



# FOOD *for* EVERY CHILD

THE NEED FOR MORE SUPERMARKETS  
IN HOUSTON

SPECIAL REPORT

**ACKNOWLEDGEMENTS**

This report was prepared by Miriam Manon and Tracey Giang of The Food Trust and David Treering, GIS Specialist at Loyola University. It was published in December 2010. This report was made possible by grants from the Robert Wood Johnson Foundation and the Kraft Foods Foundation.



**HOUSTON** must address the significant need for supermarkets and fresh food resources in many of its neighborhoods. Many factors have led supermarkets to disinvest from lower-income communities leading to a public health crisis. The Food Trust researched and wrote *Food for Every Child: The Need for More Supermarkets in Houston* to ensure that all children and their families live in communities that have access to healthy and affordable food. This goal can be achieved by encouraging the development of supermarkets in underserved communities in Houston and across the state of Texas.

Houston is among the fastest growing metropolitan areas in the country, and yet the area has fewer supermarkets per capita than most of the nation's large metropolitan areas. When measured against the national rate of per capita supermarkets, the Greater Houston area has 185 too few.<sup>1</sup> The shortage of supermarkets in Houston is representative of a statewide problem. In fact, Texas has the lowest number of supermarkets per capita of any state in the country.

In addition to having too few supermarkets, existing supermarkets are unevenly distributed across the city and state, and lower-income communities are categorically underserved in respect to supermarket access. The situation in Texas is not unique; a nationwide study of over 28,000 ZIP codes found that low-income ZIP codes have 25 percent fewer per capita supermarkets than middle-income ZIP codes.<sup>2</sup>

The lack of access to affordable and nutritious food has a negative impact on the health of children and families in Houston and across Texas. Today, nearly two-thirds of Texans are overweight or obese.<sup>3</sup> There is strong and consistent evidence that people who live in communities without a supermarket suffer from disproportionately high rates of obesity, diabetes and other diet-related health problems. 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.<sup>4</sup>

Increasing the availability of nutritious and affordable food in communities with high rates of diet-related disease does not guarantee a reduction in the incidence of the disease. However if barriers to supermarket access can be removed, people in these communities can more easily obtain an adequate diet. Furthermore, the development of new supermarkets sparks economic revitalization and brings jobs into communities that need them most.

Through mapping, this study concludes that many neighborhoods in Houston and communities across Texas with poor supermarket access also have a high incidence of death from diet-related diseases. Access to supermarkets is a key factor in the health and development of a community.

*Texas has the lowest number of supermarkets per capita of any state in the nation.*

**We call upon state and local governments to take the lead in developing a public-private response to this problem. While not a situation of any one sector's making, it is in the interest of the entire community to solve this problem, a fact made all the more evident by the estimated \$5.3 billion Texas spends each year treating obesity-related disease.<sup>5</sup> Solutions that have proven successful elsewhere in the country, such as Pennsylvania's Fresh Food Financing Initiative, have included:**

- Convening leaders from business, government, public health, economic development and civic sectors to develop a strategy to establish more supermarkets in lower- and moderate-income communities.
- Strategic investments with public funds to reduce risks associated with the development of more supermarkets in lower- and moderate-income communities.

# INTRODUCTION

**Houston is one of the nation's fastest growing metropolitan areas and yet it has fewer supermarkets per capita than most major cities.**

On a national level, there is 1 supermarket for every 8,620 people, but in the Greater Houston area each supermarket serves more than 12,000 people.<sup>6</sup> The situation in Houston is reflective of a problem impacting communities across the state. Texas has fewer supermarkets per capita than any state in the country.<sup>7</sup> This shortage of supermarkets means that residents, particularly those in lower-income neighborhoods and rural areas, often have to travel long distances to reach the nearest store that sells fresh produce and other foods necessary to maintain a healthy diet.

Two-thirds of Houston residents are either overweight or obese. Lower-income residents are likely to suffer from obesity and other diet-related health problems at rates significantly higher than those of the population as a whole.<sup>8</sup> These families are also likely to have few, if any, places in their communities in which to shop for reasonably priced, nutritious foods. The region's supermarket deficit could be eased and diet-related health problems decreased by embracing an initiative to build more supermarkets in lower-income communities, resulting in improved health and nutrition of children.

## *Two-thirds of Houston residents are either overweight or obese.*

A growing body of research demonstrates that access to supermarkets can have 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 low-income neighborhoods would reduce the rate of obesity in the United States. They also suggest that state and local governments should create incentive programs to attract supermarkets to these neglected neighborhoods.<sup>9,10</sup>

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.

The Food Trust wrote *Food for Every Child: The Need for More Supermarkets in Houston* to ensure that all children live in communities that have access to nutritious and affordable food. This report is designed, in part, to stimulate a process which will result in the development of supermarkets and other healthy food retail markets in lower-income communities. To achieve that goal, this study outlines the extent and implications of the supermarket shortage by identifying the gaps in food availability and the relationship between supermarket access, diet-related diseases and neighborhood income levels.

This study builds on the excellent work undertaken over the past several years by a variety of government, private and civic leaders in Texas and by the Healthy Food Advisory Committee, established by the executive commissioner of the Health and Human Services Commission and the commissioner of the Department of Agriculture, as put forth by the legislature during the 81st legislative session. The Food Trust is committed to building on these efforts and working with these leaders to improve supermarket access for residents in Houston and across the state.

## **Methodology**

To demonstrate which neighborhoods lack supermarkets, a geographical 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.) Retail sales data for supermarkets were obtained from Trade Dimensions. The Texas Department of State Health Services provided death records for the state from 2006, and 2010 demographic projection data were derived from the 2000 US Census.

