

# CUYAHOGA COUNTY ASSESSMENT: ACCESS TO SUPERMARKETS

Summary of Progress-to-Date, December 8, 2011



In recent years, there has been growing interest in how the characteristics of the places in which we live impact our health. On the other hand, we all realize that the quality of a neighborhood - its amenities or lack of amenities - influence whether or not people choose to live in that neighborhood. This understanding has led to efforts to revitalize neighborhoods and communities by employing place-based approaches—strategies that target the prosperity, equity, sustainability and livability of places.

Access to healthy foods is one neighborhood characteristic that has received quite a bit of attention, and led to the concept of food deserts. Food deserts are generally described as areas “with limited access to affordable and nutritious food, particularly in low-income areas”<sup>1</sup>, or areas “distant from mainstream grocery stores.”<sup>2</sup> Understanding food deserts is important because studies have shown that supermarket access plays a role in diet related diseases such as obesity, heart disease, and diabetes<sup>3</sup> and is important for the economic health of neighborhoods.

In 2004, the state of Pennsylvania addressed these issues by establishing the Fresh Food Financing Initiative (FFFI) to increase the number of supermarkets in underserved communities. An assessment of 17 FFFI projects completed since 2004 indicates that new supermarket development:

1. Helped retain and attract new residents. In Philadelphia, home prices improved near the new stores.
2. Increased economic activity in a community, including an increase in the number and quality of jobs and additional tax revenue for local government.
3. Increased access to higher-quality food products at lower costs to consumers.<sup>4</sup>

Based on the success of the FFFI, in early 2010 the Obama administration established the Healthy Food Financing Initiative (HFFI) to expand the availability of nutritious food by bringing grocery stores and other healthy food retailers to underserved communities.<sup>5</sup>

Armed with this information about both the importance of supermarkets and the potential for funding, the Cuyahoga County Planning Commission in partnership with the Cuyahoga County Board of Health and The Ohio State University Extension under the auspices of the Creating Healthy Communities initiative and the Cleveland-Cuyahoga County Food Policy Coalition began an in-depth mapping project to identify areas in Cuyahoga County where low-income residents are considered to have low access to food stores that carry a range of fresh and healthy food.

## **BACKGROUND**

In April 2008, the County Planning Commission (CPC) presented findings of an analysis of local food deserts to the Cleveland-Cuyahoga County Food Policy Coalition. This initial exploratory study on the topic was based on work conducted in the City of Chicago by Mari Gallagher: “Examining the Impact of Food Deserts on Public Health in Chicago” (2006).

### **Did you know:**

Over 138,000 households and **323,848 people (25%) live in food deserts in Cuyahoga County.**

Of these people, **79,751 (25%) are under age 18 and 43,508 (13%) are over age 65.**

While the average household income in food deserts is \$37,312, due to the higher population density, the **average total income per acre in food deserts is 10% higher than in non-food desert areas of the county.**

Among other issues, the 2006 Chicago study examined the availability and distribution of both fresh food grocery providers and fast food establishments:

“... it is clear that food deserts, especially those with an abundance of fast food options, pose serious health and wellness challenges to the residents who live within them and to the City of Chicago as a whole.”

In following the methodology of the Chicago study, the CPC worked with the Boards of Health in the cities of Cleveland and Shaker Heights, as well as the Cuyahoga County Board of Health, which covers the remainder of the County, to develop an inventory of retail food establishments and food service establishments. From those mapped inventories, the CPC identified areas lacking access to major grocery stores (grocery stores with at least 25,000 square feet of floor area), and areas with high concentrations of fast food. Ultimately, the methodology led to the use of a “food balance ratio” that relates distance to fast food with distance to major grocery. The results of that study confirmed that there are areas of concern in Cuyahoga County related to the food environment.

