Healthy Food Within Reach

Helping Bay Area Residents Find, Afford and Choose Healthy Food
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.

**EXECUTIVE SUMMARY**

**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 around 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 hadn’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 providers such as grocery and corner stores, 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. Our research scope covers the geography where SPUR focuses its work: the nine-county Bay Area, with a specific interest in San Francisco, San Jose and Oakland, the region’s three central cities.

Many of the issues that exacerbate obstacles to accessing healthy food—poverty, for example—require strong state or federal policy responses. Throughout this report, we highlight the issues where that is the case. At the same time, city and county governments have a variety of policy tools they can use to improve food access. These tools are the focus of this report.

Defining Food Access; Four Barriers to Healthy Food Consumption

We define food access as an individual’s 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.” 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.1

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—underlying 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.”2 “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.3

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.4 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).
5 Institute of Medicine, Committee on Accelerating Progress in Obesity Prevention Food and Nutrition Board, Accelerating the Progress in Obesity Prevention: Solving the Weight of the Nation (Washington, DC: The National Academies Press, 2010), 153.
6 This framework is an adaptation of the work of Heather Wosten of ChangeLab Solutions.
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 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.

### Addressing 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 from week to the 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).¹

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.

When based on a cost-of-living analysis rather than a survey, the Bay Area’s rate of food insecurity is only slightly lower than the national average (16 percent).²

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).

Food insecurity varies significantly by county within the Bay Area.

### Source

Sources: UCLA Center for Health Policy Research, California Health Interview Survey, 2011-2012.


³ In 2012, 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 $33,624. 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/data/threshold/index.html. See also Appendix A.


5 California 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. 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 obese children was two to three times the average cost of treating all children.13

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.14 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.15

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 children and teenagers than adults, but still constitute a serious public health issue. See: UCLA Center for Health Policy Research, California health interview survey, 2011-2012.

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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 steadily high in the past decade.

Diabetes
Another public health issue strongly related to diet is Type II diabetes. Though many factors contribute to the onset of diabetes, our task force concluded that, because diet is a primary factor, it is important to measure progress on addressing food access by tracking the incidence of Type II diabetes. Currently, 6 percent of Bay Area residents report having been diagnosed with Type II diabetes.23

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 those products are an integral component of a healthy diet.24 Currently, between 60 and 75 percent of Bay Area adults report consuming less than three fruits and vegetables a day, depending on the county.25 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.26

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 basic groceries pose a greater burden for lower-income residents.27

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.28

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.29 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 by healthy options alone.30

29 For a general analysis on transportation 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 2011), 3-8, figs. 3-4.
31 A University of Washington study published in 2014 found that, especially among residents with access to a car, two-thirds of people in rural areas were unable to shop at the grocery store closest to their home for reasons such as price and store quality. In rural Washington, this 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), 977–983.
The index doesn’t include farmers’ markets, nor completely lacking in food options. Rather, in called “food deserts.” Few places, however, are starting at the turn of this century, many advocates distinction, advocates have begun labeling these areas “food swamps” to draw attention to the need to change the relative prevalence of healthy and unhealthy options.

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.

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’s methodology in creating the Modified Retail Food Environment Index, see Appendix 3 for details on this methodology.

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 number of healthy and less-healthy food retailers within a census tract using this formula:

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

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 2 or fewer employees.

Sources: Centers for Disease Control and Prevention, Census Tract Level State Maps of the Healthy Retail Food Environment Index (mRFEI) for California, 2007-2011; SPUR analysis determined the census tracts with 15 percent of families below the California Poverty Measure. See Appendix 3 for details on this methodology.

# Healthy Food Retailers + # Less Healthy Food Retailers

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Sources: Centers for Disease Control and Prevention, Census Tract Level State Maps of the Healthy Retail Food Environment Index (mRFEI) for California, 2007-2011; SPUR analysis determined the census tracts with 15 percent of families below the California Poverty Measure. See Appendix 3 for details on this methodology.
### 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 more relevant ones. 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. The San Francisco Food Security Task Force’s Assessment of Food Security in San Francisco is an excellent example of the way a city agency can compile existing data into a strategy to address food security for the city’s most vulnerable residents. Another local model that uses data to target future initiatives is the 2007 Neighborhood Food Preference Survey, conducted by San Francisco’s Southeast Food Access Working Group, in partnership with the local health department.

