

# Fairfax Food Council

## 2015 Community Food Assessment





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## EXECUTIVE SUMMARY

In November 2008, the Fairfax County Health Department (FCHD) initiated a comprehensive strategic planning process to identify public health needs in the Fairfax-Falls Church community and develop goals and strategies to address those needs. This Community Food Assessment report is a continuation of that effort.

Fairfax County holds the distinction of being one of the wealthiest counties in the country. Despite this, there are a significant number of individuals and families who are unable to obtain adequate healthy food on a regular basis. The right to adequate and sufficient food is identified as a basic human right by General Comment (No. 12) of the United Nations Committee on Economic, Social, and Cultural Rights. The Committee declared that “the right to adequate food is realized when every man, woman and child, alone or in community with others, has physical and economic access at all times to adequate food or means for its procurement. The right to adequate food shall therefore not be interpreted in a narrow or restrictive sense which equates it with a minimum package of calories, proteins and other specific nutrients.”

In our community, the Partnership for a Healthier Fairfax (PFHF) has identified equity as one of its core values to be addressed in making the community a healthier place for all who live, work, and play here. The Fairfax Food Council also echoes this with its vision statement: “a vibrant food system where healthy, accessible, and affordable food is valued as a basic human right.”

This Community Food Assessment was coordinated by the PFHF, Healthy Eating Team, and funded by a Kaiser Permanente of the Mid-Atlantic States Community Benefit grant. It was intended to examine the current status of access to healthy food including the identification of existing barriers to achieving this human right. Information gathered will be used to develop and implement activities to promote increased accessibility and affordability of food in our community.

The findings of the CFA indicate that we have the potential to positively impact the health of residents through efforts to:

1. Promote the Supplemental Nutrition Assistance Program (SNAP) acceptance at farmers markets, expand farmers markets and explore options for the Special Supplemental Nutrition Program for Women, Infants and Children (WIC)
2. Expand WIC/SNAP acceptance at stores
3. Create new community gardens
4. Provide education on nutrition and budgeting
5. Enhance transportation services for senior citizens
6. Conduct additional demographic research.

“ Food kind of touches everything. It’s the beginning of everybody’s day. What they’ve eaten, both that day and over time, really affects the quality of their life; ”

Dorothy McAuliffe (2015), First Lady of the Commonwealth of Virginia.

## WHAT IS A COMMUNITY FOOD ASSESSMENT?

“A Community Food Assessment (CFA) is a collaborative and participatory process that systematically examines a broad range of community issues and assets, to take action to make the community more food secure. CFAs discover challenges in the local food system and food environment and also identify community assets to improve these weaknesses” (Community, 2002). The “community” in a CFA is defined by the group undertaking the work. It may be identified by zip codes, census tracts, a town, county, or region.

Each CFA is unique as it can be developed and implemented based on information most relevant to the conditions and concerns of a particular community. There are many tools and resources available to conduct a CFA. Some include analysis of existing conditions, conducting surveys, holding community listening sessions, as well as spending time in the communities and speaking with residents and stakeholders. Depending on the region, the focus may include local farmers or urban agriculture.

This assessment includes information about the local food system and combines existing data, community (resident) surveys, as well as a review of the food environment, which includes food stores, community gardens, farmers markets, and emergency food providers. Key to the resulting recommendations from this report was the perspective of the community residents towards their ability to access affordable healthy food as well as their shopping behaviors. The findings and recommendations are intended to guide the work of the PFHF in the Fairfax community by extrapolating to the broader Fairfax County community the information obtained from the three communities included in this assessment.

### *Health and Diet*

The relationship between food and health is well documented (CDC, 2014). It is known, for example, that cardiovascular disease and obesity are often connected to poor diet. It is also recognized that increasing the consumption of fruits and vegetables (5 A Day) is associated with decreasing the risk of such chronic diseases as hypertension, heart disease, and stroke. Access to healthy foods is also associated with increased consumption of fruits and vegetables and improved health. Poor dietary intake and obesity are both risk factors of chronic disease, including diabetes, hypertension, heart disease and some cancers. In addition, the quality of the food we eat is also fundamental to our physical and mental health. Research shows that regularly eating healthy, well-balanced meals contributes to maintaining better weight and overall physical and mental health (CDC, 2015).

# THE PARTNERSHIP FOR A HEALTHIER FAIRFAX

In November 2008, the Fairfax County Health Department (FCHD) initiated a comprehensive strategic planning process, Mobilizing for Action through Planning and Partnerships (MAPP), as developed by the National Association of County and City Health Officials (2014), to identify public health needs in the Fairfax-Falls Church community and develop goals and strategies to address them. From these efforts, the PFHF community coalition was established in 2010. The PFHF is a diverse coalition of individuals and public, community, and business organizations working to improve community health by mobilizing resources, increasing awareness, and promoting change. The vision of the PFHF is for an engaged and empowered community working together to achieve optimal health and well-being for all who live, work, and play here. The PFHF continued MAPP and guided a community health needs assessment process for the Fairfax Community which resulted in the development of the Community Health Improvement Plan (CHIP) in September 2013. The CHIP comprises action-oriented objectives and strategies intended to affect policy, systems, and environmental changes needed to address preventable chronic diseases such as some cancers, diabetes, heart disease, and obesity. Seven priority issues for change were identified: Healthy and Safe Physical Environment, Active Living, Healthy Eating, Tobacco-Free Living, Health Workforce, Access to Health Services, and Data. Seven teams were organized around these CHIP priority issues.

The Healthy Eating team was established to increase the accessibility and affordability of food through two overarching goals:

## ***Goal 1: Increase the accessibility and affordability of healthy food by:***

- Establishing a food policy council to examine the local food system and make recommendations for how to increase access to healthy and affordable food in underserved areas
- Increasing the amount of healthy food that is donated to pantries
- Establishing new community and school gardens in additional locations
- Reviewing gaps and opportunities for improving healthy and affordable food options at farmers markets and all other food retail outlets in low income neighborhoods.

## ***Goal 2: Increase the number of environments that promote healthy food choices and educational resources by:***

- Increasing the number of schools that adopt healthy eating guidelines outside of the Fairfax County Public Schools' Food and Nutrition Services setting
- Increasing the number of faith communities that adopt healthy eating guidelines
- Increasing the number of family child care providers and child care centers participating in the Child and Adult Care Food Program
- Promoting healthy eating resources in the business community.

Since the launch of the CHIP, with funding support from Kaiser Permanente, the Department of Health and Human Services/Centers for Disease Control and Prevention and the Virginia Department of Health, the Healthy Eating Team has been working towards its overall goal of increasing the accessibility and affordability of healthy food and the development of a Fairfax Food Council (FFC). The team convened in November 2013 to review the healthy eating objectives and begin to learn about food councils – what they are, potential models, work of other councils, relevant resources, and best practices. Subsequent meetings included: brainstorming and discussion on a potential purpose and mission for the council, guest presenters from other food councils, a review of food access mapping, and a planning session with staff from the Johns Hopkins Community Food Program.

The aim of the FFC is to advocate for and promote food system and policy changes benefitting the greater Fairfax community, especially underserved areas, ultimately leading to the increased consumption of healthier food and lowered consumption of less nutritional food.

Additional CHIP work completed includes: assisting with a collaborative project for delivering fresh produce at no-cost through a “market” format in the Reston community; identifying healthy eating resources for faith communities; the development of a food pantry brochure, “Guidelines for Healthy Food Donations”, a garden tool share program, and workshops and presentations to encourage faith communities to establish community gardens and support for food pantries. Additionally, the Community Gardens Working Group created an inventory of all known community garden locations throughout Fairfax County. This serves as a tool in identifying areas lacking gardens and/or potentially underused land. This working group intends to increase the sense of community within the garden community and develop partnerships between gardens and pantries.

In the fall of 2014, the Healthy Eating Team changed its name to the FFC Task Force as an interim step to formalizing itself as the FFC (under the auspices of the PFHF). In its new form, the FFC Task Force spearheaded the Community Food Assessment in an effort to review food access needs in three high-need communities (Baileys Crossroads, Reston/Herndon, and Mount Vernon) identified in the PFHF community assessment. The CFA was a collaborative effort undertaken by members of the FFC Task Force and the Fairfax County Health Department; GMU’s Department of Social Work’s undergraduate senior class, which was critical in the collection and analysis of data; and GMU’s Department of Nutrition and Food Studies, that provided interns to assist with the assessment. The intent of the CFA is that its findings will be used to inform the work of the FFC as it moves forward.

# COMMUNITY PROFILE

## Overview

Fairfax County is a 395-square-mile area located in Northern Virginia in the Washington, D.C. Metropolitan Area. Fairfax County is the most populous jurisdiction in both Virginia and the Washington, D.C. region. With more than 1.1 million residents, it has a population size larger than eight states and continues to grow each year. As an immigrant gateway, the population is racially and ethnically diverse, with minorities comprising 37 percent of the population. More than 120 languages are spoken in Fairfax County.

Fairfax County's public school system is 10<sup>th</sup> largest in the country with 188,545 students (2015 - 2016 projected student enrollment) (FCPS, About, 2015). The county is also home to several colleges and universities including: George Mason University; Virginia Tech – National Capital Region; Marymount University and Northern Virginia Community College. Fairfax County is a well-educated community. Sixty percent of the population age 25 and older has at least a bachelor's degree compared to the national average of 28.8 percent (U.S. Census, 2015).

TIME magazine has called Fairfax County "one of the great economic success stories of our time" (Fairfax Chamber, 2015). Repeatedly ranked among the wealthiest counties nationwide, the median family income is estimated to be \$111,079 (U.S. Census, 2015). This compares to \$62,666 statewide and \$52,250 nationwide. With these assets, the county would appear well poised for the challenges and opportunities of the 21<sup>st</sup> century.

Despite these assets, Fairfax County has the highest number of food insecure individuals – 67,190 of its 1.13 million residents (6.1 percent) – in the Commonwealth of Virginia (Feeding America, 2013). In addition, approximately 86,000 residents live in households with incomes between 100 to 185 percent of the poverty level (Cahill & Khaja, 2011). Over 44,000 residents receive SNAP, and over 25 percent of FCPS students receive free or reduced-price meals. There are communities within the County where many live below the poverty level and face significant linguistic, cultural, and financial barriers to meeting basic needs. Many residents face preventable health risks from inadequate physical activity, poor nutrition, and/or obesity.

Providing frequent and easy access to healthy food choices is necessary to improve nutrition in the Fairfax community. The 2012-2013 Fairfax County Youth Survey showed that nearly 75 percent of students did not eat five or more fruits and vegetables per day (Fairfax County Government, 2012). According to the County Health Rankings, 20% percent of adults in Fairfax County are obese (University, 2015). Finally, the Virginia Atlas for Community Health reported that in 2013, 28 percent of youth ages 14 to 19 in Fairfax County were classified as overweight or obese (Virginia, 2013). A high percentage of minority and ethnic populations in Fairfax County are disproportionately affected by poverty and its effects. According to the Virginia Department of Health (VDH), health disparities exist among these cohorts for various cancers, cardiovascular diseases, cerebrovascular diseases, Alzheimer's disease, chronic respiratory disease, and diabetes mellitus mortality rates (Verite, 2013).

Recalling the UN declaration - that adequate and sufficient food is a basic human right - and the PFHF core value for equity, the disparities in food access and the resulting impact on health are significant to our community and support healthy eating as a priority issue for Fairfax County.

## Self-Sufficiency Standard and Levels of Poverty

The Virginia Department of Social Services (VDSS) defines the self-sufficiency standard as the income working families need to meet their basic necessities without private or public assistance (VDSS, 2006). Basic minimum needs include: housing, childcare, food, transportation, health care, miscellaneous expenses (clothing, telephone, household items), and taxes (minus federal and state tax credits). The Weldon Cooper Center at the University of Virginia estimates that the average household needs to earn approximately two times the poverty level to approach self-sufficiency income (Weldon, 2009). The 2015 U.S. federal poverty level for a family of four is \$24,250 (Federal, 2015). In Northern Virginia, a family of four would need \$64,222 to meet their expenses (the average for the state is \$46,100). Fairfax County, with its disproportionately higher income earners, has a higher cost of living than some neighboring areas. According to the Economic Policy Institute, a family of four living in the Washington DC metro area needs \$88,285 per year to live modestly (Economic, 2013). So, while a household may not meet the criteria of being at the poverty level, members may still be living below the self-sufficiency standard, making it difficult to maintain their basic necessities. See Table 1 for poverty levels in Fairfax County.

**Table 1: Poverty levels in Fairfax County**

Of the 1,120,638 population for whom poverty is determined:	Number	Percent
1 in 17 people live in poverty	64,851	5.8%
1 in 13 children under age 5 live in poverty	5,938	7.9%
1 in 13 children under age 18 live in poverty	19,704	7.3%
1 in 20 people over the age of 65 live in poverty	6,531	5.3%
1 in 6 county residents have incomes under 200 percent of poverty	172,053	15.4%

*(Fairfax County Government, State, 2014)*

For the purposes of this report, three specific areas of Fairfax County were examined in terms of food insecurity and availability. They are Bailey's Crossroads (zip codes 22041, 22042, and 22043, and 22044) Reston/Herndon (zip codes 20170, 20171, 20190, and 20191), and Mount Vernon (zip codes 22306 and 22309) (See Appendix A). These areas are considered pockets within the county where there is need for assistance in addressing food access and insecurity. More detail about the demographics and poverty status can be found in the Existing Conditions section of the report on page 13.

## METHODS

The CFA is a synthesis of information gathered from the Herndon/Reston, Bailey's Crossroads, and Mount Vernon communities. These three areas were identified as high need through the Community Health Improvement Plan (CHIP), which was developed during the process known as Mobilizing for Action through Planning and Partnerships (MAPP). For the purpose of this report, community boundaries have been defined by zip codes, as listed previously, unless otherwise indicated.

Data for the CFA was collected using several tools in order to present a multi-faceted picture of food security. The same tools and methods were used in all three communities. The specific tools include:

1. Primary Data Collection
  - Community survey
  - Food store assessment
  - Informal stakeholder interviews
2. Secondary data collection of existing conditions

### *The Community Survey*

Survey questions were developed after a review of similar CFA surveys conducted throughout the country. Using information gathered from the analysis of these surveys, a survey tool was created consisting of 26 questions. The desired outcome was to learn about the respondent's food purchasing and eating habits; barriers encountered when attempting to access healthy foods; ideas for possible solutions to issues surrounding healthy food procurement; and links between an individual's health and diet.

Survey data was collected from the three communities. Individuals were invited to participate at community centers, senior centers, health clinics, Fairfax County Public Schools (FCPS) and at houses of worship. The surveys were administered over a five-week period during the winter of 2015.

Surveys were made available in hardcopy and online. In an effort to gather the greatest number of responses across an ethnically and linguistically diverse population, the survey was translated from English into six languages: Spanish, Arabic, Chinese, Korean, Vietnamese, and Urdu.

The survey was given to the senior class of the undergraduate social work program at GMU to disseminate to all locations except public schools and the faith community. Working with the FCPS Office of Communications, the project team sent an email to all parents of students enrolled in each school in the targeted zip code areas, inviting them to participate. In an effort to include as many participants as possible, Parent Liaisons in those schools assisted parents as needed to complete the surveys (for example, in cases of language or process barriers). In addition, an invitation to participate was sent by the Community Interfaith Coordinator in Fairfax County's Department of Neighborhood and Community Services to all houses of worship in the identified zip codes.

Students from the participating GMU Department of Social Work class were responsible for the distribution of surveys and for inputting hard copy responses from all locations except those from the faith community (houses of worship) and the public schools. SurveyMonkey.com was used to collect online survey data. For the purpose of data analysis, information was then segregated by zip code and community as well as income level (those making \$50,000 or less annually and those above this income).