### **REVISED STORE INVENTORY METHODS**

In 2010, the CPC et al decided to update and expand the 2008 Cuyahoga County study in order to conduct a more thorough analysis of the overall food environment in the County. The team acknowledged that the issue is multifaceted and decided to first investigate access to supermarkets and larger grocery stores in low-income areas based on the positive impacts of supermarket projects completed by the Fresh Food Financing Initiative. The three major changes included:

- Concentrating solely on access to grocery stores, rather than fast food
- Reclassifying “major” grocery stores to include more mid-size stores
- Creating a clear definition of low-income areas

After a review of numerous food desert studies recently conducted throughout the United States, the team agreed to follow the methodology used by the USDA for the Healthy Food Financing Initiative and its Food Desert Locator mapping project<sup>6</sup> because it was consistent with the 2008 study and provided standards for low-income and accessibility.

The first step was to map the availability of affordable and nutritious food to county residents. The USDA’s Food Desert Locator uses supermarkets and large grocery stores as proxies for sources of healthy and affordable foods. Therefore, the CPC began by building a comprehensive inventory of food stores in order to identify stores that provided an adequate supply of healthy food.

In April 2010, the CPC again worked with the local Boards of Health and collected health inspection records in each jurisdiction, using the State Board of Health’s Food Establishment Licensing System and its inspection records. The “Retail Food Establishment” inventories were used as the “universe” of establishments, providing names and addresses of 1,786 stores throughout the county. This inventory included all types of stores licensed by the health departments to sell food ranging from wholesale clubs, supermarkets and grocery stores to corner stores and convenience stores.

The boards of health inventories were supplemented with other data sources for locations of major supermarkets just outside of Cuyahoga County (27 stores), and a handful of others not found in the boards of health inventories. In total, 1,820 locations were included in the study.

According to the Food Marketing Institute, a supermarket is defined as any store with \$2 million or more in annual sales. However, it has been noted in a few Food Desert studies that grocery stores with lower annual sales could supply a complete healthy diet. For the purposes of classifying the range of grocery

stores in the inventory, the CPC evaluated a number of standards, and settled on an adaptation of a classification scheme utilized by the Prevention Research Center at Case Western Reserve University. While the location of smaller stores may be critical in devising intervention strategies, the project team decided to focus on Classes 1 and 2 (Supermarket and Grocery Store) with a minimum size of 5,000 square feet as locations where a household could purchase a range of fresh healthy foods.

For the purposes of this study, a Class 1 store is a **Supermarket** defined as a large self-service grocery store selling a variety of groceries, dairy products, and household goods which carries at least 11 varieties of both fresh fruits and vegetables and offers at least three varieties of milk (including low-fat milk). Giant Eagle, Heinen's and Dave's Markets are examples of supermarkets in Cuyahoga, but Sam's Club, Walmart Supercenter and Costco were also considered to be a supermarket for the purposes of this study.

A Class 2 store is a **Grocery Store** defined as a smaller chain or non-chain store offering fewer options compared to a supermarket, but which carries at least 6 different varieties of both fresh fruits and vegetables, at least one type of low-fat milk (either 1% or skim), carries raw meat, eggs, and a variety of fresh bread, grains, and cereal, and has at least 5,000 square feet of floor area. Examples include Sav-A-Lot, Marc's and Aldi's.

In some cases it was not possible to classify a food store based solely on its name. For independent non-chain food stores, the team conducted in-store assessments in order to classify them based on the range of food products provided.

Based on the classification of the 2010 inventory of stores, a total of 167 stores (76 in Class 1 and 91 in Class 2) were mapped for this study. It is believed that this inventory is more complete than that used by the USDA Food Desert Locator.

It is important to note that the classification system does not include assessments of the quality or price of food available in these 167 stores. It is possible that while some of the Class 2 stores provide the right kind of food products, consumers may not choose to shop there because of either poor quality and/or high price of the fresh food available.

