Mapping Baltimore City's Food Environment:

2015 Report

June 2015

JOHNS HOPKINS
CENTER *for* A LIVABLE FUTURE

HEALTH DEPARTMENT
BALTIMORE MARYLAND

CITY OF BALTIMORE

STEPHANIE
RAWLINGS-BLAKE
MAYOR

CITY of BALTIMORE
DEPARTMENT of PLANNING

BALTIMORE
DEVELOPMENT CORPORATION

“This report and analysis will guide us in creating and expanding specific food access strategies and policies that will promote equitable access to healthy affordable food for all residents.”

Stephanie Rawlings-Blake
Mayor, City of Baltimore

STEPHANIE
RAWLINGS-BLAKE
MAYOR

As Mayor, one of my priorities is to increase access to healthy affordable food in Baltimore City food deserts. We have created the 2015 Food Environment Map to reveal differential access to healthy food across the city through the cutting edge research of the Baltimore Food Policy Initiative (BFPI) and the Johns Hopkins Center for a Livable Future. This report and analysis will guide us in creating and expanding specific food access strategies and policies that will promote equitable access to healthy affordable food for all residents.

BFPI is our intergovernmental collaboration on food access and food systems, and this report reflects how these agencies come together to help the City craft strategies, set priorities and make decisions. Through this work, we understand the healthy food access problems, and we continue to develop innovative solutions to address them.

The City has many successful programs and policies underway to increase access to healthy affordable food. This analysis and report has helped to develop and fine tune additional strategies. Some key initiatives and accomplishments include: 1) a comprehensive Food Desert Retail Strategy that acknowledges that all types of food retailers should provide healthy food and provides support on various levels to encourage them to do so; 2) providing food desert residents in senior, disabled, and public housing the opportunity to purchase groceries online through the Virtual Supermarket Program; 3) improving healthy food offerings in our historic public markets; 4) linking the Homegrown Baltimore urban agriculture strategy to food access to encourage residents to grow, buy and eat local.

I understand the food access challenges many of our residents face. It is my goal to grow Baltimore by 10,000 families and I want to make sure that all residents, both old and new, have access to the healthy affordable food they want and deserve. This map and report are strong tools that will help us to reach these goals and I am proud and excited to see them put to use.

Stephanie Rawlings-Blake
Mayor, City of Baltimore

To successfully address food access, a city must approach food from planning, health and economic perspectives, working across many agencies. That is why we partnered to create the Baltimore Food Policy Initiative— an intergovernmental collaboration of the Department of Planning (DOP) and its Office of Sustainability, the Baltimore City Health Department (BCHD), and the Baltimore Development Corporation (BDC). With each agency lending its expertise, the City creates comprehensive strategies that tackle food access from many perspectives, and implements programs and policies with multi-sector support.

The Food Environment Map Report epitomizes what this type of partnership can accomplish. By pairing vast knowledge of Baltimore City with first-class research, we crafted a fine-tuned plan for increasing food access and growing the city. Over the past five years, DOP has led the effort to refine the City's food agenda and priorities through sustainability and food access lenses, and has incorporated food into a variety of plans and policies. It is clear that food is an increasingly important planning issue.

We know that where you live impacts your health. Furthermore, differential access to healthy and/or unhealthy food drives health disparities. It is through cross-cutting collaborations and innovative community-based food access programming that we are able to fully understand these impacts— and the path forward to health equity. BCHD is committed to making Baltimore a city where all residents can realize their full health potential, and knows that improving healthy food access is a critical piece to realizing that goal.

Food is a catalyst for economic development. The Food Desert Retail Strategy was developed by understanding the challenges and opportunities food retailers face in Baltimore City. Furthermore, attracting and retaining food business, of all sizes, is a critical component of the City's Comprehensive Economic Development Strategy. BDC offers retailers, small food businesses and food entrepreneurs access to information, resources and incentives.

Our organizations are proud to partner with each other, Mayor Rawlings-Blake and the Johns Hopkins Center for a Livable Future on such a critical issue to our City. The relationships that have been cultivated through the Baltimore Food Policy Initiative will ensure that the implementation of the strategies contained in this report will occur in ways that holistically incorporate and drive sustainability, public health and development.

Thomas J. Stosur
Director
Department of Planning

Dr. Leana S. Wen
Commissioner of Health
Health Department

William H. Cole, IV
President and CEO
Baltimore Development Corporation

JOHNS HOPKINS
CENTER *for* A LIVABLE FUTURE

The partnership between the Johns Hopkins Center for a Livable Future (CLF) and the Baltimore Food Policy Initiative (BFPI) demonstrates the strength of collaboration in conducting research with immediate real-world application. We consider this to be a valuable partnership that generates multiple opportunities to translate research into practical, evidence-based resources that can inform community and policy decision-making.

The 2015 Food Environment Map uses the CLF-developed methodology to capture four food desert factors: distance to a grocery store, income, access to a vehicle, and the availability of healthy food. The CLF's researchers developed and tested this methodology, then collected data in the field – visiting over 850 retail stores across the city.

Developed as part of the Maryland Food System Map Project, the Food Environment Map exemplifies the CLF's core mission to promote research and communicate information about the complex interrelationships among diet, our environment and human health. In this project, the environment refers to the physical built environment in the city of Baltimore. The CLF plans to continue this research, both as part of the Maryland Food System Map Project and by encouraging and supporting other JHU research related to access to healthy food in Baltimore.

The 2015 Food Environment Map Report provides insight into healthy food accessibility issues in the city of Baltimore. The Baltimore City government has assumed a leadership role in addressing the issues and implementing strategies for improvement. This partnership and collaboration between city government and an academic institution provide a model for researchers around the country who want to apply their research to public policy. The CLF, in partnership with BFPI, looks forward to continuing our work on behalf of and in conjunction with communities as we strive to improve healthy food access for all of Baltimore's residents.

Robert S. Lawrence, MD
Director
Johns Hopkins Center for a Livable Future

AUTHORS AND CONTRIBUTORS

Authors:

Amanda Behrens Buczynski
Senior Program Officer, Johns Hopkins Center for a Livable Future

Holly Freishtat
Baltimore City Food Policy Director, Office of Sustainability

Sarah Buzogany
Food Access Planner, Office of Sustainability

Map Developers:

Jamie Harding
GIS Specialist, Johns Hopkins Center for a Livable Future

Travis Pate
Planner II, Department of Planning

Kelleigh Eastman
Intern, Office of Sustainability

Contributors:

Carrie Burns
Communications Specialist, Johns Hopkins Center for a Livable Future

Alice Huang
Healthy Food Coordinator, Office of Sustainability

Laura Flamm
Baltimarket and Food Access Coordinator, Baltimore City Department of Health

Laura Fox
Director of the Office of Chronic Disease Prevention, Baltimore City Department of Health

Michael Milli
Digital Asset Manager, Johns Hopkins Center for a Livable Future

Anne Palmer
Program Director, Johns Hopkins Center for a Livable Future

Michael Snidal
West Team Director, Baltimore Development Corporation

Jessica Varsa
Chief of Research and Strategic Planning, Department of Planning

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CONTENTS

EXECUTIVE SUMMARY 1
INTRODUCTION 7
Contextual Factors Related to Healthy Food Access in Baltimore City 7
History 8
METHODOLOGY 11
Definitions 11
Four Food Desert Analysis Variables 12
Understanding the Four Food Desert Factors 16
Limitations 18
Methodology Next Steps 19
2015 Food Environment Map 20
EFFECT OF FOOD DESERTS ON BALTIMORE CITY RESIDENTS 23
Demographics and Disparities 23
Health Disparities in Baltimore City 25
The Relationship Between the Food Environment and Health 26
THE RETAIL FOOD ENVIRONMENT 29
Local Produce Retail 33
APPLYING THE FOOD ENVIRONMENT MAP IN PRACTICE 37
Baltimore's Food Desert Retail Strategy 37
The Food Environment Map as a Policy and Planning Tool 41
Community Food Planning 42
Council District Food Environment Maps 44
Neighborhood Food Plans 46
CONCLUSION 51
APPENDIX 52
I) Maps 53
a. Maps and Information Sheets for Baltimore's 14 City Council Districts 53
b. Food Desert and Rate of Premature Death due to Cardiovascular Disease 82
c. Food Desert and Life Expectancy 83
d. Food Desert and Zoning Code 84
e. Food Desert and Population Density 85
II) METHODOLOGY 86
a. Healthy Food Availability Index Scoring Tool 86
Endnotes 87

“Our definition of a food desert is an area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.”

EXECUTIVE SUMMARY

Baltimore's residents have different levels of access to healthy food based on their specific circumstances. The 2015 Food Environment Map and Report is a culmination of years of data collection, analysis and strategizing around innovative solutions to improve access to healthy food. The Baltimore Food Policy Initiative (BFPI) and the Johns Hopkins Center for a Livable Future (CLF) created this 2015 Food Environment Map and Report in order to better understand Baltimore's food environment and food deserts - areas where residents lack both access and sufficient economic resources to purchase healthy food - and to more proactively and effectively promote equitable access to healthy food. The materials and information contained within provide a resource to inform decision-making in policy, planning and legislation related to healthy affordable food access, and in improving health outcomes.

Baltimore City's food environment is a complex system of the built environment, marketing, advertising and social environments, all of which are influenced by government policy, cultural norms and market forces. This report primarily focuses on the retail food environment, but also considers food assistance and urban food production.

Food Desert Definition: An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

Based on this definition, the 2015 map reveals:

- One in four of Baltimore City residents live in areas identified as food deserts.
- Children are affected disproportionately, with 30 percent living in food deserts.
- African Americans have disproportionately low access to healthy food and are the most likely of any racial or ethnic group to live in a food desert neighborhood.

Key Methodology Updates: To increase the accuracy of the 2015 Food Environment Map, the data were updated/enhanced or the metric was recalibrated for all four food desert factors. These changes to methodology make it inadvisable to compare this map to previous versions. The updated data sets along with the more robust methodology now set the standard for future assessments and will allow for tracking change. The following points outline the most significant changes made:

- **Access to Vehicles Threshold:** The 2012 Baltimore Food Environment Map classified an area as low vehicle access if 40 percent or more of the population lacked access to a vehicle. The data set was updated based on the 2009-2013 American Community Survey (ACS), which showed that Baltimore City neighborhoods have an average of 30.3 percent of households lacking access to a vehicle. For the 2015 map analysis, this threshold was changed to 30 percent or more to better reflect the City average. Of all the methodology updates, this change had the largest effect on the number of residents classified as living in a food desert.

- **Poverty Level:** The latest data from the ACS were used, the five-year average from 2009-2013. In general, the percent of the population living in poverty has increased by about 3.7% in Baltimore since 2005-2009 ACS data were released.

- **Enhanced Healthy Food Availability Index (HFAI) Scores:** The 2012 food environment analysis used a combination of HFAI scores: 140 stores were physically surveyed in 2008, and the remaining stores (over 700) were assigned imputed scores based on the average score of a given store type in a given neighborhoods with similar racial composition. To improve this data for the 2015 map, CLF conducted a new survey in the summer of 2012, using a streamlined tool. All 900 known stores were physically surveyed and actual scores were collected. On average, the new scores were higher than what had been imputed.

- **Supermarket Alternative:** The concept of a "supermarket alternative" was incorporated into the definition after researchers observed that some food outlets that are not traditional supermarkets can offer a market basket of healthy food options (basic whole foods for home preparation) equivalent to that of a supermarket. To capture the notable impact these food sources can have and define a threshold to strive towards, smaller groceries and public markets with an HFAI score of 25 or higher may be considered supermarket alternatives. As such, they may be included in the map in the same ways that traditional supermarkets are— in the distance measure and average HFAI scores.

Application of the Food Environment Map and next steps: The Food Environment Map is an effective tool for illustrating the need for improved access to healthy food. This report, however, goes beyond the main map and contains an in-depth analysis and strategic approaches to help plan and implement the strategies and policies needed to address the urgent healthy food access issue. Baltimore has come a long way in understanding the challenges and solutions related to healthy food access and will continue to refine its analyses. Among the many ongoing programs and policies mentioned in the report, next steps include:

Food Desert Retail Strategy: Most people in Baltimore shop at supermarkets for the majority of their groceries, even if they have to travel beyond their neighborhoods to do so. However, improving supermarket access is not the only solution to increasing access to healthy staple foods. BFPI developed a comprehensive strategy to support many types of retail, considering additional factors such as population density and zoning. The Food Desert Retail Strategy will reduce the number of people living in food deserts and grow the economy using five key approaches: 1) expand and retain supermarkets, 2) improve non-traditional grocery retail options, 3) improve healthy food availability in the public market setting, 4) expand Homegrown Baltimore to serve food desert neighborhoods, and 5) develop a transportation strategy.

Work is ongoing in all five categories of the Food Desert Retail Strategy:

1) Baltimore City will create financial incentives to address the comparatively high costs of personal property tax, workforce development, and security that supermarkets face when locating and renovating in the city. As a retailer retention strategy, BFPI will work with state leadership to extend the disbursement period for Supplemental Nutrition Assistance Program (SNAP) benefits from 10 to 20 days to even out the current highly concentrated business cycles. This issue has been prioritized by retailers, as a longer disbursement period for SNAP benefits would ensure steadier sales throughout the month, more consistency in store stocking, and more consistency in staffing.

2) Most food deserts occur in residential areas, where locating a large supermarket may not be appropriate. With this in mind, BFPI created strategies to improve non-traditional grocery retail. These include, expanding the Virtual Supermarket and continuing the work of the Healthy Corner Stores program to provide healthier options in food desert neighborhoods.

3) BFPI will work with two public markets to elevate their healthy food offerings to the level of a supermarket alternative.

4) Baltimore City recently streamlined the process for farmers market permitting, and will look to a farm stand strategy for neighborhoods that cannot support a full farmers market.

5) BFPI will develop a transportation strategy to determine ways to bring food to people and bring people to food. Solutions could take the form of community-run shuttles, modified bus routes or mobile markets. BFPI will research best practices and work with specific neighborhoods to develop targeted transportation solutions.

- **Council Maps:** One of the innovations in this report is showing the Food Environment Map by council district to display greater detail on a smaller scale. In Baltimore, as in other cities, where a person lives impacts his or her health. These maps help show the spatial relationship of food deserts to food retail, food assistance locations and urban agriculture and examine disparities to suggest neighborhood-specific solutions to make healthy food more accessible to residents.

- **Community Food Planning:** BFPI will work with groups of neighborhoods and community planners to incorporate a food lens into existing planning processes such as master plans. The maps in this report will help frame the conversation, and BFPI will engage community leaders, planners and residents in planning processes to identify additional resources and barriers, and create practical, implementable plans that are driven directly by community input and commitment to increase access to healthy food. These plans will play an important role in shaping the food environment on the neighborhood level.

Conclusion: Baltimore is an innovator and leader in the food policy arena, and has made important progress toward increasing equitable access to healthy food. More than 200 households in neighborhoods classified as food deserts no longer have to invest a disproportionate amount of time and resources to travel to a supermarket, because the Virtual Supermarket brings groceries directly to their housing complexes. New supermarkets are scheduled for construction in food desert neighborhoods. Through the Healthy Stores program, corner stores in West Baltimore have made healthier items available and have been joined in this effort by a cadre of youth trained as Neighborhood Food Advocates. Urban farmers now have long-term land security to farm City-owned land. The City began an annual Food Justice Forum in 2014 to bring together residents and organizations to discuss community-empowered food access. There is momentum in Baltimore. The analyses and strategies contained in this report will help to move the City's food policy agenda forward in the most productive and impactful ways possible.

The 2015 Food Environment Map can be found on page 19 of the full report.

“One in four of Baltimore’s residents live in food deserts – areas where residents lack both access and sufficient economic resources to purchase healthy food.”

INTRODUCTION

Baltimore City has reached a turning point. After decades of population loss following the decline of manufacturing and the rise of suburbanization, Baltimore has stabilized and is beginning to gain residents, while building ever stronger momentum around urban revitalization. The past disinvestment, however, has contributed to differential access to healthy food. Twenty five percent of Baltimore's residents live in food deserts– areas where residents lack both access and sufficient economic resources to purchase healthy food. This challenge affects current residents and could impede the potential to attract new families to Baltimore. With these issues in mind, the City sought to better understand the food environment and implement strategies to promote equitable access to healthy food. Baltimore City's food environment is a complex system of the built environment, marketing and advertising, and social environments, all of which are influenced by government policy, cultural norms and market forces. This report primarily focuses on the retail food environment, but also considers food assistance and urban food production.

Baltimore City, in collaboration with the Johns Hopkins Center for a Livable Future (CLF), produced the 2015 Food Environment Map and Report to draw attention to food access patterns in Baltimore City's neighborhoods and to assist with policy development and implementation. This report provides context to healthy food access issues in Baltimore; showcases the 2015 Food Environment Map; depicts who is affected by food deserts and the impact on their health; describes the food retail environment; provides innovative analysis regarding how to use food desert mapping for policy and planning purposes; and offers strategies and incentives to overcome the barriers to healthy food access to promote health equity for all residents.

The analysis included in this report is anchored in the 2015 Food Environment Map. Based on Baltimore's food desert definition, the map shows where the need for improved access to healthy food is concentrated in terms of economic resources and store locations. However, one map cannot incorporate all factors that may affect Baltimore residents' abilities to access healthy food, such as public transportation, affordability, crime, education, or cultural acceptability. The food desert layer is used in various other map analyses in this report to better understand how healthy food access interacts with these other influences.

Contextual Factors Related to Healthy Food Access in Baltimore City

Poverty: 42.1 percent of residents live at or below 185 percent of the Federal Poverty Level in Baltimore City.[i] This income level, along with expenses and other factors, qualifies an individual or family for federal nutrition assistance benefits, including the Supplemental Nutrition Assistance Program (SNAP), and is the threshold used in Baltimore's food desert

definition. As of March 2015, approximately 202,500 individuals, or nearly one third the city's population, received SNAP benefits each month.[ii]

Diversity: Baltimore's population is made up of 68.3 percent minority residents,[iii] with 63.3 percent identifying as Black or African American. [iv] In Baltimore, as in other major cities in the U.S., non-white minorities experience worse health outcomes than white residents, including diet-related diseases.[v]

Economy and Employment: From 2009-2013, employment in Baltimore City increased by 1.3 percent,[vi] but unemployment remained close to 13.9 percent in 2014.[vii]

Health: Baltimore City has seen declines in mortality due to cardiovascular disease and diabetes, both of which are considered diet-related diseases; however, residents still die at higher rates from these diseases in Baltimore compared to the rest of Maryland.[viii] Baltimore also fares worse than the state average in overall health status, diabetes, obesity and high blood pressure, and there are striking disparities in the prevalence of these conditions between white and black residents and low- and high-income residents.

History

This map and report are born out of a 2009 Food Policy Task Force recommendation[1]— support continued research on food deserts and collaboration with policymakers— and The Baltimore Sustainability Plan's[2] Greening Goal #2, Strategy F— compile local and regional data on various components of the food system. These recommendations aimed to "establish Baltimore as a leader in sustainable local food systems," and reach other goals the city has set forward related to food and research.

The Baltimore Food Policy Initiative (BFPI)— an intergovernmental collaboration between the Department of Planning (DOP), Office of Sustainability (BOS), Baltimore City Health Department (BCHD), and Baltimore Development Corporation (BDC)— was founded in 2010 to "improve health outcomes by increasing access to healthy affordable food in Baltimore City's food deserts". The CLF is driven by the concept that public health, diet, food production and the environment are deeply interrelated and that understanding these relationships is crucial in pursuing a livable future. These two organizations collaborate so that research and policy are not isolated, but can be developed in tandem. Thus, research focuses on the most relevant issues that will aid in the development of meaningful policy and programs.

[1] http://cleanergreenerbaltimore.org/uploads/files/Baltimore%20City%20Food%20Policy%20Task%20Force%20Report.pdf

[2] http://www.baltimoresustainability.org/sites/baltimoresustainability.org/files/Baltimore%20Sustainability%20Plan%20FINAL.pdf

The CLF created its first Baltimore City Food Desert Map in 2009 to examine household income and supermarket locations. In 2010, the CLF and BFPI partnered to release the first City-approved food desert map in the nation using these basic measures. This preliminary version was then refined in 2012 by adding two new factors: vehicle availability and the CLF's Healthy Food Availability Index (HFAI), which measures presence of staple whole foods and healthy options in food stores. The 2012 map served as an excellent tool to demonstrate disparities in healthy food access in Baltimore's communities. To create the 2015 map, the team used more complete and thorough data sets and improved methodology to create the most rigorous Food Environment Map to date.

The 2015 Food Environment Map establishes a solid baseline for measuring food deserts and understanding areas with limited healthy food access in Baltimore, and will be used to compare against future healthy food access measures. Due to changes in the methodology between analyses, the 2015 map is not directly comparable to the 2012 map or previous maps for the purpose of drawing conclusions about changes in healthy food access.

“Nuanced maps help researchers, policymakers, public health practitioners, planners, community leaders and the business community better understand the realities and complexities of the issue of access to healthy food.”

METHODOLOGY

The 2015 Food Environment Map builds on past research and employs a refined methodology to present an accurate depiction of healthy food access gaps and resources in Baltimore City. Key points and changes are highlighted in this section, and detailed methodology is available from the CLF by request.

Definitions

Food Source Type Definitions: The definitions below are listed for each food store type and food source alternative included in the underlying analysis of the Food Environment map. Definitions are derived from industry standards, from the Food Marketing Institute, and from the CLF's research on food sources.

- **Supermarket:** Large format grocery stores with all food departments present, including produce, meats, seafood, canned goods and packaged goods. Typically chain stores, these stores have annual sales of $2 million or more and have three or more cash registers.

- **Small Grocery and Corner Stores:** Small format grocery stores that are typically independently owned and operated. They have annual sales of less than $2 million, mostly due to limited food departments.

- **Convenience Store:** A variety of stores that sell food products, but where food is not the main business (the majority of sales are made up from gas, cigarettes, pharmacy items, home goods, etc.). This includes chain and gas station convenience stores, drug stores or pharmacies, and discount/dollar stores.

- **Public Market:** Historic City-owned indoor markets that feature diverse vendors selling a variety of food and non-food products. There are six in operation in Baltimore.

- **Supermarket Alternative:** Small grocery stores, corner stores and public markets with a Healthy Food Availability Index (HFAI) score of 25 or higher (see below).

- **Virtual Supermarket:** Operated by the Baltimore City Health Department, this program is located at certain libraries and senior, disabled and public housing, and allows residents to order groceries online through a designated supermarket partner, with delivery to a central location with no delivery fee to the customer.

Food Desert Definition: An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index score for all food stores is low.

Four Food Desert Analysis Variables

The four variables of the Baltimore City food desert analysis are 1) distance to supermarket, 2) household income, 3) vehicle availability, and 4) supply of healthy food in retail food stores. While similar to measures used in food desert maps for other cities, the CLF's mapping team examined and modified each metric to most accurately represent Baltimore, rather than relying on generic definitions. Baltimore's food desert methodology focuses on retail food sold for home consumption and does not evaluate prepared food sources such as fast food, carryout or sit down restaurants. The variable data, available at different geographies, were combined and analyzed in grid cells, roughly equivalent in size to a city block. A grid cell must meet all four variables to be categorized as a food desert.

1) **Distance to Supermarket or Supermarket Alternative:** The Baltimore definition uses a quarter-mile radius from a supermarket or supermarket alternative to approximate walking distance. Based on empirical studies, it can be assumed that households using public transit or walking to food stores would not walk farther than one quarter mile with groceries. [ix] **Note:** This is an "as the crow flies" walking distance measure and does not equate to the distances supermarkets might use in their own market research— as the purpose of each is different.

- **2015 Methodology Update:** The supermarket alternative category was added to the analysis after researchers observed that it may be possible for some food outlets that are not traditional supermarkets to offer a market basket of healthy food equivalent to a supermarket. To capture the significant impact these food sources could have in the food environment, smaller groceries and public markets with an HFAI score of 25 or higher— the median score of supermarkets—may now be considered Supermarket Alternatives. The intention is to assist and encourage more stores/markets to reach this healthy food threshold and it presents an opportunity to positively impact food deserts over time.

  In the 2015 analysis, no stores qualify as a Supermarket Alternative. BFPI will work with small groceries, corner stores and public markets to increase their healthy food offerings and embody this concept. These sites will be included in future releases of the map in the same way that traditional supermarkets are: in both in the distance measure and average HFAI scores.

These sites are included in the map in the same way that traditional supermarkets are: in both in the distance measure and average HFAI scores. In the 2015 analysis, one small grocer qualifies as a Supermarket Alternative.

2) Household Income: Low-income areas are identified by median household income at the census tract level. This analysis considered 185 percent of the Federal Poverty Level or below for a family of four to be "low-income." This threshold is one factor used in determining qualification in federal nutrition assistance programs, such as SNAP. The Federal Poverty Level for a family of four in 2013 was $23,550 and 185 percent was $43,567.50.

- **2015 Methodology Update:** The most recent American Community Survey (ACS) five-year estimate data were used, 2009-2013. Therefore, the 2013 Federal Poverty Level was also used in order to be comparable to ACS data.

3) Vehicle Availability: The CLF conducted a literature review to determine an appropriate percentage or threshold of the population negatively impacted by the lack of access to a vehicle. Residents without a personal vehicle are forced to find another means of transportation— either public or private transportation or walking— to reach food stores, often requiring more time and effort than if they had a vehicle at their disposal. Most studies cited 10 to 35 percent or more of the population as a significant percent lacking access to a vehicle. In Baltimore City neighborhoods, on average, 30.3 percent[x] of people are without access to a vehicle. The research team thus chose 30 percent or more as the threshold per census tract, to align more closely to the City average.

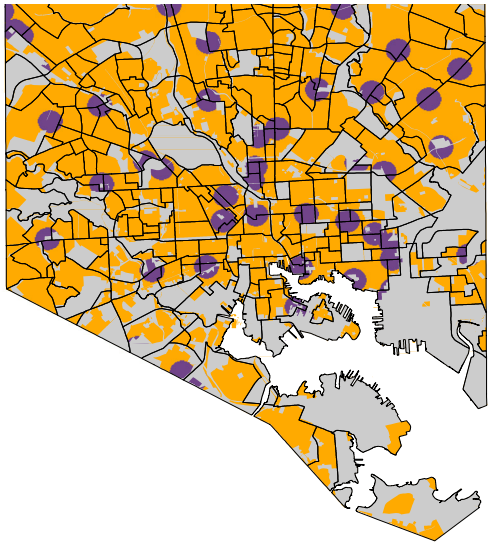
- **2015 Methodology Update:** Previous Baltimore Food Environment Maps used a vehicle availability factor of 40 percent or more of the population lacking access to a vehicle. When access to vehicle data were updated using on the 2009-2013 ACS, which showed a neighborhood average of 30.3 percent lacking access, the research team chose to lower the threshold to 30 percent for the 2015 map. **This change dramatically increased the number of residents classified as living in a food desert, more than any other methodology update.** Understanding the transportation barriers that many Baltimore residents face and the fact that few live in walking distance to a supermarket, the 30 percent threshold and its subsequent impact on food desert analysis is the more appropriate and accurate representation of food deserts in Baltimore, and sheds light on the need to prioritize transportation strategies.

4) Supply of Healthy Food: In an effort to more accurately characterize the healthy food retail environment beyond the presence or absence of a supermarket, Healthy Food Availability Index (HFAI) scores were collected for all food stores and some alternatives unique to Baltimore.

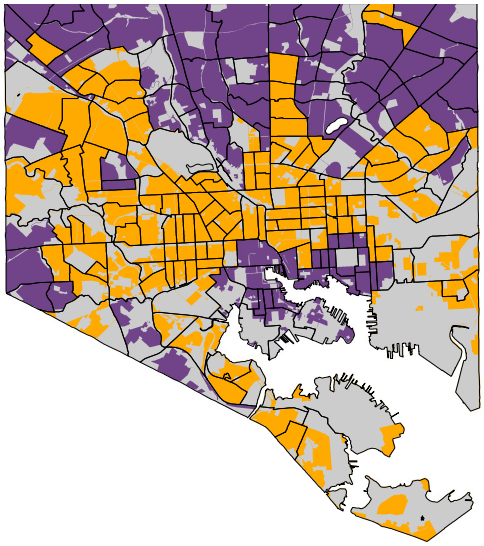
The food sources included in the survey are: supermarkets, small groceries and corner stores, convenience stores, and public markets. The CLF developed its own HFAI tool (see Appendix), that awards points based on the presence of a market basket of basic whole food groups (i.e. staple foods) in a given location, as well as whether there are healthy options available. The food groups include milk, juice, fruits and vegetables, meats, bread, cereal, canned goods, dry goods and frozen foods. The healthy options are based on USDA nutrition standards, such as 100 percent whole wheat bread or one-percent and skim milk. Scores can range from 0 to 28.5, with a higher score indicating a greater presence of healthy foods. Scores for all stores were averaged across block groups. Those block groups with average scores in the lowest third, 0 to 9.5, were classified as potential food deserts.

- **2015 Methodology Update:** This analysis reflects enhanced HFAI data collection over previous maps. The 2012 food environment analysis used HFAI scores from physical surveys of 140 stores conducted in 2008, and imputed scores for the remaining stores (over 700) based on the average score of a store type in a given neighborhood with similar racial composition. In an effort to improve this data for the 2015 map, the CLF conducted a new survey in the summer of 2012, using a condensed tool and physically visiting and surveying ***all*** known stores at the time of data collection, totaling over 900 stores

FIGURE 2— The Four Food Desert Factors, Mapped Individually (Note: Non-residential areas, including parks, were removed from analysis and are represented in gray on the following maps.)