A series of maps was created using Geographic Information Systems computer mapping software.<sup>11</sup> Weekly sales volume at supermarkets was distributed over a one-mile radius to plot the concentration of sales and then divided by total population density and the average for weekly sales per person to calculate a ratio for weekly supermarket sales per person. The ratios were mapped; ratios greater than 1 represent high sales and ratios less than 1 represent low sales. Median household income was multiplied by the number of households to determine total income density. 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 156,525 diet-related deaths were mapped statewide, including 11,299 in Houston. "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 less than the statewide average. Only Texas data were analyzed, so no comparisons were made with rates outside of the state.

# KEY FINDINGS

Access to nutritious food is not evenly distributed in Houston. Many people have to travel excessive distances to buy food at a supermarket.

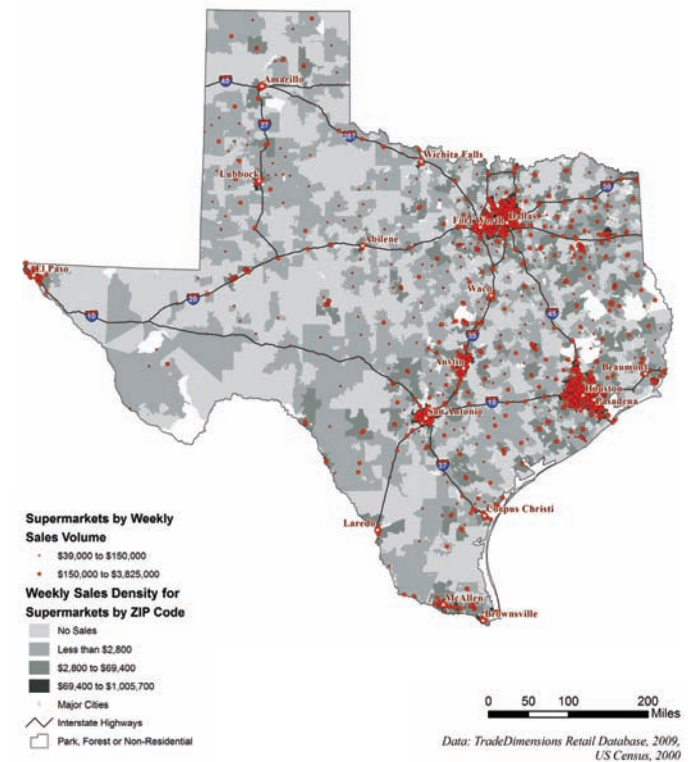
- The uneven distribution of supermarkets is a serious problem in Houston. There are large areas of the city with few supermarkets, and many neighborhoods where none exist. The situation in Houston is reflective of a statewide trend.

**MAP 1A/B:** *Weekly Sales Volume for Supermarkets* shows the location of 2,068 stores throughout Texas, including 178 in Houston, 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 ZIP code. 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.

1A: Weekly Sales Volume for Supermarkets in Houston



1B: Weekly Sales Volume for Supermarkets in Texas



Map 1A shows that supermarkets in Houston are unevenly distributed. Many people must travel considerable distances to buy food from supermarkets in the few neighborhoods where supermarkets are easily accessible. Supermarkets are especially sparse along the east side of the city and south of the 610 loop.

Map 1B demonstrates that supermarkets are also distributed unevenly throughout the entire state. The data reflect a high concentration of stores and sales along major highways and dense population centers while rural communities and many inner-city neighborhoods have relatively few.

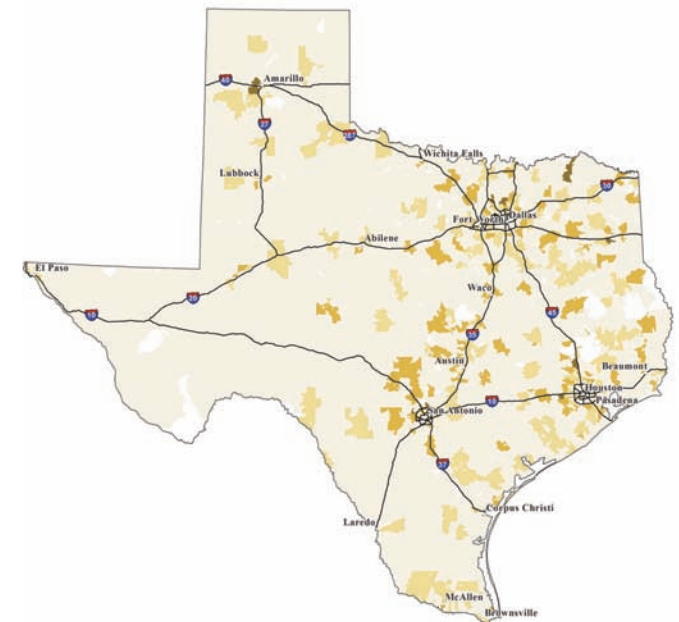
*In Houston, many people must travel considerable distances to buy food from supermarkets in the few neighborhoods where supermarkets are easily accessible.*

**MAP 2A/B:** 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. Communities with greater than average supermarket sales relative to total population are shown in yellow and brown tones. In these communities, 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.

