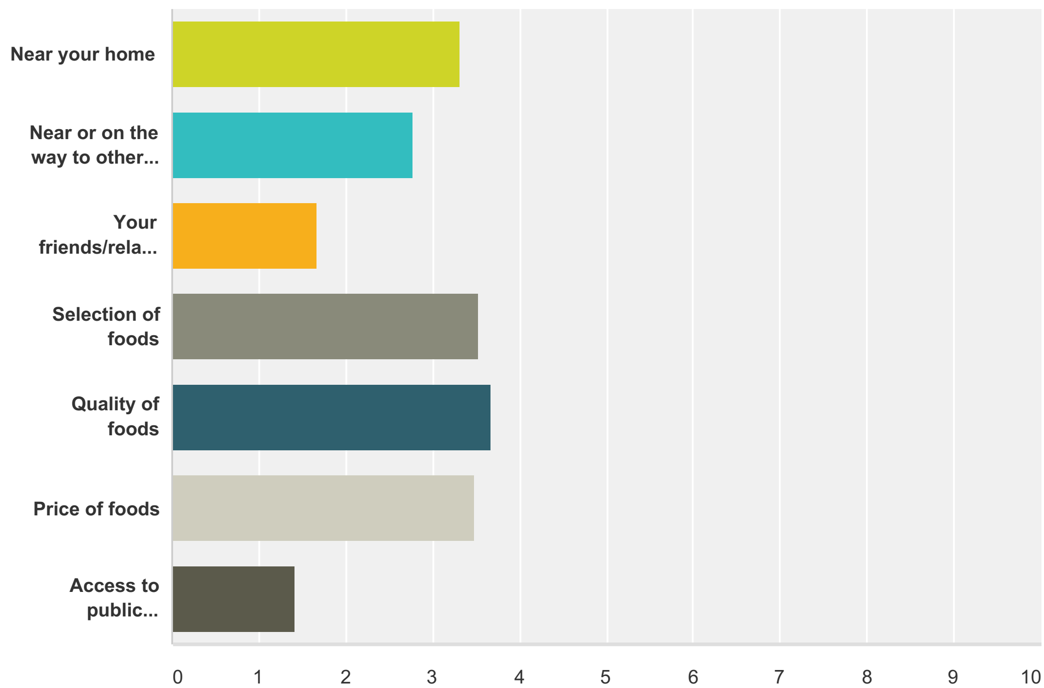
Answered: 205 Skipped: 8



Answer Choices	Responses	
Public Transportation	**0.98%**	2
Walk	**1.95%**	4
Car	**96.10%**	197
Bike	**0.49%**	1
Other (please specify)	**0.49%**	1
Total		**205**

Q7 How important are each of the following factors in your decision to shop at the store where you buy most of your food?

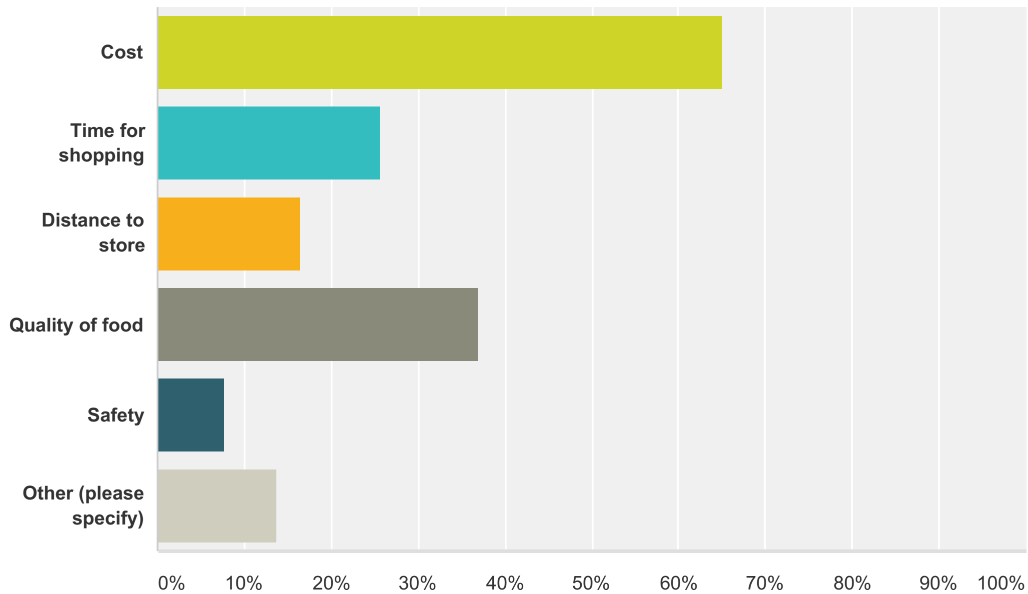
Answered: 205 Skipped: 8



	Not at all	A little	Somewhat	Very	Total	Weighted Average
Near your home	**3.92%** 8	**9.80%** 20	**37.25%** 76	**49.02%** 100	204	3.31
Near or on the way to other places where you spend time	**17.50%** 35	**19.50%** 39	**31.50%** 63	**31.50%** 63	200	2.77
Your friends/relatives shop at this store	**66.00%** 132	**13.00%** 26	**10.50%** 21	**10.50%** 21	200	1.66
Selection of foods	**2.02%** 4	**5.05%** 10	**31.31%** 62	**61.62%** 122	198	3.53
Quality of foods	**1.00%** 2	**4.00%** 8	**22.00%** 44	**73.00%** 146	200	3.67
Price of foods	**1.99%** 4	**6.47%** 13	**32.84%** 66	**58.71%** 118	201	3.48
Access to public transportation	**80.90%** 161	**5.03%** 10	**4.52%** 9	**9.55%** 19	199	1.43

Q8 What are the main barriers with getting the foods you need/want (select all that apply)?

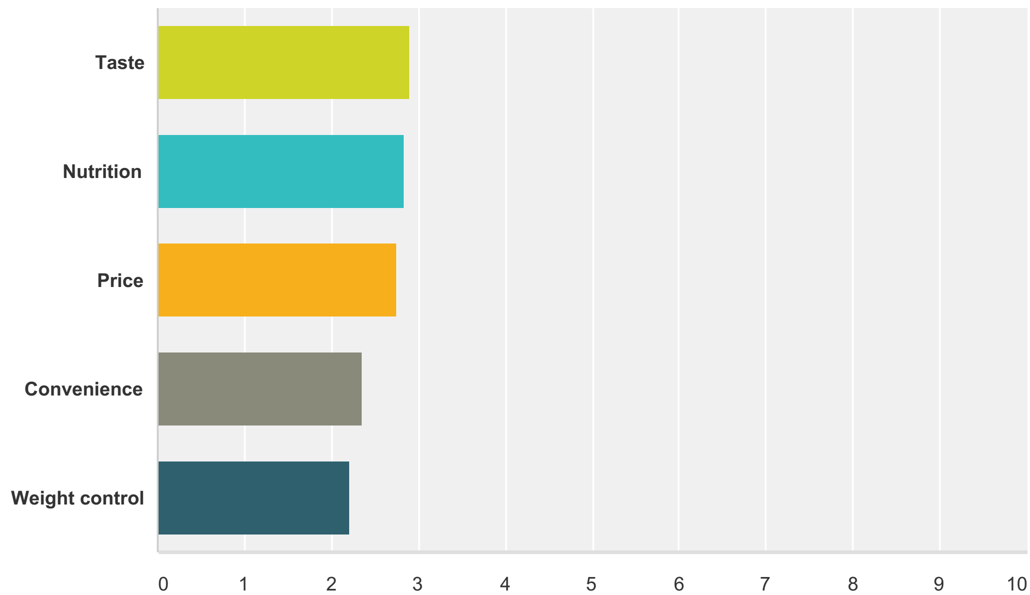
Answered: 195 Skipped: 18



Answer Choices	Responses	
Cost	**65.13%**	127
Time for shopping	**25.64%**	50
Distance to store	**16.41%**	32
Quality of food	**36.92%**	72
Safety	**7.69%**	15
Other (please specify)	**13.85%**	27
Total Respondents: 195		

Q9 When you shop for food, how important is...

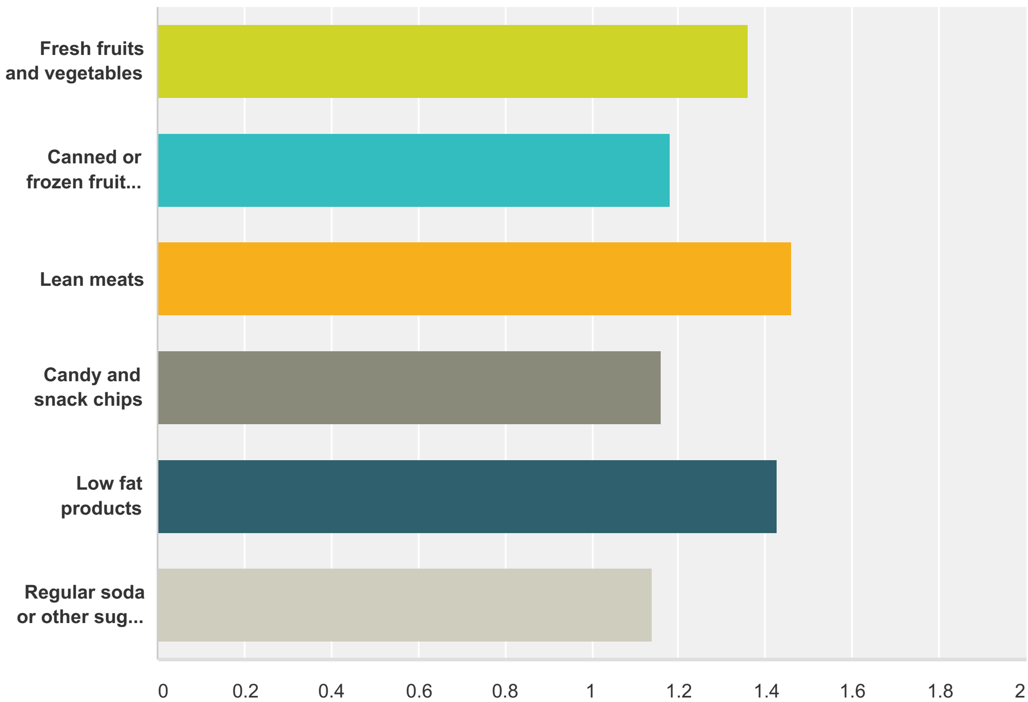
Answered: 206 Skipped: 7



	Not at all important	Somewhat important	Very important	Total	Weighted Average
Taste	**0.00%** 0	**10.34%** 21	**89.66%** 182	203	2.90
Nutrition	**0.49%** 1	**16.18%** 33	**83.33%** 170	204	2.83
Price	**0.50%** 1	**23.27%** 47	**76.24%** 154	202	2.76
Convenience	**5.88%** 12	**52.45%** 107	**41.67%** 85	204	2.36
Weight control	**13.79%** 28	**51.72%** 105	**34.48%** 70	203	2.21

Q10 At the store where you buy most of your food, how hard is it to get each of these types of food?

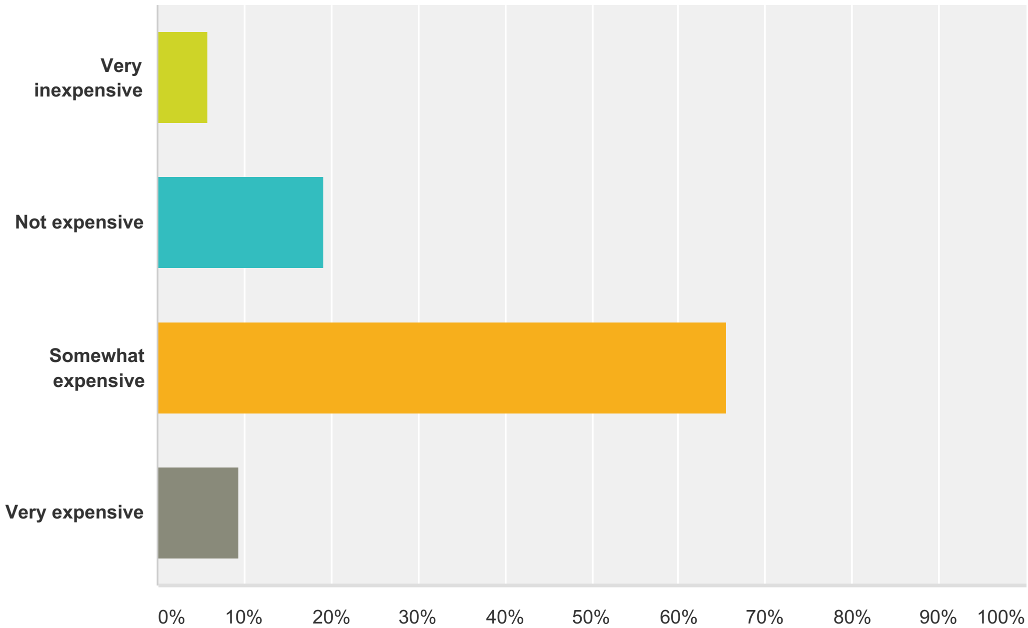
Answered: 206 Skipped: 7



	Very easy	Somewhat easy	Somewhat hard	Very hard	Total	Weighted Average
Fresh fruits and vegetables	**71.36%** 147	**20.87%** 43	**7.77%** 16	**0.00%** 0	206	1.36
Canned or frozen fruits or vegetables	**85.37%** 175	**13.17%** 27	**0.00%** 0	**1.46%** 3	205	1.18
Lean meats	**64.68%** 130	**25.37%** 51	**9.45%** 19	**0.50%** 1	201	1.46
Candy and snack chips	**86.73%** 170	**11.73%** 23	**0.00%** 0	**1.53%** 3	196	1.16
Low fat products	**66.67%** 132	**24.24%** 48	**8.08%** 16	**1.01%** 2	198	1.43
Regular soda or other sugary drinks (sports drinks, juice drinks, etc.)	**88.83%** 175	**9.64%** 19	**0.00%** 0	**1.52%** 3	197	1.14

Q11 At the store where you buy most of your food, how would you rate the price of fresh fruits and vegetables?

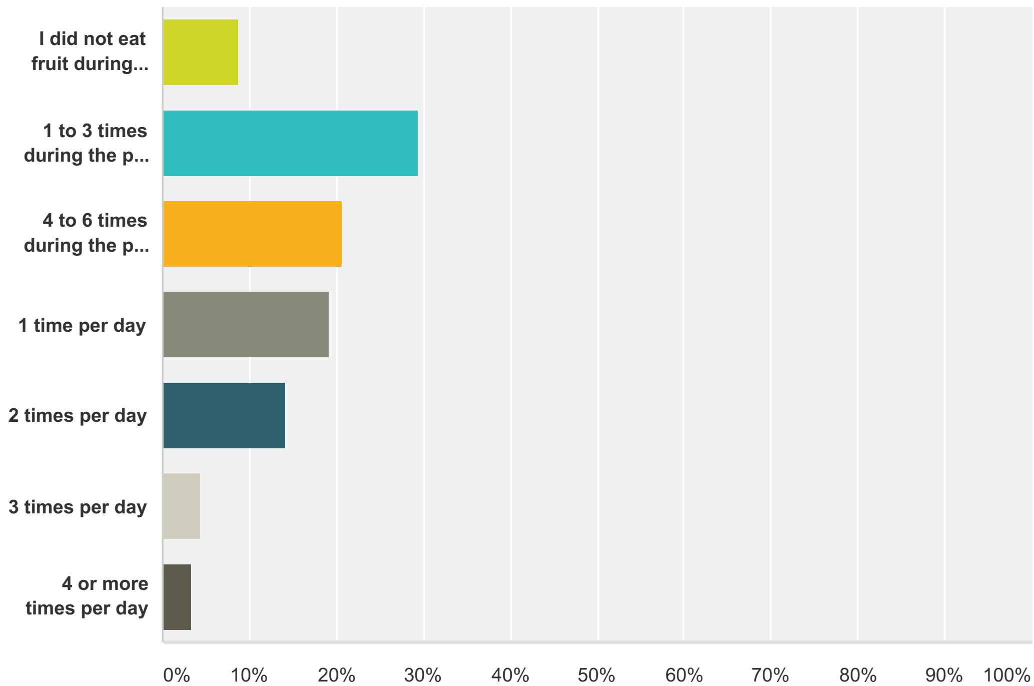
Answered: 203 Skipped: 10



Answer Choices	Responses	
Very inexpensive	**5.91%**	12
Not expensive	**19.21%**	39
Somewhat expensive	**65.52%**	133
Very expensive	**9.36%**	19
Total		**203**

Q12 During the past 7 days, how many times did you eat fruit? (do NOT count fruit juice)