Distance to Supermarket: Supermarket and supermarket alternative locations and their quarter-mile radius (shown in purple)

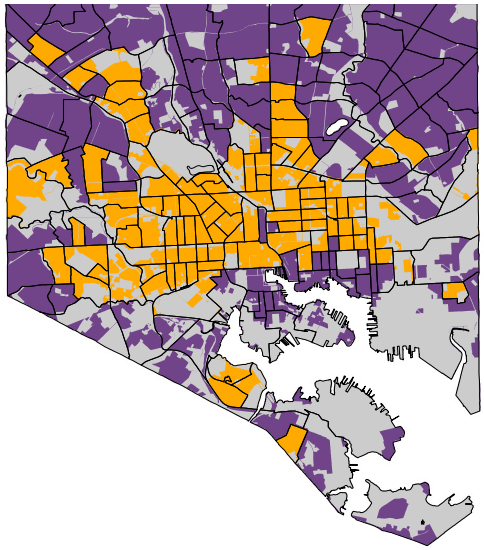


Household Income: Median household income at or below 185 percent Federal Poverty Level (shown in orange)

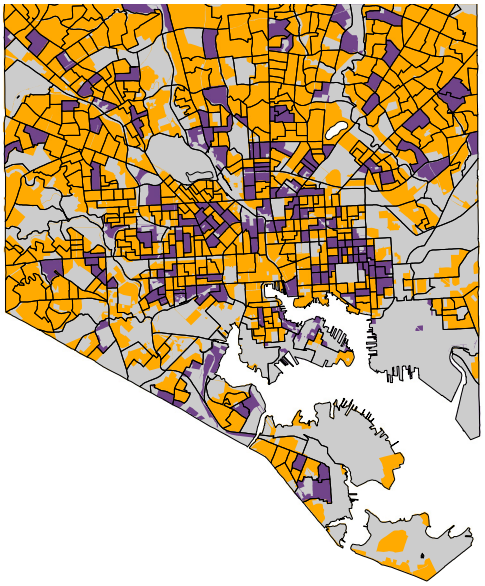
(about 85 percent of the food stores in the city). Stores that were not known to the data team at the time of collection and thus were not visited (a small percentage of small groceries and corner stores) did not receive a score and were not included in the analysis.

In 2014 this measure was expanded to include public markets to acknowledge and account for the role these markets play in the food environment. All markets were surveyed and scored in 2014.

Virtual Supermarket sites were not included in the HFAI factor. The one partner supermarket that supplies the program sites has an HFAI score of 28.5. However, since these sites are new, have limited participation, and some are only open to residents of specific locations, the HFAI score was not included in the block group average. The customers of these sites (approximately 300 individuals across 200 households) were subtracted from the total population residing in food deserts, to account for the program's impact in providing those residents access to healthy food.



Vehicle Availability: 30% or more households without access to a vehicle (shown in orange)



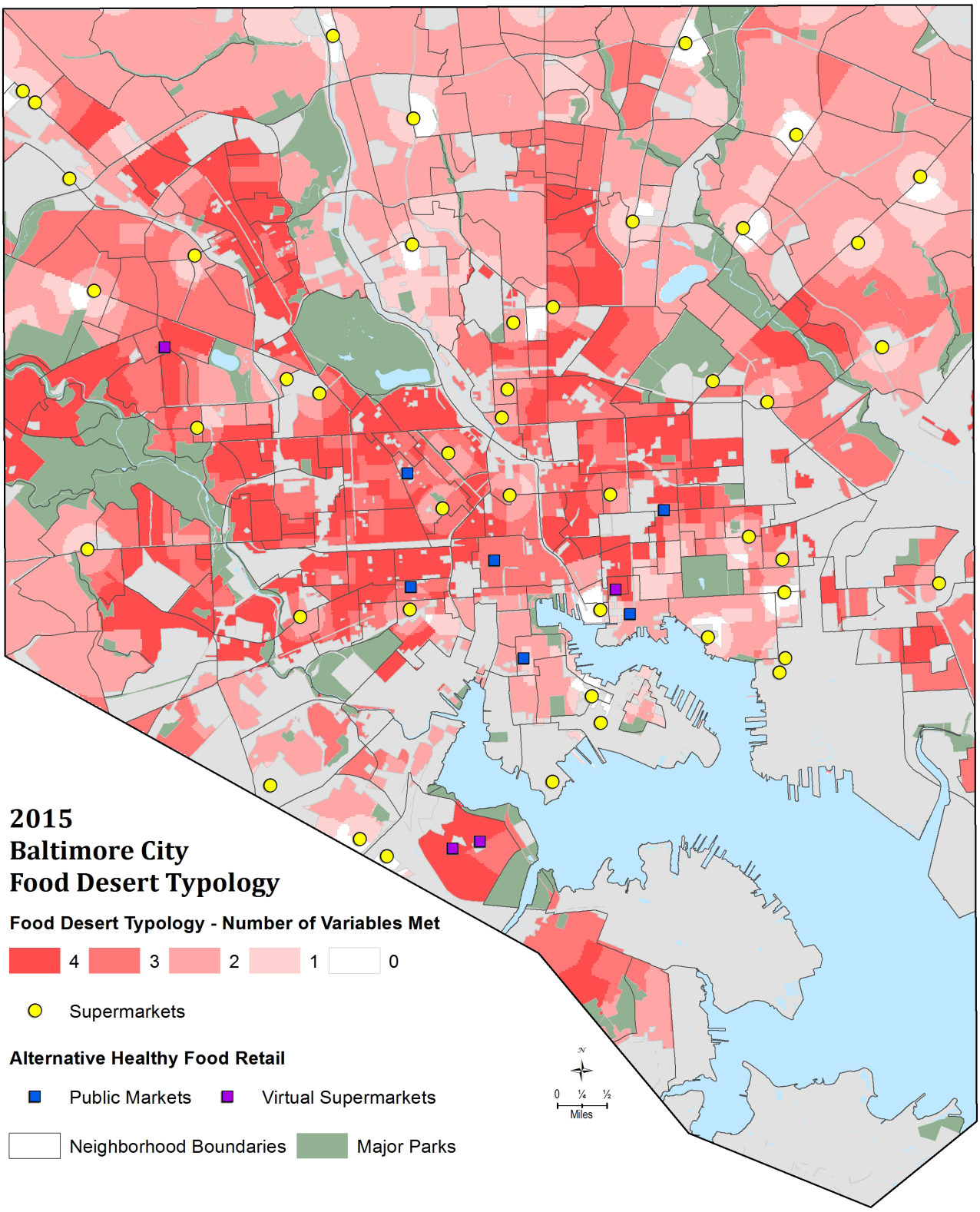
Healthy Food Availability: Average HFAI score is in the lowest third (0-9.5) (shown in orange)

Understanding the Four Food Desert Factors

The four maps on the following pages show each food access variable mapped individually. More nuanced maps help researchers, policymakers, public health practitioners, planners, community leaders and the business community better understand the realities and complexities of the issue of access to healthy food. Because two factors— income and vehicle availability— are related to financial resources, food deserts cluster in areas of higher poverty. These areas generally also have higher rates of crime, mortality, and vacant homes, and lower rates of educational attainment. Improving healthy food access is only one of many strategies needed to help all Baltimoreans reach their full health potential.

The map in Figure 3 depicts a typology of the four food desert factors for the city. Food access is on a continuum, meaning individual residents must overcome different challenges based on the combinations of constraints they face. Living in a food desert does not necessarily mean that people cannot access healthy food at all, but that their access is most limited. Similarly, living in a non-food desert does not guarantee easy access to healthy food. On the typology map, areas that score a four qualify as food deserts, as they meet all four food desert factors. The areas that do not meet any of the food desert factors score a zero. The remaining areas fall across the spectrum.

Figure 3: Baltimore City Food Desert Factor Typology Map



Limitations

There are many known limitations to map-making and interpreting maps. In using maps to examine the retail food environment, there are additional limitations that deserve mention here.

- **Food Environments Change Rapidly:** Food stores open and close frequently because they are subject to market forces such as consumer preferences, competition and the overall economy. As a result, it is difficult to create and maintain a map that reflects the current food retail environment in a city the size of Baltimore City. The 2015 Food Environment Map was developed using the best available data.

- **People Do Not Always Shop at the Closest Food Store:** For the purposes of mapping the food environment, there is an assumption made that residents predominantly frequent the food sources nearest to where they live. However, through community food assessments and qualitative research the CLF found that residents may travel a distance to seek out better prices or foods they prefer which are not found at nearby stores. Some people may do their grocery shopping near where they work or in transit between work and home. That said, qualitative research shows that many people do use the food stores closest to their homes, even if only for supplementary food shopping.

- **The Food Environment is Complex:** Baltimore City's food environment is a complex system of the built environment, marketing and advertising, and social environments, all of which are influenced by government policy, cultural norms and market forces. For this research, we only examined certain aspects of the food retail environment to reflect common practice in food desert research and highlight key assets unique to Baltimore.

- **Maps Show Relationships, Not Necessarily Causality:** Maps show geographic relationships – for example where supermarkets are located in relation to other food stores, why certain stores may be clustered together or are spaced far apart, etc. – but such a map does not necessarily prove a causal relationship between these locations. Therefore, maps often indicate a geographic relationship that points to further study or analysis, a tool for understanding exploring associations and connections.

Methodology Next Steps

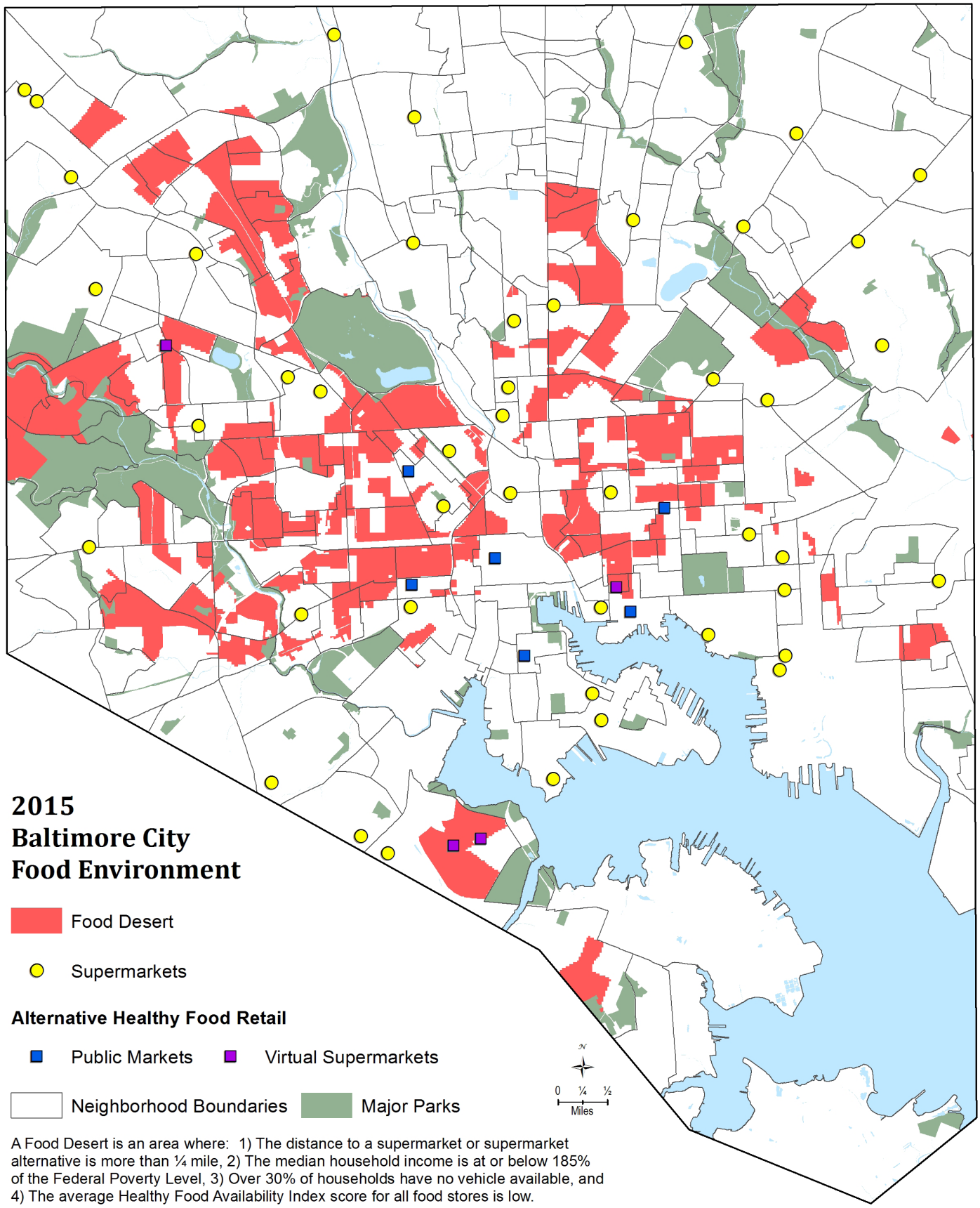
With a strong methodology in place, the CLF plans to expand its examination of certain aspects of the food environment to conduct future analysis. Some planned updates include:

- **HFAI Survey:** The CLF has begun to review the 2012 HFAI survey, assessing whether any changes are needed before the next survey. Food stores will be surveyed again prior to the next Food Environment Map release.

- **Supermarket Measurement Tool:** As noted later in the discussion of the retail food environment, not all supermarkets offer the same quality or variety of food, and affordability can vary significantly. The CLF will develop a tool to measure these differences, to better understand nuances within the supermarket environment.

- **Food Environment Research:** The CLF will continue to contribute to the growing body of research and information about urban food environments. Located in the Bloomberg School of Public Health, the CLF provides access to graduate students who use the food desert data for additional study.

2015 Food Environment Map



A Food Desert is an area where: 1) The distance to a supermarket or supermarket alternative is more than ¼ mile, 2) The median household income is at or below 185% of the Federal Poverty Level, 3) Over 30% of households have no vehicle available, and 4) The average Healthy Food Availability Index score for all food stores is low.

“Of the approximately 621,000 people living in Baltimore, the 2015 Food Environment Map shows that 25 percent live in food deserts... Thirty percent of school-aged children live in food deserts”

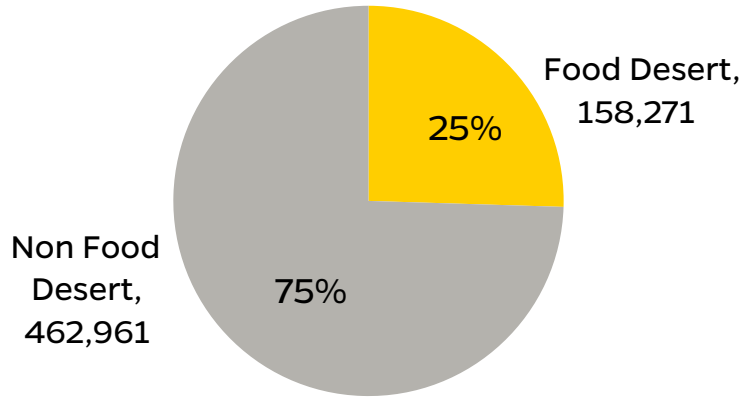
EFFECT OF FOOD DESERTS ON BALTIMORE CITY RESIDENTS

Demographics and Disparities

Of the approximately 621,000 people living in Baltimore, the 2015 Food Environment Map shows that 25 percent (158,271 people) live in food deserts (Figure 4). Forty-eight percent of neighborhoods (as defined by the Department of Planning) contain food deserts. In some cases, this could be the whole neighborhood, while in others it may be a few blocks.

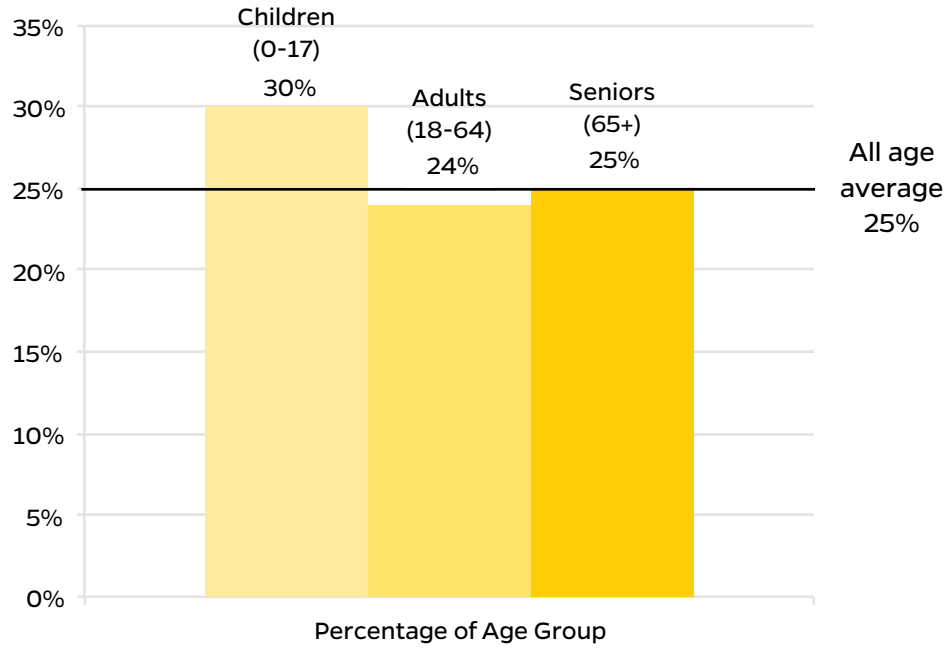
Though much of Baltimore City's population has limited access to healthy foods in their own neighborhoods, certain groups are affected disparately. Thirty percent of school-aged children live in food deserts (Figure 5). Over one third (35 percent) of African Americans live in food deserts, which is disproportionately higher than all other racial and ethnic groups. In comparison, only eight percent of white residents live in food deserts.

FIGURE 4: Percentage of the Population in Food Deserts



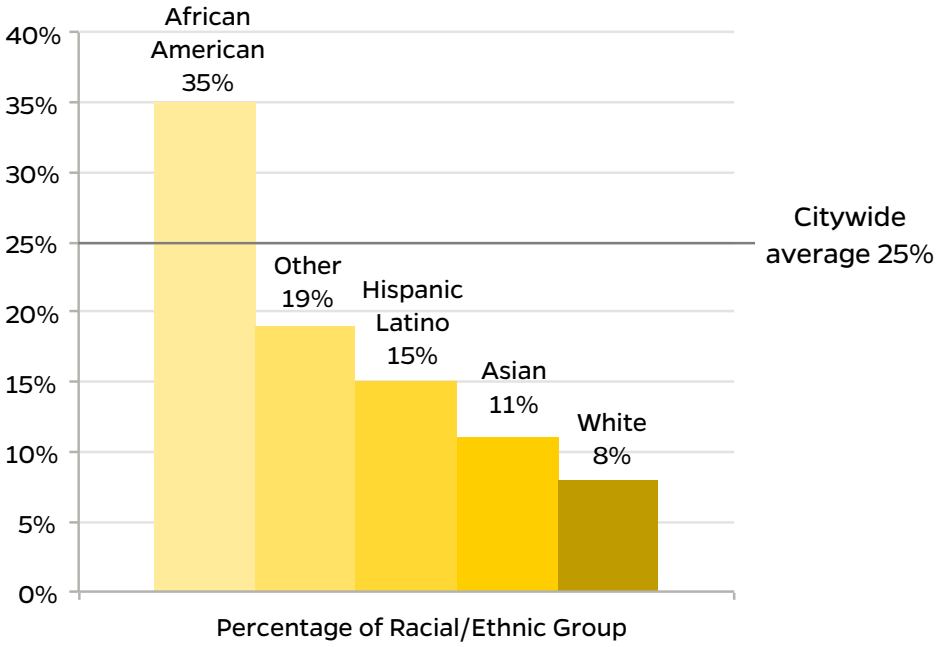
Total Population of Baltimore City from 2010 Census = 620,961

Figure 5: Percentage of Age Group Living in Food Deserts



These are percentages of food desert residents within each age group. For example, 30% of all children living in Baltimore City live in food deserts.

Figure 6: Percentage of Race/Ethnicity Living in Food Deserts

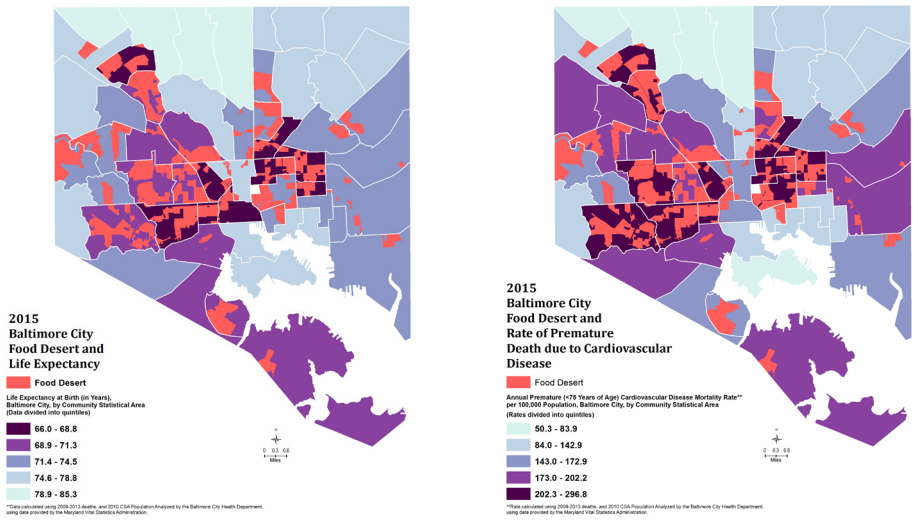


These are percentages of food desert residents within each racial/ethnic group. For example, 34% of all African Americans living in Baltimore City live in food deserts.

Health Disparities in Baltimore City

Health outcomes are the driving factor behind mapping and understanding healthy food access disparities in Baltimore City. In Baltimore, as in other major cities, it is clear that where residents live affects their health. The maps below overlay the food desert layer on Baltimore City health outcomes. The maps show a strong correlation between healthy food access and life expectancy, and healthy food access and premature deaths due to cardiovascular disease. The health disparities of Baltimore City's neighborhoods are fueled in part by disparities in lack of access to healthy affordable foods.

Figure X: Food Deserts and Health Outcomes



The health outcome data in the maps above are based on BCHD analysis of data from the DHMH Vital Statistics Administration. Ranges were divided into quintiles.

According to the 2013 Baltimore City Health Disparities Report Card:

- **Race:** All else being equal, African American residents of Baltimore are 1.8 times more likely to report fair or poor health status, 2.5 times more likely to be diagnosed with diabetes, 2.05 times more likely to be obese, and 1.4 times more likely to have been diagnosed with high blood pressure than white Baltimore residents.

- **Income:** The lowest income residents (<$15,000) compared to the highest income residents (>=$75,000) are 6.1 times more likely to report fair or poor health status, 6.8 times more likely to have been diagnosed with diabetes, 1.5 times more likely to be obese, and 3 times more likely to have been diagnosed with high blood pressure.

The Relationship Between the Food Environment and Health

A large and growing body of literature points to the connection between the retail food environment— not just food itself— and health. A review of 54 studies found that greater access in terms of proximity to supermarkets and less access to convenience stores is correlated with healthier diets and lower obesity rates.[xi] The relationship between health and the retail food environment is affected by a number of factors including:

- *Accessibility:* Each meter of shelf space devoted to fruits and vegetables is associated with eating 0.35 more servings of fruits and vegetables per day.[xii] In areas with supermarkets, African Americans are more likely meet dietary recommendations, even after controlling for income,[xiii] and SNAP customers consume about one more serving of fruit per day.[xiv]

- *Affordability:* Some processed and refined foods (which are often more calorie-dense and higher in added fats and sugars) are more affordable than fresh, healthy foods,[xv] and in low-income neighborhoods overall, food is higher priced and lower quality.[xvi]

- *Transportation:* Many low-income families do not own cars and may struggle to afford the transportation to supermarkets or other healthy food outlets.[xvii] A recent study by the USDA found that only 68 percent of SNAP households nationwide use their own vehicle to get to a grocery store, compared with 95 percent of non-SNAP households.[xviii] For seniors and people with disabilities, these transportation challenges can be even greater.

- *Over-abundance of unhealthy foods:* Many corner stores and convenience stores in food desert communities do not carry healthy, low-cost foods.[xix] A community food assessment study in Southwest Baltimore, a food desert community with an abundance of corner stores, estimated that 20 percent of residents' food expenditures go to corner stores.[xx]

Increasing access to healthy foods on a community and policy level is a key part of the solution. Research indicates that community-based and policy changes are more effective than direct education in preventing obesity among those of lower socioeconomic position.[xxi]

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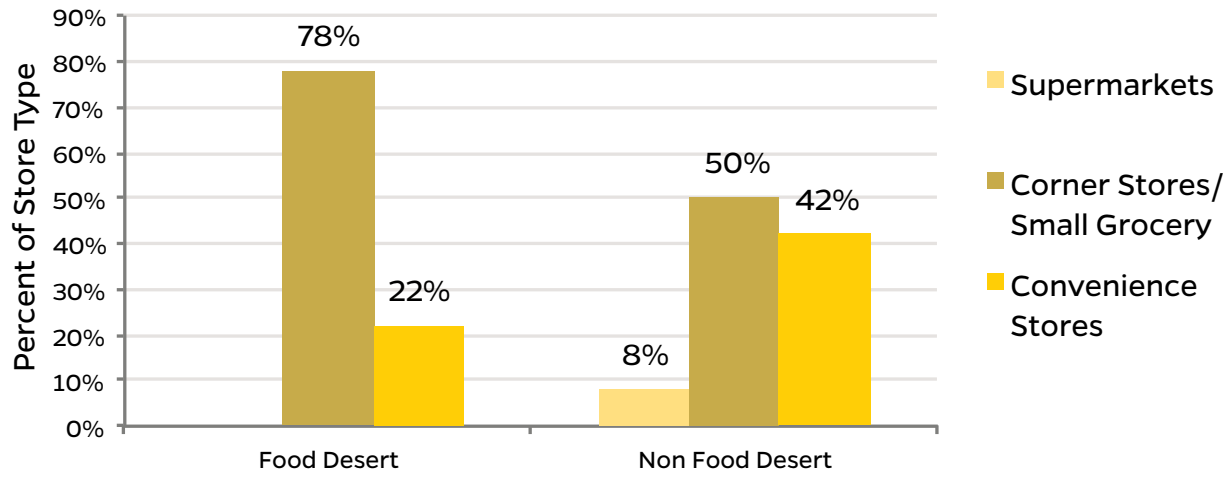
EAT RIGHT LIVE WELL!
Apples

“While new supermarkets are not the only way to eliminate food deserts, the presence of a supermarket has a large impact on food access. Nationally, in 2013, 63 percent of all dollars for food purchased for home consumption were spent at supermarkets.”

THE RETAIL FOOD ENVIRONMENT

Baltimore City's retail food environment is made up of supermarkets, small groceries and corner stores, convenience stores, public markets, Virtual Supermarket sites, farmers markets, and farm and garden stands. All but farmers markets and farm and garden stands are considered in the food environment map. Understanding the retail food environment and the types of food available at different outlets can drive and guide policy and economic development decisions. The following figure (Figure X) shows the type of food stores within food deserts and outside of food deserts across the rest of the city.

FIGURE X: PERCENT OF FOOD STORES IN FOOD DESERTS and NON FOOD DESERTS



The maps above are based on BCHD analysis of data from the DHMH Vital Statistics Administration. Ranges were divided into quintiles.

Listed below are observations noted during initial research and HFAI data collection for each category of food store. Note: Not all food store categories are shown on the official map, but they are represented in the underlying analysis, with the exception of farmers markets and farm stands. The official map highlights key unique healthy food assets in Baltimore on top of the food desert analysis.

Supermarkets: While new supermarkets are not the only way to eliminate food deserts, the presence of a supermarket has a large impact on food access. Nationally, in 2013, 63 percent of all dollars spent on food purchased for home consumption were spent at supermarkets.[xxii] Additionally, more than 80 percent of SNAP benefits are redeemed at supermarkets and superstores.[xxiii] The CLF conducted Community Food Assessments[3]

[3] http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/projects/CFA/

in seven neighborhoods in Baltimore, which involved interviewing residents about purchasing patterns and perceptions of access to healthy food. All of these assessments confirm that residents purchase the majority of their food from traditional supermarkets, even if they have to travel outside of their neighborhoods to do so. As such key resources for healthy food, traditional supermarkets play a role in the map in two ways— in the distance measure and the HFAI score used in the average for each block group. However, researchers observed during HFAI data collection that not all supermarkets offer the same quantity or quality of healthy food, and the mere presence or absence of a supermarket does not guarantee access to healthy food. Further research is being conducted to better understand these differences between supermarkets.

Small Groceries and Corner Stores: There are over 450 small groceries and corner stores in Baltimore City— more than any other type of food store. These stores make up about two thirds (in terms of store count) of the retail food offerings in food deserts. Because food desert residents have to travel to reach a supermarket, it is important to consider the impact of these small food retailers that are more likely to be within walking distance.

The average HFAI score for this category of stores is 9.8 (out of a total of 28.5), indicating that these stores typically have few, if any, healthy food offerings (Figure 7). Stores with the highest scores in this category are small international food stores and neighborhood markets that expressly sell food. These high-scoring small groceries and corner stores may be potential targets for future interventions, as they may already have some of the needed infrastructure and interest in carrying more diverse and healthier options.[xxiv] If these stores reach an HFAI threshold of 25, they can qualify as Supermarket Alternatives.

Convenience Stores: These stores vary widely in terms of healthy food availability depending on the store ownership and layout. For example, some chain convenience and drug stores with centralized supply chains are better able to carry fresh fruits and vegetables, while gas station convenience stores are often independently managed and carry mostly packaged goods. Dollar and discount stores typically carry non-perishable packaged foods and snacks that are typically less healthy.

Public Markets: Baltimore's historic public markets are unique indoor markets with multiple vendor stalls. In the past, public markets hosted farmers and wholesalers that sold fresh foods, but today few such vendors remain. It is still possible to find a market basket of staple foods at many of the public markets, but to do so often requires more time and effort than shopping for these items at a supermarket. A 2012 BFPI assessment of the six public markets revealed that the majority (75 percent) of the food vendors are carryouts (vendors who offer prepared foods to-go). Many of these carryouts do not offer healthy choices. BFPI is working with vendors to improve the healthfulness of items, and Lexington Mar-

A CLOSER LOOK: HEALTHY FOOD AVAILABILITY INDEX SCORES BY RETAIL TYPE

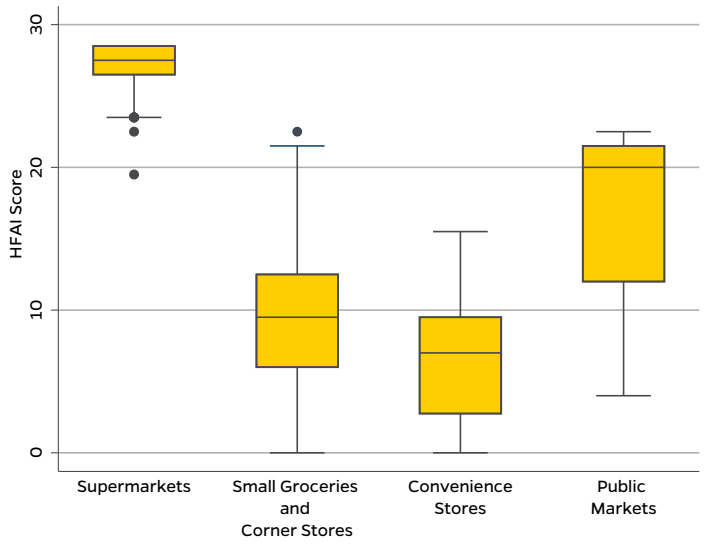
Supermarkets, in general, have higher HFAI scores than small grocery, corner stores or convenience stores, and public markets, indicating the greater presence of healthy food options. But there is variation in all store categories, revealing opportunities for understanding why some stores carry more healthy foods than others and how to create change within store categories.