#### **DEMOGRAPHIC TARGETING:**

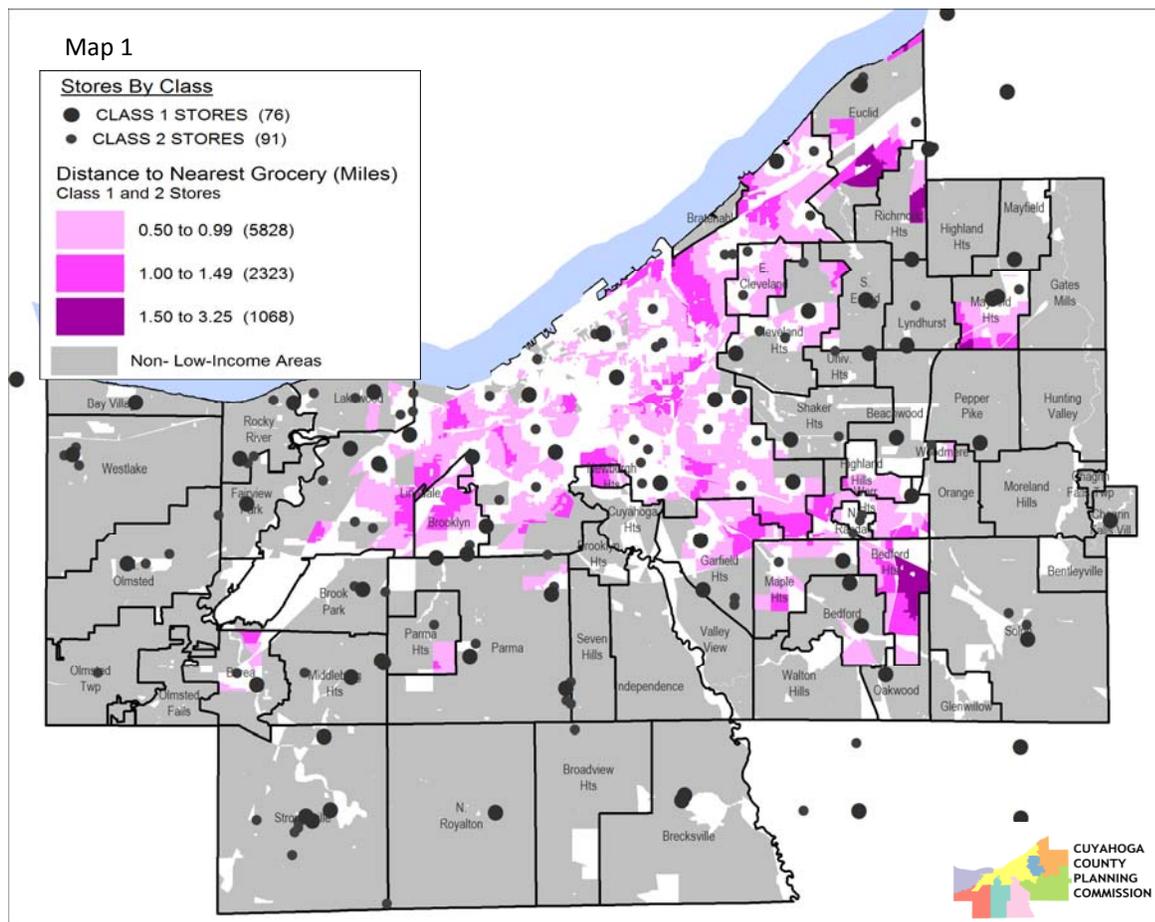
In addition to gauging average distance to major grocery stores, many studies on access to fresh food also incorporate measures of income (ability to pay more for food at smaller, more expensive stores). Indeed, according to the USDA's Food Desert Locator, these are the two primary criteria for identifying a food desert: distance from a grocery store and low income status. However, another key factor is access to transportation (vehicle ownership versus reliance on walking and/or public transportation). While lower density areas at the outer edges of the County can be expected to have greater average distance to grocery stores, it is assumed that those residents have the means to cope with the greater distances – both in terms of income and access to vehicles. As such, those areas with relatively higher income and greater access to vehicles are discounted in the ultimate determination of "food deserts".

In addition, there are a number of other indicators that are used to describe the differences between food desert areas and non-food desert areas. Data sources used for this analysis include 2010 US Census for population, households, age and land area of census tracts and the 2005-2009 American Community Survey for data on car ownership, and household income. Descriptions of these key measures follow.