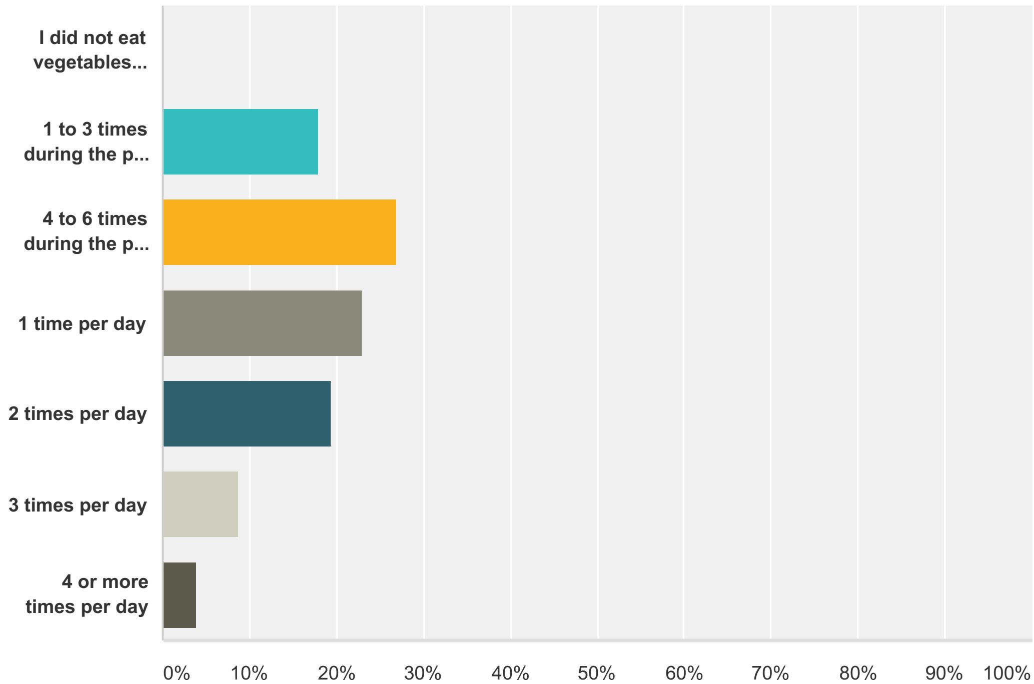
Answered: 204 Skipped: 9



Answer Choices	Responses	
I did not eat fruit during the past 7 days	**8.82%**	18
1 to 3 times during the past 7 days	**29.41%**	60
4 to 6 times during the past 7 days	**20.59%**	42
1 time per day	**19.12%**	39
2 times per day	**14.22%**	29
3 times per day	**4.41%**	9
4 or more times per day	**3.43%**	7
Total		**204**

Q13 During the past 7 days, how many times did you eat vegetables?

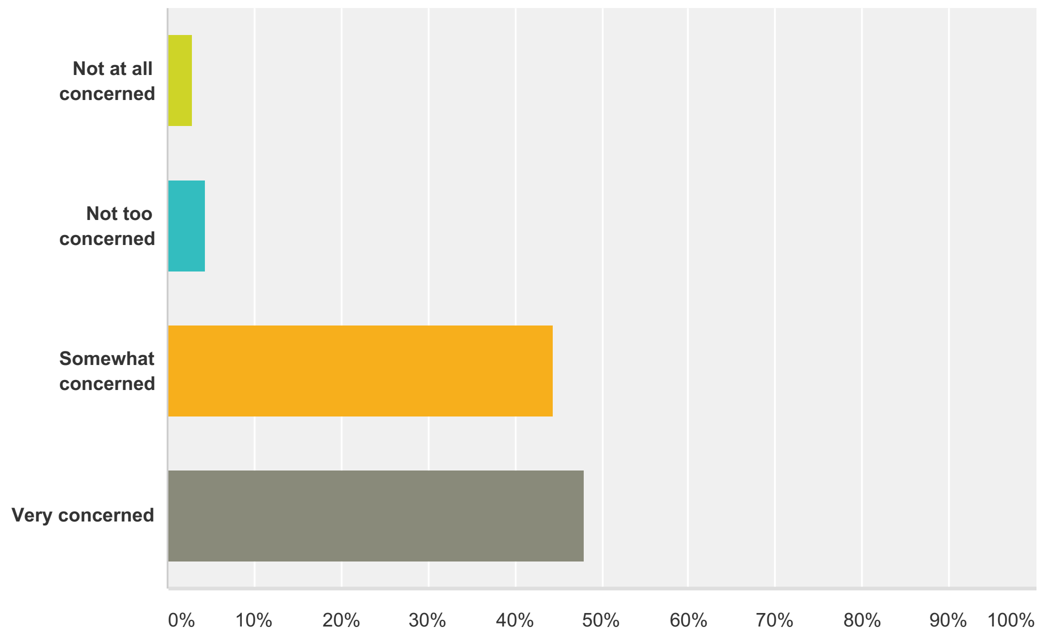
Answered: 205 Skipped: 8



Answer Choices	Responses	
I did not eat vegetables during the past 7 days	**0.00%**	0
1 to 3 times during the past 7 days	**18.05%**	37
4 to 6 times during the past 7 days	**26.83%**	55
1 time per day	**22.93%**	47
2 times per day	**19.51%**	40
3 times per day	**8.78%**	18
4 or more times per day	**3.90%**	8
Total		**205**

Q14 How concerned are you about the nutritional content of the foods you eat?

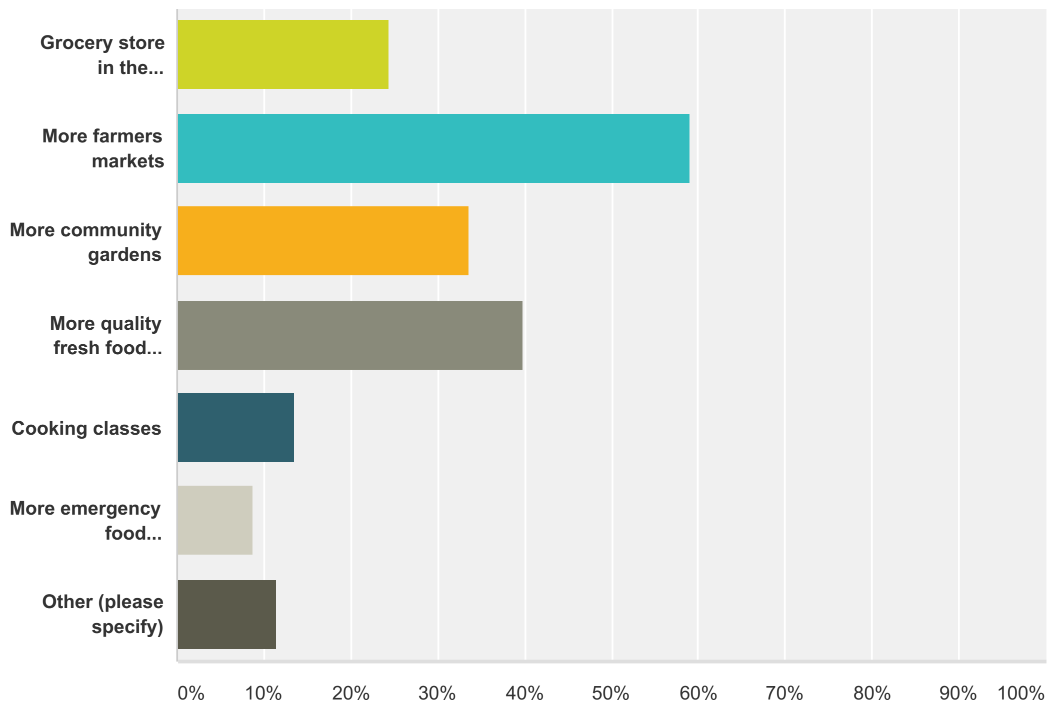
Answered: 202 Skipped: 11



Answer Choices	Responses	
Not at all concerned	**2.97%**	6
Not too concerned	**4.46%**	9
Somewhat concerned	**44.55%**	90
Very concerned	**48.02%**	97
Total		**202**

Q15 What would you like to see change in your neighborhood and community's food environment?

Answered: 193 Skipped: 20



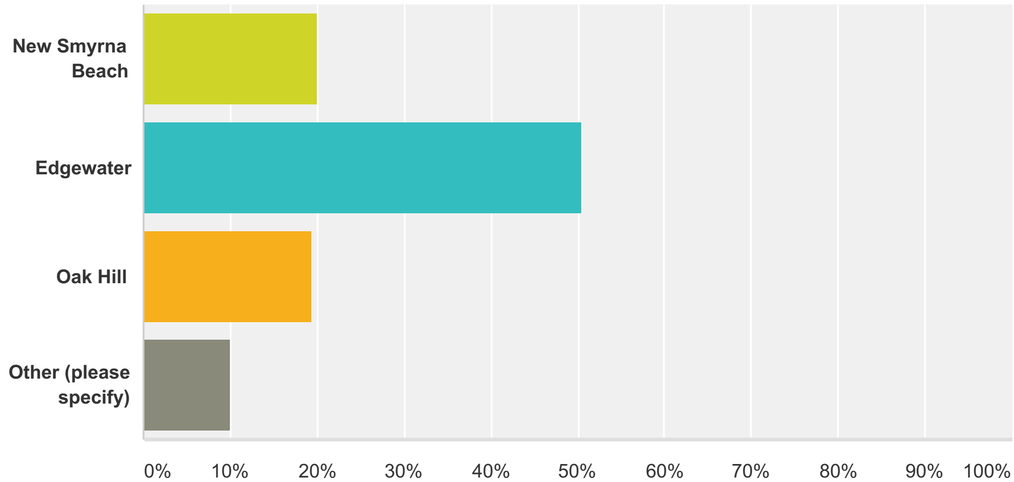
Answer Choices	Responses	
Grocery store in the neighborhood	**24.35%**	47
More farmers markets	**59.07%**	114
More community gardens	**33.68%**	65
More quality fresh food available at grocery store	**39.90%**	77
Cooking classes	**13.47%**	26
More emergency food distribution locations	**8.81%**	17
Other (please specify)	**11.40%**	22
Total Respondents: 193		

Q16 Do you have any additional thoughts about your neighborhood's present food needs? What would you like to see changed?

Answered: 47 Skipped: 166

Q17 What community do you live in?

Answered: 200 Skipped: 13



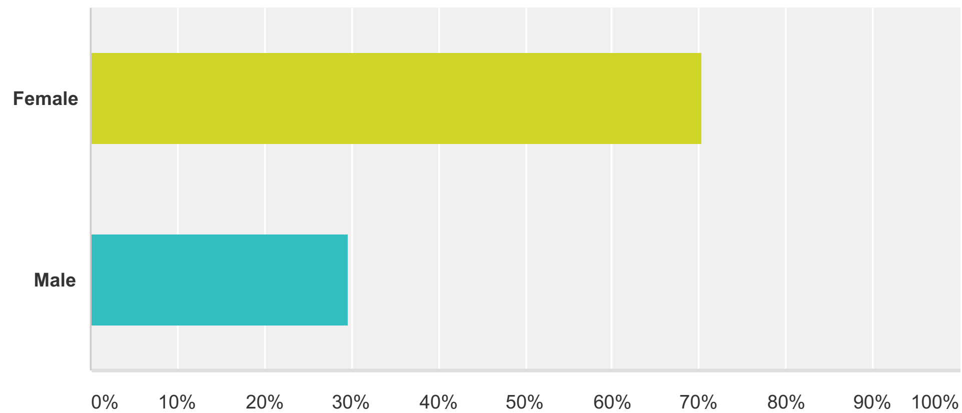
Answer Choices	Responses	
New Smyrna Beach	**20.00%**	40
Edgewater	**50.50%**	101
Oak Hill	**19.50%**	39
Other (please specify)	**10.00%**	20
Total		**200**

Q18 What Zip Code do you live in?

Answered: 200 Skipped: 13

Q19 What is your gender?

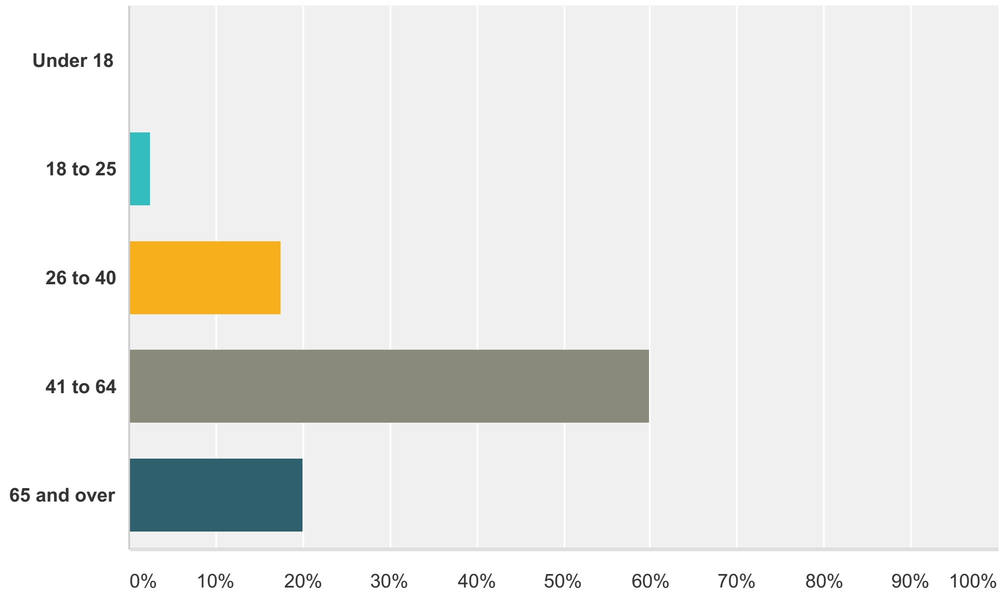
Answered: 196 Skipped: 17



Answer Choices	Responses	
Female	**70.41%**	138
Male	**29.59%**	58
Total		**196**

Q20 What is your age?

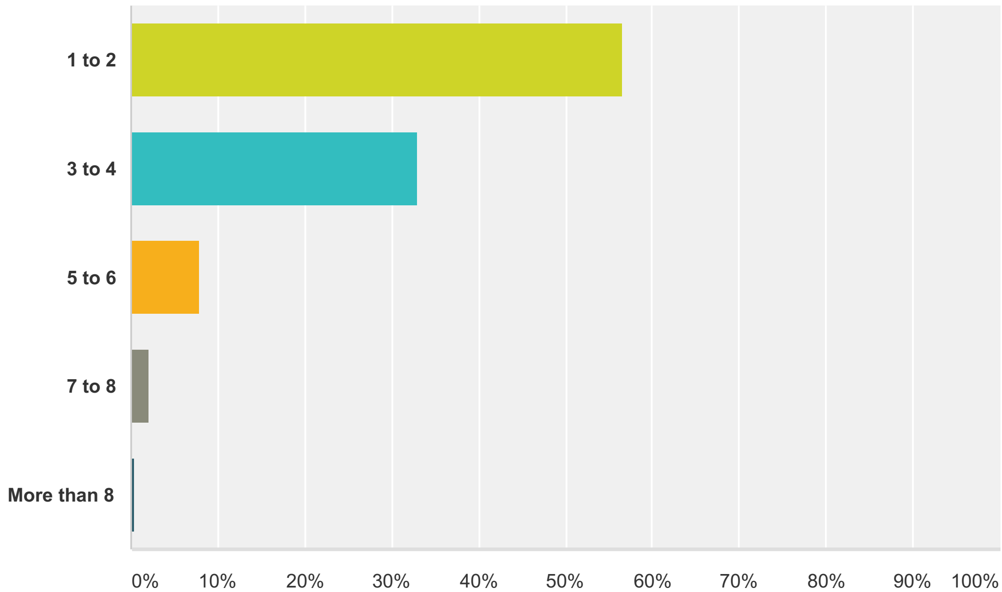
Answered: 200 Skipped: 13



Answer Choices	Responses	
Under 18	0.00%	0
18 to 25	2.50%	5
26 to 40	17.50%	35
41 to 64	60.00%	120
65 and over	20.00%	40
Total		**200**

Q21 Including yourself, how many people live in your household?

