Healthy Food Within Reach

Helping Bay Area residents find, afford and choose healthy food
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Executive Summary

One in 10 adults in the Bay Area struggle to consistently find three meals a day. More than half of all adults are overweight or obese. And residents in many of the region’s communities live in neighborhoods where fast food restaurants and convenience stores abound, while grocery stores are scarce or don’t exist at all. To meet our basic needs, improve public health and enhance our quality of life, Bay Area residents must have access to healthy food.

There are four main barriers to food access that prevent someone from having a healthy diet:

- Physical access: Can you find healthy food?
- Economic access: Can you afford healthy food?
- Educational access: Do you know how to make healthy choices and how to cook?
- Cultural access: Do you want the healthy food that is available and affordable?

City and county agencies have a variety of tools they can use to address these barriers. SPUR’s Food Access Task Force analyzed different policy tools as they have been used both inside and outside the Bay Area to help evaluate the effectiveness of various strategies. We found that a one-size-fits-all approach rarely works. A retail strategy for a dense urban neighborhood is unlikely to work as well in a suburban neighborhood. A social service outreach program based on one language or culture may not translate well to a different community. To make progress on food access, policymakers must examine the barriers at a neighborhood scale.

We also found that some strategies should be evaluated in more detail to determine their cost-effectiveness and their long-term impacts on public health. This kind of research would be especially helpful for evaluating food retail initiatives and would provide policymakers with critical information for how to focus their efforts.

City and county agencies should not try to address food access by themselves, nor do they necessarily need to lead all the initiatives described in this report. While we have targeted our recommendations to city and county governments, all of our recommended actions should involve other community stakeholders. Local merchant associations, food banks, nonprofit educators, food policy councils and other similar groups are important partners — and in some cases may be in the best position to lead an effort in partnership with local government agencies.

SPUR recommends 12 actions that local governments can take to identify and address these issues in Bay Area communities.

**STRATEGY 1: Understand the local context when developing food access strategies**

- **Recommendation 1:** Conduct an assessment of existing data to develop a targeted set of food access programs and initiatives.

**STRATEGY 2: Increase the purchasing power of low-income residents to improve their economic access to healthy food**

- **Recommendation 2:** Maximize enrollment in federally funded food assistance programs.
- **Recommendation 3:** Support long-term funding for healthy food incentive programs.

**STRATEGY 3: Make healthy food available in all neighborhoods**

- **Recommendation 4:** Tailor grocery store attraction and corner-store conversion initiatives at the neighborhood level.
- **Recommendation 5:** Use zoning thoughtfully to shape food retail options.
- **Recommendation 6:** Link public financial assistance for food retailers with requirements that they offer healthy options.
- **Recommendation 7:** Support food pantries and emergency food assistance for those who cannot afford, or are not able, to shop at food retailers.

**STRATEGY 4: Ensure that people know how to cook and make healthy food choices**

- **Recommendation 8:** Support educational initiatives promoting food literacy and encourage their integration into existing food access programs.

**STRATEGY 5: Reduce demand for unhealthy food while increasing demand for healthier options**

- **Recommendation 9:** Limit or prohibit the sale and marketing of unhealthy food in environments frequented by children, especially at facilities that receive government funding.
- **Recommendation 10:** Engage selectively in publicly funded marketing campaigns.
- **Recommendation 11:** Tax sugar-sweetened beverages to decrease consumption and generate revenue for initiatives addressing diet-related disease and food access.

**STRATEGY 6: Support research that evaluates and improves food access initiatives**

- **Recommendation 12:** Partner with local academic institutions to evaluate food access programs, and give preference to projects that include robust evaluation.

See pages 34-35 for a plan of action identifying the parties responsible for implementing these recommendations.
How Can Bay Area Cities Best Support Access to Healthy Food?

The Bay Area is a global culinary capital known for offering delicious food from around the region and the world. Our restaurants, grocery stores and farms helped pioneer the celebration of fresh, local and organic food — as well as the business models that make this thriving food culture possible. Yet many Bay Area residents, like many Americans nationwide, face a reality far removed from this celebration of cuisine. In communities throughout the region, families have trouble affording three meals a day, grappling with the effects of diet-related diseases such as obesity and diabetes, and have to travel far to find quality grocery stores that offer fresh, healthy food.

In the past decade, these problems have intensified, and local governments have begun responding with a variety of initiatives. City and county agencies have worked to attract supermarkets to neighborhoods that haven’t had a full-service grocer in years. They’ve partnered with corner stores to stock healthier options. They’ve increased enrollment in food assistance programs, promoted urban agriculture and more. Each of these programs attempts to improve access to healthy food by approaching the problem from a different angle. Some have been more successful than others. Despite these efforts, there is more work to be done to solve the problems of food insecurity, diet-related disease and unhealthy food retail environments.

This report analyzes these various initiatives and provides policymakers with a recommended plan of action. SPUR’s Food Access Task Force reviewed existing programs in the Bay Area as well as in other parts of the country. Many of the programs we studied involve commercial food retailers such as grocery and corner stores, but we also analyzed important noncommercial food providers such as food pantries, home-delivered meals and free dining rooms. Based on our research and findings, we offer policymakers a framework for improving food access and recommendations for how to prioritize their efforts going forward.

Defining Food Access: Four Barriers to Healthy Food Consumption

We define food access as an individual or family’s ability to obtain “sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.”1 There are four main barriers to food access; see Figure 1. We need to address all four of these barriers to promote a more wholesome diet for individuals and a self-sustaining healthy food economy for communities.2

In the past decade, local government agencies and many nonprofit organizations have focused heavily on addressing physical access through initiatives such as attracting grocery stores, improving corner store offerings, expanding food pantries and encouraging the start of new farmers’ markets. These initiatives can significantly improve the lives of residents, but by their nature they are focused only on the supply side of a healthy food economy. For most initiatives to be economically self-sustaining, the other barriers outlined above — which underlie demand for healthy food — must also be addressed. A new grocery store will fail without enough customers, corner stores will stop stocking healthy items that have anemic sales, and farmers’ markets can’t succeed without shoppers who have the time, knowledge and desire to cook what’s on offer. Policymakers interested in addressing food access must work to understand which barriers are present in their communities and to address these obstacles simultaneously.

Defining Healthy and Unhealthy Food

Throughout this report, we emphasize the importance of increasing access to “healthy food” and reducing consumption of “unhealthy food.” All calories are not created equal. Our diet is closely tied to our health, and improving food access should improve not just the quantity of food in someone’s diet but the quality. Providing highly processed food with little nutritional value may address hunger, but it could also contribute to obesity and other diet-related health problems. Successful efforts to improve food access should reduce hunger and promote a healthy diet at the same time.

In this report, “healthy food” refers to foods that support the federal government’s Dietary Guidelines for Americans, which state that “a healthy eating pattern limits intake of sodium, solid fats, added sugars, and refined grains and emphasizes nutrient-dense foods and beverages — vegetables, fruits, whole grains, fat-free or low-fat milk and milk products, seafood, lean meats and poultry, eggs, beans and peas, and nuts and seeds.”3 “Unhealthy food” refers to foods that the Institute of Medicine’s Committee on Accelerating Progress in Obesity Prevention describes as “calorie-dense and low in naturally occurring nutrients. Such foods and beverages contribute little fiber and few essential nutrients and phytochemicals but contain added fats, sweeteners, sodium, and other ingredients.”4 While many nutrition professionals are working to devise a system to identify and label healthy and unhealthy foods, currently there is no widely accepted standard in place to categorize individual food items as healthy or unhealthy.5 Instead, the definitions above provide categories of food that generally support or detract from a person’s health when consumed frequently.

1 The nine counties are Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma.
2 This definition is based on the United Nations’ Food and Agriculture Organization’s definition of “food insecurity,” a term that is in many ways similar to “food access.” In this report we use the framework and terminology of “food access” to describe all the barriers that people face in meeting their food needs. We use the phrases “food security” and “food insecurity” in the context of the economic barriers to obtaining food. See: Food and Agriculture Organization, “Declaration of the World Summit on Food Security” (November 2009).
Why Food Access Matters

Access to healthy food in the Bay Area is intimately tied to three major problems facing the region:

1. **Hunger and food insecurity:** Meeting basic dietary needs to lead an active life
2. **Public health:** Improving diet to reduce the historically high levels of obesity and diabetes
3. **Quality of life:** Improving neighborhood food retail options

Below we present a series of baseline measurements that illustrate each of these problems and can be used to evaluate future progress in addressing them.

What Success Looks Like

What tangible metrics can we use to measure increased food access? In the long term, we would feel confident that access to healthy food had improved if the following changes occurred to a significant degree throughout the Bay Area and across income levels:

- A decrease in self-reported food insecurity
- A decline in both obesity and diabetes consumption rates
- An increase in fruit and vegetable consumption rates
- An increase in the number of people reporting access to fresh fruits and vegetables that they can afford
- A decrease in the proportion of residents living in poverty, according to the California Poverty Measure thresholds
- A decrease in the proportion of households living below the Self-Sufficiency Standard for California counties

While it is beyond the scope of this report to address the root causes of poverty, income levels are important proxies for food security, and sustainable, long-term success will mean increasing the number of people who can meet their dietary needs without public or private assistance.