The CFA survey was sent out electronically to all parents of students in schools in targeted zip code areas via the FCPS Keep in Touch system. Additionally, the Program Manager for County Interfaith Coordination sent an electronic copy of the survey for bulletin and website announcements as well as a link to the electronic survey for promotion through houses of worship located in the target communities.

Hard copy surveys were distributed with the following goals for completion:

- 10-15 at each of the three Community Health Care Network (CHCN) locations (one site per target community)
- 20-25 at each of the community and senior centers (roughly four total sites in each of the three target communities)
- 50 to be completed at each of three food pantries (one per community).

The total number of surveys completed was 1,862 of which 1,574 were analyzed. Surveys included in the analysis are only from the identified zip codes. Therefore, completed surveys with alternate zip codes were not included in the analysis. A copy of the community survey can be found in Appendix B.

In an effort to increase participation, respondents were given the opportunity to enter a drawing for one of 12 grocery store gift cards ranging in value from \$20-30. In order to maintain the confidentiality of the survey responses, a form containing drawing contact information was collected separately. An online random number generator ([www.stattek.com/statistics/random-number-generator.aspx](http://www.stattek.com/statistics/random-number-generator.aspx)) was used to eliminate selection bias. Individuals with winning numbers were contacted and the gift cards were mailed. Seven hundred sixty-eight people entered the drawing.

### ***Healthy Food Availability Index (HFAI)***

The goal of the food store assessment was to broadly determine the availability of healthy food by store category and community. Using information provided by the FCHD, the project team compiled an initial list of retail food establishments. Its origins were gathered from locations where the county conducts food health inspections in the three communities. Specialty stores such as bakeries, ice cream shops, and farmers markets were eliminated from the list since they did not carry the variety of foods being assessed. Stores surveyed in this assessment included convenience stores, international stores, drug stores, supermarkets, superstores, and local corner stores.

The assessment tool was the Healthy Food Availability Index (HFAI) survey created by the Johns Hopkins Center for a Livable Future. This was developed based on the Nutrition Environment Measurement Survey (NEMS) created by Dr. Karen Glanz at Emory University. The survey:

- Identifies the type of store being assessed, confirmation of the store's existence, if the store had a parking lot, if the store accepted WIC/SNAP benefits, the number of aisles and registers, and a store's refusal to have the survey administered.
- Measures the availability of twelve types of food: milks, juices, fruits, vegetables, beef, chicken, seafood, frozen foods, packaged foods, canned foods, bread, and breakfast cereals. The survey also identified how many different options of each food type were available.

The HFAI survey was conducted by the social work students from GMU during the winter of 2015. A copy of the HFAI survey can be found in Appendix C.

## ***Stakeholder Interviews***

The project team conducted interviews with key stakeholders in each of the identified areas in order to supplement the survey, HFAI, and existing demographic data. The interviews centered on the perspective of key stakeholders working in agencies or facilities that provide services to those struggling with food insecurity and poverty issues. These individuals work in close contact with those in need, serving as a safety net for individuals and households struggling with food access. Stakeholders were selected based on input from PFHF and initial interviews held with Fairfax County regional service managers in each of the three targeted areas. Thirteen interviews were conducted with identified stakeholders. Directors from five food pantries were interviewed as well as two parent liaisons from elementary schools in the targeted areas. Interviews with a community center director along with three community organizers were also included. In addition, a senior center director and senior housing director provided input on needs of the senior populations they serve. Guiding questions were used in interviews with sessions recorded so they could be reviewed and transcribed to identify consistent themes and data. A copy of the stakeholder interview questions can be found in Appendix D.

## ***Secondary Data Collection of Existing Conditions***

Relevant information regarding the community demographics including: population, race, ethnicity, etc. was pulled from current information provided primarily through Fairfax County and the U.S. Census Bureau.

# EXISTING CONDITIONS

This report focuses on three communities in Fairfax County commonly known as Reston/Herndon, Bailey’s Crossroads, and Mount Vernon. All three of these communities are characterized by a high percentage of minority and ethnic populations disproportionality affected by poverty and its effects. For the purposes of this review, community boundaries were defined by zip codes. Some data was more readily available by census tracts, and therefore when used, was overlaid with zip codes to obtain needed information. As a result, slight discrepancies may exist. This CFA report is intended to provide a more generalized overview of conditions.

## Demographics

Fairfax County represents approximately 14 percent of Virginia’s population and the three communities being examined in this report account for 26 percent of the Fairfax County population (U.S. Census, 2015). See Table 2.

**Table 2: 2014 Population**

2014 Population			
Fairfax County	Reston/Herndon	Bailey’s Crossroads	Mount Vernon
1,116,246	134,080	93,368	63,826
100%	12%	8%	6%

*(Fairfax County Government, Population, 2014)*

Table 3 highlights the diversity of the county as well as the ethnic mix within each of the examined communities.

**Table 3: Population, Race and Ethnicity**

Race/Ethnic Origin	Fairfax	Reston/Herndon	Bailey’s Crossroads	Mount Vernon
White (non-Hispanic)	55%	55 %	47%	38%
Black (non-Hispanic)	9%	8 %	6%	24%
Asian/Pacific Islander	17%	18 %	17%	8%
Other Race or Multi-Racial	3%	4%	3%	3%
Hispanic (may be of any race)	16%	15%	27%	28%

*(U.S. Census, 2010)*

The median income of the county’s residents in 2013 was \$111,079, which is well over the median income of the state at \$62,666 (U.S. Census, 2015). Because median income of the communities studied is gathered from all zip codes combined, it does not adequately highlight the pockets of need. However, the community survey results presented later in this report shed light on this. Table 4 shows the median income for each community.

**Table 4: Median income**

Median Income and Poverty	Fairfax	Reston/Herndon	Bailey's Crossroads	Mount Vernon
Median House-hold Income	\$111,079	\$112,156	\$86,231	\$71,717
Below poverty level	6%	7%	10%	11%
185% of poverty level	14%	10%	21%	25%

(U.S. Census, 2015)

**Food Insecurity Data**

Fairfax County fields calls requesting assistance through their Coordinated Services Planning (CSP) department. CSP provides information, referral, linkage, and advocacy to public and private human services available to Fairfax County residents. Through partnerships with community-based organizations and other Fairfax County agencies, they assist callers with services, some of which cover basic needs. Data collected on requests for assistance, indicate that food assistance is the most frequent request followed by housing. A main objective for CSP is to prevent homelessness. Food assistance is always part of the plan to maintain housing. For instance, if money can be allocated to rent, then CSP works with food assistance programs to supplement the lack of money for food. Low income is usually the underlying reason for the call. In 2014, CSP reported that 7,644 calls or 13.4 percent of all calls received were related to emergency food, followed by emergency financial assistance for housing. Table 5 shows that while the three communities of focus have the same emergency needs, there are some slight differences from the third to fifth most frequent topic requests.

**Table 5: Selected Calls to CSP**

Total Calls and % for top 5 Contact Topic within Community Period: 1/1/14-12/31/14			
Fairfax	Mount Vernon	Bailey's Crossroads	Reston/ Herndon
Total Calls 56953	Total Calls 7964	Total Calls 7120	Total Calls 6844
Emergency Needs/ Food 13.4%	Emergency Needs/ Food 12.1%	Emergency Needs/ Food 18.5%	Emergency Needs/ Food 10.8%
Financial – Emergency – Rent/ Mortgage/ Sec Dep 9.4%	Financial – Emergency – Rent/ Mortgage/ Sec Dep 11.9%	Financial – Emergency – Rent/ Mortgage/ Sec Dept 8.5%	Financial – Emergency – Rent/ Mortgage/ Sec Dep 10.0%
Financial – Emergency – Utility Assist 5.7%	Financial – Emergency – Utility Assist 6.7%	Food Stamps 6.0%	Financial – Emergency – Utility Assist 6.9%
Food Stamps 5.2%	Employment – Job Search/ Placement 5.9%	Employment – Job Search/ Placement 4.4%	Employment – Job Search/ Placement 5.3%
Employment – Job Search/ Placement 4.9%	Food Stamps 5.3%	Financial – Emergency – Utility Assist 4.0%	Food Stamps 4.9%

(Fairfax County Government, Coordinated Services, 2015)

Leete and Bania (2010) explain that negative income “shocks” or events that cause funds to be reallocated away from food purchases can have a detrimental effect on food security. These negative income shocks such as a loss of job, healthcare needs, childcare or loss of food stamps can be particularly troublesome for those that do not have savings (Gundersen & Gruber, 2001).

## **Food and Nutritional Assistance Programs**

### *Supplemental Nutrition Assistance Program (SNAP)*

The Supplemental Nutrition Assistance Program (SNAP), formerly known as Food Stamps is intended to provide nutritional food access to low-income households. The majority of recipients are children, seniors, and those with disabilities. Nearly 80 percent of recipients live in or near large cities, 11 percent live in or near smaller cities and towns, and approximately seven percent live in rural areas (USDA, Characteristics, 2014). There are eligibility requirements, such as income levels that residents must meet in order to qualify for these benefits. For instance, a family of four would need to have a gross monthly income of no more than \$2,584 or \$31,000/annually to qualify (USDA, Characteristics, 2014).

### *Women, Infants and Children (WIC)*

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides funds for supplemental foods, breastfeeding and nutrition education for low-income pregnant and postpartum women, as well as to infants and children up to age five who are found to be at nutritional risk (USDA, 2015). The current annual income eligibility guideline for WIC for a single person is \$21,590, \$29,101 for two person households, and \$36,612 for three person households (USDA, Income, 2014). See Table 6 for a summary of food assistance programs.

**Table 6: Federal Food and Nutritional Assistance Programs Participation**

	Fairfax	Reston/Herndon	Bailey’s Crossroads	Mount Vernon
SNAP Households	3.8%	4.6%	5.6%	7.6%
WIC Participants	1.4%	2.1%	3.0%	4.1%

*(U.S. Census, 2015)*

### *Free and Reduced Lunch (FRLP)*

The National School Lunch Program, also known as the Free and Reduced Lunch Program (FRLP), provides nutritional lunches and breakfast for free or at reduced cost to low-income children. Families whose income level falls below 130 percent of the federal poverty line qualify for free meals, while families in the 130-185 percent range qualify for reduced price meals. Over 25 percent of students in Fairfax County receive free or reduced lunch (See Appendix E). Within the communities examined, the level of participation often varies from school to school and far exceeds the county average. In the Bailey’s Crossroads community, participation in the FRLP is as high as 65 percent. In Reston/Herndon, the participation is as high as 52 percent and in Mount Vernon, 76 percent (FCPS, Free, 2015).

### *Summer Food Service Programs*

Summer meal programs provide free breakfast and lunch to children aged 4 to 18. Residents over 18 with mental or physical disabilities may participate in these programs also. These meals help fill a gap between academic years for those children who are eligible for free and reduced lunches. There are no requirements or restrictions regarding acceptance to the program (FCPS, Overview, 2015). Locations are throughout the county and are identified as either open or closed sites. Open sites are for children who live in low-income areas and do not require enrollment though closed areas do.

There are three locations in Bailey's Crossroads that serve both breakfast and lunch and two locations that serve only lunch. In the Herndon/Reston area, there is one location that serves both breakfast and lunch and two locations that serve lunch. In Mount Vernon, there are four locations that serve both breakfast and lunch and three locations that serve only lunch (Fairfax County Government, Summer, 2014).

### *Weekend Knapsack Programs*

Weekend meal programs, largely coordinated by nonprofit and religious organizations, work with volunteers and staff at participating Fairfax County Public Schools to provide healthy meals, drinks, and snacks over the weekend to children who receive free or reduced-price meals during school days. For many children, these are the only meals they receive during the weekend.

### *Emergency Food Assistance Centers*

Food pantries were created to address emergency food needs. Increasingly, families need both public and private assistance to meet their food needs (Weinfield et al., 2014). There are 44 emergency food pantries located throughout the county. These emergency food pantries maintain and distribute perishable and non-perishable food items on a case-by-case basis to county residents requiring food assistance (FCHD, 2015). If a family is in need of emergency food services, they can be referred to a local pantry by contacting Fairfax County's Coordinated Services Planning (CSP) service at (703) 222-0880 (Fairfax County Government, Coordinated Services, 2015). These pantries may be funded by both private and public sources. Food for distribution is acquired through donations from the community, local food stores, farmers markets, and restaurants. Variety, healthfulness, and cultural acceptance vary from food drive to food drive, within communities, and depending on time of year. An ongoing effort exists to raise awareness of the importance of healthy food donations.

# KEY SURVEY RESULTS

The goals of the community survey were to gain a better understanding of the beliefs and habits of the respondents related to diet and food purchases, as well as solicit recommendations to improve their access to healthy, more affordable food. Surveys were distributed at key locations and online within identified zip codes. For purposes of this analysis, the data is presented as an overview of the three communities combined. Surveys collected from respondents living outside the identified zip codes were not included in the review.

A total of 1,574 surveys were collected within the identified zip codes. Data comparisons were made among those making \$50K or less per year and those making more than \$50K. A household with an income level below \$50K, which is less than half the area median income for the greater Washington, D.C. area, is considered to be low-income. Approximately one-third (481) of respondents fell into the \$50K or less category and 1,093 had incomes above \$50K.

## Demographics of Respondents

Demographics were self-reported and some respondents chose to identify with more than one group or not at all. As a result, the percentages broadly reflect the race and ethnicity of respondents and do not add up to a total of 100 percent. Tables 7, 8 and 9 show select demographics and characteristics of survey respondents.

**Table 7 - Key Demographics (shown as percentage)**

Race, Ethnicity, Household Size	≤ \$50,000 (n=481)	>\$50,000 (n=1093)	Total (n=1574)
<b>Race</b>			
White	10.8	43.1	53.9
Black	4.3	2.5	6.8
Asian	4.6	11.0	15.6
Middle Eastern	0.9	0.4	1.3
American Indian/Alaska Native	0.4	0.8	1.2
Pacific Islander	0.1	0.1	.2
Multi-race	1.5	4.4	5.9
Other	2.0	1.1	3.1
<b>Ethnicity</b>			
Hispanic	14.7	6.2	20.9
Non-Hispanic	12.1	51.3	63.3
<b>Household Size</b>			
			Total
1-2 people	6.9	3.2	10.0
3-4 people	13.9	43.6	57.5
5 or more people	9.0	14.6	23.6
<b>Children</b>			
0 children	5.1	2.0	7.1
1-2 children	16.3	47.8	64.2
3 or more children	7.4	11.4	18.8
<b>Adults 55 or over</b>			
0 adults	17.0	46.6	63.6
1-2 adults	9.9	13.2	23.1
3 or more adults	0.6	0.7	1.3

**Table 8 – Health Conditions (shown as percentage):**

Self-identified Health Conditions Within Households*	≤ \$50,000 (n=481)	>\$50,000 (n=1093)	Total (n=1574)
Diabetes	5.9	5.6	11.5
Heart disease	2.2	1.8	3.9
High blood pressure	7.5	13.3	20.8
Obesity	3.9	10.5	14.4
High cholesterol	6.4	14.9	21.3
Osteoporosis	1.7	2.3	3.9

\* Please note households may have reported more than one health condition.

