

Physical Access as a Factor in Food Security- February 2015

We know that food security is an issue in Springfield- 1,000 students within Springfield Public Schools are participating in the backpack program and according to Feeding America, 16.2% of all people and 22.4% of children face food insecurity.² This report provides a brief examination of physical access to food in Springfield.

The focus of the report is on low income households, as these are most susceptible to food insecurities. The report utilizes the same definition of low income as the USDA in the Food Access Research Atlas: the census tract poverty rate (less than 100% of the Federal Poverty Level) is greater than 20% or the census tract median income is less than 80% (\$33,166) of the county's median income (\$41,458). To evaluate each census tract the American Communities Survey, 2008-2012 summarized data was used.

This report is not intended to be a comprehensive analysis of the entire food system, but rather to examine access to the stores where the majority of people shop for food most of the time. To this end, the food stores used in this analysis were supermarkets. Supermarkets represent 86% of all SNAP benefits being redeemed, supporting their use to examine food access in low income households.¹ For the analysis, supermarkets are defined as large retail stores (greater than 20,000 sq. ft.), require no membership, offering all major food groups and have economical items and pricing. The analysis included the following stores: Aldi, Cash Saver, Food 4 Less, Harter House, Hy-Vee, Price Cutter, Save-a-Lot Foods and Wal-Mart. The stores represented in the report reflect the recent community changes of Dillons' exodus from the community and Price Cutter's redistribution of store locations. It does not represent the Wal Mart Neighborhood Market currently under construction located on Grand Avenue.

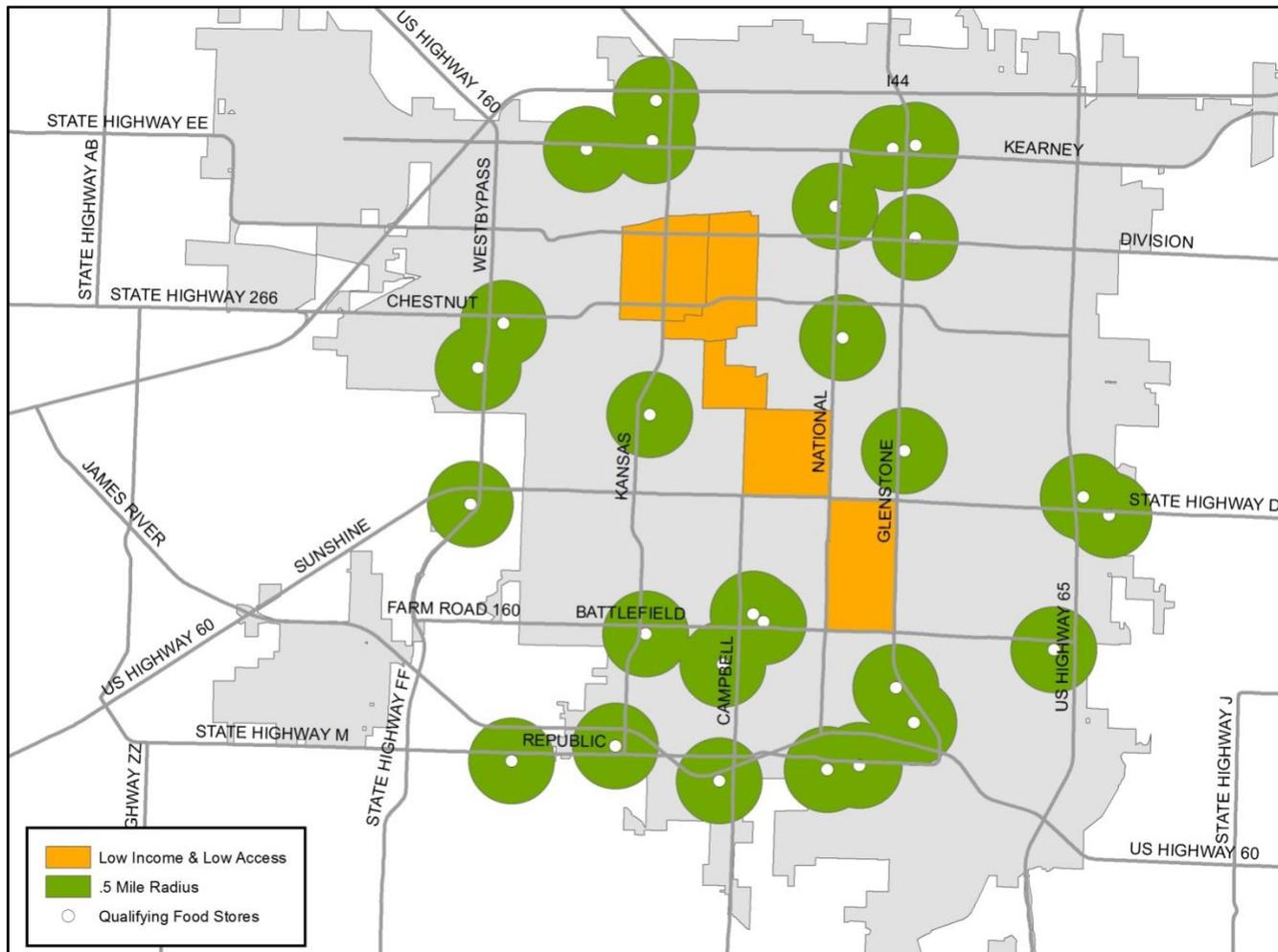
The report also utilizes the USDA's guidelines for what constitutes food access. For an area to be considered highly accessible, individuals without transportation (i.e. walking individuals) must be a maximum of .5 miles from a food store, and to be considered moderately accessible, individuals without transportation must be a maximum of 1 mile from a food store.¹ All individuals living beyond 1 mile without access to transportation are considered to have inadequate access. Additionally, the USDA provides information about the habits of SNAP participants. SNAP participants live an average of 1.8 miles from the nearest supermarket.¹ SNAP participants' average distance to the store they use most often is 4.9 miles, which leads us to understand that they are not necessarily using the closest store, but travel further to use the store of their preference or due to transportation barriers, such as the use of public transit.¹