Accessing Hunger and Food Insecurity Through Food Access

Even in a relatively wealthy region like the Bay Area, many people experience food insecurity, a category that includes both those who are chronically hungry and those who are uncertain about having enough food to eat next, if they'll be able to obtain enough food for an active and healthy life.

Ten percent of all adults in the Bay Area reported being food insecure in 2011–2012. While the region’s rate is lower than the statewide average of 14 percent, food insecurity varies significantly by county. In some places, such as Alameda and Contra Costa counties, the rate approaches the statewide average, while Solano County’s rate of food insecurity exceeds it (see Figure 2).2

Between 2001 and 2012, the share of adults in the Bay Area who said they had trouble affording sufficient food increased by 72 percent, with the most dramatic jump occurring at the start of the Great Recession. As of 2012, nearly one out of 10 adults in the Bay Area — 572,000 total — reported being food insecure (see Figure 3). Looking at the Bay Area within a national context, our region’s trend closely parallels that of the rest of the country.

What Food insecurity is most often caused by not having enough money for basic expenses. When cash is tight, individuals often choose to eat less or eat less healthfully in order to cover other expenses, such as housing. Recognizing this phenomenon, analysts often use economic measures to estimate poverty and food insecurity.

The most commonly used economic standard for estimating poverty — and identifying individuals and families at risk of food insecurity — is the federal poverty threshold. Created in the 1960s and updated annually, this threshold is determined by estimating the costs of a basic diet and extrapolating a basic yearly budget for all household expenses from that figure.3 Though widely used, the federal poverty threshold relies on national averages and does not reflect regional differences in cost of living. As such, it does not accurately measure food security in expensive regions like the Bay Area.4

The California Poverty Measure, produced by the Public Policy Institute of California, provides a more accurate estimate of the income level at which an individual or family would be unable to meet their basic needs. The poverty threshold reflects changes in the cost of living by county and factors in government assistance in the form of cash benefits (such as child tax credits and the earned income tax credit) and in-kind benefits (such as food stamps). Approximately one in five Bay Area residents were considered to be living in poverty in 2011 according to this measure, with poverty rates ranging from 16 percent to 26 percent depending on the county (see Figure 4 on page 10).

Addressing Hunger and Food Insecurity Through Food Access

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2. In 2013, the federal poverty threshold for a family of one parent and two children was $18,769. For a family of two parents and two children, it was $33,634. See: U.S. Census Bureau, “Poverty Thresholds for 2013 by Size of Family and Number of Related Children Under 18 Years,” http://www.census.gov/hhes/www/poverty/thresholds/index.html. See also Appendix.


Sources: UCLA Center for Health Policy Research, California Health Interview Survey; “Adult health Profiles”, SPUR analysis.
Improving Public Health Through Food Access

While numerous factors such as physical activity and genetics contribute to a person’s weight, studies continue to show that what we eat has a strong influence on our weight and our likelihood of developing a diet-related disease such as diabetes.16 These health conditions don’t just impact individuals’ lives; they also burden the health system through increased hospitalizations and treatment costs. A 2006 study estimated that the overall cost to public and private insurers for treating obesity cases was twice to three times the average cost of treating all children.17

Obesity

The Bay Area’s adult obesity rates steadily increased from 2001 to 2011, from 16 percent to 20 percent. This is a historically high level and only slightly lower than the statewide average of 25 percent.18 Overweight and obesity rates also vary substantially from county to county (see Figure 5). Over a third of Solano County residents are obese, compared to one in 10 people in San Francisco.

In the past decade, changes in obesity rates have not been distributed equitably across income levels. The most recent data available shows that rates of obesity are twice as high among Bay Area residents living below the self-sufficiency standard compared to those living above it.19

Over the long term, it’s important to track not only whether more people have become food secure but whether greater numbers of people have the income they need to be food secure independent of government or private assistance. The California Self-Sufficiency Standard measures the income necessary for a family to meet its basic needs without assistance.20 According to the index, a family of three (one preschool child and a school-age child) in San Francisco required an income of $79,092 in 2014 to be self-sufficient, while a family of three (one preschool child) required $69,670. In 2005 in most Bay Area counties, to meet the dietary goals of the basic food plan laid out by the U.S. Department of Agriculture (USDA), a family of three would need to spend approximately $680 per month on food while a family of four would need to spend approximately $930 per month. The thresholds for family of four for all nine Bay Area counties are shown in Figure 4, and data for a family of three is available in Appendix I. In the Bay Area in 2012, between one-third and one-fourth of all households lived below the self-sufficiency threshold, depending on the county. Both the California Poverty Measure and Self-Sufficiency Standard, while not direct measurements of food insecurity, provide useful economic benchmarks for tracking progress in addressing poverty, the underlying cause of food insecurity.

### FIGURE 4

**Self-Sufficiency and Poverty Thresholds by County**

The California Poverty Measure estimates the income level below which an individual or a family would be unable to meet their basic needs. It is adjusted for changes in the cost of living by county and factors in government assistance. The California Self-Sufficiency Standard, meanwhile, measures what income an individual or family would need to meet their basic needs without assistance.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda</td>
<td>$31,701</td>
<td>18%</td>
<td>$72,830</td>
<td>29%</td>
</tr>
<tr>
<td>Contra Costa</td>
<td>$31,743</td>
<td>19%</td>
<td>$71,711</td>
<td>26%</td>
</tr>
<tr>
<td>Marin</td>
<td>$35,785</td>
<td>19%</td>
<td>$87,263</td>
<td>30%</td>
</tr>
<tr>
<td>Napa</td>
<td>$31,335</td>
<td>26%</td>
<td>$74,110</td>
<td>27%</td>
</tr>
<tr>
<td>San Francisco</td>
<td>$36,349</td>
<td>23%</td>
<td>$79,092</td>
<td>26%</td>
</tr>
<tr>
<td>San Mateo</td>
<td>$36,504</td>
<td>18%</td>
<td>$85,090</td>
<td>29%</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>$34,377</td>
<td>19%</td>
<td>$81,774</td>
<td>30%</td>
</tr>
<tr>
<td>Solano</td>
<td>$30,898</td>
<td>17%</td>
<td>$70,434</td>
<td>34%</td>
</tr>
<tr>
<td>Sonoma</td>
<td>$30,898</td>
<td>17%</td>
<td>$70,434</td>
<td>34%</td>
</tr>
</tbody>
</table>

11 Ibid.
12 Ibid.
15 Institute of Medicine, Accelerating the Progress in Obesity Prevention: Solving the Weight of the Nation, 54–61 and 46–54.
17 CHS results, calculated using AaCHS, [http://ask.chs.uc.edu/main/default.asp](http://ask.chs.uc.edu/main/default.asp). The CHS survey follows CDC guidelines, which define obesity based on a body mass index (BMI) calculation. Individuals with a BMI of 30 or greater are considered obese, and individuals with a BMI between 25 and 20 are considered overweight. The formula for (BMI in metric measurements) is weight in kilograms divided by height in meters squared. See: Centers for Disease Control and Prevention, “About BMI for Adults,” [http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html](http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html).
19 Institute of Medicine, What’s Eating America: An Obesogenic Environment (2005), 3, 14, 15, 22, and 23.
22 According to the index, a family of three (one preschooler and one school-age child) in San Francisco required an income of $79,092 in 2014 to be self-sufficient, while a family of three (one preschooler) required $69,670. In 2005 in most Bay Area counties, to meet the dietary goals of the basic food plan laid out by the U.S. Department of Agriculture (USDA), a family of three would need to spend approximately $680 per month on food while a family of four would need to spend approximately $930 per month. The thresholds for families of four for all nine Bay Area counties are shown in Figure 4, and data for a family of three is available in Appendix I. In the Bay Area in 2012, between one-third and one-fourth of all households lived below the self-sufficiency threshold, depending on the county. Both the California Poverty Measure and Self-Sufficiency Standard, while not direct measurements of food insecurity, provide useful economic benchmarks for tracking progress in addressing poverty, the underlying cause of food insecurity.

