FOOD *for* EVERY CHILD

THE NEED FOR HEALTHY FOOD FINANCING IN OHIO

SPECIAL REPORT

ACKNOWLEDGMENTS

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OHIO must address the significant need for supermarkets and other fresh food resources in many of its communities. Numerous factors have led supermarkets to disinvest from lower-income communities across the state, leading to a public health crisis. The Food Trust researched and wrote *Food For Every Child: The Need for Healthy Food Financing in Ohio* to document these findings and to ensure that all children and their families live in neighborhoods that have access to healthy and affordable food. This report demonstrates the need for a statewide financing program to encourage healthy food retail development in Ohio.

Despite Ohio's sizable population, many communities in the state have too few supermarkets or other places to purchase healthy, affordable food. Large areas of Columbus, Cleveland, Cincinnati, Toledo, Akron and Dayton as well as rural areas are underserved, and many residents have to travel long distances to purchase foods necessary to maintain a healthy diet.

The lack of access to affordable and nutritious food has a negative impact on the health of children and families in both rural and urban areas of Ohio. A growing body of research indicates that people who live in communities without a supermarket suffer from disproportionately high rates of diet-related health problems.[1] In contrast, when people live in a community with a supermarket, they tend to eat more servings of fruits and vegetables and are more likely to maintain a healthy weight.[2]

Increasing the availability of nutritious and affordable food in communities with high rates of diet-related diseases does not guarantee a reduction in the incidence of these diseases. However, removing barriers to supermarket access is a key step toward enabling people to maintain a healthy diet. Furthermore, the development of new supermarkets sparks economic revitalization and brings jobs into communities that need them most.[3]

Efforts in Cincinnati have already led to the establishment of the Cincinnati Fresh Food Retail Financing Fund, a citywide healthy food financing program seeded with $15 million of local government investment over three years, to support the development of grocery stores and other healthy food retail in Cincinnati. Communities in urban and rural areas of Ohio can benefit from a similar, statewide program.

More than half a million children in Ohio live in lower-income communities underserved by supermarkets.

Access to supermarkets and other healthy food retail is a key factor in the health and development of a community. **Section One** of this report highlights the many lower-income neighborhoods in Ohio with poor supermarket access and a high incidence of diet-related deaths. **Section Two** of this report recommends the creation of a statewide healthy food financing program to incentivize healthy food retail development in communities of need. In similar states, such as Pennsylvania, New York and Illinois, such a program has improved healthy food access while creating jobs and strengthening the economic well-being of surrounding areas.

This study builds on the work undertaken over the past several years by a variety of government, private and civic leaders in Ohio, including efforts that led to the creation of the Cincinnati Fresh Food Retail Financing Fund. This report demonstrates that, despite considerable progress, there is still more work to be done in Ohio, particularly in its largest cities and its rural areas, to ensure that all residents have convenient access to stores selling fresh and affordable foods.

SECTION ONE:

THE NEED FOR HEALTHY FOOD RETAIL

Many communities in Ohio have poor access to a supermarket and there are numerous neighborhoods where none exist.

This shortage of healthy food retail means that residents, particularly those in lower-income neighborhoods and rural areas, must travel out of their neighborhoods to reach the nearest store that sells fresh produce and other foods necessary to maintain a healthy diet. Over two million Ohio residents, including more than half a million children, live in lower-income communities underserved by supermarkets.[4]

Rates of childhood obesity in Ohio are among the highest in the country; according to recent data, a staggering 30.8 percent of Ohio children ages 10 to 17 are overweight or obese.[5] Lower-income residents in Ohio are likely to suffer from obesity and other diet-related health problems at rates significantly higher than those of the population as a whole. For adults, the situation is similarly alarming. According to the Centers for Disease Control and Prevention, 30 percent of Ohio adults are overweight or obese.[6] These numbers contribute to the fact that Ohio spent an estimated $6.8 billion in a single year to fight obesity-related diseases.[7]

A staggering 30.8 percent of Ohio children ages 10 to 17 are overweight or obese.

At the same time, many families in Ohio cities have few, if any, places in their neighborhoods in which to shop for reasonably priced, nutritious foods. This is also a problem in rural communities where residents often have to travel long distances to reach the nearest food store. A growing body of research demonstrates that access to healthy food retail has a measurable impact on people's diet and health outcomes. Both the Institute of Medicine and the Centers for Disease Control and Prevention have independently recommended that increasing the number of supermarkets in underserved areas would reduce the rate of childhood obesity in the United States. They also suggest that state and local governments should create incentive programs to attract healthy food retail to these neglected neighborhoods.[8, 9]

Ohio's supermarket deficit could be eased and diet-related health problems reduced by investing in an initiative to build more supermarkets and other healthy food retail in underserved communities, resulting in the improved health of children and families. Such an investment would have positive economic impacts as well. Supermarkets create jobs and revitalize communities, serving as retail anchors and sparking complementary development nearby.

This report is designed, in part, to stimulate a process that will encourage state and other local leaders to support the creation of a fund that will develop supermarkets and other healthy food retail in underserved communities. To achieve that goal, this section outlines the extent and implications of the supermarket shortage by identifying the gaps in food availability within Ohio and highlights the relationship between supermarket access, diet-related diseases and neighborhood income levels. While these maps do not reflect every nuance of healthy food access in communities, they present a general portrait of need across the state and highlight the urgent need for intervention.

Methodology

To demonstrate which neighborhoods lack supermarket access, a series of maps was created using Geographic Information Systems computer mapping software.[10] A geographic representation of food access, income and diet-related disease was created by mapping the locations of supermarket sales, income and diet-related mortality data. (See Appendix for more detail; methodology differed for the map of Cincinnati.) Retail sales data for supermarkets were obtained from the 2014 Trade Dimensions retail database. Diet-related mortality data for 2011 were provided by the Ohio Department of Health and demographic data were derived from the American Community Survey 2008–2012.

All supermarkets were plotted and then classified into two categories: high and low weekly sales volumes. For Ohio, values of total sales were used to classify the tracts by approximate quartiles into four categories. For the cities, weekly sales volume was further transformed from a series of points to a continuous grid representing the sales density per square mile using the kernel density function with a one-mile radius in ArcGIS's Spatial Analyst. This grid was then classified into quartiles. The results for Columbus are shown in Map 1: Weekly Sales Volume for Supermarkets. Median household income was multiplied by the number of households and the result was divided by total population to create a per capita income. The term "lower income" in this report is used to define areas where households have less than median income, except when citing a separate study.

A total of 59,660 diet-related deaths were mapped across the state. The ratio of deaths per total population was mapped. "High" diet-related mortality areas are defined as having diet-related death rates greater than the statewide average, and "low" areas have diet-related death rates lower than the statewide average. Only data for Ohio were analyzed, so no comparisons were made with rates outside of the state.

KEY FINDINGS

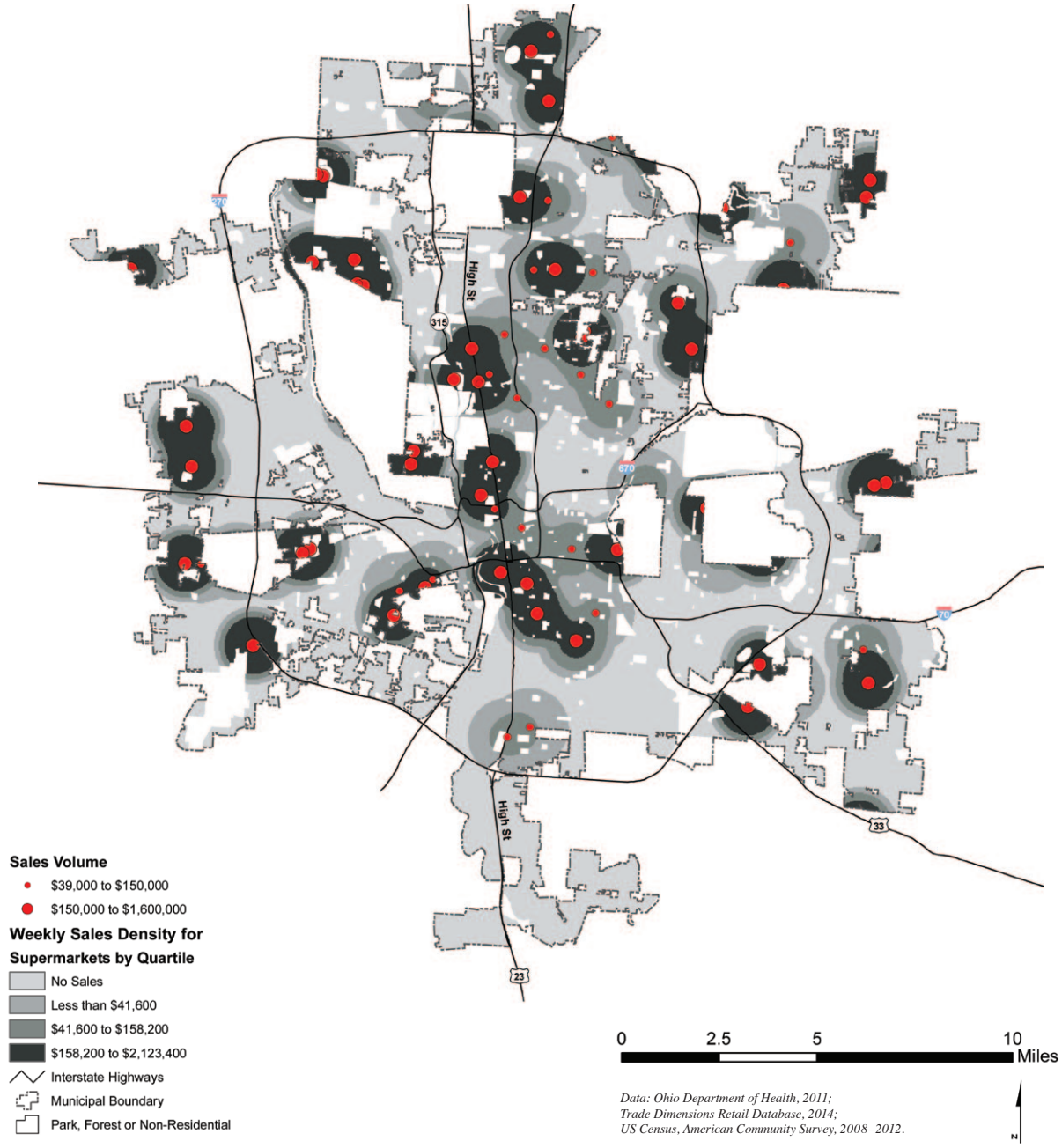
Access to healthy, affordable foods is not evenly distributed in Ohio. Many people have to travel excessive distances to buy food at a supermarket.