**Income:** According to the USDA’s Food Desert Locator, to qualify as a “**low-income census tract,**” a census tract must have either: 1) a poverty rate of 20 percent or higher, OR 2) a median family income at or below 80 percent of the metropolitan area’s median family income.

**Distance:** While the USDA’s Food Desert Locator uses a one-mile distance to define low access in urban areas, other studies have used a more common “walkable” distance of either one-half mile or one-quarter mile. This study uses a **one-half mile distance as the measure for low access** considering the difficulty of carrying groceries.

Map 1 illustrates the areas of Cuyahoga County that meet the criteria of low income combined with areas that are more than one-half mile from a grocery store.



**Other Indicators:** In order to understand the range of issues that might be correlated to food deserts, a number of other characteristics were examined.

**Population Density:** Population density represents the number of residents per square mile, meaning that the denser the neighborhood, the smaller the grocery store trade area may need to be.

**Car Ownership:** As noted above, owning a car lessens the importance of distance to a grocery store. But for residents without a car, accessibility to a grocery store within easy walking distance is especially important.

**Aggregate Income per Acre:** In denser urban areas, median household income can under-represent the scale of spending potential in a neighborhood. Aggregate income per acre, or income density, is an important indicator of spending potential. While the average household incomes are relatively low in

food deserts areas (where one of the criteria is low-income), the typically higher density of these more urban areas translates into higher income density on a per acre basis.

Grocery Store Supply: Once the stores were mapped and food desert areas identified, it is possible to compare the number of grocery stores located in communities with food deserts compared to non-food desert communities.

### **PRELIMINARY FINDINGS**

The following key points highlight the findings from this analysis:

- According to the US Census, there were 1,280,122 people living in Cuyahoga County in 2010. This study indicates that **nearly 323,850 people (25%) live in food desert areas**. For the city of **Cleveland, 221,036 people (55.7% of the city's population) live in food desert areas**.
- Over **30,800 (22.3%) households in the food desert areas did not own a car in 2009**. This is more than twice the rate of households without a vehicle in non-food desert areas.
- The food desert areas throughout Cuyahoga County have high population densities. The average **population density within the food desert areas is 5,828 persons per square mile, which is 83% higher than the county average**, and 110% higher than non-food desert areas.
- While the average household income in food desert areas is \$37,312, compared to \$70,448 in non-food desert areas, the **average income per acre (income density) in the food desert areas is nearly 12% greater than the average income per acre in non-food desert areas**. In 2009, the average income per acre for the food desert areas was \$144,846.
- Within the 20 cities that contain the food desert areas, there is a **Class 1 supermarket for every 27,260 people compared to one store for every 14,500 residents in the other cities**.
- When comparing both Class 1 and 2 stores, **there is one store for every 10,400 residents in the food desert communities compared to one store for every 6,700 residents in the other cities**.