### 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 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 meals 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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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 2014.34 Undocumented residents and very low-income, low-income residents receiving Supplemental Security Income are not eligible. The average CalFresh benefit per person in California in 2013 was $154 per month, or $1,848 per year.35

In the nine-county Bay Area, nearly 441,000 people, or 6 percent of all residents, received CalFresh benefits in 2013.36 Strikingly, only 56 percent of those who are estimated to be eligible for the program are enrolled. As a result, an additional 350,000 Bay Area residents could be receiving assistance through the program.37 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 $33.5 million in annual monetary benefits.38

The CalFresh program is very cost-effective for local governments. The federal government provides 100 percent of the costs and, along with support from the state government, covers 85 percent of a county’s administrative costs.39 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.40 Additionally, the USDA has estimated that as much as $9 of economic activity is directly and indirectly generated from every dollar of CalFresh benefits that is available, which means that CalFresh also supports economic development.41

Local social service agencies are improving CalFresh enrollment levels by linking other social safety net programs with CalFresh and by using technology to ease residents’ enrollment and stay enrolled. Both are administrative changes that increase efficiency for the agencies and the applicants. For example, the Alameda County Community Services Agency — a partnership that includes the Alameda County Social Services

20 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 school districts to operate the school meals programs vary by district. Generally, because of the federal and state reimbursements, the percent increase in cost is very low. Recently, San Francisco Unified School District has updated its nutritional guidelines for reimbursable meals in an attempt to better align the nutritional content of school meals with the guidelines for the Special Supplemental Nutrition Program for Women, Infants, and Children.

21 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 meal 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 average of $5 of CalFresh benefits per student in the nine Bay Area counties, an average of 42 percent of students (375,000 total) receive lunch through their schools each day, with three of four of those students receiving the meal for free or at a reduced price.42

41 Mike Billings, “San Francisco Schools’ New Food Provider Offers Improved, Healthier Meals,” San Francisco Bay Area (2010).
43 For more background on the interaction between CalFresh and the state’s SSI program, see: Kerry Birnbach, “California’s Cashout Policy” (California Food Policy Advocates, March 5, 2013), http://sfpl.net/county-profiles accessed June 30, 2014)
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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.18 The Economic Prosperity Strategy’s recommendations include numerous ways that cities and counties can help Bay Area residents increase their income.

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 provides. 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 will still be in poverty in every part of the Bay Area according to the California Poverty Measure.39 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 to get 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. 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 cost 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.40

Investing in education, providing worker training and increasing the state and local minimum wage will 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 150 percent of the federal poverty level receive free meals, while those below 185 percent of the federal poverty level receive reduced-price meals.41 In the nine-county Bay Area in 2013, an estimated 78,000 children and 1,800 seniors received meals from care centers participating in the program, supported by federal meal reimbursements totaling $49 million.42

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.43

These programs have been shown to boost low-income customers’ purchase of fresh, healthy food while also increasing revenue for local farmers.44 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.45

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 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 2018.46 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 consistent source of funding for these programs either at the local or state level.

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.47

In 2014, 30,000 square feet of new space, the company expects the store will be capable of servicing the top-grossing of its 40 locations.48 Looking beyond...
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. 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.

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 store. It remained in business for only seven years. 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 by 2014. Each now stocks some healthy items and receives support ranging from marketing material to grants for equipment. In the Bay Area, the longest-running corner-store conversion effort is in San Francisco. Starting in 2013, 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.

**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 happen. 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 4,000 square feet before phase 2 of the development can begin.

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


45 Judith Bell et al., Access to Healthy Food and Why It Matters: A Review of the Research, 16-17.


49 See: Serena Unger and Heather Wooten, “A Food Systems Assessment for Oakland, CA,” Toward A Sustainable Plan (Oakland Mayor’s Office of Sustainability and University of California, Berkeley, Department of City and Regional Planning, June 21, 2006), 52.