- This situation is reflected at the local level in Columbus, where there are large areas with few supermarkets and many neighborhoods where none exist at all.

- The following pages walk through maps of the city of Columbus, the state's largest city, as an example of the need in Ohio.

  The need for improved food access is then highlighted in five other major cities, as well as across the entire state.

1: Weekly Sales Volume for Supermarkets in Columbus



Data: Ohio Department of Health, 2011; Trade Dimensions Retail Database, 2014; US Census, American Community Survey, 2008–2012.

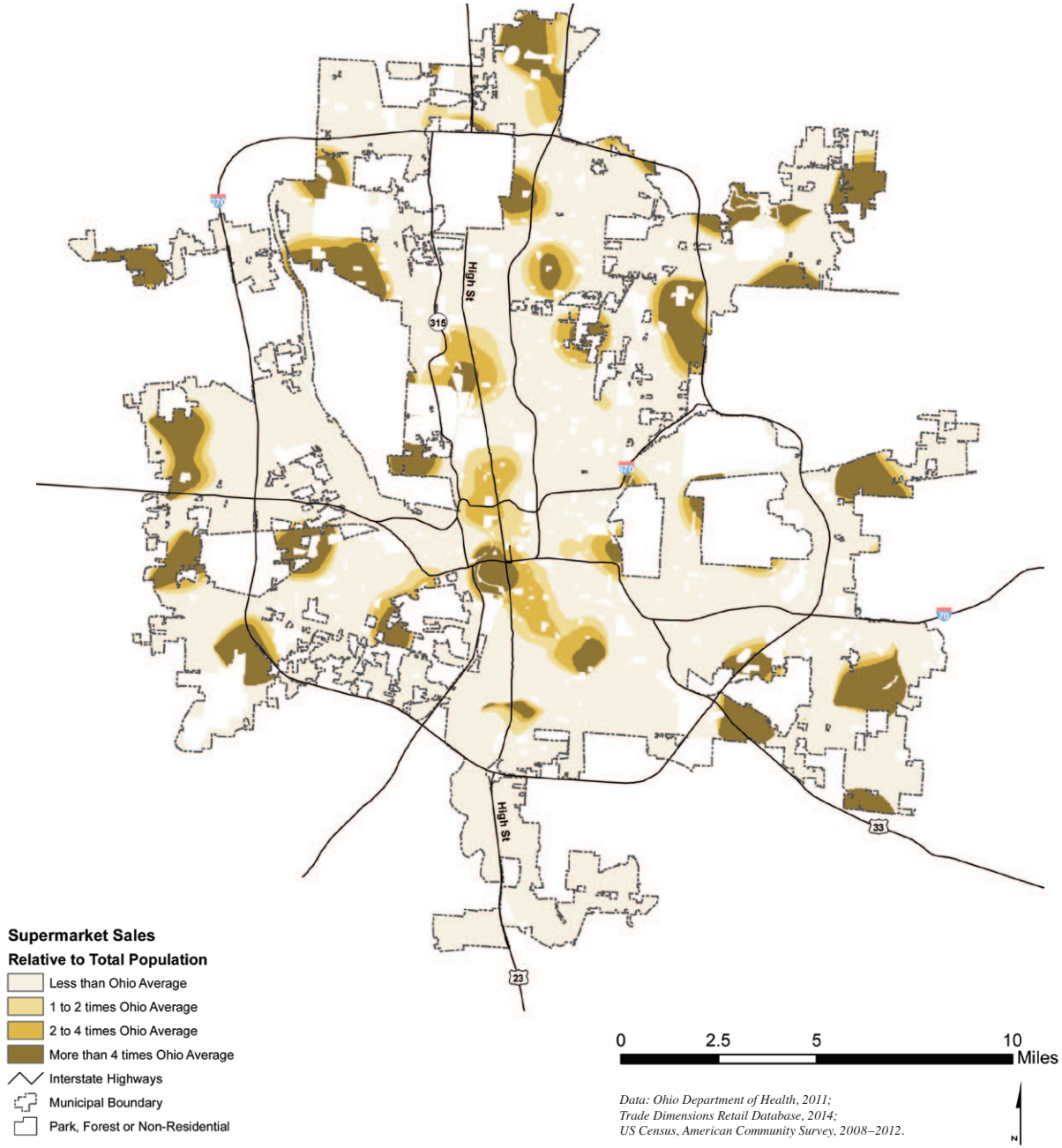
MAP 1: *Weekly Sales Volume for Supermarkets* shows the location of 61 stores in Columbus and the weekly sales volume at each store. The smaller red circles represent lower weekly sales volume; the larger red circles represent higher weekly sales volume. The gray shading shows how supermarket sales are distributed across each census tract. The darkest areas have the highest concentration of supermarket sales, whereas the light areas have the lowest sales, indicating that few or no supermarkets are located there.

Map 1 features supermarkets in Columbus and the concentration of sales across the city. Neighborhoods including Brewery District, German Village and parts of the South Side as well as University have the highest concentration of supermarkets and supermarket sales. Neighborhoods with the fewest supermarkets include Far South Columbus, North Central, Greater Hilltop and Franklinton.

In Columbus, neighborhoods with the fewest supermarkets include Far South Columbus, North Central, Greater Hilltop and Franklinton.

MAP 2: *Supermarket Sales and Population* shows that the amount of supermarket sales in a particular location does not seem to be associated with the population of that area. Neighborhoods with greater than average supermarket sales relative to total population are shown in yellow and brown tones. In these neighborhoods, people are either spending more than average in supermarkets, as might be the case in higher-income communities, or more people are buying groceries in these communities than the number of people who live there, indicating that people are traveling from outside the area to shop there.

2: Supermarket Sales and Total Population in Columbus

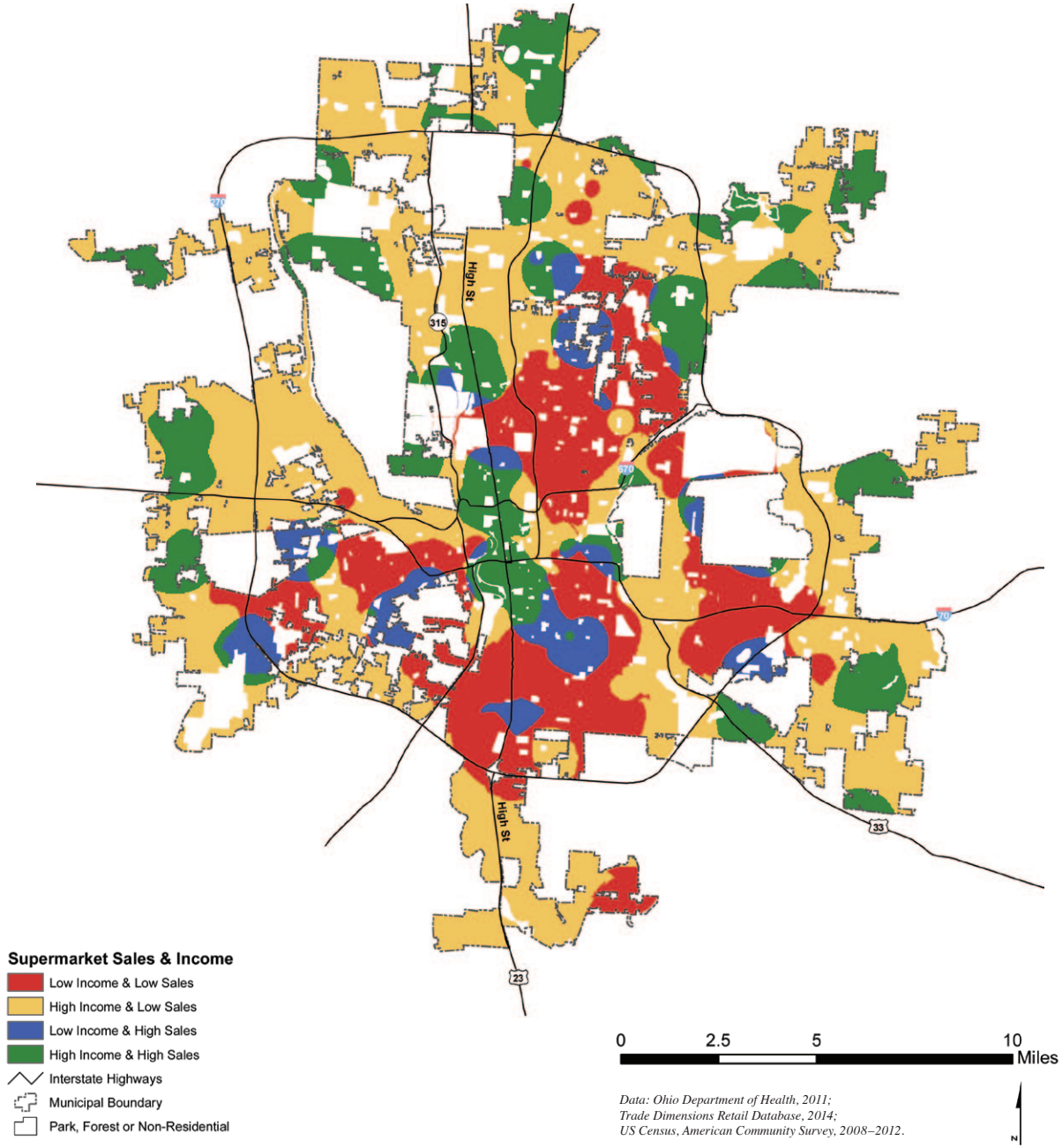


KEY FINDINGS

The uneven distribution of supermarkets in Columbus leaves a disproportionate number of lower-income families without access to nutritious food.