2A: Supermarkets Sales and Total Population in Houston



2B: Supermarkets Sales and Total Population in Texas



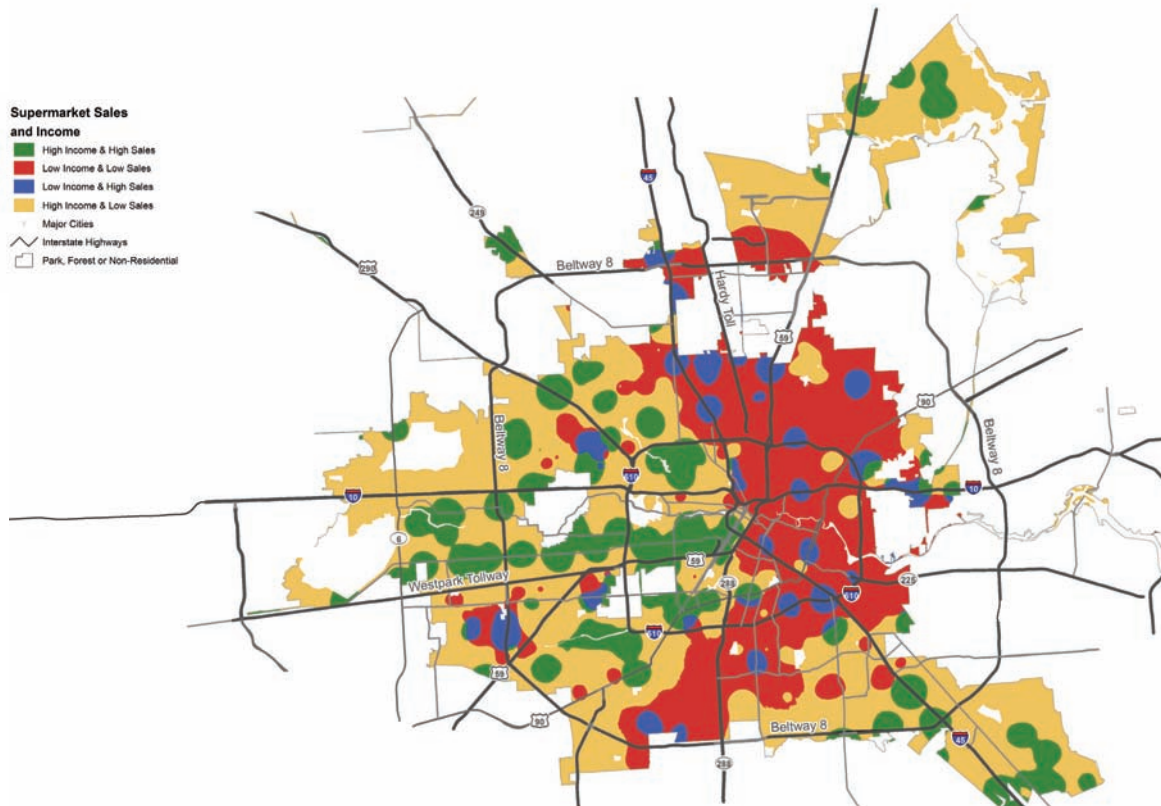
# KEY FINDINGS

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

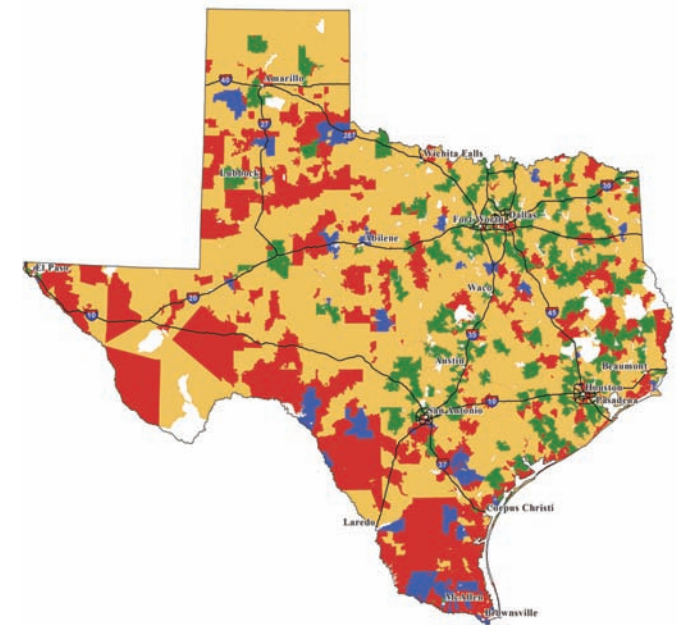
- Texas ranks as the lowest state in the nation for supermarket density per population. Measured against the national rate of per capita supermarkets, Texas could support 589 additional supermarkets, including 185 in the Greater Houston area.<sup>12</sup> This shortage of supermarkets particularly impacts lower-income residents with limited resources to obtain an adequate diet.

**MAP 3A/B:** *Supermarket Sales and Income* shows the distribution of supermarket sales and the distribution of income throughout the city and state. 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 to shop at in their community. However, since these communities are higher-income, residents often have high car ownership rates and are likely able to afford driving the longer distances to shop.

3A: Supermarket Sales and Income in Houston



3B: Supermarket Sales and Income in Texas





The red areas represent lower-income communities not adequately served by supermarkets.