### FIGURE 5

**Adult Obesity Rates Vary Substantially From County to County**

Rates of obese and overweight adults by county, 2011-2012

<table>
<thead>
<tr>
<th>County</th>
<th>Underweight or Obese</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda</td>
<td>21%</td>
<td>55%</td>
</tr>
<tr>
<td>Contra Costa</td>
<td>24%</td>
<td>63%</td>
</tr>
<tr>
<td>Marin</td>
<td>18%</td>
<td>47%</td>
</tr>
<tr>
<td>Napa</td>
<td>29%</td>
<td>61%</td>
</tr>
<tr>
<td>San Francisco</td>
<td>29%</td>
<td>61%</td>
</tr>
<tr>
<td>San Mateo</td>
<td>17%</td>
<td>51%</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>19%</td>
<td>54%</td>
</tr>
<tr>
<td>Solano</td>
<td>16%</td>
<td>69%</td>
</tr>
<tr>
<td>Sonoma</td>
<td>22%</td>
<td>55%</td>
</tr>
<tr>
<td>California</td>
<td>25%</td>
<td>60%</td>
</tr>
</tbody>
</table>


### FIGURE 6

**Obesity is More Prevalent, and Growing Faster, Among Very Low-Income Residents**

Adult obesity rates in the Bay Area by household income ranges

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Rates of Obese and Overweight Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>$20,000 — $29,999</td>
<td>25%</td>
</tr>
<tr>
<td>$15,000 — $19,999</td>
<td>20%</td>
</tr>
<tr>
<td>$10,000 — $14,999</td>
<td>15%</td>
</tr>
<tr>
<td>$0 — $9,999</td>
<td>10%</td>
</tr>
<tr>
<td>$5,000 — $9,999</td>
<td>5%</td>
</tr>
<tr>
<td>$0 — $4,999</td>
<td>2%</td>
</tr>
</tbody>
</table>
Area adults with annual household incomes below $15,000 (28 percent) than among those with annual incomes of $100,000 or more (14 percent). As illustrated in Figure 6, the trends of adult obesity rates in the past decade differ among income brackets. However, despite the important differences, all income groups in the Bay Area have seen their rates of obesity increase or, at best, stay steady high in the past decade.

Diabetes

Another public health issue strongly related to diet is Type II diabetes.22

Dietary Behavior

Tracking obesity and diabetes — primary public health concerns — is important in evaluating the outcome of food access efforts. Tracking dietary choices — a measurement of individual behavior — is another way to evaluate the impact of efforts to improve access to healthy foods. Public health officials commonly use fruit and vegetable consumption as a proxy measurement for healthy eating because these products are an integral component of a healthy diet.23 Currently, between 60 and 75 percent of Bay Area adults report consuming less than three fruits and vegetables a day, depending on the county.24 This means that the vast majority of adults are not meeting the USDA and Centers for Disease Control and Prevention’s recommendation that most people eat at least four to five total servings of fruits and vegetables each day.25

Improving Quality of Life Through Food Access

Improving food access also improves quality of life by increasing the convenience and availability of affordable, healthy and desirable food. Residents in some neighborhoods of the Bay Area — especially low-income and rural ones — have to travel significantly farther than their counterparts in other neighborhoods just to find a grocery store or market that offers fresh fruit, vegetables and other healthy items. A longer trip is not just an inconvenience and frustration for many residents, it’s also an equity issue because the transportation costs (in both money and time) to get basics groceries pose a greater burden for lower-income residents.26

One out of every 10 Bay Area adults report that they can find fresh fruit and vegetables in their neighborhood only sometimes or never. Of those who can access fresh produce in their neighborhood, one out of every six adults report that they only sometimes find it affordable, and 1 percent report that they never find it affordable.27

Among lower-income residents, the barriers to food access are even more stark. Fifteen percent of households with an annual income less than $20,000 report that they can only sometimes, or never, find fresh produce in their neighborhood, while nearly 30 percent report that they can only sometimes, or never, access affordable produce in their neighborhood (see Figure 7). Though not everyone shops for food within their own neighborhood, many people do — and more might if they could find affordable options that matched their tastes.28 Increasing the availability of produce, dairy, meat, whole grains and other basic ingredients in a neighborhood where those options are currently lacking can help improve the quality of life for the area’s residents.

While the availability and affordability of healthy retail options in a neighborhood has an impact on residents’ quality of life, research indicates that when it comes to public health, people’s food choices are influenced more by the mix of food options around them — including convenience stores and fast food restaurants — than they are by healthy options alone.29

28. For a general analysis of food costs as a share of income in the Bay Area, see: Metropolitan Transportation Commission, Transportation 2035 Plan for the Bay Area: Equity Analysis Report (February 2009), 24-25. Additionally, survey data shows that 25 percent of the Bay Area’s low-income residents commute by transit, walking or biking compared to 13 percent of residents with higher incomes. Assuming that the numbers are similar for nonwork travel, the time cost — and likely monetary cost as well — for lower-income residents to run basic errands when a grocery store is far from home is greater than it is for higher-income residents, who are more likely to use a car. See: Metropolitan Transportation Commission and Association of Bay Area Governments, Plan Bay Area Equity Analysis Report (July 2015), 3-8, 3-4.
30. A University of Washington study published in 2014 found that, especially among residents with access to a car, two-thirds of people in than sample — regardless of income — did not shop at the grocery store closest to their home or to their workplace. Instead, factors such as price and store quality had a greater influence on where people shopped. See: Anju Aggarwal et al., “Access to Supermarkets and Fruit and Vegetable Consumption,” American Journal of Public Health, vol. 104, no. 5 (May 2014), 897-903.
Starting at the turn of this century, many advocates framed food access as an issue of bringing healthy food retail into places that had none — often called “food deserts.” Few places, however, are completely lacking in food options. Rather, in called “food deserts.” Few places, however, are

The index doesn’t include farmers’ markets, nor completely lacking in food options. Rather, in called “food deserts.” Few places, however, are

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The Centers for Disease Control and Prevention, responding to this more nuanced analysis of the physical food environment, created the Modified Retail Food Environment Index, which calculates the ratio of healthy food retailers to total food retailers. It attempts to show “food swamps” on a map. Even with this level of analysis, the Modified Retail Food Environment Index can only paint a partial picture. Measuring the quality of a neighborhood’s food retail options is difficult because the data on retail outlets is imprecise. The index doesn’t include farmers’ markets, nor does it reveal the mix of products available in outlets classified as grocery stores or fast food retailers. But, even with these limitations, our task force concluded that the Modified Retail Food Environment Index data could help policymakers identify areas of their cities and counties with unhealthy retail food environments. We looked at the data for the three central cities of the Bay Area: San Francisco, San Jose and Oakland. (See Figure 8, pages 15-17.) To further refine the maps, SPUR highlighted unhealthy food retail environments in census tracts where 15 percent or more of the households fall below the county-specific California Poverty Measure threshold. (For a more detailed explanation of the methodology that generated these maps, see Appendix 3.) These are the neighborhoods and areas where we believe policymakers should focus their attention and engage local residents, community institutions and retailers.

Neighborhoods With High Poverty and a Lack of Healthy Food Retail Options

Focusing on San Francisco, San Jose and Oakland, SPUR used CDC data to highlight unhealthy food environments in neighborhoods where more than 15 percent of families live in poverty. These areas are where we recommend that policymakers focus food access efforts.

The modified Retail Food Environment Index (mRFEI) measures the ratio of healthy and less-healthy food retailers within a census tract using this formula:

\[
\text{mRFEI} = \frac{\text{# Healthy Food Retailers} + \text{# Less Healthy Food Retailers}}{\text{Total # of Retailers}} \times 100
\]

For this indicator, healthy food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 3 or fewer employees.

For the full description of the Centers for Disease Control and Prevention’s methodology in creating the Modified Retail Food Environment Index, see: Centers for Disease Control and Prevention, Census Tract Level State Maps of the Modified Retail Food Environment Index (2011); ftp://ftp.cdc.gov/pub/Publications/npaap/census-tract-level-state-maps-mrfei_1A6508.pdf.

FIGURE 8

Percent of Food Retail Options Classified as “Healthy” in Census Tracts With High Poverty

- 0-1.5%
- 1.5-5%
- 5-37.5%
- Tracts < 15% of families in poverty
- Parks and open space

San Francisco


The modified Retail Food Environment Index (mRFEI) measures the number of healthy and less-healthy food retailers within a census tract using this formula:

\[
\text{mRFEI} = \frac{\text{# Healthy Food Retailers} + \text{# Less Healthy Food Retailers}}{\text{Total # of Retailers}} \times 100
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Neighborhoods With High Poverty and a Lack of Healthy Food Retail Options

Focusing on San Francisco, San Jose and Oakland, SPUR used CDC data to highlight unhealthy food environments in neighborhoods where more than 15 percent of families live in poverty. These areas are where we recommend that policymakers focus food access efforts.

Sources: Centers for Disease Control and Prevention, Census Track Level State Maps of the Health Food Index (2005); SPUR analysis determined the census tracts with 15 percent of households below the California Poverty Measure. See Appendix 3 for details on this methodology.

The modified Retail Food Environment Index (mRFEI) measures the number of healthy and unhealthy food retailers within a census tract using this formula:

\[
\text{mRFEI} = \frac{\# \text{ Healthy Food Retailers}}{\# \text{ Less Healthy Food Retailers}} + 100
\]

For this indicator, healthy food retailers include supermarkets, large grocery stores, convenience stores, fast food restaurants, and small grocery stores with 2 or fewer employees. Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores with 2 or fewer employees.
City and county agencies can use a variety of strategies to address the four barriers to healthy food access. To evaluate the effectiveness of different strategies, SPUR’s Food Access Task Force analyzed policy tools that have been used both inside and outside the Bay Area. One overarching theme of our analysis is that a one-size-fits-all approach rarely works. A retail strategy for a dense urban neighborhood is unlikely to work as well in a suburban neighborhood. A social service outreach approach based on one language or culture may not translate well to a different community. To make progress on food access, policymakers must examine the barriers at a neighborhood scale.