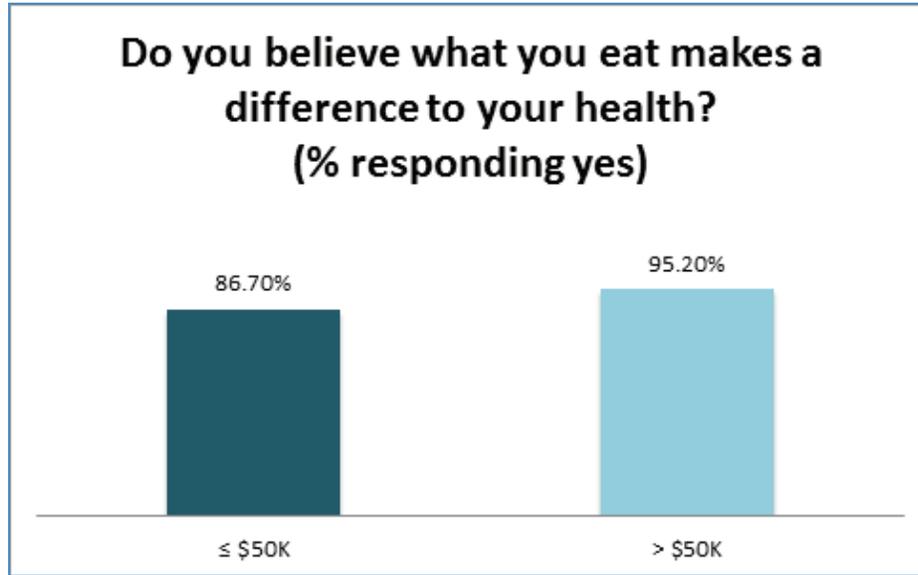
**Table 9 - Use of Public and Private Food Programs:**

Self-reported Use of Public and Private Food Programs*	≤ \$50,000 (n=481)	>\$50,000 (n=1093)	Total (n=1574)
SNAP	10.2	1.5	11.7
WIC	6.4	1.2	7.6
Food Pantry	5.7	1.1	6.8
House of Worship	3.0	0.8	3.8
Community Gardens	0.4	0.3	0.7

\* Please note households may have reported more than one program use.

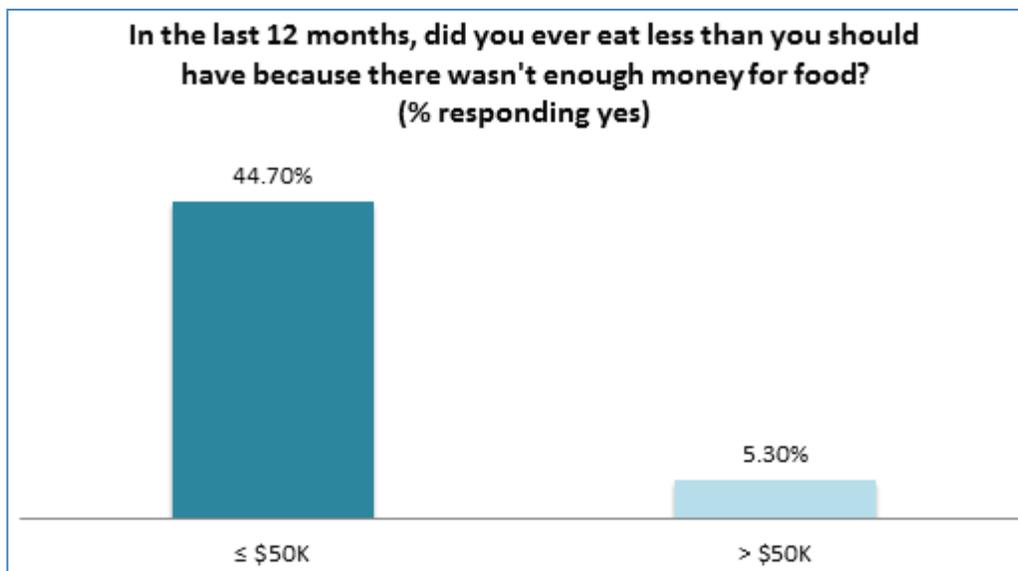
## Survey Responses to Food-related Questions

Survey Question: *Do you believe that what you eat makes a difference to your health?*



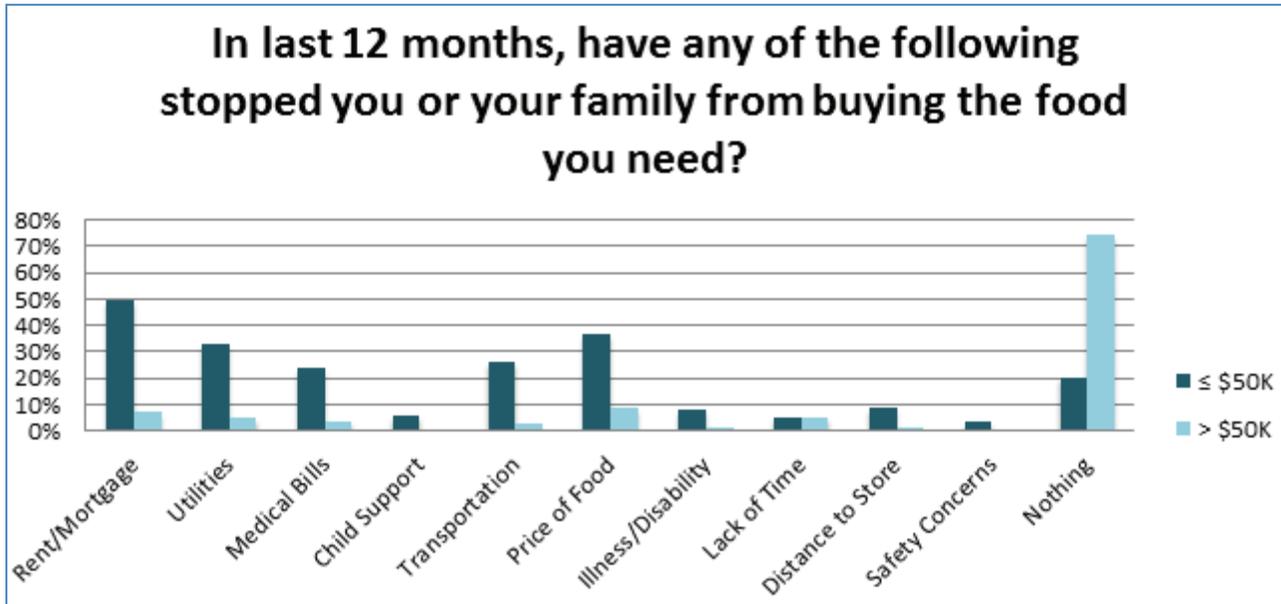
Ninety-one percent of total survey respondents (n=1,574) indicated that they believe what they eat makes a difference to their health. The percentage of those responding yes to this question was lower among those making \$50K or less per year (86.7 percent) compared to those making more than \$50K (95.2 percent).

Survey Question: *In the last 12 months, did you ever eat less than you should have because there wasn't enough money for food?*



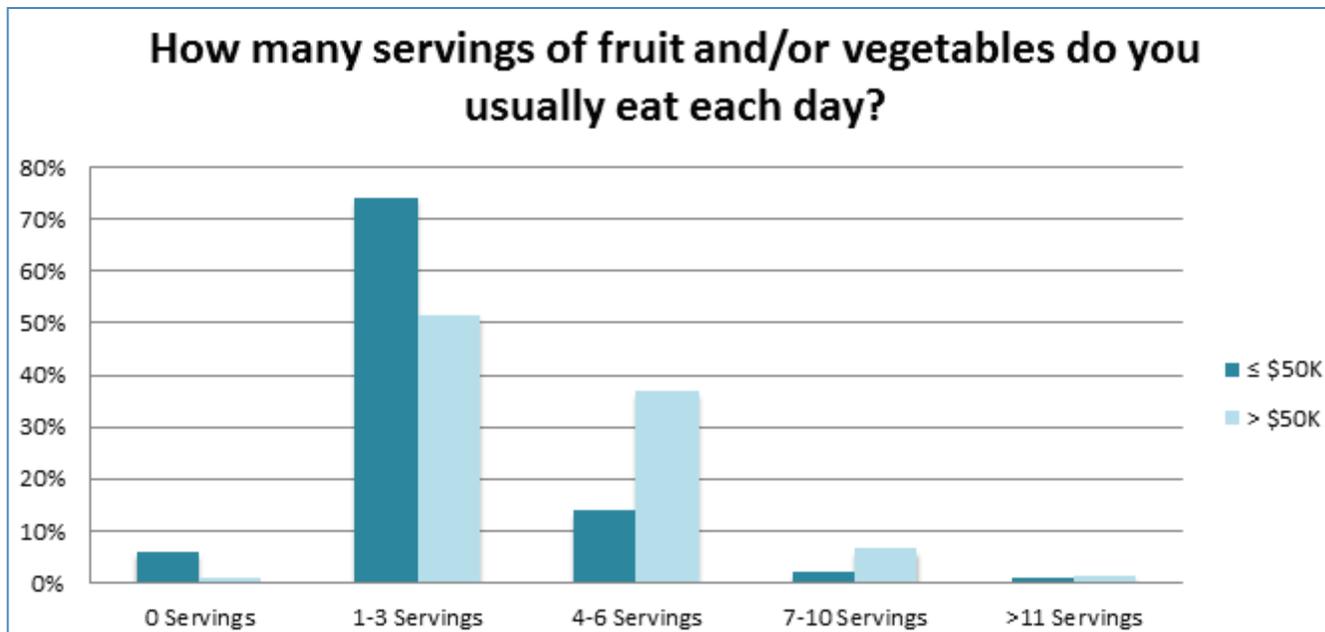
CFA survey data shows 44.7 percent of respondents in the \$50K or less category (n= 481) sometimes ate less than they should have because there was not enough money for food. This can be compared to 5.3 percent of those making over \$50K (n= 1,093). The following chart shows other needs that respondents prioritized over food.

Survey Question: In the last 12 months, have any of the following stopped you or your family from buying the food you need?



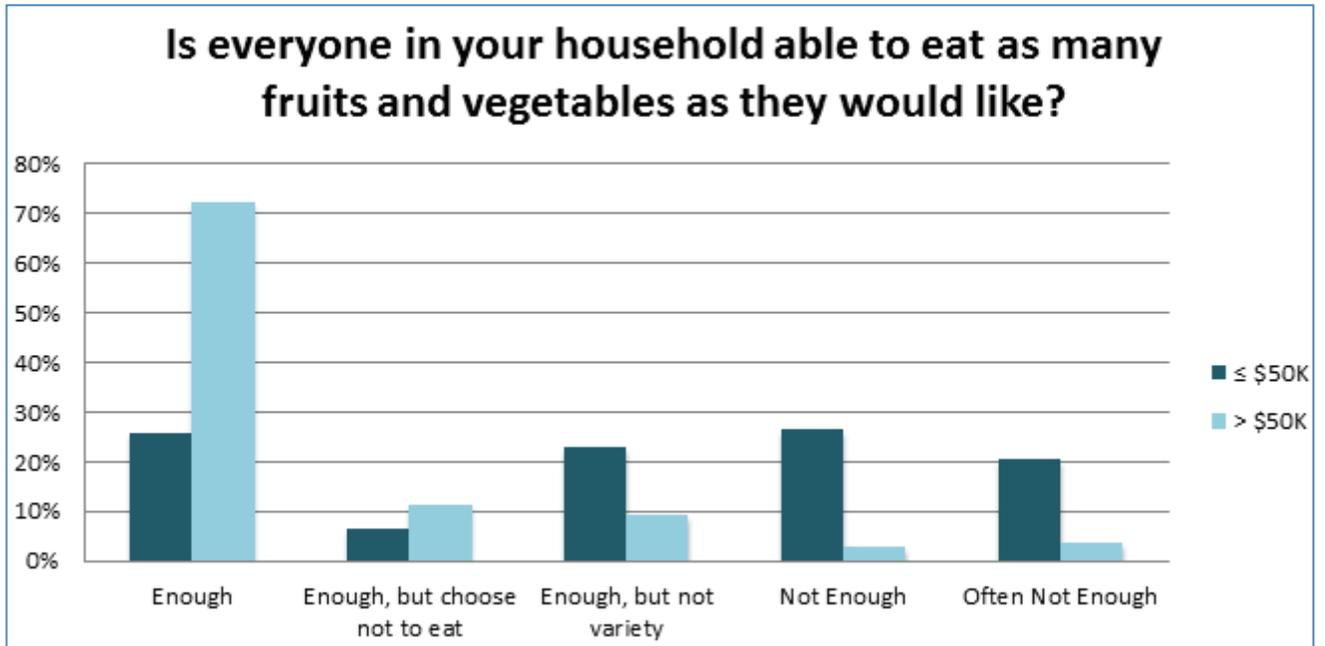
Rent or mortgage payments, followed by price of food and utilities, are the biggest factors among those making \$50K or less in terms of impacting respondents' ability to buy needed food. This is in significant contrast to those making over \$50K. These numbers mirror the Coordinated Services Planning Report for FY 2014 (Table 5).

Survey Question: How many servings of fruit and/or vegetables do you usually eat each day?



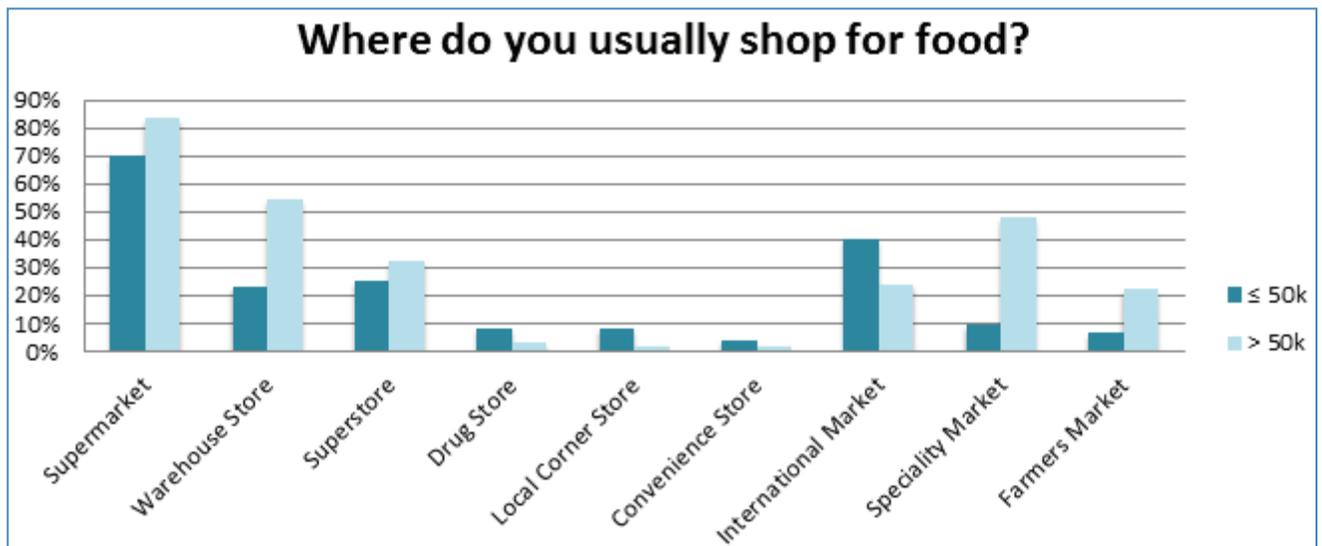
Based on CFA survey data, 80 percent of households making \$50K or less indicated that they eat fewer than three servings of fruits and vegetables daily. Overall, 61 percent of respondents in the targeted areas consume less than the recommended five fruits and vegetables daily.