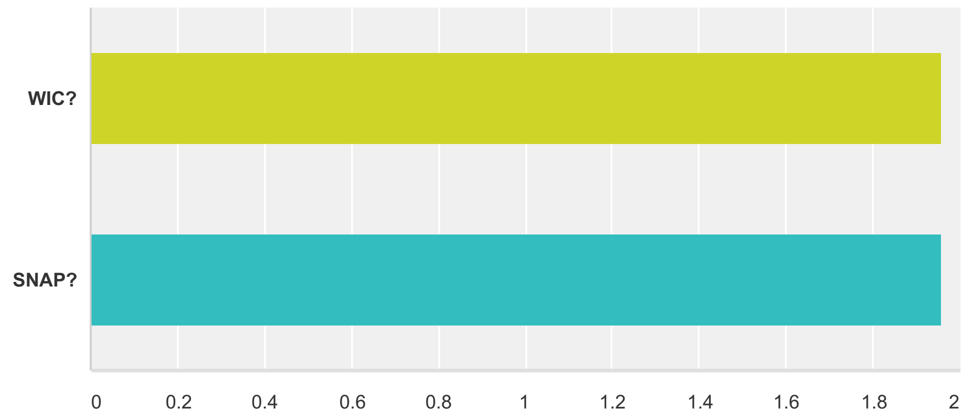
Answered: 200 Skipped: 13



Answer Choices	Responses	
1 to 2	**56.50%**	113
3 to 4	**33.00%**	66
5 to 6	**8.00%**	16
7 to 8	**2.00%**	4
More than 8	**0.50%**	1
Total		**200**

Q22 Do you use:

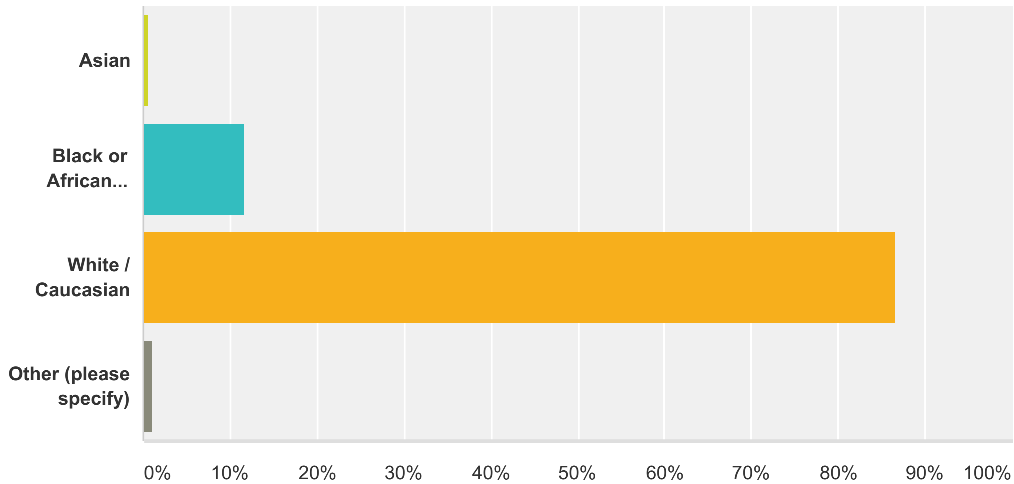
Answered: 194 Skipped: 19



	Yes	No	Total	Weighted Average
WIC?	**3.76%** 7	**96.24%** 179	186	1.96
SNAP?	**3.65%** 7	**96.35%** 185	192	1.96

Q23 Which race/ethnicity best describes you? (Please choose only one.)

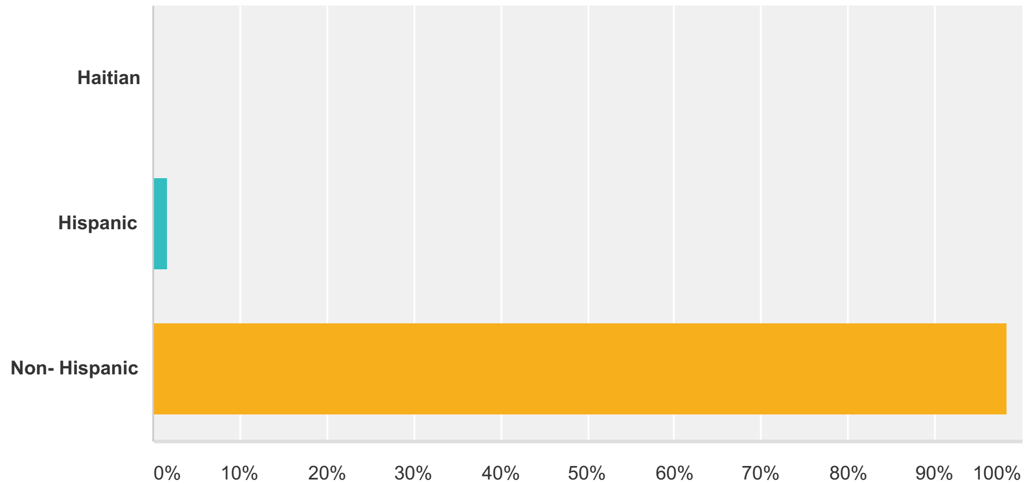
Answered: 188 Skipped: 25



Answer Choices	Responses	
Asian	**0.53%**	1
Black or African American	**11.70%**	22
White / Caucasian	**86.70%**	163
Other (please specify)	**1.06%**	2
Total		**188**

Q24 Which best describes your ethnicity?

Answered: 174 Skipped: 39



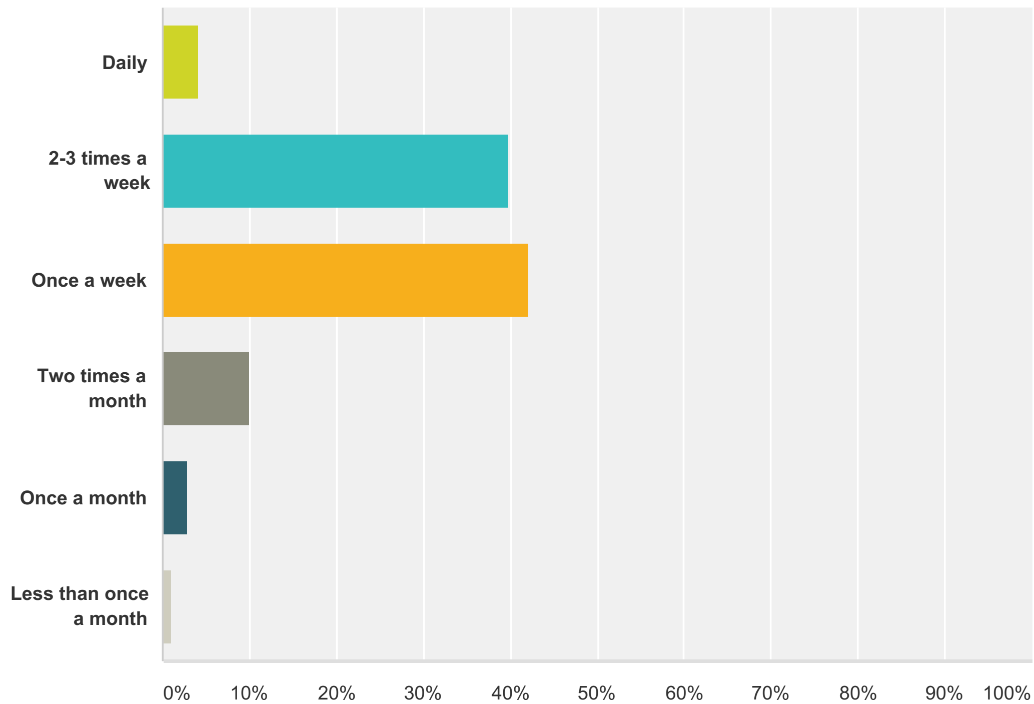
Answer Choices	Responses	
Haitian	**0.00%**	0
Hispanic	**1.72%**	3
Non- Hispanic	**98.28%**	171
Total		**174**

Q1 Where do you go to buy most of your groceries?

Answered: 210   Skipped: 3

Q2 How often do you go food shopping?

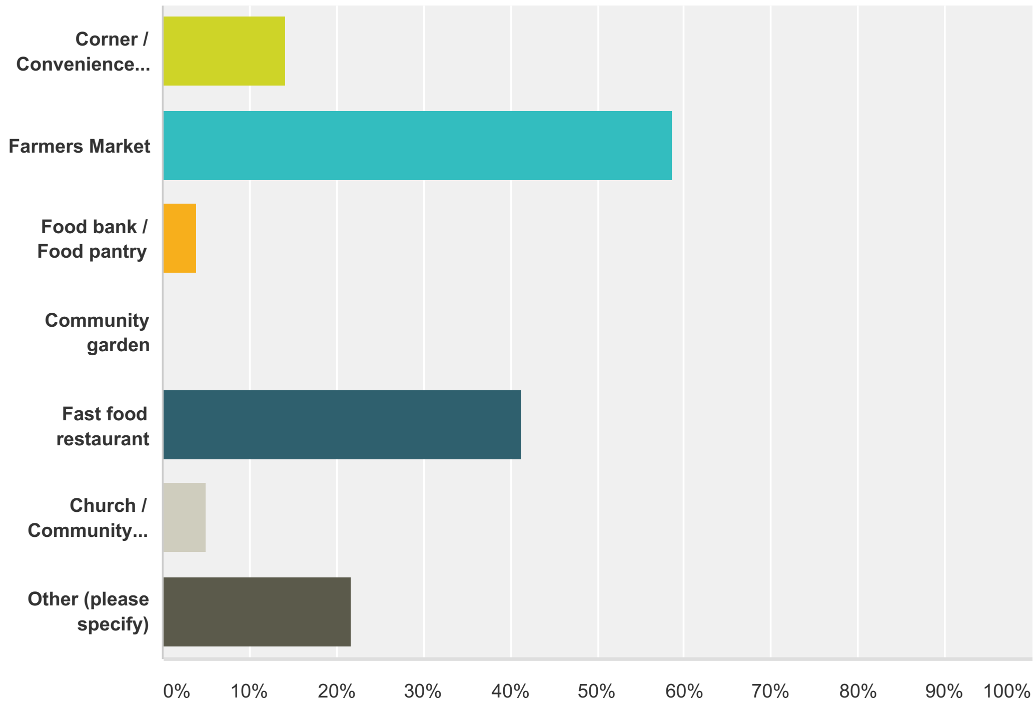
Answered: 211 Skipped: 2



Answer Choices	Responses	
Daily	**4.27%**	9
2-3 times a week	**39.81%**	84
Once a week	**42.18%**	89
Two times a month	**9.95%**	21
Once a month	**2.84%**	6
Less than once a month	**0.95%**	2
Total		**211**

Q3 Besides grocery stores, where else do you get food?

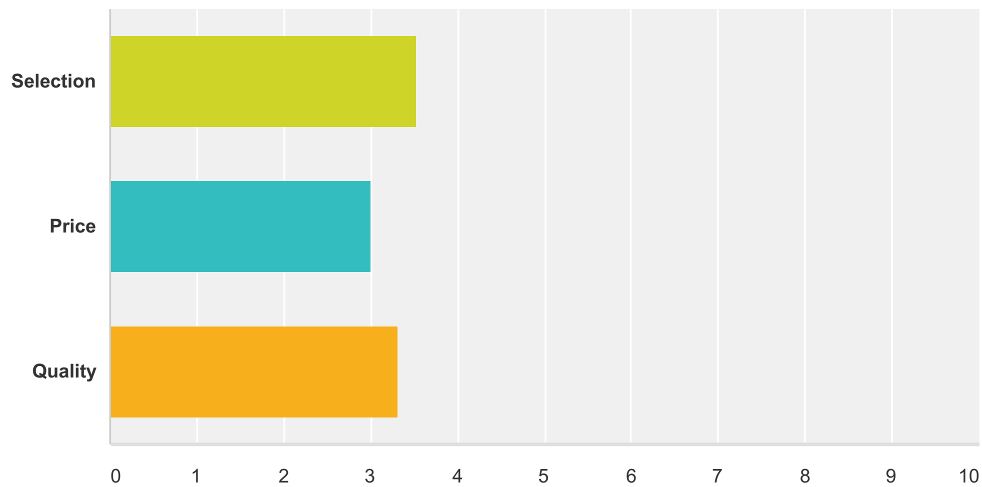
Answered: 198 Skipped: 15



Answer Choices	Responses	
Corner / Convenience store	**14.14%**	28
Farmers Market	**58.59%**	116
Food bank / Food pantry	**4.04%**	8
Community garden	**0.00%**	0
Fast food restaurant	**41.41%**	82
Church / Community organization	**5.05%**	10
Other (please specify)	**21.72%**	43
Total Respondents: 198		

Q4 At the store where you normally buy food, how would you rate the fruits and vegetables in terms of:

Answered: 197 Skipped: 16



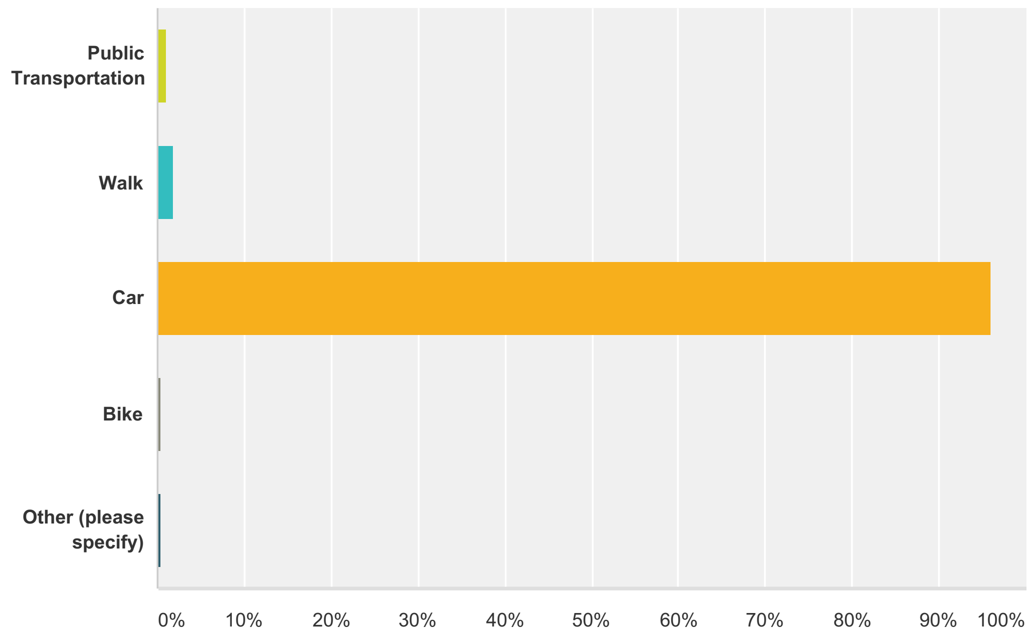
	Much worse	A little worse	About the same	A little better	Much better	Total	Weighted Average
Selection	**0.00%** 0	**12.76%** 25	**42.35%** 83	**24.49%** 48	**20.41%** 40	196	3.53
Price	**5.21%** 10	**27.60%** 53	**38.02%** 73	**20.31%** 39	**8.85%** 17	192	3.00
Quality	**3.14%** 6	**14.66%** 28	**43.98%** 84	**23.04%** 44	**15.18%** 29	191	3.32

Q5 How far do you travel to get to your regular full-service grocery store?

Answered: 204 Skipped: 9

Q6 How do you travel to locations where you purchase/receive food?

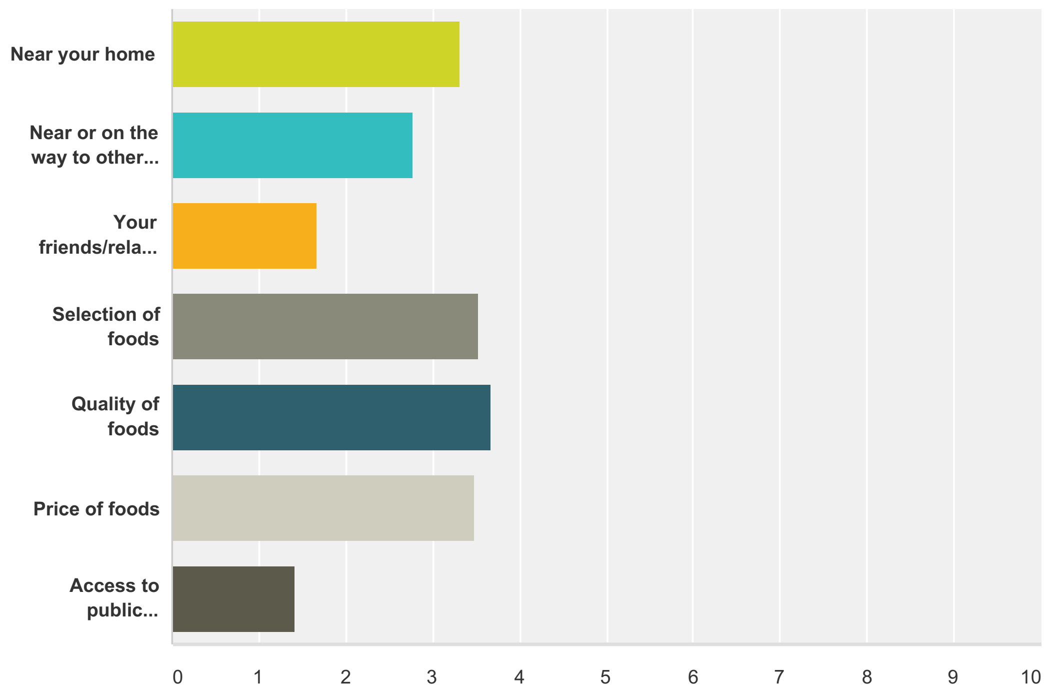
Answered: 205 Skipped: 8



Answer Choices	Responses	
Public Transportation	**0.98%**	2
Walk	**1.95%**	4
Car	**96.10%**	197
Bike	**0.49%**	1
Other (please specify)	**0.49%**	1
Total		**205**

Q7 How important are each of the following factors in your decision to shop at the store where you buy most of your food?

