

KERN COUNTY FOOD INSECURITY NEEDS ASSESSMENT

August 2023



Acknowledgements

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We know there are other individuals and groups working to address food insecurity in Kern County that are not included in this report. While every effort was made to reach as many organizations as possible, that we know that many were omitted. For those who were not included, we recognize your efforts in this important work.

Finally, a very special thank you to the Community Action Partnership of Kern for the role they play in supporting the community. Their dedication, effort, and commitment to helping the people of Kern County was demonstrated throughout this process, beginning with the decision to fund this study, which will help to determine next steps to make a healthier Kern County.



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I. Background and Purpose of the Study

In spring 2022, the Community Action Partnership of Kern (CAPK) contracted with Transforming Local Communities, Inc., (TLC) a local research and evaluation company, to conduct an in-depth needs assessment of food insecurity in Kern County. The need for such a study was based on a series of unique factors about Kern County:

- In 2021, Kern County had the greatest agricultural production value of any county in the United States, at \$8.34 billion (California Department of Food and Agriculture, p. 21, 2021-2022). Kern's top five commodities (grapes, citrus, pistachios, almonds, and milk) generated over \$6.3 billion of that total (Kern County Department of Agriculture and Measurement Standards, p. 1, 2021).
- In 2021, 13.0% of adults in Kern County were food insecure, compared to 10.5% for California, and 10.2% nationwide (Hake et al., 2023).
- In 2021, 18.2% of Kern children were food insecure (Hake et al., 2023).

During the COVID-19 pandemic, more food was made available through a greater number of sources than ever before. With the ending of many of the emergency food programs on February 28, 2023, agencies in Kern County found themselves inundated with people in need of food. Debra Powers, Executive Director of the Golden Empire Gleaners, a local nonprofit providing food baskets to families referred from organizations across the county, stated:

This place blew up on...March 1. We could not keep up with the baskets. We had to stop taking orders because we didn't have enough carts to put the orders on to make the baskets. We can see that this is not going to stop.

Similarly, a representative from the Kern River Valley Family Resource Center, a CalFresh site, explained:

In COVID we had resources for families we've never had before...It felt like we were making a dent in hunger...And we are watching that dry up and standing by helplessly....But the bottom line is we had a lot of families who got used to having food and are now remembering what it's like to have hunger...And that kind of sucks to watch.

Food insecurity is not always obvious. Although Bakersfield was designated as "America's hungriest city" in 2012 (Food Research and Action Center, 2012), in a seeming contradiction, 48.7% of adults in Kern County are obese and another 29.3% are overweight (Kern Public Health, n.d.). In 2019, 37.3% of 5th grade girls and 45.0% of 5th grade boys (10-year olds) in Kern were overweight or obese (KidsData.org, 2019)—although nearly one in five of Kern's children are food insecure. Despite the apparent contradiction—how can overweight or obese children be food insecure, or malnourished?—according to Kern health providers, there is a correlation.

Despite the agricultural richness of the region, extensive parts of Kern County—including areas of metropolitan Bakersfield—are considered “food deserts.” In “food deserts,” access to fresh, affordable, healthy, and culturally appropriate foods are limited. Kern also has areas that are designated “food swamps”; that is, areas where available food (often fast food retailers or convenience stores) is often inexpensive, but is also highly processed, calorie-dense, and nutritionally deficient. In short, a significant percentage of Kern’s residents lack access to affordable, high quality, fresh foods—a problem that leads, in turn, not only to malnourishment but to major health consequences—and to children who are both overweight and experiencing the early symptoms of chronic disease such as diabetes and high cholesterol.

CAPK, as the largest nonprofit in the county, includes in its mission the alleviation of poverty. The first of its 2021-2025 strategic goals is “Increased access to healthy, affordable food to support the health of the communities we serve.” This includes, specifically, the dissemination of emergency food resources to those most in need. Along with its Food Bank, which in 2022 distributed 19.1 million pounds of food throughout Kern County (including 1.8 million pounds to Kern County seniors), the organization also operates several “food-facing programs” that provide food to Kern’s most vulnerable: Head Start; Women, Infants & Children (WIC); CalFresh Healthy Living; and the Migrant Alternative Payment Program (MCAP) (CAPK 2022 Annual Report).

CAPK is not working alone in its efforts to address food insecurity. The Golden Empire Gleaners, The Mission at Kern County, Kern County Public Health’s Waste Hunger Not Food, CityServe, Blue Zones, local family resource centers, and a number of smaller nonprofits, agencies, and individuals work diligently to address the food-related needs of the people in Kern County. Often, however, these efforts are siloed, with limited opportunity for meaningful collaboration to ensure that the needs of all county residents are met.

Recognizing that a broad-based needs assessment of food insecurity could help both identify those areas in which County stakeholders are most effective and those areas in which significant gaps remain, CAPK commissioned this study for two distinct purposes:

- (1) To provide a context for understanding how food supply, distribution, access, and affordability impact the nutrition and health of Kern residents; and
- (2) To collect data that can be used to collect data that can be used to expand services in the areas of greatest need.

I.1 Research Methodology

A variety of data sources were used to complete the study, including internet research, qualitative interviews with a variety of stakeholders county-wide, a survey of CAPK agency partners, and Geographic Information System (GIS) mapping of Kern’s food resources. These are detailed below.

Qualitative interviews with CAPK food-facing programs. In-depth interviews were conducted with directors or supervisors of the CAPK Food Bank, Senior Food Bank, Head Start, WIC, Central Kitchen, CalFresh Healthy Living, and Migrant Alternative Payment Program (MCAP) in late spring and summer, 2022. In addition, an interview was conducted with the Director of Health and Nutrition. Follow-up interviews were conducted with two staff members in May and June, 2023. These interviews focused on building an understanding of how these programs address the food-related needs of CAPK clients, and how they partner with other departments within CAPK as well as with external agencies. Challenges that make it difficult to adequately or efficiently address food insecurity were also discussed.

Qualitative interviews with five of CAPK's agency partners. In order to build a meaningful survey instrument to distribute to CAPK's agency partners, in summer 2022 TLC staff conducted in-depth interviews with five agency partners across the county that represented Arvin, Bakersfield, Delano, and Ridgecrest. The goal of these interviews was to better understand the various ways in which agency partners receive and distribute food—both from CAPK and from other sources in their respective communities. These individuals were also asked to provide feedback on a survey that was ultimately distributed to all CAPK agency partners (see below).

Survey of CAPK's agency partners. CAPK supports several types of food distribution programs, including commodity and pantry. Commodity programs distribute boxes of foods made available through the USDA composed primarily of non-perishable items (e.g., rice, beans, canned and/or packaged foods), while pantry programs source food from a variety of venues or vendors and will generally include fresh, whole fruits and vegetables, meat, dairy, and other perishable items. A survey instrument was developed in fall 2022 but it was not disseminated to agency partners until the holiday season was over because the sites experience an increased demand in November and December. In January 2023, the survey was sent to all of CAPK's agency partners across Kern County that host commodity programs, pantry programs, both commodity and pantry programs, and something other than a commodity or pantry program. Those programs that are “neither” commodity nor pantry may be getting food only for their own clientele (e.g., a recovery house, animal shelter), from the Senior Food Bank or other specialized food programs, or do not currently have a viable location from which to distribute food. Results from the survey are included in the report.

Qualitative interviews with other county stakeholders involved in food production, acquisition, or distribution. A variety of public agencies, nonprofit organizations, local/grassroots groups, and schools and universities are directly involved in working to address food insecurity in Kern County. Understanding that it would be impossible to identify and interview every food distribution stakeholder in Kern County, the research team created a list that was expanded by CAPK project supervisors. This list includes:

- Apple Core Project (grassroots nonprofit)
- Bakersfield College (schools/universities)
- Blue Zones Project—Bakersfield (community health initiative)
- California State University Bakersfield (schools/universities)

CityServe (nonprofit)
City of Bakersfield Public Works (city agency)
Food Not Bombs (local chapter)
Grimm Family Education Foundation, Bakersfield (nonprofit)
Grimmway Farms (grower)
Kern County Black Farmers Association (growers)
Kern County Public Health (county agency)
Kern County Public Works (county agency)
Kern County Superintendent of Schools (county education agency)
Kern River Valley Family Resource Center (CalFresh)
Lamont Family Resource Center (CalFresh)
MLK CommUNITY Initiative (grassroots nonprofit)
Sal Moretti (community member)
The Golden Empire Gleaners (nonprofit)
The Mission at Kern County (nonprofit)

Qualitative interviews with health care providers. Interviews were conducted with medical professionals (doctors and nurses) from Clinica Sierra Vista, Kern Medical, and Omni—all facilities that serve low-income individuals and families.

Geographic Information System Mapping. The TLC research team subcontracted with Gary Bess Associates to provide geographic information system (GIS) mapping of Kern that includes the following: low-income areas by census block, 200% below poverty by census tract, CAPK agency partners, WIC stores, SNAP stores, commercial farmers markets, free farmers markets (through CAPK), large supermarkets, mid-sized markets, corner stores, and public transit routes. This interactive map is expected to be available on the CAPK website by early fall 2023.

SWOT Analysis. At the end of the initial data analysis, the TLC research team conducted a “SWOT” (Strengths, Weaknesses, Opportunities, Threats) analysis with sixteen representatives from CAPK’s food-facing programs and some members of the administrative team. After receiving a presentation of initial study findings, the group proceeded to identify *internal* factors that they believe are helping them move forward in achieving their goals and objectives (strengths) related to reducing food insecurity, or, alternatively, are hindering them in moving forward (weaknesses). They then looked at external factors that could be game changers (opportunities) in CAPK’s efforts to address food insecurity, and those threats that could operate as barriers. Finally, the group identified critical next steps to ensure that CAPK is positioned most effectively to work with all county stakeholders in addressing the issue of food insecurity.

I.2 Format of the Report

The remainder of this report is divided into four primary sections. Section II provides a profile of Kern County that includes a brief description of its geography and climate, its population demographics, its primary economic drivers, and income distribution. Section III, Understanding Food Insecurity, gives a

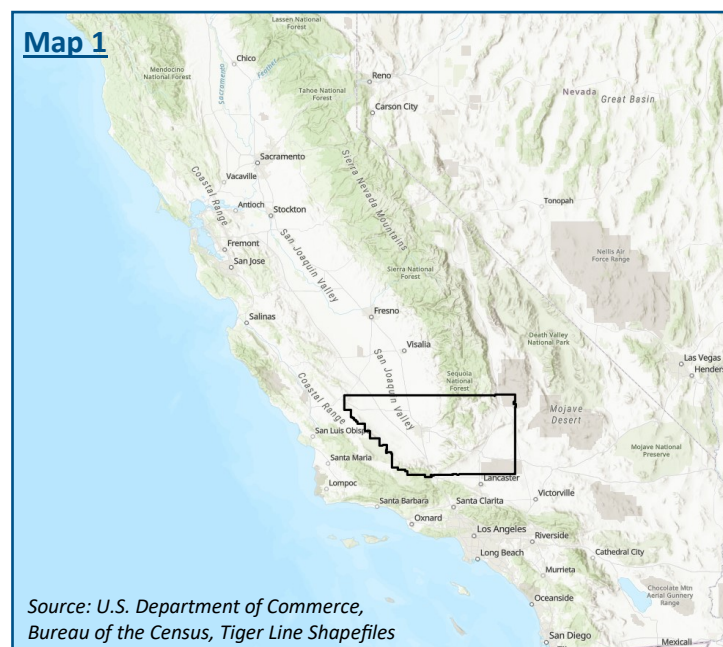
brief history of how food insecurity came to be tracked, and how definitions have evolved over time. It also includes a broad overview of food insecurity and health outcomes, and food insecurity and climate change. Section IV, Current Levels of Food Availability and the Reduction of Food Waste, focuses on how the current infrastructure supports the broad availability of fresh, healthy foods county-wide to those in need, and also examines the role of California Senate Bill 1383 in helping to reduce food waste and to increase food availability. Section V, Access to Healthy, Affordable, Culturally Appropriate Foods, looks at the distribution of CAPK agency partners locations county-wide, against high-density, low income areas that are “food deserts”—that is, lacking easy access to affordable healthy food. It also examines how easily available low cost food that is highly processed, calorie-dense, low-nutrient foods has conditioned some areas to poor eating habits, and the role of education in addressing lifestyle change. Section VI offers findings from a SWOT (strengths, weaknesses, opportunities, and threats) analysis conducted with sixteen CAPK supervisors and administrators attached to food-facing programs. Finally, Section 7 provides conclusions, recommendations, and next steps suggested by stakeholders both inside and outside of CAPK who were involved in the data collection process for this report.

II. Kern County Profile

A combination of factors work together to make Kern County unique. Its geographic location near major inter and intrastate routes, its climate and population characteristics shape local culture. This section of the report features the attributes that define Kern County.

II.1 Geography and Climate

Kern County, sometimes referred to as “The Golden Empire” because of its rich history of gold, oil, and agricultural production, is located at the southern end of California’s San Joaquin Valley. It consistently ranks as one of the top producing agricultural counties in the United States, as well as being one of the nation’s leading petroleum-producing counties. In recent years, Kern has also become a distribution hub for some of the world’s largest companies, primarily due to its location along major throughfares that run both north/south and east/west, providing easy access to California’s large urban centers, as well as neighboring markets in Arizona, Nevada, and Utah (California Employment Development Department, n.d.).

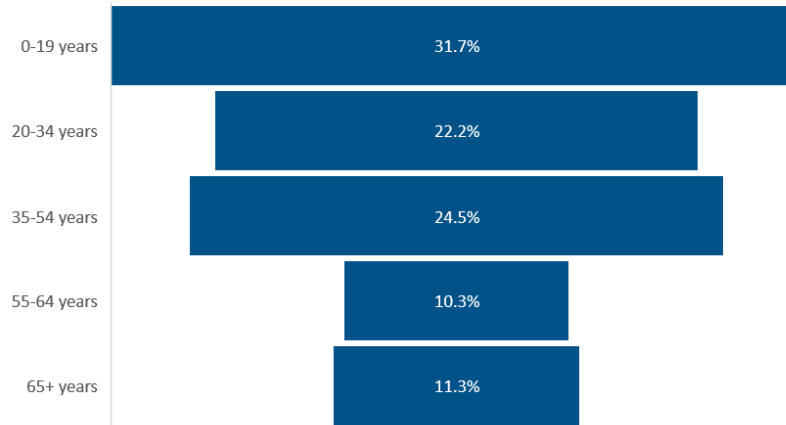


One of Kern County’s assets is its geographical diversity. Spanning 8,135 sq. miles, its land size makes it the 3rd largest county in California, or roughly the size of New Jersey (8,723 sq. miles). In terms of population, it is the 11th most populous of California’s 58 counties (U.S. Census Bureau, 2020).

II.2 Population Demographics

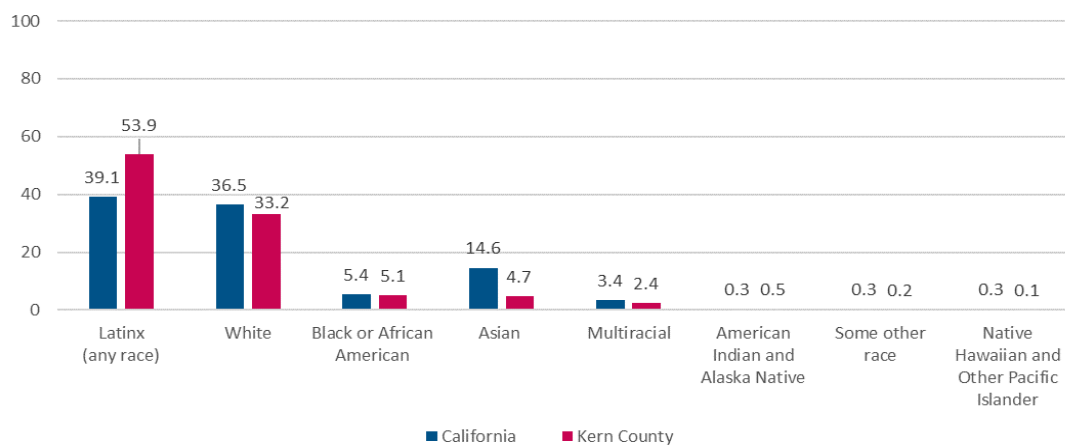
Kern County is home to 916,108 people (U.S. Census Bureau, 2022). Partly due to its size and topography, it has far fewer people per square mile than the state average with 111.8 people per

Figure 1
Kern County Residents
Age
2021



square mile compared to 253.7. It has a younger population than California, with 31.7% of residents 19 or younger compared to 24.9% across the state. It also has fewer senior citizens with 11.3% of Kern residents who are 65 and older compared to 15.1% in California (U.S. Census Bureau, 2021). [See Figure 1 above]

Figure 2
Kern County Residents
Race/Ethnicity
2020



In terms of race and ethnicity, Kern mirrors the state for most racial and ethnic populations. Where Kern differs, however, is that it has a much higher percentage of Latinx (of any race) people than does California as a whole, a somewhat smaller percentage of Whites, and substantially fewer people of Asian descent.



II.3 Main Economic Drivers

In 2019, Kern was the seventh largest oil-producing county in the United States, and represented 71% of California's oil production and 3% of the total U.S. oil production. In addition, Kern County produced 78% of the state's natural gas. Not only is the industry a significant source of employment, but also creates high-paying jobs from entry to highly technical, all of which provide above average wages compared to other industries in the county. The average annual salary for the entire oil and gas sector is \$80,874, which is two-thirds more than the "all industries" annual average of \$49,751 (Kern Economic Development Foundation, January 2021, p. 3). In addition, the industry has a substantial impact on local services as it makes up nearly one-quarter of the county's property tax revenue, contributing significant dollars to the budgets of the county, incorporated cities, school districts, and special districts (Karlman, 2022).

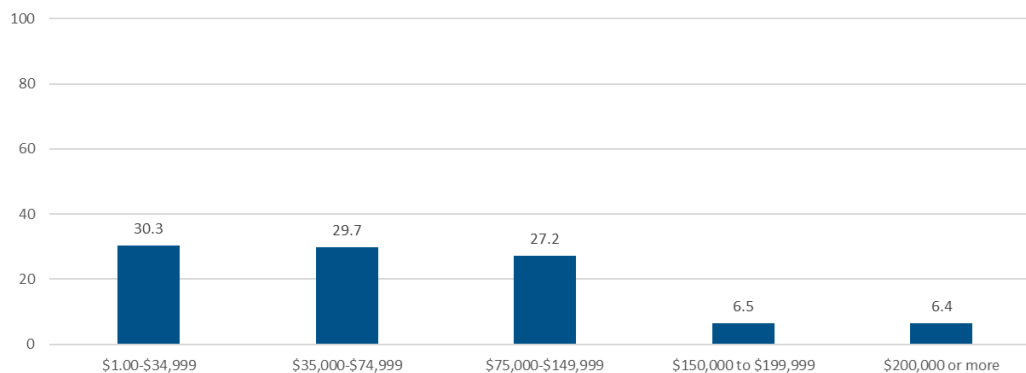


Kern's other primary economic driver is agriculture. In 2021, Kern was the largest agricultural producing county in the United States, with the gross value of all agricultural commodities produced at \$8.3 billion (California Department of Food and Agriculture, 2021-2022, p. 21). The warm climate, rich soils, progressive water management, and the efforts of Kern County's vegetable growers and workers have made Kern County one of the top vegetable producing regions in the nation. In fact, Kern County is the leading producer of carrots, contributing over 80% of the total national production (Kern County Agriculture, n.d.). In terms of revenue, Kern's top five agricultural commodities in 2021 were grapes, citrus, pistachios, almonds and milk (Kern County Department of Agriculture and Measurement Standards, 2021).

II.4 Employment, Education, and Distribution of Wealth

In June 2023, Kern County's unemployment rate was 8.8%, up from 8.6% in May 2023, and well above the previous year's estimate of 7.0%. By comparison, California's unadjusted unemployment rate during the same period was 4.9% and the national rate was 3.8% (Employment Development Department, 2023). Correspondingly, Kern has a higher poverty rate—18.5% compared to the state-wide poverty rate of 12.3%. The average education level also lags far behind the state average; 17.6% of Kern residents have a Bachelor's degree or higher, compared to 35.3% of all Californians. While the average number of persons per household does not differ significantly between Kern and the state, 3.19 persons per household in Kern and 2.92 in California (U.S. Census Bureau, n.d.), Kern does have a higher owner occupancy rate than the state average, with 59.3% of homes in Kern being owner-occupied compared to 55.5% in California (U.S. Census Bureau, 2020).

Figure 3
Kern County Residents
Annual Household Income
2021



Source: American Community Survey, 2021

Despite the wealth generated by the oil and agriculture industries, nearly a third of Kern's population (30.3%) has a household income of under \$35,000, and a similar percentage (29.7%) of households earn between \$35,000 and \$74,999 per year. Just 6.5% of households earn between \$150,000 and \$199,999, and nearly the same percentage (6.4%) earn \$200,000 or more (U.S. Census Bureau, 2021).