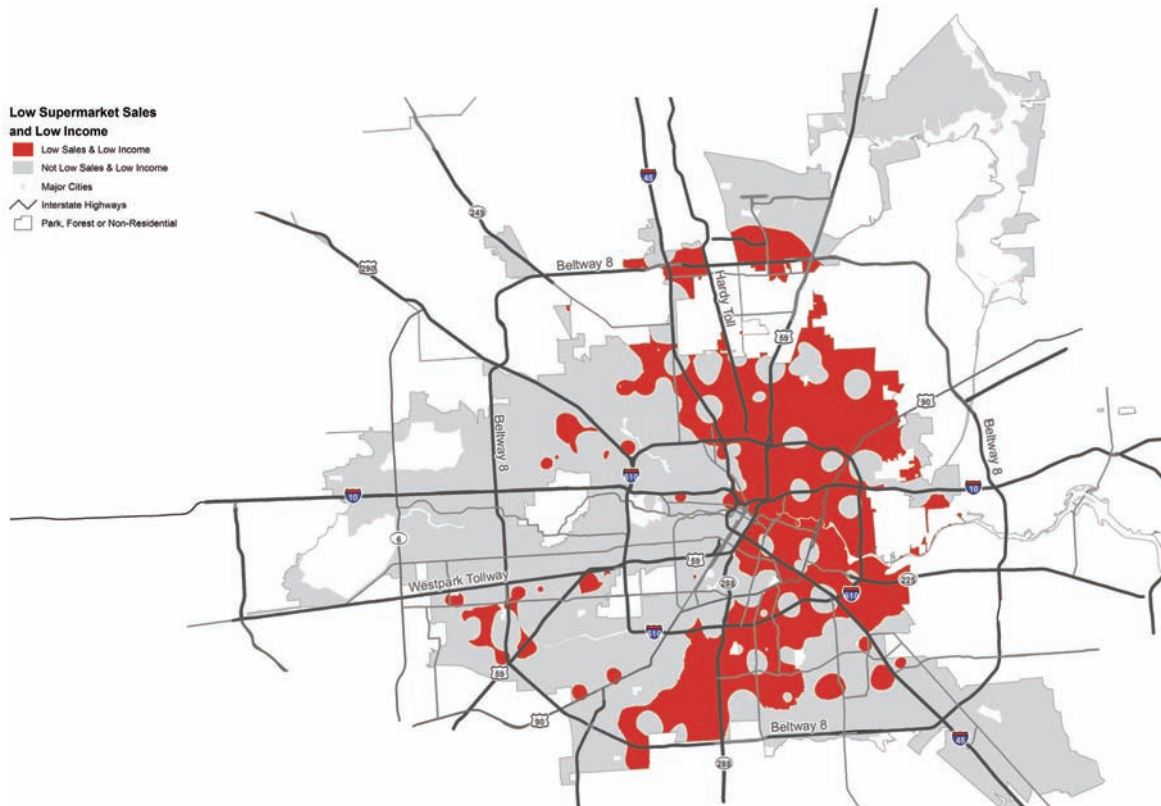
**MAP 4A/B:** *Low Supermarket Sales and Low Income* further highlights areas with low supermarket sales because there are few to no supermarkets located there. Since income is also lower in these areas, families face more difficulty traveling to the areas where supermarkets are concentrated, especially when public transit is not accessible or convenient. This is particularly significant in Houston, where 21 percent of the population live below the poverty line and are disproportionately affected by the lack of supermarkets.

In Houston, these lower-income areas with insufficient access to supermarkets are heavily concentrated on the eastern side of the city, east of I-45 on the north side; and east of Highway 288 on the south side. Underserved super-neighborhoods include Magnolia Park, Lawndale, Northside, Greater Fifth Ward, Sunnyside, South Park and others.

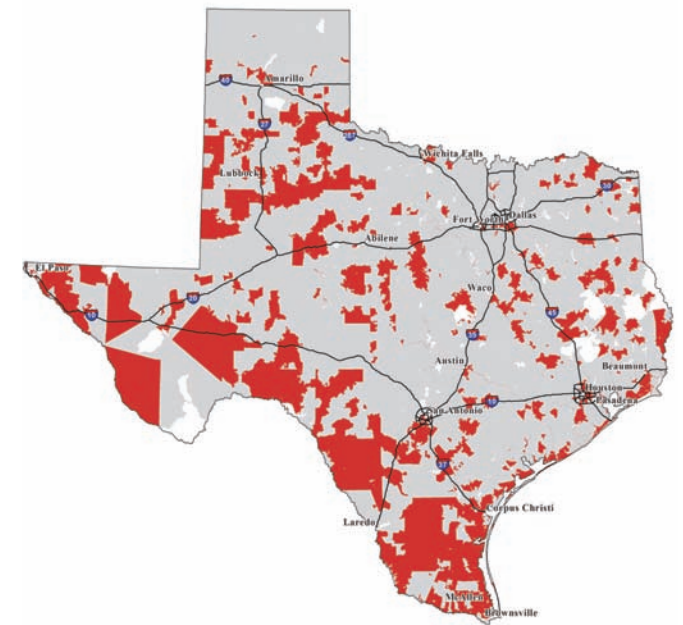
Map 4B shows that these areas of need are spread throughout the state. Cities and rural counties across Texas are underserved by supermarkets. Studies in Texas and elsewhere have documented the disappearance of supermarkets from many rural communities, leaving residents with few local options and long drives to the nearest food store.<sup>13, 14</sup>

*Lower-income areas with insufficient access to supermarkets include Magnolia Park, Lawndale, Northside, Greater Fifth Ward, Sunnyside, South Park and more.*