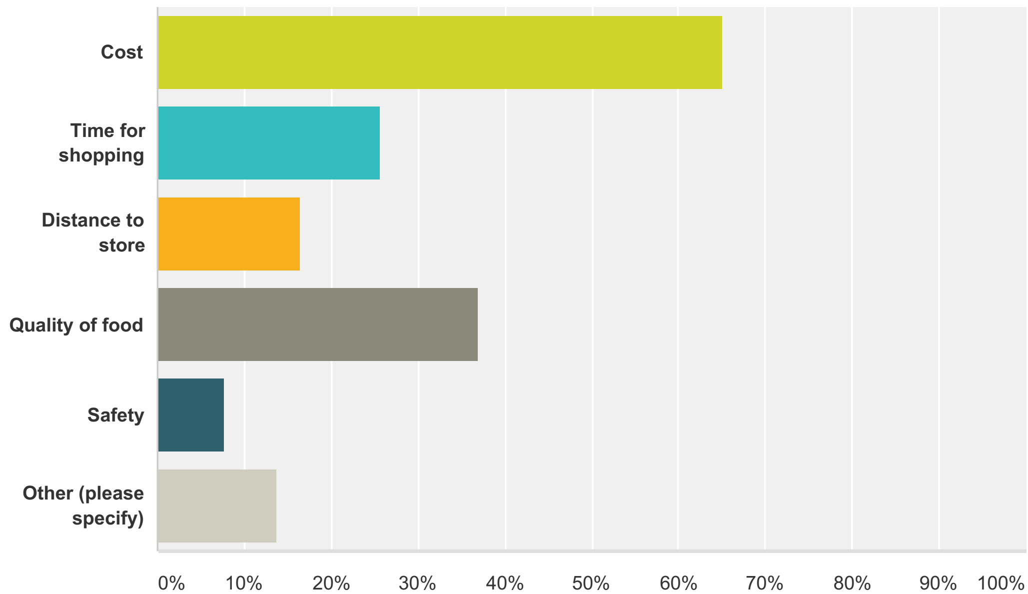
Answered: 205 Skipped: 8



	Not at all	A little	Somewhat	Very	Total	Weighted Average
Near your home	**3.92%** 8	**9.80%** 20	**37.25%** 76	**49.02%** 100	204	3.31
Near or on the way to other places where you spend time	**17.50%** 35	**19.50%** 39	**31.50%** 63	**31.50%** 63	200	2.77
Your friends/relatives shop at this store	**66.00%** 132	**13.00%** 26	**10.50%** 21	**10.50%** 21	200	1.66
Selection of foods	**2.02%** 4	**5.05%** 10	**31.31%** 62	**61.62%** 122	198	3.53
Quality of foods	**1.00%** 2	**4.00%** 8	**22.00%** 44	**73.00%** 146	200	3.67
Price of foods	**1.99%** 4	**6.47%** 13	**32.84%** 66	**58.71%** 118	201	3.48
Access to public transportation	**80.90%** 161	**5.03%** 10	**4.52%** 9	**9.55%** 19	199	1.43

Q8 What are the main barriers with getting the foods you need/want (select all that apply)?

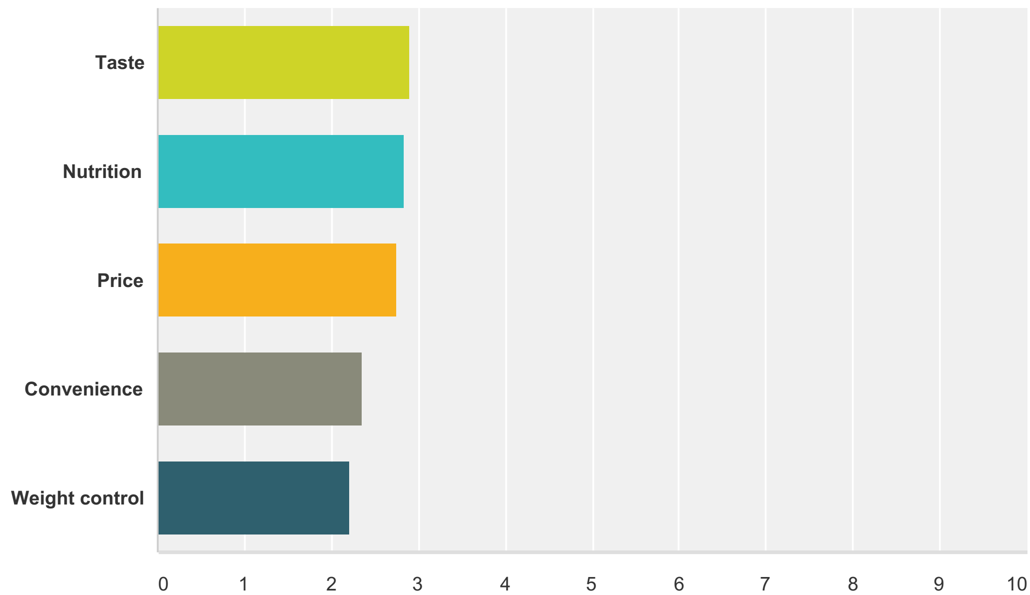
Answered: 195 Skipped: 18



Answer Choices	Responses	
Cost	**65.13%**	127
Time for shopping	**25.64%**	50
Distance to store	**16.41%**	32
Quality of food	**36.92%**	72
Safety	**7.69%**	15
Other (please specify)	**13.85%**	27
Total Respondents: 195		

Q9 When you shop for food, how important is...

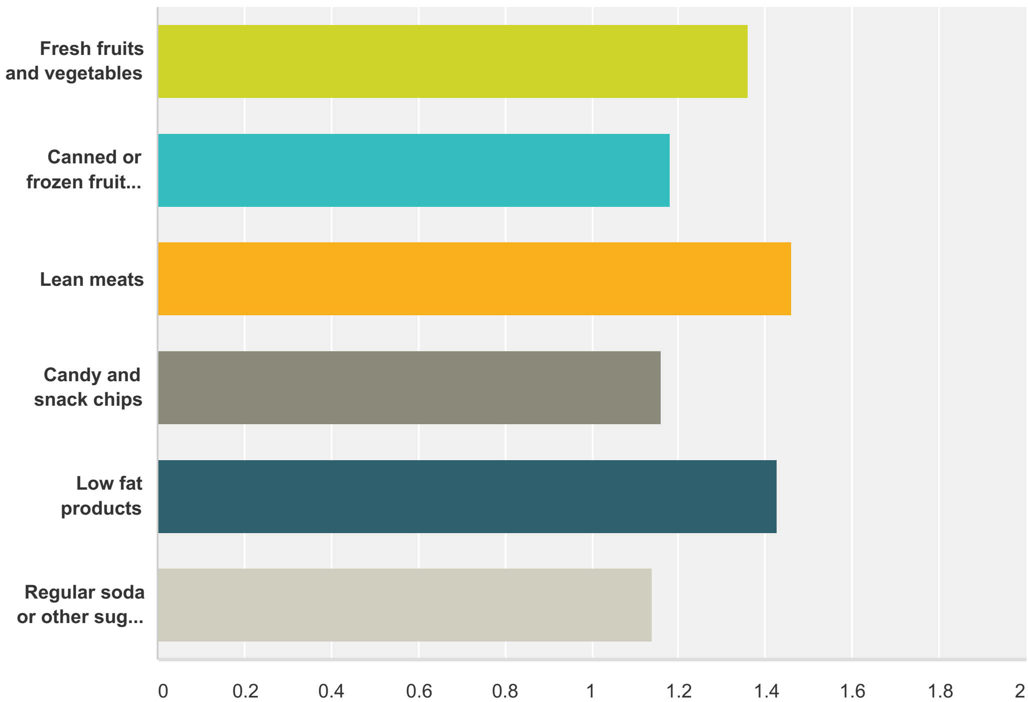
Answered: 206 Skipped: 7



	Not at all important	Somewhat important	Very important	Total	Weighted Average
Taste	**0.00%** 0	**10.34%** 21	**89.66%** 182	203	2.90
Nutrition	**0.49%** 1	**16.18%** 33	**83.33%** 170	204	2.83
Price	**0.50%** 1	**23.27%** 47	**76.24%** 154	202	2.76
Convenience	**5.88%** 12	**52.45%** 107	**41.67%** 85	204	2.36
Weight control	**13.79%** 28	**51.72%** 105	**34.48%** 70	203	2.21

Q10 At the store where you buy most of your food, how hard is it to get each of these types of food?

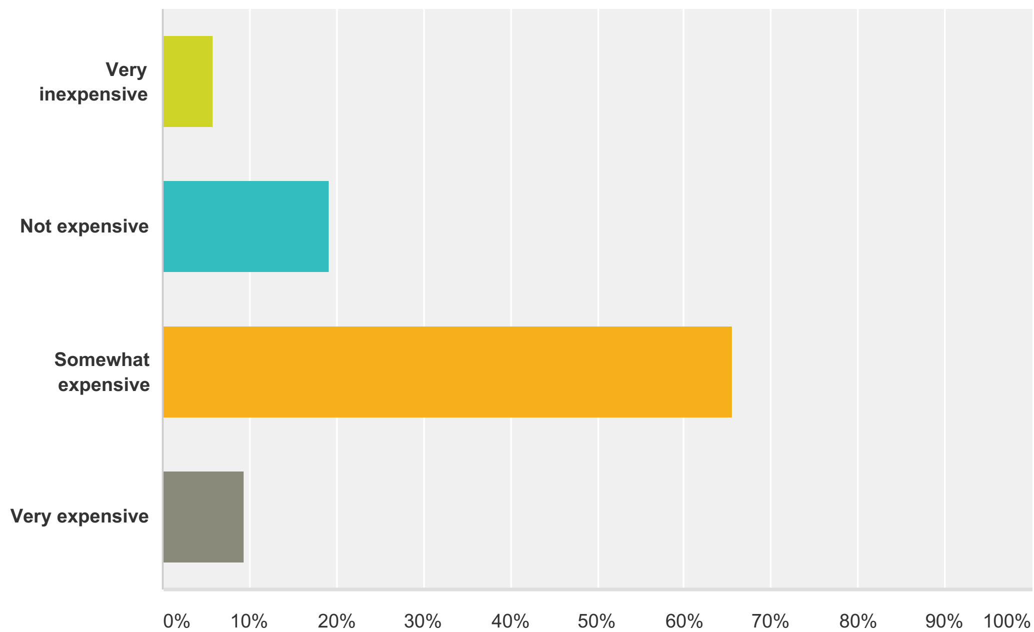
Answered: 206 Skipped: 7



	Very easy	Somewhat easy	Somewhat hard	Very hard	Total	Weighted Average
Fresh fruits and vegetables	**71.36%** 147	**20.87%** 43	**7.77%** 16	**0.00%** 0	206	1.36
Canned or frozen fruits or vegetables	**85.37%** 175	**13.17%** 27	**0.00%** 0	**1.46%** 3	205	1.18
Lean meats	**64.68%** 130	**25.37%** 51	**9.45%** 19	**0.50%** 1	201	1.46
Candy and snack chips	**86.73%** 170	**11.73%** 23	**0.00%** 0	**1.53%** 3	196	1.16
Low fat products	**66.67%** 132	**24.24%** 48	**8.08%** 16	**1.01%** 2	198	1.43
Regular soda or other sugary drinks (sports drinks, juice drinks, etc.)	**88.83%** 175	**9.64%** 19	**0.00%** 0	**1.52%** 3	197	1.14

Q11 At the store where you buy most of your food, how would you rate the price of fresh fruits and vegetables?

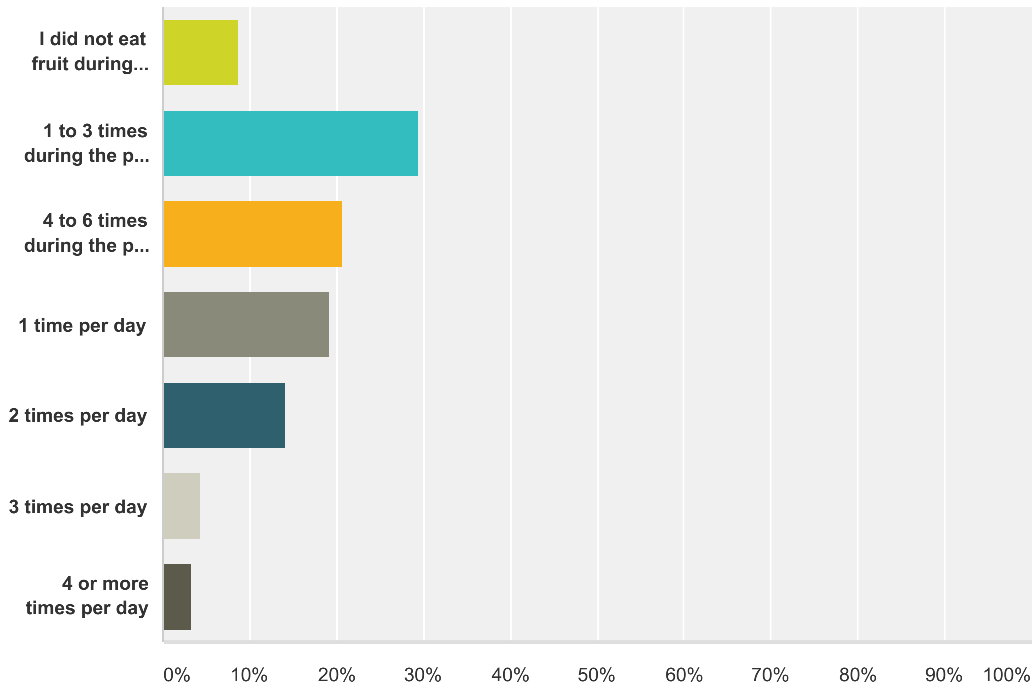
Answered: 203 Skipped: 10



Answer Choices	Responses	
Very inexpensive	**5.91%**	12
Not expensive	**19.21%**	39
Somewhat expensive	**65.52%**	133
Very expensive	**9.36%**	19
Total		**203**

Q12 During the past 7 days, how many times did you eat fruit? (do NOT count fruit juice)

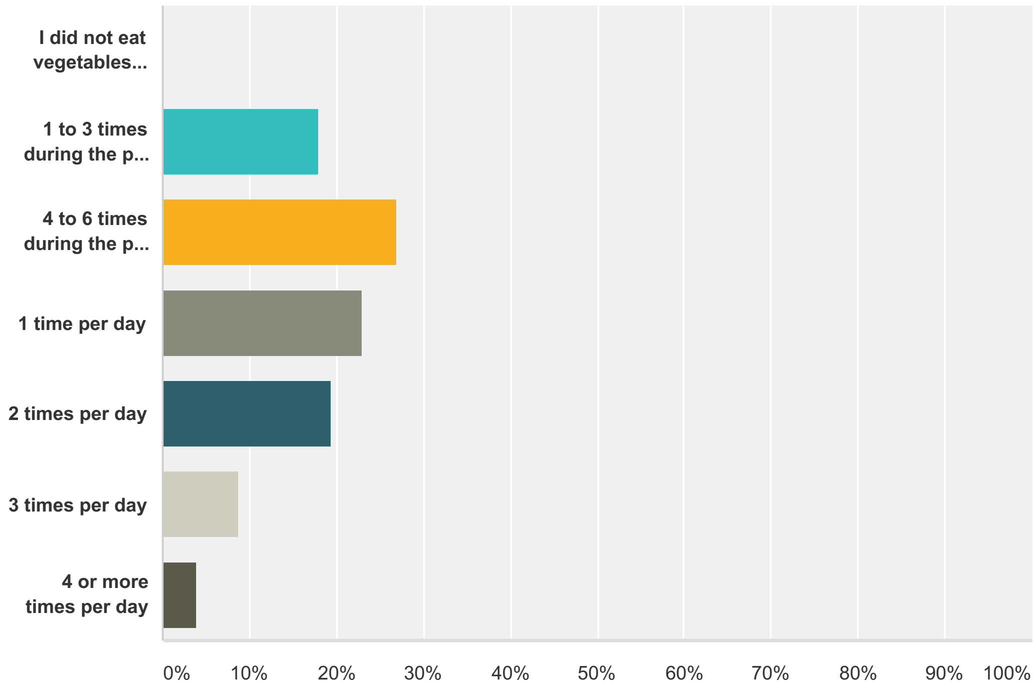
Answered: 204 Skipped: 9



Answer Choices	Responses	
I did not eat fruit during the past 7 days	**8.82%**	18
1 to 3 times during the past 7 days	**29.41%**	60
4 to 6 times during the past 7 days	**20.59%**	42
1 time per day	**19.12%**	39
2 times per day	**14.22%**	29
3 times per day	**4.41%**	9
4 or more times per day	**3.43%**	7
Total		**204**

Q13 During the past 7 days, how many times did you eat vegetables?