III. Understanding Food Insecurity

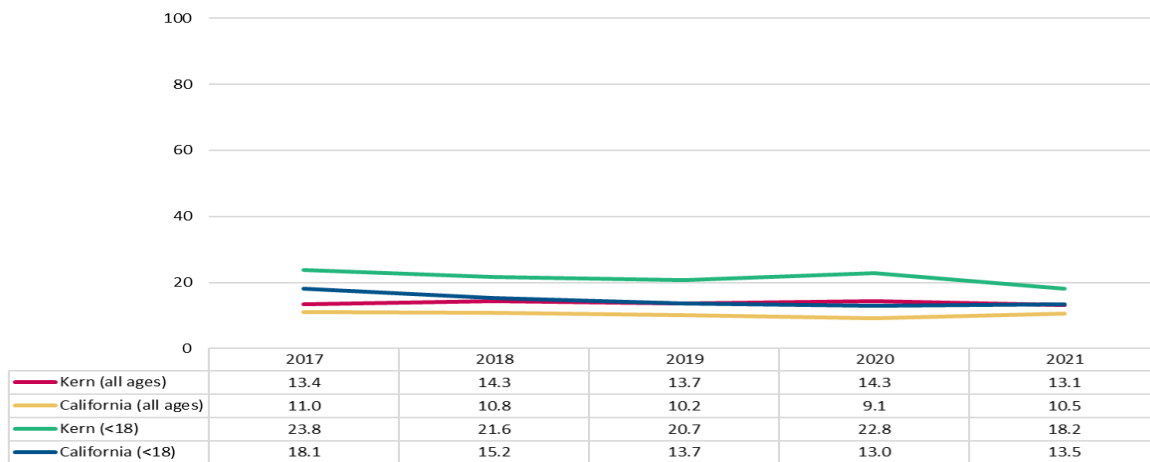
Before the issue of food insecurity can be discussed, it first must be defined. Over the years, the term has been used to describe a variety of circumstances, applying to an individual person, a region, or an entire country. The term has also been applied to circumstances that are short-term with a fairly definitive end (e.g., a storm season that ruins one year of crops, transportation disruptions that delay shipments) to long-term conditions with no foreseeable end. This section defines the use of the phrase “food insecurity” for the purposes of this report, as well as how food insecurity is linked to health outcomes and climate change.

III.1 Evolving Definitions of Food Insecurity

*Food insecurity rates for Kern County in 2021 were
13.0% overall and 18.2% for children.*

The United States has monitored the access to food since the Great Depression when policies were first put in place to address the need of providing adequate nutrition for people suffering from chronic hunger. Traditionally, these policies have been administered through the United States Department of Agriculture (USDA). Following the trend in other developed nations, the USDA focuses on individual access to food to track who has enough food and who does not. After legislation passed in 1990, the secretaries of the Department of Agriculture and the Department of Health and Human Services were “to prepare and implement a ten-year comprehensive plan to assess the dietary and nutritional status of the U.S. population” (Wunderlich & Norwood, 2006, p. 27). Their work led to formalized definitions of food security and insecurity and an 18-question survey which measured access to food: the Food Security Core Module. Since 1995, the USDA has measured access to food by asking whether individuals in the household have had adequate access to food over the previous twelve months. Initially, the response options included the term “hunger” as part of some of the classifications. In 2006, the terms (though not the survey) were revised, and hunger was removed from the classifications because there was “no clear conceptual basis for what hunger should mean as part of the measurement of food insecurity” (Wunderlich & Norwood, 2006, p. 4). Currently the USDA classifies households as food secure, if they have “access by all members at all times to enough food for a healthy, active life.” Food insecurity is defined as households that have “limited or uncertain availability of nutritionally adequate and safe foods, or limited or uncertain ability to acquire acceptable foods in socially acceptable ways” (Beaulieu, 2014, pp. 1-2). The USDA uses a scale to classify households as having high or marginal food security, low food security, or very low food security (Beaulieu, 2014, pp. 1-4). The 18-question form the Food Security Core Module (also referred to as the Food Security Scale [Cook & Jeng, 2009]) are administered annually by the Census Bureau as part of the Current Population Survey Food Security Supplement (Coleman-Jensen, 2010, p. 215).



Figure 4**Food Insecurity Rate for All Ages and Children
Feeding America**

Kern County rates of food insecurity have fluctuated over the years with spikes occurring during the Great Recession beginning in 2008 and especially at the beginning of the Covid-19 pandemic in 2020. According to Feeding America’s Map the Meal Gap (which bases its information on the Census Bureau’s Current Population Survey), the food insecurity rate for Kern County residents of all ages has hovered between 13% and 14% between 2017 to 2021, and is consistently higher than the state’s average. A more striking gap exists among children where Kern’s rate is five to 10 percentage points higher than the state. [See Figure 4]

Research has consistently found that food insecurity “disproportionally affects vulnerable populations, including children, the elderly, minorities, and low-income households” (Beaulieu, 2014, p. ES-2). Other important findings have shown that “the prevalence of food insecurity among immigrant households is estimated to be twice as high as the prevalence of food insecurity among non-immigrant households in the United States” (Beaulieu, 2014, p. ES-3) and that households headed by single women with children have high food insecurity (Beaulieu, 2014, p. ES-3). While there is a correlation between poverty and food insecurity, not all households with low socio-economic status are food insecure, which raises questions about the causality of food insecurity (Cook & Jeng, 2009, p. 7).¹ In addition, the U. S. measure of poverty is so low that many researchers claim that it does not reflect how much food insecurity there is in the country. Many guidelines for aid use 130% of the poverty line; some use 185% of the poverty line; and some researchers claim that in order to provide an adequate safety net, the guidelines for food aid should be twice the poverty line (Cook & Jeng, 2009, p. 6).²

¹Many researchers attribute food insecurity primarily to poverty. Other researchers focus more on food insecurity as tied to diet, marketing, and various public policy perspectives (such as the promotion of high sugar foods). Still other researchers attribute food insecurity to “agricultural land use, and foreign policy” (Bellows and Hamm 2003:108). Research findings also vary due to the use of different definitions of poverty.

²Bartfield & Dunifon note that “food insecurity does not reach negligible levels until household income exceeds five times the poverty threshold.” They argue that this result means that researchers do not fully understand the relationship between income and food insecurity (2006, p. 922).

In the United States, Census Bureau is charged with measuring poverty. To set a poverty threshold, they determine how much money a person or a household needs to earn to cover basic expenses. They calculate it using a formula developed in the early 1960s. While the formula is adjusted for inflation, it makes two assumptions that are not necessarily true: 1) it uses the cost of a minimum food diet and multiplies that by three to determine the income a family needs (it adjusts for family size) and uses pretax income; and 2) that pre-tax income is not adequately measured because it undercounts in some cases (for example, the earned income tax credit is not counted) and overcounts in other cases (Measuring Poverty in the United States, n.d.). Haider and Schweitzer (2020) note, “For decades, now, researchers and advocates have argued that the official poverty count is much too low.” One reason is that over the years the relative costs of food and other necessities have changed. Food is now one-seventh of a family’s expenses, while other costs such as housing, childcare, and transportation have grown substantially. Another problem is that the poverty line does not adjust for variations in state income (except for Alaska and Hawaii), nor for rural and urban distinctions. The National Center for Children in Poverty argues that “Across the country, families typically need an income of at least twice the official poverty line to meet basic needs” (Measuring Poverty in the United States, n.d.). Using different measures of poverty, some analysts have found that nearly 51 million more individuals in the United States live in poverty and “struggle to pay for basic necessities such as food, housing, and health care” (Haider and Schweitzer, 2020).

California’s 2023 Federal Poverty Line (FPL) is \$30,000 for a family of four. The U.S. government de facto recognizes that the FPL is too low because the qualifications for SNAP benefits are 130% of the FPL (and below) and the qualifications for WIC benefits are 185% of the FPL (and below). Neither of these levels, however, comes close to a living wage for a family of four in Kern County. The Massachusetts Institute of Technology (MIT) developed a “Living Wage Calculator” which looks at the income needed for 12 different types of families in every county in the United States. It estimates the local wages that a full-time worker needs in order to cover their basic needs. Using this calculator, a family of four with two working adults and two children in Kern County needs a household income of \$104,083 to make ends meet (See this website for the MIT Living Wage Calculator <https://livingwage.mit.edu/>).

III.2 Food Insecurity and Health Outcomes

Food insecurity is strongly associated with hypertension, coronary artery disease, diabetes, hepatitis, stroke, cancer, asthma, arthritis, chronic obstructive pulmonary disease, kidney disease, depression, and limitations in activities.

Research on food insecurity and health outcomes has consistently shown that “food insecurity [is] negatively associated with health” (Gunderson & Ziliak, 2015, p. 1). Former Surgeon General Vivek H. Murthy noted that “food insecurity is an important health problem and an underrecognized social determinant of health. It places a substantial burden on our society through health care and social

costs” (2016). These excess health care costs were estimated to be as high as \$52.9 billion in 2016 (Berkowitz et al., 2019). This is approximately “3% to 6% of the approximately \$1.2 trillion in annual health care expenditures” (Berkowitz et al., 2019, p. 3). In Kern County, the additional cost of health care was estimated to be \$180,929,518 in 2016 (Feeding America Research, 2019). If food insecurity was mitigated, then health care costs would be less of a burden for both the county and individuals.

Researchers have consistently documented the cost of food insecurity on physical and mental health, as well as quality of life. Food insecurity is strongly associated with the following health conditions: “hypertension, coronary artery disease, diabetes, hepatitis, stroke, cancer, asthma, arthritis, chronic obstructive pulmonary disease, kidney disease, depression, and limitations in activities” (Bhandari et al., 2023, p. 1) Bhandari et al. found that a cause and effect relationship existed at the population level “between increasing levels of food insecurity and both mental and physical health related to quality of life” (2023, p. 4). They found that even marginal food insecurity status was significantly linked to a lower quality of life (p. 5) that could not be explained by other factors such as demographic, socioeconomic, or insurance status (p. 6).

When examining the health of individuals who are food insecure, researchers typically break the population into three age groups: children, non-senior adults, and senior adults (generally 60+). Most of the research in this area has been conducted with children, followed by seniors, and lastly, the non-senior adult group. Based on these age categories, the findings show a strong relationship between food insecurity and negative health outcomes for all groups. Among children, food insecurity is “associated with increased risks of some birth defects, anemia, lower nutrient intakes, cognitive problems, aggression, and anxiety. It is also associated with higher risks of being hospitalized and poorer general health, and with having asthma, behavioral problems, depression, suicide ideation, and worse oral health” (Gunderson & Ziliak, 2015, p. 4). For non-senior adults, food insecurity is associated with “decreased nutrient intakes; increased rates of mental health problems and depression, diabetes, hypertension, and hyperlipidemia; worse outcomes on health exams; being in poor or fair health; and poor sleep outcomes” (p. 4). For seniors, the list of health consequences includes lower nutrient intakes, a higher likelihood of reporting poor or fair health, depression, and limitations in the activities of daily living (p. 4). In a recently published article, Assoumou et al. examined different groups of seniors and concluded that among seniors, “Food insecure individuals were more likely to be younger, less educated, Black or African American, female, a current smoker, low income, report having fair/poor health, have chronic conditions, and utilize government assistance programmes” (2022, p. 229). Of particular concern was that seniors with food insecurity were also likely to have medication non-adherence (likely linked to cost [p. 240]) and were also more limited in physical functioning. Gunderson and Ziliak note that a senior with marginal food insecurity when compared to a senior with full food security likely “has reduced nutrient intakes roughly equivalent to having \$15,000 less income” (2015, p. 4).



One health outcome that is not as clear as researchers once thought is the relationship between obesity and food insecurity. Assoumou et al. note that there are many factors contributing to obesity in the U.S., and that it is possible that obesity may precede or follow food insecurity (2022, p. 241). Similarly, Gunderson and Ziliak noted that there was no association between obesity and food insecurity in men and children “after relevant confounding factors” were controlled for by the researchers. There was, however, a possible connection between food insecurity and obesity for women for one year (2015, p. 5).



All of the negative health outcomes associated with food insecurity place a severe drain not only on the individuals with less than optimal health, but they also drain the community by increasing health care costs and socioeconomic costs such as missed work and school days, inability to perform the activities of daily living (particularly for seniors), and lost potential. In order to change, U.S. Surgeon General Vivek Murthy succinctly stated, “Food security is a top public health priority for the nation. To promote more food security

in American households, we must leverage multisectoral approaches across government, nonprofit, health care, and research to study and scale effective strategies” (2016, p. 657).

Since the Supplemental Nutrition Assistance Program (SNAP) program has been shown to reduce food insecurity and to reduce poverty as well, increasing SNAP benefits is a proposal often made by food insecurity policy advocates. Other frequent suggestions include the government reducing barriers to applying for SNAP and recertifying the SNAP program. Because mortgage or rent payments are not factored in when determining the amount of discretionary income a family has to spend on food, setting a higher income level to be eligible for SNAP would align more closely with the reality families face (Gunderson & Ziliak, 2015, p. 7). For example, Thomas et al. argue that the short- and long-term effects of food insecurity have clearly been shown to negatively impact children’s health. They advocated for increased SNAP benefits and increased supplementary benefits to provide more nutrient-rich foods. Without such increases, children’s health will continue to be detrimentally affected (2022). Assoumou et al. argued that safety net programs do provide help for seniors; however, they do not provide enough help, especially when considering the high cost of medications. Seniors often do not have sufficient resources to pay for both food and medications. They suggest that public health interventions be more systemic and address “the underlying determinants of food insecurity” (2022, p. 243). In the short term, health care providers can recognize that food insecurity plays a role in mental and physical health, as well as impacting quality of life. Researchers recommend that health care providers screen patients for food insecurity on a routine basis. If food insecurity is found, Gunderson & Ziliak suggest that providers refer patients to food assistance programs (2015).

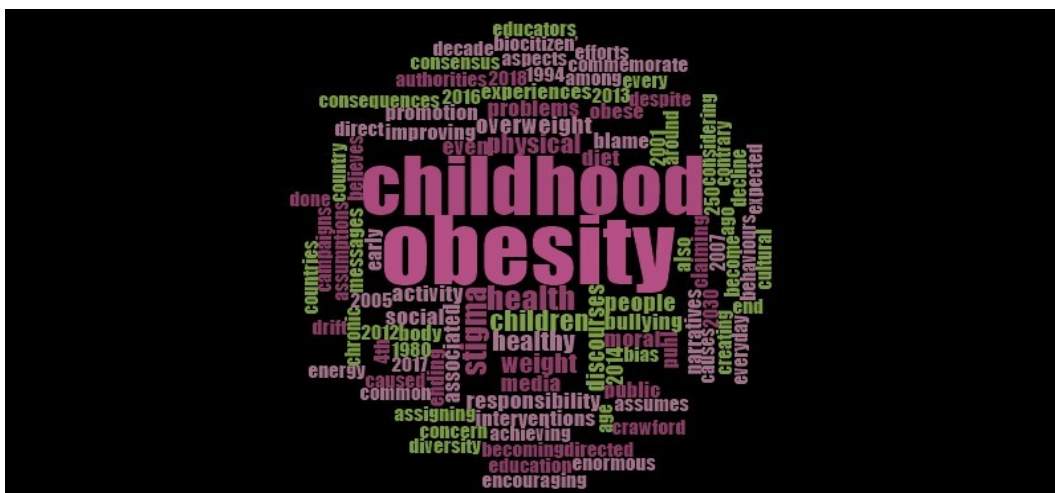
In Kern County, three health care providers were interviewed in 2023 by the TLC research team: a physician working with Kern Medical; a physician with Clinica Sierra Vista; and an administrator with a medical background from Omni Family Health. These practitioners have wide experience with patients who have had or who currently experience food insecurity. One of the respondents, in particular, spoke of the record number of young patients who are clinically obese and are “struggling with comorbidities at a much younger age now.” They noted that they are seeing:

...a lot of earlier diagnoses of type 2 diabetes or prediabetes...kids who come in that are malnutrition [sic]; they have a lot more dental problems. ...And high blood pressure, a lot of times high blood pressure. Even ...[in] some of the pediatric populations, just seeing things that are not necessarily [what] we would ever have seen before. For our adult population, we’ve seen a great increase in [high] blood pressure and diabetes.

As a result of these increases, one of the organizations interviewed is expanding their support services to include pediatric programs. They anticipate that close to 17,000 pediatric patients in the area will meet the criteria for inclusion in the program “because of the amount of comorbidities they have.”

Providers also noted that while food insecurity is one of the social determinants of health, it can be hard to find out if a patient is experiencing food insecurity. One of the physicians reported that food insecure individuals may not disclose this issue to providers, especially if there is violence in the home. They also noted that some patients may not even know they are food insecure. As a result, one of these agencies was in the process of “educating our providers and our support staff, so that we can gather information [about food insecurity] without making the patient uncomfortable or violating their privacy.” Patients need nutrition education, which can be done, they argued, in small incremental changes to food acquisition and food preparation. They emphasized that primary care physicians cannot fix the root causes:

I feel like we’re sometimes putting all this money and all these efforts in this bucket [health care] that has no bottom, because we need to tackle the root cause. And it starts with education, with access to food, with changing the culture, and that’s the hardest.



Much of this is difficult because socioeconomic conditions influence health care outcomes. As one physician put it: “Our communities experience substance use disorder, homelessness, food insecurity, obesity, morbidly obese, they’re morbidly obese and with that comes cardiovascular disease, diabetes...Strokes at a young age, and then other circulatory complications.” Another need is street medicine so healthcare providers can learn some of the issues associated with homelessness. For example, a homeless person will generally not have access to a refrigerator so prescribing insulin will be ineffective.

These concerns were shared by one of the other medial professionals who has worked in shelters and street medicine, as well as with medicine designed to treat addiction. They underscored their point by talking about a patient who wasn’t coming to the clinic and had been:

chronically homeless for seven years....and I was like, why aren’t you coming to clinic? He’s like, because I am losing time in collecting cans, and I need cans to be able to eat. ...It just blew my mind. I think with a lot of our patients having housing insufficiency, being in and out of shelters, couch surfing, when they do have access to food, it’s usually not very healthy.

Medical providers talked about children coming to the emergency department because they have “gastritis, like, stomach inflammation from Hot Cheetos...there’s actually been studies published [about this].” They also spoke about some food insecure individuals choosing to purchase drugs in lieu of food. “When they don’t have food, they are smoking more. They’re using methamphetamine...I think I’d rather see them get the food at the end of the day than turn to other substances that are going to do more harm.” While they would like to see education programs about nutrition expanded, one respondent noted that they currently have only one nutritionist to serve their patients. In addition, they shared that staffing is short. Oftentimes, primary care physicians may have only 15 minutes for a visit, so “it can’t be just on the burden of the primary care doctor, because there’s just not enough time for how many patients we have to see.”

We need a culture shift to change aspects of “this ingrained American diet.”

In summary, Kern County health care professionals report many of the same physical and mental issues in their patients as do researchers who study the dynamic between food insecurity and health care, though local providers place even more emphasis on the relationship between food insecurity and problems associated with obesity, especially seen now at younger and younger ages. They advocated for interventions in education and nutrition to try to bring about a “culture shift” toward healthier eating. They also noted that health care providers cannot necessarily improve the health outcomes of their patients when the health care provider may not even be aware of the patient’s food insecurity or have sufficient time to address underlying problems in a 15-minute visit. While screening for food insecurity can be incorporated into the healthcare settings, the burden on providers is such that

healthcare cannot truly address the larger problems, especially when patients cannot afford food and/or healthy food. That concern has traditionally been seen as the responsibility of other sectors (e.g., government programs, agriculture, food policies). They also advocated for that most difficult task of changing eating preferences and habits to bring about a “culture shift.”

III.3 Food Insecurity and Climate Change

Climate change is expected to have global impacts on food production and distribution systems. This can cause food prices to increase, which makes food less affordable and increases food insecurity, obesity, and malnutrition in economically constrained households.

In February 2017, the California Department of Public Health published “Climate Change and Health Profile Report for Kern County.” This report examined how climate change was likely to affect Kern County in the coming years. Among the changes they projected were an increase in annual temperature, a decline in annual precipitation (including snowpack), and more heat waves. The eastern edge of the county was projected to experience an increase in wildfire risks of four to six times more than the current conditions (2017, p. 5). Similarly, the California Department of Food and Agriculture (in cooperation with San Diego-based Climate Science Alliance) noted that irrigation water would become more scarce, that weather conditions would become more variable and intense, and that temperatures would rise (Cox, 2020). In 2023, Kern County, like much of California, experienced greater snow and rainfall than expected. The National Resources Defense Council reported that “the Kern River Watershed, which lies at the Southern end of the Sierra Nevada, is predicted to receive 422% of its average snowmelt runoff. This kind of “climate whiplash” where several years of drought is followed by record snowfall is predicted to continue and accelerate as climate change advances.

Ongoing changes in climate will affect health in many ways, including direct exposure to extreme weather such as droughts or floods which can lead to death and displacement from homes. Climate change will continue to affect agriculture, damaging or ruining crops, resulting in higher demand for less product, driving prices upward, resulting in a greater number of people who cannot afford healthy food. As the Climate Change and Health Profile Report for Kern County succinctly put it:

Climate change is expected to have global impacts on food production and distribution systems. This can cause food prices to increase, which makes food less affordable and increases food insecurity, obesity, and malnutrition in economically constrained households” (2017, p. 11).

The report continues by elaborating which populations are the most vulnerable. When considering the direct consequences of increased temperatures such as a heat wave, the very young and the very old, as well as those with compromised health, are at greater risk. Also at risk are those who work

outdoors. While everyone will experience some degree of disruption from to climate change, people with less education, those who experience racial segregation, and those living in poverty “face disproportionate climate-related health burden[s]” (2017, p. 11).

IV. Current Levels of Food Availability and the Reduction of Food Waste

CAPK administrators identified two primary objectives related to the reduction of food insecurity in Kern:

- (1) Locally grown foods are available through schools and food banks/food distribution centers;
- (2) Kern County residents have ongoing access to affordable, healthful foods that reflect their cultural values.

This section of the report addresses existing efforts by county stakeholders to ensure the availability of high quality, fresh, healthy, affordable and culturally appropriate foods for all Kern County residents. It focuses heavily on current efforts by CAPK and other county stakeholders to increase food availability, and discusses some of the challenges they are facing in doing so. It should be noted that there was a Food Policy Council facilitated by the United Way of Kern that disbanded in approximately 2018. The original council is referenced by some of the stakeholders interviewed for this study. CAPK, Blue Zones Project Bakersfield, along with others are currently reestablishing a Food Policy Council.