Survey Question: *Is everyone in your household able to eat as many fruits and vegetables as they would like?*



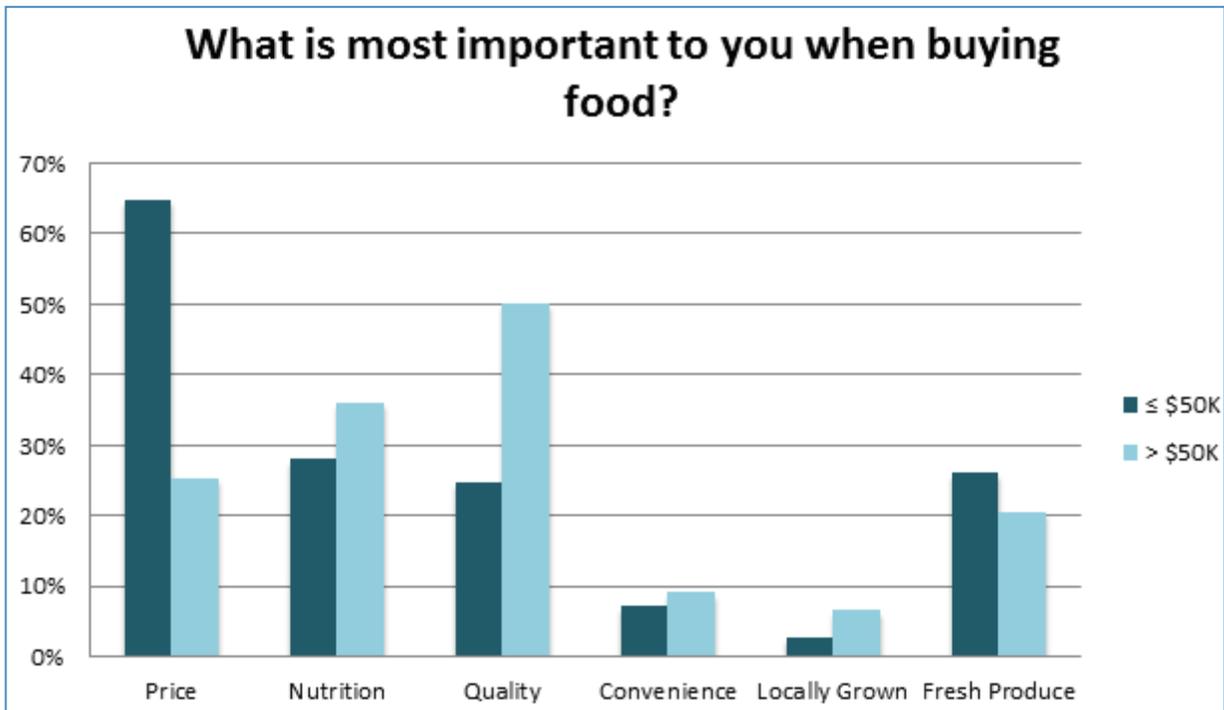
Despite the fact that 91 percent of CFA respondents believe what they eat makes a difference to their health, many in the \$50K or less category do not eat the recommended servings for key food groups that they should eat or would like to eat. The cost of nutritious food is a major barrier to healthy eating among those struggling with poverty and food insecurity. Zhang et al., for example, found that higher prices for fruits and vegetables were associated with higher levels of food insecurity in low-income households with children (2013).

Survey Question: *Where do you usually shop for food?*



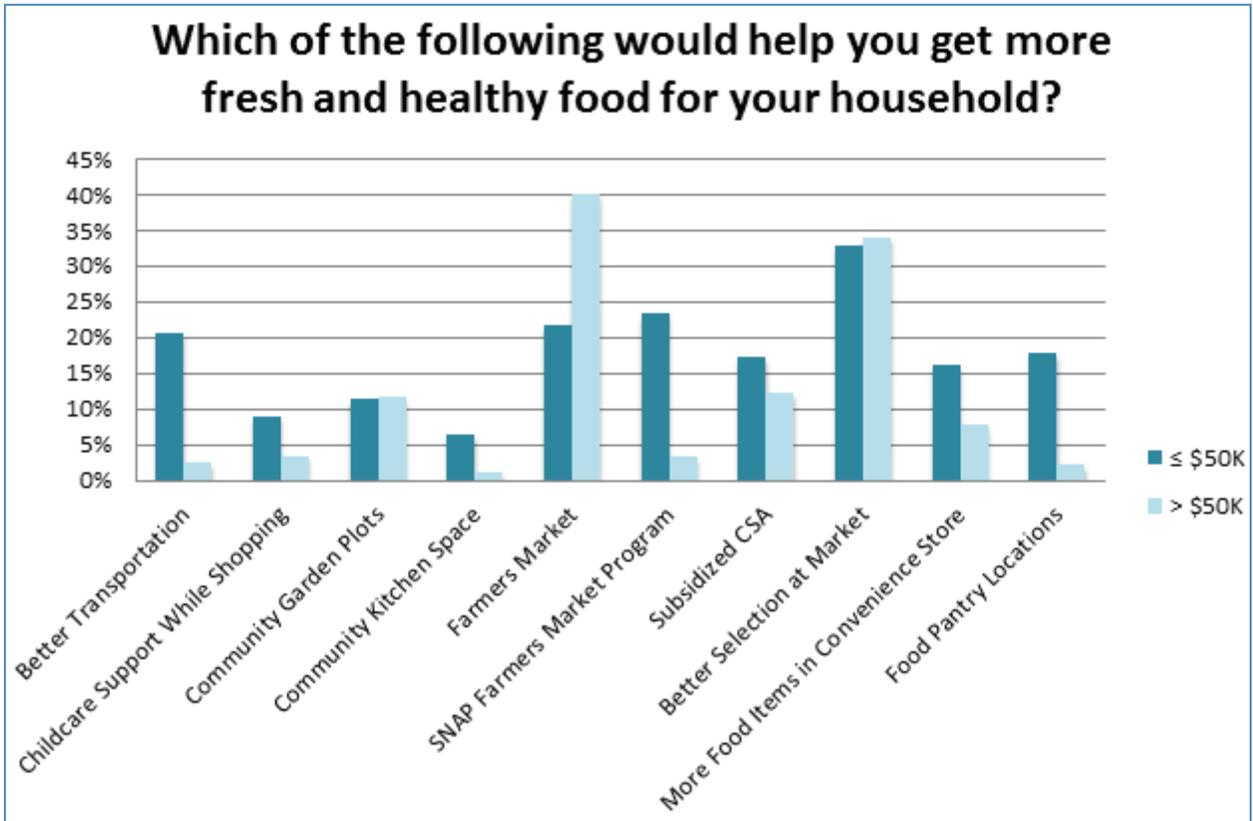
A large percentage of respondents in both income classifications buy their food from a supermarket. However, there are some noticeable differences between the two groups. Those making more than \$50K were more likely to shop at warehouse stores (55 percent), specialty stores (48 percent) and farmers markets (22 percent) compared to those making \$50K or less. It is also noteworthy that 40 percent of those making \$50K or less usually bought food from an international market compared to 24 percent in the over \$50K category. Further research may show if this relates to better food prices, proximity to the store and/or access to ethnic foods not found elsewhere.

Survey Question: *What is most important to you when buying food?*



Sixty-five percent of respondents in the \$50K or less category indicated that price was most important to them when buying food, while only 25 percent in the \$50K or more category indicated price as a factor. Quality (50 percent) and nutrition (36 percent) dominated in the \$50K or more category as important factors. Responses were fairly even between income categories about the value placed on fresh produce, with 26 percent in the \$50K or less category and 21 percent of people in the over \$50K category.

Survey Question: Which of the following would help you get more fresh and healthy food for your household?

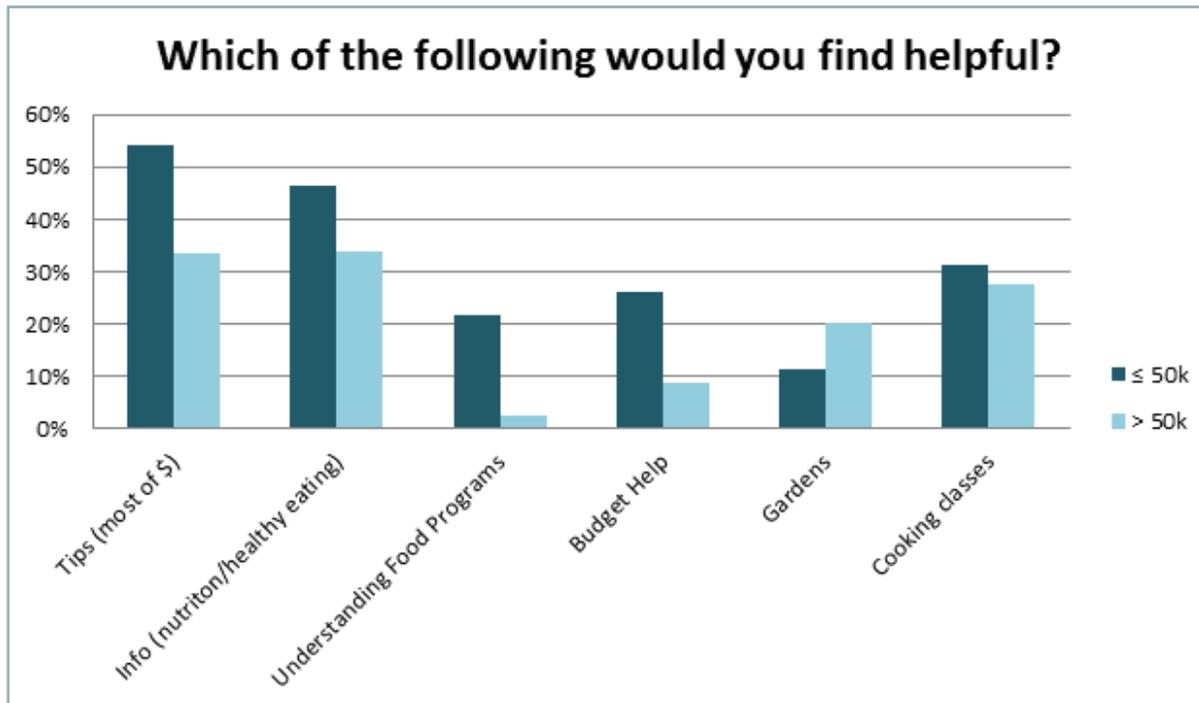


In response to what would help in obtaining more fresh and healthy food, farmers markets ranked as the most popular selection overall with 34.4 percent. Better supermarket selection was also popular among 34 percent of respondents.

Among those making \$50K or less, SNAP benefits at farmers markets was the second most popular selection with 23 percent. Additional farmers markets with convenient times was also popular among each income category with 40 percent in the over \$50K group and 22 percent in the \$50K or less group.

A few items were significantly higher between the two groups. For instance, better transportation was reported by 21 percent in the \$50K or less group compared to two percent in the over \$50K group. Sixteen percent of \$50K or less group (twice as many as in the over \$50K group) indicated the need for more food items in convenience stores. In addition, 18 percent of the \$50K or less group indicated the need for more food pantry locations. Both categories (12 percent of the over \$50K group and 11 percent of \$50K or less group) indicated interest in establishing more community garden plots.

Survey Question: Which of the following would you find helpful?



Budget concerns were reflected in the \$50K or less group with 54 percent indicating interest in receiving tips for making the most of their money at the grocery store. In addition, 26 percent would find help with budgeting useful. Tips for making the most of their money was also popular (33 percent) among those making more than \$50K. Information on nutrition and healthy eating was also high among both groups with 34 percent among those making more than \$50K and 46 percent among those making \$50K or less.

**Results from Healthy Food Availability Index (HFAI)**

One hundred and eighty four stores were selected for analysis in the predetermined areas of study. Twenty-one stores were removed from the data analysis because they refused to participate (seven stores) or no longer existed (14 stores). The data analyzed was compiled from a sample size of 163 stores in the three targeted communities: Bailey’s Crossroads with 70 stores, Reston/Herndon with 58 stores, and Mount Vernon with 35 stores. See Table 10 for a breakdown of store types surveyed.

**Table 10: Store Types**

Store Type	Bailey’s Crossroads	Reston/Herndon	Mount Vernon
Supermarket	12	10	5
Superstore	1	3	2
Drug Store	4	8	7
Corner Store	1	0	0
Convenience Store	30	26	12
International Store	18	9	8
Specialty Store	4	2	1
TOTAL	70	58	35

The HFAI score is used to determine the variety of healthy food options in stores and areas (see Appendix F for the HFAI score key). HFAI scores are used to describe a store’s healthy food variety by determining the availability of milk, fruit, vegetables, chicken, seafood, canned food, packaged food, juice, frozen meals, bread, cereal, and meat. Due to discrepancies in the data, meat was not included in this HFAI analysis. Table 11 lists HFAI scores by neighborhood.

**Table 11: Scores by Neighborhood**

HFAI Scores for Each Neighborhood	
Bailey’s Crossroads	11.7
Reston/Herndon	11.7
Mount Vernon	11.8

*The highest score each store can receive was 26.5.*

HFAI scores were broken down by store type as well (Table 12). Supermarkets received the highest scores.

**Table 12: HFAI Scores by Store Type**

Store Type	Bailey’s Crossroads	Reston/Herndon	Mount Vernon
Supermarket	25.7	24.5	23.9
Superstore	26.5	15.2	19
Drug Store	9	7.4	7.1
Corner Store	9	n/a	n/a
Convenience Store	24.5	5.9	8.3
International Store	11.4	14.1	13.2
Specialty Store	8.9	24.8	6

SNAP and WIC acceptance at the stores included in the HFAI analyses were reported by type of store and neighborhood. Across all neighborhoods, convenience stores and drug stores were more unlikely to accept WIC compared to supermarkets and superstores. Fifty percent or more of stores accepted SNAP except for local corner stores and international markets. SNAP acceptance is fairly high at supermarkets and superstores. International stores had the lowest rate of SNAP acceptance, even though respondents in the \$50K or less category, over 10 percent of whom have SNAP benefits, indicate that they frequent these stores (see above).

### **Stakeholder Interview Results**

Interviews of key stakeholders were used to supplement survey and HFAI data. Some common themes arose from the data and are discussed below and supported with existing literature.

#### *Immigration Status and Participation in Government Assistance Programs:*

CFA survey data indicate that approximately 33 percent of respondents making \$50K or less self-reported that they participated in SNAP and 21 percent WIC. Based on data from schools in the CFA-targeted areas, a high percentage of students are enrolled into free and reduced price lunch and summer backpack programs. As mentioned by most interviewed stakeholders, this program is critical to families and children.

*“We have kids that only get food at school – not getting dinner and maybe a snack at home. Most of our kids have breakfast here.” (Parent Liaison, school in Mt. Vernon).*

Parents feel fortunate that their children receive food at school. As mentioned by stakeholders, parents are focused on making sure that their children eat more at school for breakfast and lunch to offset limited food for dinner.

Interviews in each of the targeted communities revealed a fear of having immigration status discovered if a request was made for formal assistance. A parent liaison for an elementary school in Mt. Vernon shared that these families are struggling: “they are scared of getting caught and being sent back home. Parents are scared of applying for any service that they may qualify for.” This apprehension with providing information is even felt at food pantries, which may require general paperwork. A major food pantry in Reston noted that people often stop by to see what is in the small “grab and go” section rather than fill out paperwork to access the full pantry services.

Rumors about deportation and conflicts with law enforcement are often perpetuated in the community, which stops some from requesting help. One function of nonprofit support agencies is dispelling false rumors and creating a sense of trust in the community. At a resource center in the Bailey’s crossroads area, which is contracted through Fairfax County to provide social services, staff members also help new immigrants navigate the paperwork and language barriers to obtaining assistance. The majority of their clients are from Central America with very little education so the prospect of filling out paperwork for a program such as WIC can be daunting. At the resource center, assistance is provided with getting income validation and understanding the application process. Similar assistance is available in Reston/Herndon and Mt. Vernon. In addition, a legal aid center in the Bailey’s Crossroads area uses its twice a month food distribution time to bring day laborers together to discuss issues of concern. Police are invited to the events to help foster trust and a positive environment.

Schools are also a central resource for immigrant families struggling with food insecurity. The parent liaisons in the school function as social workers helping parents navigate resources often in the context of a new country and a different language. As one parent liaison shared, “I am the parent liaison and interpreter. But that involves being the psychologist, social worker, filling out job applications and more. We have very few staff that speak Spanish so families come to me for everything.” At an elementary school in the Bailey’s Crossroads area, the parent liaisons have set up a clothing room and food distribution closet. The parent liaison summed up the school in that area by sharing, “Schools are the community bridge, the center of the community. Anyone can come to the school for help.”