- This problem is impacting families across the state. Over two million Ohio residents, including more than half a million children, live in lower-income communities underserved by supermarkets.

3: Supermarket Sales and Income in Columbus

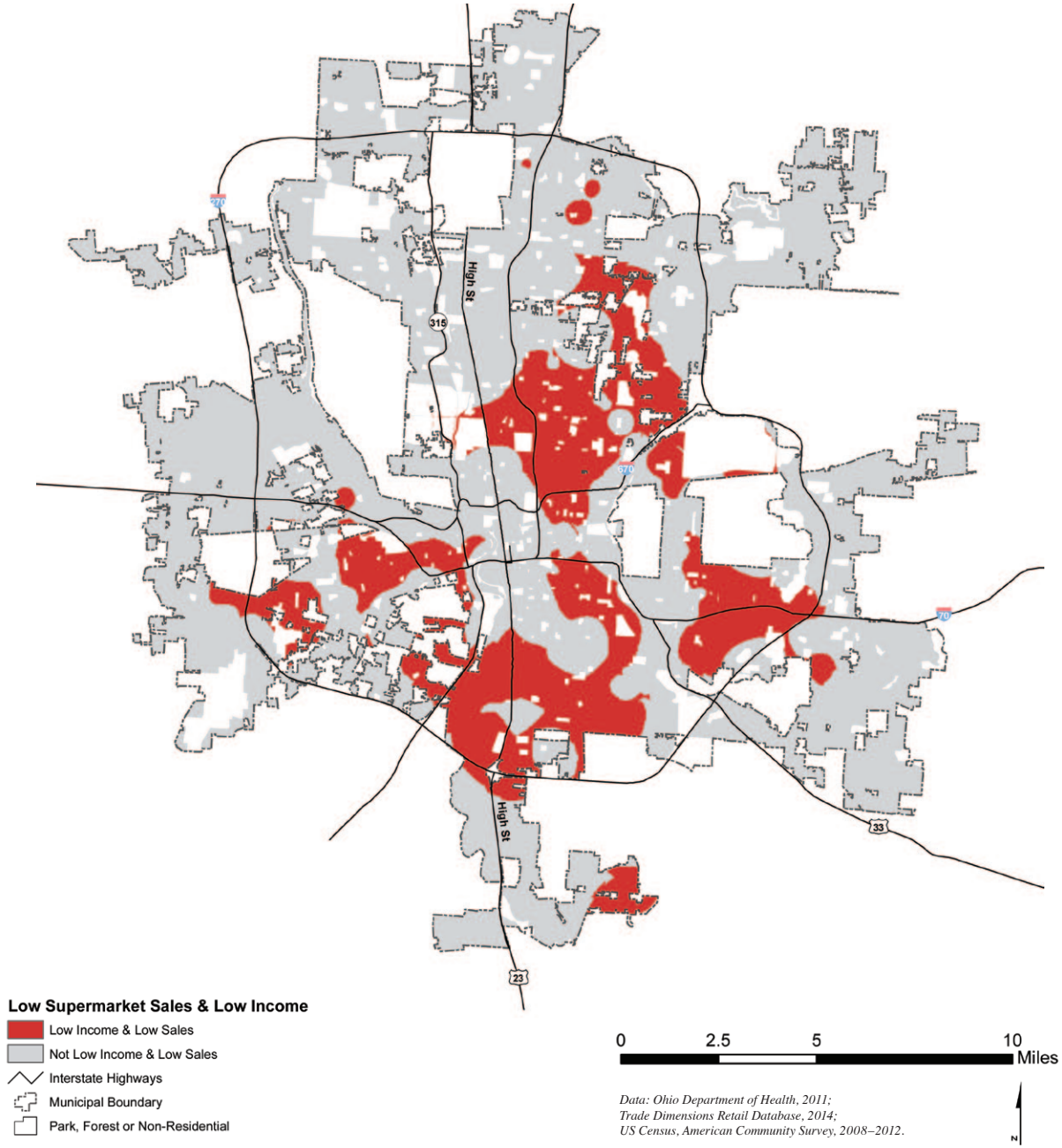


MAP 3: *Supermarket Sales and Income* shows the distribution of supermarket sales and the distribution of income throughout Columbus. Higher-income areas with higher supermarket sales have the best access to food resources and are indicated by the green areas of the map. In some lower-income areas, there are communities with higher-than-average supermarket sales volumes, as highlighted in blue. People in the areas shown in yellow have fewer supermarkets at which to shop in their community. However, since these communities are higher-income and often have high car ownership rates, residents are likely able to drive to stores or to stop at small specialty food purveyors.

The red areas represent lower-income neighborhoods that are not adequately served by supermarkets.

MAP 4: *Low Supermarket Sales and Low Income* further highlights areas with low supermarket sales because there are few to no supermarkets located there. Since income is also lower in these areas, families face more difficulty traveling to the areas where supermarkets are concentrated, especially when public transit is not accessible or convenient. In Columbus, underserved neighborhoods are concentrated in areas such as Far South Columbus, North Central, Franklinton and Greater Hilltop.

4: Low Supermarket Sales and Low Income in Columbus



Data: Ohio Department of Health, 2011;
Trade Dimensions Retail Database, 2014;
US Census, American Community Survey, 2008–2012.

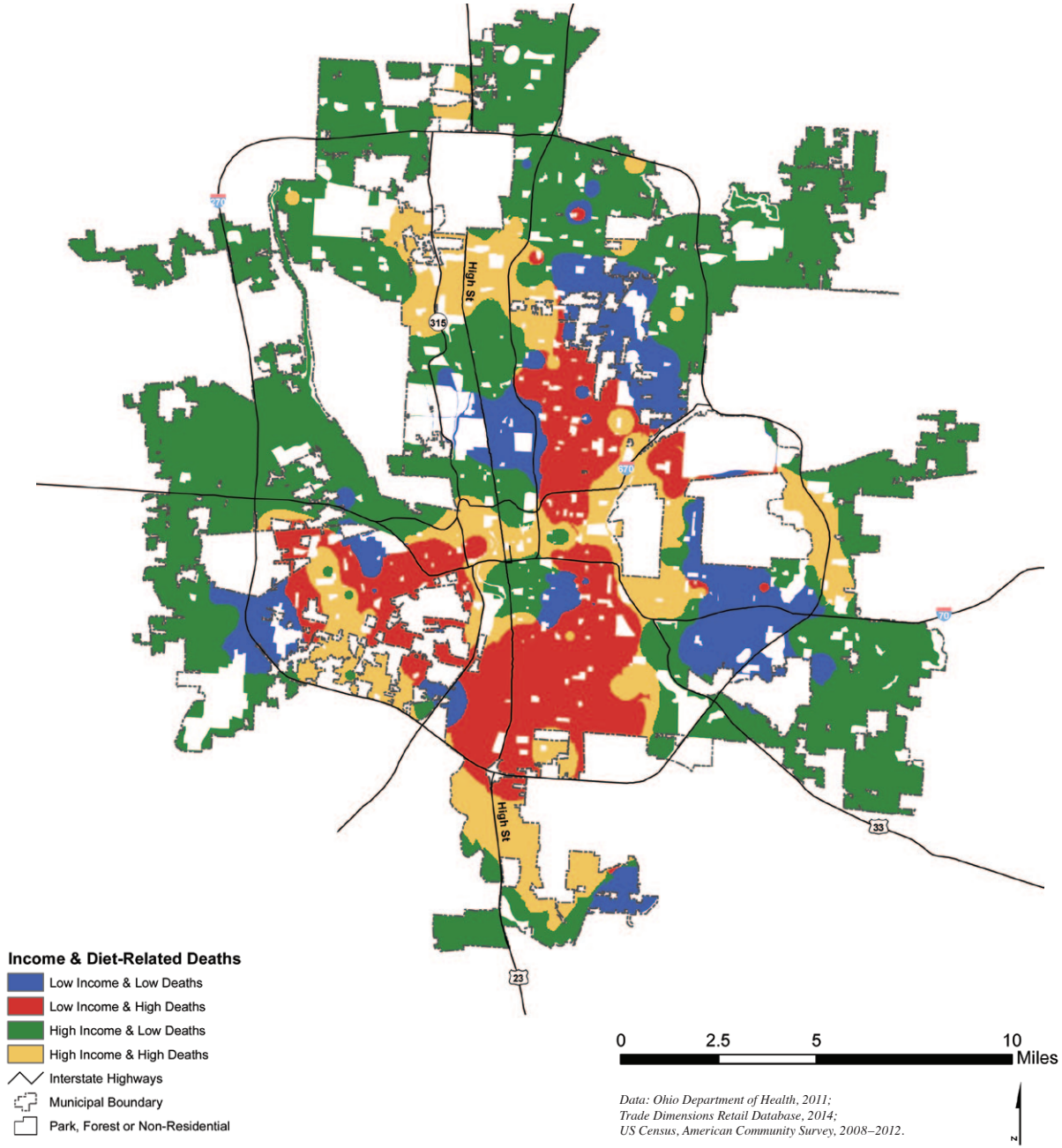
KEY FINDINGS

There is a connection between lack of supermarkets and diet-related disease.