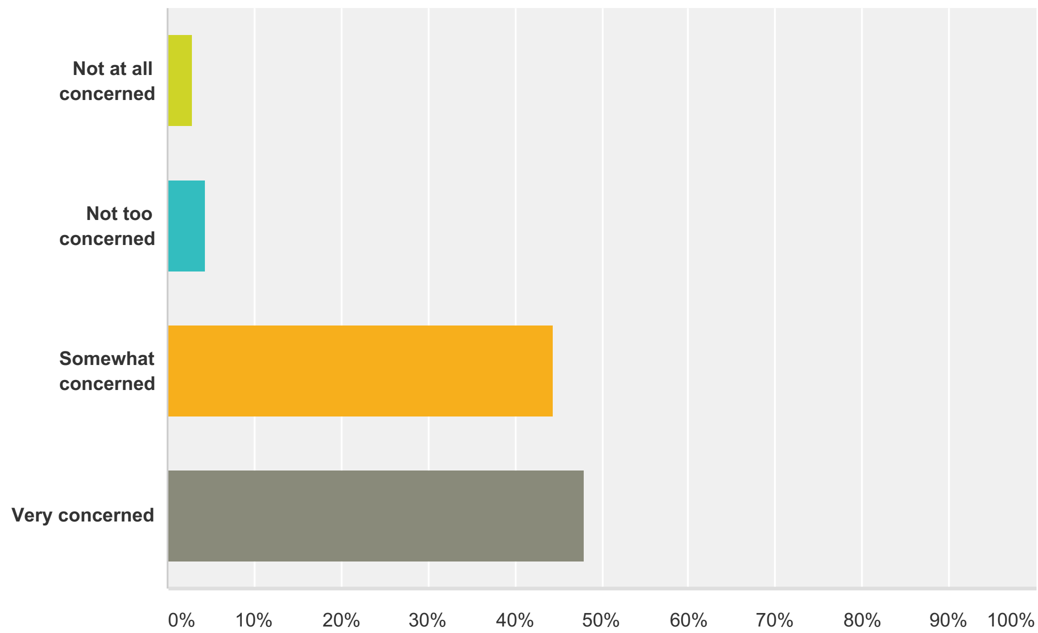
Answered: 205 Skipped: 8



Answer Choices	Responses	
I did not eat vegetables during the past 7 days	**0.00%**	0
1 to 3 times during the past 7 days	**18.05%**	37
4 to 6 times during the past 7 days	**26.83%**	55
1 time per day	**22.93%**	47
2 times per day	**19.51%**	40
3 times per day	**8.78%**	18
4 or more times per day	**3.90%**	8
Total		**205**

Q14 How concerned are you about the nutritional content of the foods you eat?

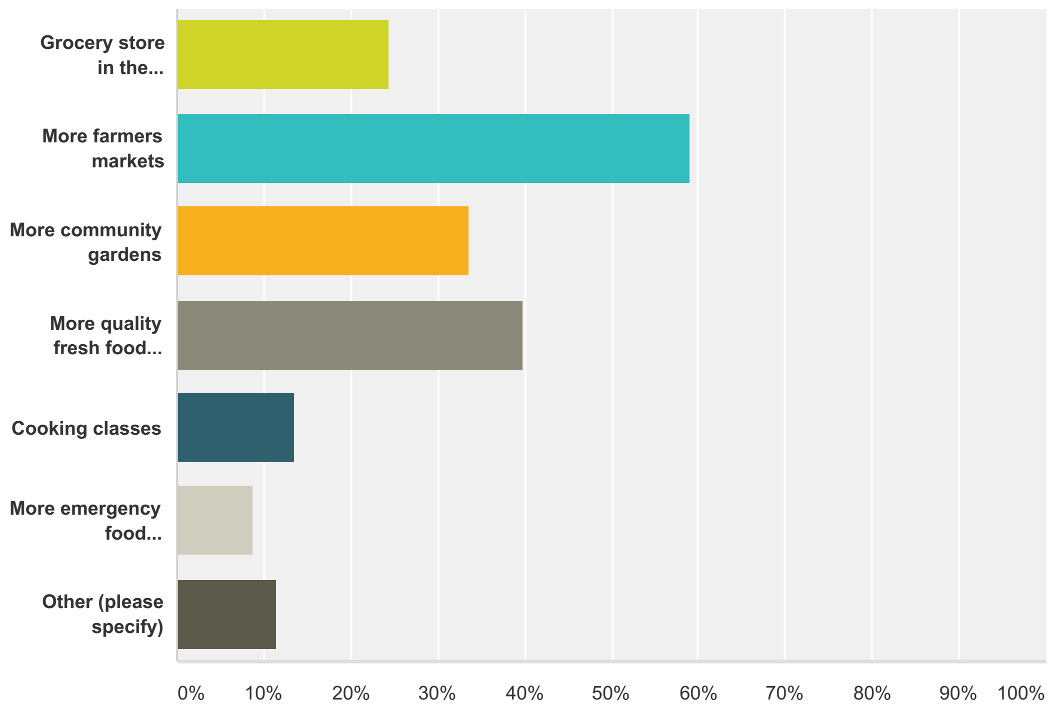
Answered: 202 Skipped: 11



Answer Choices	Responses	
Not at all concerned	**2.97%**	6
Not too concerned	**4.46%**	9
Somewhat concerned	**44.55%**	90
Very concerned	**48.02%**	97
Total		**202**

Q15 What would you like to see change in your neighborhood and community's food environment?

Answered: 193 Skipped: 20



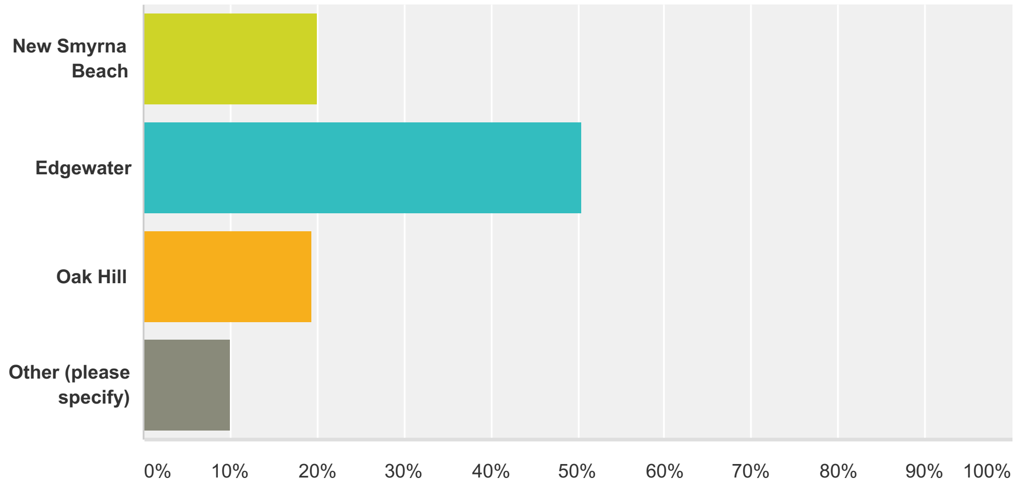
Answer Choices	Responses	
Grocery store in the neighborhood	**24.35%**	47
More farmers markets	**59.07%**	114
More community gardens	**33.68%**	65
More quality fresh food available at grocery store	**39.90%**	77
Cooking classes	**13.47%**	26
More emergency food distribution locations	**8.81%**	17
Other (please specify)	**11.40%**	22
Total Respondents: 193		

Q16 Do you have any additional thoughts about your neighborhood’s present food needs? What would you like to see changed?

Answered: 47 Skipped: 166

Q17 What community do you live in?

Answered: 200   Skipped: 13



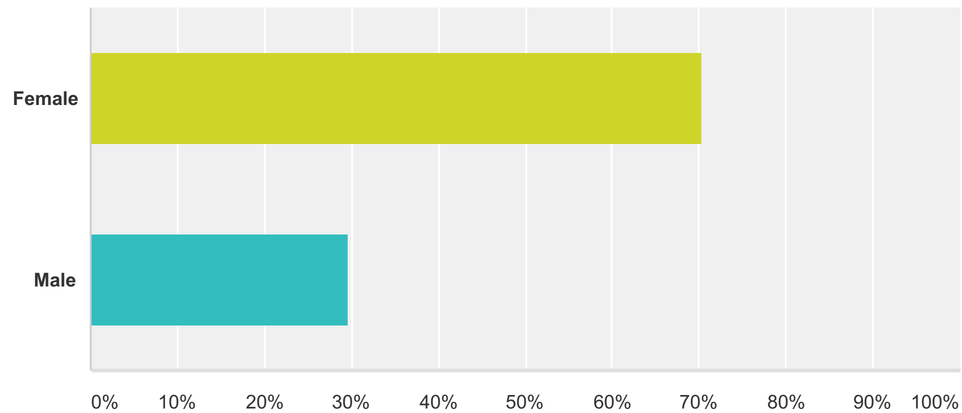
Answer Choices	Responses	
New Smyrna Beach	**20.00%**	40
Edgewater	**50.50%**	101
Oak Hill	**19.50%**	39
Other (please specify)	**10.00%**	20
Total		**200**

Q18 What Zip Code do you live in?

Answered: 200 Skipped: 13

Q19 What is your gender?

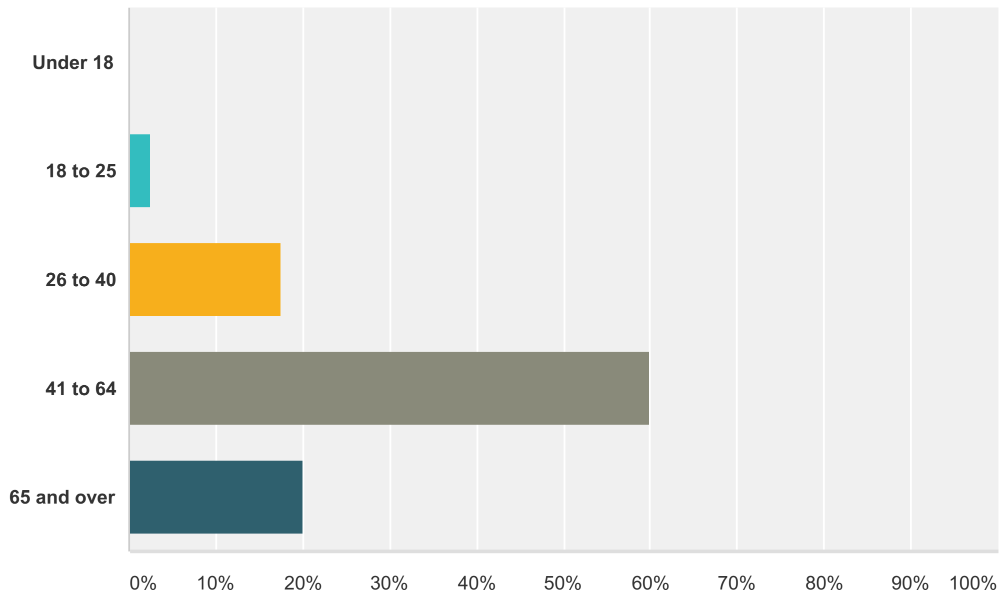
Answered: 196 Skipped: 17



Answer Choices	Responses	
Female	**70.41%**	138
Male	**29.59%**	58
Total		**196**

Q20 What is your age?

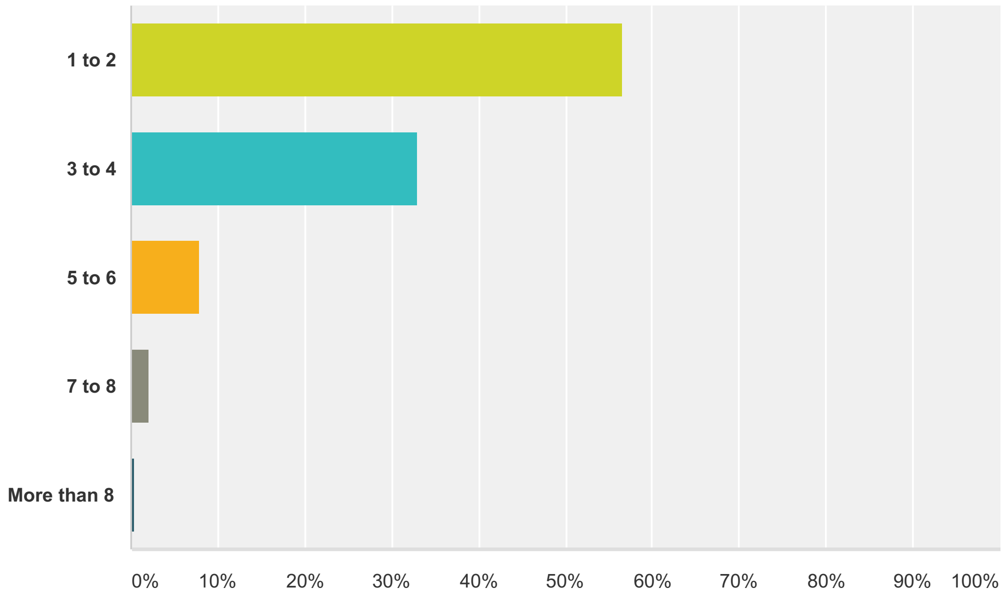
Answered: 200 Skipped: 13



Answer Choices	Responses	
Under 18	**0.00%**	0
18 to 25	**2.50%**	5
26 to 40	**17.50%**	35
41 to 64	**60.00%**	120
65 and over	**20.00%**	40
Total		**200**

Q21 Including yourself, how many people live in your household?

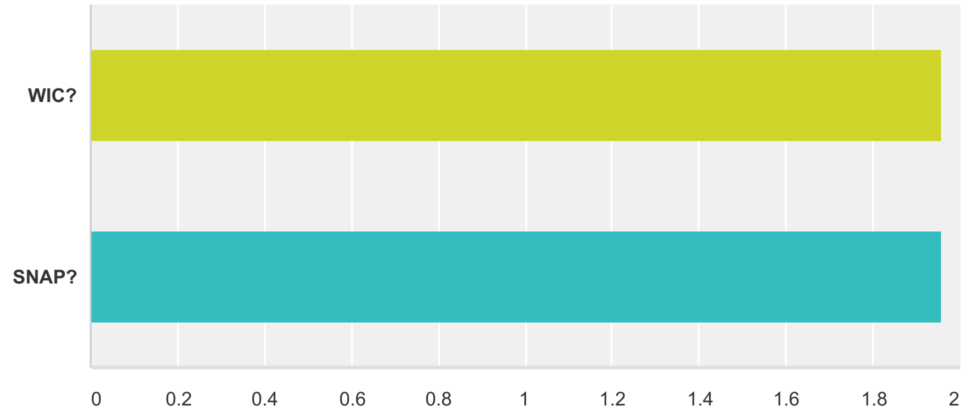
Answered: 200 Skipped: 13



Answer Choices	Responses	
1 to 2	**56.50%**	113
3 to 4	**33.00%**	66
5 to 6	**8.00%**	16
7 to 8	**2.00%**	4
More than 8	**0.50%**	1
Total		**200**

Q22 Do you use:

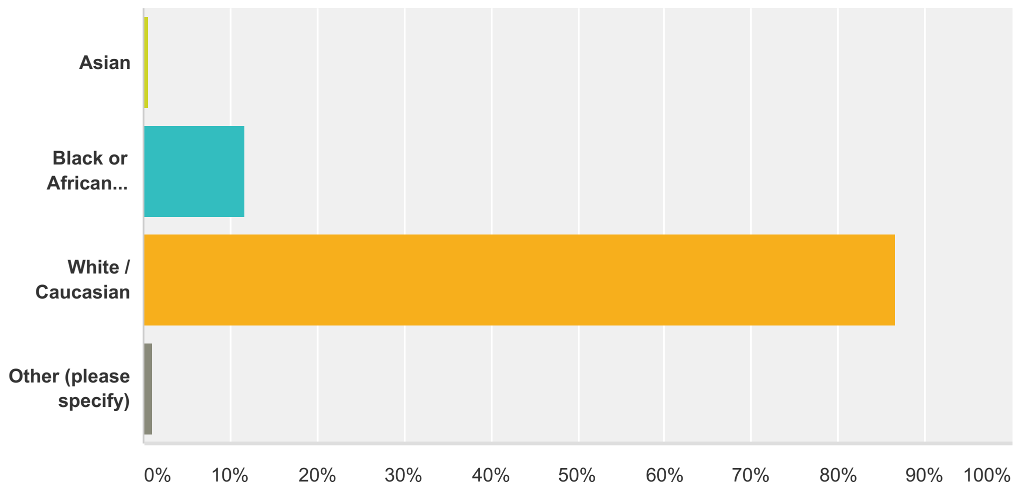
Answered: 194 Skipped: 19



	Yes	No	Total	Weighted Average
WIC?	**3.76%** 7	**96.24%** 179	186	1.96
SNAP?	**3.65%** 7	**96.35%** 185	192	1.96

Q23 Which race/ethnicity best describes you? (Please choose only one.)