We have developed six broad strategies, listed below. Within each strategy, we provide specific recommendations, along with an analysis of various policy tools used to address food access.

City and county agencies should not try to address food access by themselves, nor do they necessarily need to lead all the initiatives described here. While we have targeted our recommendations to city and county governments, all of the actions we propose should involve other community stakeholders. Local merchant associations, food banks, nonprofit educators, food policy councils and similar groups are important partners. The government may be the best leader in some cases, but in others nongovernmental groups may be in the best position to spearhead an effort in partnership with local government agencies.

Many of the strategies we studied are relatively new; therefore, metrics on their effectiveness, especially in regard to their public health impacts, are not yet available. This created a challenge in drafting detailed recommendations for some strategies, and it is why we include Recommendation 12, which encourages government agencies to partner with academics to rigorously evaluate food access programs. We expect that future policy work, both by SPUR and other organizations, will provide more specific recommendations based on these evaluations.

**STRATEGY 1**
Understand the local context when developing food access strategies

**Recommendation 1:** Conduct an assessment or use existing data to develop a targeted set of food access programs and initiatives.

**Who:** Public health departments

Statistics in the earlier section of this report clearly show that food access varies dramatically within each city and county by income and by geography. Some neighborhoods and some communities are struggling with high levels of diet-related disease, food insecurity or poor retail food environments. Others are not. And even among places that face challenges when it comes to food access, such as West Oakland and San Francisco’s Tenderloin neighborhood, important differences in each place require city agencies to consider neighborhood-level variables when developing their initiatives and programs.

County public health departments are often in the best position to lead overall food access strategy. These departments have access to pre-existing data on neighborhood income and health. And they can work with local planning departments, economic development agencies and community groups to combine that information with local data on the food retail environment. When collecting information to develop a food access strategy, it is important that agency staff review all available food access data, not just the data one agency has been used by numerous counties. The California Department of Public Health has created a helpful model framework called the Communities of Excellence in Nutrition, Physical Activity and Obesity Prevention, which has been used by numerous counties.

**STRATEGY 2**
Increase the purchasing power of low-income residents to improve their economic access to healthy food

While all four barriers to food access pose obstacles to healthier eating, one of the biggest issues is economic access. In many cities, food access efforts have focused on food retail and increasing the availability of healthy options. But without consumer demand, healthy food retail isn’t economically viable and retailers are less likely to move into new neighborhoods or change their product mix. Increasing residents’ purchasing power makes healthy food relatively more affordable and can increase demand for these products, which helps businesses see value in stocking a greater supply of healthier options.

**Recommendation 2:** Maximize enrollment in federally funded food assistance programs.

**Who:** Boards of supervisors, city councils, county social service agencies, school districts, public health departments

Local governments have a few tools at their disposal to help low-income residents obtain more money for food. From a local budget perspective, the most cost-effective are those that are funded primarily by the federal government. County social service agencies, school districts and public health departments, along with nonprofit social service organizations, should work to enroll the thousands of families who are eligible but not participating in the food stamp program and should strive to increase student enrollment in free and reduced-cost school meal programs.

**CalFresh**

The largest of the federal food assistance programs is the Supplemental Nutrition Assistance Program, known as CalFresh in California and formerly known as the Food Stamp Program. CalFresh provides

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87 California Department of Public Health, “Communities of Excellence in Nutrition, Physical Activity and Obesity Prevention,” http://www.cdph.ca.gov/programs/cpmc/Pages/ CX3_Main_Navgation.aspx


eligible individuals and households with money to buy food via an electronic benefit transfer card that functions like a debit card. To qualify for CalFresh, residents must have a net income no higher than 100 percent of the federal poverty level, which amounts to $973 per month for an individual and $1,650 per month for a family of three in 2014. Undocumented residents and those receiving Supplemental Security Income are not eligible. The average CalFresh benefit per person in California in 2013 was $154 per month. 24

In the nine-county Bay Area, nearly 441,000 people, or 6 percent of all residents, received CalFresh benefits in 2013. Strikingly, only 56 percent of those who are estimated to be eligible for the program are enrolled, which means that an additional 350,000 Bay Area residents could be receiving assistance through the program. 25 If county social service agencies were able to enroll all those nonparticipants and they received average levels of benefits, the federal government would provide low-income residents in the Bay Area with an additional $53 million per month to spend at local food retailers. The CalFresh program is very cost-effective for local governments. The federal government provides 100 percent of the benefits and, along with support from the state government, covers 85 percent of a county’s administrative costs. 26 In San Francisco, for example, this means that the city’s General Fund only pays for $3.6 million of the city’s $121 million CalFresh budget — nearly $100 million of which is used by residents to purchase food. Additionally, the USDA has estimated that as much as $9 of economic activity is directly and indirectly generated from every $1 of CalFresh benefits. In short, means that CalFresh also supports economic development. 27

Local social service agencies are improving CalFresh enrollment levels by linking other social safety net programs with CalFresh and by using strategies such as上门 visits. In San Francisco, the amount of money that CalFresh also supports economic development.

School Meals
School meals allow local school districts to provide nutritious food to students at low or no cost to them and their families. While school lunch is the largest component, a school’s meals program can also include breakfast, snack and supper during the school year, as well as lunch during the summer. Most school districts in the Bay Area charge less than $3 for a lunch. Even so, the very poor $15 of CalFresh benefits can help the low-income families below 185 percent of the federal poverty line, which qualifies them for free or reduced-price lunches. For these students, a school meal provides critical food security and allows them to stretch their food dollars further. Within the nine Bay Area counties, an average of 42 percent of students (375,000 total) receive lunch through their schools each day, with three out of four of those students receiving the meal for free or at a reduced price. 28

The federal government, and to a smaller degree the state government, reimburses school districts a set amount of money for each free and reduced meal they serve. The cost to local school districts to operate the school meals program varies by district. Generally, because of the federal and state reimbursements, the percent of CalFresh food assistance for the district

School meals give communities an opportunity to provide a nutritious meal at low or no cost to the student and relatively low cost to the school district’s general fund. However, unlike with CalFresh, students have decided choices when it comes to the food that is available, which makes enticing students to eat the meals a key factor in how well these programs address food access and how economically viable they are for the school district.

School districts throughout the Bay Area have reformed, and should continue to reform, their school meal programs to improve the overall food costs. As Figure 15 shows, the number of eligible students consistently receiving food assistance benefits.

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Increasing Income to Increase Purchasing Power

Food subsidy programs are incredibly important in addressing food insecurity, but they do not impact the largest underlying cause of a family’s inability to afford food: income. A family’s income can be increased through a variety of policy tools. As SPUR and other authors outlined in the 2014 Economic Prosperity Strategy, workforce training and increased education can help workers move from low-wage jobs to middle-wage jobs. The Economic Prosperity Strategy’s recommendations include numerous ways that cities and counties can help Bay Area residents increase their incomes. However, as the study also showed, the Bay Area is not projected to generate enough middle-wage jobs to allow all working families the opportunity to earn an income that covers their basic needs. And today there is already a gap between a basic cost of living and what a full-time job at minimum wage pays. In 2014, the minimum wage was $10.74 per hour in San Francisco, $10.15 in San Jose and $9.00 in the rest of California. A single parent with two children who works a full-time job at minimum wage would still be in poverty in every part of the Bay Area according to the California Poverty Measure.7 The situation improves with two parents who have full-time minimum-wage jobs. But the minimum wage would have to be much higher for families to meet their basic needs without public or private assistance. In a household with two working adults and two children, both adults would have to work full-time jobs earning $17 to $21 per hour in 2014 to meet the Self-Sufficiency Standard.5455 In short, our minimum wages are inadequate.

The state and federal governments are often in the best position to establish minimum wages. But when those minimums do not reflect the costs of living in the Bay Area relative to much of California, local governments should consider raising city or county minimum wages. These higher wage floors, especially if they are indexed to inflation and established in coordination with surrounding jurisdictions, can greatly increase the economic security of low- and moderate-wage workers.56

Investing in education, providing worker training and increasing the state and local minimum wage would all help low-income families increase their purchasing power for healthy food.

families to purchase healthy food, the WIC program helps address the economic barrier of food access. Child and Adult Care Food Programs The Child and Adult Care Food Programs provide federal reimbursement for affordable, nutritious food, as well as administrative costs, to child-care facilities and adult day care homes. Children and seniors in households with income at or below 130 percent of the federal poverty level receive free meals, while those below 185 percent of the federal poverty level receive reduced-price meals.8 In the nine-county Bay Area in 2013, an estimated 78,000 children and 1,800 seniors received meals from child care centers participating in the program, supported by federal meal reimbursements totaling $49 million.54

Recommendation 3: Support long-term funding for healthy food incentive programs Who: Boards of supervisors, city councils, social service agencies In the past few years, nonprofit organizations, government agencies and farmers’ markets have collaborated to create another model to increase low-income residents’ economic access to healthy food. Known by a variety of names across the country, such as Market Match and Double Up Bucks, these programs provide a subsidy, in the form of coupons or matching dollars, to low-income customers who shop at farmers’ markets. For example, at some participating farmers’ markets in the Bay Area, the Market Match program, coordinated by the Ecology Center, provides customers with an extra $5 if they spend $10 of their CalFresh benefits on fresh produce at the market.83-89