## *Cost of Living*

Data from the CFA survey showed a significant difference between the two income levels selected for analysis. For those making \$50K or less a year, everyday living expenses can affect money allocated for food. Rent/Mortgage payments are the biggest factor with almost 50 percent of people responding that this expense impacted their ability to buy needed food. This is in significant contrast to seven percent of those making more than \$50K.

This is substantiated by CFA survey data that shows almost 45 percent of those in the \$50K or less category ate less than they should have because there was not enough money for food compared to five percent of those making more than \$50K. Interview data suggest that income generation and improved job skills need to be a focus in order to move people out of poverty.

## ***Transportation Issues***

Transportation was mentioned by 26 percent of survey respondents (\$50K or less) as a factor in obtaining food. Stakeholder interviews revealed that most of the people they serve do not have access to a car so are dependent on public transportation or walking to reach grocery stores. While there are bus lines that traverse many sections of the focus areas, the cost of the bus is an added expense and the time needed to navigate multiple bus routes can be cumbersome. One parent liaison mentioned that many people she helps do not feel comfortable walking by themselves. They are fearful of being stopped or approached by the police. As mentioned in interviews, winter is a particularly difficult time for those lacking a vehicle. Weather conditions can affect walkability and waiting outside for a bus in the cold can be difficult for those with children or the elderly.

Interviews with those working with seniors cite transportation as a key barrier to food access. Seniors may have sufficient funds to purchase food but lack the funds to pay for a taxi ride. Walkability is an issue for seniors especially when they must navigate a distance carrying grocery bags.

## ***Cost of Food***

Despite transportation issues, many respondents expressed that access to food was not the primary issue for those struggling with food insecurity; rather, the cost of food was the significant barrier. The director of a low-income senior housing development noted, “affordability is the issue, not necessarily access – at the end of the month, people run out of money.” The perceived and often justified high cost of fresh food, such as fruits, vegetables, and fresh meats, impacts the choices people make when purchasing food. Sixty-five percent of those in the \$50K or less category indicated that price was most important to them when buying food, while only 25 percent in the over \$50K category indicated price as a factor. Quality and nutrition dominated in the over \$50K category as important. This is not to say that those with lower incomes do not care about these factors as well, but the reality of making the most of their limited funds impact their daily food choices.

Two stakeholders specifically mentioned the popularity of Ramen Noodles and other such processed food with those lacking sufficient funds. The director of a resource center in Bailey’s Crossroads explained that many immigrants grow up in their native country having access to affordable fruits and vegetables directly from farms and gardens. Native foods from immigrants’ country of origin can be more expensive in the United States, limiting one’s access to culturally preferred foods. This can promote the adoption of an American diet based on inexpensive processed foods, especially among the children of immigrants (Munger et al., 2014).

A Mt. Vernon community developer noted in regards to affordable healthy eating, “What do you do if I know I am supposed to eat five fruits and vegetables and I can’t afford it?” Similar sentiments were echoed by stakeholders in Reston/Herndon: “People coming from Latin American culture are used to eating fresher foods and cooking from scratch, but when they come here [United States] they are exposed to microwaves and may not have access to a full kitchen. Sometimes there is a habit of convenience.”

## ***Reliance on Food Pantries and Private Assistance***

Food pantries were created to address emergency food needs. However, increasingly, families need both public and private assistance to meet their food needs (Weinfield et al., 2014). Private food assistance programs have grown rapidly over the last 30 years (Mabli et al., 2010). Twenty-nine percent of CFA survey respondents in the \$50K or less category indicated that they regularly use food pantries and house of worship resources to obtain food for their household. A consistent theme that emerged from stakeholder interviews was the importance of food pantries and food programs in each of these targeted areas. Individuals struggling often visit multiple pantries and faith-based organizations to

obtain food throughout the week. Unfortunately, the need for food assistance has not waned in these areas, but has grown. Interviews reiterated that food pantries were not solutions to ending food insecurity, but rather a temporary support. Two of the interviewed food pantries in Reston/Herndon and Mt. Vernon are pieces of a greater social service network and are able to counsel individuals on budget, employment, health, and family issues. Addressing the underlying causes of poverty is important in combating food insecurity (Martin et al., 2013). These pantries also employ models that give food choices and selection options to clients, which have been shown to be important in increasing dignity.

### ***Health Impacts Related to Food Insecurity***

Stakeholder interviews indicated concern over the health status of those struggling with food insecurity. In addition, stakeholders discussed that many clients lack health insurance due to immigration status so certain health conditions are undiagnosed or remain untreated. Diabetes, high cholesterol, blood pressure, and obesity were highlighted. Interviewees were concerned about processed food consumption, as well as the lack of vegetables and fruits in the diet.

Food insecurity can have a negative impact on one's health status. Low-income populations are at greater risk for obesity and its negative effects including heart disease, hypertension, diabetes, stroke, and some forms of cancer. Food insecure children are at particular risk for health, cognitive, and behavioral issues due to lack of quantity as well as quality of the food available (Cook & Frank, 2008). Readily available processed foods and cheaper "junk food" are often energy dense and lacking in key nutrients. While this type of food may stave off the pains of physical hunger, it holds consequences for increased risk of obesity (Drewnoski & Specter, 2004). In a recent analysis of National Health and Nutrition Examination Survey 2001-2010 data, food insecurity was associated with increased obesity risk for children ages 6-11 years (Kaur, Lamb, & Ogden, 2015). Childhood obesity can result in short- and long-term health consequences, such as increased blood pressure and lipid profiles as well as glucose tolerance issues that may lead to the onset of type II diabetes (Freedman et al., 2007; Reilly et al., 2003).

### ***Fruit & Vegetable Access & Consumption***

Despite the belief of most CFA respondents (87 percent) that what they eat makes a difference in their health, many in the \$50K or less income category do not meet the recommended servings in key food groups. Cost of nutritious food is a major barrier to healthy eating among those struggling with poverty and food insecurity. Zhang et al. (2013) found that higher prices for fruits and vegetables were associated with higher levels of food insecurity in low-income households with children.

Fresh fruits and vegetables are expensive and often limited in supply at local food pantries. In addition, direct sources for these items at farmers markets are viewed as pricey. Those struggling with finances cannot afford to have food spoil, so shelf life is a consideration when making food choices. Anticipated cost of spoilage and waste of fresh foods not consumed has been found to be an important determinant of shopping behavior (Fish et al., 2015; Chen & Gazmararian, 2014).

In conversations with food pantries in each of the targeted areas, fresh fruits and vegetables are limited in supply and highly valued. Donated items often come in the form of processed and canned items that can be easily stored. Many of the pantries have limited space for storage as well as refrigeration. While some of the pantries are able to glean items from local farmers markets or accept fresh vegetables from garden plots, this is primarily available from May to November. According to the Reston pantry, there is a limited selection of fresh fruits and vegetables from December through April.

Most of the donations from supermarkets are in the form of breads, pastries, and canned food. There can be challenges with supermarkets donating fresh vegetables and fruit to local pantries. One

stakeholder in Reston suggested that there may be a corporate policy attached to donating fruits and vegetables, while another pantry in Mt. Vernon said that there is a lot of waste from grocery stores throwing out fresh food that could be used by the food pantry. At one local food pantry in the Bailey's Crossroads area, a bag of vegetables is included with the weekly distribution. This encompasses primarily potatoes, onions, and lettuce. Other vegetables are available only when the budget allows.

The Capital Area Food Bank and Food for Others both work in the Fairfax community with a myriad of nonprofit and religious organizations to supplement pantry donations with fresh produce that is received from grocery stores, farmers and other partners as well as produce secured through USDA commodity or other programs. Capital Area Food Bank conducts larger distributions through mobile markets on a monthly basis throughout the greater Washington DC region, and also operates a monthly Community Marketplace in Reston working in collaboration with other local organizations. This is a farmers market-inspired food distribution that focuses on providing fresh produce at no charge and serves 300-400 people, with many lining up early to take advantage of the opportunity.

While some farmers markets participate in the SNAP double dollar program in the targeted areas, participation is low according to stakeholder interviews. Only six percent of households making \$50K or less indicated that they shop for food at a farmers market. According to stakeholder interviews, many perceive a farmers market as a high-end option for food. Time and transportation may also be factors. Similarly, a qualitative study by Fish et al. (2015) that examined food shopping behaviors of low income African-American and Latino families found that most did not view farmers markets as feasible solutions for fruit and vegetable purchases. Hours, cost of items, and time for travel were all factors echoed by the interviews conducted in the study. In addition to the few County-run weekly farmers markets that accept SNAP, Arcadia, a nonprofit dedicated to creating an equitable and sustainable local food system in the Washington DC region, operates a weekly mobile market in the Mt. Vernon area from April through October that accepts SNAP benefits with double points. Arcadia's mobile market is described as a "farm-stand-on wheels" offering locally grown produce to high need areas.

Interviews with stakeholders suggest that there still appears to be a demand for affordable produce in the targeted areas even with the efforts of the non-profit and faith community to distribute additional produce. Although there are many organizations working collaboratively to address the need for accessible and affordable fruits and vegetables, there is much more to do. The Capital Area Food Bank's (2015) Hunger Heat Map helps illustrate the need through an interactive map which highlights the gaps in unmet food pounds needed in food insecure areas of the community. While it provides a broad overview of all food donated and the many gaps to be met, it is clear that the produce gap is especially large due to the challenges in securing and distributing fresh fruits and vegetables.

## RECOMMENDATIONS

The CFA was designed to provide information on how existing environments and conditions affect the consumption of a healthier diet. It was intended to give a snap shot in time of current food access and affordability issues, thus giving guidance to the development of a food council. The issues identified in this report and recommendations being proposed are not unique to the three communities and ought to be used throughout Fairfax County. Generally, there is a strong reliance on local non-profits for assistance with food access and security. As discussed above, many struggling with food insecurity are fearful of government assistance. Therefore, non-profits, schools, and religious organizations often bear the burden of bridging gaps in household food shortages. These organizations are also a central source for outreach in the community.

### ***Recommendation 1: Promote SNAP acceptance at Farmers Markets, expand Farmers Markets and explore options for WIC.***

Farmers markets have the potential to increase access to fresh fruits and vegetables. Expanding farmers markets in the targeted areas may help reduce perceived barriers to fruit and vegetable access (see Appendix G for a map of current farmers market locations). For instance, the Bailey's Crossroads area lacks an accessible farmers market. The importance of proximity of farmers markets to high poverty areas is critical for access to healthy food, given that many in these areas struggle with transportation issues (Sage, McCracken & Sage, 2013). Hours and days of operation of existing markets should also be explored to facilitate access for those who work.

Currently, the farmers market is seen as a luxury that many in the \$50K or less category cannot afford. Similar perceptions of farmers markets were found in other studies. Lack of knowledge about the options at farmers markets was seen as a deterrent, as well as perceived cost and inconvenience (Fish et al., 2015; Zepeda et al., 2014). Zepeda et al. (2014) discuss the need to expand double vouchers at farmers markets as well as ways to offer specials and discounts at the end of the month when families are often struggling to stretch their remaining dollars.

Additional community outreach is necessary on the SNAP benefits available at local farmers markets. Publicity and advertising to targeted areas may help to raise awareness of the markets among the community. Efforts need to be explored to expand SNAP and also to investigate the possibility of offering WIC benefits to existing farmers markets currently not participating in the program.

Farmers markets are also a potential avenue for educational outreach in the community. Cooking demonstrations, health-focused events, and nutritional material distribution has the potential to raise awareness about fruit and vegetable consumption and healthy eating (Zepeda et al., 2014).

### ***Recommendation 2: Expand WIC/SNAP Acceptance at Stores***

CFA survey data indicates that 40 percent of those making \$50K or less usually bought food from an international market. The HFAI survey found that there is a disparity among which stores participate in SNAP and WIC. Many of the international markets and smaller corner stores do not accept these programs. These stores tend to be walking distance for many and carry more culturally diverse foods. Efforts should be directed toward promoting these programs with local markets, especially with international markets that are frequented by those that may be struggling with food security.

### ***Recommendation 3: Create New Community Gardens***

Stakeholder interviews indicated that community gardens were of interest in these targeted areas (see Appendix H for a map of current community gardens). Many in the immigrant population have come from countries where farming is an integral food source. According to Fish et al. (2015), people who had previously had access and exposure to gardening and farming in their native country were open to the idea of community gardens. For those with access to gardens, gardens were viewed as a safe source of growing vegetables as well as a source for better tasting produce (Fish et al., 2015). However, gardening space, time, and transportation were barriers to their implementation.

Despite the interest level, stakeholders cited significant barriers to establishing community gardens, such as space, time and transportation. They discussed that more needs to be done to facilitate collaboration among schools, Fairfax County, and the private sector to use available land for community gardens. Another potential project could focus on enabling community garden growers to sell produce at a market stand, increasing the attraction of this initiative and generating income.

### ***Recommendation 4: Provide Education on Nutrition & Budgeting***

Forty-six percent of CFA respondents want more information on healthful eating. Conversations with stakeholders reiterated the need for more nutritional education. A parent liaison at an elementary school in Bailey's Crossroads said many families are unsure how to prepare canned and packaged foods from the pantries in a healthy way. She shared the importance of creating programs that recognize the cultural needs of participants. Nutrition education tailored to specific populations including various cultural groups, senior citizens, and teens was also highlighted in interviews.

CFA survey data indicates that 55 percent of respondents making \$50K or less would like more information on tips for getting the most for their money at grocery stores with 26 percent requesting budget help. People in the \$50K or less category are generally working on a limited budget. People may be getting benefits but still have difficulties managing their budgets. In Reston, after using the pantry three times, staff sit down with clients to discuss spending and budget management. They see a wide range in the amount of money different families are spending on groceries. Studies suggest that healthy eating can be affordable and that consumers need more help on reallocating their budgets so that healthful eating can be seen as cost saving (Carlson & Frazao, 2014; Stewart et al., 2011).

### ***Recommendation 5: Enhance Transportation for Senior Citizens***

While only a limited number of stakeholder interviews centered on the senior population, it was clear that transportation for seniors is a major factor in relation to food access. Promoting existing programs (volunteer driver software) and looking at creative ways to address seniors that are homebound is something the FFC may want to investigate.

## ***Recommendation 6: Conduct Additional Demographic Research***

Further research into household composition in targeted areas (for example, are they single-headed, multi-generational, extended, or multi-family and what is the ethnic composition) may help in understanding issues related to access to healthy food and provide additional guidance for working groups. Additionally, the following areas could be investigated:

- a. Homeless community members
- b. “Undocumented” community members
- c. Free and Reduced Lunch/Summer Backpack programs.

The issues highlighted in this report are only a few of the many possible opportunities that the FFC may choose to focus on. It is clear from stakeholder interviews as well as survey and HFAI data that Fairfax County is not immune to poverty and food access issues. The hope is that the FCC can serve as an avenue for collaborative efforts aimed at improving the health and nutrition for all of Fairfax County’s residents.

## LIMITATIONS

The CFA is a convenience sample and while it cannot be statistically generalized to a larger population, it is intended to provide the food council and its working groups a launch pad for initiatives that increase the access and consumption of healthy, affordable food throughout the county and especially in underserved areas.

### *Community Survey:*

- Due to the fact that the CFA questions did not follow the USDA guidelines, the survey respondents cannot be classified for low food security or very low food security
- While Fairfax County has a diverse ethnic population, the majority of survey respondents self-identified primarily as white or Hispanic
- Due to some methodological issues in the implementation of the survey, fewer responses were collected in one of the three communities than was expected and therefore the team decided to combine the results of all three communities
- Selection bias on the community survey is possible; given constraints in terms of timing and human resources the survey gathered a convenient sample
- Eight full and five partial survey days were lost due to inclement weather.

### *Interviews:*

The stakeholder interviews were specifically targeted at understanding food access issues in underserved populations in the targeted areas. They represented the perspective of those in positions that work directly with those in need. The immigrant community, specifically Hispanic immigrants, was the primary focus of many of the interviews and may not represent other subsets of the population. Speaking with those working with underserved populations provided an overall perspective of challenges facing those struggling with food access. However, it did not give a first-hand perspective of what individuals struggling with poverty and food security issues are thinking and experiencing. In order to fully understand the issues highlighted in this report, this perspective is needed.