The data presented are based on interviews with representatives from The Mission at Kern County, Golden Empire Gleaners, Blue Zones, the Kern County Black Farmers Association, Bakersfield City Public Works, Kern County Public Health (Waste Hunger Not Food), CityServe, Kern County Public Works, and a private citizen heavily involved in efforts to address policy change. (Information on other stakeholder organizations is contained in Section V, which focuses on consumer access.) Because it remains the largest of the stakeholder organizations, much of this section of focuses on the efforts of the CAPK Food Bank and food-facing programs, and is based on interviews with sixteen CAPK employees involved in supervising or directing food-related services. This section also incorporates information from the CAPK Agency Partner Survey completed by CAPK agency partners directly involved in distribution, analyses from GIS mapping, and information on state and local efforts to reduce food waste.

IV.1 The CAPK Food Bank



The CAPK 2022 Annual Report indicated that approximately 19.1 million pounds of food were distributed by CAPK and its roughly 150 agency partners that year (2022, p. 29). In addition, the Senior Program distributed approximately 1.8 million pounds of food. To gain an understanding of the increasing need for food in Kern, in 2016 CAPK

distributed approximately 500 senior food boxes a month; this year, the senior program is distributing 5,000 boxes a month and they expect the caseload to grow. The amount of fresh produce made available through the Food Bank has increased from approximately 100,000 pounds in 2014 to nearly two million pounds in 2022. One Food Bank staff member noted that they had seen the Food Bank go from distributing about 13 million pounds of food in 2017 to a record of 33 million in 2020. They also reported that the Food Bank is on track in 2023 to distribute 24 million pounds. With the increased demand, the need for bigger and better facilities with more cold storage capacity has led to grant-funded expansion projects, which have resulted in a new warehouse for the Food Bank and a discussion about a new building for the Central Kitchen. According to a CAPK staff person, the original Central Kitchen was “maxed out.”



To address this issue, funds were obtained to vastly increase the physical size of the Food Bank. Once completed, the new facility will be 60,000 square feet, tripling the size of the current 20,000 square foot space, allowing for storage of more food to meet the growing need.

When the CAPK Food Bank expansion is complete, all food will be housed in one location including the Senior Commodity Program which is currently located in a different warehouse. A director mentioned, “The talk is that Central Kitchen might be moved right next door to us. So, having all of that together that, that’s going to definitely[create] some kind of collaboration where there’s piggybacking on services that we can provide.” Also, staff have been shuttled between warehouses, as staffing needs arise. “Once the expansion is complete, it’ll solve a lot of our problems. Because we will all be under one roof...So we can all help each other easier than being in these different warehouses.”

FRESH RESCUE

While CAPK picks up food from some of the larger grocery stores under its association with Feeding America, one Food Bank staff person noted, “We don’t have the drivers to pick [food] up every single day”—or as often as the store might request. Staff may then turn to a pantry program and ask them if they have the capacity to pick up donations from a grocery store in their area as part of a program known as “Fresh Rescue.” According to agency partners that participated in the survey for this study, the biggest problem with participating in Fresh Rescue is that they generally do not know what the grocery store plans to donate: “The hard thing with that is, it could be three boxes of food, it could be a box of Pop Tarts.” CAPK, as well as all pantry programs participating in Fresh Rescue, must track the volume of food (number of pounds) they receive through Fresh Rescue to report to Feeding America. The Food Bank has agreements with most of the large grocery stores in Kern County. The smaller grocery ones, such as Dollar General, are now reaching out to Feeding America (and thus to CAPK as the local affiliate). CAPK has onboarded nine Dollar General stores in 2023 by pairing them with agency partners enrolled in Fresh Rescue.

Most of the food distribution from CAPK is funded and processed through federal and state programs as well as through grants. To understand how the funding works, it is necessary to understand the differences between commodity programs, food pantry programs, the senior commodity program, and produce sites (free farmers markets). In the past year, changes were made to the Memorandum of Understanding (MOU) at CAPK so that all participating agencies, organizations, and civic groups involved in the distribution of food are now called “agency partners.” Agency partners may participate in food distribution with CAPK in several ways: these various food distribution options are designated as programs in addendums in the MOU. Currently, CAPK partners with approximately 125 food pantry programs and 54 commodity programs (some sites operate both pantry and commodity programs).

CAPK participates in two USDA commodity programs: The Emergency Food Assistance Program (TEFAP) which is available to low-income individuals and the Commodity Supplemental Food Program (CSFP) which is available to low-income seniors 60 years of age and older. TEFAP foods are currently distributed to agency partners sites with commodity programs. Delivered on pallets, agency partners staff and volunteers organize their distribution method as it best suits their physical space and staffing capacity. Some sites allow clients to walk in and pick up the food, while other sites have a drive-thru model where clients stay in their car while a volunteer brings the box of food to them—an approach that became popular during COVID-19. All agency partners that participate in the commodity program

are required to collect the names and addresses of participants in order to comply with USDA requirements. While income guidelines are posted at commodity sites, that information is not collected from participants. CAPK does not charge the agency partners for the costs of the food or for delivery.



CSFP is a program dedicated to people 60 and over. Commodities are packed into boxes at the Food Bank and

delivered to eligible senior commodity sites once a month. CSFP commodity foods must be kept separate in the warehouse and can only be used for this program. In order to receive a box, seniors must provide their name, address, zip code, and income. They are only eligible for food if their income is at or below the amount set by the federal government. While sites collect this information, they do not ask for proof of income. CAPK also delivers CSFP commodity boxes directly to eligible homebound seniors. Currently one-third of their caseload is direct delivery. One Food Bank employee explained:

But we don't need their [income] guidelines. If they're willing to stand in line and if they feel that they need this, then they're able to go shopping [receive food] without showing their income.

While funds for the commodity sites have specific requirements and the food purchased with those funds must be closely monitored, funding for the pantry programs comes from a variety of sources, most of which are not as restrictive. Food provided to pantry sites either has no cost attached or is deeply discounted.



Agency partners that operate a pantry site “shop” for their items at the Food Bank facility. Historically, pantry programs went to the warehouse to shop at a predetermined time, and they were accompanied by a Food Bank staff member. Over time, there were not enough time slots available to accommodate all the current pantry programs or to add new programs. In 2023, the process for ordering and picking up food changed; a move that many agency partners had been requesting but others had resisted. Now, agency partners place their order online and schedule a pick-up date and time. When they arrive, their order has been palletized.

CAPK obtains food that is stored in the warehouse either through purchase or donation. Because the Central California Food Bank (located in Fresno) is a Feeding America partner, and because CAPK is an affiliate member of the Central California Food Bank, CAPK can receive food donated by grocery stores. CAPK is also able to broker relationships directly between agency partners and grocery stores as part of the Fresh Rescue program. While at the Food Bank to pick up their order, they may add additional items that are not always available that have donated to the Food Bank.

Pantry programs throughout the county can apply to become a commodity program. Generally, pantry programs need to demonstrate institutional capacity and staying power for at least six to 12 months before they can apply to become a commodity program. One Food Bank staff member said that many agency partners have been doing this work for decades “so they’re pretty well versed in it. New sites can be a challenge because of the learning curve, the difficulty of starting this up.” They went on to say that some pantry coordinators “come in with wide eyes—like, well, we’re going to help the community. And then they realize the amount of work, and they kind of just fade away.”

Recognizing that agency partners were struggling with being able to consistently provide their consumers with healthy options, the Food Bank recently began to ensure that they always have five categories of staples in stock: fruits, vegetables, produce, starches, and juices. While agency partners understood that CAPK did not always know what would be available to them, they appreciate knowing that they are guaranteed access to several categories of healthy options from which to choose.

CAPK also oversees seven produce-only distributions funded by The Wonderful Company. These are referred to as “farmers markets” although there are no costs attached. Currently, these are held once a month, with the goal of expanding to 10 locations by the end of 2023. The Food Bank has strategically located these sites across the county so that all well populated communities have a nearby market. The current locations are in Bakersfield (3 sites), Arvin, Delano, Ridgecrest, Shafter, and Wasco—effectively spanning the county. The produce comes from donations by farmers, grocery stores, and the California Association of Food Banks (CAFB), associated with Feeding America. While the produce from CAFB is generally free to CAPK, the freight costs are not, and they can be substantial. In addition, CAPK also has several large grants to purchase produce.

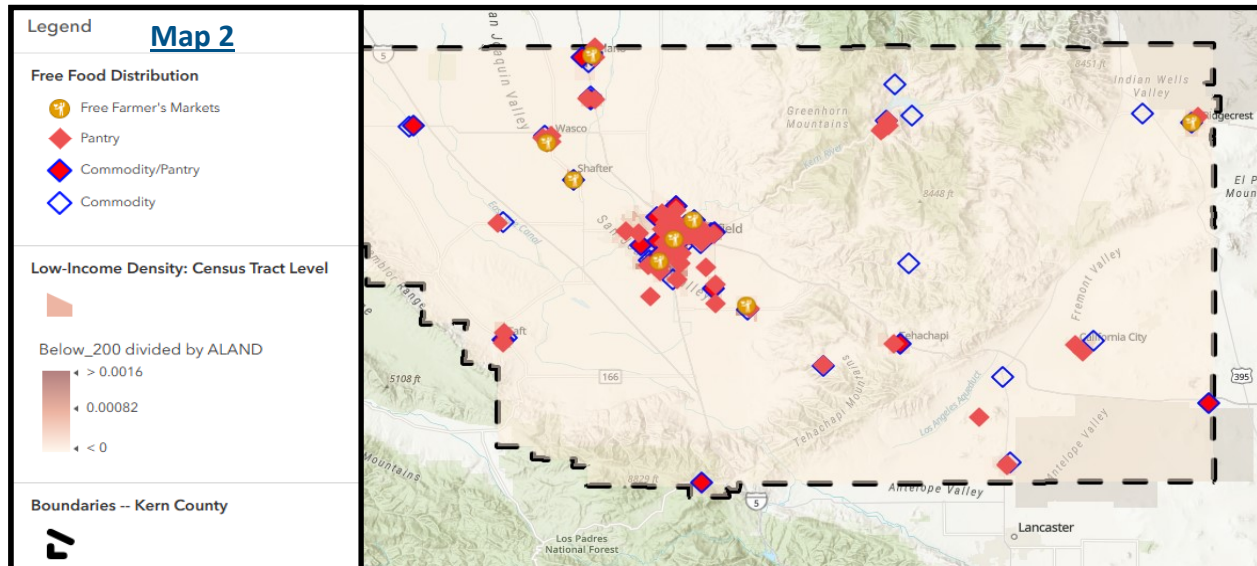
Traditionally, the Food Bank has supplied food for organizations holding special events, even for groups that are not agency partners. A recent shift has been to invite organizations to become agency partners “so that we can collaborate better moving forward, and we can be part of what you are planning.” One staff person explained, “The relational part is still very important to me. And, I’ve been endeavoring to change that culture for a little while.”

IV.1a Distribution of Agency Partner Sites County-wide

GIS mapping was used to provide a geographic view of the commodity, pantry, and free farmers markets across the county. Not only does this provide information about which areas have distribution sites and which areas are in need of additional partners when examined in combination with poverty rates, the picture becomes even more clear where community members would benefit from additional distribution sites, pointing to where new partnerships should be prioritized.

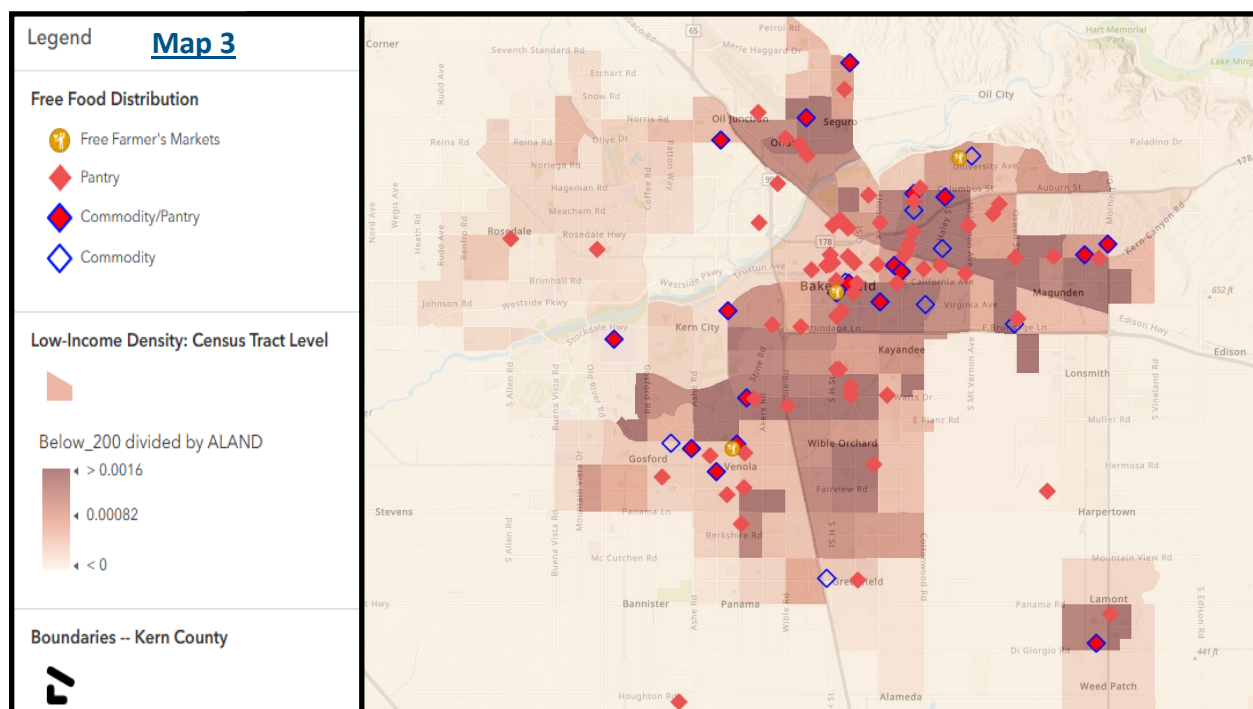
Map 2 [see page 24] shows all of the commodity, pantry, and free markets across the county, along with the rate of people who live in households below 200% of the Federal Poverty Guideline (FPG). The 200% FPG is used in this analysis of food distribution services because it is the income threshold used by the California Health Interview Survey conducted by the University of California at Los Angeles to measure rates of food insecurity. As previously mentioned, poverty rates are typically calculated below 130%-200% poverty since the U.S. formula for determining poverty does not take into account how much rent and mortgage payments have risen in proportion to food expenditures.

Because Kern County is so large geographically, there are broad areas with no inhabitants, largely because some places are geographically remote or they present other challenges (e.g., steep areas of the Sierra Nevada Mountains, undeveloped areas of the Mojave Desert), and because agriculture and the oil and gas industries require a sizeable amount of land for their products. Despite this, there is some kind of distribution in all 11 incorporated communities, although it may be limited in frequency.



Because more than half of the county's residents live in the greater Bakersfield area (many urbanized parts of the greater Bakersfield area are not within the incorporated city boundary, particularly in east and northeast), this area was selected to provide an example of what CAPK and other stakeholders will be able to do with the GIS map that was developed in conjunction with this study. It will provide not only geographic accessibility, but also includes distribution days and times, enables stakeholders to see which areas have the greatest need.

Using Bakersfield as the example, it should be noted that some of Bakersfield's neighborhoods that were developed primarily in the middle of the last century have chosen to remain unincorporated. As a result, city population estimates do not account for the entirety of residents living in the urban area. It



also contributes to differing availability of services, resources and infrastructure, even within well-established neighborhoods. Some unincorporated areas are completely surrounded by the City of Bakersfield's jurisdiction. This plays a role in food distribution, as policy and permitting vary between the city and county.

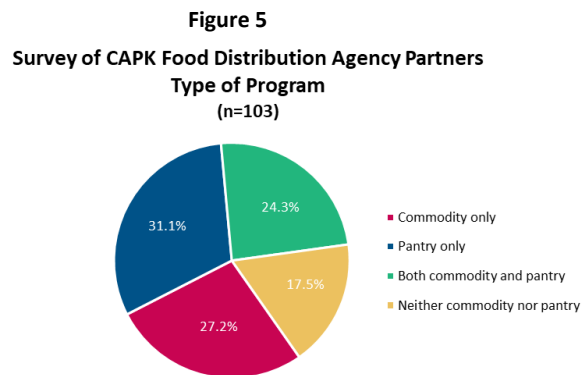
Looking at metropolitan Bakersfield specifically [see Map 3 on page 24], it's more apparent where concentrations of low income individuals live (the darker the color, the greater the percentage of people in that census tract who live in poverty). It appears that many of the areas with high concentrations of the most severe poverty have some distribution sites. Both the southwest and the southeast, however, have pockets without distribution locations, as is also the case for some areas of the northwest.

It should be kept in mind that CAPK relies on agency partners to distribute food, so CAPK cannot necessarily determine the exact location of distribution sites in any given community. While CAPK will not deny a potential new partner that reaches out to them (unless there is already good coverage for the area), they are proactive in reaching out to potential partners in underserved areas.

IV.1b The CAPK Agency Partner Survey

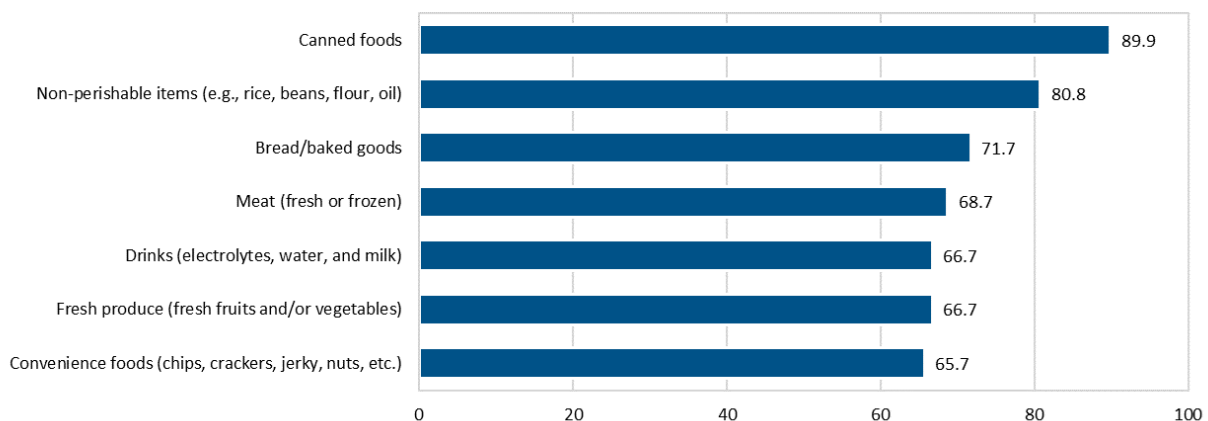
As mentioned, 103 agency partners responded to the Agency Partner Survey collected by TLC in January and February, 2023. After the survey was piloted in five locations and the instrument revised based on feedback, the Food Bank Administrator sent the survey link to all agency partners asking one representative from their site to complete the survey. Due to an initial low response rate, TLC called agency partners asking them to complete the survey over the phone. After making contact with all sites, 103 sites responded. For most of the following analyses, however, four of the sites were omitted because they do not distribute food outside their own facility (e.g., one site only distributed to tribal members, another was a recovery house).

Of the 103 sites that responded, 27.2% operated commodity programs only; another 31.1% operated a pantry program only, 24.3% operated both commodity and pantry programs, and 17.5% indicated that they are neither a community nor pantry program [Figure 5]. In the last case, most participated only in the senior food distribution program and some were temporarily without a distribution locations so they were taking a hiatus from receiving food.



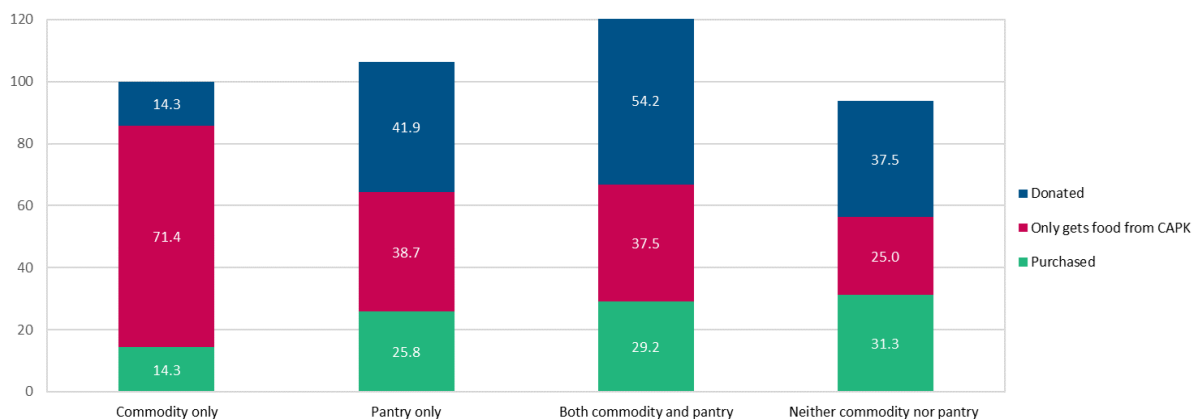
Agency partners were asked to indicate the foods they distribute most often. Canned foods topped the list at 89.9%, followed by non-perishable items (e.g., rice, beans, flour, oil) at 80.8%; and bread/baked goods at 71.7%. About two thirds of programs provide fresh or frozen meat (68.7%), distribute drinks such as electrolytes, water, and milk (66.7%), fresh produce fresh fruits and/or vegetables (66.7%) and convenience foods like chips, crackers, jerky and nuts (65.7%).