These programs have been shown to boost low-income customers’ purchase of fresh, healthy food while also increasing revenue for local farmers.57 For example, a two-year analysis of four different programs nationwide, including California’s Market Match program—which operated at more than 150 markets in 2014—found that more than 75 percent of customers who used food stamps at farmers’ markets reported increasing their produce purchases because of the incentive program.84

The biggest obstacle to the expansion of these programs is a steady stream of funding. Currently, nearly all of the programs are funded by public or private grants. The federal farm bill passed in 2014 included a Food Insecurity Nutrition Incentive Grant Program that will provide a total of $100 million in matching grants for these types of programs between 2014 and 2018.88 Even with this support, however, the programs lack long-term sustainability because of unsteady funding. Local elected officials should augment existing funds and secure a long-term source of funding for these programs either at the local or state level.54

These incentive programs hold the greatest potential if they can be expanded beyond farmers’ markets to grocery stores—where most people do most of their food shopping. The Fair Food Network piloted an incentive program with three independent grocery stores in Detroit in 2013 and expanded it to include larger grocery chains in 2014. The results have shown promise but also indicate that implementing these incentive programs in grocery stores can be more complicated than at farmers’ markets for at least three reasons: the difficulty of identifying local produce, complex cash register technology and the greater number of staff involved at grocery stores.59

STRATEGY 3

Make healthy food available in all neighborhoods

Availability is not the only barrier preventing residents from accessing healthy food, but it is still a prime factor. This is especially true in low-income areas as residents need access to stores and are less likely to own cars.

Recommendation 4: Tailor grocery store attraction and corner-store conversion initiatives at the neighborhood level. Who: Planning departments, economic development agencies, public health departments

Our task force’s review of various food retail initiatives found that their effectiveness varies significantly depending on the neighborhood. What works in one neighborhood may not work in another. Policymakers should be aware that the previous success of one type of intervention in another part of the country, region or even city might not be transferable. While the context of each neighborhood will be different, we offer general best practices for food retail strategies to improve food access in Figure 9 on page 26.

Grocery Store Attraction

One of the best-known strategies for improving physical access to food is attracting grocery stores to underserved neighborhoods. The Fresh Food Financing Initiative, which began in Pennsylvania in 2004 with funding from both public and private sources, has supported the creation or renovation of numerous grocery stores to improve food access. In California, the FreshWorks Fund follows a similar model and in 2012 provided $7.6 million in financing to Northgate Markets to help the company modernize and expand, opening a second grocery store in a grocery store in Inglewood in Southern California. With 30,000 square feet of new space, the company expects the store will be the top-grossing of its 40 locations.60 Looking beyond

The Double Up Food Bucks program in Michigan has expanded from farmers’ markets to pilot projects in grocery stores, including Parkway Foods in Detroit.

90 Market Match Program, http://marketmatch.org
91 For a comprehensive literature review, see: Lindsay Cathell, Nicole Danna, Martha Fisher and Terra Rose, San Francisco Healthy Food Supplement Program: A Report for the San Francisco Food Security Task Force (May 2014), http://www.sfpub.org/foodsecurity. See also: SPUR, Locally Nourished (May 2013): 27
95 Market Match Program, http://marketmatch.org
96 For a comprehensive literature review, see: Lindsay Cathell, Nicole Danna, Martha Fisher and Terra Rose, San Francisco Healthy Food Supplement Program: A Report for the San Francisco Food Security Task Force (May 2014), http://www.sfpub.org/foodsecurity. See also: SPUR, Locally Nourished (May 2013): 27
100 The Reinvestment Fund, Healthy Food Retail Financing at Work: Pennsylvania Fresh Food Financing Initiative, (September 2013), http://healthyfoodforfamilies.org/sites/default/files/healthy-food-retail-financing-1024.pdf
financing, New York City provides real estate tax reductions, density bonuses and reduced parking requirements through its Food Retail Expansion to Support Health (FRESH) program.42 And staff at economic development agencies in the Bay Area often work with grocery retailers to attract new stores or remodel old ones. In addition to improving a neighborhood’s quality of life and public health, grocery stores often serve as anchor retailers that support increased economic activity in a commercial area.43

While there are numerous benefits to neighborhood grocery stores, experience in the Bay Area has shown that keeping a store can be as difficult as attracting one. In San Francisco’s Bayview neighborhood, for example, local residents and advocates worked for years to attract a new full-scale grocery store. In 2011, city officials celebrated the opening of a Fresh & Easy grocery store inside a newly built mixed-use development.44

However, two years later, when the company went out of business and sold many of its stores to other operators, the store in the Bayview found no buyer and remains closed.45 Gateway Foods, which was West Oakland’s first full-scale grocery store in a decade when it opened in 2000, is another example of how hard it is to attract and maintain a grocery store. It remained in business for only seven years.46 In all of these cases, it is difficult to pinpoint a single factor that can explain why some grocery stores succeed while others don’t last. What the examples from Pennsylvania, Southern California and the Bay Area illustrate is that attracting grocery stores can significantly improve food access, but the launch of a store does not ensure its continued success. This is one of the areas where we’d like to see additional research. Per Recommendation 12, that can help local agencies make decisions about when and how to pursue this strategy.

Corner-Store Conversion

Encouraging the owners of corner stores to change their product mix to include healthier options is another way to improve the retail food landscape. Unlike grocery store attraction—which often involves large sites, considerable capital and long timelines—corner-store conversions make incremental improvements to existing businesses that already have a customer base. In dense neighborhoods where there are few sites suitable for a new grocery store, focusing on corner stores can be a more fruitful way of increasing healthy food retail.

The Food Trust, a nonprofit organization based in Philadelphia, has implemented one of the country’s largest corner-store conversion efforts. With funding from the city’s health department and state economic development agency, the Philadelphia Healthy Corner Store Network grew from 40 stores in 2010 to 660 stores in 2014. Each now stocks some healthy items and receives support ranging from marketing material to grants for equipment.47 In the Bay Area, the longest-running corner-store conversion effort is in San Francisco. Starting in 2005, the Southeast Food Access Working Group’s Food Guardians partnered with three corner-store owners to increase their healthy offerings.

The Good To Go program provides cash incentives, marketing material and technical assistance to corner stores that stock healthier items. Sales improved at Lee’s Food Market in San Francisco after the owners partnered with the Southeast Food Access Working Group’s Food Guardians to increase their healthy offerings.

**Recommendations**

| **Recommendation 5:** Use zoning thoughtfully to shape food retail options |
| Who: Planning departments, boards of supervisors, city councils |

In addition to providing incentives and assistance to attract grocery stores or improve the options available at corner stores, local governments can use zoning to promote healthy food retail or restrict unhealthy options. However, this tool will likely only be effective in limited circumstances. Because existing businesses are usually grandfathered into any updated zoning code, changing what is and is not allowed in a neighborhood through the zoning code only has an impact in the future and, usually, it takes decades for changes to take place. For that reason, we recommend using the zoning code to improve food retail in areas that are undergoing considerable land use transition through large master planning processes, redevelopment or new construction. A good example is the development agreement for the former site of the Schlage Lock factory in San Francisco, which specifically requires the construction of a grocery store of at least 5,000 square feet before phase 2 of the development can begin.48

Even in areas undergoing considerable development, however, zoning is a blunt tool. For example, it can be used to


46 known as the Schlage Lock Development Project” (July 15, 2014), File 140444, 45. Between the City and County of San Francisco and Visitacion Development, Llc, Known As the Schlage Lock Development Project” (July 15, 2014), File 140444, 45.


50 Correspondence with Erin Healy, Director of Healthy Living, Health Trust, August 2014.

51 Alameda County Health Care Services Agency. Memo to the Board of Supervisors, “Subject: Approve Master Contract Amendments With the Southeast Food Access Working Group’s Food Guardians to Increase their Healthy Offerings.”


55 The Good To Go program provides cash incentives, marketing material and technical assistance to corner stores that stock healthier items.


58 Correspondence with Erin Healy, Director of Healthy Living, Health Trust, August 2014.

59 Alameda County Health Care Services Agency. Memo to the Board of Supervisors, “Subject: Approve Master Contract Amendments With the Southeast Food Access Working Group’s Food Guardians to Increase their Healthy Offerings.”


61 The San Mateo County Health System, has also begun working on corner-store conversions in the county; see: http://www.yli.org/blogpost/62/inspiration-launches-healthy-neighborhood-stores-in-santa-mateo-county.


65 The Good To Go program provides cash incentives, marketing material and technical assistance to corner stores that stock healthier items.

66 The San Mateo County Health System, has also begun working on corner-store conversions in the county; see: http://www.yli.org/blogpost/62/inspiration-launches-healthy-neighborhood-stores-in-santa-mateo-county.