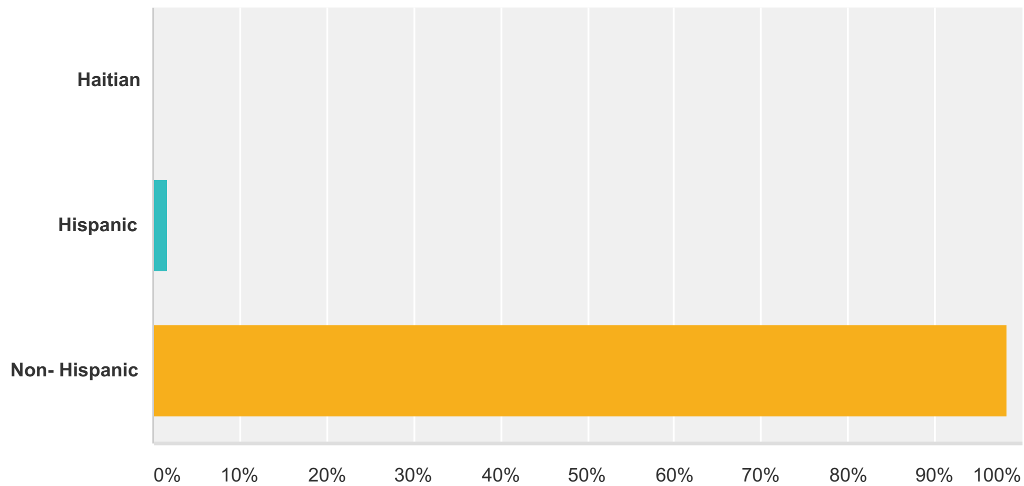
Answered: 188 Skipped: 25



Answer Choices	Responses	
Asian	**0.53%**	1
Black or African American	**11.70%**	22
White / Caucasian	**86.70%**	163
Other (please specify)	**1.06%**	2
Total		**188**

Q24 Which best describes your ethnicity?

Answered: 174 Skipped: 39



Answer Choices	Responses	
Haitian	**0.00%**	0
Hispanic	**1.72%**	3
Non- Hispanic	**98.28%**	171
Total		**174**

Appendix B:

The Food Trust Report

Access to Healthy Food Retail in Volusia County, Florida:

Cities of New Smyrna Beach, Edgewater and Oak Hill

Submitted by:
The Food Trust
April 2016
Revised July 2016

The Food Trust
THEFOODTRUST.ORG

Introduction: Access to Healthy Food and Why It Matters

Access to healthy food is a fundamental component of a healthy and vibrant community. However, in thousands of urban and rural areas across the country, fresh, nutritious, affordable food is not accessible. According to the United States Department of Agriculture, nearly 30 million Americans live more than a mile from the nearest grocery store.[1] A significant and growing body of research finds that people who live in communities without a supermarket suffer from disproportionately high rates of obesity, diabetes and other diet-related diseases. Communities of color and lower-income rural areas are also particularly underserved. In contrast, when people live in a community with a supermarket, they tend to eat more servings of fruits and vegetables and are more likely to maintain a healthy weight. Removing barriers to healthy food access is a key step toward enabling people to maintain a healthy diet. Furthermore, the development of new grocery stores and healthy food retail in low-income communities and communities of color sparks economic revitalization and brings jobs into places that need them most. Improving access to nutritious, affordable food improves public health, promotes equity, and stimulates local economies.[2]

In Volusia County, Florida, diet-related disease and lack of access to healthy food are problems for many residents. According to the *Healthy Volusia Report: Overweight and Obesity in Volusia County*, 54.0% of adults in Volusia County are overweight or obese, compared to a national rate of 35.7%. The percentage of residents with high blood cholesterol levels and deaths from stroke and coronary heart disease is also higher in Volusia County than in Florida as a whole. Only 15.1% of adults in Volusia County report consuming three or more servings of vegetables daily, compared to 29.1% at the state level. This is also a matter of racial equity; at the sub-county level, black residents have higher rates of diabetes hospitalization with a diagnosis of obesity than residents of other races. The higher prevalence of adult obesity in Florida compared to other states has been documented by several notable sources, including the Behavioral Risk Factor Surveillance System (BRFSS), National Health and Nutrition Examination Study (NHANES), and Reasons for Geographic and Racial Differences in Stroke (REGARDS).[3]

In response to the issue of lack of healthy food access, public health and community development experts are working to encourage the development of healthy food retail in low-income communities as a means to improve health, revitalize communities and address social inequities. Health and environmental professionals are conducting a Health Impact Assessment of three cities in Volusia County, Florida: New Smyrna Beach, Edgewater and Oak Hill. As part of this assessment, The Food Trust examined the food retail landscape

[1] Ver Ploeg, M, et al. "Access to Affordable and Nutritious Food: Updated Estimates of Distance to Supermarkets Using 2010 Data." Economic Research Report No. (ERR-143) 54 pp, 2012.
[2] Bell J., Mora, G., Hagan E., et al. (2013) Access to Healthy Food and Why It Matters. Oakland (CA): PolicyLink and The Food Trust.
[3] Florida Department of Health, Volusia County. "Overweight and Obesity in Volusia County." Healthy Volusia 1.3, 2014.

across these three cities to identify unique challenges and opportunities within each city, as well as potential interventions that may serve to improve access for residents in all three areas. The Food Trust's report is intended to support the broader Health Impact Assessment by addressing food access, which is one key component of community health.

Analysis of Demographics and the Food Retail Environment

Methodology:

The analysis provided in this report is based on The Food Trust's experience assessing sites and projects as part of the implementation of healthy food financing initiatives at the city, state, and federal levels. To determine whether projects are eligible for financing, The Food Trust examines income levels and healthy food retail options within the trade areas of targeted locations for new or expanded grocery stores.[4] In this report, unless otherwise noted, median household income (MHI) is used to measure income, and poverty levels are consulted for verification. Low/moderate income is considered less than or equal to 80% of area median income, middle income is less than or equal to 120%, and upper income is above 120%. The USDA Food Access Research Atlas (formerly known as "Food Desert locator") was consulted, but data did not appear to reflect accurate store information: the assessment represented several well-served areas as "low access" and on the other hand did not include several underserved areas noted below. Food retail stores were identified using the Trade Dimensions database from PolicyMap, as well as through an internet search on Google Maps, with phone calls to each store to verify its location and offerings. For The Food Trust's methodology, trade areas range from two blocks to two miles depending on population density and store size. If there are no full-service supermarkets, and few to no smaller stores selling a variety of fresh and affordable food within the trade area, the area is deemed underserved. When communities have a high number of LMI residents that are underserved by retailers, they should be prioritized for interventions that improve the availability of healthy food.

Summary of Findings:

For this Volusia County Health Impact Assessment, The Food Trust gathered data related to income, health and fresh food retail for the cities of New Smyrna Beach, Edgewater and Oak Hill. There are several full-service supermarkets in both New Smyrna Beach and Edgewater, while there are no full-service supermarkets in Oak Hill. There are also numerous convenience stores throughout Volusia County, but none offer a wide variety of fresh produce (see image #1 in the Appendix for a map of supermarkets and convenience stores throughout the trade area, and image #2 for the estimated trade areas of full-service and limited assortment stores within

[4] Harries, Caroline MRP, AICP, et al. "Moving From Policy to Implementation: A Methodology and Lessons Learned to Determine Eligibility for Healthy Food Financing Projects." Journal of Public Health Management & Practice. 20.5 (2014): 498-505. doi: 10.1097/PHH.0000000000000061

the three cities). Retail landscapes and demographic data for each city will be discussed in greater detail below, and a full list of stores can be found in the Appendix of this report. Across the three cities, residents appear to be primarily middle income, with more affluent areas along the eastern coast in New Smyrna Beach and Edgewater. The lowest-income block groups are located in one concentrated area of New Smyrna Beach and in Oak Hill; these areas are clearly underserved by food retail. While there are relatively high levels of car ownership in this region, for LMI residents without access to a car, the local public transit system, Votran, provides limited transportation options.[5] Transportation was listed as a key barrier to accessing healthy food in stakeholder interviews for all three cities.

New Smyrna Beach:

New Smyrna Beach (population: 23,000) is relatively well-served by fresh food retail, with four full-service supermarkets in the city: two Publix, a Winn-Dixie and a Walmart Supercenter. There is also a produce market, Perrine's, in northern New Smyrna Beach and a Save-A-Lot on US-1 that recently opened. However, there are several block groups in New Smyrna Beach that are moderate income and are underserved by fresh food retail. Block group #121270829031, located just northwest of the intersection of Lytle Ave and US-1, is about 0.8 miles north of the new Save-A-Lot. That block group also has the largest non-white population in the study area, a relatively high population density and rate of diabetes and a lower rate of vehicle ownership compared to the rest of the city, state and country. A nearby block group south of Lytle Ave, #12170829021, is also moderate income and highly underserved (some residents must travel at least 2-3 miles to get the nearest supermarket). Of the entire study area, the starkest income disparities appear in New Smyrna Beach, where incomes are high along the east coast and lower directly to the west, across US-1 and the railroad tracks (see Image #3). An interview with a New Smyrna Beach city employee confirmed that New Smyrna Beach is divided, both by income and race, on either side of the tracks. The Save-A-Lot mentioned above just opened within the last few months (March 2016) on US-1, south of route 44. Save-A-Lot is a limited assortment discount supermarket, but most Save-A-Lots now have full produce departments and other healthy and affordable offerings, and this particular store does have a fresh produce department. This new Save-A-Lot will likely enhance healthy food access for a number of lower-income residents in New Smyrna Beach and Edgewater who have until now been underserved, and it has been taken into consideration within this analysis.

Edgewater:

With a population of just under 21,000 people, Edgewater is similar in size to New Smyrna Beach but has a slightly higher population density. There are two major supermarkets in Edgewater, Publix and Winn-Dixie. In

[5] Votran, South East Volusia Route Map: http://www.votran.org/take-a-trip/se-volusia-map.stml

addition, residents of northern Edgewater may now also shop at the new Save-A-Lot in New Smyrna Beach. According to the MHI measure, no census tracts within Edgewater are considered LMI. However, there is a census tract in northern Edgewater, #12127083008, located along route US-1, that is distressed according to other measures such as the Federal New Markets Tax Credit and Community Reinvestment Act programs (see image #4). This census tract is also underserved by healthy food retail, as it is located 1.9 miles south of the new Save-A-Lot and 1.6 miles north of Winn-Dixie. One block within this census tract (block group ##121270830081) also has a relatively low rate of vehicle ownership. Since local stakeholders noted there is a sizable elderly population in Edgewater, it may be worth further assessing if there is a challenge of accessing healthy food for these residents.

Oak Hill:

With a total population of less than 2,000 people and a population density of just 67.83 people per square mile, Oak Hill is significantly smaller and less populated than the other two cities. There are no full-service supermarkets in Oak Hill. The closest supermarket is the Publix in Edgewater, which is up to 8.2 miles away from some Oak Hill residents. There are only three food retail stores, total, within the city: Dollar General (which does not sell perishable items), Sunoco Gas Station, and Scragg's Grove & Gift Shop, north of the Dollar General on US-1. Scragg's has a sizable selection of fresh fruits and vegetables and accepts Electronic Benefit Transfer (EBT) cards. The owners of Scragg's also own an organic orange grove in Oak Hill and sell their oranges (and freshly squeezed orange juice) at the store. The store sold dairy a few years ago, but when Dollar General came to the area and also sold dairy, Scragg's could no longer compete in that category. There is a flea market that occasionally sells limited food on the weekends. Additionally, there are two food banks in Oak Hill, which may be the only source of fresh food for some residents. Oak Hill appears as borderline LMI, with an MHI at the block group level of 82.56% of area median income (see image #5). There is a unique confluence of cultural and infrastructural factors affecting the food retail landscape in Oak Hill. In addition to its sparse population, Oak Hill's sewage system serves as a major barrier for businesses. Commercial and residential spaces receive their water supply through well pumps. According to a local city administrator, many people from Oak Hill travel north to Edgewater to do their grocery shopping. Oak Hill seems to be the most distressed of the three cities studied.

Qualitative Data and Community Outreach:

For this assessment, The Food Trust spoke to representatives from each city in order to better understand the local food access landscapes (see the Appendix for a list of interviewees). These conversations provided information about barriers to accessing healthy food for Volusia County residents. We also conducted outreach to grocers from stores of various sizes throughout the study area, to learn about the main challenges they face and to gauge their interest in participation in fresh food initiatives. For example, a conversation with the manager from the Dollar General in Oak Hill, which does not currently offer perishables, indicated that all decisions related to store inventory are made at the corporate level. In addition to this stakeholder data, The Food Trust helped to develop and adapt a community survey that is currently being conducted in Volusia County to assess community members' food access and needs. The results of that survey will help further define the actual and perceived healthy food access landscape in the study area. The team conducting the Health Impact Assessment will also be conducting public meetings, which will include discussion about food access.

Recommendations

The above quantitative and qualitative data supports the need for improved access to nutritious affordable food retail in Volusia County. Given the unique and somewhat complex factors impacting fresh food access in the region, a comprehensive and creative approach will be key for building healthier communities.

We recommend that local health and environmental professionals consider various, comprehensive strategies for increasing food access and healthy decisions, including healthy food financing and healthy corner store programs. Healthy food financing is a tool for providing flexible financing to fresh food retailers serving lower-income, underserved areas. Through this model, loans and grants are available to both new and existing stores and can assist with store upgrades and renovations. In the case of the underserved pockets mentioned above, there may not be the market and population to support the development of a new, large full-service supermarket. For example, based on the industry standard identified by Social Compact, a 45,000 square-foot store would require a customer base of approximately 15,000 shoppers, and the underserved communities referenced above all have significantly smaller populations.[6] However, financing for a new small-scale supermarket, the renovation/expansion of existing stores, or alternative models such as mobile markets or farmers' markets may help residents access food in the areas that were identified as underserved, such as Oak Hill or the pockets on the west side of the railroad tracks in New Smyrna Beach.

Grocery wholesalers are important players to engage when exploring healthy food financing. Wholesalers can often make connections to retailers and recommend high-capacity operators who are interested in expansion. They often provide additional financing, technical assistance and development support for grocery stores. Wholesalers tend to work with many independent grocery operators, who often have more flexibility and room for innovation. Below are the main wholesalers in the region, who supply numerous independent grocers in Florida:

[6] Social Compact, Inc. (2008). Inside Site Selection: Retailers' search for strategic business locations. ICSC Research Review.

-Associated Grocers of South Florida: The largest distribution center in Florida, owned by member-retailers and serving stores of all sizes, http://www.agfla.com/

-Associated Wholesale Grocers: A retailer-owned cooperative serving over 2,300 retail member stores in more than 30 states, http://www.awginc.com/

-Ira Higdon Grocery Company: Serving independent grocers in the region from its Cairo, Georgia warehouse since 1909, http://www.irahigdongc.com/

-Supervalu: Both operates stores under its own corporate banners and serves as a wholesale distributor serving 3,420 stores, many of which are discount stores run as franchises, http://www.supervalu.com/

Healthy corner store programming is another strategy that could provide more comprehensive food access in these areas. These programs help convenience store owners introduce a wider variety of healthy food, and they often include incentives (such as equipment), store owner training and support with distribution. There are numerous convenience stores throughout New Smyrna Beach and Edgewater, including four Kangaroo Express stores and two Circle K stores. Phone calls with local Kangaroo Express stores revealed that some stores do already work with a fruit distributor to sell fruit in their stores, but since Kangaroo Express is owned by Circle K, discussions about potentially expanding their produce offerings would need to go through the Circle K corporate office. There may be a possibility to work with stores like Kangaroo Express or other independently owned small stores to provide technical assistance and any needed renovations to help them serve as a fresh food access point, filling in gaps between grocery stores. More information on healthy corner store strategies and other retail strategies can be found on the Healthy Food Access Portal.[7] Since distribution of healthy food to small stores can also be a barrier for retailers, and The Food Trust recently produced a report which highlights case studies and recommendations for improving distribution systems: *Healthy Food and Small Stores: Strategies to Close the Distribution Gap*.[8] If individual cities in Volusia County do not feel they have the capacity to run their own corner store programs, they could perhaps join a county-wide or regional effort, leveraging partnerships and sources of technical assistance to create an impactful piece of holistic food access efforts in Florida.