Figure 6
Survey of CAPK Food Distribution Agency Partners
Top 7 Most Frequently Distributed Foods
(n=99)



The 99 programs that distribute to the general public were asked where they source their food—through CAPK, donations, or by purchasing. Figure 7 shows that these three sources made up the entirety of food sourcing options for programs that responded to the survey. Programs that operate only commodity programs rely most heavily on CAPK, with 71.4% indicating that CAPK is their only source of food. Comparatively, one-third to one-quarter of the other three program types relied exclusively on CAPK; 38.7% of pantry only programs, 37.5% of sites with both commodity and pantry programs, and 25.0% of programs that are neither pantry nor commodity sites.

Figure 7
Survey of CAPK Food Distribution Agency Partners
Food Sources
by Program Type
 (n=99)



Note: More than one source could be selected

Agency partners were asked a few open-ended questions on the survey, one of which asked: “What would you change, if anything, about the way CAPK provides food (e.g., shopping at their warehouse, delivery, ordering, schedule)?” This survey was distributed prior to several operational changes, including the move to online purchasing. Many of the changes suggested on the survey have already been made. Several pantry programs wanted more time to shop when they came to the warehouse. Some wanted to be able to come to warehouse more times in the same month. One of the bigger issues mentioned had to do with communication. For example, some pantry sites wanted an appointment confirmation via email, having gone to the pantry occasionally and been told that they couldn’t shop at the time they believed they were scheduled. Similarly, commodity sites reported not always knowing when deliveries would arrive. Some said trucks were early so their volunteers were not there to help unload; others said the trucks were later than expected and volunteers were waiting for long periods. A few pantry programs wanted to have the food delivered to their distribution site rather than having to drive to Bakersfield to pick it up; this was especially true for the partners located furthest from Bakersfield.

Finally, agency partners were asked, “What, if anything, would help you improve your food distribution services?” The most frequent reply was that they needed more storage, especially for frozen and

refrigerated products. Several went on to say that they needed a refrigerated truck to transport food, particularly in the warmer months. The second most frequent reply was that they needed more volunteers. With respect to picking up food, some agency partners wanted to either have more appointment times or to know in advance what types of food they would be receiving. Several sites wanted more food in general, more food options, and/or they needed bags or boxes for consumers to take food home. One said, “Right now they are struggling because those who receive food don't have any way to carry them.”

IV.2 Kern County Stakeholders: Tradition and Innovation in Expanding Food Availability

In addition to the work done by CAPK, there is a large network of state, federal, and county programs, as well as nonprofits agencies working to increase access to affordable, locally grown foods and to empower Kern County residents to become both healthier and more invested in their food choices. Many of the agency representatives interviewed for this project described and documented the need for these changes; many were working to address the immediate need by expanding services, and some advocated for systemic change through policies and education. All of these approaches have a role in both feeding those who are food insecure and working toward a future when all Kern County residents have access to healthy, affordable food.

This section focuses on four stakeholders, two of which—The Mission at Kern County and Golden Empire Gleaners—have been in operation many decades. The third, Blue Zones Project Bakersfield, is a very new entity with a somewhat different focus, and the fourth is Kern County Black Farmers Association, which approaches access and affordability through a non-traditional strategy.

IV.2a The Mission at Kern County

The Mission at Kern County, located in Bakersfield, has been serving meals to unhoused individuals for over 70 years. A Christian-based organization, The Mission provides emergency shelter, a residential discipleship program for men and women, and a recovery home for women with children. They provide job skills training on their campus and through Encore Boutique, a resale shop where men and women in the discipleship program learn employment skills. They provide meals to both residents and walk-ins. As one person described it:



So, you have people from the...apartments or homes within the vicinity that come down and get a meal. It's open to the public. We've designed it that way. It serves our residents that are going through our programs. It's serving our homeless guests that are staying with us. It's serving our women and children at our O Street property.

The Mission provides between 500 and 600 meals a day, 365 days a year—or more than 200,000 meals per year, at a cost of about \$2.50 per meal. Although The Mission has both a kitchen and dining room,

both have grown inadequate to meet the increasing need, and the organization was in the process of seeking funds to expand its facilities at the time of the interview.



To feed its clientele, The Mission partners with CAPK, the Golden Empire Gleaners, and local restaurants and businesses. Speaking about the larger picture of food insecurity, an administrator at The Mission pointed to what they see as oftentimes a failure in “big picture” planning among organizations attempting to address food insecurity, in that it is very easy to follow a funding stream without adequately ensuring that the program or service is something that can be sustained in the long term. He went on to say that a reinvigorated Kern County Food Policy Council would be good for the community, but they would like to see:

...more coordination. I do think there has to be more conversation that's meaningful, and that has strategic goals that are going to be set—not just to talk....Because at the end of the day its, you have people that are coming to your doors for help. They don't want an action plan. They want to get fed.

And The Mission does this, three meals a day, 365 days a year.

IV.2b Golden Empire Gleaners



Golden Empire Gleaners rescues food, receives donations from farms, fundraises and receives donations from grocery stores through CAPK's Fresh Rescue designation through Feeding America. Gleaners receives no government funding; however, the organization provides approximately two million pounds of food per year to Kern County residents. Founded in 1985 and located in Bakersfield, Gleaners serves communities throughout Kern County, including Taft, Rosamond, Tehachapi, and Frazier Park.

The Senior Sack program provides food twice a month to 17 senior communities. In March of 2023, when the COVID-19 pandemic relief programs ended, Gleaners served about 11,000 individuals. Prior to that, they averaged 7,500 people per month. People are referred to them by agencies, recovery homes, schools, and other sources. As explained by one administrator:

But on a daily basis, the phone rings, and it's from one of our agencies. Let's say Bakersfield City School. And they're like, "This is Susan, I have a family with 10 members in it. I need to fulfill that need" or "I have a basket I need for two adults, one child." So we pack those baskets according to the family size. I think we're the only one that does that in Kern County....We look at the whole picture...I'm very proud of that.

Individuals can also volunteer to assist in the preparation of food baskets, and will receive a food basket for their service.

If the organization receives a donation they do not have the capacity to distribute (for example, produce too close to its expiration date), they call The Mission at Kern County to find out if they can use that food. If they receive food that has already spoiled, they make use of that, too, by giving it to calf and pig farmers, ensuring that nothing goes to waste.



IV.2c Blue Zones Project Bakersfield



Blue Zones Project (BZP), a national movement to create healthier communities, came to Bakersfield late in 2021. Blue Zones research began in 2004, when Dan Buettner worked with National Geographic, the National Institute on

Aging, and other researchers “to identify pockets around the world where people lived measurably better, longer. In these five areas—dubbed ‘blue zones’—researchers found that people reach age 100 at a rate 10 times higher than the United States, and they do so with lower rates of chronic disease” (Blue Zones Project Story, n.d.). BZP uses research findings to work for healthier communities across the United States. Metropolitan Bakersfield, comprised of 13 zip codes, is now one of over 70 communities participating in the BZP (Blue Zones Project Story, n.d.).

BZP Bakersfield has four major partners: Adventist Health, California Resources Corporation, the City of Bakersfield and Valley Children’s Health (Blue Zones Project Bakersfield, 2023, July). In their finalized Blueprint for the city, BZP Bakersfield addresses the “built environment” (e.g., infrastructure), tobacco policy, and food policy (Blue Zones Project Bakersfield, 2023, July). In the area of food policy, BZP Bakersfield will work to “(1) build food skills; (2) make healthy food accessible and affordable for everyone; (3) increase healthy food environments; (4) grow long-term community health; and (5) grow the local food supply” (Blue Zones Project Bakersfield, 2023, January, p.1).

In 2022, Blue Zones Project Bakersfield undertook a discovery assessment of the Bakersfield area focusing on four major areas: (1) food skills; (2) food environments; (3) food culture; and (4) food infrastructure. The findings were shared with 64 leaders who attended a Food Policy Summit (Blue Zones Project Bakersfield, January 2023, p. 4). At the summit, decisions were made about which areas to focus on over the next five years. The national Blue Zones Project organization reviewed this work and proposed a Blueprint for the community.



The Food Policy Summit recommended the following as its highest priorities under the goal of building food skills: (1) that the Blue Zones Project (BZP) Bakersfield would have their Food Policy Committee

“conduct an inventory of existing food skills resources, programs, and infrastructure to guide formation of a community-wide strategy across potential partners, highlighting gaps in current programs” and (2) that they would respond to the gaps or needs discovered by “collaboratively develop[ing] a comprehensive, culturally responsive food skills education strategy, tailored to accompanying food-growing and distribution efforts recommended



in the Discovery Report and occurring in the community” (Blue Zones Project Bakersfield, 2023, February, p. 5). Many other goals were identified, but none at this level of priority. One medium level priority goal has already been implemented. As part of its fourth goal, grow long-term community health, the Food Policy Summit recommended that “Local food systems leaders and organizations will reinvigorate the County’s Food Policy Council and support its function to guide and implement future food systems development efforts.” [For all areas of priority and the accompanying strategies see Blue Zones Project Bakersfield, 2023, February.]

One BZP Bakersfield staff member summarized the initiative this way:

With Blue Zones, the whole idea is that we’re focusing on where we live. Right? So if you want to eat healthy, well, we’re not just going to be eating healthy at home. Right? Because we spend a lot of time at work, our kids spend a lot of time at school, so we want to make sure that everywhere we go that we have these healthy options available for us. So that’s why we really focus on the overall approach, the holistic approach to things.

They went on to note that Bakersfield has many food deserts, and that they want to work with corner markets to make fresh fruits and vegetables available. They plan to work with farmers markets, as well, to expand the number that accept SNAP and WIC benefits, to work with schools to help them implement their wellness programs, to reformulate the Kern County Food Policy Council, and generally to help Bakersfield to have safer streets and healthier foods. [See the Blue Zones Project Bakersfield, July 2023, for a full list of the areas they will address, agency partners, and leadership.]

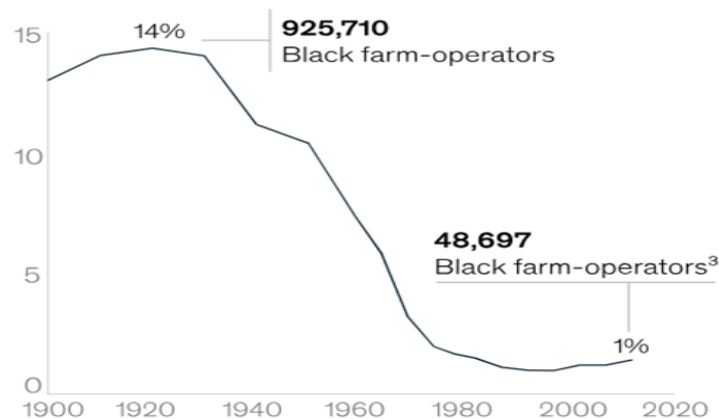
IV.1d Kern County Black Farmers Association

The numbers tell a compelling story. Over the last century, the number of Black farmers in the U.S. has plummeted drastically, falling from nearly 1 million in 1920 (14% of the U.S. total) to less than 50,000 by 2017. According to the USDA Census of Agriculture Highlights (ACH 17-9, October 2019), “in 2017, the United States had 48,697 producers who identified as Black, either alone or in combination with another race. They accounted for 1.4% of the country’s 3.4 million producers, and they lived and farmed primarily in southeastern and mid-Atlantic states. Black producers were older and more likely to have served or to be serving in the military than U.S. producers overall. Their farms were smaller,

and the value of their agriculture sales was less than 1% of the U.S. total.” In Kern County, where Black farmers have been an integral part of the agricultural and cultural fabric since the 1880s, the numbers are just as striking. Of 3,159 agricultural producers in the county, a mere 28, or 0.9%, identify as Black or African American.

In Bakersfield, a handful of African American residents still own small plots of land in various parts of the city, including the southeast, an area notorious as a food desert, as well as the southwest,

Figure 8
Black farm operators (key decision makers)¹ have declined significantly since 1900, % of total²



northwest, and northeast. Realizing the potential for engaging small landowners in production that could serve as a valuable and culturally appropriate local resource, Dr. Evelyn Young Spath recently formed the Kern County Black Farmers Association and is currently awaiting recognition as a 501(c)3 non-profit organization. About 15 aspiring, beginning, and experienced farmers gathered as an interest group and were the impetus for forming the association. Their fledgling organization has held meetings to determine individual and collective needs and assets, start a directory, and create a one-stop repository for information, training and education, and resources to help farmers launch, grow, or scale their ag businesses.

Part of the reason Dr. Spath believes the organization is so important has to do with helping overcome and dismantle the legacy of slavery linked to Blacks and land cultivation. “Some of what we’re dealing with is the historical and generational stigma, shame, and suffering of slavery linked to anything associated with farming and ag. ...For many of us, unaddressed, unhealed trauma is the root of an aversion to agriculture. So, reclaiming, reframing, and renaming what it means to work the land is key to shifting our relationship with it. It’s no longer something we have to do because we were poor, did not have access to education, and it was all we could do. It’s now what we get to do to be empowered, food secure, and food sovereign. We get to grow what we eat, and eat what we grow. We are working the land for ourselves, our families, our children, and our communities.”

Dr. Young Spath cites that Kern County is the number one agricultural producing county in the country, generating some \$8 billion in annual revenue, but that Bakersfield is also “the number one city for food hardship with 24% of residents identifying as food insecure (Food Research Action Center).” As this evolving organization begins to articulate its goals, a primary objective is to make sure that the food grown in the county is also available to those who are food insecure in the county. Ideas they are exploring include tapping into Community Supported Agriculture (CSA)—that is, boxed, fresh, local produce made available regularly to people who subscribe to have boxes picked up or delivered—at a rate affordable to low-income individuals. Dr. Young Spath would like to see CSA boxes going directly to the homes of low-income recipients as the norm for the community. The organization also is looking at building interest in small farmer collectives and local farmers markets in low-income areas — something that has been implemented successfully in more affluent areas.

Dr. Young Spath raises questions such as “What culturally relevant legacy crops are we growing and making available to our increasingly diverse community? How can we get back to canning, pickling, and preserving so produce is available in the off-season?” She shared, “I went to a local farmers’ market and one of the vendors had a little four-pack of lemons for \$8.00. Who can afford that? The price is out of reach. It’s a barrier for people with limited means who also want fresh produce. We must have affordable farmers’ market options.” Dr. Young Spath is exploring diverse farmer market models for small-scale farmers, focusing on affordability and electronic benefit transfer (EBT) payment expansion for SNAP participants and farm-to-door delivery. She is collaborating with seasoned farmers’ market experts.

An important piece of this work is “to help people achieve sovereignty, agency, and self-determination regarding where their food comes from, what goes into it, and how it gets to them. How do we address, in an affirming way – not by dismissing, diminishing, or denying – the mindset and lived experiences of African Americans and other people of color whose labor was exploited for the ag industry profitability? How do we reconnect them with the land so that they love the land again?” Dr. Spath stressed this reconnecting so that people have a “sense of place,” a “sense of ownership,” and “a sense of belonging” in agriculture and farming.



IV.3 Food Recovery and the Reduction of Food Waste

The CAPK Food Bank works hard to create as little waste as possible. Occasionally staff is forced to refuse fresh food donations that are too close to expiration. A Food Bank staff member explained:

I had this one farmer who grew squash...He was sending me three or four semi loads a day. And all of it was bad. Like it was covered in flies and mold. ...And these truck drivers were independents; they would show up expecting me to pay them....So, stuff like that is the biggest source of our waste....[and] that's very rare.

When receiving food that is close to expiration, Food Bank staff works closely with other stakeholder organizations, particularly Gleaners and The Mission at Kern County to sort and distribute the food. They also work with farmers to repurpose food that is no longer suitable for human consumption but can be fed to livestock.

Other forms of food waste are less easily addressed, because federal policy sets guidelines for whether food can be kept and redistributed or must be discarded. For example, the Head Start Program must follow USDA regulations which require that unused food at Head Start sites go into the garbage. A Head Start staff person explained:

If a child's not eating it, it cannot leave the center....It's very difficult for us to show our clients, our families that are struggling with food insecurity at home, when they're volunteering in a classroom and [they're] seeing food going in the garbage. They want to take it home to their families, but we're legally not allowed to do that. So I will say from a food insecurity perspective, if there were some more connectivity between our funding sources and the federal regulations, that would be helpful.

The Central Kitchen at CAPK prepares most of the food for the Head Start Programs in the county. A staff member noted:

So once we send out food [to other parts of the county], we never bring it back—unless it's a canned item, which is an actual can that's been sealed, hasn't been opened, hasn't been touched, and it hasn't been crushed. We'll take those back, and we'll actually use them again. However, anything that's been sent out frozen, cooked, and it's been at the centers, we don't bring back.

The way Head Start is trying to reduce food waste is to get as accurate a count as possible of the children who attend each week—not an easy task, as the number varies considerably. It is not uncommon for Head Start to literally trash 1,000 meals over the course of a week county-wide, either because a child refused the meal or because the child did not attend.

At one time, the program attempted to use prepackaged meals that might be reused later:

But that even became just logistically more challenging to track to ensure that when they came to review our program that we can validate that we had enough of a particular product available for all children present to have the right portion. And so we ended up having to stop doing that.

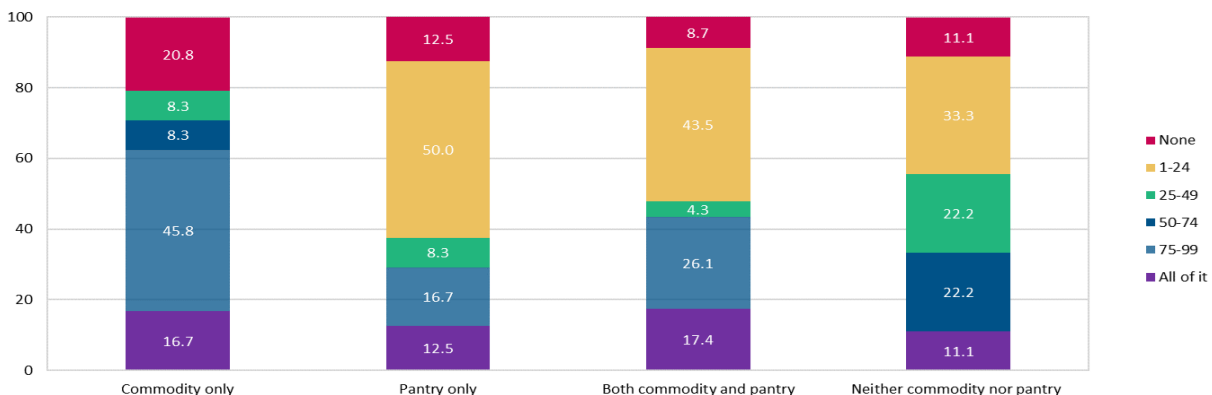
Head Start guidelines stipulate that all children must receive the exact same food and the exact same portions, so it is not possible to combine meals from one day with meals from the next, given the inability to guarantee that numbers will be sufficient to serve all children the same meal.

At one point, Head Start attempted to have prepackaged food picked up by delivery drivers and returned to the Central Kitchen for redistribution, but this too had to stop because the staff time involved in sanitizing product containers and packages was simply too costly.

These are areas that require policy changes at the highest level, and that will have implications for compliance with new California regulations requiring the rescuing of edible foods (see SB 1383, p. 41).

The survey conducted with agency partners also addressed food waste. Respondents who indicated that they currently get food from CAPK (94 respondents) were asked approximately what percentage of all food they throw away comes from CAPK. The percentage of programs reporting that, on average, 50% or more of the food they throw away comes from CAPK, ranged from 29.2% of “pantry only” programs to 70.8% of “commodity only” programs (see Figure 11). One-third (33.3%) of programs that were neither commodity nor pantry sites estimated that 50% or more of the food they throw away is received from CAPK, while 43.5% of “commodity and pantry” programs reported that 50% or more of the food they discard comes from CAPK. In contrast, sizable percentages of all program types

Figure 9
Survey of CAPK Food Distribution Agency Partners
Approximate Percentage of All Food Thrown Away that Comes from CAPK*
(n=94)



Note: Only includes sites that receive food from CAPK

estimated that 25% or less of all the food they throw away comes from CAPK – 62.5% of “pantry only” programs, 52.2% of sites that run both commodity and pantry programs, and 44.4% of sites that have neither commodity nor pantry programs.

When asked about their reasons for throwing away food (including food sourced from places other than CAPK), 35% of all agency partners surveyed indicated that they *never* throw away food, while 42.7% indicated that they throw away produce that comes to them already spoiled. Another 18.4% indicated they throw away food that spoils after it gets to their site. Most telling is that 19.4% throw away boxed or canned goods that come to them past their “expiration date,” and 11.7% throw away boxed or canned goods that “expire” after they are at their site. [See section IV.3a below, “Understanding Expiration Dates.”] Other reasons added by respondents included:

- *At our old location we had a mouse problem.*
- *Sometimes storage is the problem.*
- *Very rarely do we throw away food because we have local relationships with farms with animals, homes with chickens, and a worm farmer, too. The only food we throw away is opened packages that come to us unsealed (meat is given to people with dogs) and really spoiled produce from Fresh Rescue (sometimes the stores throw everything in the box, including moldy and watery produce).*

Survey respondents were asked a series of open-ended questions, one of which read, “What would you change, if anything, about the quality of the food you get from CAPK?” The most frequent response concerned the dates marked on the food they received: they noted that often the non-perishable food was either close to “expiring” or had already “expired.” This appears to be an opportunity for agency partners to learn more about the dates that are printed on food items. They may be contributing to food waste by throwing away food that could be used since none of the labels they are referencing actually refer to “expiration”—a confusion shared by the American public.

IV.3a Understanding Expiration Dates

One area in which CAPK could provide education to its agency partners is on the topic of expiration dates. The USDA does not require any product labeling for usage dates except for infant formula. *This means that all the dates consumers see on packages are voluntary labeling by the manufacturer.* In addition, there are no industry standards for addressing expiration. The USDA lists the following as the dates consumers will see most often on products:

- A **Best if Used By/Before** date indicates when a product will have the best flavor or quality. It is not a purchase by or safety date.
- A **Sell-By** date tells the store how long to display the product for sale for inventory management. It is not a safety date.
- A **Use-By** date is the last date recommended for the use of the product while at peak quality. It is not a safety date except when used on infant formula.