69 Evaluations of these models have varied in their comprehensiveness and shown a range of results in terms of longevity, change in sales of healthy items, and customer behavior. As projects are being piloted, it is important that policymakers support evaluations of their long-term effectiveness alongside their implementation. (See Recommendation 12.)

70 As projects are being piloted, it is important that policymakers support evaluations of their long-term effectiveness alongside their implementation. (See Recommendation 12.)
Recommendation 6: Link public financial assistance for food retailers with requirements that they offer healthy options.

Who: Economic development agencies, public health departments

Local government can promote the availability of healthy food through incentives or licensing regulations that directly influence the business practices of food retailers.

In the context of incentives, economic development agencies, health departments and any other agency that provides assistance to a grocery store or corner store can condition that assistance on certain requirements. For example, a grant program can mandate that recipients apply for authorization to accept CalFresh and/or WIC. As part of the development of the San Francisco Healthy Food Retailer Incentives Program, retailers who receive loans and technical assistance must agree to dedicate at least 35 percent of their shelf space to fresh foods, whole grains, lean proteins and low-fat dairy products.26 These types of incentive-based commitments are a straightforward way for local governments to promote healthy food access through voluntary agreements.

Through the ability to license businesses, local governments have the power to require certain business practices, and this can extend to regulating a minimum set of foods that retailers must offer. For example, in 2008 Minneapolis passed the Staple Food Ordinance, which required any retailers classified as grocery stores (including many corner stores) to sell a minimum amount of produce, meat, poultry, fish or vegetable protein; bread or cereal; and dairy products. Despite the requirement, a year later the local health department found that 75 percent of corner stores were not carrying the produce required by law.27 The department subsequently increased its outreach and engagement with storeowners and saw increases in produce sales, though those sales still often constituted less than 1 percent of overall store sales.28 The experience in Minneapolis illustrates that regulations requiring retailers to carry healthy food items are unlikely to succeed without increased demand and significant government support for training, marketing and equipment. Licensing or other retailer mandates to stock certain items are newer food policy tools, and any future pilots should be evaluated carefully to determine whether they have a positive impact. In the meantime, we recommend that local jurisdictions only consider pursuing this type of strategy when it is combined with a comprehensive business assistance program and with initiatives that support increased consumer demand, like those recommended in Strategies 2 and 4.

Assessment

restrict types of restaurants but is not well adapted

that serves healthy meals and one that o

to distinguish between a quick-service restaurant

Healthy Retail SF

RECOMMENDATIONS

Recommendation 7: Support food pantries and emergency food services for those who cannot afford, or are not able, to shop at food retailers

Who: Social service agencies, public health departments, nonprofit organizations

The previous three recommendations all aim to improve physical access to healthy food through food retailers. Some residents, however, do not have enough money to obtain all their food from a retailer, are physically homebound or are homeless. For those residents, physical access to food is best provided through the safety-net programs of food pantries, home-delivered meals and groceries, and meals served at institutions and soup kitchens.

In San Francisco, nearly 100,000 people are served every week by more than 200 food pantries that are either operated or supported by the SF-Marin Food Bank. This means that 12 percent of the city’s population accesses food through this noncommercial distribution channel, which is largely funded by private philanthropy. In addition to the pantries, local nonprofits such as St. Anthony’s and Glide operate 13 free dining rooms that serve an average of 6,000 meals per day.29 Services like Meals on Wheels, which are partially funded by the city’s Department of Aging and Adult Services, deliver an additional 4,500 meals daily to seniors and adults with disabilities.30 In Santa Clara County and San Mateo counties, the Second Harvest Food Bank supports 740 food pantries and also operates a Produce Mobile Program, which uses refrigerated trucks to deliver fresh produce to nearly 1,000 low-income households.31 The Alameda County Food Bank directly or indirectly provides food to 311,000 individuals annually, serving one out of every five residents in the county at some point in the year.32

Because these safety-net programs provide critical nutrition to those most in need, local governments should consider expanding their financial support for these programs. San Francisco, for example, recently committed an additional $2.5 million to expand its support of programs for home-delivered meals and groceries as well as free dining rooms.33 In addition to

Click to view SPUR report 2015: "Healthy Food Within Reach" - San Francisco Public Utilities Report - February 2015

28 Minneapolis Health Department, Testing an Evaluation Model for Assessing the Efficacy of the Minneapolis Healthy Corner Store Program (September 2013)
30 SF-Marin Food Bank: “More Successful When: Owners with procurement and in-store marketing,” in Testing an Evaluation Model for Assessing the Efficacy of the Minneapolis Healthy Corner Store Program (September 2013)
31 WHO: Economic development agencies, public health departments
33 In the FY 2014–15 budget process, the mayor’s budget included an infusion of $170,000 to expand San Francisco’s food security programs. In addition to the Board of Supervisors, which passed the “add back” budget process, provided an additional $2.5 million to expand its support of programs for home-delivered meals and groceries as well as free dining rooms. In addition to

Public Health Law and Policy, Model Healthy Food Zone Ordinance, Creating a Healthy Food Zone Around Schools by Regulating the Location of Fast Food Restaurants and Mobile Vendors (October 2009), www.chc-inc.org/downloads


Click to view SPUR report 2015: "Healthy Food Within Reach" - San Francisco Public Utilities Report - February 2015

26 SPUR REPORT FEBRUARY 2015

HEALTHY FOOD WITHIN REACH

27 SPUR REPORT FEBRUARY 2015
Nearly 100,000 people are served every week by pantries operated or supported by the SF-Marin Food Bank, whose warehouse is pictured here. The Second Harvest Food Bank in Santa Clara and San Mateo counties and the Alameda County Food Bank also operate large food assistance programs. Addressing hunger, this budgetary support can also save money when compared to potential avoided costs. In San Francisco, providing home-delivered meals costs $3,600 per person for a year.68 A study in the Philadelphia area indicated that, especially for populations with existing chronic medical conditions, ensuring adequate nutrition through home-delivered meals could lower overall health-care costs by $12,000 per person per month, or $144,000 per person per year.69 While the savings would not be as significant in a population without chronic illness, the vast difference between cost and savings underscores the idea that when it comes to addressing hunger and improving nutrition through social-safety-net programs, an ounce of prevention may be worth a pound of cure.70

**Strategy 4**

**Ensure that people know how to cook and make healthy food choices**

**Recommendation 8: Support educational initiatives promoting food literacy and encourage their integration into existing food access programs.**

**Who: School districts, public health departments, recreation and parks departments, nonprofit organizations.**

Beyond improving economic and physical access, policymakers must also work to ensure that residents have the knowledge and skills to identify and prepare healthy food. This type of education can include the basic elements of nutrition for a balanced diet, lessons on cooking from scratch or workshops on how to grow and make the most of fresh food.

**Food Literacy in Schools**

As with many educational initiatives, the existing K-12 school system is an obvious first step to start. Many programs already exist in elementary and high schools. In the San Francisco Unified School District (SFUSD), elementary school teachers are expected to provide nutrition education in at least two of their class sessions each year, and the district offers numerous lesson plans in support of this goal.71 The nonprofit Education Outside, partnering with the school district, has helped school communities create and support 45 outdoor classrooms using voter-approved bond funding. Currently, Education Outside’s outdoor science educators serve 10,000 students, who visit their school garden for weekly science lessons. Many of these outdoor classrooms include edible gardens that are incorporated into standards-based lessons. SFUSD expects to have gardens in 70 elementary schools by the end of 2017.72 The Berkeley Unified School District has perhaps the most well-known food literacy programs in the country, with every public school hosting a cooking program, edible garden or both.73 Maintaining and expanding these programs helps ensure that the next generation knows how to make healthy choices and incorporate fresh food into their diet.

**Youth and Adult Education Programs**

While schools likely provide the most cost-effective way to educate the most people, not every school currently provides food-literacy programs, and existing programs don’t reach every student. Nonprofit educational programs targeting both youth and adults can fill the gap, providing knowledge and skills. For example, the nonprofit organization 18 Reasons offers nutrition and cooking education in its Cooking Matters program. The six-week course for low-income adults, teens and families covers meal preparation, grocery shopping, food budgeting and nutrition. In 2012, more than 1,700 people in San Francisco, the East Bay or South Bay participated in a Cooking Matters course, with the majority of participants reporting that they were eating more fruits and vegetables after completing the program.74 Another education model that has shown promising results is the Better Choices, Better Health workshops offered by the Health Trust in Santa Clara County. These provide peer-to-peer education on nutrition and other topics for people with chronic diseases such as diabetes.75

**Urban Agriculture As an Educational Strategy**

As we highlighted in our 2012 report Public Harvest, urban agriculture provides numerous benefits to communities. City gardens and farms can provide a significant amount of food for a family.76 Bay Area nonprofit organizations such as City Slicker Farms and Planting Justice in Oakland, La Mesa Verde and Valley Verde in San Jose, and Collective Roots in East Palo Alto provide garden boxes and training to individual residents and families to help them grow their own food. Other organizations, like Veggieution in San Jose and Alemany Farm in San Francisco, offer food for low or no cost to nearby residents of low-income communities. A recent study by University of California Cooperative Extension researchers in San Jose found that community gardens saved an average of $435 per garden plot by growing their own vegetables in the summer.77 For the families and

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69 OMG Center for Collaborative Learning, Food Report: An Examination of Health Care Costs and Health Outcomes among MANNA Clients and a Comparison Group when compared to potential avoided costs. In San Francisco, diabetes patients are expected to incur higher costs to treat their diabetes than food-secure diabetes patients; see Hillary Saltzman et al., “Food Insecurity is Associated with Hypoglycemia and Poor Diabetes Self-Management in a Low-Income Sample with Diabetes,” Journal of Health Care for the Poor and Underserved, vol. 21, no. 4 (November 2010), 1227–33.