Urban farms and community gardens are another increasingly popular approach to improving supply and demand for fresh food in lower-income, underserved areas. Successful and emerging urban agriculture models are allowing residents to take ownership in growing and selling their own food, while creatively re-purposing vacant land, increasing residents' satisfaction with their neighborhood, and offering a space for public gathering.

---

[7] Healthy Food Access Portal, Retail Strategies: http://healthyfoodaccess.org/retail-strategies/

[8] Bentzel D., Weiss S., Bucknum M. and Shore K. (2015). Healthy Food and Small Stores: Strategies to Close the Distribution Gap. Philadelphia, PA: The Food Trust. Copyright The Food Trust 2015. http://thefoodtrust.org/uploads/media_items/healthy-food-and-small-stores.original.pdf

Policies at the city and county level can support urban farming efforts by simplifying processes, reducing regulatory barriers and providing resources. Land banks can be an effective tool for transparently tracking vacant land and transferring property ownership for productive use. The Philadelphia Land Bank passed into legislation in 2013 and began operating in 2015 after finalizing a strategic plan based on community feedback.[9] The Philadelphia Land Bank serves as an example of policy that can help eliminate a common barrier to community gardening: fear of investing in and working land without ownership, and later losing the land through eminent domain or sale to a private developer. Cities and counties can join together to create land banks and outline clear policies and procedures for land ownership and use. These policies should ultimately seek to remove barriers to growing and selling fresh food, especially at schools and retail access points, such as on-site farm stands. Numerous cities, including Boston and Cleveland, have passed recent zoning reforms to better support urban agriculture.[10] [11] In New Jersey, the nonprofit Sustainable Jersey invites municipalities to apply for certification in specific "green areas."[12] Directly connecting urban gardening to retail presents an opportunity to get locally-grown food into the hands of consumers. Urban agriculture can and should be connected to other comprehensive efforts related to healthy eating and active living and overall community health and beautification.

In addition to urban farming, other pieces of a comprehensive approach to healthy food access include in-store nutrition education and marketing, farmers' markets and mobile markets, and innovative partnerships, especially with the faith-based community and health care centers. When considering alternative retail and distribution centers such as farmers' markets, co-ops and food hubs, it is important to examine management expertise and capacity to support the long-term sustainability of such projects. Since food retail is a challenging industry in which profit margins are very slim, The Food Trust generally prefers operators with a minimum of five (preferably more) years of grocery management or ownership experience. Supermarkets/traditional grocery stores tend to offer the most consistent and affordable fresh food offerings at permanent locations year-round. They tend to have support from corporate offices and/or regional wholesalers, and most lower-income residents and Supplemental Nutrition Assistance Program (SNAP) recipients do their shopping at supermarkets. However, nontraditional, community-driven approaches may be the best solution in areas that cannot support a large format grocery store and have other unique circumstances at play, such as Oak Hill.

In Oak Hill, the presence of Scragg's Grove and Gift Shop presents interesting opportunities. On a phone call conducted for this report, a long-time employee of the store expressed desire to increase awareness of the

[9] Philadelphia Land Bank: http://www.philadelphialandbank.org/about/history/
[10] City of Boston, Urban Agriculture: http://www.cityofboston.gov/food/urbanag/
[11] City of Cleveland, Cleveland's Zoning for Urban Agriculture and Green Space: http://planning.city.cleveland.oh.us/zoning/pdf/AgricultureOpenSpaceSummary.pdf
[12] Sustainable Jersey: http://www.sustainablejersey.com/about/

store and its fresh food offerings, and there seems to be potential to help forge connections between the store and Oak Hill residents. Scragg's also owns three trailers, which it takes to sell oranges and other products at farmers' markets outside of Oak Hill (including one in New Smyrna Beach). When asked if they would consider using the trailers to serve other areas of Oak Hill, the employee was hesitant, as she was not aware of unmet demand for additional fresh food retail access in the area.

It is also noteworthy that the Supplemental Nutrition Assistance Program (SNAP) distribution schedule has changed in Florida, effective April 1, 2015. Monthly SNAP distribution dates in Florida have now increased from 15 to 28 days. The Florida Retail Federation's Florida Grocers Association (FGA) strongly supported this legislation. The change is intended to benefit both customers and retailers by allowing for better selection, inventory control and customer service. [13] It will be interesting to see how this change impacts healthy food access for lower-income customers in Volusia County and whether it presents any new opportunities, such as increased SNAP outreach and incentive programming.

Taken together, the potential strategies listed above could lead to comprehensive and innovative efforts with the potential to improve access to nutritious, affordable food for residents of New Smyrna Beach, Edgewater, and Oak Hill, leading to a healthier and more vibrant Volusia County.

[13] Cloud, Kristen. "Florida's SNAP Distribution Period Expands On Friday." The Shelby Report. March 31, 2016. http://www.theshelbyreport.com/2016/03/31/floridas-snap-distribution-period-expands-on-friday/

Appendix

Image #1: Supermarkets and convenience stores in all three cities
Key: Red = New Smyrna Beach, Blue = Edgewater, Yellow = Oak Hill
Squares = supermarkets, Circles = convenience stores

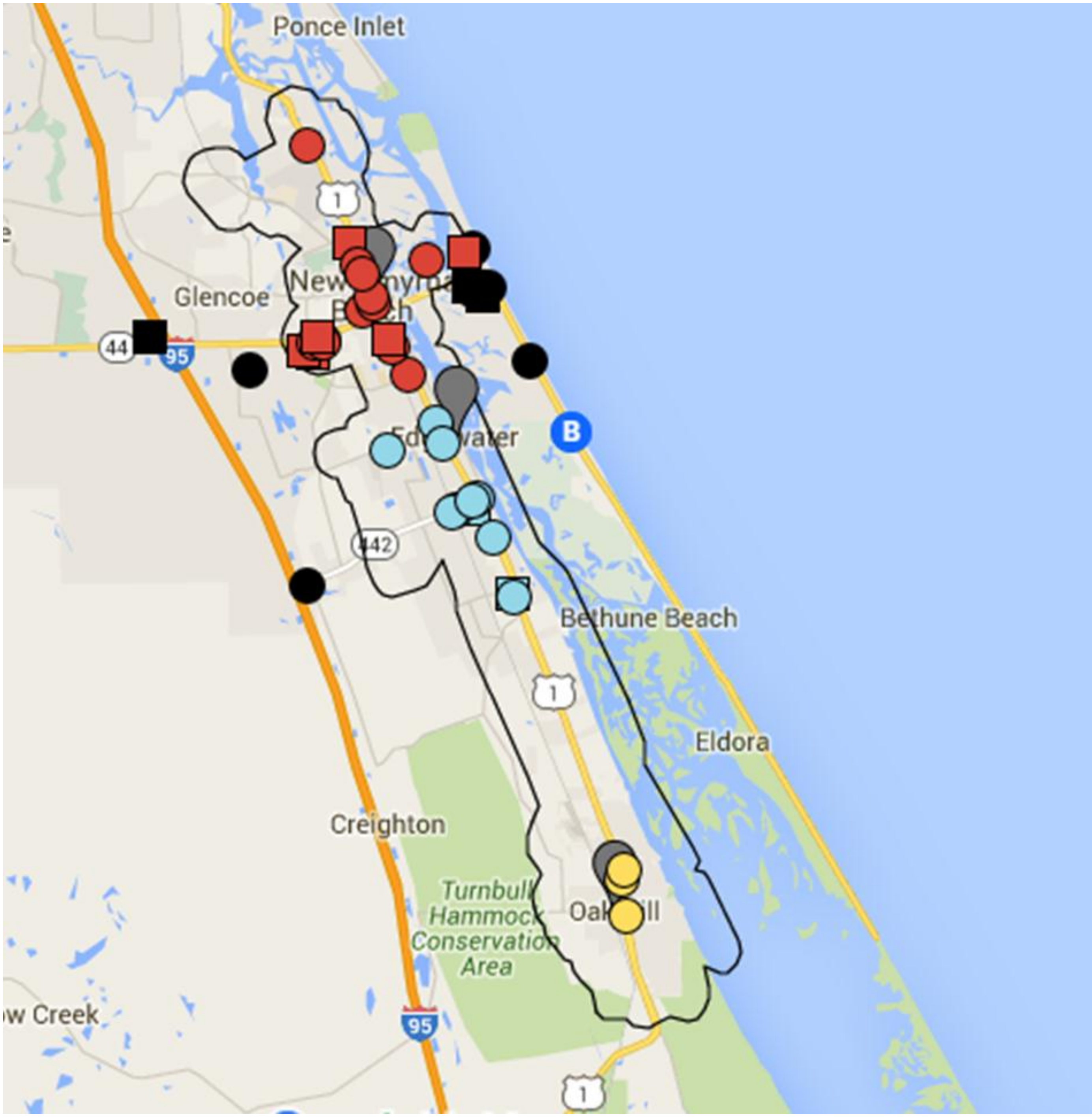


Image #2: Estimated trade areas of full service and limited assortment supermarkets in all three cities

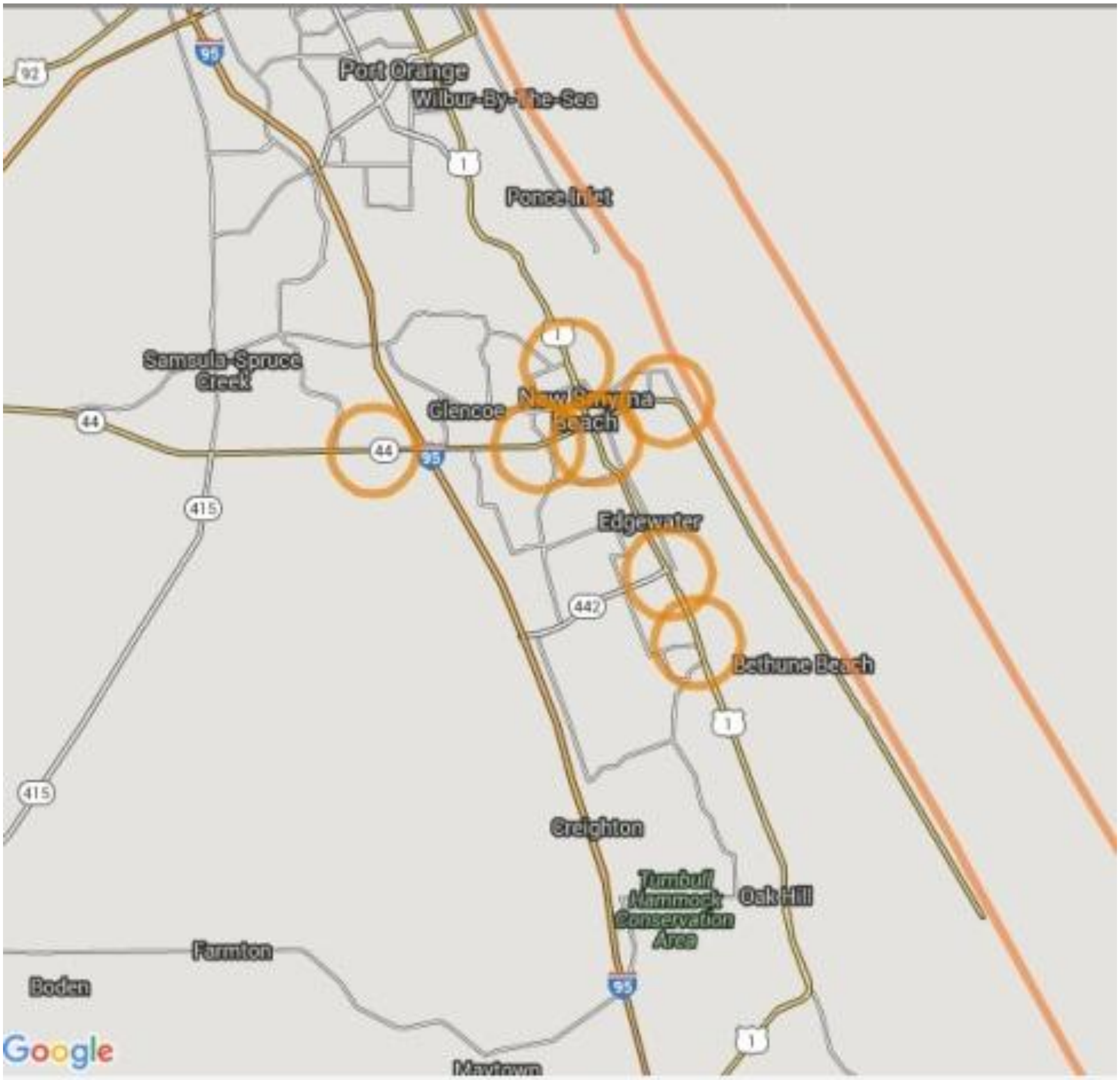


Image #3: Income disparity, New Smyrna Beach, Florida

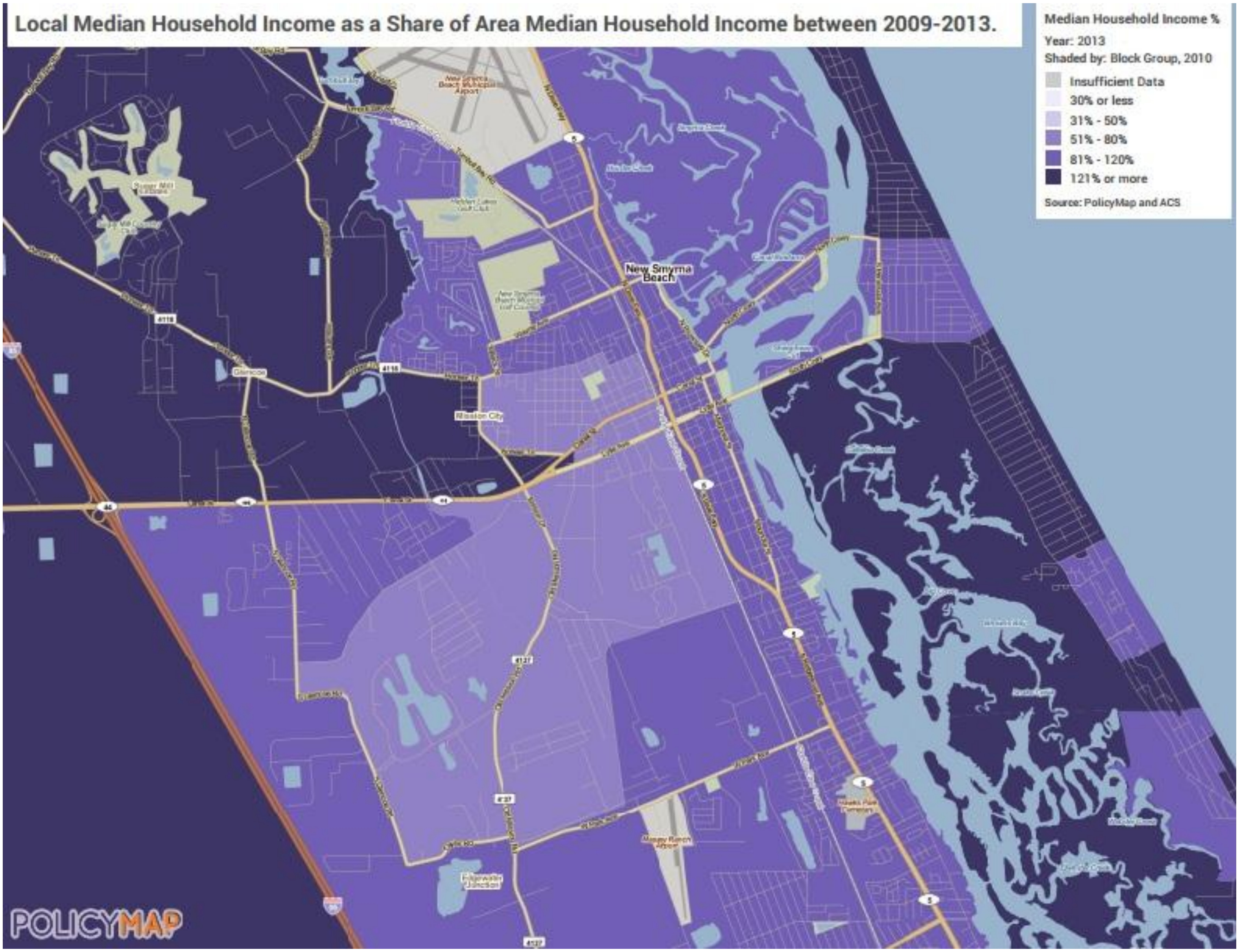


Image #4: Community Reinvestment Act eligible areas, underserved by fresh food retail, Edgewater