Figure 7: Healthy Food Availability by Retailer Type

CATEGORIES OF FOOD RETAIL	NUMBER	HFAI SCORE	
	SURVEYED	RANGE	AVERAGE
SUPERMARKET	45	22.5-28.5	27.1
SMALL GROCERIES AND CORNER STORES	453	0-22.5	9.79
CONVENIENCE STORES	300	0-15.5	6.30
PUBLIC MARKETS	6	4-22.5	16.67

Figure Y is a "box and whiskers" plot that exhibits the distribution of HFAI scores by store category. The line inside the box represents the median. The dots outside the whiskers are the few outliers. Fifty percent of the scores fall within the box, and the size of the box and whiskers together indicates the spread of the scores.

FIGURE Y: Range in HFAI Scores by Store



ket, the largest of the public markets, is undergoing a planning process to increase the variety of fresh products and staple foods. With the latest Food Environment mapping methodology, a public market that meets the HFAI threshold of 25 now can qualify as a supermarket alternative on the map. Currently none meet this threshold, but three of these markets are close (above 20) and could attain this status in the near future with only a few improvements.

Supermarket Alternatives: The supermarket alternative concept was created in 2015 to acknowledge that some small groceries, corner stores and public markets can have near equivalent healthy food options to supermarkets. Those that score a 25 or higher on the HFAI scale will be considered supermarket alternatives and may now be included in the map in the same way that traditional supermarkets are. In the 2015 analysis, no stores yet qualify as supermarket alternatives. The intention of creating this new category is to assist and encourage more stores/markets to strive to reach this healthy food threshold, and it presents an additional opportunity to positively impact food deserts over time as exisiting stores/markets improve their offerings.

The level of variation in Figure Y in the box on page 30 illustrates why a supermarket alternative category was created. Any small grocery, corner store, convenience store or public market that scores 25 or above is far above average for its category, and potentially scores higher than some supermarkets (Note: The one small grocery classified as a supermarket alternative scored 25.5, the highest for the small grocery and corner store category). Categorizing stores helps to show trends and understand broad policy implications, but many meaningful solutions happen at the individual store level, working with store owners.

Virtual Supermarket: The Baltimore City Health Department's Baltimarket Virtual Supermarket Program[4] is a novel approach to food desert elimination that uses online grocery ordering and delivery to bring food to neighborhoods with low vehicle ownership and inadequate access to healthy foods. Currently, it enables over 200 participating households to order groceries at designated senior/disabled apartments, public housing, libraries or from any computer, and pick up their orders at the community site for no delivery cost. It is the first community-based program nationally that uses online food ordering and accepts SNAP.

This and other e-commerce models stand to increase access to healthy, affordable foods through partnerships with existing brick-and-mortar retailers. Program participants have access to all of the healthy food available in the partner grocery store. Because program sites are often apartment buildings, many sites are only open to residents of these buildings. There are 212 unique households (roughly 300 individuals) that participate in the Virtual Supermarket. Total estimated customers were extrap-

[4] http://www.baltimarket.org/virtual-supermarket/

olated from average household size and composition in Virtual Supermarket communities, and these totals were subtracted from the overall total number of residents living in food deserts.

Local Produce Retail

Urban agriculture is a growing sector and important aspect of the food environment in cities across the country. With large tracts of vacant and underutilized land, Baltimore has incorporated food production into the urban food environment. Mayor Rawlings-Blake has made a commitment to urban agriculture and other local food priorities through the Homegrown Baltimore: Grow Local, Buy Local, Eat Local[5] initiative. Homegrown Baltimore includes an urban agriculture plan[6] and other strategies to encourage Baltimoreans to expand the production of locally grown food. The map on page 35 depicts three types of local food assets, and this section offers insight as to how these resources can improve food access. See next section for additional information on Homegrown Baltimore strategies.

Farmers Markets: For permitting purposes, the City of Baltimore defines a farmers market as "A recurring event on designated dates and times consisting primarily of agricultural producers selling their products directly to the public. At least 50 percent of vendors must sell agricultural or food products as designated by the State of Maryland's definition for 'Farmers Market.'"

Farmers markets were not included in the food desert layer as they are not directly comparable to traditional food stores due to their seasonality, limited hours of operations during the day and week, as well as their limited product assortment. However, they can be significant sources of healthy food. As such, the research team considered their role by reviewing their size (by number of vendors), accessibility through SNAP, and locations relative to food deserts. There are vendors at all farmers markets in Baltimore that accept Senior Farmers Market Nutrition Program (FMNP) and WIC Fruit and Vegetable Check (FVC) vouchers, increasing access for seniors, pregnant and postpartum mothers, and infants and children.

In many cases, farmers markets can be easier to quickly establish than attracting new supermarkets and can provide community benefits beyond healthy food.[xxv] Additionally, an increasing number of individual farmers and farmers markets accept SNAP and other federal nutrition assistance program benefits, opening a market opportunity for farmers while at the same time addressing healthy food access issues. However, farmers markets face unique challenges in food deserts and are just one

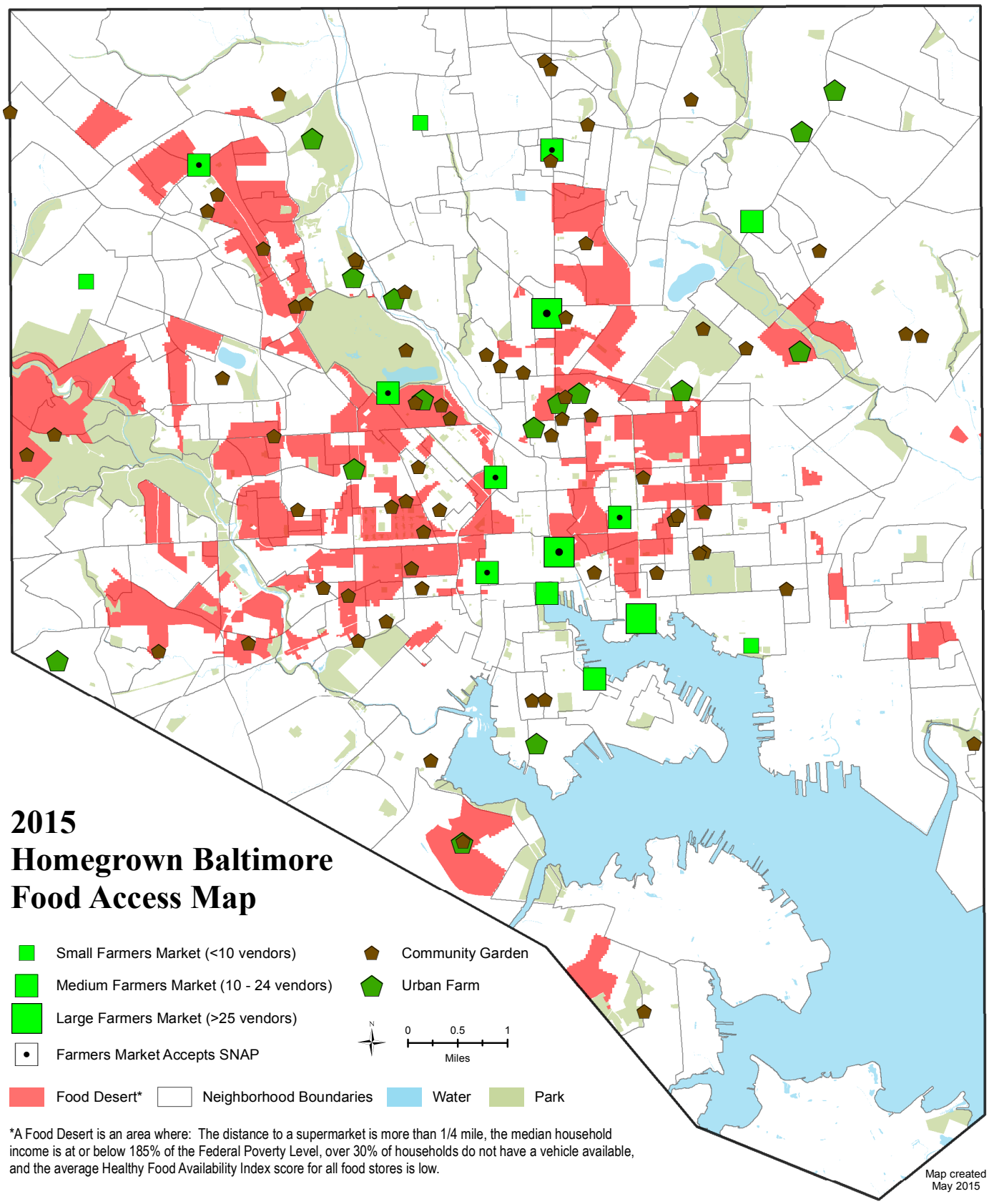
[5] http://archive.baltimorecity.gov/Government/AgenciesDepartments/Planning/BaltimoreFoodPolicyInitiative/HomegrownBaltimore.aspx

[6] http://www.baltimoresustainability.org/sites/baltimoresustainability.org/files/HGB%20Grow%20Local%20Urban%20Ag%20Plan%20final.pdf

of several local food strategies. Other solutions include farm stands and mobile markets.

Urban Farms: Homegrown Baltimore classifies urban farms as large plots with a primary emphasis on income-generating agricultural activity. Most urban farms average one-quarter to two plus acres in size. These farms may be characterized as a for-profit or non-profit business enterprise and be either community-oriented or commercially-oriented. Many of Baltimore's urban farms offer produce for sale on site at a farm stand and at Baltimore City farmers markets. Though these farms cannot offer a wide range of staple goods, their importance as sources of fresh produce should not be overlooked.

Community Gardens: Community gardens are harder to define, but are a single site, which may or may not be broken into individual plots, gardened by multiple people. Generally, produce is consumed directly by the gardeners or shared/donated. In many cases these plots can provide families with a significant amount of fresh food throughout a growing season. These gardens also foster community and can be good sites for outreach or discussion of other food-related issues. The proposed update to the zoning code, termed "Transform Baltimore," includes a provision to allow community gardens to sell produce, providing a new potential way to increase in access to fresh food access beyond just the gardeners themselves.


2015
Homegrown Baltimore
Food Access Map
Small Farmers Market (<10 vendors)
Medium Farmers Market (10 - 24 vendors)
Large Farmers Market (>25 vendors)
Farmers Market Accepts SNAP
Community Garden
Urban Farm
N
0
0.5
1
Miles
Food Desert*
Neighborhood Boundaries
Water
Park
*A Food Desert is an area where: The distance to a supermarket is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households do not have a vehicle available, and the average Healthy Food Availability Index score for all food stores is low.
Map created
May 2015

“Understanding how residents experience food deserts in different parts of the city and what can be done to eliminate them or lessen their effects takes further research, mapping analysis, community listening, strategizing and policy-making.”

APPLYING THE FOOD ENVIRONMENT MAP IN PRACTICE

Food desert mapping shows broad-based food access inequities across a city. Understanding how residents experience food deserts in different parts of the city and what can be done to eliminate them or lessen their effects takes further research, mapping analysis, community listening, strategizing and policy-making. This section delves deeper into Baltimore's food environment and the City's strategies to advance healthy food access meaningfully. BFPI and its partners work on policy at the city, state and federal levels to reduce barriers to healthy food access. These efforts include advocating for changes to state level tax credit programs and healthy food financing initiatives; local legislation and permitting processes relating to issues such as farmers markets and food trucks; federal nutrition assistance programs; and more.

Baltimore's Food Desert Retail Strategy

In 2012, BFPI conducted an extensive retailer assessment and interviewed owners and operators of all major supermarkets in Baltimore City. Based these responses and past trends, it is clear that high quality retailers face barriers to locating and operating in and near Baltimore's food deserts. The primary barriers are:

- Job training and hiring challenges
- Challenges with SNAP disbursement cycles
- Security and shrinkage
- City specific fees
- Development challenges: land assemblage, site assembly, zoning, permits
- Access to capital
- High real and personal property taxes

These barriers helped guide the creation of Baltimore's Food Desert Retail Strategy, which is one component of the City's comprehensive agenda to increase access to healthy affordable foods. Stimulating food retail development and expanding access to healthy food in underserved areas can be a holistic way to address multiple disadvantages, such as high unemployment and poor diet-related health, by reinvesting in the health and viability of communities. Based on in-depth analysis of the food environment and underlying factors, BFPI developed the Food Desert Retail Strategy to formalize approaches to overcome known healthy food access

challenges and barriers. BFPI understands that supermarkets are not the only solution to increasing access to healthy staple foods and has developed additional tactics to support other types of retail.

This strategy will reduce the number of people living in food deserts and grow the economy using five key approaches:

1) **Retain and Attract Supermarkets:** BFPI will ensure that existing supermarkets continue to serve all of Baltimore's residents, including those traveling from food deserts; as well as work to attract new supermarkets where there is retail leakage. Strategies include strategically targeting supermarket development toward areas that will have the highest impact on food access, considering proximity to food deserts, zoning designation, and population density; and developing financial and service-based incentives to attract and retain the highest quality supermarkets in and near food deserts; and providing hands-on technical assistance through the supermarket development process

Identifying Stores Successfully Preventing Food Deserts— Analysis of the Food Environment Map shows that there are supermarkets that successfully "prevent" food deserts. That means that within a quarter mile of these stores there are areas that meet the three other food desert factors— high poverty, low vehicle availability and low availability of healthy food (and most likely high availability of unhealthy food, which can bring down the HFAI average even in the presence of a supermarket). These supermarkets serve as important retail anchors and are some of the only sources of healthy food in these areas. To be clear, this concept is based only on geographic proximity to stores and does not consider sales, total number of customers, or food desert residents traveling from other parts of the city.

BFPI seeks to identify challenges and opportunities unique to being a food retailer in Baltimore City. BDC's Food Retail Economic Development Officer convenes with supermarket owners around topics such as new loan programs, employment training programs, municipal and state legislation, and crime and security concerns. Retention of existing stores is a critical component of the Food Desert Retail Strategy.

Financial Incentives and Increasing Access to Capital— Baltimore City understands that the cost of locating and doing business in an urban area can be higher than nearby suburban locations. Baltimore is developing financial incentives to increase the profitability and willingness for supermarkets to open, renovate, serve and stay in Baltimore City food deserts. These include a proposal to abate personal property taxes, connecting retailers to energy loans and workforce development funds, promoting state fresh food financing

– a state-led initiative to encourage investment in and development of healthy food retail – and more.

Extending the Monthly SNAP Issuance Period— As a retailer retention strategy, BFPI will work with state leadership to extend the disbursement period for SNAP benefits from 10 to 20 days. Retailers repeatedly mention that one of the biggest barriers to doing business in and near Baltimore's food deserts is that SNAP benefits are only disbursed over 10 days. Because many of the customers at these stores shop with SNAP benefits, this creates a pattern of highly concentrated sales during two weeks of the month and very little business during the rest of the month. This then impacts the store's ability to maintain consistent stock and staffing.

2) **Improve Non-Traditional Grocery Retail Options:** The percentage of sales of food for home consumption at supermarkets has been slowly but steadily declining compared to other store types over the past two decades. While they remain most residents' primary food source, supermarkets are not the only point of access in the food environment and may not be appropriate for every neighborhood. Therefore, BFPI created healthy food retail strategies, such as the supermarket alternative benchmark, for small grocery stores, corner stores and convenience stores, and to expand innovative community-based programs like the Virtual Supermarket Program to ensure all residents have access to affordable healthy foods.

Healthy Corner Stores— Since early 2015, the Baltimore City Health Department Baltimarket Healthy Stores program has commenced work with 18 corner store owners and the communities they serve to stock and sell fruits, vegetables, whole grain foods, low-fat milk and dairy, and healthy snacks and drinks. The program engages Youth Neighborhood Food Advocates and area supermarkets to promote healthy food options.

SNAP Technical Assistance— The 2014 Farm Bill included significant increases in the stocking requirements for stores to be eligible to accept SNAP. While these changes have not yet been implemented, Baltimore is already preparing to assist stores in understanding the requirements and creating strategies to ensure that smaller stores that increase their food stocks do so in a way that increases the overall HFAI of their offerings, while remaining cost-effective for the business owner.

WIC— The Supplemental Nutrition Program for Women, Infants and Children (WIC) provides supplemental foods and services for low-income nutritionally at-risk pregnant, postpartum and breastfeeding women, as well as infants and children. WIC provides specific nutritious foods, including vouchers for fruits and vegetables. Produce is often sold at a per-pound rather than per-piece price,

making it difficult to exactly match and redeem the full value of the fruit and vegetable vouchers. BFPI is working with the Maryland State and Johns Hopkins WIC offices to create strategies and outreach related to packaging and marketing produce to ensure that the value of fruit and vegetable vouchers is maximized, benefiting both customer and retailer.

Virtual Supermarket— The Baltimore City Health Department Baltimarket Virtual Supermarket will continue to expand, focusing especially on low-income senior, disabled and public housing as program sites.

3) **Improve Healthy Food Availability in the Public Market Setting:** As anchors in the food environment of Baltimore City, BFPI supports the merchandising plans of the public markets to emphasize a market basket of fresh healthy staple foods in order to eliminate food deserts in several neighborhoods.

Supermarket Alternatives— Public markets already provide a wide variety of food, physical infrastructure and social capital in several neighborhoods without supermarkets. BFPI will continue to work with market management and vendors to strategize vendor mix and product diversity so that each market provides a market basket of fresh healthy food at an affordable price, raising the HFAI score to 25 or higher so that these markets can be classified as supermarket alternatives. Due to their proximity to food deserts, Avenue Market and Hollins Market will be prioritized.

Get Fresh— BFPI worked closely with the public markets to create and implement the Get Fresh[7] program. Beginning as a healthy menu labeling program to promote healthy options, Get Fresh has grown to include healthy, child-friendly kids' meals and fruit and vegetable art workshops to teach children and parents about healthy eating.

4) **Expand Homegrown Baltimore to Serve Food Desert Neighborhoods:** Increase federal nutrition assistance programs at farmers markets, expand land leasing initiative for urban farmers on vacant lands, create economic opportunities for urban farmers such as the city's employee wellness Community Supported Agriculture, and support local food entrepreneurism through the Baltimore Food Hub[8].

Land Leasing— The City has signed three seven-year leases with farmers to farm City-owned vacant land. This program ensures long-term access to land for farmers and productive use of underutilized land. Approximately 20 additional acres are available for lease.

[7] http://getfreshbmoremarkets.com/
[8] http://www.baltimorefoodhub.com/

Food Hub and Entrepreneurism— Baltimore understands the power of small food business and entrepreneurism in job creation and economic development. The City supports projects like the Baltimore Food Hub, which will serve as an incubator for multiple types of food-based small businesses.

5) **Transportation Strategy:** BFPI continues to refine the Food Desert Retail Strategy based on current and future needs, and has identified a transportation strategy as the next necessary step. Based on national data and qualitative interviews, the majority of Baltimoreans prefer to do the bulk of their grocery shopping at a full-service supermarket. As many food deserts are in residential areas and not all communities are able to support a full-service supermarket, BFPI will develop a transportation strategy to assess public transit and other means of transportation and develop strategies to bring people to food and to bring food to people. Solutions could take the form of community-run shuttles, modified bus routes or mobile markets. BFPI will research best practices[9] and work with specific neighborhoods to develop targeted transportation solutions.

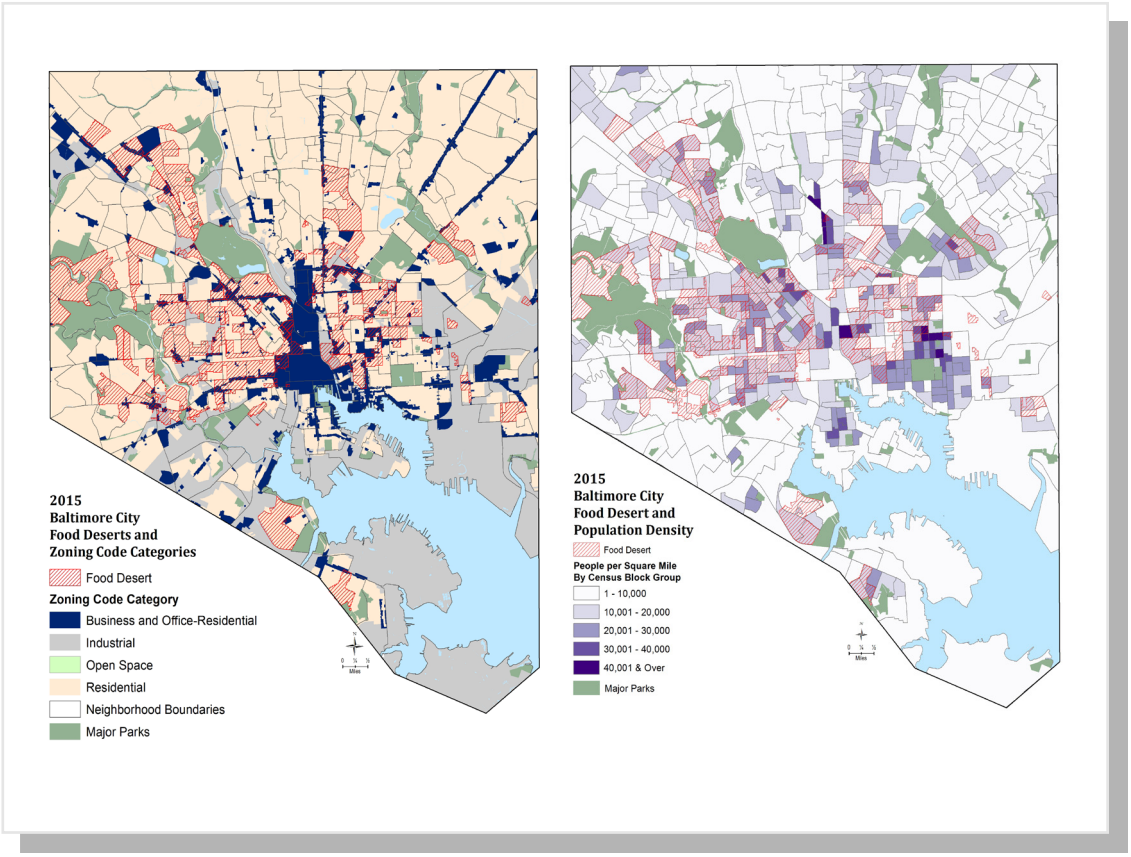
The Food Environment Map as a Policy and Planning Tool

It is difficult to consider all issues that may have implications on access to healthy food in one single map, but a solid base map can be compared with additional factors to assess their roles and impacts. The Baltimore Food Environment Map demonstrates healthy food access inequity in terms of spatial proximity to a supermarket and resource limitations. In order to examine zoning and population density, additional maps were created (Figures 8 & 9 respectively). When the food desert layer is overlaid with these factors, the resulting maps can guide the design and targeting of healthy food access strategies for specific circumstances in Baltimore City.

By further examining additional factors with food deserts, it is evident that residents in food deserts across the city do not all face the same challenges, and strategies cannot be one-size-fits-all. For example, food deserts are found primarily in residential neighborhoods and zoning must be taken into consideration to find and assemble suitable parcels that are large enough and suitably sited for a new supermarket. In some cases a supermarket may not be appropriate, and there are many smaller-scale healthy food access strategies that may work well in particular residential areas, including Virtual Supermarket sites, farmers markets, and healthy corner stores.

Additionally, the population density of food deserts varies dramatically. Some food desert areas have high population concentration while others have very few residents. Supermarkets consider population density when locating, so neighborhoods with fewer residents may require the

[9] http://www.cdc.gov/healthyplaces/healthtopics/healthyfood/transportation.htm



aforementioned alternative strategies or other innovative solutions to increase access to healthy food. By better understanding the nuances of underserved areas, the City can drive healthy food retail development to areas where it can make the most impact, and can strategically target food access resources, incentives and programming to craft site- and scenario-specific approaches.

Community Food Planning

The city-wide Food Environment map broadly shows need across Baltimore. How these gaps in healthy food access may affect the day-to-day lives of residents is more apparent and significant when compared on a smaller scale. With a citywide food environment map and food access strategy established, the next steps involve examining these issues on levels that are tangible enough for residents to play a part in creating solutions.

To address equity in the food system, it is important to understand how certain groups of people may experience food access differently, even within close geographic proximity to one another. Through mapping and analysis on the Council district level, these distinctions become clearer and discrepancies in access to healthy food can be seen in terms of age and race/ethnicity.

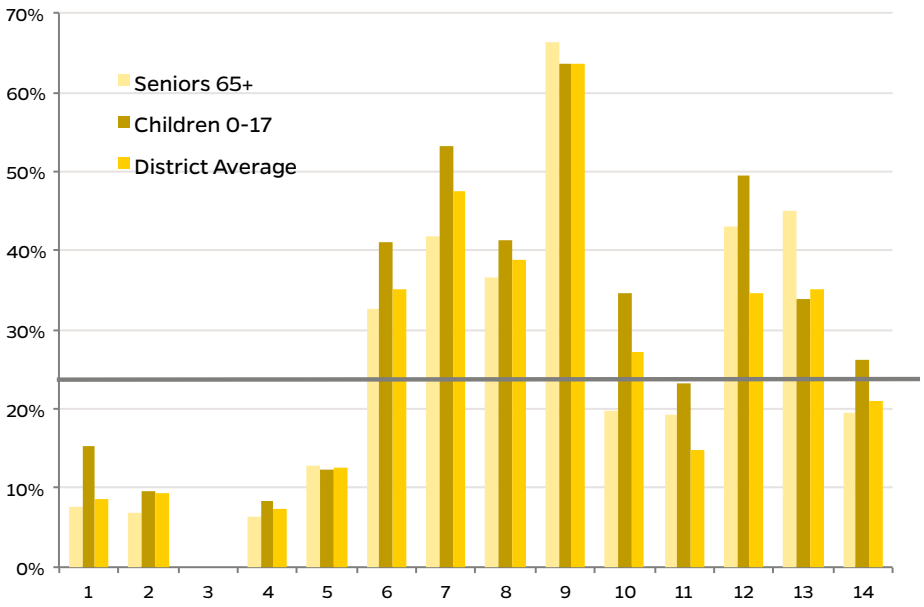
The table on page 43 shows the overall percentage of residents who live in a food desert in each district compared to the percentages of children and seniors living in food deserts in the same district. The chart that

Table Y: Disparities in Healthy Food Access by Age (Districts listed by overall population living in a food desert)

DISTRICT	OVERALL POPULATION IN FOOD DESERT	CHILDREN (0-17) IN FOOD DESERT	SENIORS (65+) IN FOOD DESERT
9	63.7%	63.5%	66.2%
7	47.6%	53.2%	41.8%
8	38.8%	41.2%	36.5%
6	35.2%	41.1%	32.8%
13	34.9%	33.7%	44.8%
12	34.6%	49.6%	43.0%
10	27.2%	34.5%	19.7%
14	20.9%	26.3%	19.6%
11	14.9%	23.2%	19.3%
5	12.5%	12.4%	12.8%
2	9.4%	9.6%	6.9%
1	8.6%	15.2%	7.6%
4	7.4%	8.4%	6.4%
3	0.0%	0.0%	0.0%

follows depicts the disparities that exist between age groups. Using these data in conjunction with the Council maps described on the next page, which show services such as federal nutrition programs for children and seniors, can help to target strategies and sites to where they may be most equitable and effective.

Chart Z: Percentage of each age group living in a food desert by district



In every Council district, African American and Other residents are more likely to live in food deserts than white residents, and in every district white residents live in food deserts at rates below the district average. In some cases, an African Americans resident is up to ten times more likely to live in a food desert than a white resident in the same district. These racial and ethnic injustices are even more troubling when linked to the diet-related health outcomes and lower life expectancy described earlier. This disparity does not always bear out across every racial/ethnic group, however. In some districts, Asian and Hispanic or Latino residents are more likely to live in food deserts than other races/ethnicities, while in others they are less likely. Understanding neighborhood-level food environments and how potential cultural practices or institutions may have protective effects for certain residents living in food deserts in particular neighborhoods is important to craft specific solutions.

Council District Food Environment Maps

BFPI created food environment maps for each City Council district to illustrate in more detail the food environments of neighborhoods and regions. Over the years, Council members have requested various maps related to food because of their interest in and commitment to healthy food access. The Council district maps are an attempt to proactively ensure that Council members have all the information necessary to serve constituents on a daily basis. Council members have a strong understanding of the food environment as a whole, but, until now, did not have convenient access to the more detailed data for their specific districts all in one place.

These maps show food assistance and urban agriculture sites, in addition to food retail, to underscore the notion that retail is not the only point of access to healthy food for many Baltimoreans. The food environment shown on the maps also includes emergency food sites such as food pantries, summer and supper meals for children, senior Eating Together meals, and urban farms and gardens. These maps drill down to look at trends for where healthy food is or is not available, and what solutions may work best in each area. Below, each category on the map is discussed, along with definitions of each site type.

- **Food Retail:** Baltimore's retail food environment is much more than the supermarkets depicted on the main map, but with over 450 small groceries and corner stores and 300 convenience stores, the map would be indecipherable with all retail data points visible at the City scale. These stores were included in the food desert analysis and therefore their impact is incorporated into the main map, but the Council district maps allow the locations of all types of stores to be shown, giving insight into their spatial relationship to the community and other assets. Recognizing that City residents also shop in food stores outside city limits, super-

market locations in the surrounding counties are also shown on these maps.

- **Food Assistance:** Given the significant proportion of City residents living in high poverty and/or in food deserts, food assistance is an important part of the food environment. These programs are not intended to transform a food environment, but to serve as a safety net to ensure that hungry residents receive needed food.

  In many cases, children and seniors are the most vulnerable populations in terms of food security and lack of access to healthy food options due to limited transportation/mobility and economic resources. Thirty percent of Baltimore's children live in food deserts and 84 percent of school-aged children are eligible for free school meals. During the academic school year students can receive up to two meals and a snack daily from School Food Nutrition Services. In some cases these may be the only meals children have access to, necessitating afterschool and summer meals to fill these gaps. Many seniors struggle with mobility and/or transportation access, and a quarter of Baltimore's seniors live in food deserts, exacerbating this challenge in accessing healthy affordable food.