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

**Recommendations**

**Option 1: Use zoning thoughtfully to shape food retail options**

- **Who:** City planning and zoning departments, boards of supervisors, city councils

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- **Who:** City planning and zoning departments, boards of supervisors, city councils

  - Even in areas undergoing considerable development, however, zoning is a blunt tool.
  - For example, it can be used to...
restrict types of restaurants but is not well adapted to healthy retail options. Some cities using the zoning code to influence healthy retail options include:

- Detroit, which prohibits fast food restaurants within 500 feet of public schools.
- Los Angeles, which imposed a ban on new stand-alone fast food restaurants in South Los Angeles starting in 2007.
- New York City, which allows developers an additional square foot of floor area in mixed residential and commercial buildings for every 100 square feet of floor area for every noncommercialization 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.17 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. 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 bring fresh produce to nearly 1,000 low-income households.18 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 of the year.19 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.18

RecommendaƟon 7: Support food pantries and emergency food distributors 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 food retailers, 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 noncommercialization 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.17 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. 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 bring fresh produce to nearly 1,000 low-income households.18 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 of the year.19 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.18

18 Healthy Food Retail Ordinance, San Francisco Administrative Code, Chapter 59 (Ordinance 191:15). For other examples in other cities see: Changelab Solutions, Health on the Shelf: A Guide to Healthy Food Retail Certification Programs (2015), 1-6, 7; http://changelabscsolutions.org/publications/health-on-the-shelf
19 Minneapolis Health Department, Testing an Evaluation Model for Assessing the Efficacy of the Minneapolis Healthy Corner Store Program (September 2013)
20 San Francisco Food Security Task Force’s 2013 report provides an in-depth examination of the barriers to access food facing the city’s most vulnerable residents: “A City-wide Endorsement: San Francisco Food Access and Security Strategy”
22 San Francisco City Council’s Committee on Budget and Finance: “Final Budget: Fiscal Year 2015” (November 2014), p. 164; Correspondence with Teri Olle, SF-Marin Food Bank, October 2014.
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. 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. 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.

**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 place 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. 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. 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. 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. 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.

**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. 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 Veggielution 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 gardeners saved an average of $435 per garden plot by growing their own vegetables in the summer. For the families and
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 ability to increase the knowledge of what healthy food is — by offering residents the opportunity to cultivate it, understand seasonality, and sample new tastes and ingredients.

To assist residents who want to grow food for themselves, cities and counties can offer public land directly or support nonprofit organizations that promote backyard growing. And, when evaluating options for providing residents the opportunity to cultivate it, understand seasonality, and sample new tastes and ingredients.

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 74 youth participants.94 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.95

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.96 Even small changes in individual consumption, over time, can have a large impact. 97

As Levy, who has a strong background in public health policy, notes, “Incorporating Cultural Food Preferences Into All Food Access Strategies

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 unappealing. 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, they were 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.98 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 and middle 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.99

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. In reality, 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 part of the diet are often faced with the choice of whether to discard their milk. While school districts are allowed to offer non-dairy alternatives generally — and are required to do so when students have submitted a doctor’s note explaining their dietary needs — it is often more expensive for the district to provide these options, and therefore they’re not commonly offered.100 By discourting 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 students may not work in another location or program. Food access programs that recognize the importance of cultural preference in determining food choice are the most likely to succeed.
Public Health noted, “in the United States, more than 98 percent of television food ads seen by children and 89 percent of those seen by adolescents are for products high in fat, sugar and/or sodium” and “other studies show high levels of calorie-dense, low-nutrient foods promoted to children in different types of marketing, including in online and offline venues, on children’s Web sites and in magazines.” The federal government is best positioned to regulate food marketing to children through mass media, but local governments can also support healthier eating by limiting sales of unhealthy food.

The most straightforward policy tool for local governments is to prohibit or limit what is sold and marketed on public property or in places that receive government funding, such as schools, parks, museums and zoos. The San Francisco Unified School District, for example, has prohibited the use of commercially branded instructional material in classrooms and also banned the sale of soda and unhealthy items on school property.134 Cities throughout California have crafted nutritional guidelines for what is sold in vending machines on their property, with varying degrees of stringency and in response to the experiences of their own operations, local agencies can also support healthier eating by limiting sales of unhealthy food.