- The Food Trust and PolicyLink, a national research and advocacy organization, conducted a comprehensive literature review which found that studies overwhelmingly indicate that people living in communities without a supermarket suffer from disproportionately high rates of diet-related health issues, while people living in communities with a supermarket are more likely to maintain a healthy weight.[11]

  One study, for example, found lower body mass index among adolescents who live near a supermarket.[12] Another documented that fruit and vegetable intake increases as much as 32 percent for each additional supermarket in a community.[13]

5: Income and Diet-Related Death in Columbus



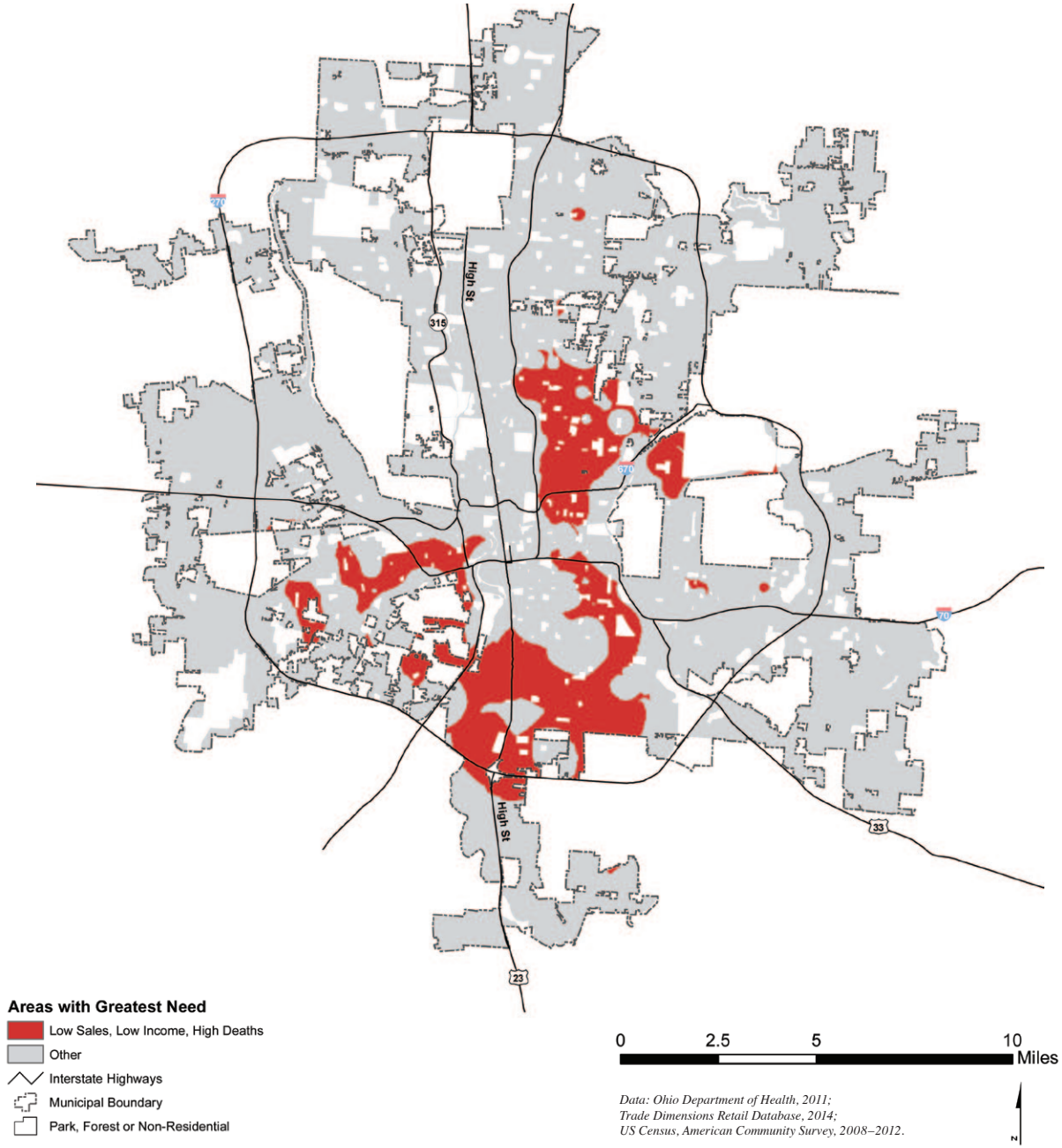
MAP 5: *Income and Diet-Related Deaths* shows diet-related mortality data by income in Columbus. The red areas indicate a higher-than-average rate of diet-related deaths occurring in lower-income areas. The yellow areas display higher rates of diet-related deaths occurring in higher-income areas. The blue and green areas have lower rates of diet-related deaths.

Diet-related diseases, such as hypertension, obesity and diabetes, create untold suffering and expense in families and communities. Heart disease and stroke are among the top five leading causes of death in Ohio, and overweight or obese adults are significantly more likely to suffer from these conditions.[14] Diet-related deaths are associated with many factors, including the lack of access to a nutritionally adequate diet.

Leading public health experts agree that increasing access to supermarkets and other stores selling healthy, affordable foods in underserved communities is critical to the health outcomes of residents.

MAP 6: *Areas with Greatest Need* displays lower-income communities where there are low supermarket sales and a high number of deaths due to diet-related disease in Columbus. These areas have the greatest need for more supermarkets and other fresh food retail venues.

6: Areas with Greatest Need in Columbus

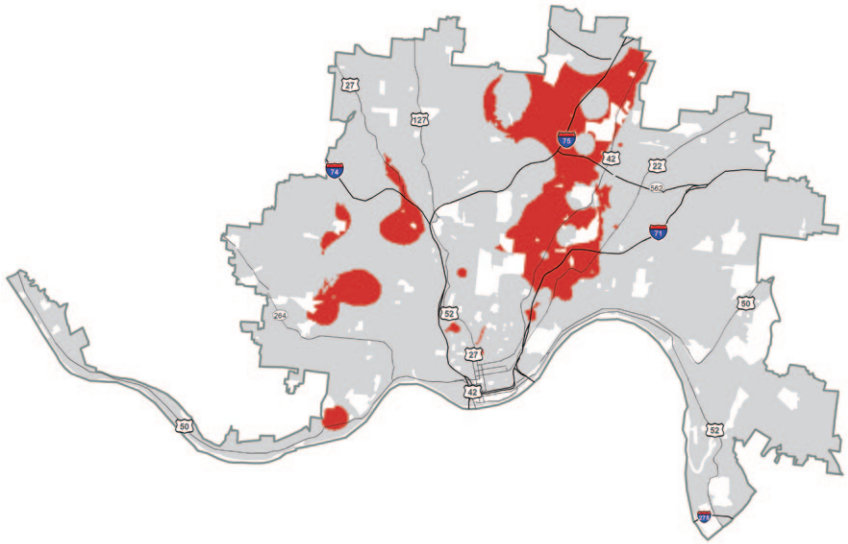


KEY FINDINGS

The need for more supermarkets in Ohio is not limited to Columbus.

- **Neighborhoods in other cities and towns in the state, including Akron, Cleveland, Cincinnati, Toledo, Dayton, Youngstown, and many rural areas, such as Vinton, Jackson, Morgan, Adams and Highland counties in the southern Appalachian region of the state, also lack access to healthy, affordable food.**

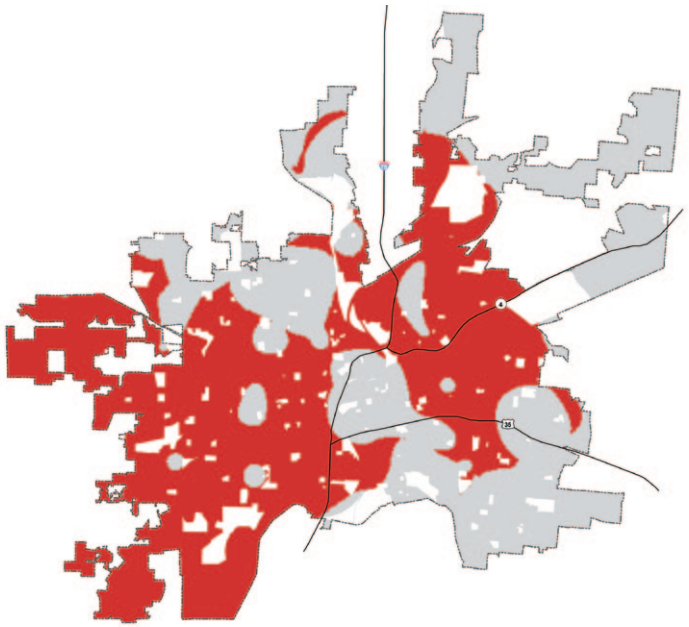
7: Areas with Greatest Need in Cincinnati



0 1.25 2.5 5 Miles

Data: Trade Dimensions Retail Database, 2009; Ohio Department of Health, 2007–2009; Zillow 2011; US Census, American Community Survey, 2005–2009