  - **Emergency Food Sites:** Religious institutions, schools, community centers, and other locations often make canned, frozen, fresh, and/or prepared foods available on an emergency basis to people in need. The majority of these sites are known as food pantries, providing free or reduced price groceries intended for home preparation. Free meal sites serve prepared meals meant to be eaten onsite or deliver ready-to-eat meals directly to the client's home. Many of these sites are only open during limited hours and the quantity and quality of food provided varies.

  - **After School Meals:** These sites provide afterschool programming to children and serve meals or snacks through the Child and Adult Care Food Program.

  - **Summer Meals:** The Summer Food Service Program (SFSP) is a federal child nutrition program funded through the United States Department of Agriculture and administered in Maryland by the Maryland State Department of Education. SFSP allows area-eligible sites such as schools, churches, parks, and camps to host summer meals at their locations if the site is within the attendance area of a school in which at least 50 percent of children are eligible for free- and reduced-price meals. In Baltimore only about half of children who eat free- or reduced price-lunch at school currently participate in summer meals.

Data points on a map can rarely tell the full story. Maps are tools for priority setting; as such, they serve as starting points in understanding geographic relationship and community assets. The limits of a given map must be understood by all who use it. For example, one food pantry represented on the map may only be open one day per week for limited hours, while another is open two days per week but provides less food than the first. Or, one urban farm may be several acres and sell produce directly to the community, while another may be smaller and only for wholesale production. Data sets may become outdated as soon as they are collected, and thus, there may be some sites represented on the maps that no longer exist, as well as new sites that were not in existence when the data were collected. These maps are intended to be used for conversation and discussion, with the hope that more people are drawn into the healthy food access conversation to continually strengthen data and identify place-specific solutions.

- **Eating Together:** A federally funded congregate meal Program operated by the Health Department for seniors and disabled persons, established to promote health, reduce social isolation, and provide a nutritious meal in a group dining setting. Eating Together also offers programming and educational opportunities. **Virtual Supermarket:** The Baltimore City Health Department's Baltimarket Virtual Supermarket allows residents to order groceries online and have them delivered to a central drop off site with no delivery fees. Program growth is focused on senior and disabled housing and public housing.

- **Locally Grown:** Baltimore City uses the Homegrown Baltimore Strategy to promote and expand urban agriculture. In Baltimore, urban agriculture ranges from backyard and community gardens to working farms on multiple acres. See Homegrown Baltimore section for more details.

  - **Urban Farms:** Large plots (average size between one-quarter acre and two acres) with a primary emphasis on income-generating agricultural activity and the operation of the farm as a for-profit or non-profit business enterprise. May be characterized as community-oriented or commercially-oriented.

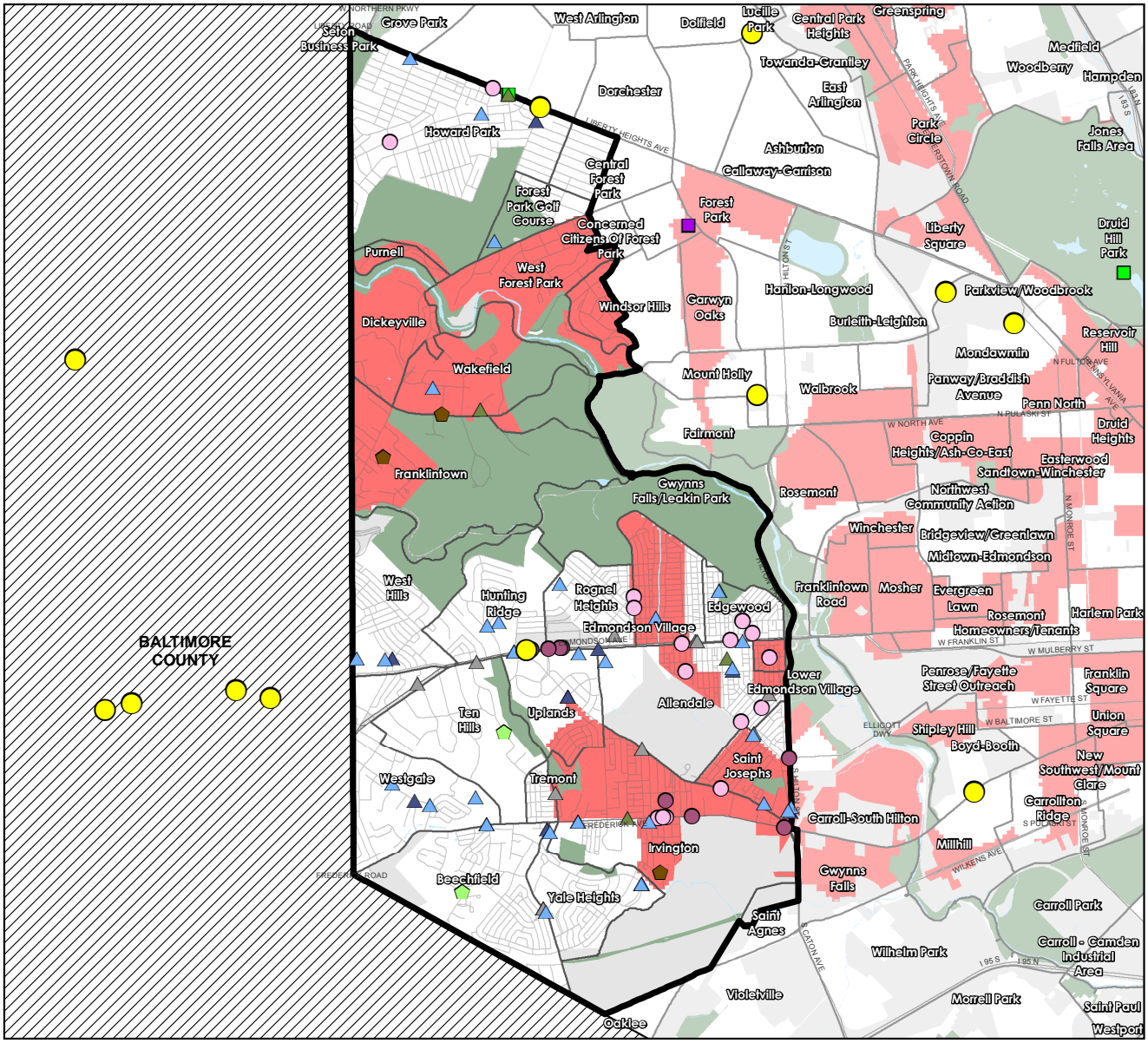
  - **Community Gardens**: A single site, which may or may not be broken into individual plots, gardened by multiple people; produce is consumed directly by the gardeners or shared/donated. Community gardens are not currently allowed to sell produce or generate income, but Baltimore's proposed new zoning code will allow for these types of sales if passed as drafted.

Neighborhood Food Plans

Synthesizing the analyses contained in this report with the targeted council district maps, BFPI will work with groups of neighborhoods and community planners to incorporate a food lens into existing planning processes such as master plans. The maps in this report will help frame the conversation, and BFPI will engage community leaders, planners and residents in planning processes to identify additional resources and barriers, and create practical, implementable plans that are driven directly by community input and commitment to increase access to healthy food. These plans will play an important role in shaping the food environment on the neighborhood level.

An example of a council district map with statistics can be found on pages 48-89. The maps and charts for all 14 Baltimore City Council Districts can be found in the Appendix.

4



2015 City Council 8th District Food Environment - Councilwoman Holton

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
County
Major Parks
Harbor, Lakes & Streams

Food Retail

- Supermarkets (1)
- Corner Stores (19)
- Convenience Stores (9)
- Farmers Markets (0)
- Public Markets (0)
- Virtual Supermarkets (0)

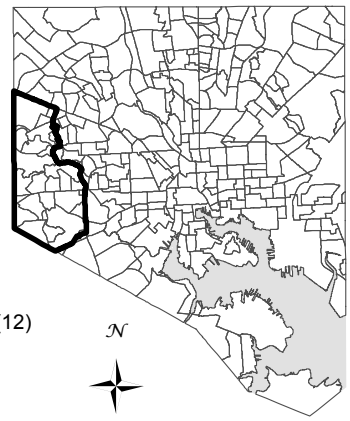
Locally Grown

- Urban Farm (2)
- Community Garden (3)

Food Assistance

- After School Meal Sites (12)
- Kids' Summer Meals Sites (30)
- Senior Meal Sites (5)
- Food Pantries and Meal Sites (12)

0 ¼ ½ Miles



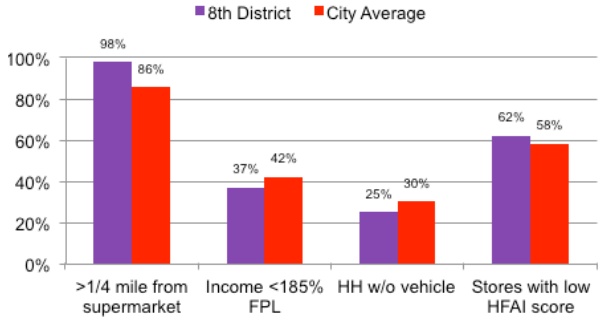
2015 FOOD ENVIRONMENT
8TH DISTRICT

WHAT IS A FOOD DESERT?

A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

FOOD DESERT FACTORS



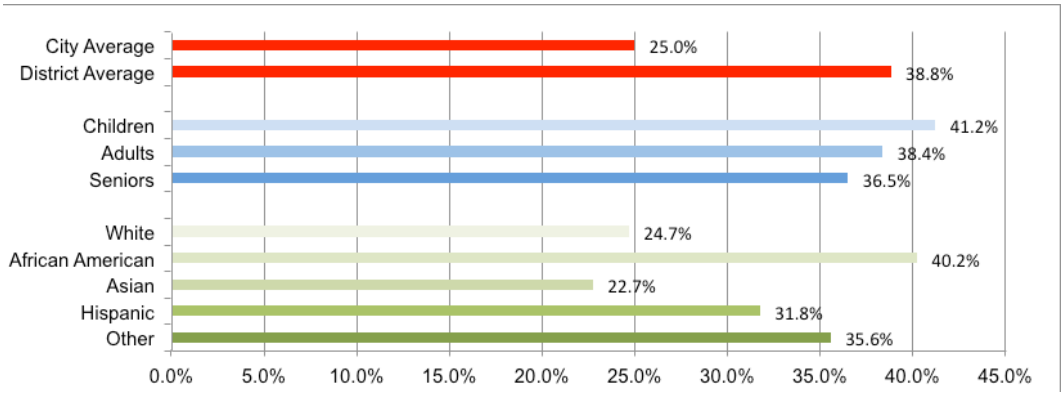
KEY FOOD DESERT INFORMATION

- Food deserts in the 8th District are located in areas with the highest population density.
- More than 4,400 children live in a food desert in the 8th District.
- More than 2,000 seniors live in a food desert in the 8th District.
- African American, Other and Hispanic residents live in food deserts at disproportionately higher rates than White and Asian residents.
- 98.0 percent of residents live more than ¼ mile from a supermarket, the highest percentage city-wide

POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	17,465	38.8%
CHILDREN (0-17)	4443	41.2%
ADULTS (18-64)	10,877	38.4%
SENIORS (65+)	2,145	36.5%
WHITE	874	24.7%
AFRICAN AMERICAN	16,177	40.3%
ASIAN	48	22.8%
HISPANIC*	190	31.8%
OTHER**	366	35.6%

PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 8th District, 41.2% live in a food desert.

* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"

“Each resident experiences access to healthy food differently, and the City will continue to work to ensure that its food environment can meet the healthy food needs of each and every Baltimorean.”

CONCLUSION

The 2015 Baltimore City Food Environment Map and Report is a strategic policy and planning tool that explores gaps and opportunities in healthy food access. This report and set of maps are intended to translate research into policy, planning and practical application, and provide a roadmap to increase access to healthy affordable food for all Baltimore City residents.

Baltimore is an innovator and leader and has made important progress toward increasing equitable access to healthy food. More than 200 households in neighborhoods classified as food deserts no longer have to invest a disproportionate amount of time and resources in traveling to a supermarket, because the Virtual Supermarket brings groceries directly to their housing complexes. New supermarkets are scheduled for construction in current food desert neighborhoods. Through the Healthy Stores program, four corner stores in West Baltimore now have healthier items available, along with the support of a cadre of youth working with the owners on promotion and community buy-in. Urban farmers now have longer-term land security to farm City-owned land. The City began an annual Food Justice Forum in 2014 to bring together residents and organizations to discuss community-empowered healthy food access. There is momentum in Baltimore, and the analyses and strategies contained in this report will help to move the healthy food access agenda forward in productive and impactful ways.

The City has much of the resources, political will and partnerships in place to address healthy food access disparities from multiple angles. Moving into the future, Baltimore City will capitalize on existing program and policies to continue to work toward lasting outcomes in improving healthy food access, while continually analyzing and strategizing to further the strong momentum. Each resident experiences access to healthy food differently, and the City will continue to work to ensure that its food environment can meet the healthy food needs of each and every Baltimorean.

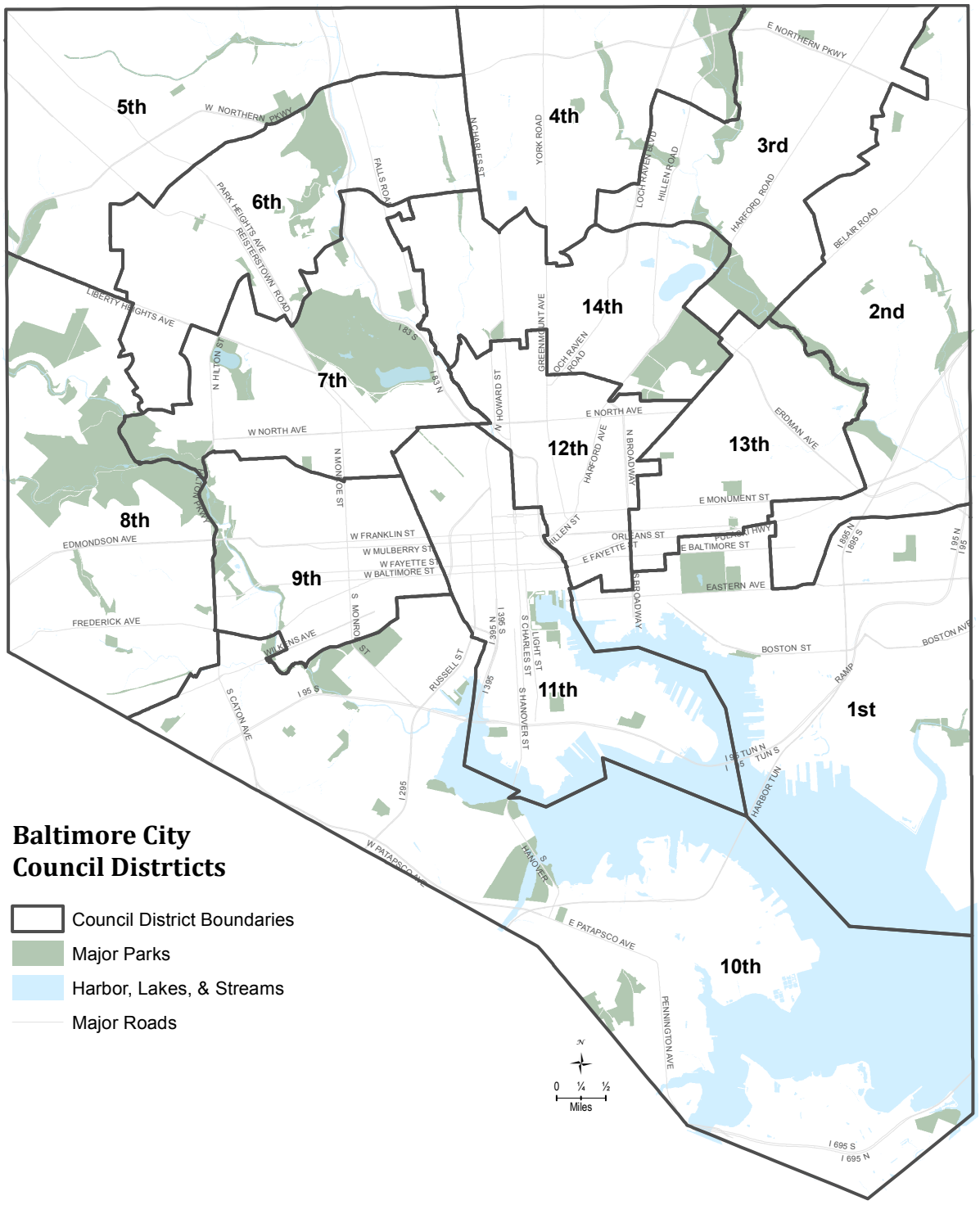
APPENDIX

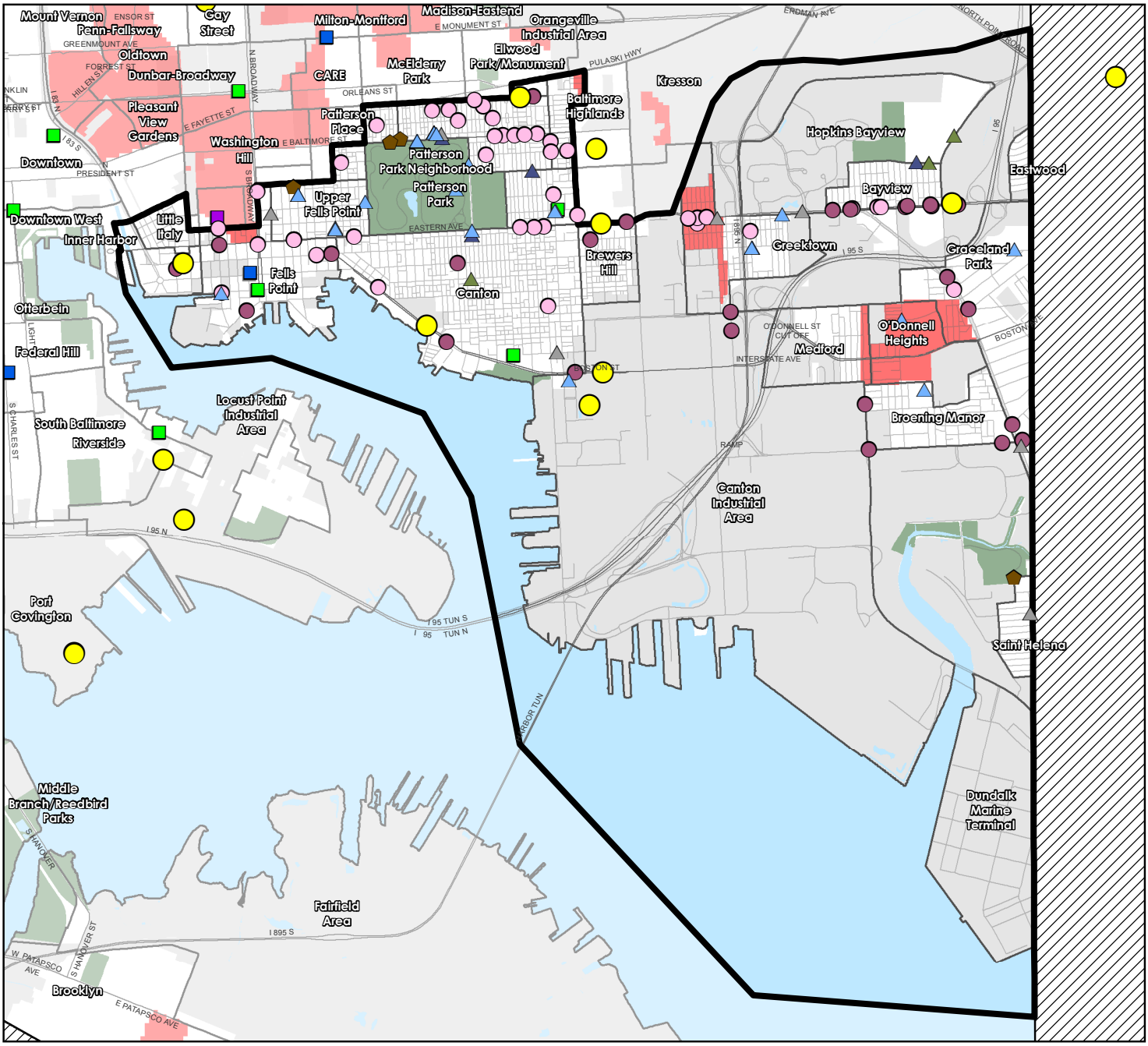
I) MAPS
   a) City Council District Maps and Information Sheets
   b) Food Desert and Rate of Premature Death due to Cardiovascular Disease
   c) Food Desert and Life Expectancy
   d) Food Desert and Population Density
   e) Food Desert and Zoning Code

II) METHODOLOGY
   a) Healthy Food Availability Index Scoring Tool

I) MAPS

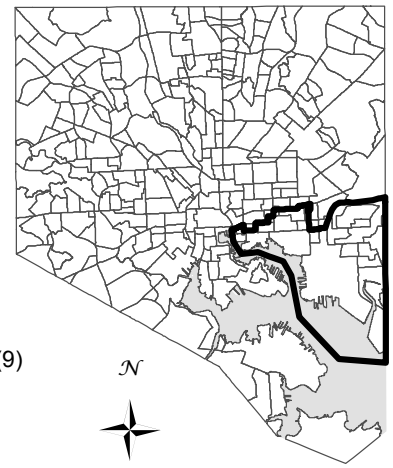
a. Maps and Information Sheets for Baltimore's 14 City Council Districts





2015 City Council 1st District Food Environment - Councilman Kraft

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
County
Major Parks
Harbor, Lakes & Streams



Food Retail

- Supermarkets (5)
- Corner Stores (46)
- Convenience Stores (26)
- Farmers Markets (3)
- Public Markets (1)
- Virtual Supermarkets (0)

Food Assistance

- After School Meal Sites (11)
- Kids' Summer Meals Sites (18)
- Senior Meal Sites (4)
- Food Pantries and Meal Sites (9)

Locally Grown

- Urban Farm (0)
- Community Garden (4)

0 ¼ ½ Miles

2015 FOOD ENVIRONMENT
1ST DISTRICT

WHAT IS A FOOD DESERT?

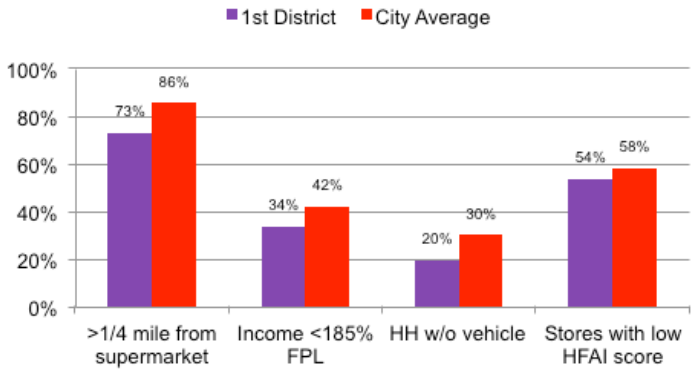
A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

KEY FOOD DESERT INFORMATION

- Children are twice as likely as adults and seniors to live in a food desert.
- Unlike other districts, white residents make up the largest race/ethnicity in food deserts.
  - However, African American, Hispanic and Other residents live in food deserts at disproportionately higher rates than white residents.
- The 1st District has the most supermarkets of any District, but they are heavily concentrated on the west side of the district.
- With over 1000 children living in food deserts, strategies such as summer and afterschool meals are important, and sites should be targeted to where they will make the most impact.

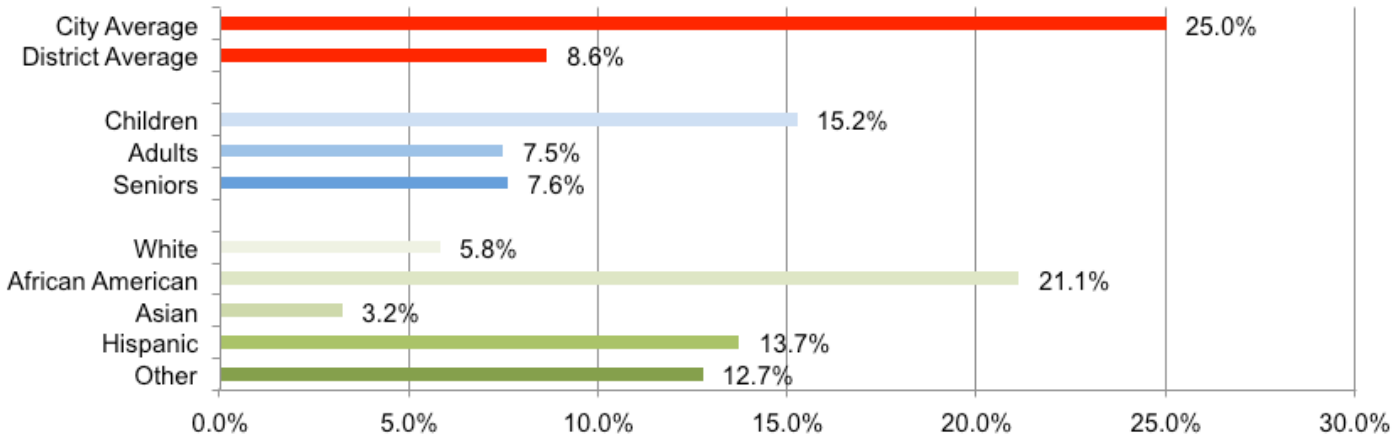
FOOD DESERT FACTORS



POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	3,991	8.6%
CHILDREN (0-17)	1,043	15.2%
ADULTS (18-64)	2,599	7.5%
SENIORS (65+)	349	7.6%
WHITE	1,892	5.8%
AFRICAN AMERICAN	1,267	21.1%
ASIAN	45	3.2%
HISPANIC*	1,134	13.7%
OTHER**	787	12.7%

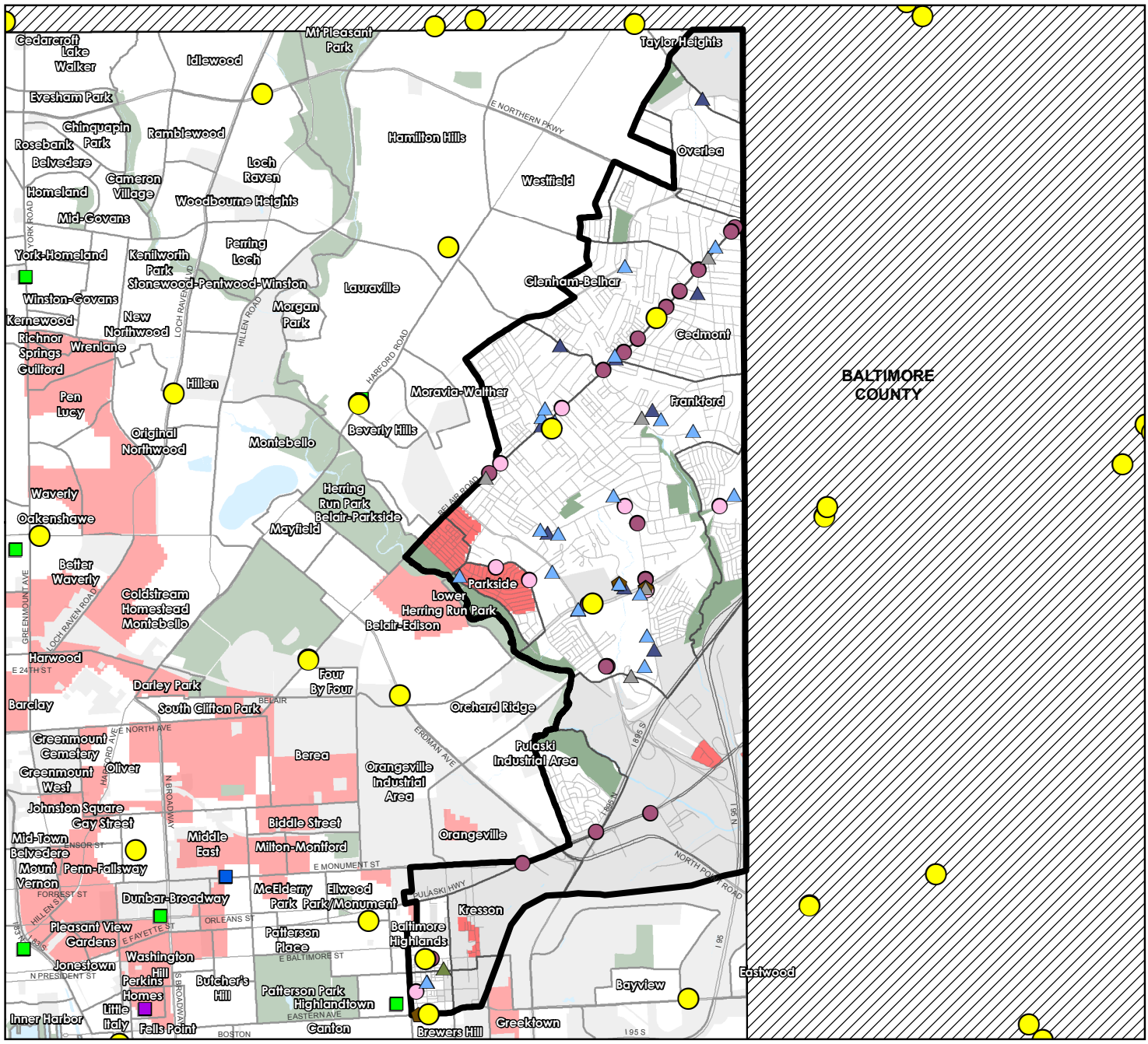
PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 1st District, 15.2 % live in a food desert.

* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"



2015 City Council 2nd District Food Environment - Councilman Scott

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
County
Major Parks
Harbor, Lakes & Streams

Food Retail

- Supermarkets (5)
- Corner Stores (8)
- Convenience Stores (23)
- Farmers Markets (0)
- Public Markets (0)
- Virtual Supermarkets (0)

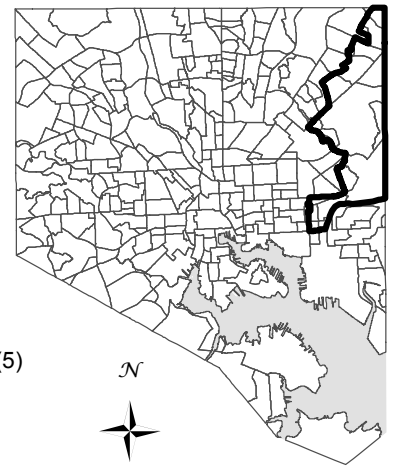
Food Assistance

- After School Meal Sites (11)
- Kids' Summer Meals Sites (20)
- Senior Meal Sites (1)
- Food Pantries and Meal Sites (5)

Locally Grown

- Urban Farm (0)
- Community Garden (3)

0 ¼ ½
Miles



2015 FOOD ENVIRONMENT
2ND DISTRICT

WHAT IS A FOOD DESERT?