**4A:** Low Supermarkets Sales and Low Income in Houston



**4B:** Low Supermarkets Sales and Low Income in Texas



# KEY FINDINGS

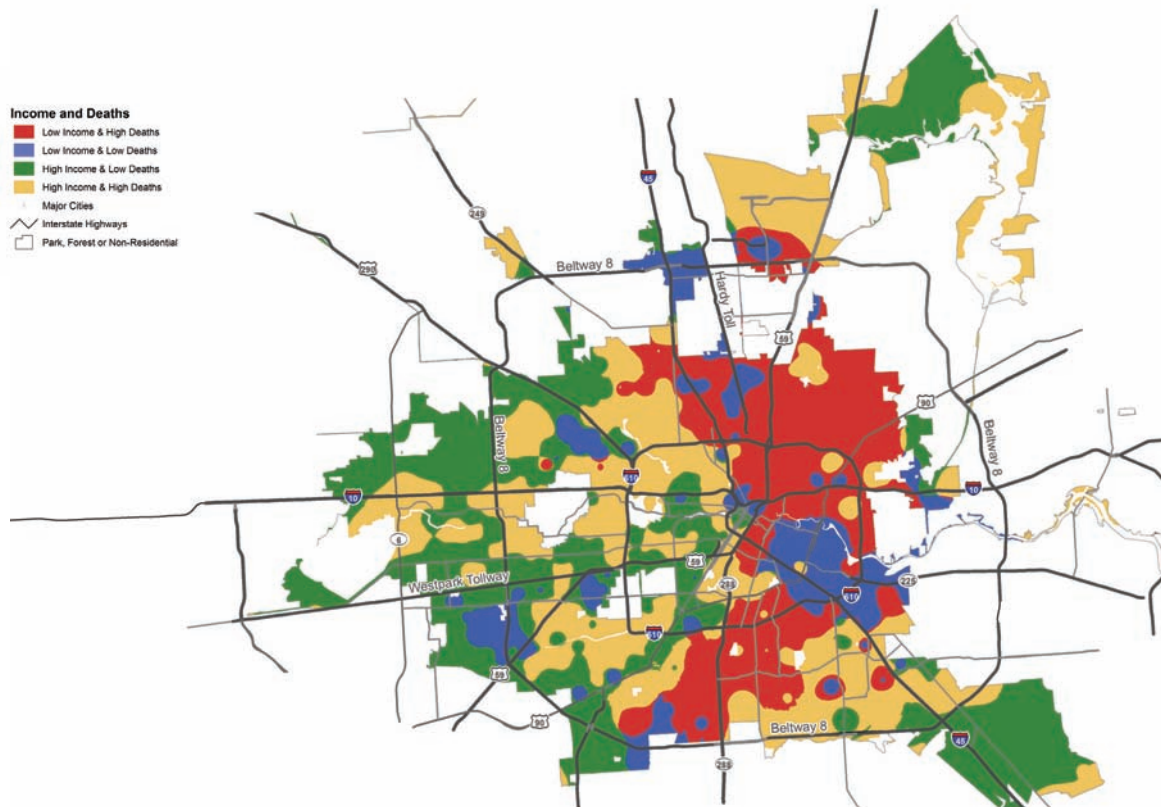
There is a connection between lack of supermarkets and diet-related disease.

- 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 obesity and other diet-related health issues, while people living in communities with a supermarket are more likely to maintain a healthy weight.<sup>15</sup>

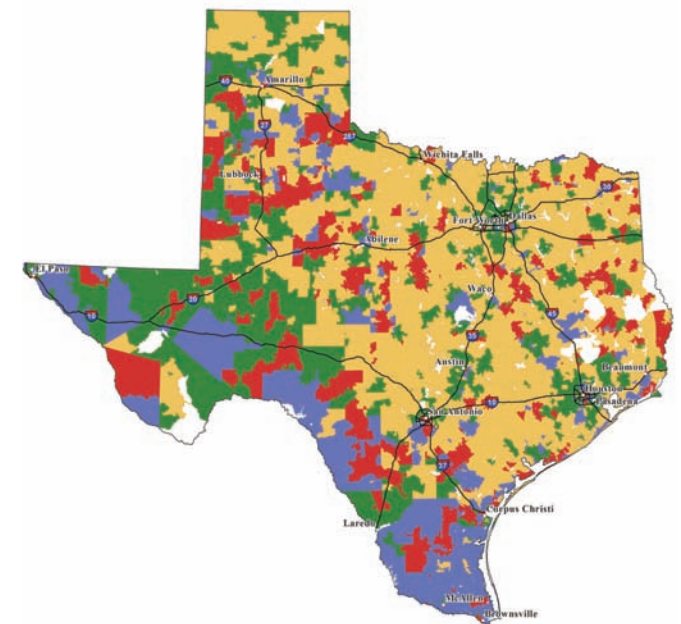
One study, for example, found lower body mass index among adolescents who live near a supermarket.<sup>16</sup> Another documented that fruit and vegetable intake increases as much as 32 percent for each additional supermarket in a community.<sup>17</sup>

**MAP 5A/B:** *Income and Diet-Related Deaths* shows diet-related mortality data by income. 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.

5A: Income and Diet-Related Deaths in Houston



5B: Income and Diet-Related Deaths in Texas



Diet-related diseases, such as hypertension, obesity and diabetes, create untold suffering and expense in families and communities. Heart disease is responsible for one in four deaths in Harris County and the area has elevated rates of high blood pressure and high blood cholesterol, diet-related indicators linked to cardiovascular disease.<sup>18</sup> Diet-related deaths are associated with many factors, including the lack of access to a nutritionally adequate diet.

disease. These areas have the greatest need for more supermarkets.