## CONCLUSION

The goal of the CFA was to identify possible barriers existing within the county to accessing healthy food, which the FFC upholds as a basic human right for all its residents. While the survey sample was limited and did not provide statistically strong results, the assessment has provided sufficient information to enable the FFC to launch more focused efforts through its working groups as they investigate ways to improve access to affordable, healthy food, particularly for those in this community who have limited resources.

## REFERENCES

- Cahill, A.P., & Khaja, K. (2011). *Putting food on the table: Food security and access to affordable and nutritious food in the Fairfax-Falls Church area*. Retrieved May 20, 2015 from [http://www.fairfaxcounty.gov/demogrph/pdf/putting\\_food\\_on\\_the\\_table.pdf](http://www.fairfaxcounty.gov/demogrph/pdf/putting_food_on_the_table.pdf)
- Capital Area Food Bank. (2015). Hunger Heat Map. Retrieved September 23, 2015 from <http://cafb.maps.arcgis.com/apps/MapJournal/index.html?appid=b4906ac11bf74cd781c5567124be9364>
- Carlson, A., & Frazão, E. (2014). Food costs, diet quality and energy balance in the United States. *Physiology & Behavior*, 13420-31. doi:10.1016/j.physbeh.2014.03.001
- Centers for Disease Control and Prevention. (2014). *Prevention status report 2013: Nutrition, physical activity, and obesity – Virginia*. Atlanta, GA: U.S. Department of Health and Human Services.
- Centers for Disease Control and Prevention. (2015). *Healthy eating for a healthy weight*. Retrieved June 16 2015 from [http://www.cdc.gov/healthyweight/healthy\\_eating/](http://www.cdc.gov/healthyweight/healthy_eating/)
- Chen, D. Y., & Gazmararian, J. A. (2014). Impact of personal preference and motivation on fruit and vegetable consumption of WIC-participating mothers and children in Atlanta, GA. *Journal of Nutrition Education And Behavior*, 46(1), 62-67. doi:10.1016/j.jneb.2013.03.001
- Community Food Security Coalition. (2002). What's cooking in your food system? Retrieved May 20, 2015 from [http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/\\_pdf/research/clf\\_reports/results\\_food\\_assessment.pdf](http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/_pdf/research/clf_reports/results_food_assessment.pdf)
- Cook, J. T., & Frank, D. A. (2008). Food security, poverty, and human development in the United States. *Annals Of The New York Academy Of Sciences*, 1136193-209. doi:10.1196/annals.1425.001
- Drewnowski, A., & Specter, S. E. (2004). Poverty and obesity: the role of energy density and energy costs. *The American Journal Of Clinical Nutrition*, 79(1), 6-16.
- Economic Policy Institute. (2013). *What families need to get by: The 2013 update of EPI's family budget calculator*. Retrieved June 19 2015 from <http://www.epi.org/resources/budget/>
- Fairfax Chamber. (2015). Retrieved May 19, 2015 from <http://www.fairfaxchamber.org/about-fairfax-county-and-northern-virginia.html#sthash.5CD1Wi6M.pdf>
- Fairfax County Government. (2012). *Fairfax County youth survey*. Retrieved May 20, 2015, from <http://www.fairfaxcounty.gov/demogrph/youthpdf.htm>
- Fairfax County Government. (2014). *Population, housing units and households by ZIP code, Fairfax County*. Retrieved from <http://www.fairfaxcounty.gov/demogrph/demrpts/report/fullrpt.pdf> table 3.7
- Fairfax County Government. (2014). *The state of the poor*. Retrieved May 6 2015 from [www.fairfaxcounty.gov/dfs/caab/pdf/state-of-the-poor.pdf](http://www.fairfaxcounty.gov/dfs/caab/pdf/state-of-the-poor.pdf)
- Fairfax County Government. (2014). Department of Neighborhood and Community Services. *Summer Food Service Program*. Retrieved May 19, 2015 from <http://www.fairfaxcounty.gov/ncs/pdfs/os14.pdf>
- Fairfax County Government. (2015). Department of Neighborhood and Community Services. Coordinated services planning contact topics, January 1, 2014 – December 31, 2014.

- Fairfax County Health Department (FCHD). (2015). *WIC Statistics 2010*. Retrieved from <http://www.fairfaxcounty.gov/hd/wic/wicdata2010.htm>
- Fairfax County Public Schools (FCPS). (2015). *About FCPS*. Retrieved July 7, 2105 from <http://fcps.edu/about/index.shtml>
- Fairfax County Public Schools (FCPS). (2015). *Free and reduced price meals*. Retrieved May 19, 2015 from <http://www.fcps.edu/fs/food/serve/free-reduced.shtml>
- Fairfax County Public Schools (FCPS). (2015). *An overview of school-based supplemental food programs including best practices*. Retrieved from May 19, 2015 from [http://www.fcps.edu/cco/bcp/includes/documents/Best\\_Practices.pdf](http://www.fcps.edu/cco/bcp/includes/documents/Best_Practices.pdf)
- Federal Register, (2015). *2015 Poverty guidelines for the 48 contiguous states and the District of Columbia*. Retrieved May 20, 2015 from <http://aspe.hhs.gov/POVERTY/15poverty.cfm>
- Feeding America. (2013). Retrieved May 21, 2015 from <http://www.feedingamerica.org/hunger-in-america/our-research/map-the-meal-gap/data-by-county-in-each-state.html>  
[http://www.feedingamerica.org/hunger-in-america/our-research/map-the-meal-gap/2013/VA\\_AllCounties\\_CDs\\_MMG\\_2013.pdf](http://www.feedingamerica.org/hunger-in-america/our-research/map-the-meal-gap/2013/VA_AllCounties_CDs_MMG_2013.pdf)
- Fish, C. A., Brown, J. R., & Quandt, S. A. (2015). African American and Latino low income families' food shopping behaviors: promoting fruit and vegetable consumption and use of alternative healthy food options. *Journal Of Immigrant And Minority Health / Center For Minority Public Health*, 17(2), 498-505. doi:10.1007/s10903-013-9956-8
- Freedman D.S., Mei Z., Srinivasan S.R., Berenson G.S., Dietz W.H. (2007). Car- diovascular risk factors and excess adiposity among overweight children and adolescents: The Bogalusa Heart Study. *Journal of Pediatrics*, 150(1),12-17.
- General Comment No. 12 of the United Nations Committee on Economic, Social and Cultural Rights (the body in charge of monitoring the implementation of the International Covenant on Economic, Social and Cultural Rights). Retrieved from <http://www.ohchr.org/EN/Issues/Food/Pages/FoodIndex.aspx>
- Gunderson, C., & Gruber, J. (2001). The dynamic determinants of food insufficiency. *Second Food Security Measurement and Research Conference, Volume II: Papers*. Margaret Andrews, and Mark Prell, eds, pp. 92-110. USDA, ERS Food Assistance and Nutrition Research Report 11-2.
- Kaur, J., Lamb, M. M., & Ogden, C. L. (2015). The association between food insecurity and obesity in children-The National Health and Nutrition Examination Survey. *Journal Of The Academy Of Nutrition And Dietetics*, 115(5), 751-758. doi:10.1016/j.jand.2015.01.00
- Leete, L., & Bania, N. (2010). The effects of income shocks on food insecurity. *Review of the Economics of the Household* 8: 505-526.
- Mabli, J., Cohen, R., Potter, F., Zhao, Z. (2010). *Hunger in America 2010 National Report* Prepared for Feeding America. Feeding America. Washington, D.C. Retrieved May 21, 2015 from: [http://feedingamerica.issuelab.org/resource/hunger\\_in\\_america\\_2010\\_national\\_report](http://feedingamerica.issuelab.org/resource/hunger_in_america_2010_national_report)
- Martin, K. S., Wu, R., Wolff, M., Colantonio, A. G., & Grady, J. (2013). A novel food pantry program: food security, self-sufficiency, and diet-quality outcomes. *American Journal Of Preventive Medicine*, 45(5), 569-575. doi:10.1016/j.amepre.2013.06.012

- McAullife, D. (2015). Retrieved January 6, 2015 from [http://www.roanoke.com/news/politics/mcauliffe-s-wife-takes-on-challenge-of-ending-childhood-hunger/article\\_f9dcfdf2-4169-5e37-8466-eb9143b1869a.html](http://www.roanoke.com/news/politics/mcauliffe-s-wife-takes-on-challenge-of-ending-childhood-hunger/article_f9dcfdf2-4169-5e37-8466-eb9143b1869a.html)
- Munger, A. L., Lloyd, T. S., Speirs, K. E., Riera, K. C., & Grutzmacher, S. K. (2014). More than just not enough: Experiences of food insecurity for Latino immigrants. *Journal Of Immigrant And Minority Health / Center For Minority Public Health. Electronic publication on July 7, 2014.*
- National Association of County and City Health Officials. (2014). MAPP Section of the website of NACCHO. Retrieved May 20, 2015 from <http://ctb.ju.edu/en/table-of-contents/overview/models-for-community-health-and-development/mapp.main>
- Reilly J.J., Methven E., McDowell Z.C., et al. (2003). Health consequences of obesity. *Arch Dis Child, 88(9):748-752.*
- Sage, J. L., McCracken, V.A. & Sage, R. A. (2013). Bridging the gap: Do farmers' markets help alleviate impacts of food deserts? *Amer. J. Agr. Econ., 95(5), 1273-1279.*
- Stewart, H., Hyman, J., Frazão, E., Buzby, J. C., & Carlson, A. (2011). Can low-income Americans afford to satisfy MyPyramid fruit and vegetable guidelines? *Journal Of Nutrition Education And Behavior, 43(3), 173-179.* doi:10.1016/j.jneb.2010.08.011
- U.S. Census. (2015). *American Community Survey, 5-year estimates, 2009-2013.* Retrieved May 19, 2015 from <http://factfinder2.census.gov>
- U.S. Census. (2010). *Geography-Fairfax County, Virginia: Profile of General Population and Housing Characteristics: 2010.* Retrieved May 20, 2015 from <https://www.census.gov/.../acsbr13-02.pdf> : Table 4 2009-2013 American Community Survey 5-Year Estimates
- United States Department of Agriculture (USDA). (2014). *Characteristics of Supplemental Nutrition Assistance Program households: Fiscal year 2013 (summary).* Retrieved from <http://www.fns.usda.gov/sites/default/files/ops/Characteristics2013-Summary.pdf>
- United States Department of Agriculture (USDA). (2014). *Income eligibility guidelines.* Retrieved from [http://www.fns.usda.gov/sites/default/files/wic/FY2014-2015\\_WIC\\_IEGs\\_WEB.pdf](http://www.fns.usda.gov/sites/default/files/wic/FY2014-2015_WIC_IEGs_WEB.pdf)
- United States Department of Agriculture (USDA). (2015). *Women, Infants and Children (WIC).* Retrieved April 21, 2015, from United States Department of Agriculture website: <http://www.fns.usda.gov/wic/women-infants-and-children-wic>
- University of Wisconsin. Population Health Institute. (2015). Retrieved May 20, 2015 from <http://www.countyhealthrankings.org/app/virginia/2015/rankings/fairfax/county/outcomes/overall/snapshot>
- Verite Healthcare Consulting. (2013). *Community Health Needs Assessment.* Prepared for Inova Mt. Vernon Hospital, May 31, 2013.
- Virginia Atlas for Community Health. (2013). Retrieved May 20, 2015 from <http://atlasva.org/hpd-/?appSession=325375761826289&RecordID=&PageID=2&PrevPageID=1&cpipage=2&CPISortType=&CPlorderBy=>
- Virginia Department of Social Services (VDSS). (2006). *Methodological appendix, Virginia 2006: Assumptions and Sources.* Retrieved May 19, 2015 from [http://www.dss.virginia.gov/files/about/reports/agency\\_wide/self\\_sufficiency\\_standards/2006/appendix\\_a.pdf](http://www.dss.virginia.gov/files/about/reports/agency_wide/self_sufficiency_standards/2006/appendix_a.pdf)

Weinfield, N.S., Mills, G., Borger, C., Gearing, M., Macaluso, T., Montaquila, J., Zedlewski, S., (2014). Hunger in America 2014 National Report. Feeding America. Washington, D.C. Retrieved May 20, 2015 from: <http://www.feedingamerica.org/hunger-in-america/our-research/hunger-in-america/>

Weldon Cooper Center. (2009). Retrieved May 20, 2015 from [http://www.coopercenter.org/sites/default/files/publications/NumbersCount\\_IncomeAdequacy\\_02\\_15\\_2011\\_1.pdf](http://www.coopercenter.org/sites/default/files/publications/NumbersCount_IncomeAdequacy_02_15_2011_1.pdf)

Zepeda, L., Reznickova, A., & Lohr, L. (2014). Overcoming challenges to effectiveness of mobile markets in US food deserts. *Appetite*, 7958-67. doi:10.1016/j.appet.2014.03.026

Zhang, Q., Jones, S., Ruhm, C. J., & Andrews, M. (2013). Higher food prices may threaten food security status among American low-income households with children. *The Journal Of Nutrition*, 143(10), 1659-1665. doi:10.3945/jn.112.170506

## GLOSSARY OF TERMS

**Community Assets** – any person, structure, business, or service that can be used to improve the quality of community life<sup>1</sup>

**Community Health Care Network (CHCN)** –partnership of health professionals, physicians, hospitals, and local government that provides primary health services for low income, uninsured residents of Fairfax County and the cities of Fairfax and Falls Church, who cannot afford primary medical care services for themselves and their families<sup>2</sup>

**Community Health Improvement Plan (CHIP)** – provides information for problem and asset identification and policy formulation, implementation, and evaluation; help measure how well a public health system is fulfilling its assurance function<sup>3</sup>

**Food Environment** – homes, schools, stores, restaurants, community gardens, soup kitchens, food banks, and other physical settings where the cost and availability of food influence what people eat as well as social influences, food marketing, and other influences on food choice<sup>4</sup>

**Fairfax County Food Service Providers (FSP)** – provides a venue for area food banks and pantries to learn from one other and create opportunities for coordination among providers<sup>5</sup>

**Food Secure/Food Security** – physical and economic access to food that meets people’s dietary needs as well as their food preferences<sup>6</sup>

**Food System** – a collaborative network that integrates sustainable food production, processing, distribution, consumption, and waste management in order to enhance the environmental, economic, and social health of a particular place<sup>7</sup>

**Healthy Foods Availability Index (HFAI)** – used to describe a store’s healthy food variety by determining the availability of milk, fruit, vegetables, chicken, seafood, canned food, packaged food, juice, frozen meals, bread, cereal, and meat.