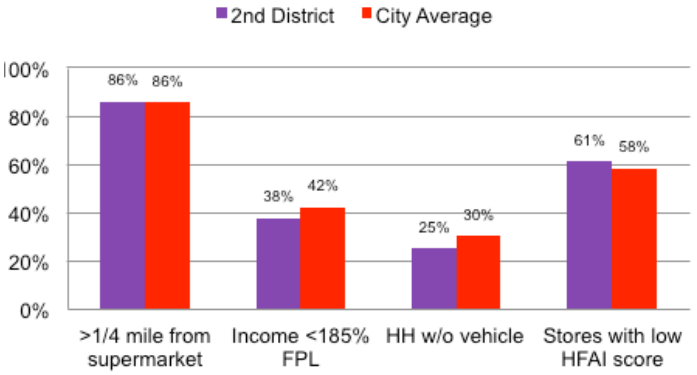
A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

KEY FOOD DESERT INFORMATION

- The 2nd District has a relatively low percentage of residents living in food deserts, but the food deserts are concentrated in more population-dense areas.
- African American, Hispanic and Other residents live in food deserts at disproportionately higher rates than white residents.
- There are many food assistance programs in the district, but none located in food deserts.
- Strategically working with the cornerstores in the Parkside neighborhood could provide easier access to affordable food for residents living in the food desert.

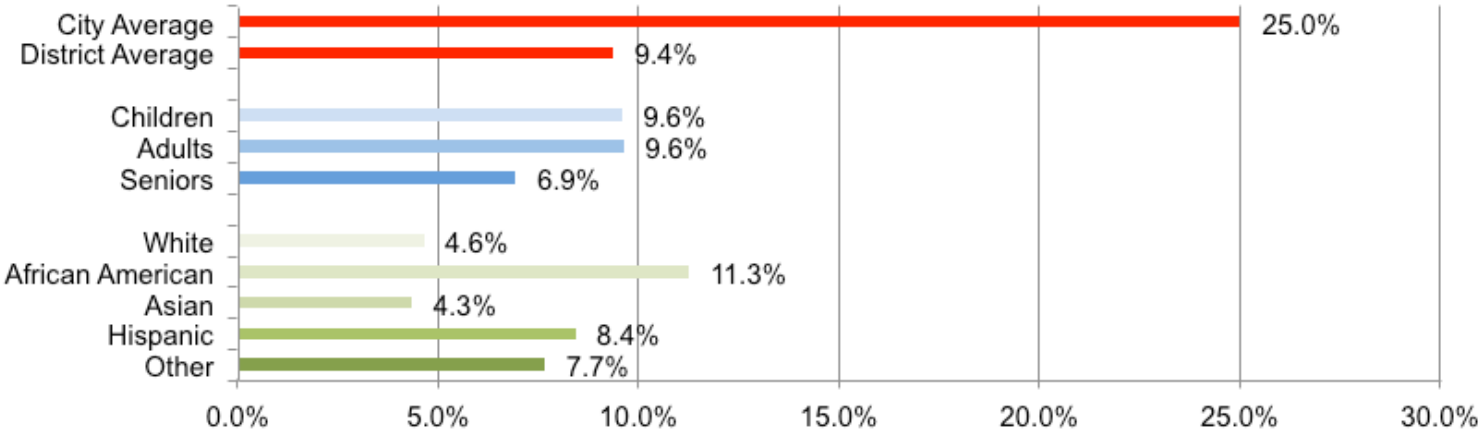
FOOD DESERT FACTORS



POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	4,016	9.4%
CHILDREN (0-17)	1,004	9.6%
ADULTS (18-64)	2,738	9.6%
SENIORS (65+)	274	6.9%
WHITE	475	4.6%
AFRICAN AMERICAN	3,338	11.3%
ASIAN	32	4.3%
HISPANIC*	171	8.4%
OTHER**	171	7.7%

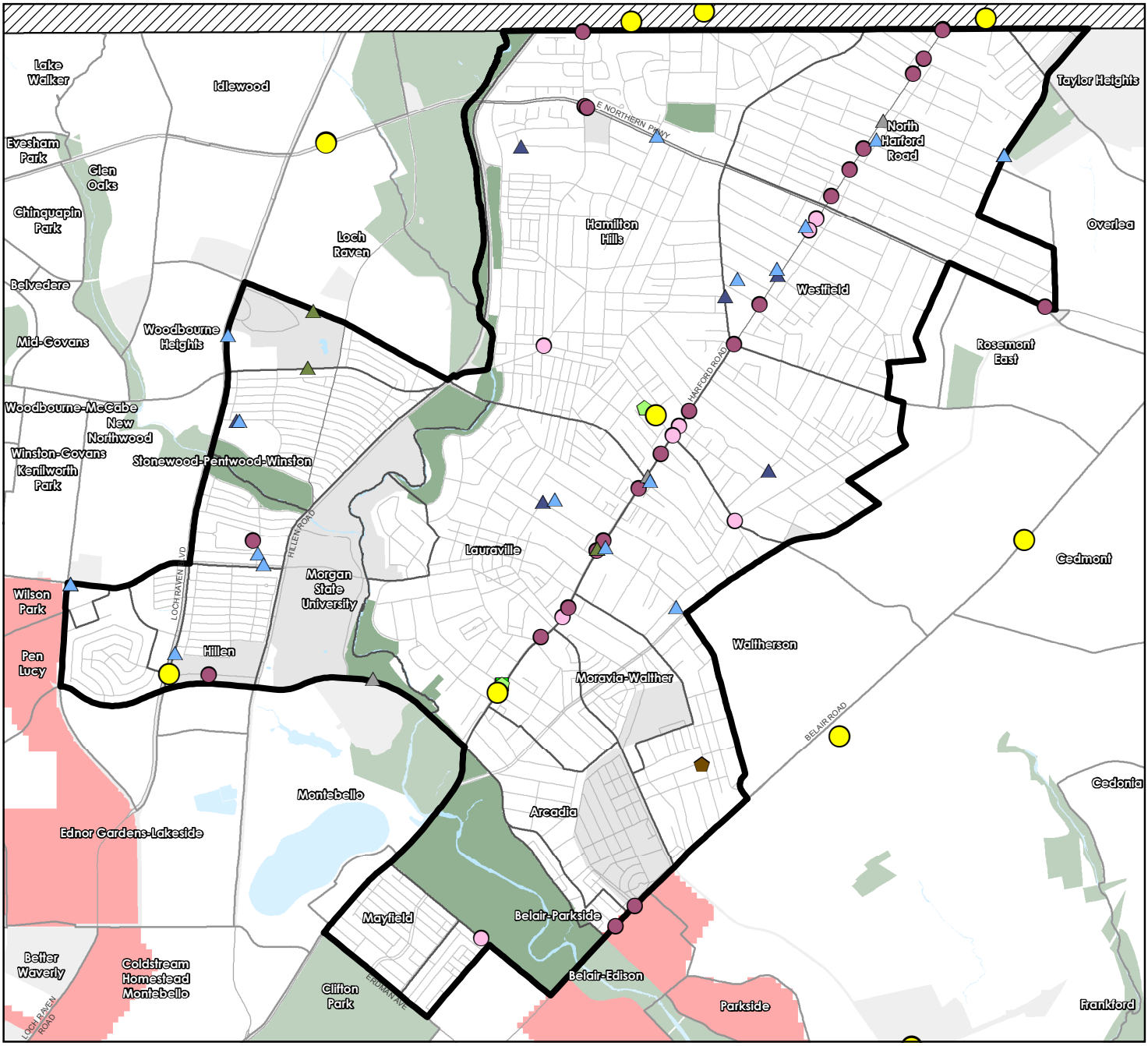
PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 2nd District, 9.6 % live in a food desert.

* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"



2015 City Council 3rd District Food Environment - Councilman Curran

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
County
Major Parks
Harbor, Lakes & Streams

Food Retail

- Supermarkets (3)
- Corner Stores (9)
- Convenience Stores (26)
- Farmers Markets (1)
- Public Markets (0)
- Virtual Supermarkets (0)

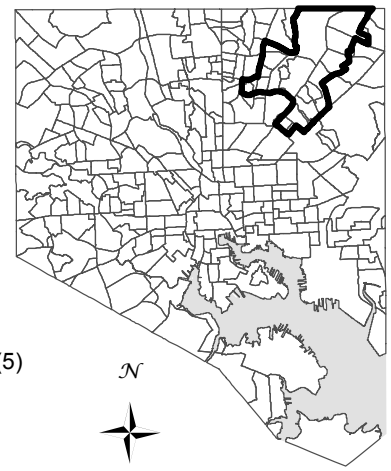
Food Assistance

- After School Meal Sites (8)
- Kids' Summer Meals Sites (16)
- Senior Meal Sites (3)
- Food Pantries and Meal Sites (5)

Locally Grown

- Urban Farm (2)
- Community Garden (1)

0 ¼ ½ Miles



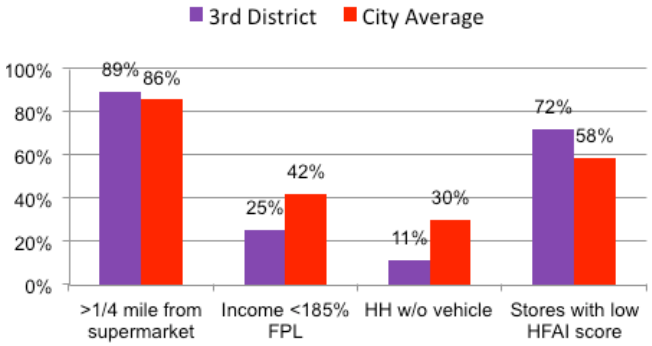
2015 FOOD ENVIRONMENT
3RD DISTRICT

WHAT IS A FOOD DESERT?

A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

FOOD DESERT FACTORS



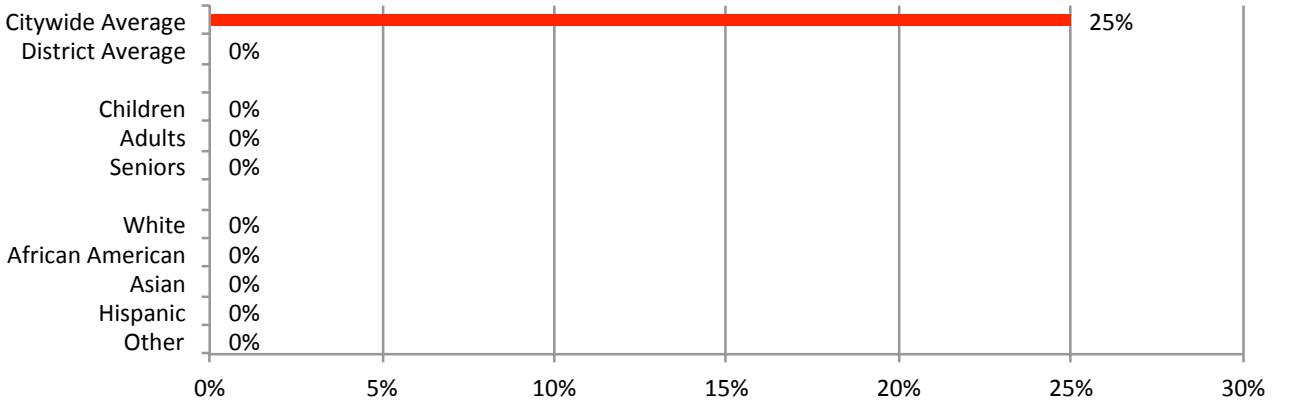
KEY FOOD DESERT INFORMATION

- There are no food deserts within the boundaries of the 3rd District, however, the district borders food deserts in several places, and some residents may still struggle to access healthy food.
- A quarter of residents – nearly 10,000 people – in the 3rd District live at or below 185 percent of the Federal Poverty Level.
- Approximately 11 percent of residents do not have access to a vehicle. For some these residents, accessing healthy food may be a significant challenge as almost all food sources are concentrated along Harford Road and not distributed throughout the district.
- Over 70 percent of stores in the district have a low Healthy Food Availability Index score, the highest percentage city-wide.
  - Because there are several supermarkets in the district, the demand may be low for smaller stores to carry healthier products.

POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	0	0%
CHILDREN (0-17)	0	0%
ADULTS (18-64)	0	0%
SENIORS (65+)	0	0%
WHITE	0	0%
AFRICAN AMERICAN	0	0%
ASIAN	0	0%
HISPANIC*	0	0%
OTHER**	0	0%

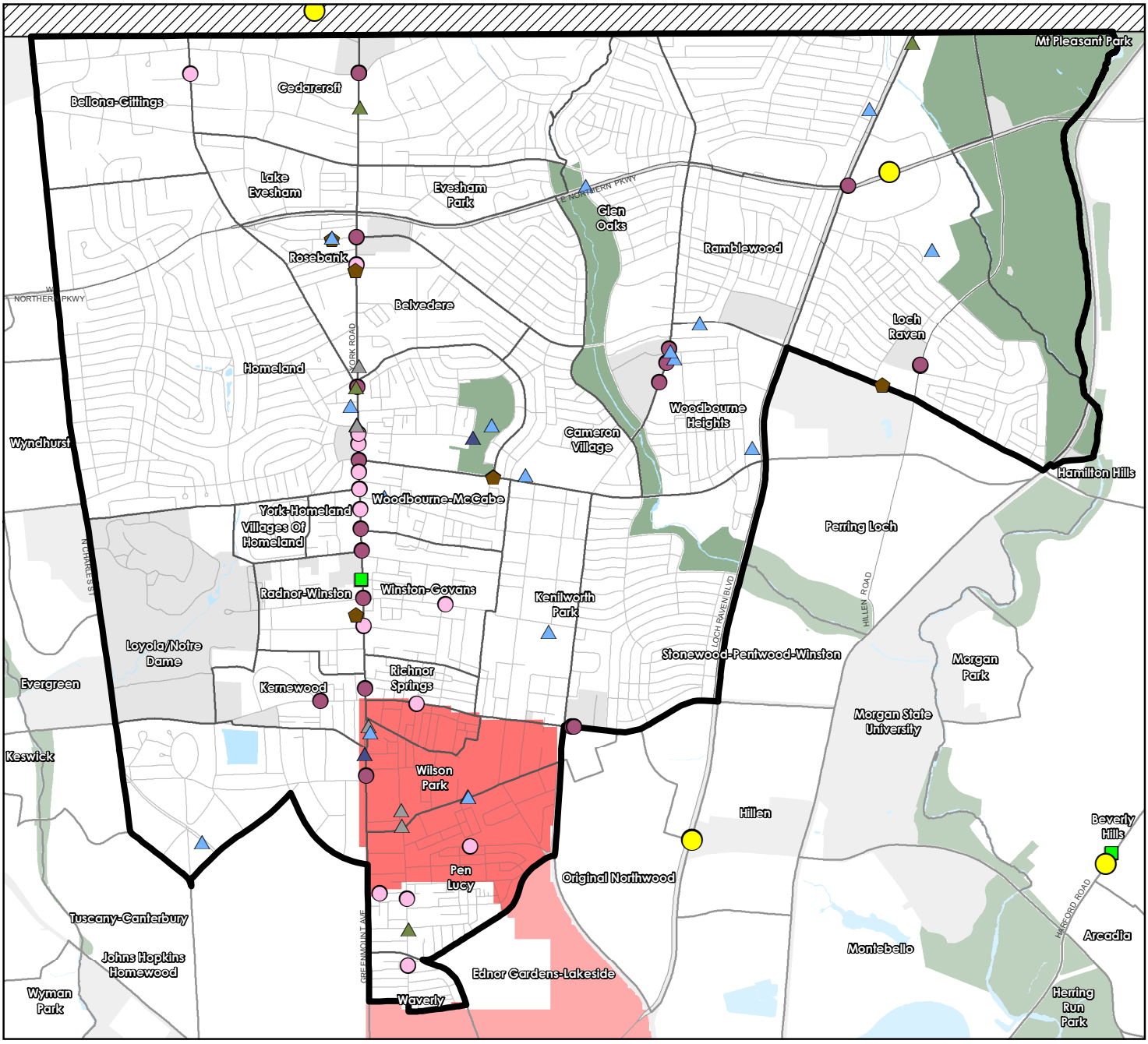
PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 3rd District, 0% live in a food desert.

* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"



2015 City Council 4th District Food Environment - Councilman Henry

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
County
Major Parks
Harbor, Lakes & Streams

Food Retail

- Supermarkets (1)
- Corner Stores (15)
- Convenience Stores (19)
- Farmers Markets (1)
- Public Markets (1)
- Virtual Supermarkets (0)

Food Assistance

- After School Meal Sites (5)
- Kids' Summer Meals Sites (16)
- Senior Meal Sites (4)
- Food Pantries and Meal Sites (6)

Locally Grown

- Urban Farm (0)
- Community Garden (5)

0 ¼ ½ Miles

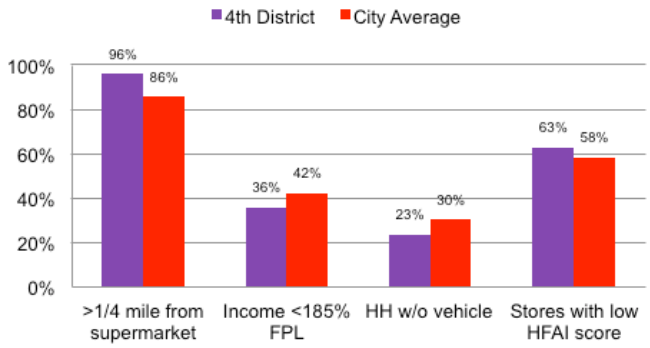
2015 FOOD ENVIRONMENT
4TH DISTRICT

WHAT IS A FOOD DESERT?

A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

FOOD DESERT FACTORS



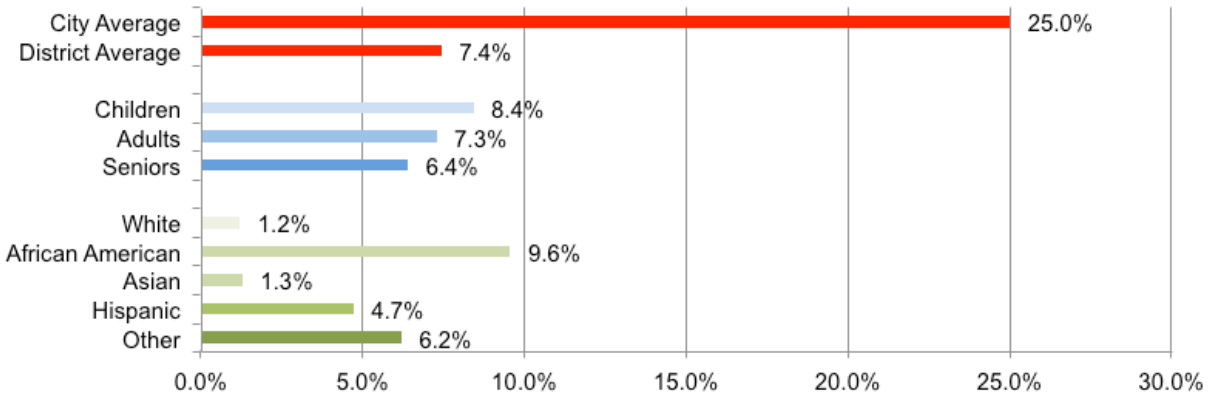
KEY FOOD DESERT INFORMATION

- Compared to the City average, the 4th District has a relatively low percentage of residents living in food deserts, however, there are still over 3,000 people living in food deserts and some residents outside of food deserts also may struggle to access healthy food.
- African American residents live in food deserts at disproportionately higher rates than other races/ethnicities, nearly eight times higher than white residents. Hispanic and Other residents are also disproportionately affected by food deserts
- 96 percent of residents live more than ¼ mile from a supermarket.
- Over 16,000 residents live at or below 185 percent of the Federal Poverty Level.

POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	3,238	7.4%
CHILDREN (0-17)	833	8.4%
ADULTS (18-64)	2,064	7.3%
SENIORS (65+)	341	6.4%
WHITE	117	1.2%
AFRICAN AMERICAN	3,035	9.6%
ASIAN	9	1.3%
HISPANIC*	45	4.7%
OTHER**	77	6.2%

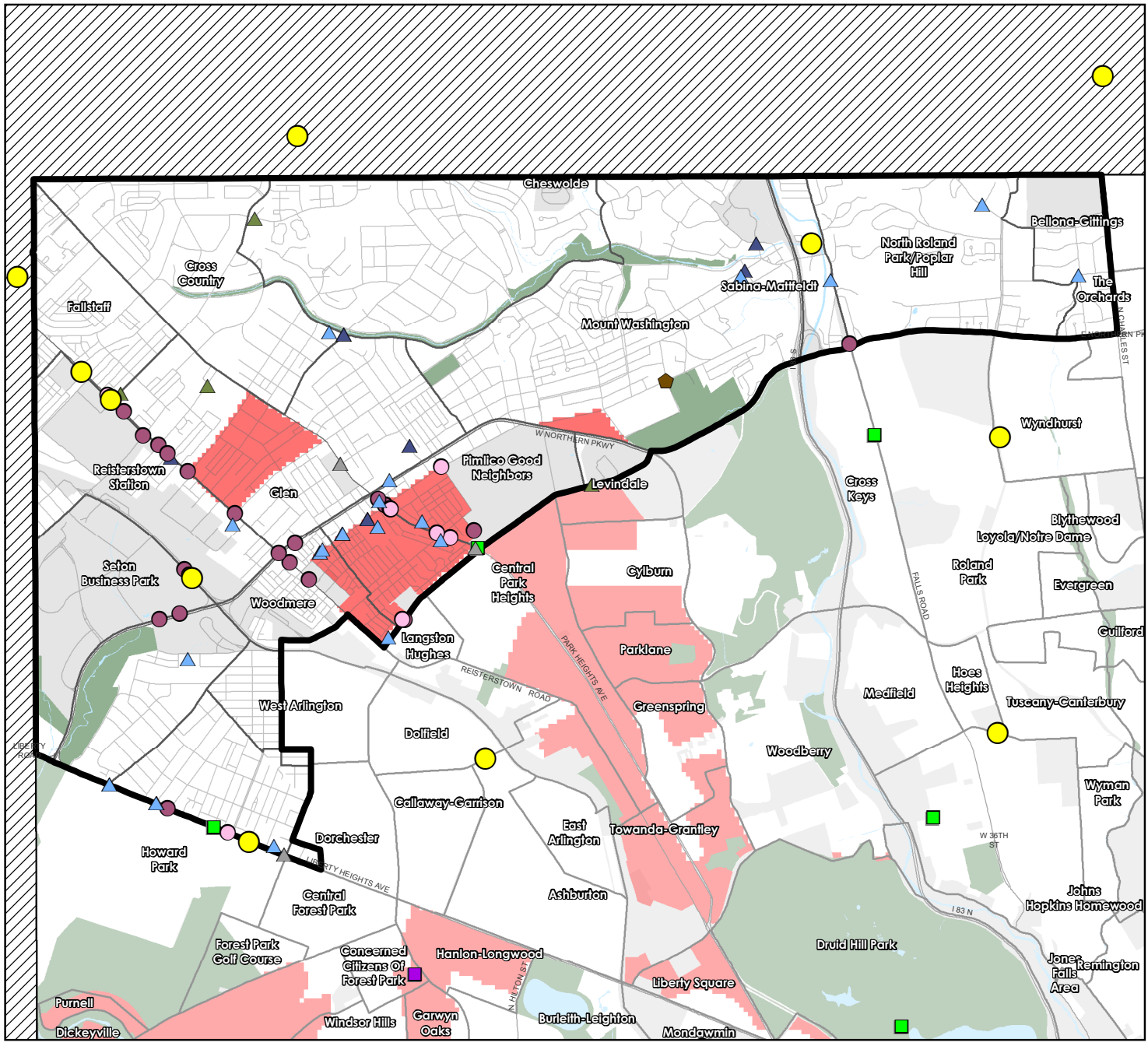
PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 4th District, 8.4% live in a food desert.

* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"



2015 City Council 5th District Food Environment - Councilwoman Spector

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
County
Major Parks
Harbor, Lakes & Streams

Food Retail

- Supermarkets (5)
- Corner Stores (13)
- Convenience Stores (26)
- Farmers Markets (2)
- Public Markets (0)
- Virtual Supermarkets (1)

Food Assistance

- After School Meal Sites (9)
- Kids' Summer Meals Sites (19)
- Senior Meal Sites (4)
- Food Pantries and Meal Sites (6)

Locally Grown

- Urban Farm (0)
- Community Garden (1)

0 ¼ ½
Miles

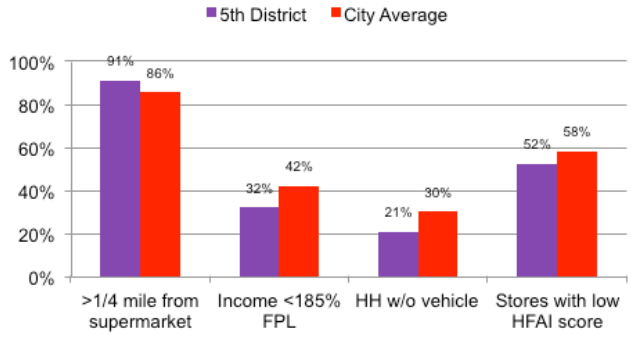
2015 FOOD ENVIRONMENT
5TH DISTRICT

WHAT IS A FOOD DESERT?

A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

FOOD DESERT FACTORS



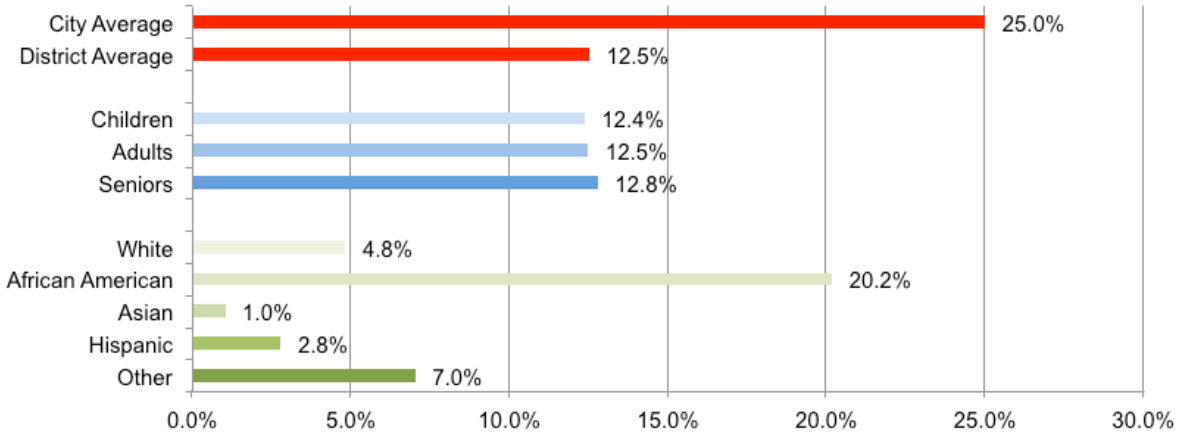
KEY FOOD DESERT INFORMATION

- While the percentage of residents living in food deserts is relatively low compared to the city average, much of the 5th District borders food deserts.
- African Americans live in food deserts at disproportionately higher rates than other races/ethnicities – more than four times higher than white residents in the 5th District.
- There are high concentrations of corner stores and convenience stores in and around the food deserts in the 5th District, and very little food retail in the central and east parts of the district.
- More than one third of the district's population lives at or below 185 percent of the Federal Poverty Level.
- Over half of the stores in the 5th District have very low Healthy Food Availability Index scores.

POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	5,495	12.5%
CHILDREN (0-17)	1,256	12.4%
ADULTS (18-64)	3,188	12.5%
SENIORS (65+)	1,051	12.8%
WHITE	921	4.8%
AFRICAN AMERICAN	4,450	20.2%
ASIAN	12	1.0%
HISPANIC*	39	2.8%
OTHER**	112	7.%

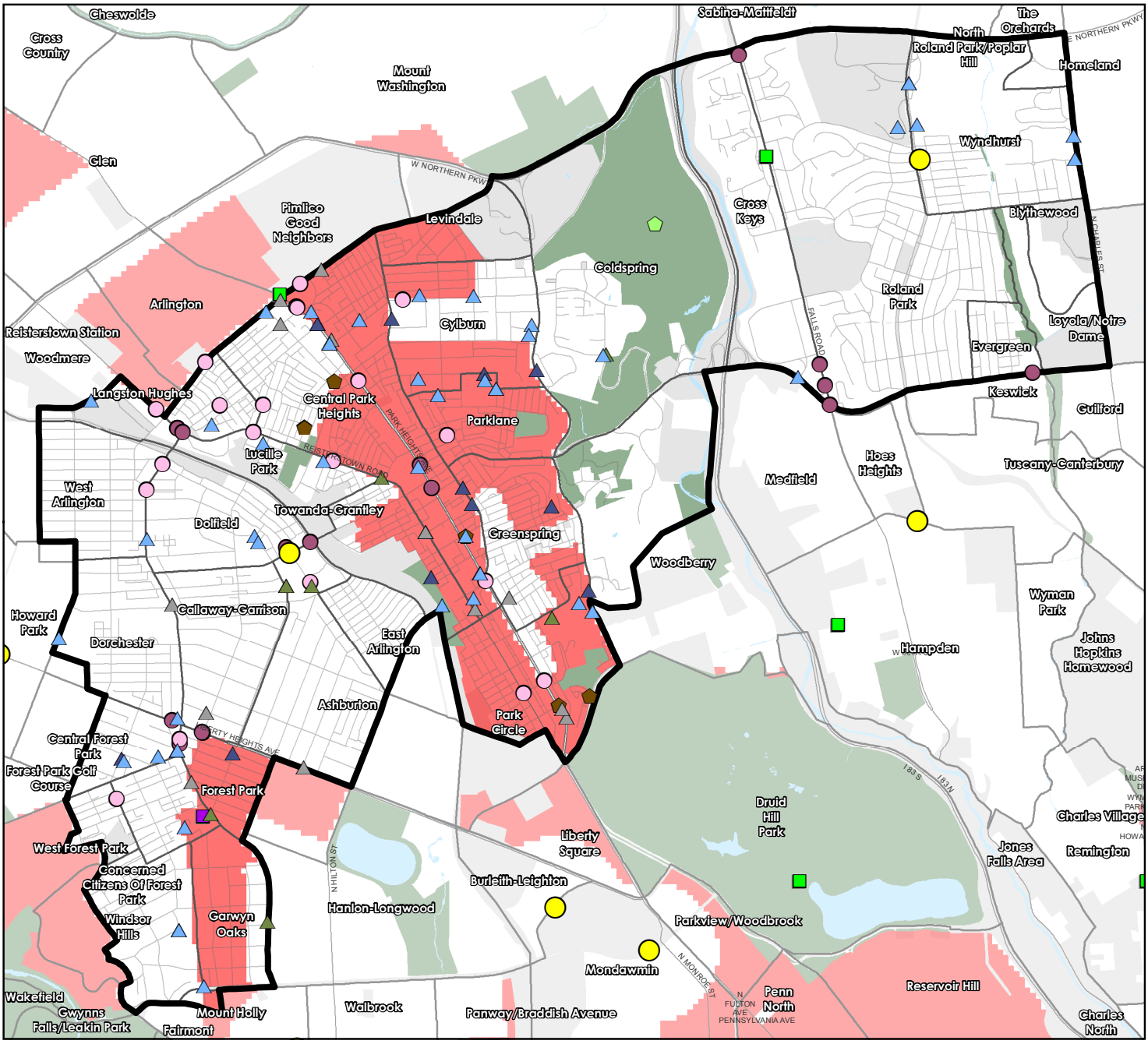
PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 5th District, 12.4% live in a food desert.