- A **Freeze-By** date indicates when a product should be frozen to maintain peak quality. It is not a purchase or safety date (Food Product Dating, 2019).

Note that none of these dates are an indication of whether a food product is safe to eat. They all pertain to peak quality or flavor.

The USDA acknowledges that confusion over what these labels mean contributes to food waste. Food that has gone past the date on any of the above labels is safe for donation as long as product is evaluated “prior to its distribution and consumption to determine whether there are noticeable



changes in wholesomeness” (Food Product Dating, 2019). A typical example of food that is thrown away due to this confusion is canned food. The USDA says of canned foods, “High-acid canned foods (e.g. tomatoes and fruits) will keep their best quality for 12 to 18 months. Whereas, low-acid canned foods (e.g. meats and vegetables) will keep for two to five years” (Food Product Dating, 2019).

IV.3b A Case Study in Innovation: Waste Hunger Not Food

Waste Hunger Not Food is a program run by the Kern County Public Health Department that rescues edible, surplus food from restaurants, schools, and markets, and then distributes it to food insecure residents in Kern County. The program began when public health inspectors noticed the large amount of food waste in the places they inspected. They talked with school officials and heard “from the restaurant owners, the schools, how disgusted they [were] by the waste that [was] occurring,” explained a program administrator. “Our Environmental Health Director and our Public Health Director kind of came up with this notion of ‘Let’s bring the two of those concepts together. Let’s reduce this waste, and let’s find a way to get it to the individuals that need it the most.’”

They gathered stakeholders, applied for and received grants, and launched the program on September 10, 2018. By April 2023, *Waste Hunger Not Food* had rescued 2,545,898 pounds of food. The program partners primarily with two organizations: CityServe (the agency responsible for distributing the rescued food), and the Open Door Network (a new organization created by a merger of the Bakersfield Homeless Center with the Alliance Against Family Violence and Sexual Assault) which provides truck drivers through their job development program. CityServe currently has covenants with 97 Christian churches throughout Kern County. Churches pick up food from the CityServe facility and take it back to their neighborhoods for distribution. *Waste Hunger Not Food* is currently working with some restaurants, but primarily they work with specific school districts. All Bakersfield City School District sites participate in *Waste Hunger Not Food*, as well as some schools from seven other Kern County districts.



The Public Health Department has an employee who handles logistics, sending their three refrigerated trucks to pick up food from partnering restaurants and

schools. They bring the food to CityServe once or twice a week. A CityServe representative explained that CityServe then distributes the food “to men’s homes, youth groups, youth adoption agencies. And then, of course, our local churches distribute what they get as well. So I think with that we’re probably reaching all parts of Kern County. But, there are about 20 pickups and drop-offs.”

This highly successful partnership has made strides in reducing food waste and helping those who are food insecure throughout the county. Until *Waste Hunger Not Food* obtains more resources, however, they cannot take on additional partners. A school administrator in a participating district explained that their district is opening a new school in fall 2023, but because *Waste Hunger Not Food* is at capacity, this school will not be able to participate in the program.

IV.3c California Senate Bill 1383: Game-changing Legislation for Food Waste

In 2016, the California Legislature passed Senate Bill 1383 with a timeline for rolling out several tiers of compliance, spanning from 2022 to 2024. Kern County Public Works has the following summary about the bill’s purpose on its website:

California is implementing statewide organic waste recycling and surplus food recovery to reduce emissions of methane from food and organic waste in landfills. This new strategy to reduce the disposal of organics is part of California’s Short-Lived Climate Pollutant Reduction Law, also known as Senate Bill (SB) 1383. The law also aims to reduce food insecurity by ensuring more surplus food reaches people in need instead of being discarded. SB 1383 was signed into California law in 2016 and requires the state to:

- ⇒ *Reduce organic waste disposal by 75% by 2025*
- ⇒ *Rescue at least 20% of currently disposed surplus edible food by 2025*

This bill affects the entire county, as well as every incorporated city within the county, in terms of recycling organic materials including households, businesses, and government agencies. Its major purpose is to divert organics from the state’s landfills to reduce methane gas, which significantly contributes to climate change (Senate Bill 1383: Organics Recycling, n.d.).

SB 1383 directly affects food insecurity because it requires food generators to donate food so that surplus edible food both stays out of landfills and also reaches individuals in need of food. To that end, businesses, public and private agencies, organizations, health care facilities, schools, etc. have been designated as Tier 1 or Tier 2 generators. Tier 1 implementation started January 1, 2022, and includes supermarkets, larger grocery stores (equal to or greater than 10,000 square feet), food service providers, food distributors, and wholesale food vendors. Tier 2 generators will need to be in compliance by January 1, 2024; these include large restaurants, large hotels, health care facilities, agencies, and educational facilities that prepare and serve food. For a full list of Tier 1 and Tier 2 generators see: <https://kernpublicworks.com/organics/edible-food-recovery-and-donation/> (SB 1383 Tier 1 and Tier 2 Generator Definitions, n.d.).

The goal is to rescue at least 20% of the food that would have been disposed of in landfills and have it go to feed the hungry. While most people support the goal, because the law and accompanying requirements are so new, there has been some confusion and anxiety around compliance. In interviews with agencies and schools, there seemed to be a general acknowledgement that the policy will benefit those needing food. Bakersfield City Public Works and Kern County Public Works has the task of determining which entities fall into Tier 1 specifications and which are Tier 2. Kern County Public Works is also responsible for the enforcement of SB 1383 in unincorporated areas of Kern. Though grocery stores and growers who package food on site have often donated food in the past, now they are “required to recover the maximum amount of edible, recoverable foods,” according to a Kern County Public Works administrator. Some food generators may need to remove food a day or two before the “sell by” date so that they have time to distribute the food to agencies while it is still fresh. Each food generator is required to keep records and to have a written contract or agreement in place with non-profit food distributors. In turn, the food recovery organizations also have to maintain detailed records.

SB 1383 has the potential to be a game changer for food recovery organizations and for individuals and families that need food. The larger impact of the recovered food from Tier 1 and Tier 2 generators is beginning to affect the systems of food recovery in Kern County. While county officials are working to inform and implement the changes required by the bill, it is understandably taking time for all these changes to work through the businesses, agencies, nonprofits, and governmental bodies required to participate. Several of those interviewed about SB 1383 were cautiously optimistic but concerned about the costs attached in transporting, storing, and distributing food. It should be noted that the state is not providing funding for food generators to make the necessary staffing and structural changes to comply or for counties to enforce the policy.

IV.4 Challenges in Increasing Food Availability

Despite a long history of working to address food insecurity in Kern County, both CAPK employees and other county stakeholders spoke to the many challenges involved in trying to ensure the highest possible level of food distribution over the widest geographic area. Some of these challenges are logistical. Others are endemic to the increasing level of need county-wide, particularly after the sunseting of COVID-19 special funding, and are the result of county, state or federal policies that are either unclear, or appear arbitrary and counterintuitive.

IV.4a Logistical Challenges

As previously mentioned, Kern County spans over 8,000 square miles, and much of the outlying regions are considered food deserts. A Food Bank employee said:

[My] biggest concern is always the furthest away towns....But in terms of the [small] town itself, are we covering the whole town? I couldn't tell you that....And even if we do determine that we need more commodity [food distribution] sites there, we don't have

the trucks and staff to send. So I know the need is great, especially in the farthest away locations. But we just don't have the staff to build the orders to take the trucks to travel those distances...[We need] more box trucks, more drivers for the box trucks, and more staffing at the warehouse.

A director explained:

So a big gap that we have right now is the operational part of running a Food Bank. I mean, we got some donated trucks last year; well, it's a fleet of trucks that we have no staff to drive.

The executive director of Gleaners shared that, though they had food available, the organization had to close its doors early on March 1, 2023 because the discontinuation of COVID-19 special funding on February 28th resulted in a large number of individuals who found themselves without the benefits they had come to depend on—so many that Gleaners ran out of carts and baskets to be able to meet the need. Though this was quickly addressed, it was not unique to this organization.

Volunteers were another area of need for all stakeholders, including CAPK. Even when volunteers are available, there may be limitations in how they used. For example, at CAPK, the Central Kitchen cannot use volunteers in food preparation and no CAPK program can use volunteers as drivers, due to liability. That said, the Food Bank does heavily depend on volunteers for some activities in the warehouse—unpacking pallets, creating boxes, restacking pallets, etc. Volunteers even staff the phones at the Food Bank. A Food Bank employee commented:

We rely very heavily on our volunteers, which is great because it's good for them. We have a lot of community work programs.

Another employee confirmed that the Food Bank needs more volunteers to help with the distribution of food in general:

Just getting more people involved in wanting to volunteer their time to hand out all this food. We are getting a lot of food in, but we don't have the manpower to give it out...

The same employee mentioned that they must occasionally turn away donations because there is no one to deliver it, but then they added:

It's really sad when we have to turn down like a truck of donations. "I'm sorry, I just can't take it." It's not going to be any good for me just sitting there in the refrigerator.

Not just volunteers, but staffing in general, came up in interviews time and time again. The biggest need with respect to the Food Bank appears to be drivers, since drivers cannot be volunteers. According to one employee, “There aren’t enough drivers to go and pick up the items that I want.”

Another employee agreed:

It’s just a staffing issue. Like, we need bodies. We need people.

The need for drivers was so great in the past year that one employee chose to learn how to drive a box truck so that they could deliver a distribution in an emergency.

A director summarized the problem like this:

So needing the operational dollars so that we are able to hire staff to be on, to be able to get more routes, to be able to reach more outlying areas within the county, I think that that’s really the need, the need for more operational dollars.

Staffing challenges are not limited to the Food Bank. Although the vacancies in these programs are not specific to food distribution, both Head Start and WIC have had trouble filling positions, especially since COVID-19. Head Start had to close 46 classrooms in 2022-2023 due to a lack of staff. When the interview was conducted in the fall of 2022, Head Start had 120 vacancies for the year. They planned to keep 13 classrooms closed and to shift monies to support increased wages in an effort “to recruit and retain staff.”

IV.4b Policy Challenges

“Farm to Table” is an example of where innovation and current policies at the state or federal level may clash. Farm to Table is a social movement to promote the use of organic, locally grown produce, particularly in schools, rather than purchasing processed, non-organic foods from vendors outside the region. The area in which Farm to Table was most discussed by CAPK staff was in regard to the Central Kitchen and in the preparation of Head Start meals.

While some employees would like to see a fuller analysis of the Central Kitchen and the potential for taking on a Farm to Table model, staff acknowledged that doing so would be costly. One staff member shared:

It does cost a little bit more. But again, it’s the quality of food that our children are getting. And I am all about quality when it comes to our families.

The cost that CAPK pays for Head Start meals already requires about a million dollars more than the USDA allocates for this food, so CAPK supplements with other funding sources. But the biggest challenge is the size of the Head Start Program:

If we're going to serve let's say 2,000 lunches, and they all have to have this same item per the menu, we'd don't know if a local farmer can give us enough to have enough quantity of food. Now we do [using our current vendors].

SB 1383, while potentially making far more food available through food banks and other food distribution sites, offers its own unique set of challenges. One of the largest is capacity: do county stakeholders have the infrastructure (e.g., refrigerated storage, staffing, and vehicles) to pick up, store, and redistribute the food? While cities and counties will be held accountable for enforcing the new legislation, SB 1383 has no new funding attached. Another issue is that state legislation is also—at least in some cases—running up against federal policy. Head Start is a prime example. All children in Head Start must be served the exact same meal, and any food that is uneaten must be disposed of—it cannot even be given away to the families of the children being served. While federal policy takes precedence over state policy, this is an example where the state itself would have to take the initiative to request exemptions from the federal government in order to remove the barrier.

V. Access to Healthy, Affordable and Culturally Appropriate Foods

Section IV addressed food availability, posing the question: how well have Kern County stakeholders ensured that healthy and culturally appropriate food is available to all regions of Kern County?

Consumer *access* to food that is “affordable, healthful and reflects their cultural values” requires a different lens. Food may be available through food distribution in any given community in Kern County on a particular day of the month; however, is it available on a day of the week or at a time of day that consumers are able to participate? And to what degree does transportation play a role in access?



In this section, representatives from CAPK’s food-facing programs identify some of the challenges their clients face in simply accessing and using their food-related benefits, and suggest ways that would improve the current system.

Also included in this section are findings from GIS mapping which examined the locations large grocery stores and supermarkets in relation to population-dense low income areas in the county, in order to identify those areas considered “food deserts” so that those stakeholders can work to provide greater access to these areas.

Results from the CAPK Agency Partner Survey that are related to access are presented in this section, as well, including the number of households served by agency partners, the days of the week and times of the day distributions are offered, how often agency partners have to turn people away because they don’t have enough for everyone, and what impediments are holding back agency partners from expanding services.

Additionally, some of the innovative programs and services being offered by schools, colleges, and local grassroots organizations are featured in Section V.4.

Finally, this section concludes with a discussion of how to change cultural conditioning, acknowledging that many people who develop a taste for calorie-dense, low-nutrient foods struggle to change their patterns of eating and preparing food, even when healthy food is available and affordable.

V.1 Challenges to Accessing Healthy and Affordable Foods

[A problem] is actually trying to get a lot of food insecure people access, easy access to fresh produce. That’s one item that people...can’t afford at the market. Do you buy five apples or do you buy a bag of beans or cereal that will last for five days instead of five minutes?

-CAPK employee

CAPK personnel dealing directly with consumers consistently noted that transportation is an issue—even for *applying* for assistance, much less accessing their benefits. For example, in the migrant community, a family needing food might have to “take two bus trips to get to my office” in order to complete the paperwork for the Migrant Childcare Alternative Payment program, one CAPK staff employee explained. Another discussed the difficulty of getting some of these families resources through the Food Bank and other programs when often these families move frequently and don’t have stable housing. Reliable transportation is also often a problem.

WIC staff was thankful that the program had changed right before the pandemic to a refillable model. WIC is required to provide nutritional education, and that changed too during the pandemic: for the first time, staff was able to offer nutritional education remotely. One person explained that before the pandemic, WIC participants had to “come into the office at least four times a year....And so people that had transportation issues sometimes weren’t able to get in to get that contact; therefore they didn’t get their benefits.” Now the situation is more convenient, but transportation to a store selling WIC products can still be a challenge: “But we still have those communities where people walk, and they don’t have as big a choice to go get items.”



CAPK’s Head Start Program faces a similar dilemma. Head Start serves families that are homeless, struggling, and/or low income. CAPK’s classrooms are 95% enrolled, with a waiting list of over 1,000 children. Prior to the pandemic, they were able to serve approximately 17% of income eligible families:

So that leaves a significant portion of income eligible families that cannot access Head Start services because we do not have enough funding to support all of the families in need in our community.

Enrollment is lower now because the program cannot recruit and retain enough staff, especially teachers. At the time staff were interviewed in summer 2022, Head Start had 120 employee vacancies. Commenting on current need, one Head Start staff person said:

I think we’re going to see more and more food insecurity. And... even though they’re going to the \$15.00 per hour [minimum wage], we know that inflation is affecting our parents. And so I think we’re going to see an even greater percentage of parents that are going to be struggling.

Head Start staff also said that the biggest food challenges for their families were gaining access to food over the weekend, and having access to *quality* food. When a family tells a Head Start staff member that there is no food in the house, the staff will drive them to the Food Bank if they don’t have transportation, but that is not a feasible method to access food.

There was some discussion among CAPK staff regarding whether CAPK should have food available at all the various program sites—WIC, Head Start, etc. Some staff were in favor of this, some staff were not. For example, a nutritional services staff explained:

[W]e have so many other programs. We have the energy program. We have all the centers. If a family were to come into a center and say, “Hey, I have food insecurity,” that we would be able to have at least some stuff on hand, instead of saying, “Well, call 211, and your distribution is going to be three weeks from now on Thursday at 10:00, while you’re at work.”

The Migrant Childcare Alternative Payment program does have a pantry and can give families a box of food (which comes from the CAPK Food Bank), so that “if a family is migrating and doesn’t have a home, they [staff members] do have something to give them immediately.” The Food Bank will also give food to someone who shows up at their door:

[W]e give them something to tide them over. But we also give them 211 contact information, [and tell them to] please contact this number, and direct them to their local commodity site. And we do that mostly because we don’t want to outstrip our pantry sites. Because if everyone knows, well you just go to the Food Bank and get food there, then they’re not going to go to the commodity and pantry sites.

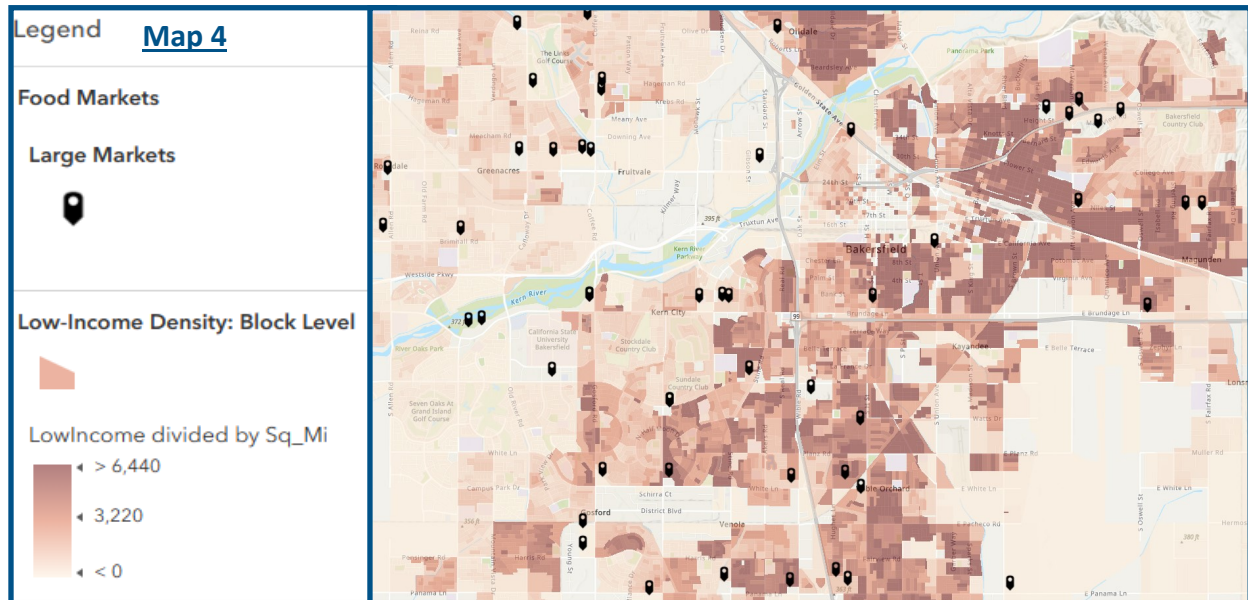
CAPK programs direct people to 211 in order to find the distribution location nearest to them. While CAPK programs will always make food available if needed, the purpose in having distribution sites around the city and county is to increase and streamline access so that large numbers of individuals do not show up at one location at one time.

Senior citizens are another vulnerable population. Staff said that it was hard “trying to get seniors out to the distributions.” The Senior Food Bank is able to make some delivery services available to seniors that are housebound, but it is limited. A staff person explained that during the height of COVID, the Food-to-Door program had at least ten drivers making food deliveries. Now that funding for the program is gone, the Senior Food Bank has one van that can deliver to people’s homes directly, limiting the number of deliveries they can make.

V.2 GIS Mapping: Access to Supermarkets and Grocery Stores

As previously mentioned, GIS mapping is a valuable tool for visualizing where services are available in relation to populated areas. Stakeholders can use these findings to deploy resources in the areas of greatest need. The following maps focus on where mid-sized and large grocery stores are located in relation to neighborhoods with high concentrations of low-income residents.