To graphically represent access, ESRI's ArcGIS 10.2 software was used. The following maps use a buffer around each supermarket, creating an area of access at .5 miles and 1 mile. The orange areas on these maps are the census tracts in Springfield that are both low access and low income- the census tract qualifies as low income and there is no portion of the census tract within a half mile of a supermarket. These maps allow for an objective examination of which segments of town (census tracts) have limited physical access to supermarkets. This final combination of low income and low access differs from the USDA definition. USDA includes population count or percentage of a census tract that lives beyond the half mile radius.



.5 Mile Radius – Food Access and Income

Orange areas indicate census tracts that are both low income and low access at .5 miles. White dots indicate the supermarket location and the green circles represent the .5 mile radius around each store. Low income census tracts that the green circles do not intersect are considered low income and low access.





1 Mile Radius – Food Access and Income

Orange areas indicate census tracts that are both low income and low access at 1 mile (none at this distance). White dots indicate the supermarket location and the green circles represent the 1 mile radius around each store. Low income census tracts that the green circles do not intersect are considered low income and low access.



Conclusions

As is evident from the maps, Springfield has both areas of sufficient coverage and areas with gaps in coverage. When examining the maps that include access and income, Springfield currently has five census tracts that are classified as low income and low access: 3, 5.02, 6, 11 and 18. These five census tracts represent the following neighborhoods: Grant Beach, Heart of the Westside, West Central, Phelps, University Heights, and Meador Park. Community efforts to reduce barriers to physical access to food are recommended for these census tracts. When the new Wal Mart Neighborhood market on Grand Avenue is completed it will provide physical access to census tracts 3 and 5.02.

Sources:

- 1- United States Department of Agriculture [USDA], Access to Affordable and Nutritious Food: Measuring and Understanding Food Deserts and Their Consequences. <http://www.ers.usda.gov/publications/ap-administrative-publication/ap-036.aspx>
- 2- Feeding America. <http://feedingamerica.org/>

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