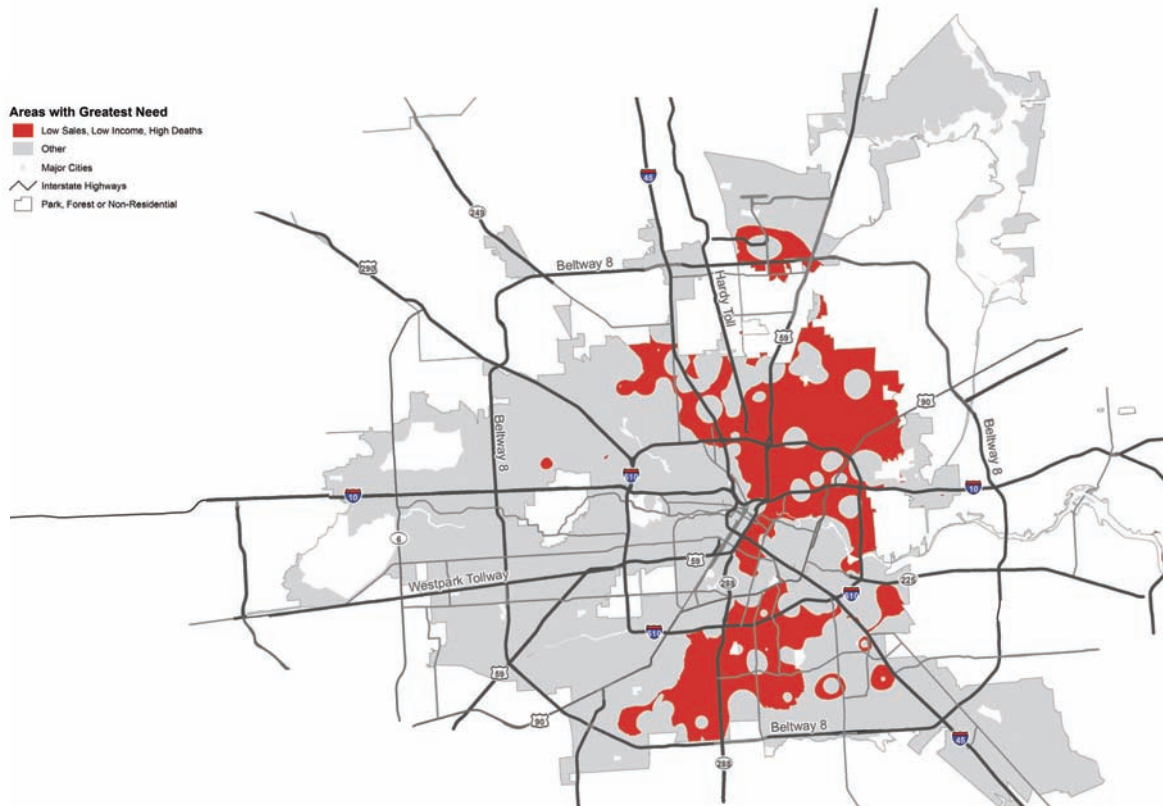
To provide affordable and nutritious food in these neighborhoods, the City of Houston and the State of Texas should encourage new supermarket development in lower-income areas where there are high rates of diet-related diseases and few supermarkets.

Increasing the availability of nutritious and affordable food in neighborhoods with high rates of diet-related diseases does not guarantee a reduction in their incidence. However, leading public health experts, including the Centers for Disease Control and Prevention and the Institute of Medicine, agree that it is a critical component of the fight against obesity.

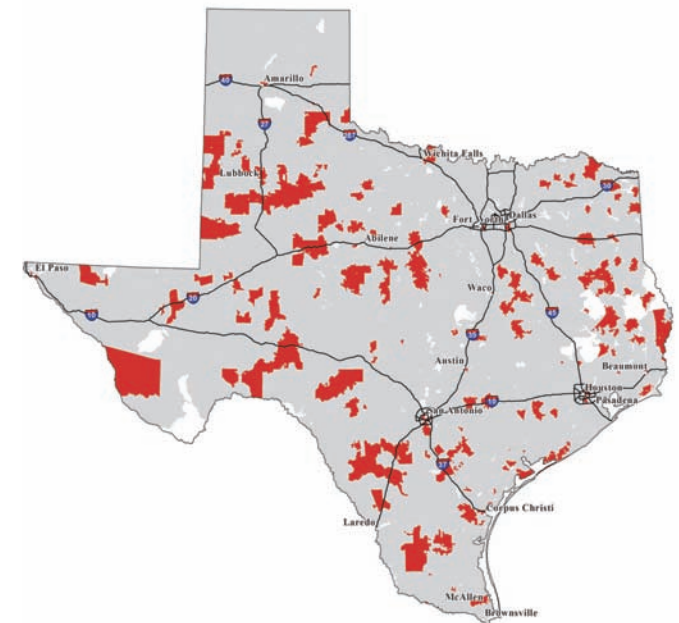
*Leading public health experts agree that increasing access to supermarkets in underserved communities is a critical component of the fight against obesity.*

**MAP 6A/B:** *Areas with Greatest Need* displays lower-income communities where there are low supermarket sales and a high number of deaths due to diet-related

**6A:** Areas with Greatest Need in Houston



**6B:** Areas with Greatest Need in Texas



# CONCLUSION

**The lack of access to supermarkets is a problem in many neighborhoods in Houston especially in lower-income areas where the incidence of obesity is alarmingly high.**

Houston can be seen as representative of the state, as these issues affect residents in lower-income neighborhoods and rural communities across Texas. The lack of supermarkets in many communities means that residents must shop at convenience and corner stores with higher prices and lower-quality food. Diets that rely on food from convenience stores are often higher in sugar and fat, contributing to the incidence of diet-related disease.

The increased incidence of diet-related diseases in lower-income neighborhoods suggests that the public sector needs to invest in supermarket development in 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. As supermarkets replaced earlier forms of food retailing, such as public markets, the public sector largely withdrew from food retailing. 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.

These consequences are stark for people of lower incomes. People who live in lower-income areas without access to supermarkets 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 fresh, affordable and nutritious food plays a role in determining what people eat.<sup>19, 20</sup> People who can only access poor food choices eat poorly.