The images included in this section are specific to Bakersfield because the smaller communities have limited commercial space so all retailers, food-related or otherwise, are concentrated in a small

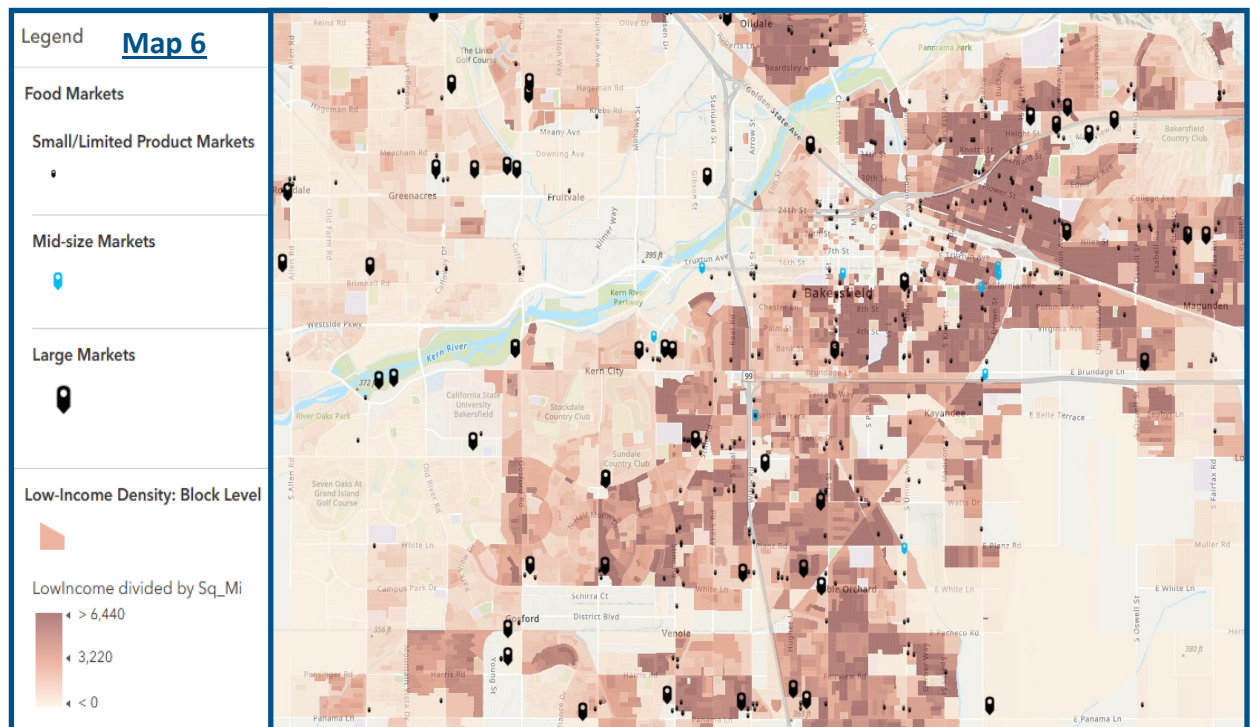
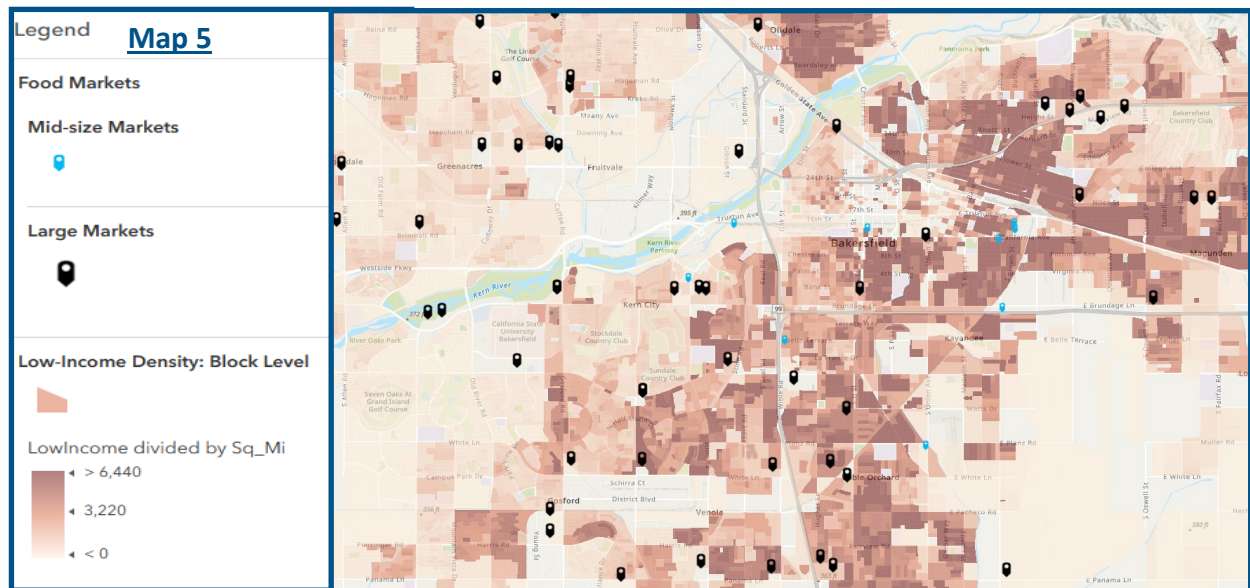


geographic space. Within Bakersfield, it is possible to see where there are fairly populated neighborhoods and the kinds of markets they can easily access.

Map 4 shows the locations of large supermarkets in the greater Bakersfield area. These include Albertsons, Smart and Final, Vallarta and other large grocery stores that regularly carry lots of choice in types of foods and typically ensure that produce is of high quality. It's apparent that the northwest area has many large stores and few areas where the census blocks have high density of households in poverty. The northeast and south central areas have commercial corridors where large markets are clustered. In contrast, Oildale, the southwest and southeast areas have few large markets nearby. While this is likely not a large burden for most residents in the southwest, where poverty rates are low and access to transportation is less of a barrier, this is a concern for residents in Oildale and southeast Bakersfield, particularly east of Union Ave.

The two maps on the next page add smaller scale markets to the map. Map 5 adds mid-sized markets. This includes stores like City Food Market, Los Reyes Market, and Med Grocery. These stores offer some choices and stock a wide range of products. There are not many mid-sized markets in the Bakersfield area, but the few that exist are located primarily in the central and eastern portions of Bakersfield.

Map 6 includes the same types of stores already viewed—large and mid-sized markets—but it also includes the locations of very small markets and/or convenience stores. These are vendors with limited options where healthy and affordable food choices are often not available. This type of store is prevalent in most neighborhoods east of the US 99 highway, with a few exceptions. There are a few neighborhoods in the southwest near US 99 that also have a high number of these kinds of stores.

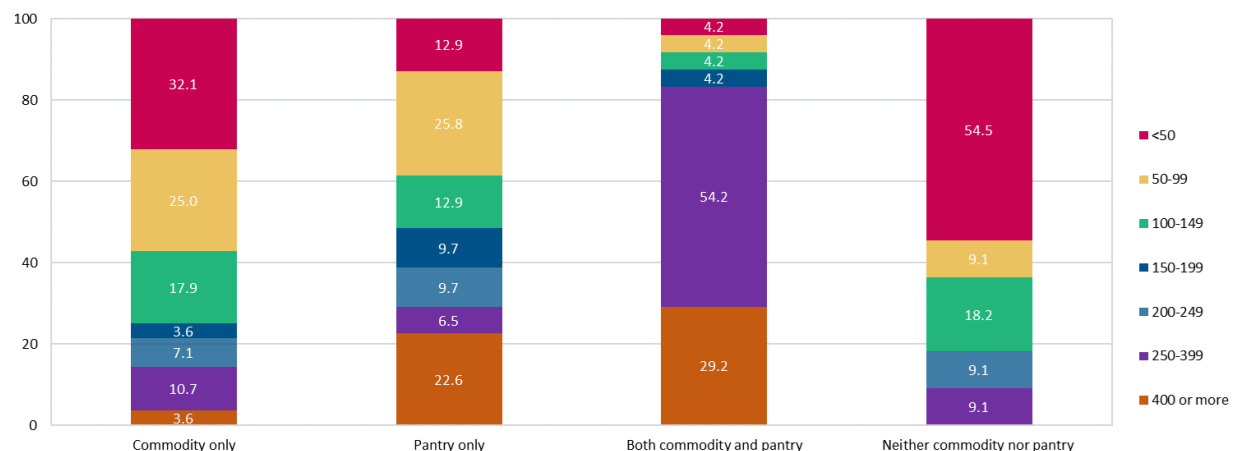


V.3 CAPK Survey of Agency Partners: Consumer Access

Several questions on the CAPK Survey of Agency Partners were designed to identify the level of ease with which consumers could access food distribution events. Agency partners were asked about the average number of households they serve monthly. Figure 12 that programs that have both commodity and pantry programs served the largest number of households per month, with nearly one-third (29.2%) serving 400 or more families per month; sites that operate only a pantry program followed close behind with 22.6% serving 400 or more households each month.

Agency partners that have only commodity programs, or have programs that are something other than pantry or commodity (most often senior programs), served the fewest number of families each month. Well more than half (57.1%) of commodity only programs served fewer than 100 families per month. Similarly, nearly two-thirds (63.6%) of programs that were neither pantry nor commodity sites served fewer than 100 people monthly. Given that the commodity and senior programs (although not all of the programs in the “neither” category were senior programs, more than half were) are the most restrictive in terms of who they can serve and how often they can be served (e.g., the USDA only allows one commodity box per household per month), the fact that these programs reach fewer people each month is not unexpected. Additionally, most programs do not track the *unduplicated* number of consumers. Because pantry programs do not have restrictions on the number of times someone can receive food in a month, a consumer may show up at the same site two, three or four times in the same month, and since most programs do not have to staffing to keep track of how many times each person signed in over a month, that same person is counted multiple times in a month, once for each time they showed up. Consequently, the regulations tied to the commodity program determine that these programs will have less reach.

Figure 10
Survey of CAPK Food Distribution Agency Partners
Number of Households Served Each Month,
by Program Type
(n=99)

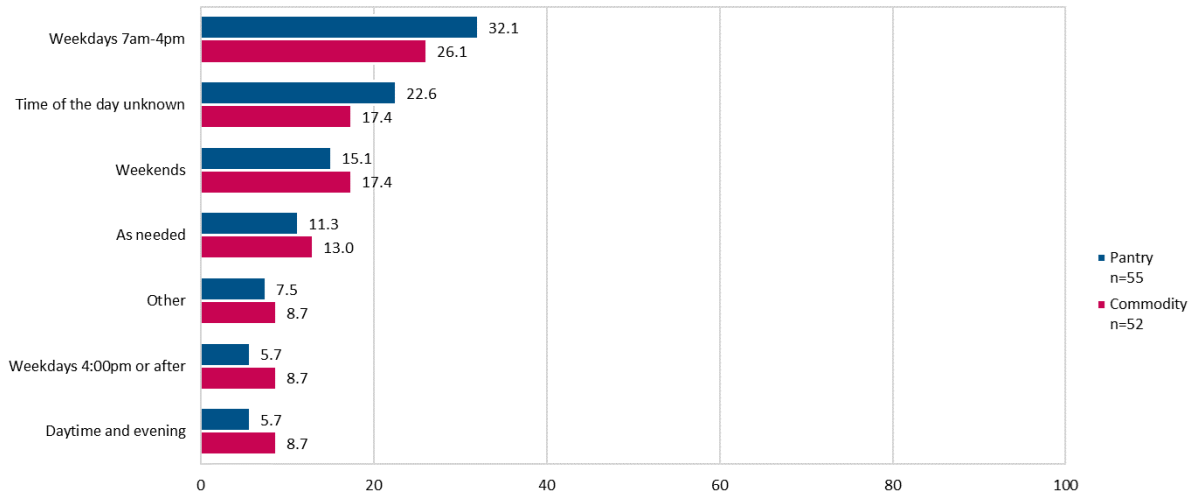


One of the biggest issues in accessibility for clients is the day of week and time of day that food is distributed, along with location of the distribution. Working consumers are available to pick up food often only late in the day and, for some people, on Saturdays. Programs were asked to specify the days of the week and times of the day that they distribute commodity and/or food pantry boxes. For programs that have both, they typically operate each program on different days of the week due to the separate funding requirements for commodity sites.

Among programs identifying that they only operated pantries, 32.1% reported that distributions occurred on weekdays between 7:00 a.m. and 4:00 p.m.—that is, during what would be considered working hours. Similarly, approximately one-quarter (26.1%) of commodity sites reported that they hold their distributions between 7:00 a.m. and 4:00 p.m. on weekdays. In general, commodity distribution days and times were more accommodating to those working traditional hours than were pantry distributions.

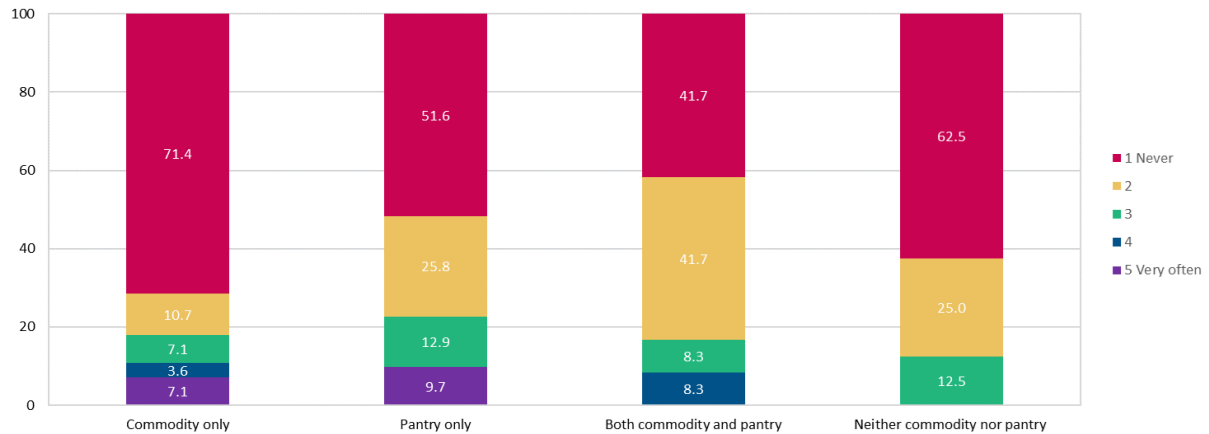
There were just a few responses that could not be classified into the categories so they are labels as “other.” They include responses such as, “depends on the number of families who come to the events or office,” “the same day we receive the food from the warehouse” and “weekly, immediately after shopping.”

Figure 11
Survey of CAPK Food Distribution Agency Partners
Food Distribution Days and Times



Agency partners were also asked how often they are forced to turn people away because they do not have enough for everyone. Commodity only programs were the least likely to have food shortages, with nearly three-quarters (71.4%) of the sites indicating that they *never* have to turn people away. Similarly, among the programs that were neither commodity nor pantry sites (more than half of these were senior programs), nearly two-thirds (62.5%) also indicated that they never turn away people due to food shortages. Sites that only operated only a pantry program reported never having to turn people away about half of the time (51.6%), and sites that hosted both commodity and pantry

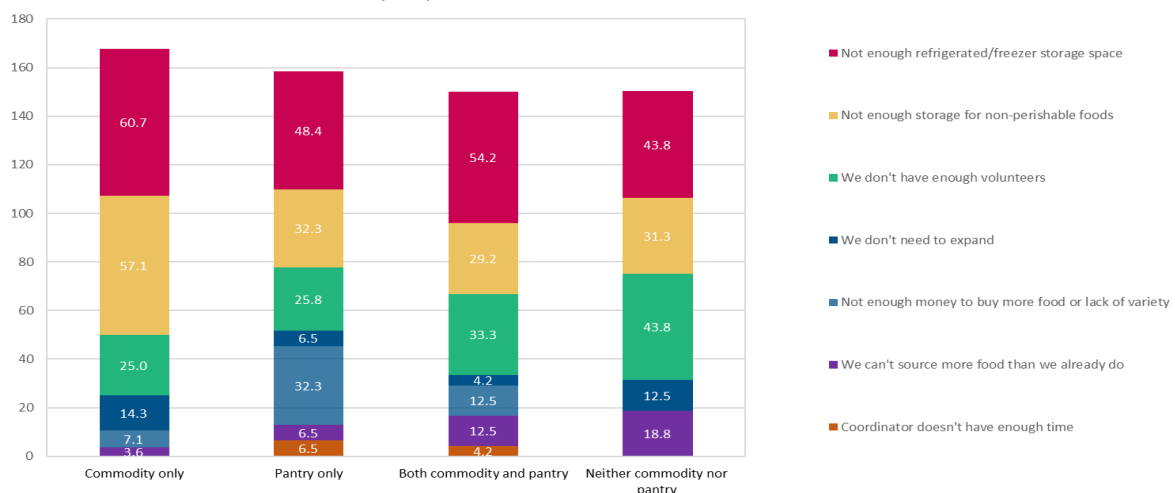
Figure 12
Survey of CAPK Food Distribution Agency Partners
Frequency of Turning People Away Due to Food Shortage,
by Program Type
 (n=99)



programs indicated that they never have to turn people away 41.7% of the time, meaning that more than half of the time they don't have enough food for everyone. It should be noted that, while CAPK has the ability to increase the volume of food delivered to agency partners, the agency partners themselves often do not have the capacity to store the food or the volunteers to distribute the food.

When asked what keeps them from expanding the amount or types of food they distribute, the most commonly cited reason across program types was a lack of storage—particularly for perishable items. Although all program types expressed the need for volunteers, sites that operated something other than a commodity or pantry program noted the greatest need for volunteers, much higher than other

Figure 13
Survey of CAPK Food Distribution Agency Partners
Barriers to Expansion
by Program Type
 (n=99)



Note: More than one reason could be selected

program types. These programs also reported that they could not obtain any more than they already do at a much higher rate than the other sites.

Finally, agency partners were asked what would help them to improve their food distribution services. Mirroring the previous questions, the most frequent reply, by far, was the need for more storage, particularly for frozen and refrigerated foods. In fact, in August 2023, CAPK received a grant of \$229,526 specifically for agency partners to purchase refrigeration, shelving and racking allowing them to expand their capacity. Several indicated the need for a refrigerated truck in which to pick up and transport food from the Food Bank—particularly during summer months. This was followed closely by the need for more volunteers to unload, prep, and distribute food.

V.4 Grassroots and Innovative Programs Working to Increase Access to Food and Nutrition Education

A number of small groups, often composed primarily or exclusively of volunteers, have been working to increase food access within specific neighborhoods or populations. In addition, the Grimm Family Education Foundation, California State University, Bakersfield, and Bakersfield College are experimenting with innovative ways to increase access—but also to provide basic nutrition education and food preparation. A few of these programs are discussed here.

V.4a Edible Schoolyard Kern County



The Edible Schoolyard movement has been in place for at least 25 years; the goal is to transform public education by using organic school gardens, kitchens, and cafeterias to use food production and preparation to enhance academic learning. Edible School Yard Kern County established its first site in 2010. Funded by the Grimm Family Education Foundation, in collaboration with the Panama-Buena Vista Union School District, the first garden was established across the street from Buena Vista Elementary

School. Edible School Yard Kern County now also has programs at both Grimm Family Education Foundation Charter schools: Grow Academy in Arvin and Grow Academy in Shafter.

The edible schoolyard model stresses “a dynamic and joyful learning experience for every child where they are encouraged to discover and develop a healthy relationship with the food they eat” (About the Edible Schoolyard, n.d.). A representative from the Grimm Family Education Foundation explained:

...[w]e have students from across the street [the school site] come over, and they spend 90 minutes in the garden and in the kitchen learning how to grow, cook, eat, and enjoy their food....[W]e really help students understand where their food comes from...A lot of the produce is grown right in their backyard, but they don't understand that. And students don't understand or comprehend that carrots come out of the ground, and they're usually quite dirty from the soil. And they're not cute and shiny and in a plastic bag that you get at the grocery store. And so, helping them make better health choices...

Edible Schoolyard Kern County now has preliminary results from a seven-year evaluation conducted by California State University, Bakersfield showing the importance of this work.

The preliminary research is showing that students that are involved in edible education do better in their STEM classes—so, the math and the science. And they really do. They're changing behaviors at home and that fact came out of a general study that the [Grimm Family Education] Foundation did with the professors at CSUB, [showing] that we were instituting change at home through the edible schoolyard, and through the gardening and kitchen classes.

At each school site, staff work not only with the children, but also with the parents. They host family classes where the student and the family are “learning how to prepare a fresh meal from scratch, you know, from the kitchen that they could easily emulate at home.”

Incorporating the same principles, they offer summer camps for students from any school district. The edible schoolyard model addresses food insecurity by helping children and their families understand where their food comes from, how to grow and cook the food, and how to eat in a healthier way.



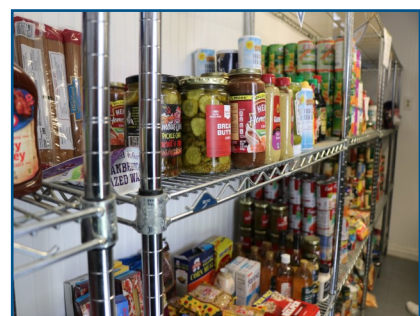
V.4b California State University, Bakersfield: Edible Garden, Food Pantry, and Coalition of Chicken Enthusiasts



In 2018 the Chancellor of the California State University (CSU) system commissioned a study to determine the level of food insecurity across all CSU campuses. They study found that just over 40% of students were food insecure. Based on the results, the Chancellor’s office mandated that all CSU campuses open a food pantry. California State University, Bakersfield (CSUB) was ahead of the curve, having already started a one-acre edible garden in 2016 and opened a food pantry in 2017, the year before the state-wide mandate. When the pantry first opened, administrators expected to serve 100 students a month. “And we served 100 the first week. And so, very quickly we realized that there’s a great need,” explained Dr. Jason Watkins, Director of Basic Needs.

Currently, the pantry serves between 300 and 400 students each week, and the university is in the process of expanding the pantry facility. In addition, “Rowdy’s Kitchen” hosts cooking demonstrations designed to teach students how to cook flavorful, nutritious meals from fresh produce. One of the goals is to introduce students to foods that are new to them, and to show them how to prepare them in an appetizing way.

CSUB maintained both the food pantry and the edible garden during the pandemic and, like many other sites, they experienced an increased demand for food. In September 2021, they received a \$50,000 gift from Adventist Health Bakersfield and the Grimm Family Education Foundation to expand both irrigation and facilities (Luiz, 2021). Funding was also secured to hire a garden coordinator, two part-time student workers, and 11 College Corps Fellows. These staff members work alongside numerous student volunteers. In 2022, the garden produced nearly 7,000 pounds of fresh produce through the pantry and through a pop-up farmstand.



The pantry has also built a relationship with a nearby elementary school, which brings its students to CSUB's garden once a month. These lessons are designed to enhance their science grade-level science standards. The elementary school would like to bring more grade levels—currently limited to 5th grade students—and CSUB garden staff would like to do so, but it would require more staffing.

In December of 2020 a new club formed on campus: the Coalition of Chicken Enthusiasts (CCE). The organization is associated with the edible garden and their mission is to tackle food insecurity. The club has about 20 active members (Leon, 2023). To stay in good standing, members are required by their charter to volunteer in the garden at least one hour a week. Members raised \$4,000 to build a chicken coop and donated 1,500 hours of work to the garden, primarily with the chickens. Any unused produce from the garden is fed to the chickens, which in turn, fertilize the garden with their manure. Eggs are collected for the pantry.

Dr. Watkins, commenting on the success of the program and his own efforts to secure permission to have chickens on campus, remarked, "Never in my career in academia did I think I would be talking about chickens."