**Mobilizing for Action through Planning and Partnerships (MAPP)** – community driven strategic planning process for improving community health; helps communities apply strategic thinking to prioritize public health issues and identify resources to address them<sup>8</sup>

**Parent Liaison Program, Fairfax County Public Schools (FCPS)** – parent liaisons work in the schools and community to help families get the information and assistance they need to support their children at home and to ensure their academic success<sup>9</sup>

**Partnership for a Healthier Fairfax (PFHF)** – coalition of community members and organizations working together to strengthen the public health system and improve community health in Fairfax County, VA<sup>10</sup>

**Supplemental Nutrition Assistance Program (SNAP)** – federal nutrition assistance program that offers benefits to low-income individuals and families and provides economic benefits to communities<sup>11</sup>

**Women, Infants, and Children (WIC)** – provides federal grants to states for supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are at nutritional risk<sup>12</sup>

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1 University of Kansas, <http://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/identify-community-assets/main>

2 Fairfax County Government, <http://www.fairfaxcounty.gov/hd/pcs/hdchcn.htm>

3 NACCHO, <http://www.naccho.org/topics/infrastructure/CHAIP/>

4 Johns Hopkins University, [http://www.jhsph.edu/research/centers-and-institutes/teaching-the-food-system/curriculum/\\_pdf/Food\\_Environments-Vocabulary.pdf](http://www.jhsph.edu/research/centers-and-institutes/teaching-the-food-system/curriculum/_pdf/Food_Environments-Vocabulary.pdf)

5 Fairfax County Government, <http://www.fairfaxcounty.gov/ncs/fpn.htm>

6 WHO, <http://www.who.int/trade/glossary/story028/en/>

7 UC Davis, <http://www.sarep.ucdavis.edu/sfs/def>

8 <http://www.naccho.org/topics/infrastructure/CHAIP/>

9 Fairfax County Public Schools, <http://www.fcps.edu/cco/fam/parentliaison.shtml>

10 Fairfax County Government, <http://www.fairfaxcounty.gov/livehealthy/partnership.htm>

11 USDA, <http://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program-snap>

12 USDA, <http://www.fns.usda.gov/wic/women-infants-and-children-wic>

## LIST OF ACRONYMS

- CBO** Community Based Organizations
- CDC** Center for Disease Control
- CFA** Community Food Assessment
- CHCN** Community Health Care Network
- CHIP** Community Health Improvement Plan
- CSP** Coordinated Services Planning
- FCHD** Fairfax County Health Department
- FCPS** Fairfax County Public Schools
- FFC** Fairfax Food Council
- FRLP** Free and Reduced Lunch Program
- FSP** Food Service Providers
- GMU** George Mason University
- HFAI** Healthy Foods Availability Index
- MAPP** Mobilizing for Action through Planning and Partnerships
- NEMS** The Nutrition Environment Measurement Survey
- PFHF** Partnership for a Healthier Fairfax
- SNAP** Supplemental Nutrition Assistance Program
- UN** United Nations
- USDA** United States Department of Agriculture
- VDH** Virginia Department of Health
- VDSS** Virginia Department of Social Services
- WIC** Women, Infants, and Children

## APPENDIX

- A. Fairfax County Zip Code Map
- B. CFA Community Survey
- C. HFAI
- D. Questions for Stakeholder Interviews
- E. Fairfax County Free and Reduced Lunch Map
- F. HFAI Score Key
- G. Fairfax County Farmers Market Map
- H. Fairfax County Community Garden Map

FAIRFAX COUNTY  
ZIPCODES  
VIRGINIA



Communities



Reston/Herndon



Bailey's Crossroads



Mount Vernon

N

1 in = 4 miles



## Fairfax Community Food Assessment 2015

**Introduction:** Thank you for taking the time to complete the Fairfax Community Food Assessment. We are interested in understanding the opportunities or lack of opportunities you and your families have to eat healthy foods. This survey is being administered by senior social work students at George Mason University in partnership with the Partnership for A Healthier Fairfax Healthy Eating Team and is completely voluntary. We are asking you these questions to get an understanding of how accessible and affordable healthy foods are to you – where you work, live and play. As a result of you completing this survey, we hope to help increase the number of environments that promote healthy food choices and educational resources.

We expect the survey to take no more than 15 minutes of your time. We do not need your name or any other identifiable information besides your home zip code. By completing this survey, you are consenting – giving us permission – to use your responses as a part of our findings and reports. Though we would appreciate you completing each question, you may skip any questions that you are uncomfortable in answering. By skipping questions or refusing to complete the survey, you are not at risk of not receiving other services from George Mason University.

We will be holding a voluntary raffle for a grocery store gift card for everyone who completes the survey. If you wish to be included in the raffle, you will need to provide us with an email address or phone number (on the paper provided). This is voluntary and is not required to participate in the survey. Your email and phone number will be kept separate from the survey.

Thank you, again, for your time and participation.

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### Start Survey:

1. What is your Home Zip Code: \_\_\_\_\_
2. Do you believe what you eat makes a difference to your health?  
 Yes  
 Somewhat  
 No

3. Does anyone in your household have any of the following health conditions? *Check all that apply.*
- Diabetes
  - Heart disease
  - High blood pressure
  - Obesity
  - High cholesterol
  - Osteoporosis
  - Prefer not to answer
  - Other - *Please specify:* \_\_\_\_\_
4. In the last 12 months, did you ever eat less than you should have because there wasn't enough money for food?
- Yes
  - No
5. In the last 12 months, have any of the following stopped you or your family from buying the food you need? *Check all that apply.*
- The need to pay rent/mortgage
  - The need to pay utilities, such as electricity
  - The need to pay medical bills
  - The need to pay child support
  - The need to pay for transportation (e.g., gas, bus, metro, taxi)
  - Price of food
  - Illness/disability
  - Lack of time
  - Distance to grocery stores
  - Personal safety concerns (e.g., difficulty crossing the street, or not feeling safe)
  - Nothing has stopped me/us
  - Other- *Please specify:* \_\_\_\_\_

6. Does anyone in your household regularly use any of the following food programs?

*Check all that apply.*

- Food stamps/SNAP
- WIC
- Food pantry/food bank
- Food programs at houses of worship
- Community gardens
- Senior farmers market coupons
- Meals on Wheels
- Free or reduced school breakfast/lunch
- Summer Food Program
- Weekend Backpack Program
- None of the above
- Other (*please specify*): \_\_\_\_\_

7. Is everyone in your household able to eat as many fruits and vegetables as they would like? *Check only one answer.*

- My household has enough fruits and vegetables to eat in the varieties we want.
- My household has enough fruits and vegetables to eat, but chooses not to eat them often.
- My household has enough fruits and vegetables to eat, but not always the varieties we want.
- My household does not have enough fruits and vegetables to eat.
- My household often does not have enough fruits and vegetables to eat.
- My household does not have enough fruits and vegetables to eat.

8. How many servings of fruit and/or vegetables do you usually eat each day? A serving is about ½ cup or about the amount of food that would fit into the palm of your hand. *Check only one answer.*

- 0
- 1-3
- 4-6
- 7-10
- More than 11

9. Where do you usually shop for food? *Check all that apply.*

- Supermarket (e.g., Giant, Safeway, Shoppers Food Warehouse)
- Warehouse store (e.g., Costco, BJ's)
- Superstore (e.g., Walmart, Target)
- Drug store (e.g., CVS, Rite Aid)
- Local corner store
- Convenience store (e.g., 7-11, WaWa)
- International market (e.g., Bestway, Fresh World, H-Mart)
- Specialty market (e.g., Whole Foods, MOM's, Trader Joe's)
- Farmer's markets

10. What is most important to you when buying food? *Check only one answer.*

- Price
- Nutrition
- Quality
- Convenience
- Locally grown
- Fresh produce
- Other (*please specify*): \_\_\_\_\_

11. Where do you and your household eat most of your meals? *Check top three answers.*

- At home
- At the home of a friend or family member
- Convenience store
- Sit-down restaurant
- Fast food (order at the counter or a drive-thru)
- Church
- Workplace
- School
- Other (*please specify*): \_\_\_\_\_

12. Are you able to maintain your family's ethnic or religious food traditions given the food that is available in your community? *Check only one answer.*

- Always
- Usually
- Sometimes
- Rarely
- Never

13. How many meals per week do you prepare at home? *Check only one answer.*

- 0
- 1-3
- 4-6
- 7-10
- More than 11

14. If you receive food from a food pantry, do you know how to prepare all the food you receive? *Check only one answer.*

- Yes, I have a recipe or use for everything
- Usually
- I can prepare about half of it
- Rarely, I don't know what to do with the food most of the time
- Not at all
- Does not apply to me and my household

15. Who prepares most of the meals in your household? *Check only one answer.*

- I do
- My spouse/partner
- My parent or grandparent
- My child or my children
- Other household members
- I/We don't prepare meals at home

16. What kind of food preparation do you practice on a regular basis? *Check all that apply.*

- Purchase convenience food and ready-to-eat meals (i.e. frozen or microwaveable meals)
- Combine ready-made ingredients to make a complete meal (i.e., boxed macaroni and cheese)
- Prepare dishes from separate ingredients
- I do not prepare food
- Other (*please specify*): \_\_\_\_\_

17. Which of the following would help you get more fresh and healthy food for your household? *Check all that apply.*

- Better transportation options
- Child care support while shopping
- Community garden plots/ affordable growing spaces for all community members
- Community kitchens/affordable kitchen space for all community members to cook in
- A farmer's market nearby open on convenient days/times
- SNAP Farmer's market nutrition program
- Subsidized community-supported agriculture/fresh food boxes direct from a local farm
- Better selection of food at the supermarket
- More items of food carried in the local convenience store
- Food pantry locations
- Other (*please specify*): \_\_\_\_\_

18. Which of the following would you find helpful? *Check all that apply.*

- Tips on getting the most for your money at a grocery store
- Information on nutrition and healthful eating
- Help with reading, filling out or understanding free food programs and applications
- Help with budgeting
- Information on how to grow a garden
- Free cooking, recipes, and food-buying classes
- Other (*please specify*): \_\_\_\_\_

19. Please let us know if you have any additional comments or concerns about the availability of healthy food where you live.

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**Demographics:**

20. Your age \_\_\_\_\_

21. Household size (number of people living in the apartment/house) \_\_\_\_\_

22. Number of children under age 18 living in household \_\_\_\_\_

23. Number of adults over age 55 living in household \_\_\_\_\_

24. Household Income Earned (per year)

- |                                              |                                              |                                             |
|----------------------------------------------|----------------------------------------------|---------------------------------------------|
| <input type="checkbox"/> Less than \$10,000  | <input type="checkbox"/> \$31,000 - \$40,000 | <input type="checkbox"/> \$76,000-\$100,000 |
| <input type="checkbox"/> \$11,000 - \$20,000 | <input type="checkbox"/> \$41,000 - \$50,000 | <input type="checkbox"/> Over \$100,000     |
| <input type="checkbox"/> \$21,000 - \$30,000 | <input type="checkbox"/> \$51,000 - \$75,000 |                                             |

25. Race

- |                                                 |                                                                 |
|-------------------------------------------------|-----------------------------------------------------------------|
| <input type="checkbox"/> White/Caucasian        | <input type="checkbox"/> American Indian/Alaskan Native         |
| <input type="checkbox"/> Black/African American | <input type="checkbox"/> Pacific Islander                       |
| <input type="checkbox"/> Asian                  | <input type="checkbox"/> Multi-racial                           |
| <input type="checkbox"/> Middle Eastern         | <input type="checkbox"/> Other ( <i>please specify</i> ): _____ |

26. Ethnicity

- Hispanic
- Non Hispanic

**Survey completed—*thank you very much!***

<b>Fairfax Community Food Assessment 2015</b>		Data Collector: _____		
Store ID: _____ Store #: _____		<b>Healthy Food Availability Index</b>		
Type: <input type="checkbox"/> Public Market <input type="checkbox"/> Supermarket <input type="checkbox"/> Small Grocery <input type="checkbox"/> Specialty Store <input type="checkbox"/> Discount Store <input type="checkbox"/> Corner Store <input type="checkbox"/> Convenience Store <input type="checkbox"/> Gas Station <input type="checkbox"/> Behind Glass Store	Store Name: _____		Grid: _____	
	Store Address: _____		Neighborhood: _____	
	<input type="checkbox"/> Confirmed	WIC: <input type="checkbox"/> Yes <input type="checkbox"/> No	SNAP: <input type="checkbox"/> Yes <input type="checkbox"/> No	# Registers: _____ # Aisles: _____
	<input type="checkbox"/> New	<input type="checkbox"/> Absent	<input type="checkbox"/> Yes <input type="checkbox"/> No	Prepared Food: <input type="checkbox"/> Yes <input type="checkbox"/> No
Comments: _____			Parking Lot: <input type="checkbox"/> Yes <input type="checkbox"/> No Photo: <input type="checkbox"/> Yes <input type="checkbox"/> No Refusal: <input type="checkbox"/> Yes <input type="checkbox"/> No	

Measure 1: MILK	Measure 3: FRUIT	Measure 4: VEGETABLES	Measure 5: MEATS
Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Ground Beef <input type="checkbox"/> Yes <input type="checkbox"/> No
Low Fat Option(s) Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Quality: <input type="checkbox"/> A <input type="checkbox"/> UA	Quality: <input type="checkbox"/> A <input type="checkbox"/> UA	Quality: <input type="checkbox"/> A <input type="checkbox"/> UA
	Type(s) <input type="checkbox"/> 0	Type(s) <input type="checkbox"/> 0	% Lean: ____ % Fat: ____
<b>Measure 2: JUICE</b>	Available: <input type="checkbox"/> 1-3 <input type="checkbox"/> 4-6 <input type="checkbox"/> 7-10 <input type="checkbox"/> 11-25 <input type="checkbox"/> >25	Available: <input type="checkbox"/> 1-3 <input type="checkbox"/> 4-6 <input type="checkbox"/> 7-10 <input type="checkbox"/> 11-25 <input type="checkbox"/> >25	Other Options Available: <input type="checkbox"/> Yes <input type="checkbox"/> No
100% Fruit Juice Available: <input type="checkbox"/> Yes <input type="checkbox"/> No			Comments: _____
Comments: _____	Comments: _____ Whole _____ Cut _____	Comments: _____ Potatoes _____ Onions _____ Whole _____ Cut _____	

Measure 6: CHICKEN	Measure 8: FROZEN FOODS	Measure 9: PACKAGED FOODS	Measure 11: BREAD
Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Meal(s) Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Dried Beans Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Available: <input type="checkbox"/> Yes <input type="checkbox"/> No
Quality: <input type="checkbox"/> A <input type="checkbox"/> UA	Healthier Meal(s) Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Rice Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	100% Whole Wheat <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Measure 7: SEAFOOD</b>		Pasta(s) Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Corn Tortillas Available: <input type="checkbox"/> Yes <input type="checkbox"/> No
Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Fruits(s) Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Measure 10: CANNED FOODS</b>	<b>Measure 12: CEREAL</b>
Quality: <input type="checkbox"/> A <input type="checkbox"/> UA	Vegetables (s) Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Soup(s) Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Available: <input type="checkbox"/> Yes <input type="checkbox"/> No
Option(s) Available: <input type="checkbox"/> Fresh <input type="checkbox"/> Frozen <input type="checkbox"/> Both	Comments: _____	Low-Sodium Soup(s) Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Low Sugar Options: <input type="checkbox"/> Yes <input type="checkbox"/> No
Comments: _____		Fruit(s) Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	# Healthy Varieties: <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2+
		Vegetable(s) Available: <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments: _____
		Comments: _____	

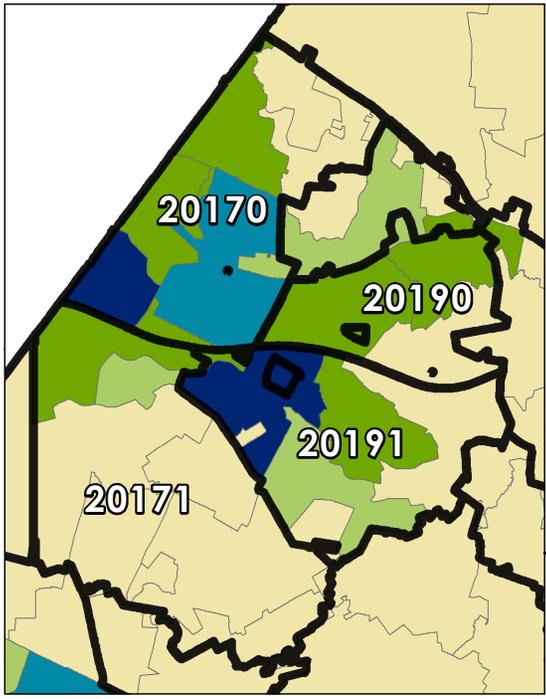
**CFA Questions for Stakeholder Interviews**

1. Can you describe your role in the community?
2. This is what your community looks like on paper (provide one page info. sheet with demographics). Can you help us understand more about your community beyond what is provided here?
3. What adjectives would you use to describe your community?
4. How would you describe the overall health of the people in your community?
5. Do you think that many households in your community have a problem with food insecurity? What is the extent of the problem?
6. How do people in your community cope with food insecurity? What strategies do they use?
7. Are there populations in your community that are not receiving the aid that they may need? Who is at highest risk?
8. Do you think people in your community are able to access healthy fresh foods? Please explain.
9. Are there issues in your community that may affect access to food (walkability, safety, lighting, etc.)?
10. Are people in your community able to access and afford fresh fruits and vegetables? Please explain.
11. Do you feel that people in your community have enough information about healthy eating? Please explain.
12. Do you think that people in your community would be interested in obtaining food from local farmer's markets, CSAs, or community gardens? Why or why not?
13. Can you describe the current programs that most people in your community take advantage of that assist them in obtaining food?
14. Are there specific cultural or religious traditions in your community that should be considered in a discussion about food access and insecurity? Please explain.