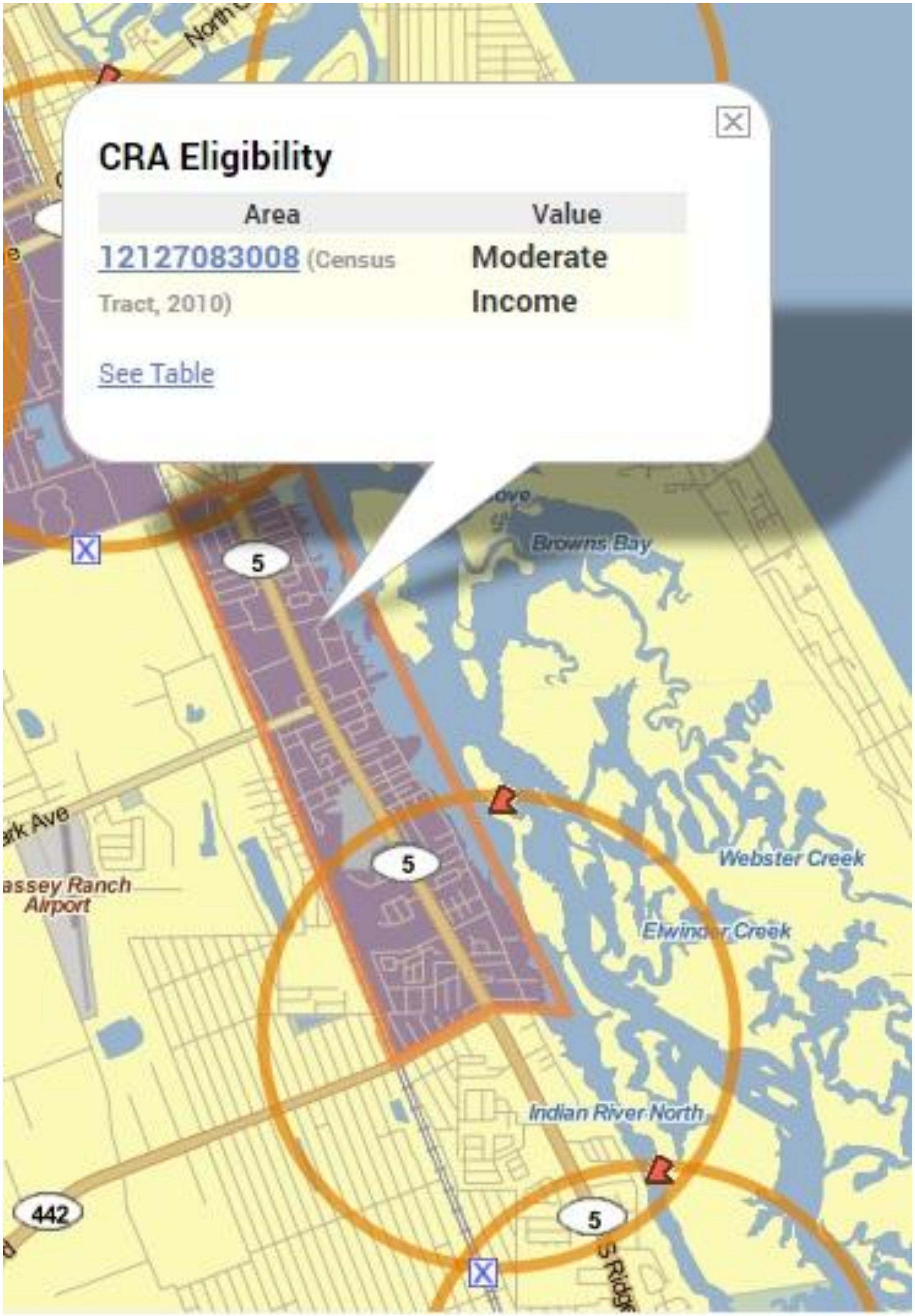
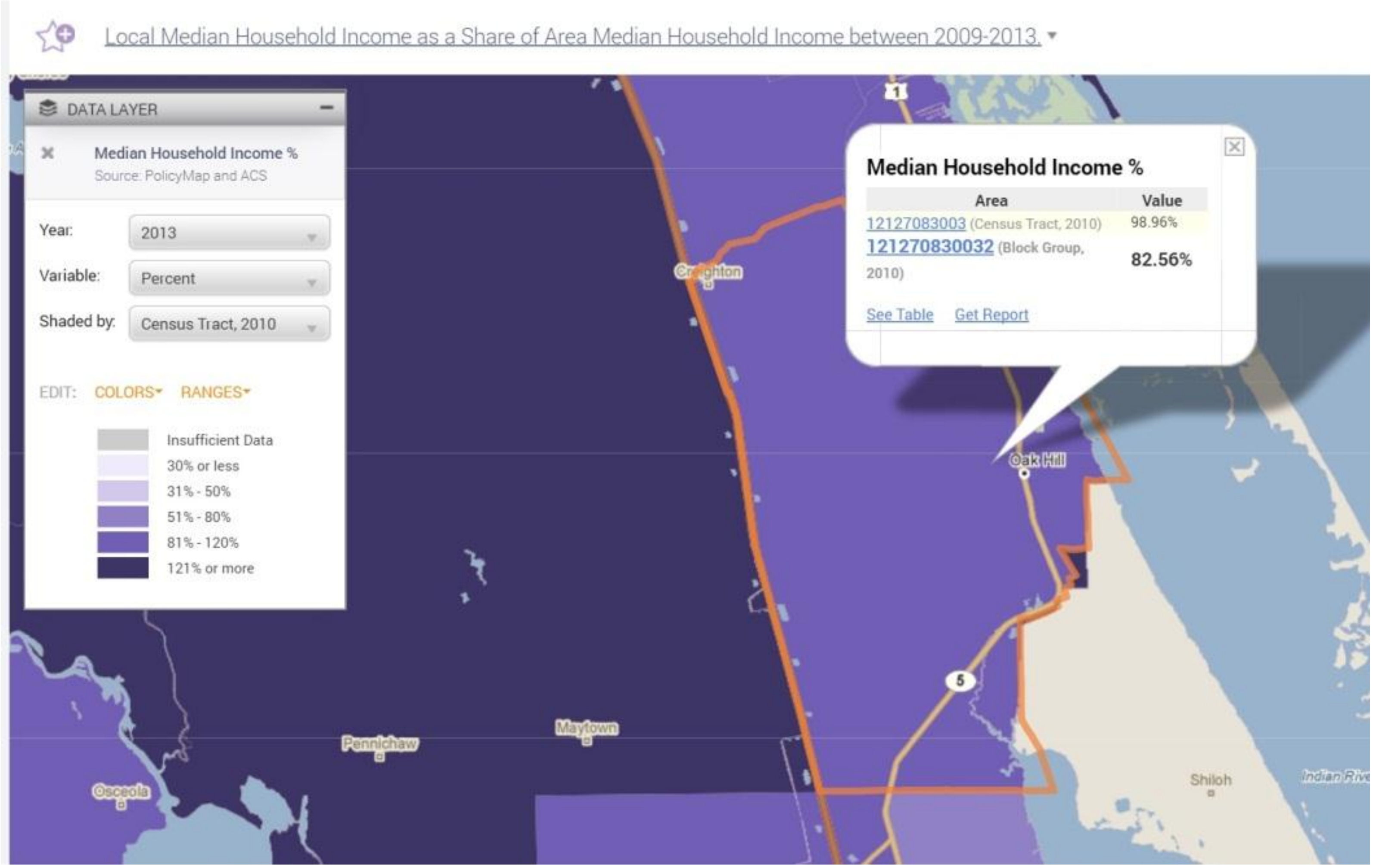


Image #5: Median Household Income, Oak Hill



List of individuals interviewed for this report:

Malecia J. N. Harris, Interim Deputy Director of Leisure Services, Grants/Project Coordinator, City of Edgewater

Kohn Evans, City Administrator, City of Oak Hill

Kat Pontiac, Founder, REANNA Ministries (food bank in Oak Hill)

Employee at Kangaroo Express, 807 Indian River Blvd., Edgewater

Employee at Scragg's Grove & Gift Shop, Oak Hill

Manager at Dollar General, Oak Hill

Review of Fresh Food Retailers in Study Area ZIP codes:

New Smyrna Beach

Publix Super Market at New Smyrna Beach Regional Center
1930 FL-44
New Smyrna Beach, FL 32168
(386) 427-9541
Supermarket
Policy Map: Full-service supermarket
Notes: full produce department; EBT accepted

Winn-Dixie
1835 FL-44, New Smyrna Beach, FL 32168
(386) 423-3111
Grocery Store
Policy Map: Full-service supermarket
Notes: full produce department; EBT accepted

Perrine's
1042 N Dixie Fwy
New Smyrna Beach, FL 32168
(386) 423-2336
Produce Market
Policy Map: N/A
Notes: Full produce selection; EBT accepted

Save-A-Lot (NEW):
720 S Dixie Freeway
New Smyrna Beach FL 32168
386-847-8861
Limited Assortment Supermarket
Notes: recently opened, phone number not yet working

Big Lots
New Smyrna Beach Regional Center
1998 FL-44
New Smyrna Beach, FL 32168
(386) 426-5459
Discount Grocery Store
Policy Map: N/A
Notes: no fresh produce, only cold and frozen food selection; EBT accepted

A K Food Store
727 Canal St
New Smyrna Beach, FL 32168
(386) 423-0566
Convenience Store
Policy Map: N/A
Notes: No produce; EBT accepted

7-Eleven
700 N Dixie Fwy
New Smyrna Beach, FL 32168
(386) 428-2876
Convenience Store
Policy Map: N/A
Notes: Limited selection (bananas, apples, limes); EBT on select items

Circle K
1801 Canal St
New Smyrna Beach, FL 32168
(386) 426-5707
Convenience Store
Policy Map: N/A
Notes: no produce; EBT accepted

Kangaroo Express
2600 N. Dixie Freeway
New Smyrna Beach, FL 32168
(386) 427-3210
Convenience Store
Policy Map: N/A
Notes: Limited selection (bananas, apples, limes); EBT accepted

Citgo Foodmart
199 N Dixie Fwy
New Smyrna Beach, FL 32168
(386) 428-3611
Gas Station/Convenience Store
Policy Map: N/A
Notes: None; EBT accepted

Circle K
1700 S Dixie Fwy, New Smyrna Beach, FL 32168
(386) 428-7717
Gas Station/Convenience Store
Policy Map: N/A
Notes: Limited selection (bananas, apples, limes); EBT accepted

Exxon
301 N Dixie Fwy
New Smyrna Beach, FL 32168
(386) 402-7804
Convenience Store
Policy Map: N/A
Notes: none; EBT accepted

Walgreens
800 Highway A1A
New Smyrna Beach, FL 32168
(386) 426-0725
Convenience Store
Policy Map: N/A
Notes: None; EBT accepted

Walgreens
1800 FL-44
New Smyrna Beach, FL 32168
(386) 428-1558
Convenience Store
Policy Map: N/A
Notes: None; EBT accepted

Walmart Supercenter
3155 FL-44
New Smyrna Beach, FL 32168
(386) 427-5767
Retailer – groceries
Policy Map: Full-service supercenter
Notes: Full produce department; EBT accepted

Kangaroo Express
3930 FL-44
New Smyrna Beach, FL 32168
(386) 427-0302
Convenience Store
Policy Map: N/A
Notes: Limited selection (bananas, apples, limes); EBT accepted

Kwik Way
620 N Dixie Fwy
New Smyrna Beach, FL 32168
(386) 427-2547
Convenience Store – Gas Station
Policy Map: N/A
Notes: Limited selection (bananas, apples, limes); EBT accepted

Lil' Sammy's Food Mart
1121 S Dixie Fwy
New Smyrna Beach, FL 32168
(386) 957-4810
Convenience Store
Policy Map: N/A
Notes: store unavailable for contact

Dollar General
1433 S Dixie Fwy
New Smyrna Beach, FL 32168
(386) 423-8090
Policy Map: Limited-service dollar store
Notes: None; EBT accepted

Dollar Tree
1952 FL-44, New Smyrna Beach, FL 32168
New Smyrna Beach, FL 32168
(386) 427-9668
Policy Map: Limited-service dollar store
Notes: None; EBT accepted

Edgewater

Winn-Dixie
1838 S Ridgewood Ave
Edgewater, Fl 32141
(386) 427-2094
Grocery Store
Policy Map: Full-service supermarket
Notes: unavailable for contact; no website

Kenny's Groceries
603 W Indian River Blvd
Edgewater, FL 32132
(386) 424-5660
Convenience Store – groceries, liquor
Policy Map: N/A
Notes: none; EBT accepted

Publix Super Market at Edgewater Commons
2970 S Ridgewood Ave
Edgewater, FL 32141
(386) 427-6022
Supermarket
Policy Map: Full-service supermarket
Notes: Full produce department; EBT accepted

Kangaroo Express
807 Indian River Blvd
Edgewater, FL 32132
(386) 427-6446
Convenience Store
Policy Map: N/A
Notes: Limited selection (bananas, apples, limes); EBT accepted

Kangaroo Express
1805 S. Ridgewood Ave
Edgewater, FL 32132
(386) 427-2351
Convenience Store
Policy Map: N/A
Notes: Limited rotating assortment (bananas, apples); EBT accepted

Now Inc.
115 N Ridgewood Ave
Edgewater, FL 32132
(386) 424-9694
Convenience Store
Policy Map: N/A
Notes: unavailable for contact; no website

Outpost Majestic
1950 W Park Ave
Edgewater, FL 32132
(386) 426-8806
Convenience Store
Policy Map: N/A
Notes: unavailable for contact; no website

Magic Mart
410 S Ridgewood Ave
Edgewater, FL 32132
(386) 423-2777
Convenience Store
Policy Map: N/A
Notes: unavailable for contact

CVS Pharmacy
1806 S Ridgewood Ave
Edgewater, FL 32132
(386) 423-4674
Pharmacy
Policy Map: N/A
Notes: None; EBT accepted

Edgewater Marathon
2340 S Ridgewood Ave
Edgewater, FL 32141
(386) 409-7161
Convenience Store
Policy Map: N/A
Notes: unavailable for contact; no website

Edgewater Trading Post
3336 FL-442
Edgewater, FL 32132
(386) 427-2423
Convenience Store
Policy Map: N/A
Notes: Limited selection (bananas, apples, limes); no EBT

Walgreens
3010 S Ridgewood Ave
Edgewater, FL 32141
(386) 427-5208
Convenience Store
Policy Map: N/A
Notes: None; EBT accepted

Family Dollar
109 E Boston Road
Edgewater, FL 32141
(386) 423-7246
Policy Map: Limited-service dollar store
Notes: None; EBT accepted

Dollar General
2798 S Ridgewood Ave
Edgewater, FL 32141
(386) 409-9188
Policy Map: Limited-service dollar store
Notes: None; EBT accepted

Oak Hill

Sunoco Gas Station
262 US-1
Oak Hill, FL 32759
(904) 345-1500
Gas Station/Convenience Store
PolicyMap: N/A

Dollar General
107 S US Highway 1
Oak Hill, FL 32759
(386) 345-0487
Policy Map: Limited-service dollar store
Notes: None; EBT accepted

Scragg's Grove & Gift Shop
275 N US Highway 1
Oak Hill, FL 32759
(386) 345-3819
Policy Map: N/A
Notes: has small produce section, including citrus grown in Oak Hill

Additional Healthy Food Access Resources

Access to Healthy Food and Why It Matters
Bell J., Mora, G., Hagan E., et al. (2013) Oakland, CA: PolicyLink and The Food Trust
http://thefoodtrust.org/uploads/media_items/access-to-healthy-food.original.pdf

Healthy Food Access Portal
http://healthyfoodaccess.org

Healthy Food and Small Stores: Strategies to Close the Distribution Gap
Bentzel D., Weiss S., Bucknum M. and Shore K. (2015). Philadelphia, PA: The Food Trust
http://thefoodtrust.org/uploads/media_items/healthy-food-and-small-stores.original.pdf

The Healthy Food Financing Handbook
Lang B., Harries C., Manon M., et al. (2013) Philadelphia, PA: The Food Trust
http://thefoodtrust.org/uploads/media_items/hffhandbookfinal.original.pdf

The National Healthy Corner Stores Network
http://thefoodtrust.org/what-we-do/administrative/healthy-corner-stores-network