V.4c Bakersfield College Food Pantry



Bakersfield College's (BC) Renegade Food Pantry was founded by the Student Government Association in 2009. Like many other pantries, it began with small, local food donations that have grown exponentially over the years. In the beginning, students could get food once a month, but had to register for the service. By 2014, distributions had increased to twice a month. In 2015, the pantry added a daily bread distribution and an emergency food distribution. Realizing that food was not the only thing students needed, staff began to stock hygiene kits in 2016. They also expanded their food options to include fruits and vegetables obtained from Golden Empire Gleaners. As the pantry grew, they shifted to "choice pantry" where students shop using their allocation of points for the week. This model reduces food waste because consumers are allowed to choose foods that appeal to them and that they will eat, rather than being given a box of food that may contain foods they don't like or cannot eat. The pantry offered workshops to teach students how to make healthy meals with the food they received from the pantry. They also helped students who were food insecure to register for CalFresh/SNAP benefits.

When COVID-19 hit, the pantry returned to packing boxes for students rather than having them shop in person; however, students would fill out a form with their requests and the pantry would fill it as well as it could, and then students would come pick up their box. In 2020, the pantry also moved to a new location on campus. In 2021, they opened their doors again and students who wanted to shop in person could do so, and those who were not comfortable coming in could continue to fill out the form. Early in the pandemic, the pantry surveyed students and found that approximately 45% were food insecure. The need is still evident; in the 2022 fiscal year, the pantry supported 4,500 unduplicated

students and they are on track to serve a similar number in 2023. One employee said, “We can’t keep our pantry stocked...we can’t keep our shelves stocked.”

BC stocks its pantry with donations from local growers, grocery stores and restaurants, as well as from partnerships with nonprofits such as CAPK and Gleaners. They are very grateful for the donations they receive, especially the fresh fruits and vegetables they are now distributing at their free farmers market once a month in partnership with CAPK.

Despite substantial donations, the pantry still has to purchase large quantities of food to meet the need. The state has provided some grant funding, and according to the program administrator, the pantry spends anywhere from \$20,000 to \$30,000 per month on additional food for the pantry. One food pantry leader noted that he worries about many students who “go to class hungry, and they don’t ask for help.” They know some of this reluctance is the result of stigma, which is something the pantry is trying to address.



Pointing to the complexities of food insecurity, and its relationship to housing insecurity, access to health care, the high cost of childcare for students with children, and inflation in general, the program director said, “I don’t know if we’ll ever find the answer to that [food insecurity] unless we look at all the different aspects to it,” adding that he’d like to see the Food Policy Council bring community partners together to pool resources.

V.4d Apple Core Project



When Jaclyn Allen moved to the Bakersfield area over a decade ago, she wanted to start community gardens and farmers markets in both affluent and low-income neighborhoods. Allen found out quickly that the farmers markets simply didn’t thrive in low-income neighborhoods. She explained, “They’re not sustainable”—a problem others have noted, and attributed this to price and lack of cultural relevance.

Allen turned her attention to the development of the Apple Core Project, a nonprofit established to help build community gardens. The Grace Street Garden is a partnership project between Apple Core and Bakersfield Recovery Services, which operates two recovery facilities adjacent to the garden. Once a month, Apple Core, in partnership with CAPK, holds a drive-through food distribution.

Apple Core would like to expand to have a larger pantry to serve more food insecure people. Allen said she would like the Grace Street Garden to be “a pilot program for abandoned lots and [to have] garages becoming food hubs in low-income



neighborhoods”—and she’s found an increasing level of local interest over the past three years, particularly among members of the Spanish-speaking community. Apple Core volunteers go door-to-door in neighborhoods, work in teams, and do outreach in schools. Allen would also like to become “mobile” in taking education to food insecure individuals rather than having people travel to them. She thinks food preparation and cooking is best taught by people to their neighbors so that both meal and the context in which it is taught are culturally appropriate. Allen continues to work on policy-related issues to make food more accessible to the people who need it.

V.4e Bakersfield Food Not Bombs



Founded in 1980, Food Not Bombs began in Massachusetts and now has affiliates in at least 65 countries. The organization’s mission is to “recover food that would have been discarded and share it as a way of protesting war and poverty” (Food Not Bombs, n.d.). They believe that money should be spent on feeding people before it is spent on war. A local member said something very similar:

Food Not Bombs is an organization with the literal, simple premise that there is just way too much money going into warfare when the government should be looking to make sure that people’s needs are being met—specifically food. Right? So, it’s like if people are going hungry, then we should not be spending any money on warfare.

Bakersfield Food Not Bombs, like other chapters, is not a 501(c) 3 nonprofit. They ask for donations from grocery stores, but they cannot give the stores a tax incentive for their donations because they do not have formal nonprofit status. In Bakersfield, there are approximately five core members with another five who are less engaged. Every Sunday, members cook meals in their homes which are then taken to Martin Luther King, Jr. Park in southeast Bakersfield. Adhering to the national organization’s charter, they serve vegan or vegetarian meals to 25-30 people each week, typically people who are unhoused.



V.4f The MLK CommUNITY Initiative



The MLK CommUNITY, an initiative of the Circle of Life Development Foundation (COLDf), is a community coalition that combines policy advocacy with direct service. According to the coalition website, “the purpose of the Initiative is to bring all hands on deck with all egos checked to support the southeast area of Bakersfield in its Rebound revitalization movement” (#MLK CommUNITY Initiative, n.d.). In an interview, a representative of the program noted that their goal is “to get to the root of the problem to fix the problem.” Part of the solution

is to have grocery stores in the community that sell food at affordable prices, rather than forcing residents to rely on neighborhood corner stores that have limited fresh, healthy, affordable food options. COLDf also provides regular emergency food distribution, focusing on southeast Bakersfield, specifically around MLK Park.

COLDf focuses on ensuring that senior citizens do not go hungry. There are a number of seniors in the area who live on a fixed incomes and experience transportation difficulties. According to the representative, “They’re the ones who are reaching out the most.... Can you help, you know?” While COLDf would like to expand to better meet the need, this is impossible without more space, including a warehouse with refrigeration and freezer capacity. At this point, they do not have the capacity to do what they would like to do; that is, to provide more in the way of fresh produce, cheese, meat, and eggs. The larger vision of COLDf, according to the representative, is “to help strengthen their voice, to bring forward change, and to help bring attention to initiatives [in the community].”



These programs are examples of ways in which individuals and institutions are responding to the need to get healthy, whole, affordable food into the hands of those in need. An even greater issue that arises, however, as food becomes more accessible is whether people are willing to exchange a highly processed, calorie-dense diet for one that relies more heavily on vegetables, fruits, and other whole foods.

V.5 Educational Needs Surrounding Food and Food Preparation

While there is debate among researchers regarding the relationship between food insecurity and childhood obesity, Kern medical providers are seeing what they believe is a direct correlation between the two. They noted that children as young as 11 and 12 are coming into their clinics with pre-diabetes and full-blown diabetes. They pointed out that food insecure families rely on cheap, calorie-dense foods to satisfy hunger, leading to nutritional deficits—and also to obesity. Even when healthy alternatives are made available, many children are so conditioned to “junk food” that they often refuse fresh, whole foods.

A representative from Edible Schoolyard Kern County confirmed this. During a “harvest day” students were given bags of produce to take home. When staff left the school that day, they found bags scattered across the ground where students walk home. Rafael Juarez, Director of Nutritional Services for the Kern County Superintendent of Schools Office, explained that, if not fully engaged in growing and preparing foods themselves, students are rarely inclined to even *try* a food that is unfamiliar.

CAPK staff from all food-facing programs were aware that many food recipients need guidance on how to prepare the food they receive. They were also aware that foods distributed needed to be culturally appropriate. One of the Directors spoke of CAPK's free farmers markets and explained:

A lot of the produce is stuff that people wouldn't normally purchase...and some kind of education component of it [is needed] so that as the client comes through, they are able to get that fresh produce, but also get maybe some education on how to use it... and also be culturally sensitive.

She noted that eating habits are learned, and that if you teach children to incorporate fruits and vegetables starting at a young age, they will develop a palate for healthier foods, and will be more likely to make healthy choices throughout their lives.

CAPK staff recognize that adults, as well as children, need to learn ways to prepare foods that are new to them. One of the CalFresh Healthy Living staff had plans in place to go to distribution sites and start doing live demonstrations. She explained that when they give out kale, folks "don't want to take it... because they don't know how to cook it. They never ate it before. It seems weird to them." If a dish can be prepared in a manner that is healthy, pleasing to the palate, and culturally appropriate, the likelihood that food recipients will incorporate it into their diet increases.

VI. CAPK Analysis of Strengths, Weaknesses, Opportunities and Threats

In July 2023, 16 CAPK staff, representing administration, program directors, and other staff involved in or supervising food-facing programs, convened to reflect on their individual programs and to brainstorm ideas for integrating and strengthening their ability to address food insecurity with their clients. Using the SWOT process, attendees considered the strengths, weaknesses, opportunities, and threats to this process.

VI.1 Internal Strengths

Many internal strengths with respect to food distribution were identified, including but not limited to the following.

- CAPK has dedicated, caring staff highly committed to its mission, and many have experienced food insecurity themselves.
- The agency has been remarkably successful in building a network of agency partners with commodity and/or pantry programs serving the breadth of Kern's 8,000 square miles.
- The Food Bank moves over 20 million pounds of food a year with reliable supply lines from a combination of federal, state, local, and private funding streams.
- The Food Bank has been highly proactive in the past year in its efforts to revamp some of its procedures and is currently in the process of completing a major expansion. This expansion has allowed CAPK to streamline services, serve a greater number of agency partners, and to respond more readily to people in need.

VI.2 Internal Weaknesses

With respect to weaknesses within the organization, staff echoed many of the same themes that were touched on in individual interviews:

- There is a critical need for more unrestricted funding that can cover operational expenses such as staff (drivers in particular) and storage.
- Some positions have a high turnover rate, often because funding restrictions make it difficult to offer competitive salaries; consequently, staff spend an inordinate amount of time onboarding new employees.
- Concern was expressed about the capacity of CAPK in the IT realm: specifically, building a platform where agency partners can track clients would be ideal, as would a more sophisticated method of tracking inventory. In fact, efforts are already underway to create such a system, but the process has been painfully slow due to staffing shortages.
- CAPK staff expressed concern about a certain lack of service coordination across CAPK programs—something that was also a concern in terms in relationship to agency partners.

- One issue raised was that sometimes agency partners are resistant to complying with reporting requirements needed from all food distribution sites, which allows CAPK to provide mandatory documentation to funders.
- CAPK staff believed they could do a better job of finding ways to educate their clients about nutrition in general and methods for cooking healthy meals. Staff wanted to help specific populations in a more targeted fashion, particularly the homeless.

VI.3 External Opportunities

CAPK staff recognized many opportunities to better meet its mandate to provide emergency food assistance to Kern residents through increased coordination, innovative ideas, new funding streams, and policy advocacy.

- Staff wants to work toward better coordination with agency partners to improve client access by (1) increasing the number of food distribution sites that are open on the weekends and late in the day during the week; (2) seeking and obtaining more distribution sites in food insecure areas; (3) maximizing partner relationships.
- CAPK can seek more funding in general, but specifically for operational expenses. Critical is the need to add staffing through more competitive salaries.
- Policy changes, especially with the rollout of SB 1383, will generate more food donations. This creates many challenges but also provides an opportunity for increased coordination across all county stakeholders.
- Many participants believed that the new iteration of the Food Policy Council offers many opportunities, including: better knowledge of and coordination with other stakeholder agencies, streamlining processes, establishing policies that all Kern County Farmers Markets accept EBT, and advocating to change federal and state policy that create food waste.
- Staff sees the potential to work within the agency and across stakeholder groups to provide education and cooking demonstrations through family-friendly events, particularly now that events are returning to pre-pandemic levels.

VI.4 External Threats

Many threats were identified. Along with lack of public transportation in the county (and its sparse schedule) and unpredictable weather patterns with increased temperatures and variable storms, these included the following.

- Federal policies have outdated income guidelines to qualify for assistance (specifically, a gap between those who do not make enough money to sustain themselves but make too much to qualify for assistance). This creates confusion and often leads to people with high needs being denied benefits.
- Staffing and funding were noted here, as well as in the weaknesses section above, especially funding for equipment and operational expenses.

- Reliance on state and federal funds can create inconsistency in programming due to fluctuations in annual budgets.
- While CAPK receives many food donations, the quality of those donations is not easy to predict and can lead to more food waste when the quality is less than desirable. This could become a greater issue under SB 1383.
- The high number of areas qualifying as food deserts and the preponderance of fast-food establishments in the county can make it difficult to convince people to make the time and effort to prepare healthy meals.
- The number of available farmers markets and grocery stores that accept WIC are lacking, particularly in rural areas of the county.

VI.4 Next Steps for CAPK

At the close of the SWOT session, participants identified next steps, or recommendations, for CAPK. These included:

- Increase collaboration between CAPK programs and improve public education regarding these programs.
- Increase collaboration with outside partners (e.g., through the Food Policy Council).
- Meet with California Senator Hurtado to address food policy issues at both the county and State levels.
- Internally, the staff suggested that the CAPK Goal 1 monthly meeting include representation from each division of CAPK.
- As a first step toward supporting other departments, it was suggested that all participants attend the ribbon cutting for the new Food Bank facility.

VII. Conclusions, Recommendations, and Next Steps

Kern County is the richest agricultural producing county in the United States and yet has the highest rate of food insecurity in the country. In 2021, 13.0% Kern residents were food insecure, compared to 10.2% nation-wide and 10.5% in California; the rate of food insecurity for Kern children was even higher, at 18.2%. It is not within the purview of this report to study the many factors that contribute to the disparities of wealth and poverty in Kern, which have been well-documented elsewhere; rather, it is to provide a context for understanding how food supply, distribution, access, and affordability impact the nutrition and health of Kern residents, and to collect data that can be used in a three- to five-year strategic plan to reduce food insecurity in Kern County. Crucial to this effort has been the cooperation of numerous individuals, grassroot organizations, agencies, and nonprofits throughout the county that have been and continue to work to address food insecurity.

Considering the vast area that the county covers and its diverse population, local efforts to increase access to healthy, affordable, and culturally appropriate foods has been somewhat remarkable. CAPK, as one of the largest nonprofits in the county, has consistently led many of these efforts. Other agencies such as The Mission and Golden Empire Gleaners are also long-term, dedicated nonprofits directly working to decrease food insecurity. Faith-based organizations, supermarkets, growers and farmers, and grassroots organizations have all played a role in addressing the food-related needs in the county. Innovative newcomers such as Blue Zones Project Bakersfield and Kern County Black Farmers Association are coming alongside the more established stakeholders strengthen the effort.

VII.1 Key Findings

This needs assessment acknowledges both the tremendous effort to reach Kern County citizens who are hungry and some of the challenges faced in reaching the goal of healthy, affordable, and culturally appropriate food for all. Among the most relevant findings:

- Currently CAPK has 53 commodity sites, 93 pantry sites, and seven free farmers markets.
- The Greater Bakersfield area was used to demonstrate how GIS mapping can be used as a tool to identify areas of need. Analysis of the distribution of CAPK commodity and pantry sites in the Greater Bakersfield area through GIS mapping revealed an adequate distribution across neighborhoods with high concentrations of low income households with some exceptions: southeast Bakersfield, southwest Bakersfield, and some pockets of northwest Greater Bakersfield. When examining the locations of large and mid-sized markets (retailers that typically carry healthy options), Oildale, the southwest and southeast areas have few large markets. While this is likely less of a burden for most residents in the southwest, where poverty rates are low and access to transportation is less of a barrier, this is a concern for residents in Oildale and southeast Bakersfield, particularly east of Union Ave.
- The GIS map will serve two major purposes: (1) to assist the general public in locating distribution sites near them and when those distributions take place; and (2) for CAPK and other stakeholders, the map is a tool for identifying food deserts and otherwise underserved

communities. Because the map will be updated as new sites open, as new retailers open, stakeholders will have an ongoing tool to identify areas of need, since it will change over time. This allows for strategic shifts as the landscape changes.

- The CAPK Agency Partner Survey indicated that agency partners need more storage for dry goods, and more often, storage for frozen and refrigerated foods. CAPK has nearly finished a 40,000 square foot expansion of its existing 20,000 square foot Food Bank facility, greatly increasing its capacity for storage, and streamlining access to agency partners. That said, storage remains a primary need for nearly all county stakeholders.
- Among the challenges facing both CAPK and other stakeholders is the need for more staff and volunteers. Transportation was also consistently cited as a need—particularly refrigerated trucks to transfer food to sites on the geographic edges of the county.
- For Kern County residents in need of food, transportation is also an issue. Some have trouble getting to offices to apply for benefits, much less in reaching a vendor where they can use their benefits to shop for food. Even when food is available at a food pantry or commodity site, if a client does not have transportation or must work during distribution hours, then they are not able to access food. Only a fraction of CAPK agency partners offer food distributions outside of traditional work hours.
- While many county stakeholders have been working aggressively to address food waste—an effort now spurred by SB 1383—there are times that federal policy impedes these efforts. An example is the Head Start meal program (run through the CAPK Central Kitchen). Every child enrolled in Head Start county-wide must receive the same meal. The no-show rate for Head Start is high, and all unused food must be discarded in the trash at the end of the day, regardless of its condition. Leftover foods cannot be taken home by staff nor can they be redistributed even to the families of Head Start children.
- There appears to be a general misunderstanding of so-called “expiration” dates on foods. In fact, with the exception of infant formula, these labels are not actually expiration dates, but act as an indicator of when food is of the best quality. There is an opportunity to educate agency partners and consumers, and results from the Agency Partner Survey suggest that such an effort would reduce food waste. Model programs such as Waster Hunger Not Food provide examples of ways to expand food recovery in new and innovative ways.
- The availability of fresh, affordable produce does not ensure that the people most in need of it will actually take advantage of its availability. Interviews with medical providers and other stakeholders reveal that low-income consumers become conditioned to the taste, ease of availability, and cost-effectiveness of calorie-dense, low-nutrient “junk foods” and even spurn fresh whole foods that are available through free farmers markets.
- Most county stakeholders recognize the need for education that includes hands-on food-prep demonstrations. Several of the innovative programs featured in this report have gardens and work with community members on the cultivation and preparation of foods. Blue Zones Project Bakersfield has made education a major priority, as has Edible Schoolyard Kern County and the California State University, Bakersfield's Edible Garden, which includes “Rowdy’s Kitchen” cooking demonstrations.

- CAPK’s internal analysis of strengths, weaknesses, opportunities and threats suggests that not only has the Food Bank been highly proactive in its outreach and expansion effort, this expansion has allowed CAPK to streamline services and respond more readily to the needs of agency partners and their clientele. That said, there is clearly a critical need for unrestricted funding to cover operational expenses such as staff and storage facilities in outlying communities. CAPK has a unique opportunity to work across stakeholder groups county-wide to develop the Food Policy Council and to establish new collaborative relationships with county stakeholders.

VII.2 Recommended Next Steps

While CAPK is working to identify opportunities for the enhancement and expansion of food facing programs both internally and externally, a number recommended next steps emerged from the data that will require increased collaboration and coordination among all county stakeholders.

VII.2a Develop and Enhance the Kern County Food Policy Council

The Kern County Food Policy Council was reinvigorated in early 2023 after a hiatus of approximately six years. The council has the potential to make significant changes in the landscape of food insecurity in the county. One significant finding was that there is a tendency for each agency addressing food insecurity to focus on its own needs and the needs of its own clients. While this is quite understandable, it can lead to a disconnect between stakeholders that results in duplicative efforts and missed opportunities to leverage existing resources. This is born from a natural tendency to silo as well as barebones staffing, which necessitates the prioritization of one’s own programs and clientele. The Council is one way to bring together agencies and individuals that are addressing food insecurity throughout the county to share a focused strategy. A few examples of immediate opportunities include:

- Use of interactive GIS mapping to view when and where food is available. This creates an unprecedented opportunity for county stakeholders to work together to identify gaps and overlaps in availability.
- GIS mapping can be used to determine the feasibility of advocating for full-service grocery stores and/or increasing healthy food options (including fresh fruits and vegetables) at smaller corner stores in areas where are currently none.

One way the Council could reduce food insecurity is through advocacy for policy changes at the local, state, and federal level. CAPK staff suggested that agency leaders meet with local elected officials to keep food security issues in the forefront of their agendas. In addition, the Council could create a platform for hearing from residents currently experiencing food insecurity. Those individuals may have insights and suggestions for change that policy makers have overlooked. This approach should be conducted in tandem with other work by the Council, as it can be difficult, and too many suggestions without adequate planning and oversight can distract from working toward the overall goals.

The revitalized Council is a strong component of addressing food security for individuals and families in Kern County and brings together partners who have the resources and knowledge to advocate for systemic changes.

VII.2b Advocate for Policy Change

Many of the solutions for eradicating food insecurity in the long term require policy change at the local, state, and federal levels. For example, in 2021, the State of California adopted universal free lunch for all students, regardless all income. This addressed the stigmatization that came with standing in a lunch line that was specifically for lower income students. This policy change ensures that students who may have been reluctant to receive free food now have access to school meals without being stigmatized. On the other hand, a policy that creates much food waste that has not yet been addressed, is the one requiring the production, distribution, and disposal of food for Head Start Programs. This policy prevents programs from recycling food unless the packages are unopened, and the exterior is then thoroughly sanitized. Since this requires food to be transported back to the Central Kitchen and additional staffing to appropriately sanitize it, the process is cost prohibitive. K-12 school districts have their own mandates regarding how food must be treated, making it difficult to redistribute. Amending these well-intentioned but flawed policies would go a long way toward addressing hunger, particularly for families with school-aged children.