Through mapping, this study shows that many lower-income neighborhoods in Houston, and communities across Texas, have both poor supermarket access and a high incidence of diet-related deaths. Much like the Houston area, Texas has too few supermarkets compared to national averages. This study demonstrates that this issue is related to significant health problems that adversely impact lower-income neighborhoods and in turn cost the state billions of dollars.

# RECOMMENDATIONS

**Houston — and Texas — must address the critical need for more supermarkets in many communities.**

The number of supermarkets in a neighborhood is a key factor contributing to the health and economic development of that community. People living in lower-income areas without access to supermarkets 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 supermarkets in underserved communities and improve the health of children and families in Houston and across the state.



We recommend that Houston, as well as state and local governments in the region,

**Convene leaders from the supermarket industry, government, public health, economic development and civic sectors to develop a strategy to create more supermarkets in lower-income communities.**

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

## GIS Methodology

All Texas statewide analysis was at the ZIP code level of geography and is prefixed by A); all Houston citywide analysis was done at the census tract level using interpolated rasters and density grids and is prefixed by B).

### SUPERMARKET SALES

Supermarkets in the 2009 Trade Dimensions retail database were included in the analysis of sales. For the purposes of this study, the definition of a supermarket is any store that has an SIC code of 541105 and an annual sales volume of greater than \$2 million. There were 2,068 supermarkets in Texas with an aggregate weekly sales volume of \$1,245,360,000, and 178 supermarkets in Houston with an aggregate weekly sales volume of \$74,139,000. Stores were plotted using the latitude and longitude coordinates for each record and classified into two categories: above and below \$150,000 in weekly sales volume. Values of sales density were used to classify the A) ZIP codes and B) raster grid into the four categories shown in Map 1: Weekly Sales Volume for Supermarkets.

### POPULATION

Population data for the State of Texas by ZIP code and City of Houston by census tract was retrieved from the US Census Bureau website ([www.census.gov](http://www.census.gov)) for the year 2000 decennial census (Texas total of 20,853,232 people; Houston total of 1,953,631 people). Geographies with no population were removed from the analysis, as indicated on the maps.

### SALES AND POPULATION

A) The weekly sales volume was divided by the total population of each ZIP code. The result was then divided by \$59.72 (the statewide ratio of sales to population:  $\$1,245,360,000/20,853,232$ ) to create an odds ratio for weekly supermarket sales per person for Texas. B) The density of weekly sales volume raster was divided by the density of total population raster. The result was then divided by \$37.95 (the citywide ratio of sales to population:  $\$74,139,000/1,953,631$ ) to create a "sales" odds ratio for weekly supermarket sales per person. An odds ratio of 1 is equivalent to the statewide/citywide rate. Anything below 1 is below the statewide/citywide rate. An odds ratio of 2 means the rate is twice the statewide/citywide rate. This is used for Map 2: Supermarket Sales and Total Population.

### INCOME

Median household income (Texas: \$39,927; Houston: \$36,616), number of households (Texas: 7,393,884; Houston: 717,945), and per capita income data were retrieved from the US Census Bureau website ([www.census.gov](http://www.census.gov)) for the year 2000 decennial census. Median household income was multiplied by number of households, and the result was divided by total population to create a per capita income per person (Texas: \$14,156.83; Houston: \$13,456.11). A) Local per capita income by ZIP code was divided by this number giving an "income" odds ratio above or below the statewide rate. B) Local per capita income by census tract was divided by the citywide number. 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 odds citywide rate.

### SALES AND INCOME

The "sales" and "income" odds ratios were combined resulting in four distinct values which correspond to the four possible combinations of high and low odds ratios, which were used to classify Map 3: Supermarket Sales and Income and Map 4: Low Supermarket Sales and Low Income.

### DIET-RELATED DEATHS

The Texas Department of State Health Services provided mortality data for the specified list of ICD-10 codes for the year 2006. A) A total of 156,525 diet-related deaths were mapped at the ZIP code level for Texas, and B) a total of 11,299 deaths were mapped at the census tract level for Houston. The data were summarized based upon the ZIP code number/census tract number to obtain a count of diet-related deaths per ZIP code/census tract.

### DIET-RELATED DEATHS AND POPULATION

The total number of deaths attributed to each ZIP code/census tract was divided by the total population of that ZIP code/census tract. This result was divided by the statewide/citywide ratio of diet-related deaths to total population (Texas:  $156,525/20,853,232 = 0.007506$ , or 75 diet-related deaths per 10,000 people; Houston:  $11,299/1,953,631 = 0.005784$ , or 58 diet-related deaths per 10,000 people), to calculate an odds ratio. A) A new binary field was created to store whether the ZIP code had a "deaths" odds ratio above or below the statewide rate. B) 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 odds citywide rate.

### DIET-RELATED DEATHS AND INCOME

The two A) binary fields and B) rasters of "deaths" and "income" odds ratios were combined through multiplication to calculate a new layer. This resulted in four distinct values which correspond to the four possible combinations of high and low deaths and income odds ratios, which were used to classify Map 5: Income and Diet-related Deaths.

### DIET-RELATED DEATHS, SALES AND INCOME

A) To combine all three variables, a new field was created and calculated by ZIP code as the product of "deaths" odds and the "Low Supermarket Sales and Low Income" variable. B) The two reclassified rasters of deaths and "Low Supermarket Sales and Low Income" variable were combined to create a new raster layer. These results were reclassified to only retain one value: High Deaths, Low Supermarket Sales and Low Income areas and mapped to produce Map 6: Areas with Greatest Need.