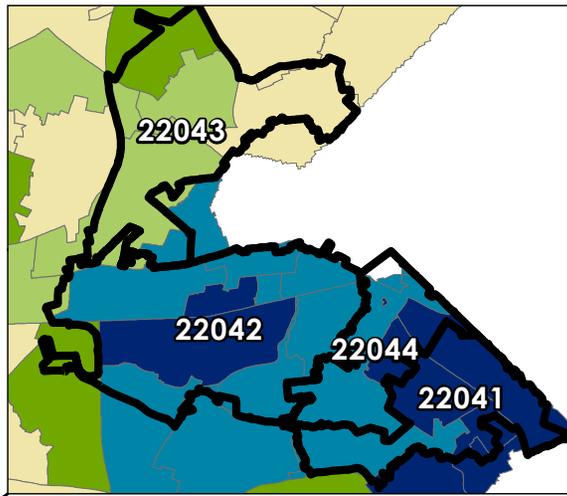
15. Can you suggest some ideas about how the food environment can be improved to address food insecurity in your area?
16. What is strength of your community? How might this strength be used to improve food access and the health of the community?
17. What additional information can you share that would help us understand the current food environment or access issues in your community?

APPENDIX E

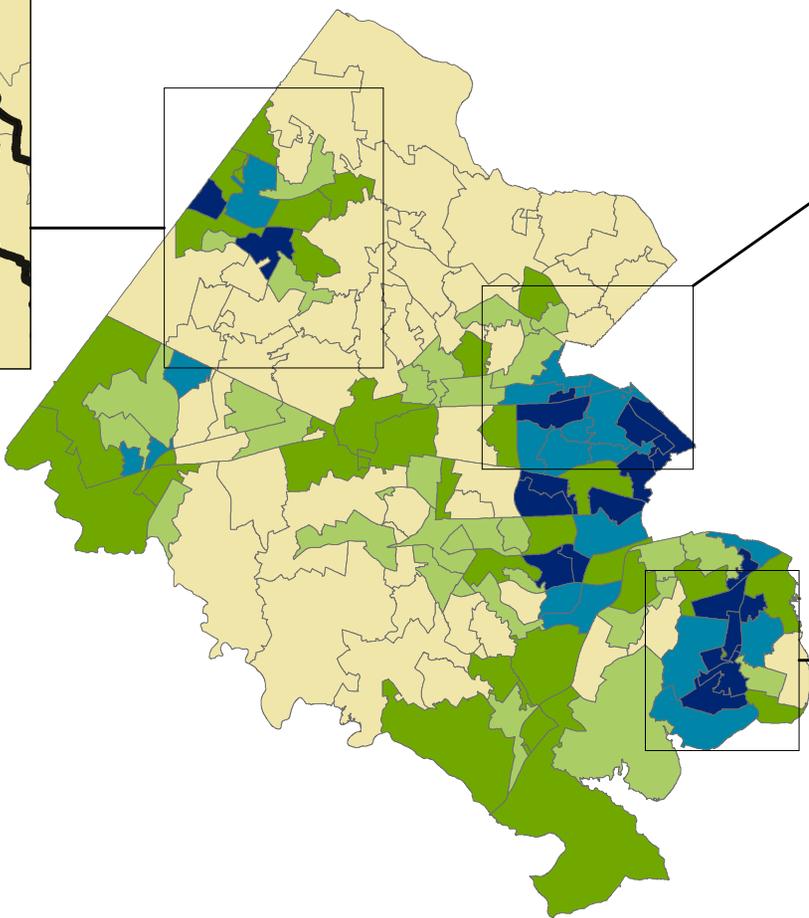
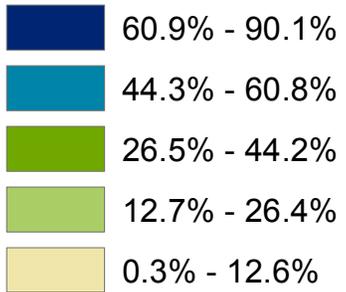
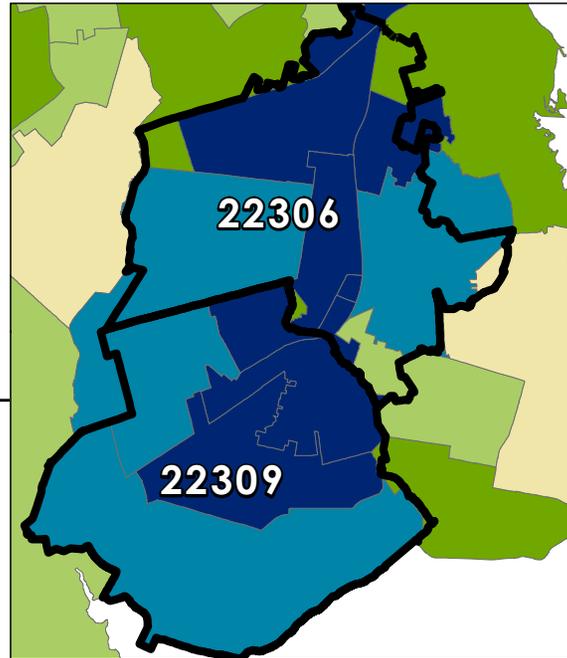
Reston/Herndon



Bailey's Crossroads



Mount Vernon



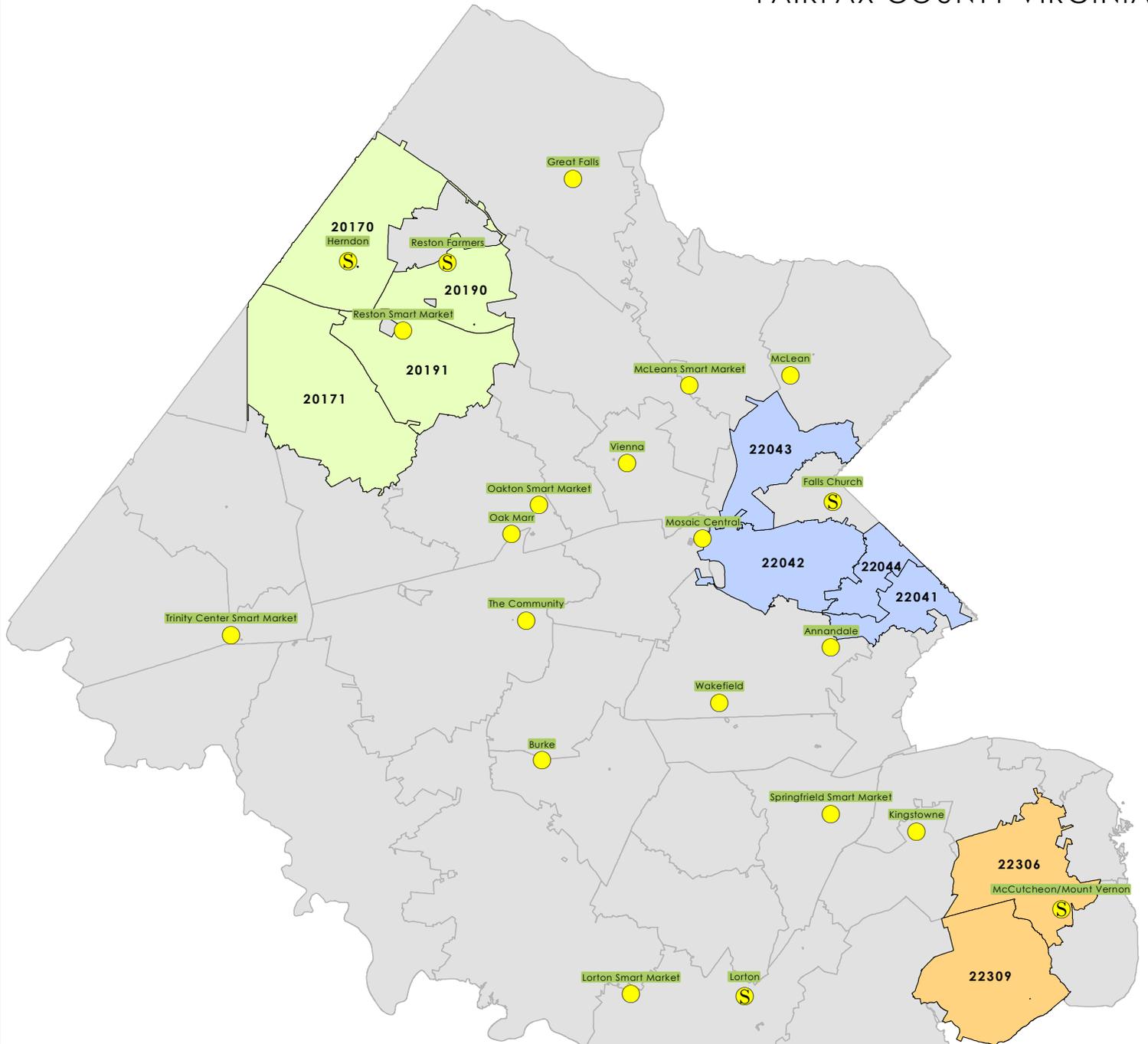
Percent of Elementary Students Eligible for Free or Reduced Lunch for Three Communities  
2014-2015

**HFAI Score Key**

Milk, available, yes = 1  
Milk, low fat, yes = 1  
100% fruit juice, yes = 1  
Fruit, number 1-3 = 1  
    Number 4-6 = 2  
    Number 7-10 = 3  
    Number 11-25 = 4  
    Number >25 = 5  
Vegetable, number 1-3 = 1  
    Number 4-6 = 2  
    Number 7-10 = 3  
    Number 11-25 = 4  
    Number >25 = 5  
Chicken, available, yes = 1  
Seafood, available, yes = 1  
Frozen meals, healthy, yes = 1  
    (Healthy = reduced fat or sodium)  
Frozen fruit, available, yes = 0.5  
Frozen veg, available, yes = 0.5  
Dried beans, available, yes = 0.5  
Rice, available, yes = 0.5  
Pasta, available, yes = 0.5  
Canned soup, low-sodium, yes = 1  
Canned fruit, available, yes = 0.5  
Canned veg, available, yes = 0.5  
Bread, available, yes = 1  
Bread, 100% Whole Wheat, yes = 1  
Corn tortillas, available, yes = 1  
Cereal, low sugar, yes = 1  
    (Low sugar = 7 gm or less/serving)  
Cereal, if 2 or more low sugar, yes = 2

HIGHEST POSSIBLE SCORE = 26.5

FARMER MARKETS  
FAIRFAX COUNTY VIRGINIA



Communities



Reston/Herndon



Bailey's Crossroads



Mount Vernon

Farmer Markets



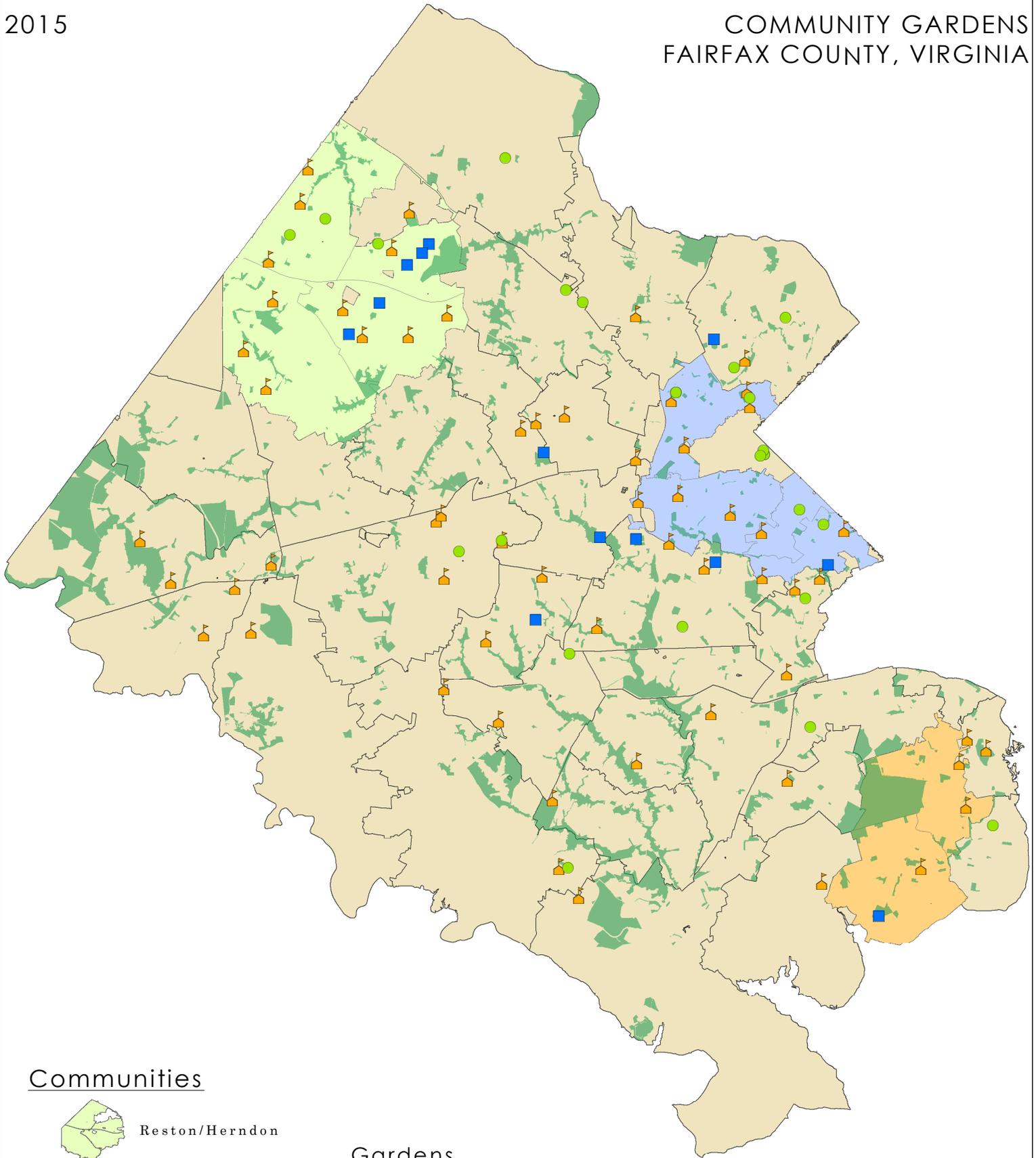
Accepts SNAP



1 in = 3 miles

2015

# COMMUNITY GARDENS FAIRFAX COUNTY, VIRGINIA



## Communities



Reston/Herndon



Bailey's Crossroads



Mount Vernon

## Gardens



Schools



Faith



Other

## Fairfax County Parks



N  
1 in = 3 miles



# LiveHealthy FAIRFAX

Transforming our communities together

*Partnership for a  
Healthier Fairfax*

## Fairfax Food Council 2015 Community Food Assessment



A Fairfax County, Va., publication. October 2015. For more information or to request this information in an alternate format, call the Fairfax County Health Department at 703-246-2411, TTY 711.