8: Areas with Greatest Need in Dayton



Areas with Greatest Need

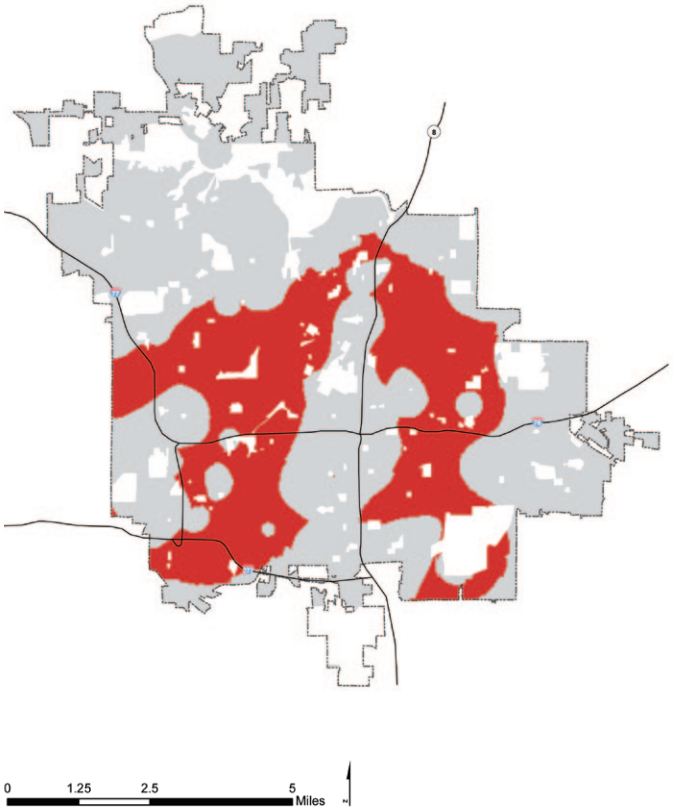
- Low Sales, Low Income, High Deaths
- Other
- Interstate Highways
- Municipal Boundary
- Park, Forest or Non-Residential

0 1.25 2.5 5 Miles

Data: Ohio Department of Health, 2011; Trade Dimensions Retail Database, 2014; US Census, American Community Survey, 2008–2012.

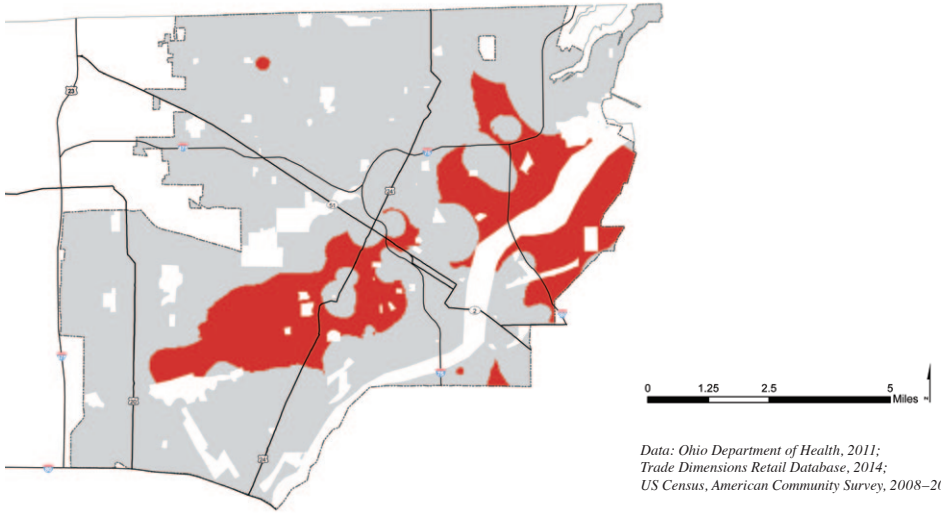
MAPS 7–12: These maps highlight lower-income communities where there are low supermarket sales and a high number of deaths due to diet-related disease. These areas have the greatest need for more supermarkets and other fresh food retail venues, a need that could be addressed by a statewide initiative to build more supermarkets and other healthy food retail in these and other underserved communities. Nearly one million residents live in these areas of red highlighted throughout the state.

9: Areas with Greatest Need in Akron



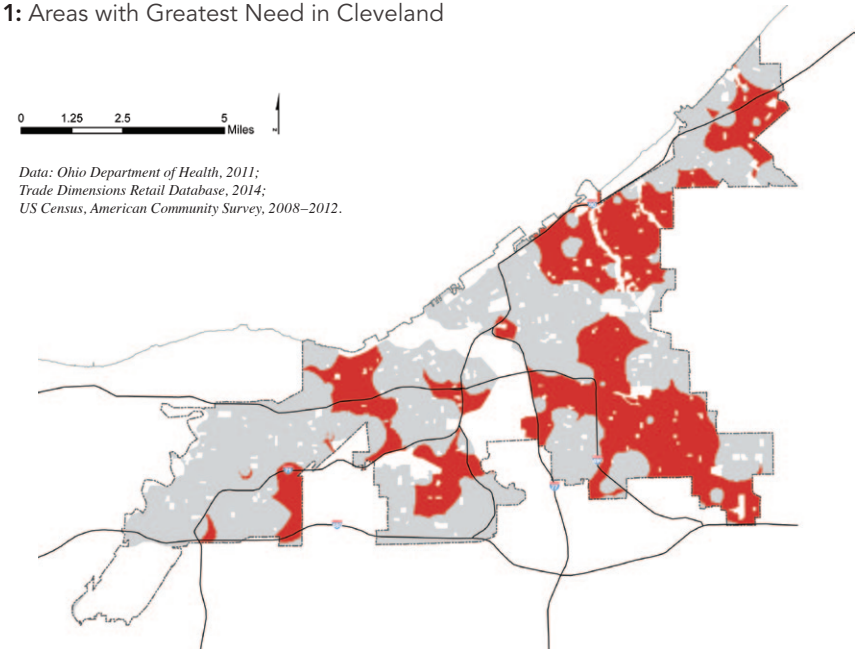
Data: Ohio Department of Health, 2011;
Trade Dimensions Retail Database, 2014;
US Census, American Community Survey, 2008–2012.

10: Areas with Greatest Need in Toledo



Data: Ohio Department of Health, 2011;
Trade Dimensions Retail Database, 2014;
US Census, American Community Survey, 2008–2012.

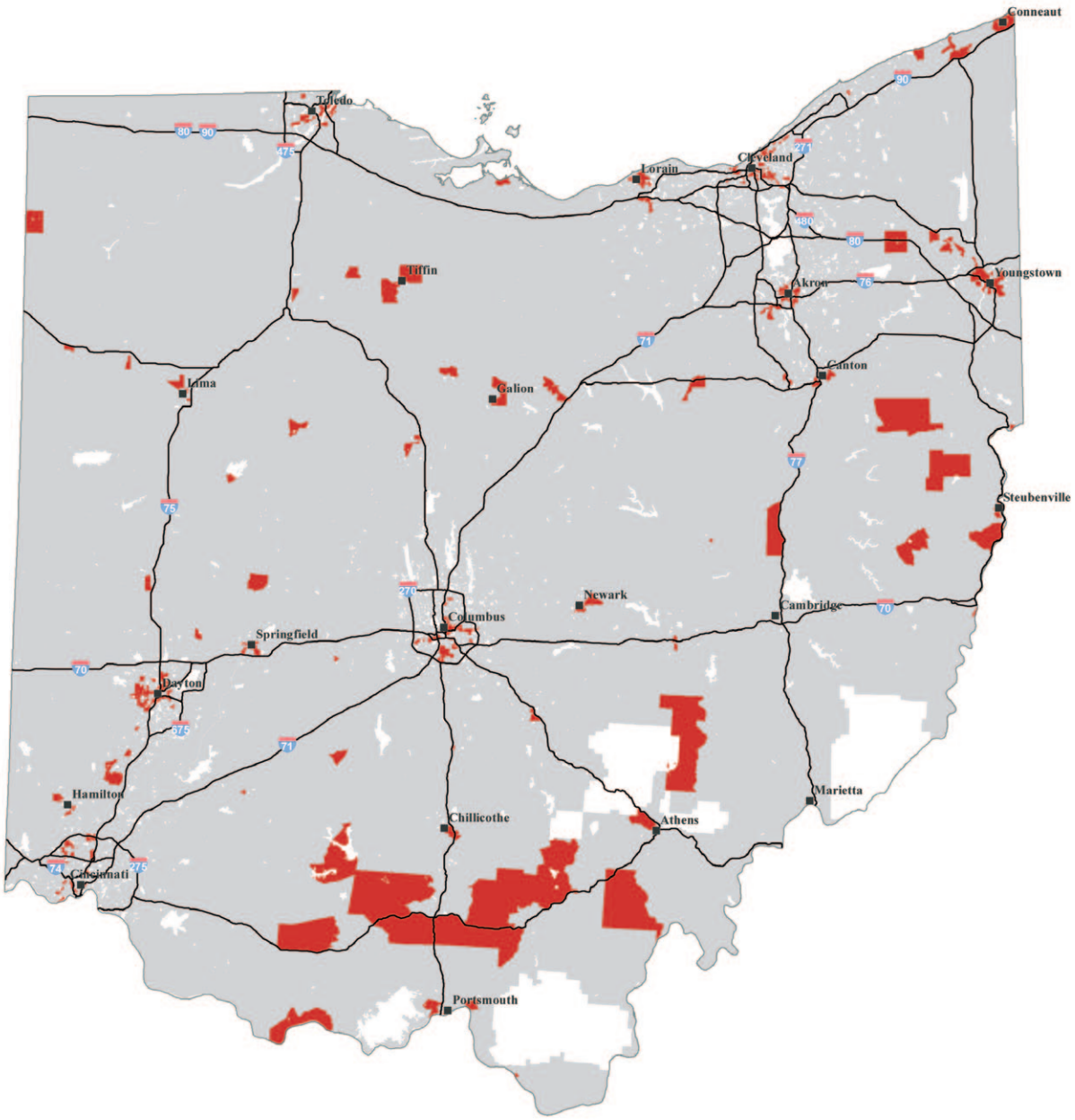
11: Areas with Greatest Need in Cleveland



Data: Ohio Department of Health, 2011;
Trade Dimensions Retail Database, 2014;
US Census, American Community Survey, 2008–2012.