## Endnotes

- <sup>1</sup> National supermarket data based on data from the Food Marketing Institute ([www.fmi.org](http://www.fmi.org)) and U.S. Census Bureau ([www.census.gov](http://www.census.gov)). Texas figures from Trade Dimensions International, Inc. (2009). National average: 11.6 supermarkets per 100,000 people; Greater Houston: 8.2 per 100,000; Texas: 8.8 per 100,000.
- <sup>2</sup> Powell L., Slater, S., Mirtcheva, D., Bao, Y., and Chaloupka, F. (2007) Food Store Availability and Neighborhood Characteristics in the United States. *American Journal of Preventive Medicine*. 44, 189–95.
- <sup>3</sup> Department of State Health Services, Center for Health Statistics, 2009 Texas Behavioral Risk Factors Surveillance System. Available online at: [http://www.dshs.state.tx.us/chs/brfss/query/brfss\\_form.shtm](http://www.dshs.state.tx.us/chs/brfss/query/brfss_form.shtm)
- <sup>4</sup> Treuhaft, S. and Karpyn, A. (2010) The Grocery Gap: Who Has Access to Healthy Food and Why It Matters. Oakland (CA): PolicyLink and The Food Trust.
- <sup>5</sup> Centers for Disease Control and Prevention. Estimated Adult Obesity-Attributable Percentages and Expenditures, by State (BRFSS 1998–2000). Available online at: <http://www.cdc.gov/obesity/causes/economics.html>; Texas comptroller estimates that obesity costs to Texas businesses could reach \$15.8 billion annually by 2025: Combs, S. (2007). Counting Costs and Calories: Measuring the Cost of Obesity to Texas Employers. Available online at: <http://www.window.state.tx.us/specialrpt/obesitycost/>
- <sup>6</sup> Per capita figures derived from: Trade Dimensions International, Inc. (2009). *2009 Marketing Guidebook*. Wilton, CT; US Census Bureau (2000).
- <sup>7</sup> Per capita figures derived from: Trade Dimensions International, Inc. (2009). *2009 Marketing Guidebook*. Wilton, CT; US Census Bureau (2000).
- <sup>8</sup> Department of State Health Services, Center for Health Statistics. 2009 Texas Behavioral Risk Factors Surveillance System. Available online at: [http://www.dshs.state.tx.us/chs/brfss/query/brfss\\_form.shtm](http://www.dshs.state.tx.us/chs/brfss/query/brfss_form.shtm)
- <sup>9</sup> Trade Dimensions International, Inc. (2009). *2009 Marketing Guidebook*. Wilton, CT; US Census Bureau (2000).
- <sup>10</sup> Sharkey, Joseph R. Jr. and Horel, Scott S. (2008). Neighborhood Socioeconomic Deprivation and Minority Composition are Associated with Better Potential Spatial Access to the Ground-Truthed Food Environment in a Large Rural Area. *The Journal of Nutrition*. 138(3), 620–627.
- <sup>11</sup> All data was prepared in MS Excel and mapped in ArcGIS 9.3.1 or 10 with Spatial Analyst extension. Also used were ET GeoWizards v9.5.1 or v10 and Hawth's Analysis Tools v3.27. The coordinate system and projection used during mapping and analysis were the North American Datum 1983 and Texas State Plane Central Zone.
- <sup>12</sup> Trade Dimensions International, Inc. (2009). *2009 Marketing Guidebook*. Wilton, CT; US Census Bureau (2000).
- <sup>13</sup> Treuhaft, S. and Karpyn, A. (2010) The Grocery Gap: Who Has Access to Healthy Food and Why It Matters. Oakland (CA): PolicyLink and The Food Trust.
- <sup>14</sup> Powell, L.M., Auld, C., Chaloupka, F.J., O'Malley, P.M., and Johnston, L.D. (2007). *American Journal of Preventive Medicine*, 33(4), S301–S307.
- <sup>15</sup> Morland, K., Wing, S., and Diez Roux, A.V. (2002). The Contextual Effect of the Local Food Environment on Residents' Diets: The Atherosclerosis Risk in Communities Study. *American Journal of Public Health*. 92(11), 1761–1767.
- <sup>16</sup> HCPHES. Harris County Public Health and Environmental Services: 2008 Annual Report. Available online at: <http://www.hcpbes.org/2008annual.pdf>
- <sup>17</sup> Treuhaft, S. and Karpyn, A. (2010) The Grocery Gap: Who Has Access to Healthy Food and Why It Matters. Oakland (CA): PolicyLink and The Food Trust.
- <sup>18</sup> Morland, K., Wing, S., and Diez Roux, A.V. (2002). The Contextual Effect of the Local Food Environment on Residents' Diets: The Atherosclerosis Risk in Communities Study. *American Journal of Public Health*. 92(11), 1761–1767.
- <sup>19</sup> Sharkey, Joseph R. Jr. and Horel, Scott S. (2008). Neighborhood Socioeconomic Deprivation and Minority Composition are Associated with Better Potential Spatial Access to the Ground—Truthed Food Environment in a Large Rural Area. *The Journal of Nutrition*. 138(3), 620–627.
- <sup>20</sup> Bailey, Jon (2010). Rural Grocery Stores: Importance and Challenges. Center for Rural Affairs. Rural Research and Analysis Program. Available online at: <http://files.cfra.org/pdf/rural-grocery-stores.pdf>

## Ensuring That Everyone Has Access To Affordable, Nutritious Food

The Food Trust, a 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 almost 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 recognized as a regional and national leader in the prevention of childhood obesity and other diet-related diseases for this and other notable initiatives to increase food access in underserved neighborhood, including the Healthy Corner Store Initiative and the Pennsylvania Fresh Food Financing Initiative, a public/private partnership which has sparked the development of 88 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](http://thefoodtrust.org) or contact The Food Trust.

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*“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





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