### **HISTORY OF SUPERMARKETS**

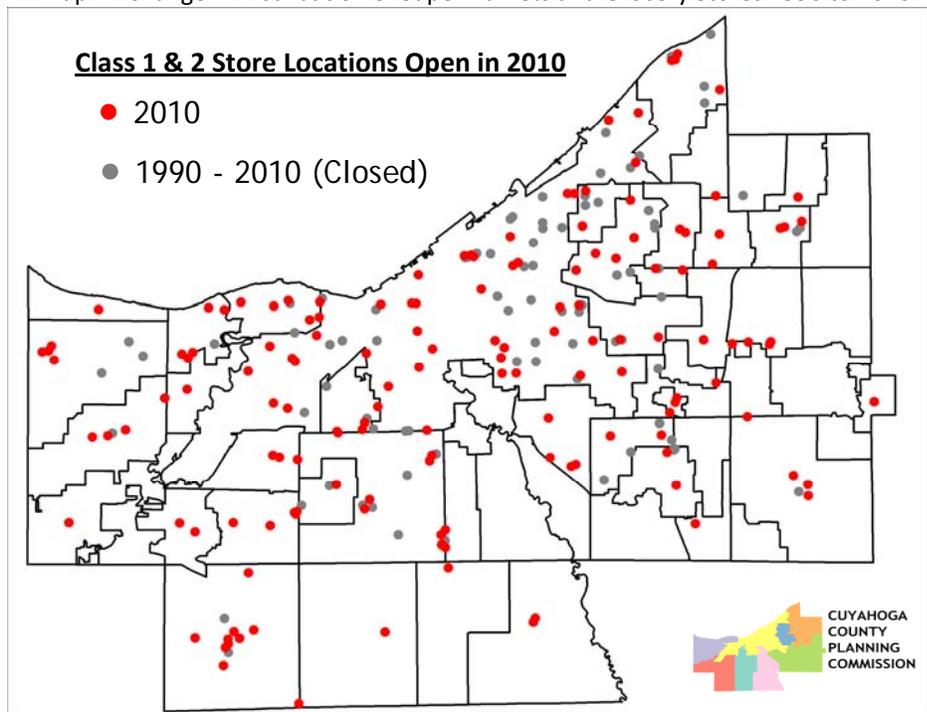
From 1990 to 2010, the population in the city of Cleveland declined 21.5% from 505,616 people to 396,815 people. At the same time, the population of Cuyahoga County declined at less than half that rate - only 9.4% from 1,412,140 people to 1,280,122 people, indicating that a number of central city residents moved outward to suburban locations. During that same period, the grocery store industry experienced increased competition as a greater range of store formats began selling food and beverage items.

Given the shift in population away from Cleveland to the suburbs, it would not be surprising to see the number of supermarkets and grocery stores in the central city declined. However, at the same time, the average grocery store size increased in order to maximize efficiency and remain competitive. This trend led to a wave of grocery store closures and consolidations beginning in the mid-1990s. It is important to understand the economic dynamics of the grocery store industry when considering the possible policies for addressing food deserts in Cuyahoga County.

In a generalized review of historical data regarding chain supermarkets and grocery stores, there are roughly the same number of these stores in 2010 as there were in 1990 (147 and 145 respectively), but the distribution of the stores has changed. As population within the county has spread out to the outer ring suburbs so has the location of the larger chain supermarkets (see Map 2). Five years after the Tops Markets chain closed in Northeast Ohio, 11 of the stores are still closed, and more than half of that space is located in the cities that contain the food deserts. Since 1990, when stores were smaller, over

40 stores once occupied by an Eagle Supermarket, Pick-N-Pay, Stop-N-Shop or Save-Mor are no longer occupied by a grocery store. More research is needed to document and analyze square feet of floor area by store type.

Map 2. Change in Distribution of Supermarkets and Grocery Stores 1990 to 2010 in Cuyahoga County.



**NEXT STEPS**

There are a number of factors that affect people’s choices of what to eat. Understanding the availability of fresh food from year-round sources such as supermarkets and larger grocery stores is only one facet of addressing food security for lower income residents. Ongoing research is needed to also understand the market conditions that contribute to differences in access to food in order to formulate policy interventions that may be effective in reducing access limitations.



This project is funded in part by the Creating Healthy Communities initiative, a program of the Ohio Department of Health.

<sup>1</sup> Access to Affordable and Nutritious Food: Measuring and Understanding Food Deserts and Their Consequences, USDA Report to Congress, 2009.  
<sup>2</sup> “Examining the Impact of Food Deserts on Public Health in Chicago” Mari Gallagher Research and Consulting Group (2006).  
<sup>3</sup> The Economic Impacts of Supermarkets on Their Surrounding Communities, TRF Reinvestment Brief, Issue 4  
<sup>4</sup> Ibid.  
<sup>5</sup> Obama Administration Details Healthy Food Financing Initiative. Press Release: Friday, February 19, 2010. <http://www.hhs.gov/news/press/2010pres/02/20100219a.html>  
<sup>6</sup> USDA Introduces Online Tool for Locating 'Food Deserts'. Press Release May 2, 2011. The online tool was an outgrowth of the USDA’s 2009 report titled Access to Affordable and Nutritious Food. <http://www.usda.gov/wps/portal/usda/usdahome>.