Close to one million Ohio residents live in areas with greatest need throughout the state.

12: Areas with Greatest Need in Ohio



Areas with Greatest Need

- Low Sales, Low Income, High Deaths
- Other
- Cities
- Interstate Highways
- Park, Forest or Non-Residential

0 25 50 100 Miles

Data: Ohio Department of Health, 2011; Trade Dimensions Retail Database, 2014; US Census, American Community Survey, 2008–2012.

RECOMMENDATIONS

Ohio must address the critical need for more healthy food retail in many communities.

The number of supermarkets—and access to them—is a key factor contributing to the health and economic development of neighborhoods. People living in lower-income areas without access to supermarkets and other healthy food retail suffer from diet-related deaths at a rate higher than that experienced by the population as a whole. Through public investment—and the creation of a program specifically tailored to supporting healthy food retail development in underserved communities—we can increase the number of healthy food outlets in underserved communities across the state.

We recommend that state and local governments in Ohio:

Convene leaders from the supermarket industry, government, public health, economic development and civic sectors to develop a strategy to establish more supermarkets and other healthy food retail in lower-income communities.

A key element of this strategy is for state and local governments, with the support of local foundations and other investors, to create a grant and loan program to support local supermarket and other healthy food retail development projects in order to increase the availability of affordable and nutritious food in underserved areas.

SECTION TWO:

A HEALTHY FOOD FINANCING PROGRAM FOR OHIO

Ohio can create jobs and improve health by increasing access to healthy food retail.

Access to healthy food retail is a key factor contributing to the health and economic development of neighborhoods. As shown in the first section of this report, people living in lower-income areas without access to supermarkets and other healthy food retail suffer from diet-related deaths at a rate higher than that experienced by the population as a whole. Through public investment, we can increase the number of healthy food retail outlets in underserved communities and improve the health of children and families across the state. Across the country, healthy food financing programs are improving food access at the local, state and federal level.

Why a Healthy Food Financing Program?

Healthy food financing programs incentivize supermarkets and other healthy food retail development in underserved communities, thereby increasing food access in communities that need it most. This innovative model was first established in Pennsylvania with the state's Fresh Food Financing Initiative (FFFI) in 2004.[15] A key component of the program was that, unlike existing economic development initiatives, it was uniquely tailored to the needs of grocers and other fresh food retail operators. FFFI took the form of a public-private partnership and encouraged grocery store development in underserved communities throughout the state. Seeded with $10 million in year one and an additional $20 million over the next two years from the state's Department of Community and Economic Development, FFFI was designed to accommodate the diverse financing needs of large chain supermarkets, family-owned grocery stores, farmers' markets and other healthy food retailers, whether located in cities, small towns or rural communities.

The program has had a tremendous impact in Pennsylvania, approving funding for 88 fresh food retail projects across the state, representing more than 5,000 jobs created or retained, and improved access to healthy foods for over 400,000 state residents.[16] Notably, from 2006 to 2010, Philadelphia's rates of childhood obesity saw an extraordinary 5% decline.[17] More than 20 stores in Philadelphia received PA FFFI funding around that time. While FFFI is only one of many factors that likely contributed to the decline in childhood obesity in Philadelphia, and more research is needed on the impact of grocery stores on health, multiple studies have linked the presence of a grocery store to positive health outcomes.[18]

Since the launch of FFFI, several other states and cities, including New York, New Jersey, Illinois, California, Colorado, New Orleans and Cincinnati, have all launched or are making preparations to launch their own versions of the Pennsylvania program. Similarly, the federal government introduced the national Healthy Food Financing Initiative, which has provided financial awards and New Markets Tax Credits to Community Development Financial Institutions, Community Development Corporations and banks investing in new or expanded healthy food retail in underserved communities throughout the country.

In addition to increasing families' access to healthy foods, new and improved healthy food retailers can help revitalize lower-income neighborhoods because they generate foot traffic and attract complementary services and stores, such as banks, pharmacies and restaurants. A 2008 study by The Reinvestment Fund found that employees at urban supermarkets in distressed areas tended to live nearby.[19] By employing local residents, grocery stores create jobs for those who need them most and help create a virtuous cycle that enables local residents to increase economic activity.

A statewide Ohio Healthy Food Financing Program will be a vital resource for increasing healthy food access in underserved communities throughout the state. The goals of the program should include:

- Providing grants and loans to supermarkets, grocery stores, co-ops, farmers' markets and other fresh food retailers for the construction, expansion and renovation of those stores in lower-income, underserved areas of urban, rural and suburban Ohio.
- Improving the health of families and individuals living in those communities by increasing access to fresh foods in underserved communities. There is growing evidence that better access to fresh food retail reduces the risk of developing diet-related diseases.
- Creating or maintaining local jobs in lower-income, underserved communities through new hiring opportunities at fresh food stores or, by providing for the upgrades and renovations needed to keep a store viable, helping to retain existing jobs in local communities.[20]
- Spurring economic development and neighborhood revitalization by bringing supermarkets and other

Market Readiness

Research has shown a significant need to improve healthy food access in key areas of Ohio. Section One of this report demonstrates the need for more healthy food retail in both rural and urban parts of the state. Maps in Section One show how over two million Ohio residents, including over half a million children, can benefit from new healthy food retail outlets and would be well served by incentive programs to locate new stores.

Furthermore, representatives from various development entities across the state are working on a range of healthy food retail projects, from large-scale grocery store development through healthy corner store programming and even major food hubs. These efforts indicate a significant demand for a healthy food financing program to help develop these new healthy food retail projects in areas of need. In addition, multiple local organizations have sought funding from the national Healthy Food Financing Initiative to support such projects. A statewide fund could help further attract these federal resources to the state.

In addition to this demand, members of the foundation community, grocery industry and economic development and public health sectors have expressed interest in supporting such a program. For example, the Ohio Department of Health is focusing on improving access to healthy food retail as part of its effort to prevent and reduce obesity and chronic disease. Ohio also has a strong statewide Community Development Financial Institution, Finance Fund, poised to implement a healthy food financing program effectively and efficiently. Finance Fund has already begun pooling together resources locally and at the federal level.

These efforts are indicative of the important impact a dedicated statewide healthy food financing program would have on both the need for improved access and demand for healthy food retail. A healthy food financing program in Ohio would help build on the tremendous momentum around healthy food retail development, leverage existing federal and other resources and help improve access to healthy food for the many areas of need throughout the state.

fresh food retailers back into Ohio neighborhoods, which will attract complementary businesses, make these areas more desirable places to live and increase property values. According to a study of the Pennsylvania Fresh Food Financing Initiative by The Reinvestment Fund, the introduction of new supermarkets to underserved neighborhoods resulted in increased appreciation of home prices near the new stores.[21]

Healthy Food Financing Best Practices:

1. Public-Private Partnership

2. Attracting Additional Funding

3. Flexible Grants and Loans

4. Flexible Eligibility Criteria

Healthy Food Financing Best Practices

Multiple regions across the country and the federal government have recognized the need to increase access to healthy food through the development of supermarkets and other healthy food retail in underserved communities. These efforts have led to the creation of healthy food financing programs at the local, state and federal levels. (See Healthy Food Financing Programs Across the Country, page 17.) These programs have all been based on the Pennsylvania Fresh Food Financing Initiative, a public-private partnership jointly managed by The Reinvestment Fund, a Community Development Financial Institution (CDFI), and The Food Trust, a Food Access Organization (FAO). Healthy food financing programs require support from several partners to ensure that funds are successfully allocated. Successful programs at the local, state and federal levels have relied on these four best practices:

1. Public-Private Partnership Structure

Healthy food financing programs have traditionally relied on a public-private partnership model, wherein seed money from the government is provided to a CDFI, which then partners with an FAO to co-administrator the program. In emerging cases a philanthropic foundation has provided seed money to initiate the fund. Each of the partners of the healthy food financing program brings special expertise needed to successfully administer the initiative. The CDFI leverages the state's investment with significant private investment to create a robust financing program offering grants and loans to supermarket and other fresh food retail operators locating in underserved communities. The Food Access Organization partners with the CDFI to market the program throughout the state and evaluate applications to assess eligibility for funding and to ensure that resources are directed to communities most in need. Together, these organizations are able to effectively administer program dollars and achieve significant impacts statewide.

The CDFI is typically a non-traditional lending institution that has experience in underwriting grocery store projects or other retail projects and has the capacity to build the fund by attracting additional investment, manage the fund and work closely with an FAO to support a variety of types and sizes of fresh food retail projects, including large supermarkets that qualify for New Markets Tax Credits. The FAO is typically a nonprofit organization that has experience in food access issues and the capacity to work closely with a CDFI on program administration as well as with grocers, state officials and others in the marketing, implementation and evaluation of the program.