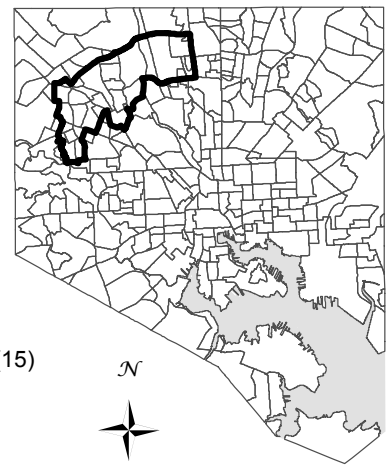
* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"



2015 City Council 6th District Food Environment - Councilwoman Middleton

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
Major Parks
Harbor, Lakes & Streams



Food Retail

- Supermarkets (2)
- Corner Stores (20)
- Convenience Stores (17)
- Farmers Markets (1)
- Public Markets (0)
- Virtual Supermarkets (0)

Food Assistance

- After School Meal Sites (17)
- Kids' Summer Meals Sites (42)
- Senior Meal Sites (7)
- Food Pantries and Meal Sites (15)

Locally Grown

- Urban Farm (1)
- Community Garden (5)

0 ¼ ½ Miles

2015 FOOD ENVIRONMENT
6TH DISTRICT

WHAT IS A FOOD DESERT?

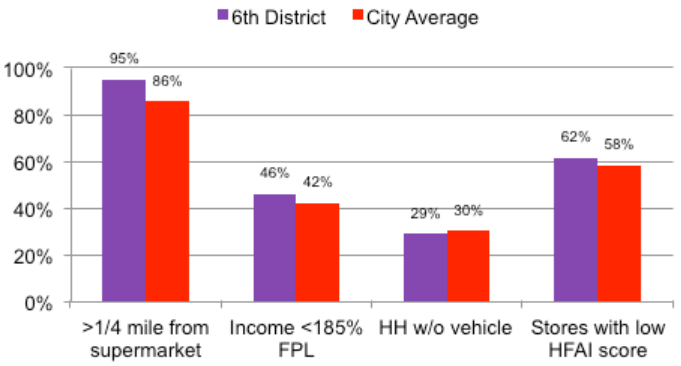
A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

KEY FOOD DESERT INFORMATION

- The 6th District has the highest disparities between racial and ethnic groups in rate of living in a food desert. In the 6th District, compared to white residents:
  - African Americans are approximately ten times more likely to live in a food desert.
  - Asians are approximately twice as likely to live in a food desert.
  - "Other" residents are approximately seven times more likely to live in a food desert.
  - Hispanic residents (including white Hispanic) are more than five times more likely to live in a food desert.
- Nearly 4,000 children live in a food desert in the 6th District.
- More than 2,000 seniors live in a food desert in the 6th District.
- There is a low number of food retail outlets compared to the rest of the city, and retail is primarily comprised of corner and convenience stores.

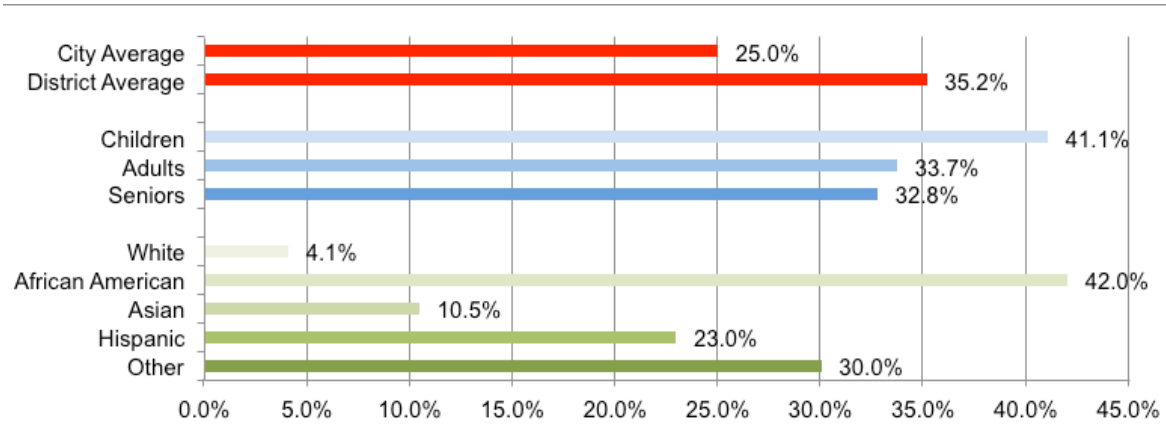
FOOD DESERT FACTORS



POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	15,705	35.2%
CHILDREN (0-17)	3,944	41.1%
ADULTS (18-64)	9,658	33.7%
SENIORS (65+)	2,103	32.8%
WHITE	305	4.1%
AFRICAN AMERICAN	15,074	42.0%
ASIAN	35	10.5%
HISPANIC*	160	23.0%
OTHER**	291	30.0%

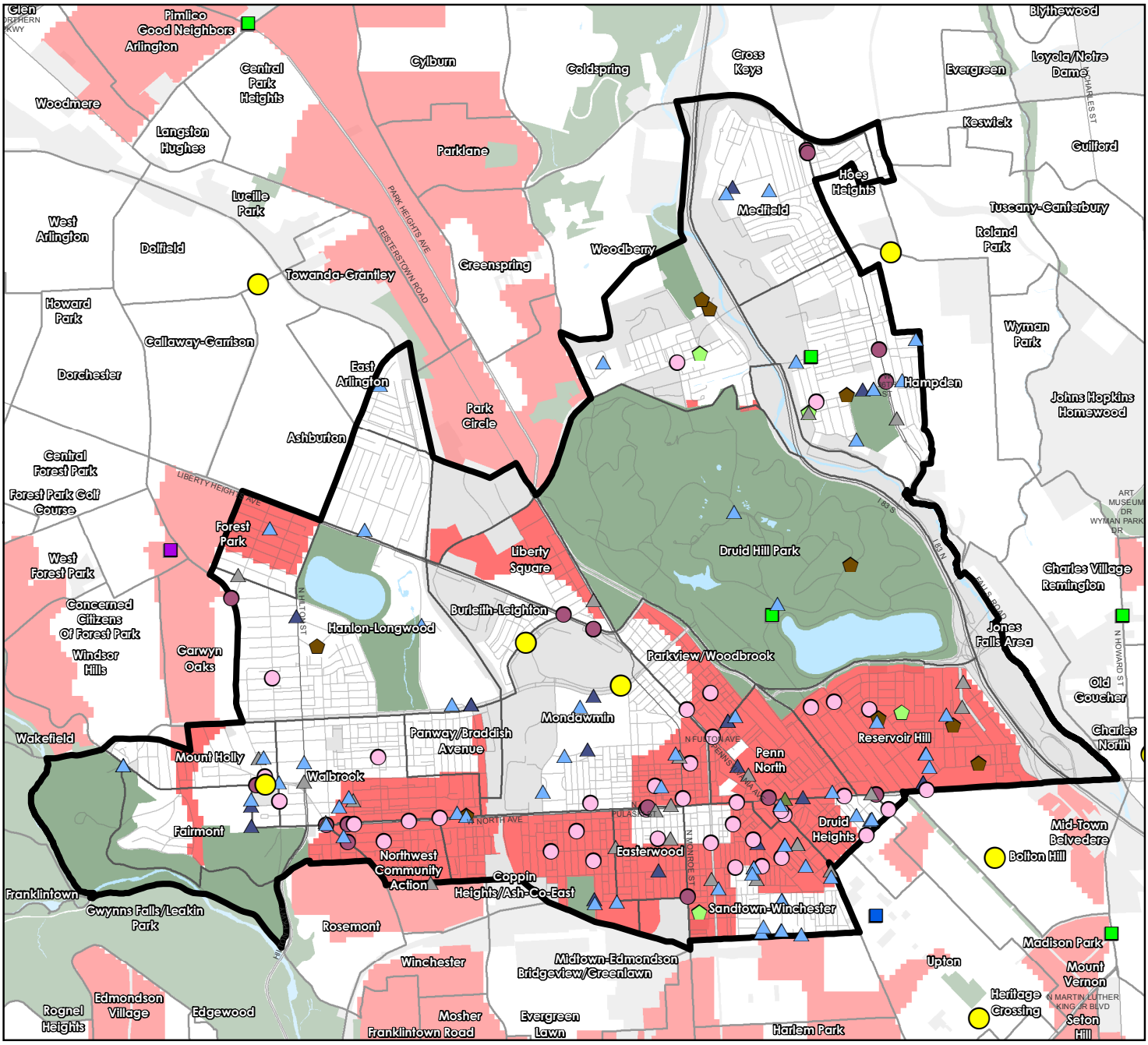
PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 6th District, 41.1% live in a food desert.

* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"



2015 City Council 7th District Food Environment - Councilman Mosby

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
Major Parks
Harbor, Lakes & Streams

Food Retail

- Supermarkets (3)
- Corner Stores (39)
- Convenience Stores (17)
- Farmers Markets (2)
- Public Markets (0)
- Virtual Supermarkets (0)

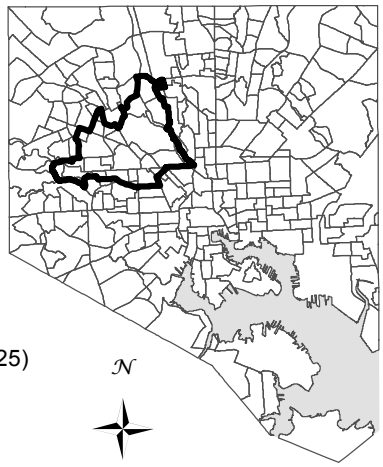
Locally Grown

- Urban Farm (4)
- Community Garden (9)

Food Assistance

- After School Meal Sites (23)
- Kids' Summer Meals Sites (54)
- Senior Meal Sites (2)
- Food Pantries and Meal Sites (25)

0 ¼ ½
Miles



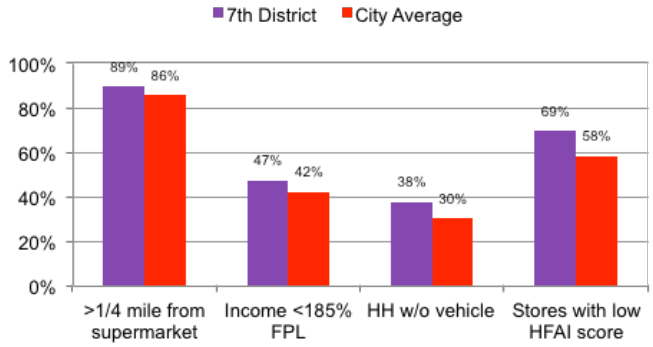
2015 FOOD ENVIRONMENT
7TH DISTRICT

WHAT IS A FOOD DESERT?

A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

FOOD DESERT FACTORS



KEY FOOD DESERT INFORMATION

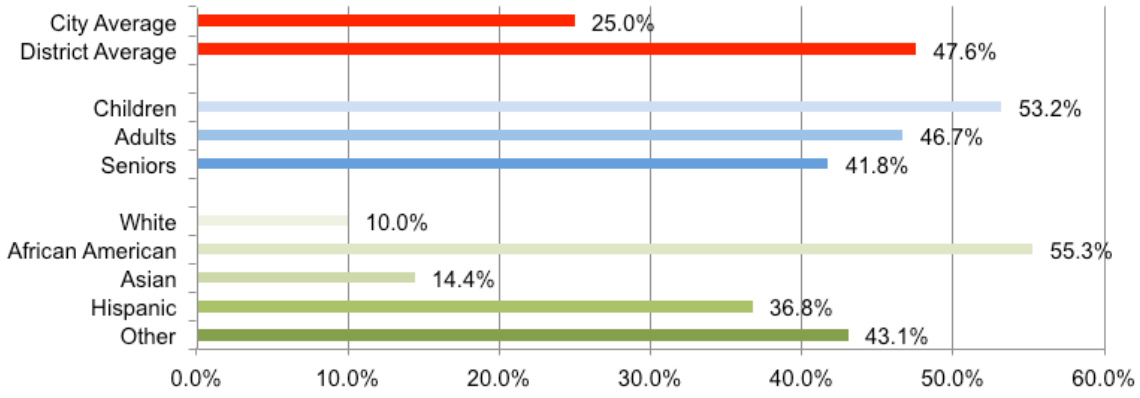
- The percentage of residents living in a food desert in the 7th District is close to twice the city average.
- There are dramatic disparities between racial and ethnic groups in the rate of living in a food desert. In the 7th District compared to white residents:
  - African Americans are approximately five times more likely to live in a food desert.
  - "Other" residents are approximately four times more likely to live in a food desert.
  - Hispanic residents (including white Hispanic) are approximately three and a half times more likely to live in a food desert.
- More than 5,000 children live in a food desert in the 7th District.
- More than 2,000 seniors live in a food desert in the 7th District and the district has one of the highest percentages of seniors living in food deserts.

Nearly 70 percent of the stores in the 7h District have very low Healthy Food Availability Index scores

POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	20,705	47.6%
CHILDREN (0-17)	5207	53.2%
ADULTS (18-64)	13,307	46.7%
SENIORS (65+)	2,191	41.8%
WHITE	673	10.0%
AFRICAN AMERICAN	19,513	55.3%
ASIAN	62	14.4%
HISPANIC*	247	36.8%
OTHER**	457	43.1%

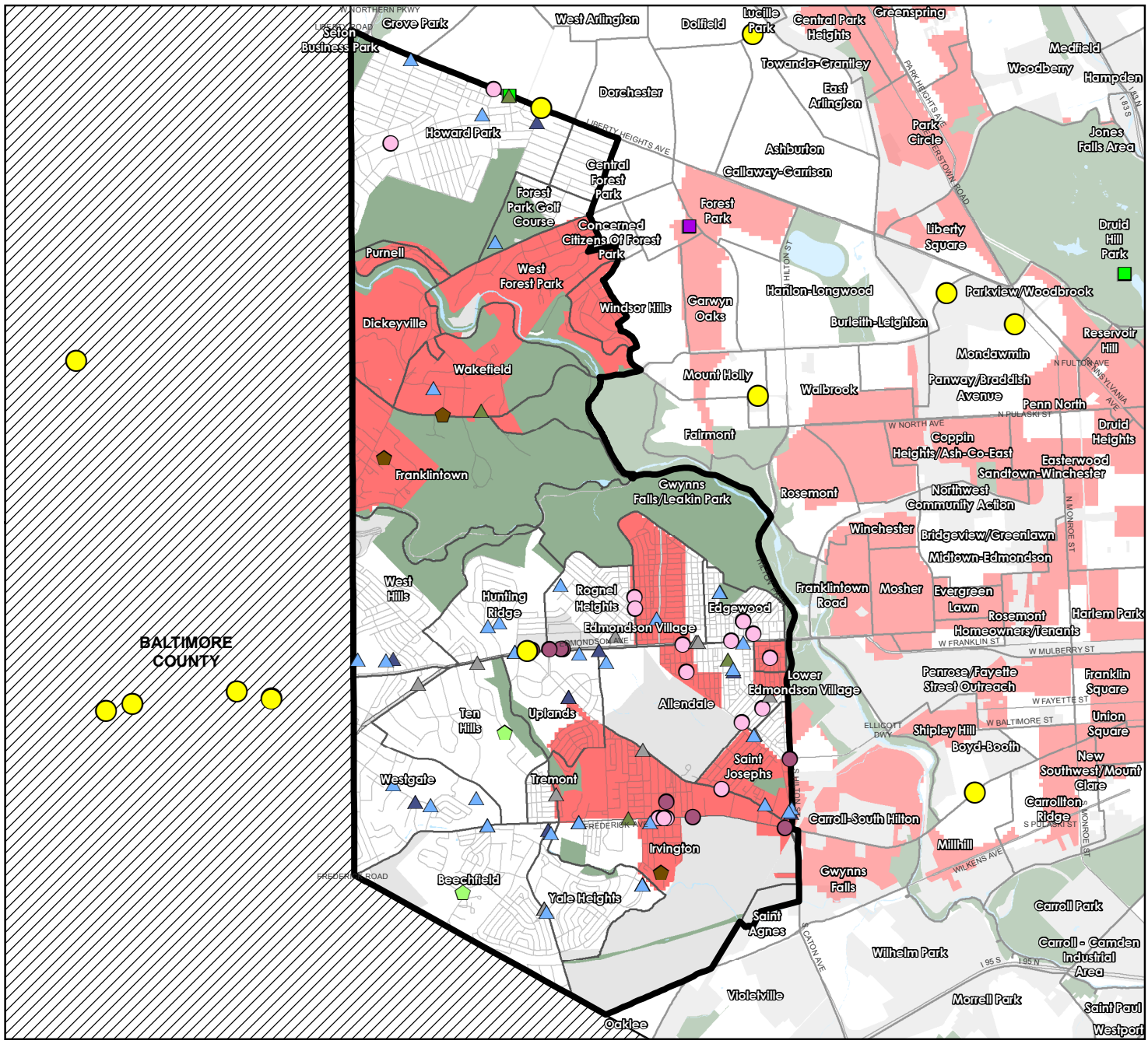
PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 7th District, 53.2% live in a food desert.

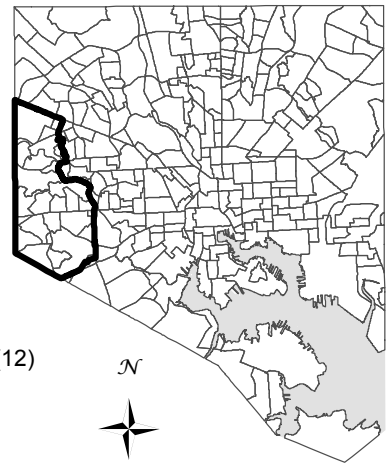
* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"



2015 City Council 8th District Food Environment - Councilwoman Holton

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
County
Major Parks
Harbor, Lakes & Streams



Food Retail

- Supermarkets (1)
- Corner Stores (19)
- Convenience Stores (9)
- Farmers Markets (0)
- Public Markets (0)
- Virtual Supermarkets (0)

Food Assistance

- After School Meal Sites (12)
- Kids' Summer Meals Sites (30)
- Senior Meal Sites (5)
- Food Pantries and Meal Sites (12)

Locally Grown

- Urban Farm (2)
- Community Garden (3)

0 ¼ ½
Miles

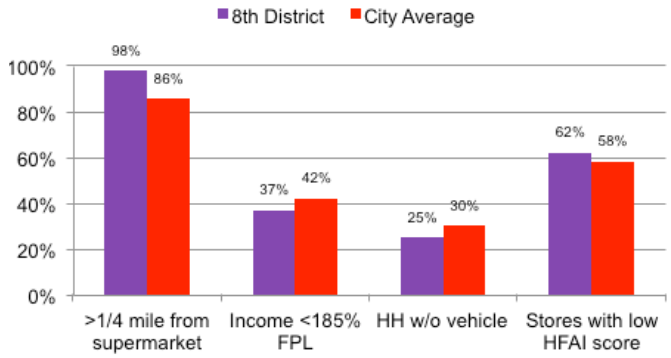
2015 FOOD ENVIRONMENT
8TH DISTRICT

WHAT IS A FOOD DESERT?

A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

FOOD DESERT FACTORS



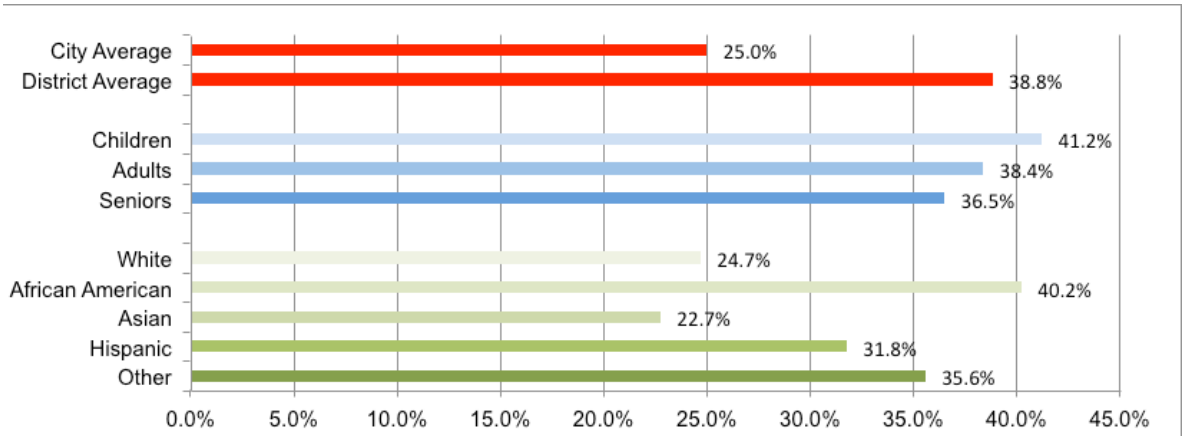
KEY FOOD DESERT INFORMATION

- Food deserts in the 8th District are located in areas with the highest population density.
- More than 4,400 children live in a food desert in the 8th District.
- More than 2,000 seniors live in a food desert in the 8th District.
- African American, Other and Hispanic residents live in food deserts at disproportionately higher rates than White and Asian residents.
- 98.0 percent of residents live more than ¼ mile from a supermarket, the highest percentage city-wide

POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	17,465	38.8%
CHILDREN (0-17)	4443	41.2%
ADULTS (18-64)	10,877	38.4%
SENIORS (65+)	2,145	36.5%
WHITE	874	24.7%
AFRICAN AMERICAN	16,177	40.3%
ASIAN	48	22.8%
HISPANIC*	190	31.8%
OTHER**	366	35.6%

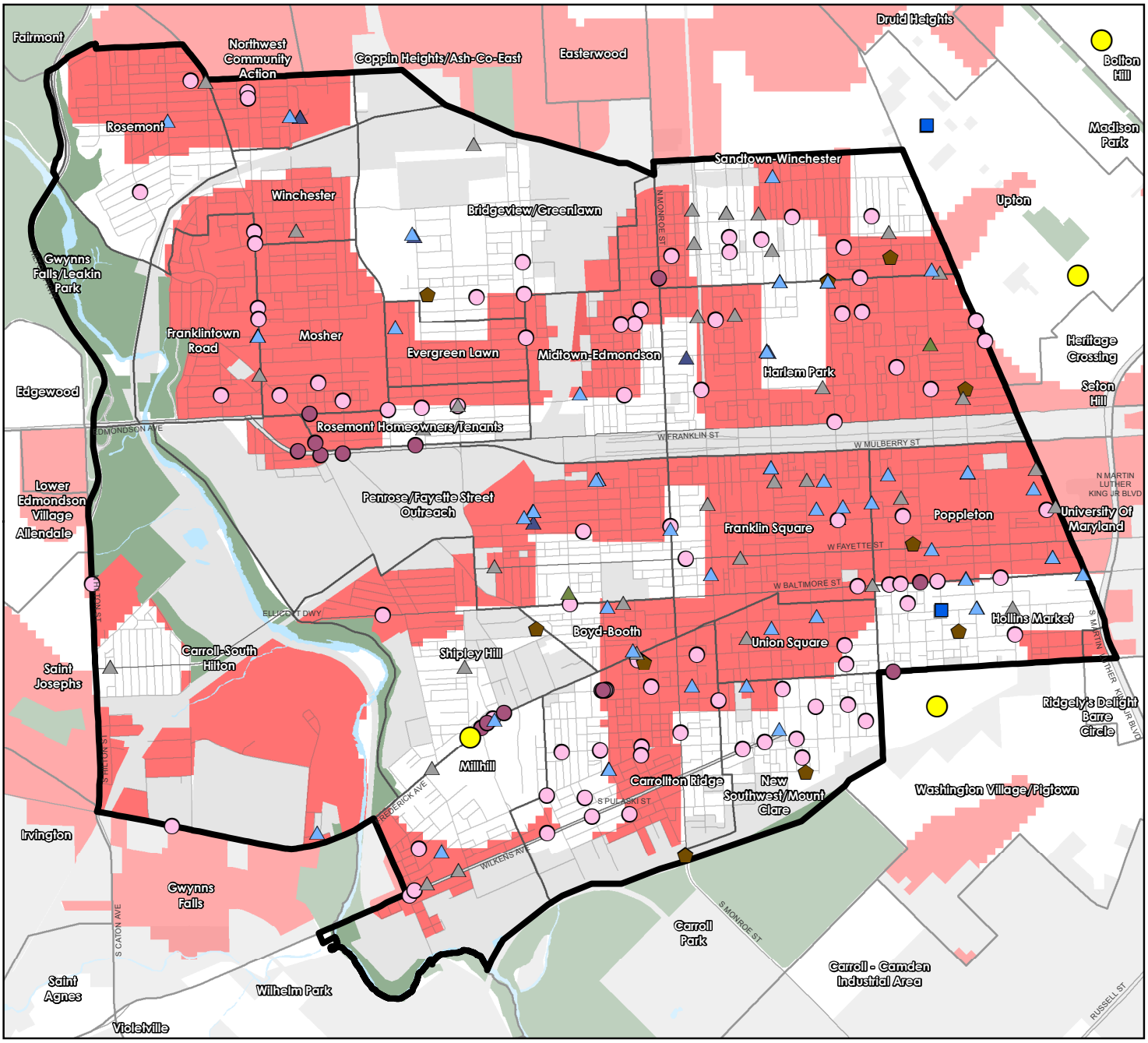
PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 8th District, 41.2% live in a food desert.

* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"



2015 City Council 9th District Food Environment - Councilman Welch

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
Major Parks
Harbor, Lakes & Streams

Food Retail

- Supermarkets (1)
- Corner Stores (89)
- Convenience Stores (14)
- Farmers Markets (0)
- Public Markets (1)
- Virtual Supermarkets (2)

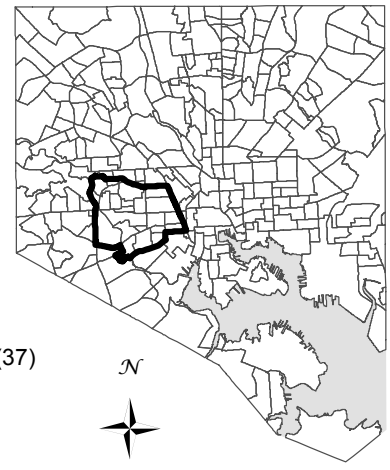
Locally Grown

- Urban Farm (0)
- Community Garden (10)

Food Assistance

- After School Meal Sites (19)
- Kids' Summer Meals Sites (42)
- Senior Meal Sites (3)
- Food Pantries and Meal Sites (37)

0 ¼ ½
Miles



2015 FOOD ENVIRONMENT
9TH DISTRICT

WHAT IS A FOOD DESERT?

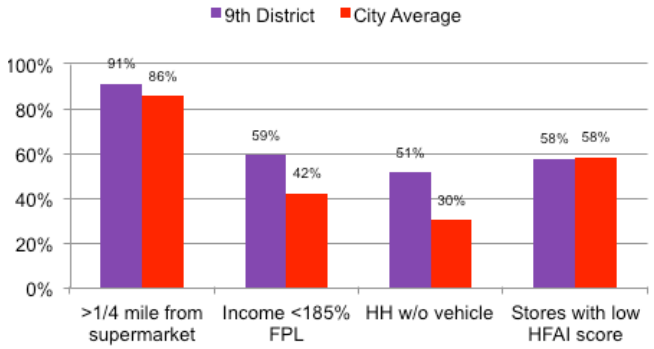
A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

KEY FOOD DESERT INFORMATION

- Citywide, the 9th District has the highest percentage of residents and total number of residents living in a food desert in Baltimore City.
- Nearly 7,500 children live in a food desert in the 9th District.
- 3,500 seniors live in a food desert in the 9th District.
- More than half of households do not have access to a vehicle.
- African Americans live in food deserts at disproportionately higher rates than other racial/ethnic groups.
- The 9th District has the highest concentration of corner stores and the lowest number of supermarkets citywide
- Residents most likely have to travel outside of the District to go to a supermarket.