A tighter-touch option is to make healthy choices more convenient than unhealthy choices. Recent studies by behavioral economists, in an initiative called Smarter Lunchrooms, indicate that small changes such as offering at least one lunch line with only healthier items or improving the marketing of healthy items can improve students’ food choices.135

**Recommendation 10: Engage selectively in publicly funded marketing campaigns.**

Who: Public health departments

It’s tempting to counteract industry marketing of unhealthy food by fighting fire with fire — promoting to promote. The best way to do that is to support healthy eating. Local public health departments, however, should be careful in putting resources toward marketing campaigns, because their marketing efforts can be drowned out by the food industry’s advertising. Emphasizing this David-versus-Goliath dynamic can reduce overall food consumption. Among 8- to 12-year-olds in one study, saw an average of 158 public service announcements on fitness or nutrition in one year compared with 7,609 ads for foods and beverages, or about 1 hour and 5 minutes of food and beverage marketing compared with more than 50 hours of messages promoting food and beverage consumption.136

The most promising avenue of marketing research, budgets indicate that some marketing campaigns to improve nutrition have been effective, especially when coupled with other efforts to increase food access or when targeted at people with health issues.137 In an evaluation of the Bay Area’s multi-county “Soda Free Summer” campaign in 2008, for example, 44 percent of survey respondents reported reducing their soda consumption following the start of the campaign. However, marketing campaigns are often less successful in creating long-lasting changes in behavior after they end.138

**Recommendation 11: Tax sugar-sweetened beverages to decrease consumption and generate revenue for initiatives addressing diet-related disease and food access.**

Who: Boards of supervisors, city councils

Sugar-sweetened beverages are the single largest source of sugar for American adults and children, and their consumption is associated with diet-related disease. As noted earlier, these diseases not only harm individuals but also burden the public health system with increased hospitalizations and treatment costs. The San Francisco Board of Supervisors Researcher估算 that San Francisco pays $4 million to $61 million annually through public and private health-care costs for obesity and diabetes treatment that is attributable to sugar-sweetened beverages. The仰研究 Estimated that city agencies spend $6 million to $28 million annually for health-care costs attributable to sugar-sweets.139

The aim of taxing sugar-sweetened beverages is to increase the price of these items and reduce overall food consumption among children and adults who consume the most of these beverages. A report by University of California, San Francisco researchers estimated that a one-cent-per-ounce tax on sugar-sweetened beverages would result in a 15 percent decrease in consumption of those products.140

A San Francisco Controller’s Office Estimated that two-cents-per-ounce tax in San Francisco could result in up to 31 percent decrease in sugar-sweetened beverage consumption in January 2014, indicates a 10 percent reduction in purchases of sugary drinks.141

Sugar-sweetened beverage taxes are better understood when viewed at the state or federal level, but a new decade of failed attempts to pass such legislation in Sacramento, it is reasonable for local governments to propose taxes to discourage unhealthy beverage consumption while also raising revenue to support the food access initiatives recommended in this report.

Getting voters to tax themselves is not easy. Dozens of soda tax proposals in states and cities in the past decade have failed to pass. However, in November 2014, Berkeley voters overwhelmingly approved a one-cent-per-ounce tax on sugar-sweetened beverages, with 76 percent of the vote. During their campaign, they presented a tax proposal in San Francisco also gained 56 percent of the vote, though it did not pass because it required a two-thirds majority. Advocates of the tax suggested that this support in two cities as a sign that these taxes are gaining public approval and could pass in other cities in the near future.142

**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 when long-term public health impacts and cost-effectiveness. Other researchers have noted how hard it is to find evaluations that include control groups and follow-up studies to assess the program’s impact on participants.143 This type of rigorous evaluation is difficult for most local government agencies and nonprofits 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 and 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 used to further refine city and county efforts to address food access.144

**STRATEGY 6**

Support research that evaluates food access initiatives

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

- 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


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

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<th>Implementing Agency</th>
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## APPENDIX 1