72 Correspondence with Arden Bucklin, Executive Director, Education Outside, August 2014.

73 Most of the Berkeley’s school programs have historically been funded by federal nutrition grants, which will no longer be available in the future. See Mary Flaherty, “School Cooking, Gardening Programs in peril,” Berkeleyly, April 16, 2013.


76 For example, “In Seattle, the Department of Neighborhoods found that families were able to cover 30 to 60 percent of their families’ produce needs through the city’s gardening programs.” See: Alison Happy, Silvana-Rice and Rebecca Flomous, Growing Urban Agriculture: Equitable Strategies and Policies for Improving Access to Healthy Food and Revitalizing Communities (PolicyLink, 2012), 17 and 19.

77 The garden plots ranged in size from 100 to 600 square feet and were usually tended by one gardener. See: Susan Alger, A. Jürgenbauer and Marian Bernack, “Vegetable Output and Cost Savings of Community Gardens in San Jose, California,” Journal of the Academy of Nutrition and Dietetics, vol. 114, issue 7 (July 2014), 1072-1075.

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84 Final Report: An Examination of Health Care Costs and Health Outcomes among MANNA Clients and a Comparison Group.

86 For Improving Access to Healthy Food and Revitalizing Communities (PolicyLink, 2012), 17 and 19.


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individuals connected with these programs, urban agriculture can improve both their physical and economic access to healthy food. However, at a neighborhood scale, urban agriculture — especially in dense areas like the Bay Area’s central cities — is not able to meet the nutritional needs of thousands of people in a cost-effective way relative to a grocery store. Instead, urban agriculture’s value in regard to food access at this scale is its effective way relative to a grocery store. Instead, urban agriculture can increase knowledge of healthy eating, as well as other community benefits, rather than on the number of people it will feed.

Valley Verde, based in San Jose, provides garden boxes and training to individuals and families to help them grow their own food.

Sixty organizations that promote backyard growing. And, when evaluating especially in dense areas like the Bay Area’s central cities — is only so much food a person will purchase and consume, and what they choose has an impact on their health and on what is offered in their community — especially when healthy food displaces unhealthy food in their diet. In addition to supporting the strategies outlined above to help increase access to food and choose nutritious food, policymakers should complement these efforts with policies that reduce demand for unhealthy options.

Recommendation 9: Limit or prohibit the sales and marketing of unhealthy food in environments frequented by children, especially at facilities that receive government funding.

Who: Boards of supervisors, school districts, planning departments, recreation and parks departments

“Marketing works.” Those opening words of the Institute of Medicine’s report Food Marketing to Children and Youth capture a fact that is both commonly understood and supported by research. Marketing unhealthy food to youth is not only ineffective — it is pervasive. An article in the 2009 Annual Review of

Incorporating Cultural Food Preferences Into All Food Access Strategies

Even if someone can find, afford and make a healthy diet choice, it’s no guarantee that they will. Sometimes this is because of a cultural barrier. The healthy and available option is unfamiliar or unpalatable. As policymakers develop programs to improve healthy food access, they should keep in mind that food choices are driven by taste, not just cost and availability. For example, the SF-Marin Food Bank traditionally distributed cranberry sauce to its clients before Thanksgiving. But they found that many of their clients from Asian immigrant families were not choosing to bring the sauce home. At first, soliciting feedback from their clients, the Food Bank began offering other options such as fermented black bean sauce or soy sauce as a Thanksgiving option, which are more popular condiments for many of these clients. While this is a small example, it illustrates how tailoring programs to match the cultural preferences of clients has allowed the Food Bank to serve more people and have a greater impact on reducing hunger and food insecurity. Similarly, a Santa Clara County Public Health Department survey in fall 2013 found that a number of elementary school students reported that their favorite part of their school’s salad bar was being able to make fruit with chili powder and jicama with lemon juice. They were creatively adapting a traditional salad bar to better meet their food preferences, which also increased their interest in eating the fruits and vegetables offered at school. The federal school meals program could better serve its students if it were more flexible in its offerings. Specifically, USDA guidelines mandate that schools participating in the federal school meals program must offer milk as an option and that each meal must meet certain nutritional requirements. As a result, in many districts, milk is the only beverage offered alongside the meal, and students are often encouraged to take it. Students who are lactose-intolerant or who come from families where milk is not a common beverage option may not drink milk. While school districts are allowed to offer nondairy alternatives generally — and are required to do so when students have submitted a doctor’s note explaining their special dietary needs — it is often more expensive for the district to provide these options, and therefore they’re not commonly offered. By discounting the fact that not all students want to drink milk, the USDA guidelines lead to wasted milk (and money), and as a result, some students eat a less nutritious meal. In short, one menu does not fit all. What works for one group of children or school students may not work in another school or program. Food access programs that recognize the importance of cultural preference in determining food choice are the most likely to succeed.

Alongside the educational workshops, the program provides each participant with vouchers for $7 per person in their household per week, which are redeemable at farmers’ markets. In 2013, Fresh Approach found modest reductions in weight among its 100 adult participants but no similar reduction among the 54 youth participants. Nationally, Wholesome Wave, a nonprofit organization, has sponsored a prescription program in multiple cities with a similar program design and voucher amount. An evaluation of their program from 2011 to 2013 found that over half of the participants reported increasing their consumption of fruits and vegetables and that approximately 40 percent reduced their body mass index (a measure of body fat based on height and weight) during the program. Further study is needed to know if these positive impacts continue after the program.

As the Institute of Medicine notes, “Unhealthy foods and beverages displace the consumption of foods recommended in the Dietary Guidelines for Americans and may lead to the development of obesity” and other diet-related diseases. To combat this, particularly in large amounts. See: Institute of Medicine. Accelerating the Progress in Obesity Prevention: Solving the Weight of the Nation, 1.

For a good overview of the importance of focusing on the demand for healthy and unhealthy food, see: Michele Vlerie Ploeg, “Food Environment, Food Store Transactions, Carrying Behavior and Diet.” CHICAGO: The Magazine of Food, Farm, and Resource issues, vol. 25, no. 3 (2010).


Correspondence with Teri Olle, Associate Director of Policy and Advocacy, SF-Marin Food Bank, August 2014.

Santa Clara County Public Health Department, “Santa Clara County Food Bank Initiative Evaluation” (April 2014) and correspondence with Jamie Flores, Santa Clara County Public Health Department, October 2014.

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Public Health noted, “in the United States, more than 98 percent of television news and 95 percent of the most popular children’s shows present 82 percent of the television time for children and 89 percent of the television consumption of the food images. Emphasizing this David-versus-Goliath dynamic, the Institute of Medicine notes that “in 2005 children aged 8-12 saw an average of 158 public service announcements on food or nutrition in that one year compared with 7,609 ads for foods and beverages, or about 1 hour and 5 minutes of marketing.” 103)

Recommendation 12: Partner with local academic institutions to evaluate food access programs, and give preference to projects that include robust evaluation.

Who: Public health departments, social service agencies, planning departments, economic development agencies, school districts

During our review of policy tools that address food access, the task force found it difficult to evaluate the efficacy of a number of these initiatives—especially those that seek to improve current public health impacts and cost-effectiveness. Other researchers have noted how hard it is to find evaluations that include control groups and follow-up to assess the program’s immediate impact on participants.104) This type of rigorous evaluation is difficult for most local government agencies and nonprofit groups to conduct and usually requires an academic partner, long time frame and significant budget. Where possible, agencies should encourage partnerships that result in rigorous program evaluation so that they can prioritize funding for the most cost-effective programs and improve existing programs.

In the Bay Area, a number of academic institutions already have mechanisms to establish partnerships with local governments or community groups to evaluate food-related issues, including:

- Office of University Community Partnerships, University of California, San Francisco
- Office of Community Health, Stanford School of Medicine
- Center for Family and Community Health, University of California, Berkeley
- Center for Weight and Health, University of California, Berkeley

While this list is by no means comprehensive, it illustrates that there are existing resources among world-class institutions that could be—and should be—used to further refine city and county efforts to address food access.

Rec 12: Partner with local academic institutions to evaluate food access programs, and give preference to projects that include robust evaluation.


Plan of Action for Local Governments

City and county agencies should not try to address food access by themselves, nor do they necessarily need to lead all the initiatives described below. While we have targeted our recommendations to city and county governments, all of the actions we propose should involve other community stakeholders. Local merchant associations, food banks, nonprofit educators, food policy councils and similar groups are important partners. The government may be the best leader in some cases, but in others, including those related to emergency food assistance programs and education, the nongovernmental groups may be in the best position to spearhead an effort in partnership with local government agencies.