2. Attracting Additional Funding

Funding sources for the creation of a program have typically included seed money from a state government and/or foundation that is then leveraged with additional dollars from banks, foundations and other sources. CDFIs are particularly adept at pooling together multiple layers of funding and are therefore critical partners in administering healthy food financing programs. For example, in Pennsylvania, The Reinvestment Fund attracted more than $117 million in private capital to match the state's $30 million investment. Funding sources, whether initial seed funding or leveraged funding, may include:

- State agencies such as a state departments of economic development or agriculture
- Legislation or budget authority
- Program Related Investments (PRIs) from foundations
- CDFIs
- Federal Healthy Food Financing Initiative
- Federal economic development dollars, such as Community Development Block Grants (CDBG) from the Department of Housing and Urban Development
- Federal New Markets Tax Credit allocations (often for large supermarkets and the creation of new stores)
- Commercial banks

3. Flexible Uses of Grants and Loans

Grant funds are essential to the closing of deals and moving debt funds, even with below-market rates and flexible terms and conditions for loans. Often, grants are matched by the applicant, private lenders or a loan from the fund itself. Flexibility in the use of funds also allows a healthy food financing program to have the most robust impact. Allowable uses for grants and loans could include:

- Predevelopment costs, including market studies, appraisals and deposits on land and buildings and other holding costs
- Land assembly, including demolition and environmental remediation, among other costs related to land assembly
- Infrastructure improvements, including retrofitting existing fluorescent fixtures, installing energy-efficient

HEALTHY FOOD FINANCING PROGRAMS ACROSS THE COUNTRY

LOCATION	NAME OF PROGRAM	PROGRAM ADMINISTRATORS	FUNDING SOURCES	TYPES OF FINANCING
CA	**California FreshWorks Fund** www.cafreshworks.com	The California Endowment, Capital Impact Partners, Emerging Markets and others	The California Endowment and other private funding: To date, approximately $264 million raised from a variety of private investors. Additionally, nearly $9 million in funding has been secured by Capital Impact Partners since 2011 through the national Healthy Food Financing Initiative.	**Loans:** Up to $8 million. **Grants:** Up to $50,000.
CO	**Colorado Fresh Food Financing Fund** www.chfainfo.com/CO4F	The Colorado Health Foundation, Colorado Enterprise Fund and Progressive Urban Management Associates	Seeded with a $7.1 million investment from the Colorado Health Foundation, and planning to leverage an additional $20 million in other public and private funding. Additionally, $1.55 million in funding has been secured by the Colorado Enterprise Fund since 2012 through the national Healthy Food Financing Initiative.	**Loans:** Up to $1.5 million per project. **Grants:** May not exceed $100,000 per project, except in extraordinary, high-impact cases.
IL	**Illinois Fresh Food Fund** www.iff.org/illinois-food	IL Department of Commerce and Economic Opportunity and IFF	Seeded with a $10 million grant from the IL Department of Commerce and Economic Opportunity. Additionally, $9 million in funding has been secured by IFF since 2011 through the national Healthy Food Financing Initiative. The fund is designed to invest approximately $30 million over the next three to four years.	**Loans:** Typical loans range from $250,000 to $1 million. **Grants:** Grants are only available to those who are also applying for a loan. The grant amount can be up to 10% of the loan amount, not to exceed $100,000.
OH	**Cincinnati Fresh Food Retail Financing Fund** www.healthyfoodaccess.org/policy-efforts/region/ohio	Center for Closing the Health Gap and Cincinnati Development Fund	Up to $15 million over three years from the city. Funds appropriated by the city's Focus 52 allotted funds, sponsored by Cincinnati's Department of Trade and Development. Additionally, $1 million in funding was secured by the Cincinnati Development Fund in 2012 through the national Healthy Food Financing Initiative.	**Loans:** Pending **Grants:** Pending
LA	**New Orleans Fresh Food Retailer Initiative** www.hope-ec.org	City of New Orleans, Hope Enterprise Corporation and The Food Trust	Federal and private funding. Seeded with $7 million in Disaster Community Development Block Grant funds. Matched by HOPE investment.	**Loans:** Not to exceed $1 million. **Forgivable Loans:** Up to $500,000 or 20% of total financing needs.
NJ	**New Jersey Food Access Initiative** www.trfund.com/financing/Healthy_food/NJ_HealthyFoodRetailInitiative.pdf	NJ Economic Development Authority (NJEDA), The Reinvestment Fund (TRF) and the Robert Wood Johnson Foundation (RWJF)	To date, financial partners include: NJ Economic Development Authority ($4 million), Living Cities ($2 million credit) and the Robert Wood Johnson Foundation ($10 million Program Related Investment). Additionally, $9 million in funding has been secured by TRF since 2011 through the national Healthy Food Financing Initiative.	**Loans:** Range in size from $200,000 to $4.5 million or larger for New Markets Tax Credit transactions. **Grants:** Range in size from $5,000 to $125,000. **Recoverable Grants:** Early-stage financing with no-interest loans, typically repaid by construction financing.
NY	**New York Healthy Food & Healthy Communities Fund** www.liifund.org/nyhealthyfood	NY Empire State Development Corporation, Low Income Investment Fund (LIIF), The Reinvestment Fund (TFR) and The Food Trust	Seeded with $10 million from the state's Empire State Development Corporation. Matched with a $20 million commitment from The Goldman Sachs Group, Inc. Additionally, $6 million in funding has been secured by LIIF since 2011 through the national Healthy Food Financing Initiative.	**Loans:** Range in size from $250,000 to $5 million or larger for New Markets Tax Credit transactions. **Grants:** Range in size from $5,000 to $500,000 for capital grants and $5,000 to $200,000 for predevelopment grants.
PA	**Pennsylvania Fresh Food Financing Initiative** www.trfund.com/financing/Healthy_food/FreshFoodFinancing.html	PA Department of Community and Economic Development, The Food Trust, The Reinvestment Fund (TRF) and the Urban Affairs Coalition	Seeded with $10 million in year one and an additional $20 million over the next two years from the state's Department of Community and Economic Development. Matched with $146 million in additional public and private investment. Additionally, $9 million in funding has been secured by TRF since 2011 through the national Healthy Food Financing Initiative.	**Loans:** Typical loans ranged in size from $200,000 to $3.5 million or larger for New Markets Tax Credit transactions. **Grants:** Up to $250,000 per store and $750,000 in total for one operator. Extraordinary grants of up to $1 million were made available for projects with high potential for serving areas of extreme need.
National	**Healthy Food Financing Initiative** www.acf.hhs.gov/programs/ocs/programs/community-economic-development/healthy-food-financing	US Departments of Treasury, Agriculture, and Health and Human Services	Since FY 2011, HFFI has distributed over $109 million to 62 community development entities across the country.	**Financing packages vary.** HFFI dollars are given to Community Development Financial Institutions (CDFIs) and Community Development Corporations (CDCs) to disseminate to projects in their regions.

lighting or refrigeration equipment and more
- Real estate costs, including construction costs, labor and materials
- Equipment associated with providing fresh food, including refrigeration and storage
- Workforce training and development costs, for the training of employees in specialty departments such as produce, meat, deli and bakery

The State of Ohio should commit $10 million to the creation of a healthy food financing program that provides grants and loans to local healthy food retail projects.

4. Flexible Eligibility Criteria
The range of eligible project types takes into consideration the unique needs of a variety of communities—urban, rural and suburban—and the needs of healthy food retailers. Recognizing that one size does not fit all, flexibility in what type of fresh food retail can qualify for healthy food financing funds, as well as for what those funds are being used, allows for the program to meet the needs of communities across the state. Project types eligible for funding could include:

- New full-service supermarket or grocery store
- Upgrade, expansion or preservation of an existing supermarket or grocery store
- The portion of a mixed-use or multi-tenant project that will be occupied by a grocery store
- Small and alternative food retailers such as farmers' markets, mobile markets, co-ops and others
- Local produce distribution enterprises, such as food hubs

Structuring an Ohio Program

Current research on the food environment in Ohio demonstrates the need for greater access to healthy food in communities throughout Ohio. A statewide healthy food financing program can draw upon existing resources in Ohio to develop a fund that taps into current sources of capital available in the state.

Capital
Similar financing programs across the country range in size from $14 million to over $200 million, with initial seed funding of $5 million to $30 million in public or philanthropic funds. Many programs have been seeded with an investment of $10 million in the first year, such as those in Pennsylvania, Illinois and New York. (See Healthy Food Financing Programs Across the Country, page 17.) Given the food environment in Ohio, and the similarity of its population base to those in Pennsylvania and Illinois, initial seed funding of $10 million is recommended for the state of Ohio. These funds could be used to leverage additional funds from various private and public sources, including banks, New Markets Tax Credits and other pools of investment. Additionally, CDFIs based in Ohio have funds from the national Healthy Food Financing Initiative, which can similarly be leveraged to support a new fund in the state.

Administration and Implementation
Other regions have demonstrated that a public-private partnership model for healthy food financing is an effective model for implementation. Seed money allocated to the creation of an Ohio healthy food financing program can be managed by a Community Development Financial Institution (CDFI) partnered with a Food Access Organization (FAO). Both the CDFI and the FAO can be selected through a competitive application process held by a state government agency. Once funds are dispersed to a CDFI, the CDFI can manage the fund and attract additional investment locally and nationally, while the FAO can ensure that projects financed through the program meet the eligibility criteria and align with the mission of the program.

In Ohio, program guidelines should include clear eligibility criteria to ensure that financing is dedicated to projects in underserved communities. As healthy food retailers apply for financing through the program, the eligibility criteria will ensure their projects will serve a lower-income, underserved community and fit the community's needs. In addition to meeting these guidelines, applicants also must qualify for financing from a financial perspective, as assessed by the CDFI.