### Self-Sufficiency Standard and Poverty Measures and Levels

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<tr>
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<td>$70,434</td>
<td>$18,769</td>
<td>$9,171</td>
<td>$23,624</td>
<td>$36,349</td>
</tr>
</tbody>
</table>

### 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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**Sources**

- Self Sufficiency Standard: Insight Center for Community Economic Development. “The Self-Sufficiency Standard measures how much income is needed by a family configuration to give people a chance to meet basic needs independently without public or private assistance.”
- It is adjusted based on the cost of living in each county.
- The California Poverty Measure (CPM) Public Policy Institute of California. The CPM is set at the Federal Poverty Level but is adjusted for differences in the cost of living between counties and is not impacted by tax credits and food stamp benefits, and the change in cost of living is not reflected until the next update.
- Federal Poverty Level: U.S. Census Bureau. The Federal Poverty Level was created in the 1960s based on an extrapolation using the costs of the USDA’s “Thrifty Food Plan” and has been adjusted for inflation every year since.
- The thresholds for various family configurations are constant across the entire country and are not adjusted for changes in cost of living by geography.

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**Notes**

- Family of three is defined as one adult, one preschooler and one school-age child. Family of four is defined as two adults, one preschooler and one school-age child. See: Insight Center for Community Economic Development. “2014 Self-Sufficiency Standard for California.”
- Family of four is defined as two adults and two children. See: Public Policy Institute of California. “Data: Set: California Poverty by County.”
- Family of three is defined as one adult and two children. Those thresholds were obtained by correspondence with Chris Wimer, one of the report co-authors, in May 2014. See: Ibid.
- Family of three is defined as one adult and two children. Family of four is defined as two adults and two children. See: U.S. Census Bureau. “Poverty Thresholds, 2013.”
- U.S. Census Bureau, “Small Area Income and Poverty Estimates.”

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**APPENDIX 2**

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

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
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<td>$9,304</td>
<td>$9,477</td>
<td>$31,000</td>
<td>$2,392.00</td>
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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 compared average 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 subtracts 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). 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>
</tr>
<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>
</tr>
<tr>
<td>Santa Clara</td>
<td>$30,258</td>
</tr>
<tr>
<td>Solano</td>
<td>$26,551</td>
</tr>
<tr>
<td>Sonoma</td>
<td>$27,196</td>
</tr>
</tbody>
</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 thresholds 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 who earned up to $24,999. For counties with an average poverty threshold under $34,999 (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.

Calculating the Percent of Families in Poverty Using Census Data and the California Poverty Measure

The California Poverty Measure Thresholds in Bay Area Counties

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<th>County</th>
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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 poverty rates above 15 percent but have a better prevalence of healthy food retail options (scores between 5 and 37.5). To encourage policymakers to focus attention on areas with higher rates of poverty where residents have difficulty affording food, 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.

The 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.

Below the poverty threshold includes all families earning less than $20,000. To determine if a census tract was below the poverty threshold we first identified census tracts where the number of households and the number of families were less than or equal to the poverty threshold for the county based on the family configuration used for poverty calculation and the number of employed persons in the county. Then we compared the number of employed persons and the number of families with the number of households in the census tract.

Using the number of employed persons and the number of families in the census tract, we calculated the number of food insecure persons and families in the census tract.

The modified 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 index. 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:

\[
\text{mRFEI} = \frac{\sum \text{Healthy Food Retailers}}{\sum \text{Less Healthy Food Retailers}} 
\]

Lower scoring indexes 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.

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 stores, as defined by the California Poverty Measure, were included: supermarkets and large grocery stores (NAICS 445110), supercenters 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); warehouse clubs (NAICS 452910). Fruit and vegetable 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 72211 (fast food restaurants). Convenience stores were defined according to NAICS 445120 (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.

Food retailer data was collected from three main sources: InfoUSA (2009), Homeland Security Infrastructure Program Database (2008) and NAVTEQ (2009). For the full description of the Centers for Disease Control and Prevention’s methodology in creating the Modified Food Retail 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, http://ftp.cdc.gov/pub/Publications/dnpao/census-tract-level-state-maps-mfei_345058.pdf.