SB 1386 is an example of policy change initiated at the State level. A newly proposed policy initiative was introduced by Melissa Hurtado, California State Senator, 16th District, on February 16, 2023. SB 628, The Human Right to Food, declares that “it is the established policy of the State that every human being has the right to access sufficient and healthy food.” The initiative would require all relevant State agencies “to consider the human right to food when revising, adopting, or establishing policies, regulations or grant criteria when they are related to the distribution of food or nutrition assistance.” These existing and proposed policy initiatives both demonstrate a recognition of the problem of food insecurity for Californians and support a fundamental human right to access food.

Other suggestions for policy change include:

- Review county permitting policies for grocery stores and retail operations selling food. Consider policies that require the city and county to offer incentives to small retailers to increase the amount of fresh produce at affordable prices.
- Expand the number of WIC and SNAP retailers.
- Require farmers markets to accept EBT.
- Work with the city and county planning departments to consider requiring developers to incorporate mid-sized or larger markets in high-density areas and in new areas, and to standardize retail locations in existing neighborhoods (e.g., ensuring that higher density residential is located within $\frac{1}{4}$ or $\frac{1}{2}$ mile of commercial zoning where at least mid-size markets are allowed).
- Incentivize supermarkets and mid-size grocers to build in high-density food desert areas.

- Work with local and state politicians to advocate for changes to income thresholds to qualify for benefits. This would open the door for many more food insecure people. For example, many advocates and scholars note that the current level of SNAP benefits needs to be increased and that outdated income guidelines need to change so that more food insecure individuals qualify. “Red tape” in the form of long applications to qualify for SNAP and to recertify could be changed so that more people could afford and/or have access to healthy food options.

VII.2c Food Waste Reduction

The new policies associated with SB 1383 provide another illustration of the importance of policy change. SB 1383 requires grocery stores, restaurants, school and hospital kitchens, and other food facilities to reduce organic waste. Smaller grocery stores, such as Dollar General, need to comply with the new policy and consequently have been reaching out to partner with local pantries. Many have been onboarded by CAPK and other agencies, but in the short term, this may lead to an overabundance of food, creating storage issues for sites that distribute directly to community members. The innovative program, Waste Hunger Not Food, organized by the Kern County Public Health Department and CityServe, currently takes food from schools and recycles it to organizations—primarily churches—that distribute to residents. This program is at capacity, however, as are many other new and/or innovative programs. At the same time, the need to recycle edible food will increase throughout the county as SB 1383 is fully implemented in January of 2024. This offers a necessary and unprecedented opportunity for county-wide stakeholder collaboration to develop and to enhance new and existing programs for the acceptance, processing, and redistribution of food.

VI.1.2d Education, Media Outreach and Culturally Appropriate Food

As discussed throughout the report, many clients do not necessarily know which foods provide the best nutrition, nor do they necessarily know how to prepare and cook healthy foods in an appetizing way. Educational programming is needed to provide basic nutrition, including how to shop for, prepare, and cook nourishing foods. Because so many people have been conditioned to eat highly processed foods, it takes time to recondition people’s palates and to understand how eating healthy food is related to overall health. Some school programs, such as the Edible Schoolyard Kern County model, not only involve students in the cultivation and preparation of foods, but incorporate these activities into lessons in biology, math, and other core subjects. Similarly, Bakersfield College and CSUB have gardens and teach students how to grow and prepare wholesome meals. CalFresh education provides nutrition education. All of these programs provide models that community gardens, food pantries, and food distribution sites can utilize.

The media is another way to reach individuals in the community. TikTok, for example, has a great deal of content about cooking and nutrition, including some that share old family recipes. Agencies could follow the trend by creating video that show how to make flavorful meals using nutritious items. Print

media can also be used to share recipes, especially if the recipe is tailored to the items clients receive in a distribution box.

Dr. Evie Young Spath of the Kern County Black Farmers Association articulated the importance of culturally appropriate food. She noted that food distribution programs often do not consider which foods are culturally appropriate for a particular population. Medical professionals also spoke about the need to make sure that the food provided is both healthy and culturally appropriate. This is something that can easily be rectified if distribution sites involve clients in decision-making around the purchase and use of foods. As agencies consider how to provide culturally appropriate foods, one option is a “choice” pantry. In this model, recipients are allowed to choose the foods they want from the available items. At this point, only a few locations in Bakersfield have adopted such a model because it requires dedicated space and more volunteers.

VII.2e Health Outreach, Screening for Food Insecurity, Referrals for Food Insecurity

The foods we eat determine our health. Highly processed foods, for example, are correlated with weight gain, diabetes, and hypertension; and yet highly processed foods are less expensive and tend to make up a significant proportion of donated food. As a result, health outcomes for food insecure people tend to be worse, both mentally and physically. Health care professionals are on the front lines working with food insecure patients but often do not know if a patient is food insecure. Health care researchers recommend that patients be screened for food insecurity and that they be referred to food distribution sites if needed. Providers recognize, however, that people are often reluctant to admit that they are in need of food or don’t recognize that they are because they can afford fast food or other inexpensive options. In addition, health professionals may make a referral to a nutritionist or dietician to educate their patients about healthy food options; however, all of the health care professionals interviewed said that they usually did not have enough personnel or time for the initial screening and/or referrals to nutritionists. Nutritionists, too, need more education in culturally appropriate food recommendations for some of their patients. Providers need more face time with patients to screen for food insecurity and to ensure that patients follow-up with nutritionists. This creates an opportunity for collaboration between food-facing programs and health care providers to address the gap in patient education.

VII.2f Increasing Funding Streams

There are a number of nutrition-related funding streams available in California that offer innovative opportunities. For example, in 2015, the California Nutrition Incentive Program was established to encourage the purchase and consumption of healthy, California-grown fresh fruits and vegetables. The program provides monetary incentives for the purchase of California grown fruits and vegetables at Certified Farmers’ Markets and small businesses. In 2018, the Healthy Refrigeration Grant Program was first introduced and is now established in California’s Food and Agricultural Code. This program improves access to California-grown produce in small retail environments, specifically for underserved communities. It also funds energy efficient refrigeration units in corner stores and small businesses located in food deserts, funding infrastructure needs for businesses that want to offer their customers

healthier choices. The California Department of Food and Agriculture Office of Farm to Fork provides funding for schools to participate in farm to school projects. In 2022, the program offered grants to K-12 school districts, early care and education centers, agricultural producers, and farm to school partnerships. In 2022, they funded 120 farm-to-school projects throughout the State for a total of \$25.5 million. One school site in Kern received this grant: Cesar Chavez High School in Delano.

Of course, the problem is that identifying funding streams, writing competitive grants, and managing grant requirements takes trained and dedicated staff, and few streams provide such operational expenses. In addition, grants are usually short-term—three to five years in length—and so are not easily sustainable. Still, they do offer opportunities to “seed fund” innovative programs, and tracking and evaluation can provide the data to justify the reallocation of existing funding and/or the pursuit of new funding to ensure sustainability. This is another example of where inter-agency collaboration could provide crucial new opportunities for the development of innovative programs.

VII.2g The Need for Comprehensive Case Management Services

County-wide efforts to address food insecurity have necessarily focused heavily on immediate need. A question that remains unanswered is how a box of food ultimately reduces food insecurity for an individual or family—not just on a short-term basis, but in the long-term. Interviews with both health providers and staff from CAPK food-facing programs speak to the deeper needs of Kern families that are food insecure. A family receives a box of food: does the family have the capacity to store the food? Do they have the means to cook the food? Are family members willing to eat the food—and if not, why not? Does this become a nutrition education issue, or something more fundamental related to reliance on and conditioning toward high-calorie, low-nutrient foods? Is a particular family’s food-related needs due to variations in seasonal labor, and therefore temporary? Are families receiving all the benefits and resources for which they are qualified? How is that box of food provided as an emergency stopgap measure actually impacting food-related need? It is through holistic case management services that providers can collect ongoing data to provide a context in which to better understand the changing needs of families and how best to target those needs. This has major implications for funding. Most funders are concerned primarily with direct service provision, not necessarily understanding either the need for operational support or how data can be used in the long-term to target the underlying root causes of food insecurity. Comprehensive, holistic case management is the next step in managing food insecurity for many Kern families.

VII.3 Final Thoughts

A county-wide needs assessment of food insecurity that includes GIS mapping, quantitative data collection, in-depth qualitative interviews, and the involvement of well over 150 stakeholders is unprecedented for Kern County—or, for that matter, most counties in California. Few counties have the resources and capacity to undertake such a project. Understanding the importance of these findings is key in any serious effort to reduce food insecurity. CAPK understands the need, and sought and obtained funding for the study, and supported it in every way. The information contained in this report can and should be used by stakeholders to write grants, inform donors, and enhance

fundraising. It will also provide opportunities for stakeholders to review their own programs in new ways, which may lead to refined systems of food access for clients—a major goal for all stakeholders.

Basic math from the numbers in the report shows that there are enough food-related resources to feed all Kern residents. Approximately 119,094 of Kern residents are food insecure. Between all the programs mentioned and many that weren't, approximately 25 million pounds of food will be distributed throughout the county in 2023. With an average of 1.2 pounds per meal, that is enough food to provide every food-insecure person with 175 meals; or almost a meal per day for two weeks each month. Food-related resources are not lacking. The questions that must be asked include: when and where and at what times of day are distributions occurring? Are distributions being offered outside traditional work hours? What types of food are being distributed? A family of four might eat for a week or more from a commodity box, but for only a few days from a pantry box. How do stakeholders encourage the use of fresh, whole and perishable foods under these circumstances?

These questions speak to a number of issues: the need for increased cooperation and collaboration across stakeholder groups; in-depth analyses of where underserved communities exist—understanding that a community with a single monthly distribution between 8:00 a.m. and 12:00 noon may still qualify as “underserved”; and the real-life situations of those who are food insecure. What are their circumstances? Do they have transportation to food distribution sites? Do they have the capacity to store food? Do they have the means to cook food? Do they have the knowledge to make healthy substitutions for what may have been primarily a nutrient deficient diet? The last speaks to the need of comprehensive wraparound case management services for individuals and families.

The most important opportunity coming out of this study is to promote new and better systems of communication, cooperation, and collaboration among county stakeholders. The reinvigoration of the Food Policy Council is one example of this; the report itself offers many other examples. The data have been collected. The stakeholders are assembled. The opportunities are endless. Action is the next step.

References

- About the edible schoolyard.* (n. d.) Edible Schoolyard Kern County. Retrieved August 3, 2023, from <https://esykerncounty.org/about-us/#what-is-an-edible-schoolyard>
- Aminetzah, D., Davis, W., Brennan, J., Idoniboye, B., Noel, N., & Palowski, J. (2021, November 10). *Black farmers in the US: The opportunity for addressing racial disparities in farming*. McKinsey & Company. Retrieved August 9, 2023, from <https://www.mckinsey.com/industries/agriculture/our-insights/black-farmers-in-the-us-the-opportunity-for-addressing-racial-disparities-in-farming>
- Assoumou, B. O. M., Coughenouri, A. G., Godbole, A., & McDonough, I. (2022). Senior food insecurity in the U.S.A.: A systematic literature review. *Public Health Nutrition*, 26 (1), 229-245.
- Bartfield, J. & Dunifon, R. (2006). State-level predictors of food insecurity among households with children. *Journal of Policy Analysis and Management*, 25, (4), 921-942. <https://doi.org/10.1017/S1368980022002415>
- Beaulieu, S. M. (2014). *Current and prospective scope of hunger and food security in America: A review of current research*. RIT International, Center for Health and Environmental Modeling. https://www.rti.org/sites/default/files/resources/full_hunger_report_final_07-24-14.pdf
- Bellows, A. & Hamm, M. (2003). International effects on and inspiration for community food security policies and practices in the USA. *Critical Public Health*, 13 (2), 107-123. <http://doi.org/10.1080/0958159031000097652>
- Berkowitz, S. A., Basu, S., Gundersen, C., & Seligman, H. (2019). Preventing chronic disease. *Public Health Research, Practice, and Policy*, 16, 1-11.
- Blue Zones Project Bakersfield. (2023, February). *Summit report: Food systems*.
- Blue Zones Project Bakersfield. (2023, July). *Bakersfield blueprint*.
- Blue Zones Project Bakersfield. (2023, January). *Discovery report*.
- Blue Zones Project story: Our history.* (n.d.). Bakersfield Blue Zones Project [BBZP]. Retrieved August 3, 2023, from <https://bakersfield.bluezonesproject.com/about/>
- Bhandari, S., Campbell, J.A., Walker, R.J., Thorgerson, A., Dawson, A. Z. & Egede, L. (2023). Dose response relationship between food insecurity and quality of life in United States adults: 2016–2017. *Health and Quality of Life*, 21, 1-7. <https://doi.org/10.1186/s12955-023-02103-3>
- Buena Vista Schoolyard Project.* (n. d.) Edible Schoolyard Project. Retrieved August 3, 2023, from <https://edibleschoolyard.org/program/buena-vista-edible-schoolyard>
- California Department of Food and Agriculture. (2021-2122). *California Department of Statistics Review 2021-2022*. https://www.cdffa.ca.gov/Statistics/PDFs/2022_Ag_Stats_Review.pdf

- California Employment Development Department. (n.d.). Retrieved July, 2023, from <https://labormarketinfo.edd.ca.gov/geography/kern-county.html>
- Capps, S., Smith, J., & Feenstra, G. (2017). *Kern County food system assessment: Indicators for a healthy food and agricultural economy*. University of California, Davis, Sustainable Agriculture and Education Program. <https://sarep.ucdavis.edu/fs/assessment/kern-county-food-system-assessment>.
- Coleman-Jensen, A. J. (2010). U. S. food insecurity status: Toward a refined definition. *Social Indicators Research*, 95, (2), 215-230.
- Community Action Partnership of Kern (CAPK). (2022) *2022 Annual report: Helping people change lives*. <https://www.capk.org/2022-annual-report/>
- Cook, J. & Jeng, K. (2009). *Child food insecurity: The economic impact on our nation*. Feeding America. https://childrenshealthwatch.org/wp-content/uploads/FA_Report_july2009_full.pdf
- Cox, J. (2020, August 14). Climate change forecasts hard times for Kern Ag. *The Bakersfield Californian*. https://www.bakersfield.com/news/climate-change-report-forecasts-hard-times-for-kern-ag/article_a9b0f9e2-ddb3-11ea-b024-bbc9636fdb74.html
- Department of Agriculture and Measurement Standards. (2021). *2021 Kern County Agricultural Crop Report*. http://www.kernag.com/dept/news/2022/2021_Kern_County_Crop_Report.pdf
- Feeding America Research. (2019, July 17). *Healthcare costs of food insecurity*. <https://public.tableau.com/app/profile/feeding.america.research/viz/TheHealthcareCostsofFoodInsecurity/HealthcareCosts>
- Feeding America (2014). *Map the meal gap: Highlights of findings for overall and child food insecurity*. A Report on County and Congressional District Level Food Insecurity and County Food Cost in the United States in 2012. Feeding America. <https://www.feedingamerica.org/sites/default/files/research/map-the-meal-gap/2012/2012-mapthemealgap-exec-summary.pdf>
- Food Not Bombs. (n.d.). *FAQ*. Retrieved August 3, 2023, from http://foodnotbombs.net/new_site/faq.php
- Food Product Dating* (2019, October 2). United States Department of Agriculture: Food Safety and Inspection Service. <https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/food-safety-basics/food-product-dating#:~:text=Usually%20these%20are%20%22Best%20if,for%20two%20to%20five%20years>
- Food Research and Action Council. (February 2012). *Food Hardship in America 2011*. https://carolinapublicpress.org/wp-content/uploads/2012/03/food_hardship_2011_report.pdf
- Greenfield, Nicole. (2023, April 17). *California's Climate Whiplash*. Natural Resources Defense Council (NRDC). <https://www.nrdc.org/stories/californias-climate-whiplash#:~:text=The%20state%20>

20broke%20snowfall%20records,re%20very%20hard%20to%20manage.

Gundersen, C. & Ziliak, J. P. (2015). Food insecurity and health outcomes. *Health Affairs*, 34, (11), 1830-1839. <https://doi.org/10.1377/hlthaff.2015.0645>

Haider, A. & Schweitzer, J. (2020, March 5). *The poverty line matters, but it isn't capturing everyone it should*. The Center for American Progress. Retrieved August 9, 2023 from <https://www.americanprogress.org/article/poverty-line-matters-isnt-capturing-everyone/>

Hake, M., Englehard, E., & Dewey A. (2023). *Map the meal gap: A report on county and congressional district food insecurity and county food cost in the United States 2021*. Feeding America. <https://Map%20the%20Meal%20Gap%202023.pdf>

Kern County Agriculture. (n. d.) Vegetable Research and Information Center. University of California, Davis. Retrieved on August 10, 2023 from https://vric.ucdavis.edu/virtual_tour/kern.htm

Kern County Department of Agriculture and Measurement Standards. (2021). *Kern County Agricultural Crop Report*.

Kern Economic Development Foundation. (January, 2021) *The Economic Contribution of the Oil and Gas Industry in Kern County*.

Kern Public Health. (n. d.) *#Know Your Numbers*. <https://kernpublichealth.com/knowyournumbers/>

Leon, E. (2023, March 3). Getting to know the Coalition of Chicken Enthusiasts. *The Runner*. <https://therunneronline.com/35942/broadcast/getting-to-know-the-chicken-coalition-club/>

Living Wage Calculator. (n. d.) Massachusetts Institute of Technology. Retrieved August 9, 2023 from <https://livingwage.mit.edu/>

Luiz, J. (2021, September 20). *CSUB receives \$50,000 gift to expand Edible Garden*. California State University, Bakersfield. <https://news.csub.edu/csub-receives-50000-gift-to-expand-edible-garden>

Karlamangla, S. (2022, July 20). If drilling ends in California, what happens to oil country? *New York Times*. <https://www.nytimes.com/2022/07/20/us/california-kern-county-oil.html>

Maizlish, N., English, D., Chan, K. D., & English, P. (2017). *Climate change and health profile report for Kern County*. California Department of Public Health and University of California, Davis. https://www.cdph.ca.gov/Programs/OHE/CDPH%20Document%20Library/CHPRs/CHPR029Kern__County2-23-17.pdf

Measuring Poverty in the United States. (n. d.). National Center for Children in Poverty. Retrieved August 9, 2023, from [https://www.nccp.org/publication/measuring-poverty-in-the-united-states/#:~:text=How%20does%20the%20U.S.%20measure%20poverty%3F&text=The%20U.S.%20government%20measures%20poverty%20by%20a%20narrow%20income%20standard,\(including%20savings%20or%20property\).](https://www.nccp.org/publication/measuring-poverty-in-the-united-states/#:~:text=How%20does%20the%20U.S.%20measure%20poverty%3F&text=The%20U.S.%20government%20measures%20poverty%20by%20a%20narrow%20income%20standard,(including%20savings%20or%20property).)

- #MLKcommUNITY Initiative. (n.d.) MLK Community. Retrieved August 3, 2023, from <https://www.mlkcommunity.com/community>
- Murthy, V. K. (2016). Food insecurity: A public health issue. *Public Health Reports*, 131 (5), 655-657.
- Our Story*. (n.d.). Golden Empire Gleaners. Retrieved August 3, 2023, from <https://www.goldenempiregleaners.com/about>
- Senate Bill 1383: Organics Recycling*. (n.d.). Kern County Public Works Department. Retrieved August 3, 2023, from [Kernpublicworks.com/organics/](https://kernpublicworks.com/organics/)
- [*SB 1383 Tier 1 & Tier 2 Generator Definitions*](#). (n.d.). Kern County Public Works Department. Retrieved August 3, 2023, from <https://kernpublicworks.com/wp-content/uploads/2022/09/Tier-1-Tier-2-Generator-Definitions.pdf>
- Thomas, M. C., Miller, D. P., & Morrissey, T. W. (2019). Food insecurity and child health. *Pediatrics*. 144 (4). <https://doi.org/10.1542/peds.2019-0397>
- United States Census Bureau. (n.d.) *American Community Survey 5-year estimates, 2017-2021*. Retrieved July 023. data.census.gov.
- United States Census Bureau. (2021) *American Community Survey*. Retrieved July, 2023. <https://data.census.gov/table?t=Age+and+Sex&g=050XX00US06029&tid=ACSST1Y2021.S0101>
- United States Census Bureau. (2020). *American Community Survey*. Retrieved July, 2023. <https://data.census.gov/table?q=ethnicity+kern+county+2020&g=040XX00US06&tid=ACSDT5Y2020.B03002>
- United States Census Bureau. (July 2023) *Quick Facts , Kern County, California*. Retrieved July 30, 2023. <https://www.census.gov/quickfacts/fact/table/kerncountycalifornia/INC910221#INC910221>
- United States Department of Agriculture. (2019, October). National Agriculture Statistics Service. *Census of Agriculture: Kern County*. https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/California/cp06029.pdf
- Wunderlich, G.S., & Norwood, J. L. (Eds.). (2006). *Food insecurity and hunger in the United States: An assessment of the measure*. The National Academies Press. <https://doi.org/10.17226/11578>

Map Sources

Food Markets

Sources:

Food sales permits from Kern County Department of Public Health

USDA SNAP Retail Locator publicly available at <https://usda-fns.maps.arcgis.com/apps/webappviewer/index.html?id=e1f3028b217344d78b324193b10375e4>, accessed March 2023.

WIC store locations from California Department of Public Health, California WIC Program (<https://myfamily.wic.ca.gov/Home/WICOfficeGrocer>)

Free Food Distribution Sites

Source: Community Action Partnership of Kern County

Jurisdiction Boundaries

Source: U.S. Department of Commerce, Bureau of the Census, Tiger Line Shapefiles (<https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html>)

Schools

Source: California Department of Education (<https://www.cde.ca.gov/SchoolDirectory/districtschool/>)

Transportation

Sources:

City of Bakersfield GIS Service (<https://cob.maps.arcgis.com/apps/webappviewer/index.html?id=9829919f71fc4e1ab1cbc7148161b25e>)

Kern Transit (<https://kerntransit.org/routes-and-schedules/>)