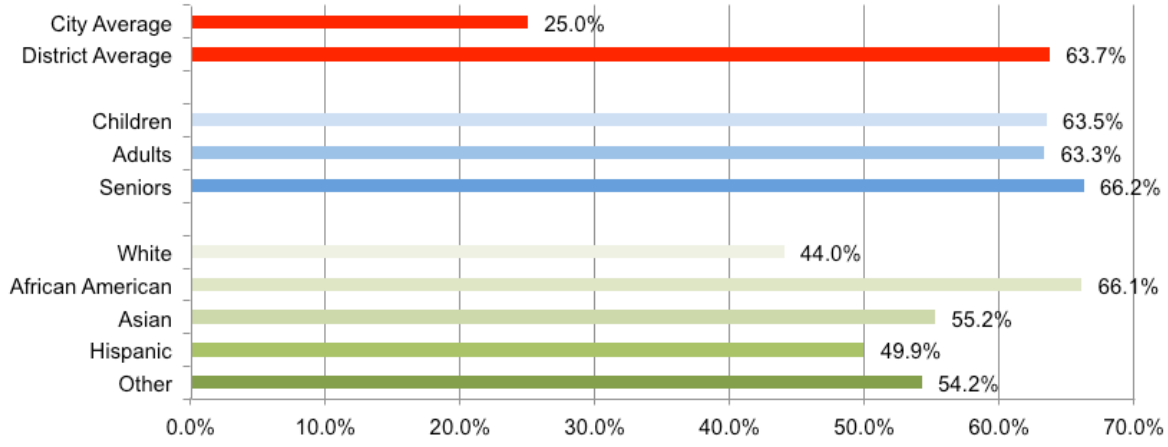
FOOD DESERT FACTORS



POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	29,189	63.7%
CHILDREN (0-17)	7,497	63.5%
ADULTS (18-64)	18,161	63.3%
SENIORS (65+)	3,531	66.2%
WHITE	1,776	44.0%
AFRICAN AMERICAN	26,461	66.1%
ASIAN	175	55.2%
HISPANIC*	463	50.0%
OTHER**	777	54.2%

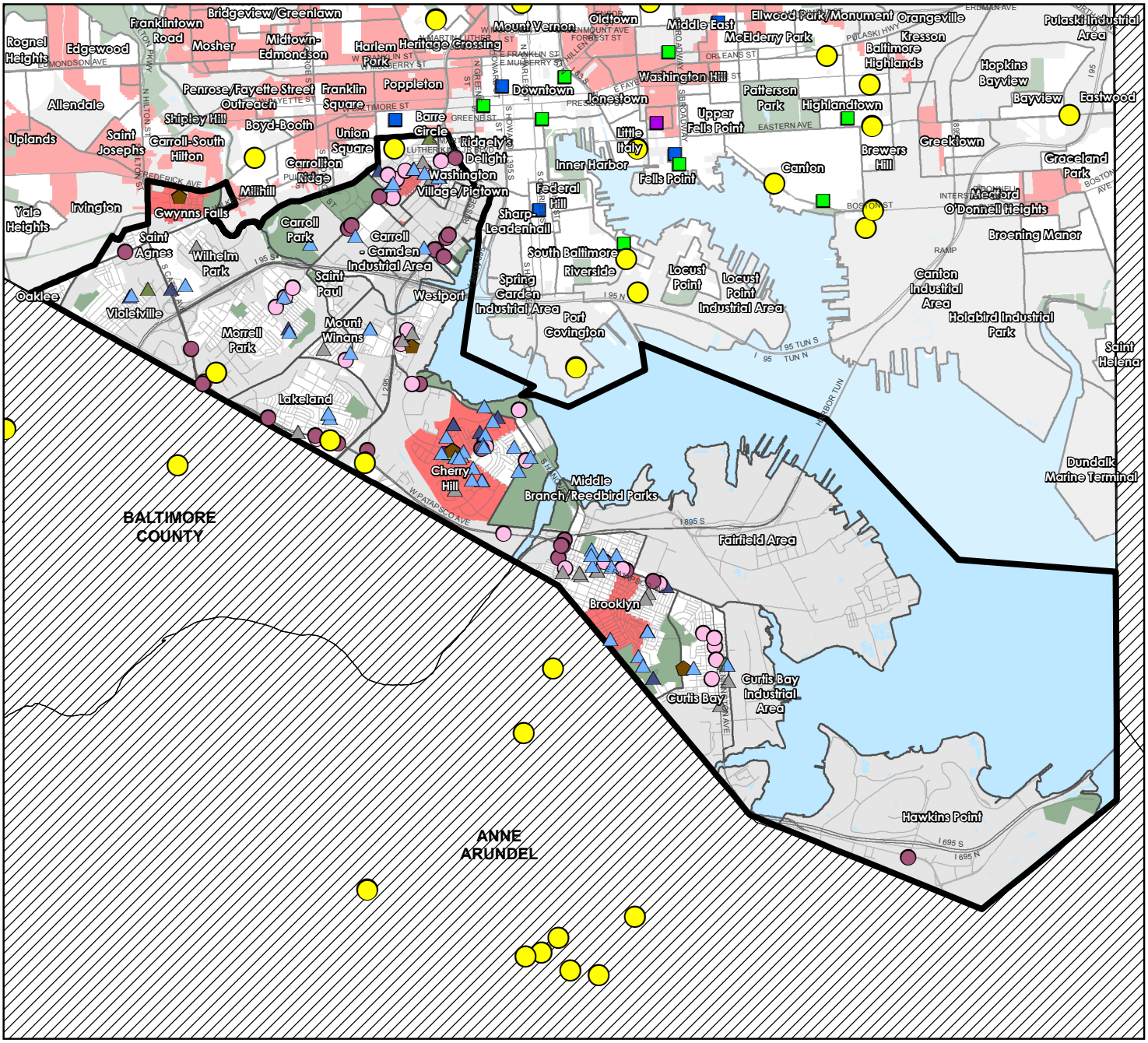
PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 9th District, 63.5% live in a food desert.

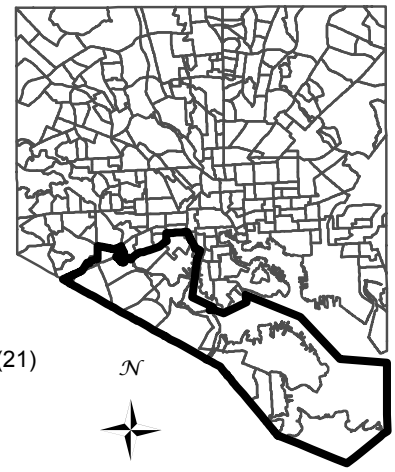
* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"



2015 City Council 10th District Food Environment - Councilman Reisinger

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
County
Major Parks
Harbor, Lakes & Streams



Food Retail

- Supermarkets (4)
- Corner Stores (30)
- Convenience Stores (31)
- Farmers Markets (0)
- Public Markets (0)
- Virtual Supermarkets (0)

Food Assistance

- After School Meal Sites (18)
- Kids' Summer Meals Sites (44)
- Senior Meal Sites (3)
- Food Pantries and Meal Sites (21)

Locally Grown

- Urban Farm (1)
- Community Garden (4)

0 ¼ ½ Miles

2015 FOOD ENVIRONMENT
10TH DISTRICT

WHAT IS A FOOD DESERT?

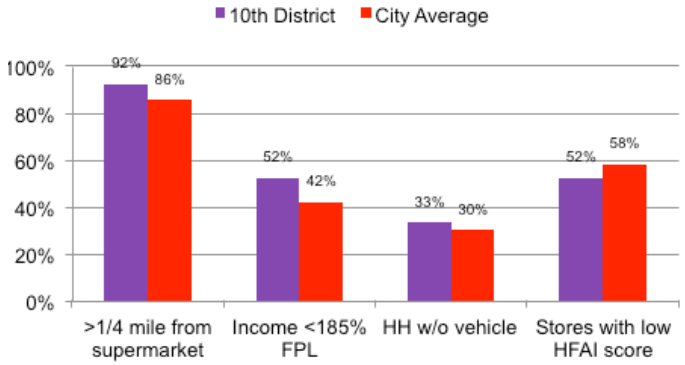
A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

KEY FOOD DESERT INFORMATION

- Over 4,000 children live in a food desert in the 10th District, and children make up one third of all residents in 10th District food deserts.
- African Americans live in food deserts at disproportionately higher rates than other racial/ethnic groups.
- There are many supermarkets just across the county line and residents may be leaving Baltimore City to shop for healthy food.
- The 10th District could improve its food deserts by increasing the HFAI scores of some of its corner stores.

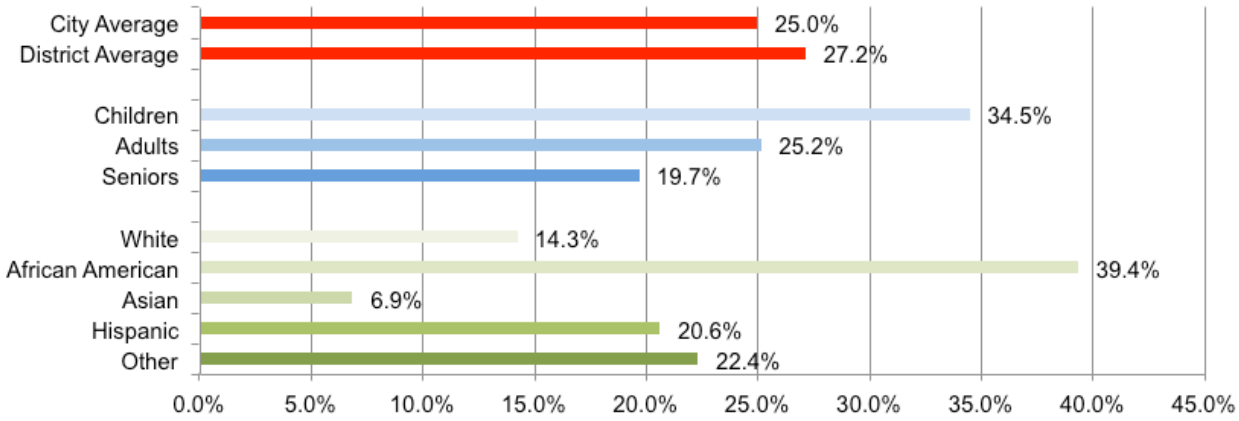
FOOD DESERT FACTORS



POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	12,286	27.2%
CHILDREN (0-17)	4,239	34.5%
ADULTS (18-64)	7,175	25.2%
SENIORS (65+)	872	19.7%
WHITE	2,668	14.3%
AFRICAN AMERICAN	8,893	39.4%
ASIAN	64	6.7%
HISPANIC*	633	20.7%
OTHER**	661	22.4%

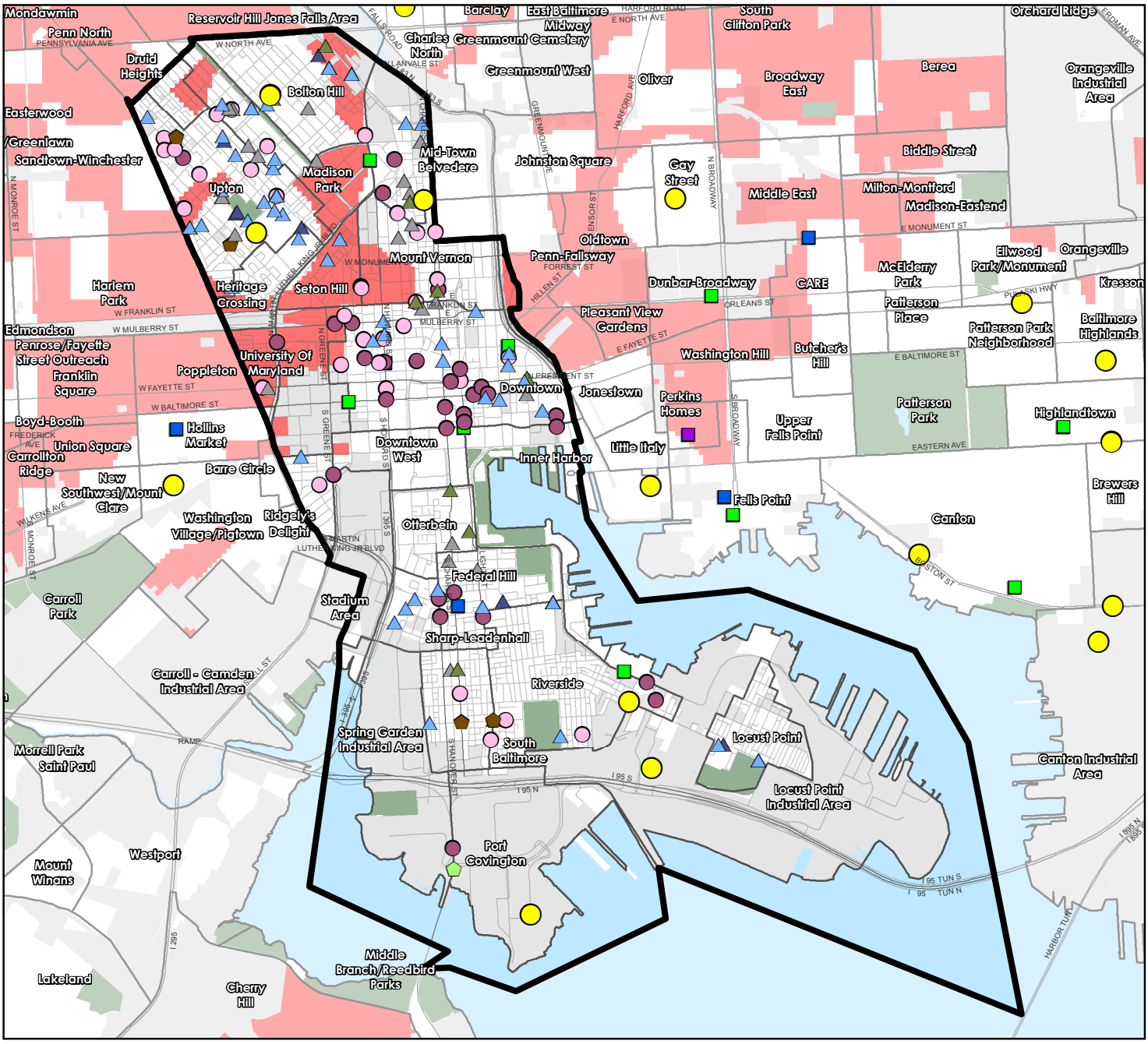
PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 10th District, 34.5% live in a food desert.

* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"



2015 City Council 11th District Food Environment - Councilman Costello

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
Major Parks
Harbor, Lakes & Streams

Food Retail

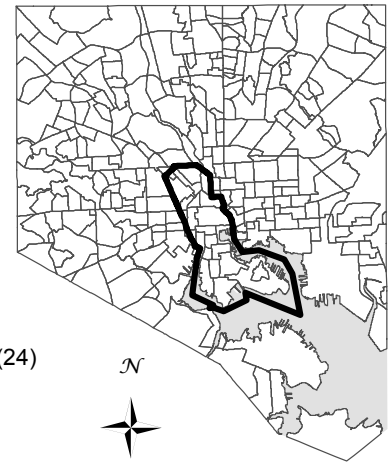
- Supermarkets (6)
- Corner Stores (36)
- Convenience Stores (37)
- Farmers Markets (5)
- Public Markets (2)
- Virtual Supermarkets (1)

Food Assistance

- After School Meal Sites (14)
- Kids' Summer Meals Sites (48)
- Senior Meal Sites (10)
- Food Pantries and Meal Sites (24)

Locally Grown

- Urban Farm (1)
- Community Garden (4)



0 ¼ ½
Miles

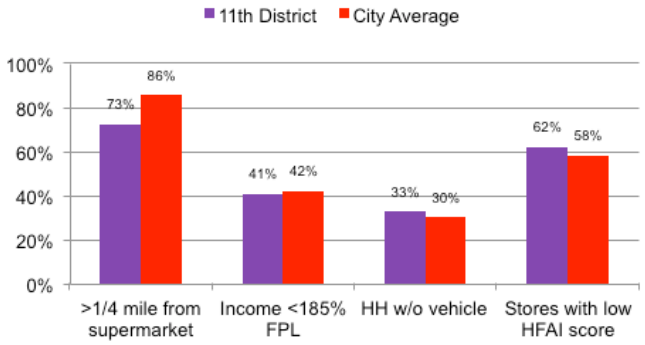
2015 FOOD ENVIRONMENT
11TH DISTRICT

WHAT IS A FOOD DESERT?

A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

FOOD DESERT FACTORS



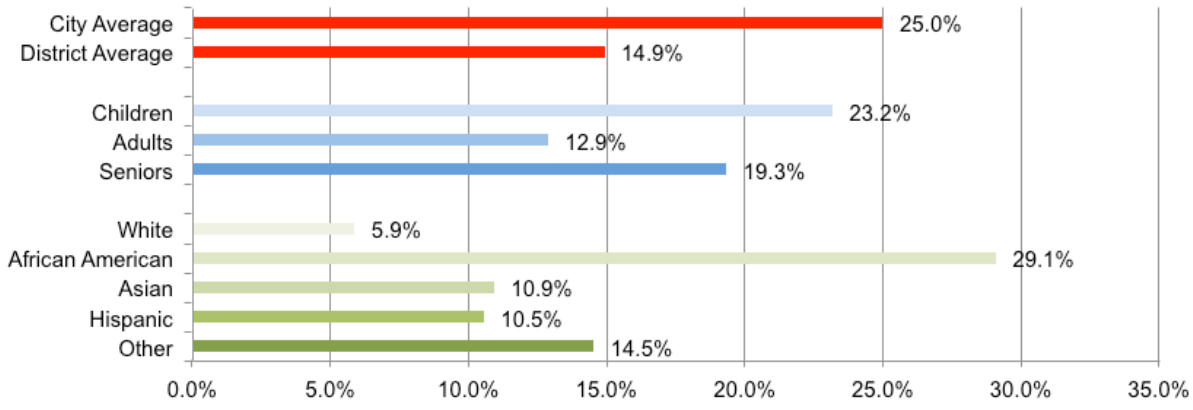
KEY FOOD DESERT INFORMATION

- Children and seniors live in food deserts at disproportionate rates in 11th District.
- African Americans live in food deserts at disproportionately higher rates than other racial/ethnic groups, and are nearly five times more likely to live in a food desert than a white resident of the 11th District.
- There are several supermarkets in the midst of the food deserts in the northern region of the 11th District are essentially "preventing" food deserts, meaning that within a quarter mile of these stores there are areas that meet the three other food desert factors— high poverty, low vehicle availability and low availability of healthy food.

POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	6,823	14.9%
CHILDREN (0-17)	1,411	23.2%
ADULTS (18-64)	4,479	12.9%
SENIORS (65+)	933	19.3%
WHITE	1,464	5.9%
AFRICAN AMERICAN	4,853	29.1%
ASIAN	284	10.9%
HISPANIC*	146	10.6%
OTHER**	222	14.5%

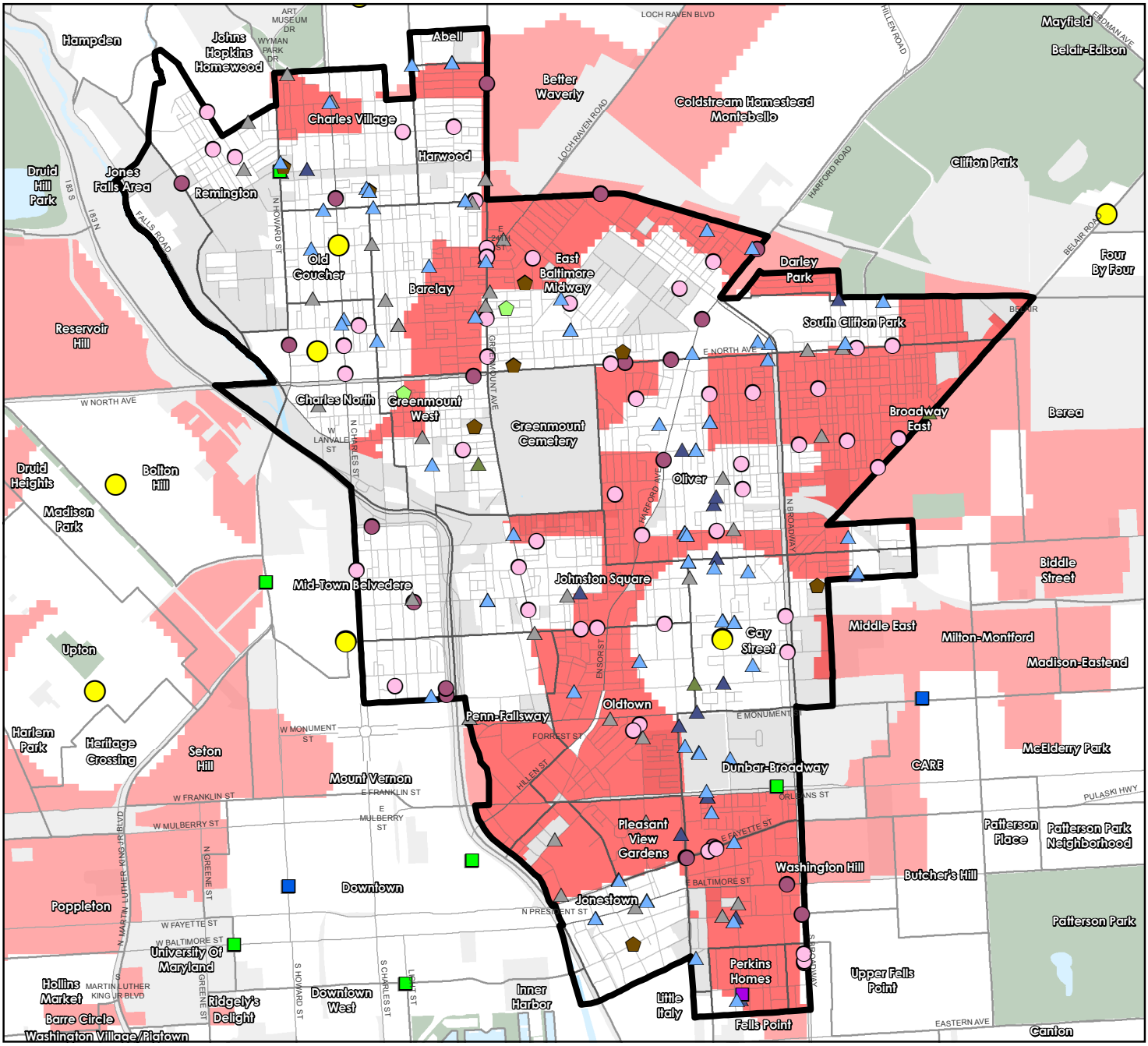
PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 11th District, 23.2% live in a food desert.

* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"



2015 City Council 12th District Food Environment - Councilman Stokes

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
Major Parks
Harbor, Lakes & Streams

Food Retail

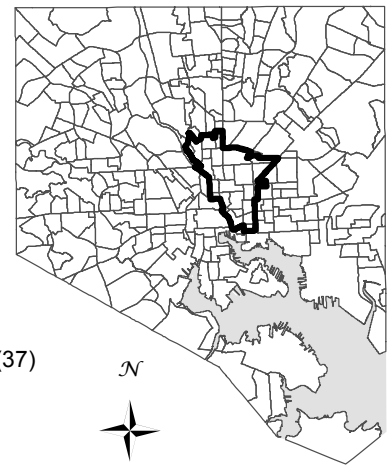
- Supermarkets (3)
- Corner Stores (53)
- Convenience Stores (22)
- Farmers Markets (2)
- Public Markets (0)
- Virtual Supermarkets (0)

Food Assistance

- After School Meal Sites (30)
- Kids' Summer Meals Sites (58)
- Senior Meal Sites (4)
- Food Pantries and Meal Sites (37)

Locally Grown

- Urban Farm (2)
- Community Garden (8)



0 ¼ ½
Miles

2015 FOOD ENVIRONMENT
12TH DISTRICT

WHAT IS A FOOD DESERT?

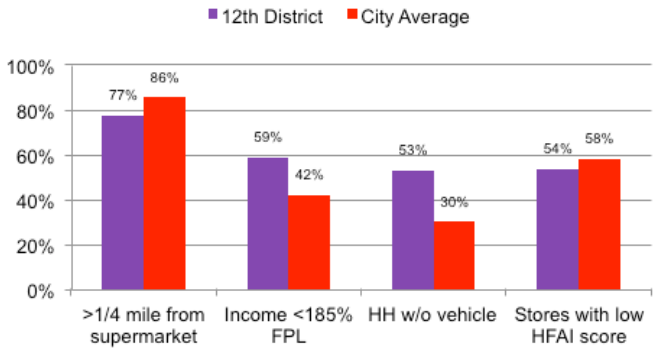
A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

KEY FOOD DESERT INFORMATION

- Children and seniors live in food deserts at disproportionate rates in the 12th District.
- Over 4,000 children live in a food desert in the 12th District.
- African Americans live in food deserts at disproportionately higher rates than other racial/ethnic groups, and are more than three times more likely to live in a food desert than a white resident of the 12th District.
- More than half of residents live at or below 185 percent of the Federal Poverty Level.
- More than half of households do not have access to a vehicle.

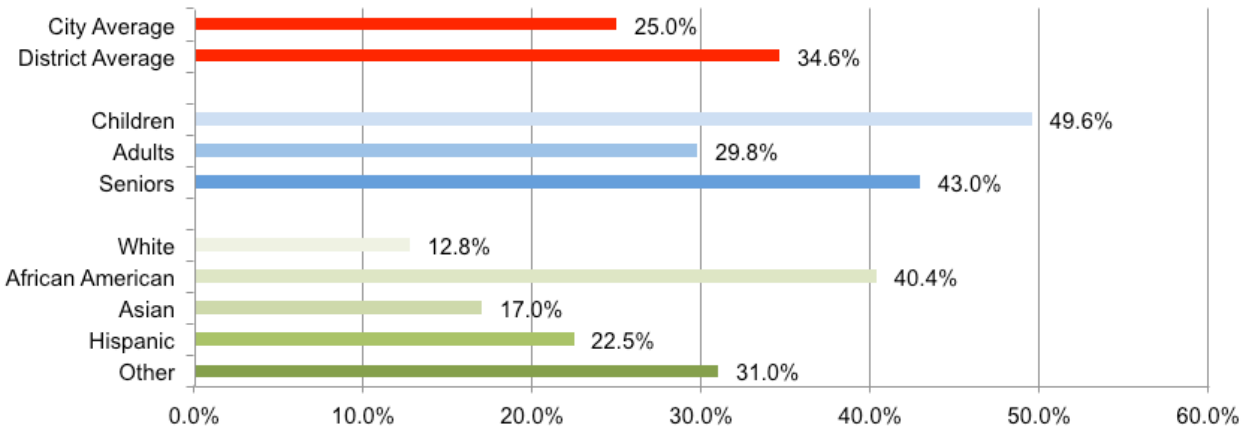
FOOD DESERT FACTORS



POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	15,735	34.7%
CHILDREN (0-17)	4,191	49.6%
ADULTS (18-64)	9,794	29.8%
SENIORS (65+)	1,750	43.0%
WHITE	1,026	12.8%
AFRICAN AMERICAN	14,078	40.4%
ASIAN	183	17.0%
HISPANIC*	258	22.5%
OTHER**	448	31.0%

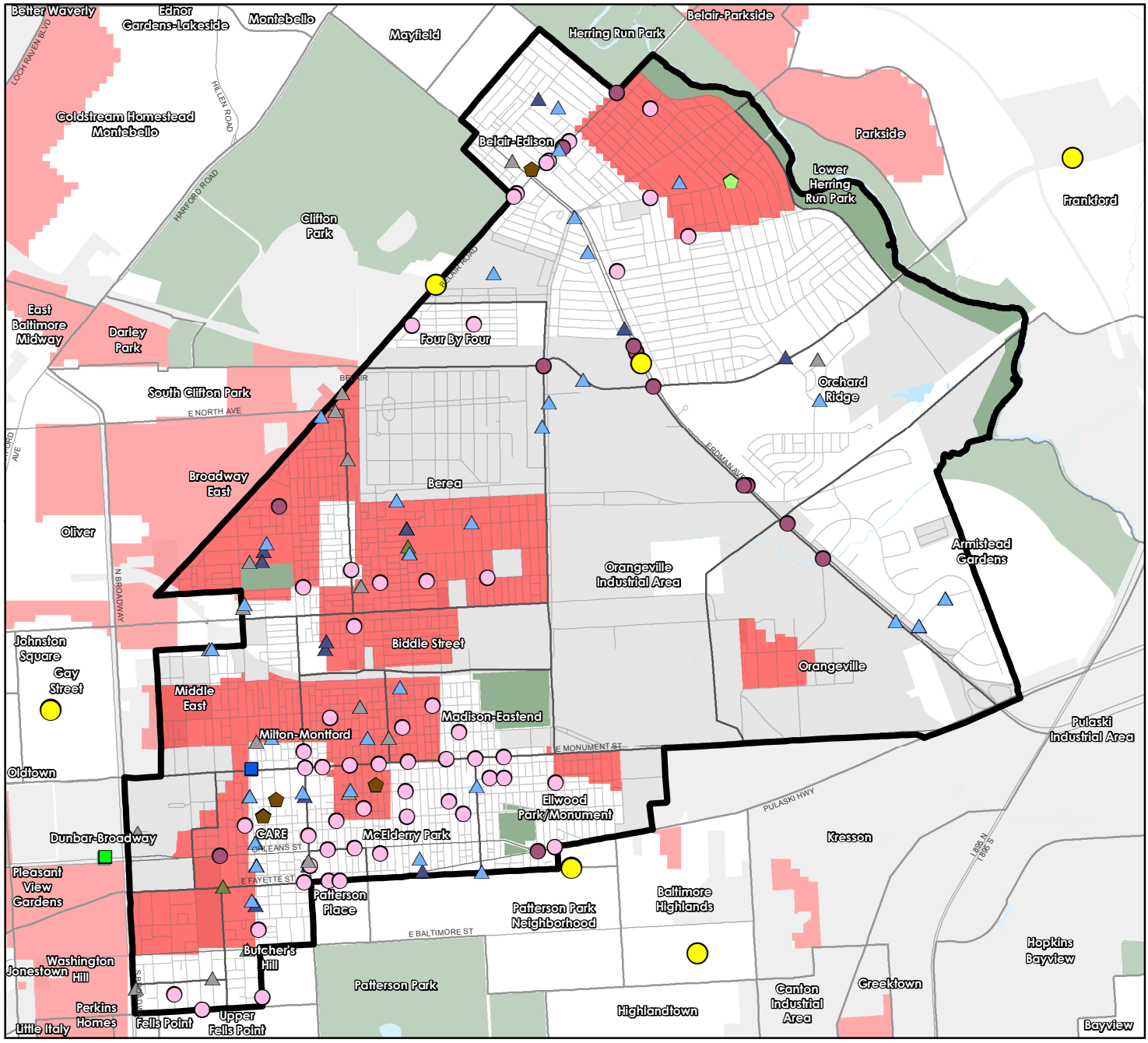
PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 12th District, 49.6 % live in a food desert.

* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"



2015 City Council 13th District Food Environment - Councilman Branch

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
Major Parks
Harbor, Lakes & Streams

Food Retail

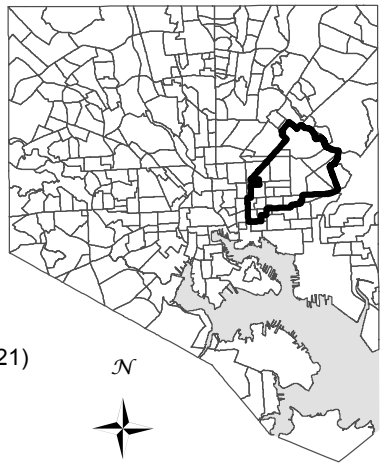
- Supermarkets (3)
- Corner Stores (58)
- Convenience Stores (15)
- Farmers Markets (0)
- Public Markets (1)
- Virtual Supermarkets (0)

Food Assistance

- After School Meal Sites (17)
- Kids' Summer Meals Sites (32)
- Senior Meal Sites (2)
- Food Pantries and Meal Sites (21)

Locally Grown

- Urban Farm (1)
- Community Garden (5)



0 ¼ ½
Miles

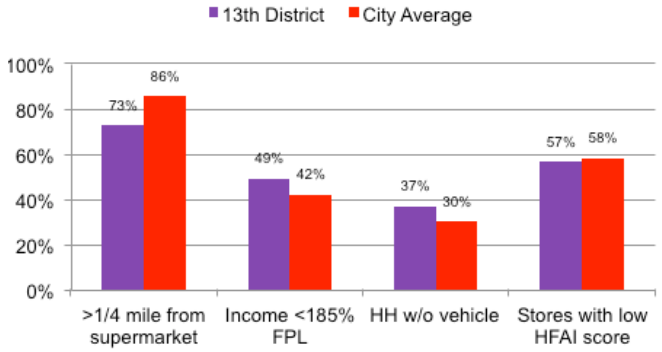
2015 FOOD ENVIRONMENT
13TH DISTRICT

WHAT IS A FOOD DESERT?

A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

FOOD DESERT FACTORS



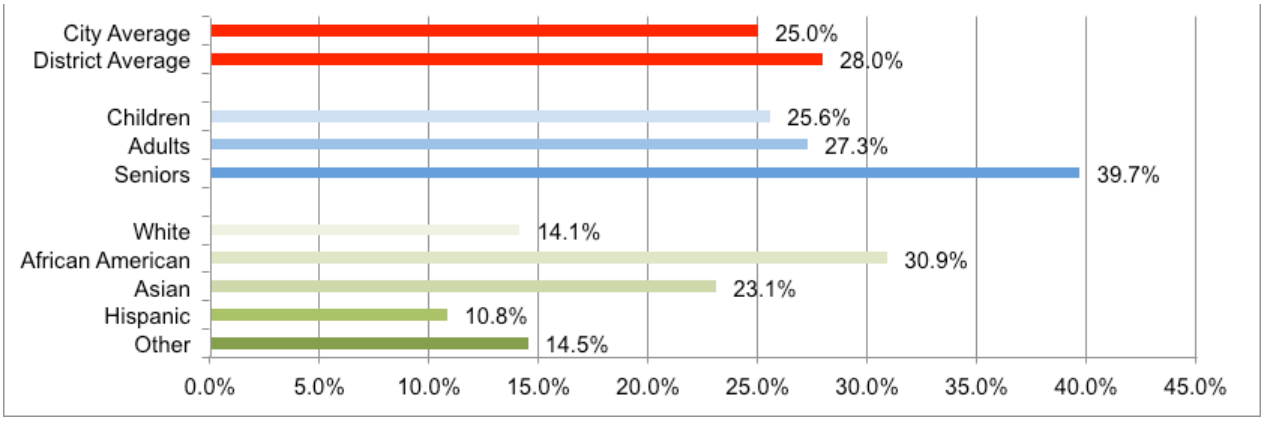
KEY FOOD DESERT INFORMATION

- Seniors live in food deserts in the 13th District at disproportionately high rates.
- While at a lower rate than the District average, nearly 3,000 children live in a food desert in the 13th District.
- African Americans live in food deserts at disproportionately higher rates than other racial/ethnic groups, and are twice as likely to live in a food desert as a white resident of the 13th District.
- Nearly half of all residents live at or below 185 percent of the Federal Poverty Level.
- There is a high concentration of corner stores in the McElderry Park area, bordering food deserts.

POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	11,987	28.0%
CHILDREN (0-17)	2,997	25.6%
ADULTS (18-64)	7,417	27.3%
SENIORS (65+)	1,573	39.7%
WHITE	750	14.1%
AFRICAN AMERICAN	10,833	30.9%
ASIAN	102	23.1%
HISPANIC*	254	10.8%
OTHER**	302	14.5%

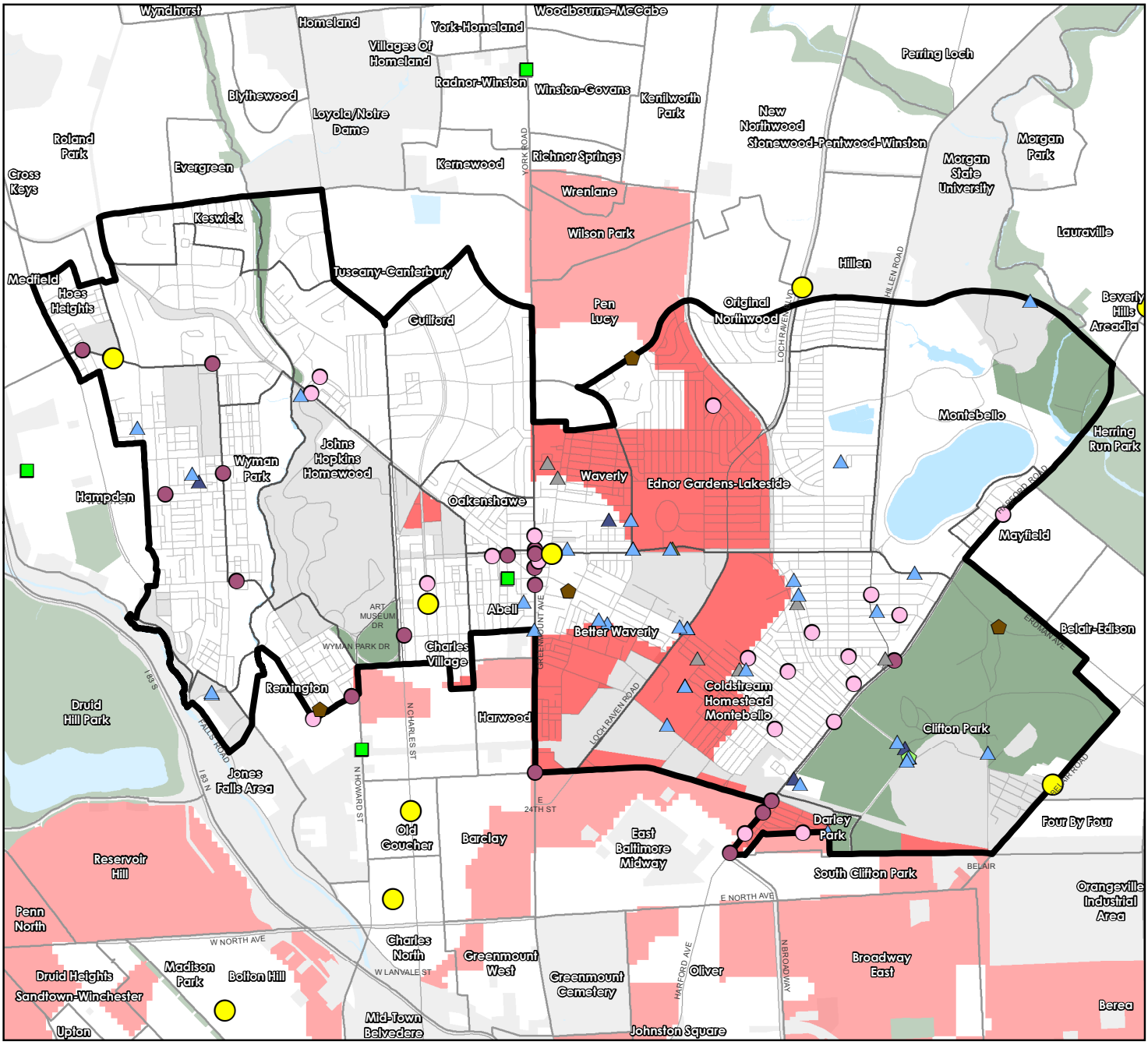
PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS



How to read this graph (example): Of all the children living in the 13th District, 25.6% live in a food desert.

* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"



2015 City Council 14th District Food Environment - Councilwoman Clarke

Food Desert
Council Boundaries
Neighborhood Boundaries
Streets
Non-Residential
Major Parks
Harbor, Lakes & Streams

Food Retail

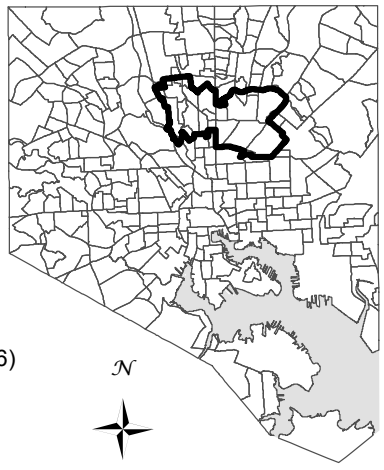
- Supermarkets (3)
- Corner Stores (20)
- Convenience Stores (18)
- Farmers Markets (1)
- Public Markets (0)
- Virtual Supermarkets (0)

Food Assistance

- After School Meal Sites (10)
- Kids' Summer Meals Sites (30)
- Senior Meal Sites (2)
- Food Pantries and Meal Sites (6)

Locally Grown

- Urban Farm (1)
- Community Garden (4)



0 ¼ ½ Miles

2015 FOOD ENVIRONMENT
14 TH DISTRICT

WHAT IS A FOOD DESERT?

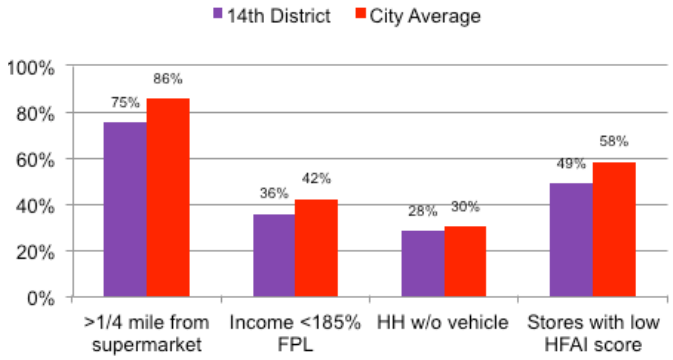
A food desert is an indicator for low access to healthy food. It is an area where residents lack both access and sufficient economic resources to obtain healthy food.

Food Desert Definition:
An area where the distance to a supermarket or supermarket alternative is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 30% of households have no vehicle available, and the average Healthy Food Availability Index (HFAI) score for all food stores is low.

KEY FOOD DESERT INFORMATION

- While the 14th District has a lower percentage of residents living in food deserts than the city average, children and African Americans are affected disproportionately.
- Over a quarter of the 14th District's children live in food deserts.
- African Americans live in food deserts at disproportionately higher rates than other racial/ethnic groups, and are three times as likely to live in a food desert than a white resident of the 14th District.
- Food deserts in the 14th District are located primarily in population-dense areas that contain few food stores.

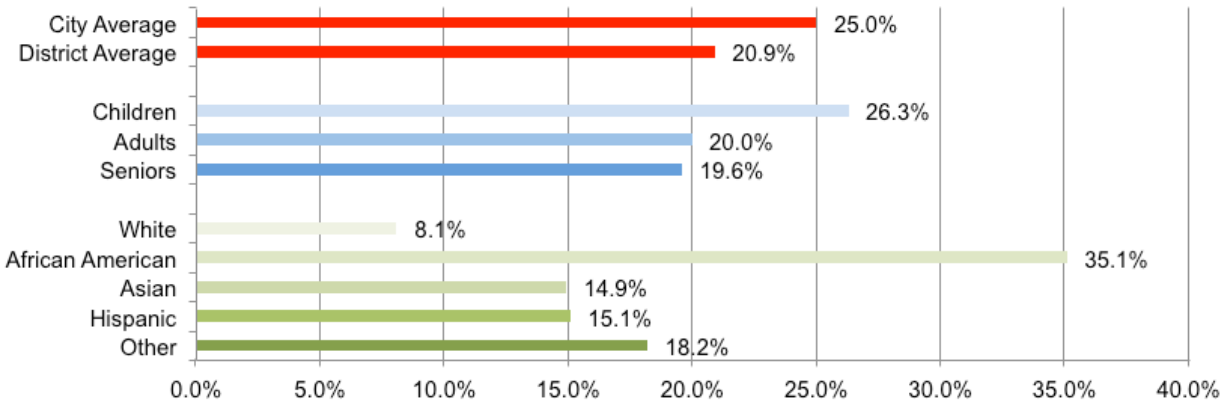
FOOD DESERT FACTORS



POPULATIONS LIVING IN FOOD DESERTS

POPULATION	NUMBER	PERCENT OF GROUP
TOTAL RESIDENTS	9,072	20.9%
CHILDREN (0-17)	1,765	26.3%
ADULTS (18-64)	6,159	20.0%
SENIORS (65+)	1,148	20.0%
WHITE	1,536	8.1%
AFRICAN AMERICAN	6,695	35.1%
ASIAN	564	14.9%
HISPANIC*	195	15.1%
OTHER**	277	18.2%

PERCENTAGE OF EACH POPULATION GROUP LIVING IN FOOD DESERTS

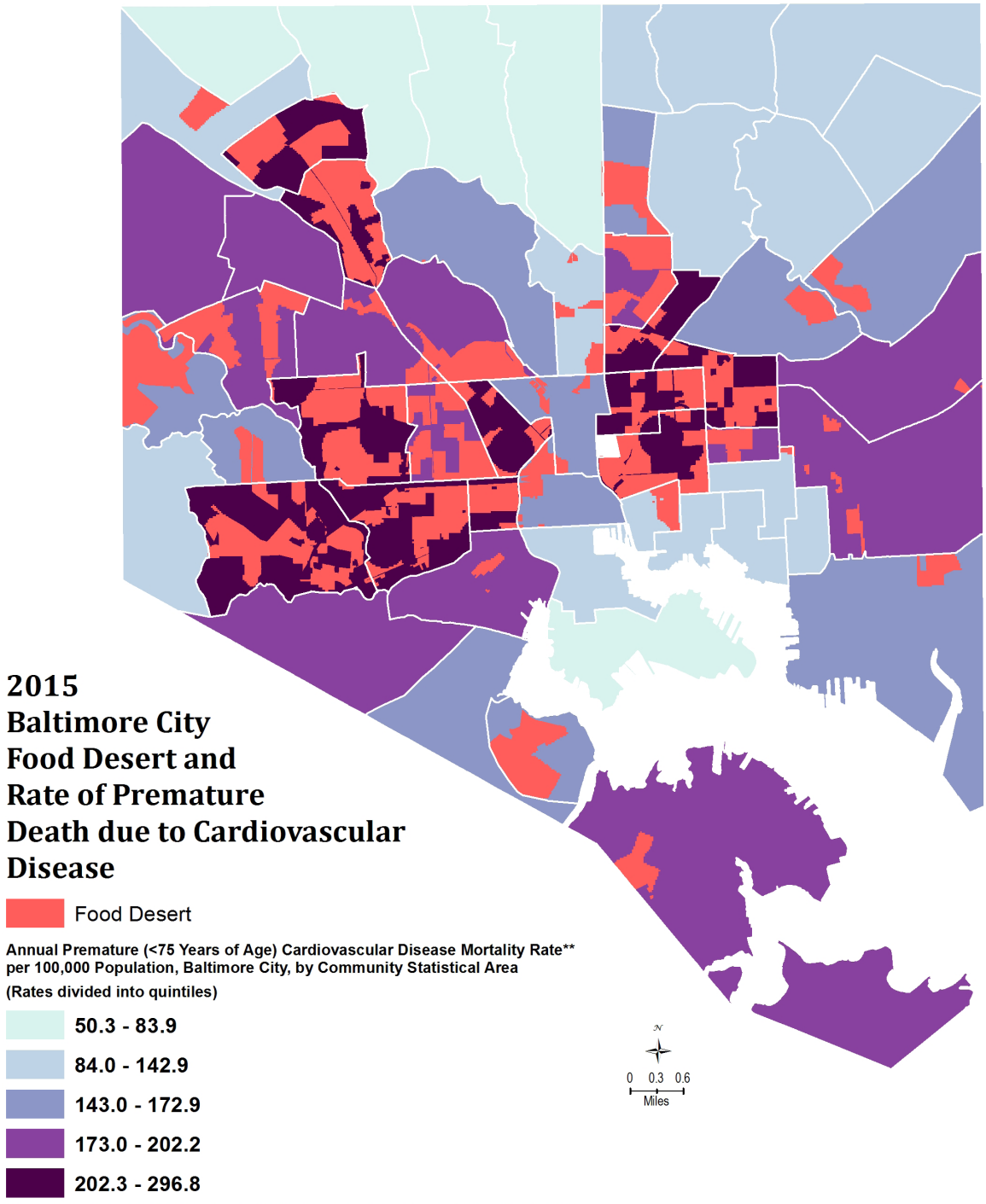


How to read this graph (example): Of all the children living in the 14th District, 26.3% live in a food desert.

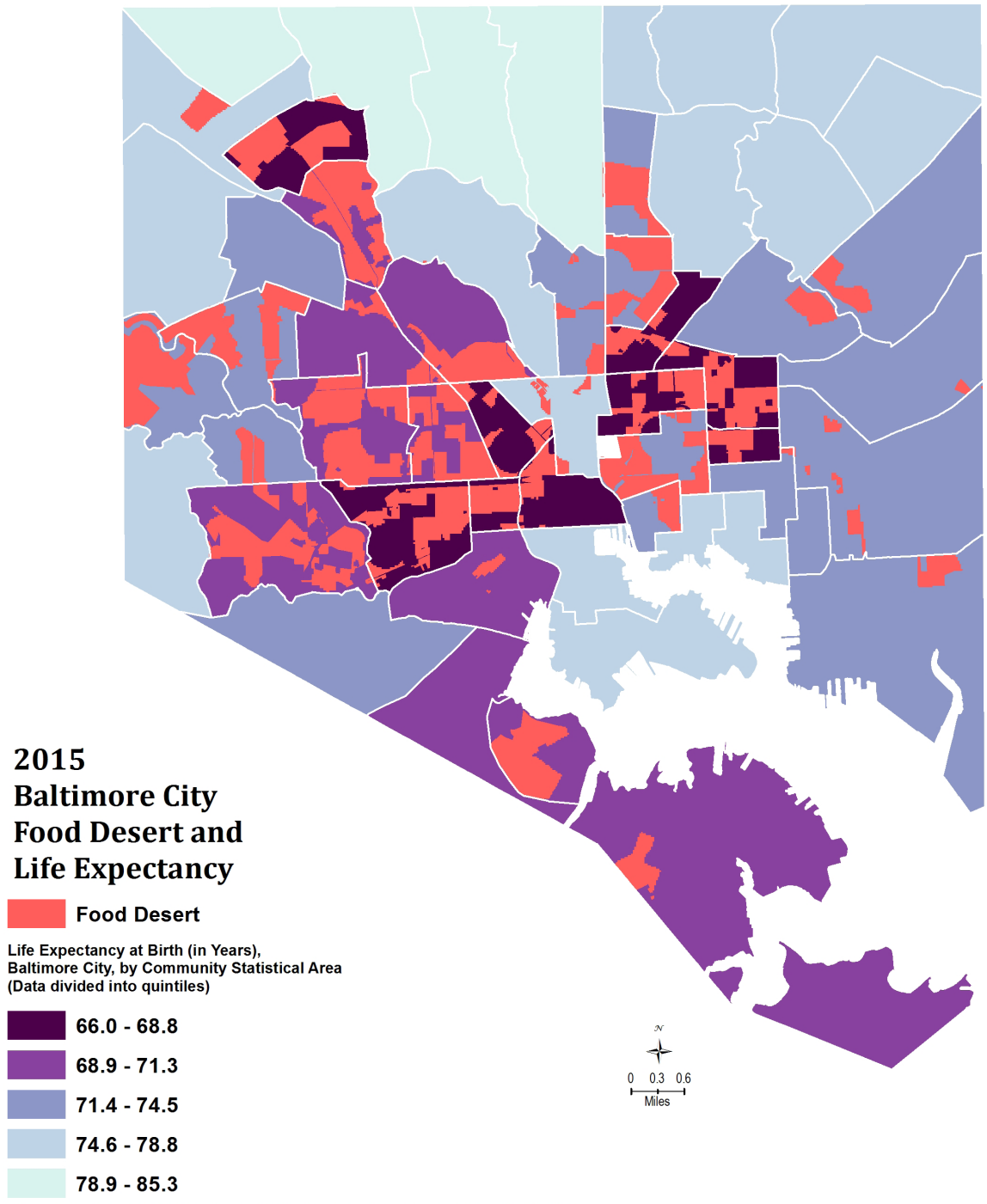
* Hispanic is an ethnic classification that includes all races, therefore there may be overlap between Hispanic and other racial categories

** Per US Census categories, "Other" is a combination of American Indian, Other, Hawaiian/Pacific Islander, and "Two or More"

b. Food Desert and Rate of Premature Death due to Cardiovascular Disease

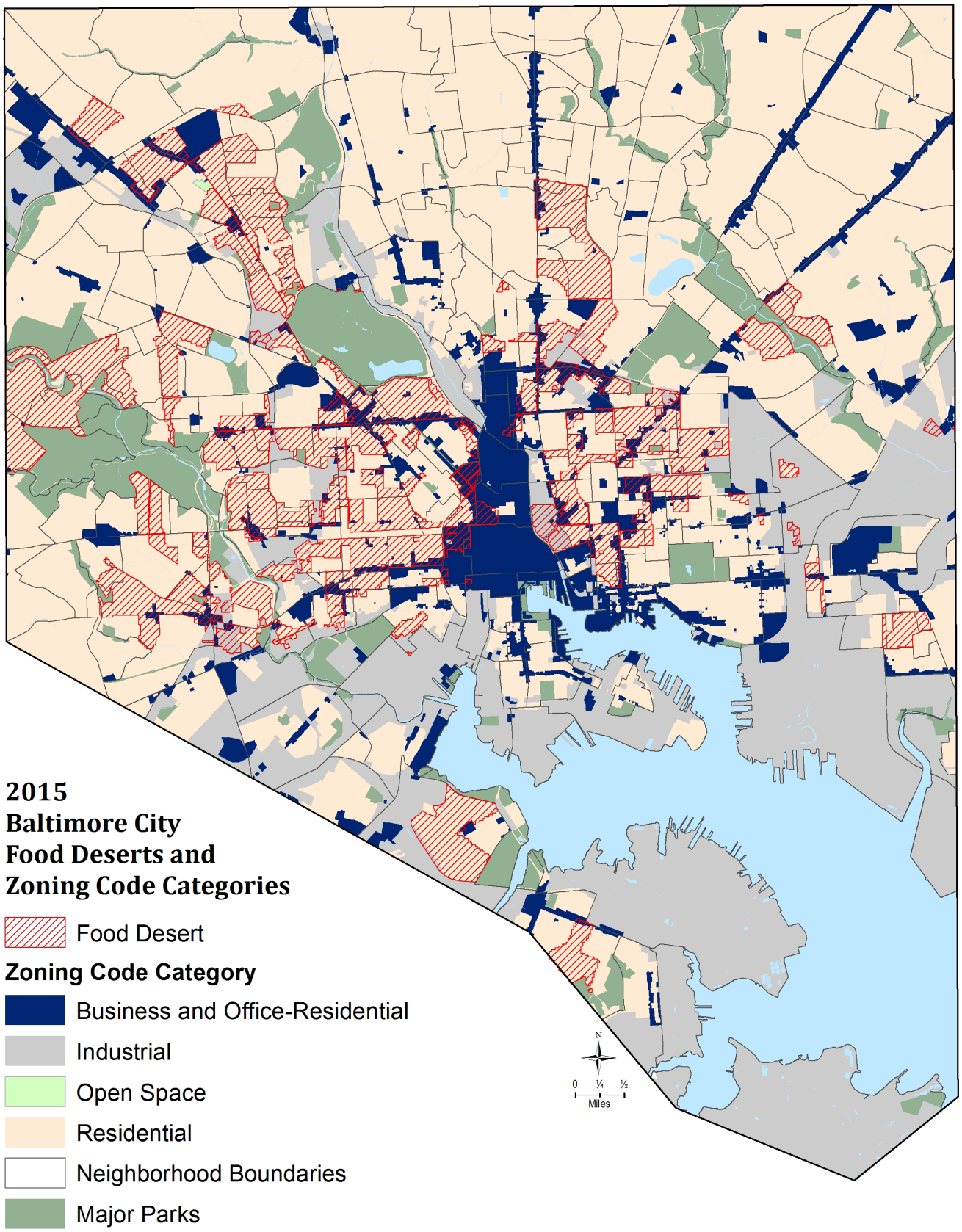


c. Food Desert and Life Expectancy

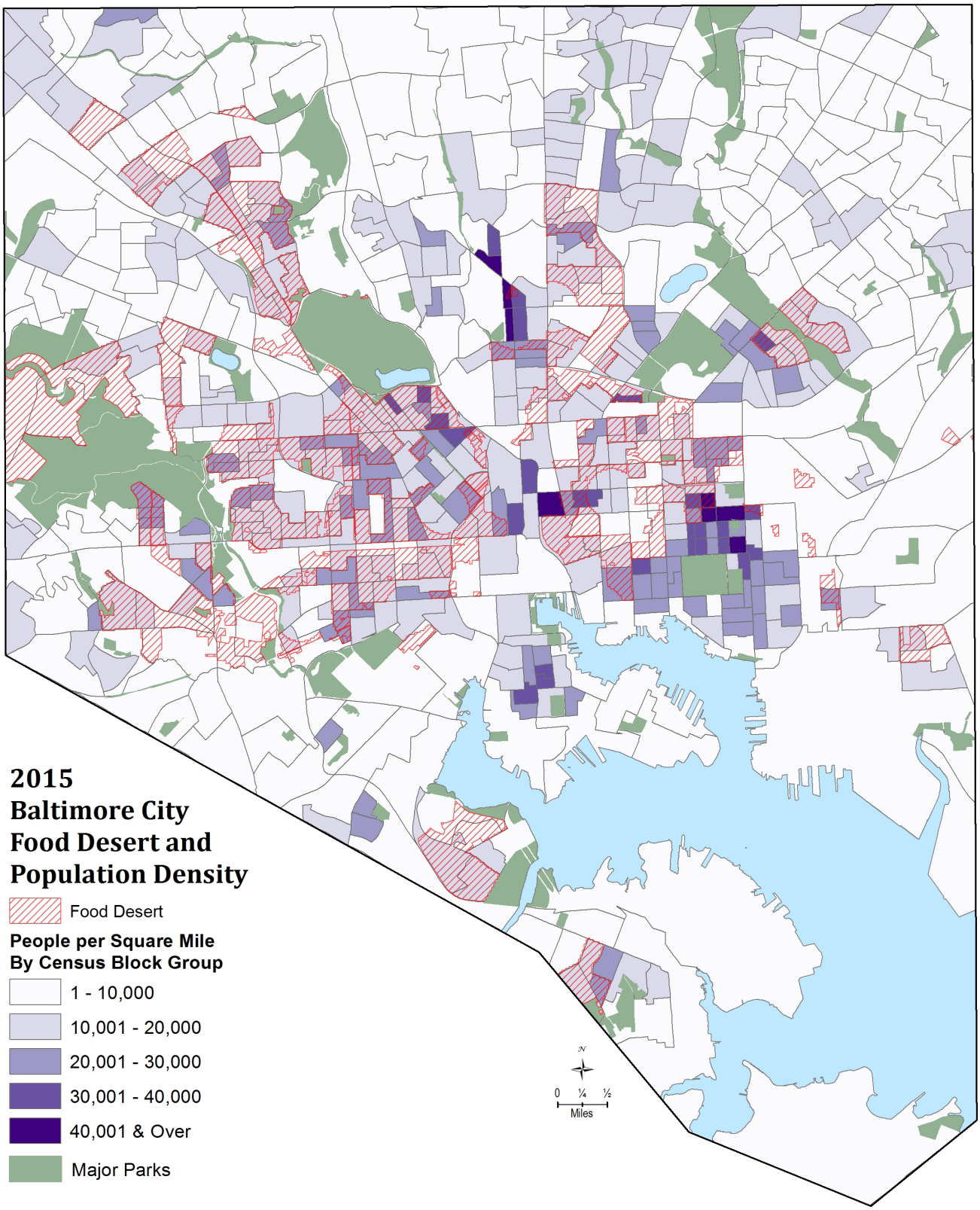


**Data calculated using 2009-2013 deaths, and 2010 CSA Population Analyzed by the Baltimore City Health Department, using data provided by the Maryland Vital Statistics Administration.

d. Food Desert and Zoning Code



e. Food Desert and Population Density



a. Healthy Food Availability Index Scoring Tool

JOHNS HOPKINS CENTER for A LIVABLE FUTURE

www.jhsph.edu/clf

Store ID: _____ Store #: _____	**Baltimore Food Store Study Healthy Food Availability Index**						Data Collector: _____
Type: [ ] Public Market [ ] Supermarket [ ] Small Grocery [ ] Specialty Store [ ] Discount Store [ ] Corner Store [ ] Convenience Store [ ] Gas Station [ ] Behind Glass Store	Store Name:					Grid:	Date:
	Store Address:					Neighborhood:	
	[ ] Confirmed [ ] New [ ] Absent	WIC: [ ] Yes [ ] No	SNAP: [ ] Yes [ ] No	# Registers:	# Aisles:	Prepared Food: [ ] Yes [ ] No	Parking Lot: [ ] Yes [ ] No
	Comments:					Photo: [ ] Yes [ ] No	Refusal: [ ] Yes [ ] No

Measure 1: MILK	**Measure 3: FRUIT**	**Measure 4: VEGETABLES**	**Measure 5: BEEF**
Available: [ ] Yes [ ] No	Available: [ ] Yes [ ] No	Available: [ ] Yes [ ] No	Ground Beef Available: [ ] Yes [ ] No
1% or Skim Option(s) Available: [ ] Yes [ ] No	Quality: [ ] A [ ] UA	Quality: [ ] A [ ] UA	Quality: [ ] A [ ] UA
	Type(s) [ ] 0	Type(s) [ ] 0	% Lean: ___ (of leanest) % Fat: ___
Measure 2: JUICE	Available: [ ] 1-3 [ ] 4-6 [ ] 7-10 [ ] 11-25 [ ] >25	Available: [ ] 1-3 [ ] 4-6 [ ] 7-10 [ ] 11-25 [ ] >25	Other Options Available: [ ] Yes [ ] No
100% Fruit Juice Available: [ ] Yes [ ] No	_____	_____	
Comments:	Comments: Whole _____ Cut _____	Comments: Potatoes ____ Onions ____ Whole _____ Cut _____	Comments:

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

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