A healthy food financing program in Ohio could include the following partner organizations with the following responsibilities:

Government and/or Foundation:
- Provide seed funding
- Oversee program implementation

Community Development Financial Institution:
- Raise capital and administer funds
- Determine applicant's financial eligibility
- Originate and underwrite projects for grants and loans
- Report program impacts

Food Access Organization:
- Develop program guidelines and materials with CDFI
- Conduct outreach and marketing to food retailers and community leaders
- Determine applicant's program eligibility
- Ensure funds are utilized in areas most in need

CONCLUSION

The lack of access to supermarkets is a problem for too many communities in Ohio, particularly in lower-income areas where the incidence of diet-related disease is alarmingly high.

The lack of supermarkets in many communities means that residents have to rely on corner and convenience stores with higher prices and often lower-quality foods or travel long distances to purchase nutritious foods. Diets that rely on food from convenience stores are often higher in sugar and fat, contributing to obesity and other diet-related diseases.

The increased incidence of diet-related diseases in lower-income communities suggests that the public sector needs to invest in supermarket and other healthy food retail development in these underserved areas to help combat these diseases. Such an investment would have positive economic impacts as well, since supermarkets bring jobs to communities that need them the most.

The public sector has a responsibility to help provide a nutritious food supply in underserved communities in order to safeguard public health and promote economic development. But as supermarkets replaced earlier forms of food retailing, such as public markets, the public sector largely withdrew from the food-retailing sector.

Supermarkets later left many communities, leaving large numbers of people without a stable food supply. At the same time, the incidence of diet-related diseases increased in these communities.

The consequences are stark for people of lower incomes. People who live in lower-income areas without access to supermarkets and other healthy food retail suffer from diet-related deaths at a rate higher than that experienced by the population as a whole. Based on additional studies conducted by The Food Trust and others, access to healthy, affordable food plays a role in determining what people eat.[22] People who can only access poor food choices eat poorly. Through mapping, this study shows that many lower-income communities in Ohio have both poor supermarket access and a high incidence of diet-related deaths.

Ohio is well positioned to create and support a statewide healthy food financing program to encourage the development of supermarkets and other healthy food retail in underserved communities. There is already much momentum surrounding this issue in Ohio, and leaders in the civic, public, private, financial and grocery sectors have all expressed the need for this type of program. Current and new funding resources in the state can be appropriated to support a program that will improve the health of residents and create jobs in both rural and urban communities.

GIS Methodology

For information on the Cincinnati map on page 10, see *Cincinnati Fresh Food Retail Financing Fund.*[23]

All other tabular data was prepared in MS Excel and mapped in ArcGIS 10.2.1 by ESRI. The coordinate system and projection used during mapping and analysis were the North American Datum 1983 and Ohio State Plane South. Analysis was at the US Census Bureau's tract level of geography using vector polygons from the 2014 ESRI Data & Maps shapefiles. Ohio statewide analysis used discrete tract polygons while citywide analysis used interpolated rasters and density grids from tract centroids and statewide rates.

Demographic data from the US Census Bureau website (www.census.gov) for the 2008–2012 American Community Survey were chosen due to the presence of income variables not available in the 2010 Decennial Census.

This analysis was performed for the state of Ohio at the level of census tract. Each of the city maps for Akron, Cleveland, Columbus, Dayton and Toledo use the statewide data and are mapped relative to the state rates and odds ratios, not relative to the city's own rates and odds ratios.

SUPERMARKET SALES
Supermarkets in the 2014 Trade Dimensions retail database were included in the analysis of sales. For the purposes of this study, the definition of a supermarket is a store that had an SIC code of 541105 and was identified by Trade Dimensions as a "conventional, limited assortment or natural supermarket," a "superette" or a "supercenter" with over $2 million in annual sales. There were 1,174 supermarkets in Ohio, with an aggregate weekly sales volume of $317,942,000.

All supermarkets were plotted using the latitude and longitude coordinates for each record and then classified into two categories: between $39,000 and $150,000 or more than $150,000 in weekly sales.

Aggregate weekly sales volume of all supermarkets was attributed to the census tracts within which they occurred through a spatial join. For Ohio, values of total sales were used to classify the tracts by approximate quartiles into the four categories shown in Map 1: Weekly Sales Volume for Supermarkets. For the cities, weekly sales volume was further transformed from a series of points to a continuous raster grid representing the sales density per square mile using the kernel density function with a one-mile radius in ArcGIS's Spatial Analyst. This raster was then classified into quartiles. The results for Columbus are shown in Map 1.

POPULATION
Population data estimates for the state of Ohio by tract were retrieved from the US Census Bureau's 2008–2012 American Community Survey (total of 11,533,561 people). Density of total population was calculated from the census tract centroid points using kernel density with a search radius of one mile, or 5,280 feet. Geographies with no population were removed from the analysis, as indicated on the maps.

SALES AND POPULATION DENSITY
For Ohio, the weekly sales volume was divided by the total population of each tract. The result was then divided by the statewide rate of $27.57 ($317,942,000/11,533,561) to create an odds ratio for weekly supermarket sales per person for Ohio. For the cities, the density of weekly sales volume raster was divided by the density of total population raster. The result was then divided by $27.57 to create an odds ratio raster.

An odds ratio of 1 is equivalent to the statewide rate. Anything below 1 is below the statewide rate. An odds ratio of 2 means the rate is twice the statewide rate. The results for Columbus are used for Map 2: Supermarket Sales and Population Density. A new binary field recorded whether each tract had a weekly sales odds ratio above or below 1.

INCOME
Ohio median household income ($48,246) was multiplied by number of households (4,555,709), and the result was divided by total population to create a per capita income per person ($19,057). Local per capita income by tract was divided by this number giving an "income" odds ratio. For Ohio, a new binary field was created to store whether the tract had an "income" odds ratio above or below the statewide rate. For the cities, the odds ratio, assigned to the census tract centroid, was used to interpolate a grid, which was then reclassified to yield two distinct values, those below and those above the statewide rate.

SALES AND INCOME
The "sales and income" odds ratio binary fields were combined, resulting in four distinct values which correspond to the four possible combinations of high and low odds ratios. The results for Columbus were used to classify Map 3: Supermarket Sales and Income and Map 4: Low Supermarket Sales and Low Income.

DIET-RELATED DEATHS
The Ohio Department of Health provided mortality data for the year 2011. A total of 117,045 deaths were received and filtered by Ohio residency and a specified list of diet-related ICD-10 codes. A total of 59,660 diet-related deaths were mapped at the tract level for Ohio.

DIET-RELATED DEATHS AND POPULATION
The number of diet-related deaths attributed to each tract was divided by the total population of that tract. This result was divided by the statewide ratio of diet-related deaths to total population (59,660/11,533,561 = 0.005173, or 52 diet-related deaths per 10,000 people) to calculate the "deaths" odds ratio. For Ohio, a new binary field was created to store whether the tract had a "deaths" odds ratio above or below the statewide rate. For the cities, the odds ratio, assigned to the census tract centroid, was used to interpolate a grid, which was then reclassified to yield two distinct values, those below and those above the statewide odds rate.

INCOME AND DIET-RELATED DEATHS
The two binary fields of "deaths" and "income" odds ratios were combined through multiplication to calculate a new field and raster. This resulted in four distinct values which correspond to the four possible combinations of high and low deaths and income. The results for Columbus were used to classify Map 5: Income and Diet-Related Deaths.

DIET-RELATED DEATHS, SALES AND INCOME
To combine all three variables for Ohio, a new field was created and calculated by tract as the product of "deaths" odds and the "low supermarket sales and low income" variable. For the cities, the two reclassified rasters of "deaths" and "low supermarket sales and low income" were combined to create a new raster layer. These results were both reclassified to only retain one value, "low supermarket sales, low income and high deaths," and mapped to produce Maps 6–12: Areas with Greatest Need.

Endnotes

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Ensuring That Everyone Has Access To Affordable, Nutritious Food

The Food Trust, a nationally recognized nonprofit founded in Philadelphia in 1992, strives to make healthy food available to all. Research has shown that lack of access to healthy food has a profound impact on food choices and, therefore, a profound impact on health.

For 20 years, The Food Trust has worked with neighborhoods, schools, grocers, farmers and policymakers to develop a comprehensive approach to improving the health of America's children. The Food Trust's innovative initiatives integrate nutrition education with increased availability of affordable, healthy foods.

This approach has been shown to reduce the incidence of childhood overweight; a study in the journal *Pediatrics* found that the agency's School Nutrition Policy Initiative resulted in a 50 percent reduction in the incidence of overweight among Philadelphia school children.

> *"The Food Trust is transforming the food landscape one community at a time by helping families make healthy choices and providing access to the affordable and nutritious food we all deserve."*
>
> ▪ ROBERT WOOD JOHNSON FOUNDATION

The Food Trust is recognized as a regional and national leader in the prevention of childhood obesity and other diet-related diseases due to this reduction and other notable initiatives to increase food access in underserved neighborhoods. Other noteworthy programs include the Healthy Corner Store Initiative and the Pennsylvania Fresh Food Financing Initiative, a public-private partnership which has approved funding for nearly 90 fresh food retail projects across Pennsylvania.

The Centers for Disease Control and Prevention honored the Fresh Food Financing Initiative in its Showcase of Innovative Policy and Environmental Strategies for Obesity Prevention and Control, and the program was named one of the Top 15 Innovations in American Government by Harvard University. For more information or to order additional copies of this report, visit thefoodtrust.org or contact The Food Trust.

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