Recommendations Organized by Implementing Agency

<table>
<thead>
<tr>
<th>Implementing Agency</th>
<th>Recommendation</th>
<th>Rec. #</th>
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<tbody>
<tr>
<td>Boards of supervisors and city councils</td>
<td>Maximize enrollment in federally funded food assistance programs.</td>
<td>2</td>
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<tr>
<td></td>
<td>Support long-term funding for healthy food incentive programs.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Use zoning thoughtfully to shape food retail options.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Limit or prohibit the sales and marketing of unhealthy food in environments frequented by children, especially at facilities that receive government funding.</td>
<td>9</td>
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<td></td>
<td>Tax sugar-sweetened beverages to decrease consumption and generate revenue for initiatives addressing diet-related disease and food access.</td>
<td>11</td>
</tr>
<tr>
<td>Public health departments</td>
<td>Conduct an assessment or use existing data to develop a targeted set of food access programs and initiatives.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Maximize enrollment in federally funded food assistance programs.</td>
<td>2</td>
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<td></td>
<td>Tailor grocery store attraction and corner-store conversion initiatives at the neighborhood level.</td>
<td>4</td>
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<tr>
<td></td>
<td>Link public financial assistance for food retailers with requirements that they offer healthy options.</td>
<td>6</td>
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<tr>
<td></td>
<td>Support food pantries and emergency food assistance for those who cannot afford, or are not able, to shop at food retailers.</td>
<td>7</td>
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<td></td>
<td>Support educational initiatives promoting food literacy and encourage their integration into existing food access programs.</td>
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<td></td>
<td>Engage selectively in publicly funded marketing campaigns.</td>
<td>10</td>
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<td></td>
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<tr>
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### APPENDIX 1

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<td>$18,769</td>
<td>$23,624</td>
<td>12%</td>
</tr>
</tbody>
</table>

**Sources**

- Self Sufficiency Standard: Insight Center for Community Economic Development. “The Self-Sufficiency Standard measures how much income a family needs to adequately meet their basic needs — without public or private assistance.”

### APPENDIX 2

**Minimum Wage Earnings Compared to California Poverty Measure Thresholds**

We have used the minimum wage for 2011 for this comparison because it is the most recent year for which the California Poverty Measure thresholds are available. The State of California and numerous Bay Area jurisdictions, including San Francisco, Oakland and San Jose, have updated their minimum wages since 2011. However, costs of living have also increased. Without an updated California Poverty Measure, it is difficult to estimate what this analysis would look like using data for 2014.

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<td>$31,000</td>
<td>$2,392.00</td>
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</tbody>
</table>

**Sources**

- Family of four is defined as two adults and two children. See: Public Policy Institute of California, “Data Set: California Poverty Measure, Family of Four,” 2011.
APPENDIX 3
Methodology for Food Retail Environment Maps

Methodology
The maps illustrating areas with high poverty and low prevalence of healthy food retail options are based on a SPUR analysis combining two different types of data: median family income by census tract and an assessment of the physical food retail environment called the Modified Retail Food Environment Index (mRFEI). Details about each data set and how they were combined to produce the maps in this report are below.

Calculating the Percent of Families in Poverty Using Census Data and the California Poverty Measure
We obtained family income data from the U.S. Census Bureau’s American Community Survey 2008-2012, five-year estimates. This provides family income data at the census-tract level.
We then averaged family income in each census tract to the California Poverty Measure (CPM) threshold for the county that corresponded to the census tract. The CPM, published by the Public Policy Institute of California, calculates a poverty threshold for various family configurations based on the varied cost of living in each county in the state. It also factors in the impact of social programs, tax credits and other in-kind assistance that can augment family resources and subtract medical, commuting and child-care expenses.

For our analysis, we chose poverty thresholds for a family configuration of two adults and one child because the U.S. Census in 2012 reported that the average family size was 3.21 people, consisting of roughly one person less than 18 years of age (0.81) and two people 18 years or older (2.3).126 The CPM for 2011 for the nine Bay Area counties is listed in the table below.

<table>
<thead>
<tr>
<th>County</th>
<th>CPM threshold for family of two adults and one child, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda</td>
<td>$27,903</td>
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<tr>
<td>Contra Costa</td>
<td>$27,940</td>
</tr>
<tr>
<td>Marin</td>
<td>$31,498</td>
</tr>
<tr>
<td>Napa</td>
<td>$27,580</td>
</tr>
<tr>
<td>San Francisco</td>
<td>$31,994</td>
</tr>
<tr>
<td>San Mateo</td>
<td>$32,150</td>
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<td>Santa Clara</td>
<td>$30,258</td>
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<tr>
<td>Solano</td>
<td>$26,551</td>
</tr>
<tr>
<td>Sonoma</td>
<td>$27,196</td>
</tr>
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</table>

Using the average family income data from the census and the poverty thresholds listed above, we calculated the percentage of families within a census tract living in poverty.

Because family income in the census data is broken into $5,000 increments, we had to round the CPM thresholds to correspond to the category increments in the census data. To provide a conservative estimate of the number of families in poverty, we chose to round down the poverty threshold to the nearest income range. For counties with an average poverty threshold of less than $29,999 (Alameda, Contra Costa, Napa, Solano and Sonoma), the total number of families living below the poverty threshold includes only those families that earned up to $24,999. For counties with an average poverty threshold under $35,999 (Marin, San Francisco, San Mateo and Santa Clara), the total number of families living below the poverty threshold includes all families that earned up to $29,999. As a result, this analysis may underestimate the number of tracts that fall below the poverty threshold measure identified by the CPM.

Lower scores indicate that a census tract contains many convenience stores and/or fast food restaurants compared to the number of healthy food retailers. A zero score indicates that no healthy food retailers are located in the census tract.128 Healthy food retailers include supermarkets, large grocery stores, supercenters and produce stores within a census tract or half a mile from the tract boundary.
The following scores, as defined by the National Academy of Sciences, included: supermarkets and large grocery stores (NAICS 445110); supermarkets further defined as stores with 50 or more annual payroll employees; large grocery stores further defined as stores with 10 to 49 employees; fruit and vegetable markets (NAICS 445230); produce clubs and produce markets (NAICS 452910). Fruit and vegetable markets and produce markets include establishments that sell produce and include markets and permanent stands.

Less healthy food retailers include fast food restaurants, small grocery stores and convenience stores within a census tract or half a mile from the tract boundary. Fast food stores were defined according to NAICS 722110 (fast food restaurant). Convenience stores were defined according to NAICS 445110 (convenience stores) or NAICS code 445110 (small groceries) where the number of employees was three or fewer.

There are some limitations to the CDC’s mRFEI data:

• The source of business retail locations is from 2008 and 2009 and is unlikely to fully reflect the current retail mix in many places.
• The data does not include farmers’ markets in its inventory of healthy food retailers.
• The inventory does not include liquor stores in the category of unhealthy food retailers, and numerous advocates would argue that these retailers are part of the overall food retail landscape, so excluding them results in less comprehensive data.

Producing the Maps
In our GIS analysis, we linked the mRFEI data to all census tracts where more than 15 percent of families were living in poverty. We colored census tracts with an mRFEI score of less than 5 (meaning 5 percent or less of food retail options in the census tract are considered healthy) red or orange to indicate areas that we thought were of most concern in terms of physical and economic food access. Areas colored yellow have higher rates of poverty where residents have difficulty affording food, and we did not color-code the mRFEI scores in any census tract where fewer than 15 percent of families are in poverty. We chose a threshold of 15 percent based on consulting with Bay Area food access experts to ensure that the maps highlighted areas that had already been identified as places with obstacles to healthy food access. However, we recognize that this is a relatively arbitrary threshold and acknowledge that a different poverty threshold would produce different maps.

Though the CDC does calculate census tracts with mRFEI scores greater than 37.5, none of the tracts we were highlighting had index scores at this level and therefore we did not include this category in our maps.

128 Thresholds for this family configuration were obtained through correspondence with Chris Wimer, co-author of the California Poverty Measure report, May 2014.

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APPENDIX 3 Modifying the Retail Food Environment Index (mRFEI) is a way of measuring the number of healthy and less healthy food retailers in an area using a single number. The mRFEI used in this report was calculated by the Centers for Disease Control and Prevention (CDC) with data from 2008 and 2009 for each census tract using the following formula:

# Healthy Food Retailers
# Healthy Food Retailers + # Less Healthy Food Retailers

Food retailer data was collected from three main sources: InfuUSA (2009), Home Land Security Infrastructure Program Database (2008) and NAETIQ (2009). For the full description of the Centers for Disease Control and Prevention’s methodology in creating the Modified Retail Food Environment Index, see: Center for Disease Control and Prevention, Census Tract Level State Maps of the Modified Retail Food Environment Index (mRFEI), 2011, 1-3 and 8, ftp://ftp.cdc.gov/pub/Publications/dnpao/census-tract-level-state-maps-mrfei_3a0508.pdf.

# Healthy Food Retailers

# Less Healthy Food Retailers
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