

Fighting Hunger in San Francisco and Marin

An Analysis of Missing Meals and the Food Landscape over the
Great Recession

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Executive Summary

Though the Great Recession that officially began in late 2007 has been both extraordinarily long and deep, we lack rigorous local estimates of how unmet food need, or “missing meals” are expanding or contracting due to increasing need and the efforts of government and nonprofit food providers. This report provides an attempt to fill this knowledge gap in San Francisco and Marin Counties in California. We also seek to understand what the food landscape would look like if some of our major food assistance programs were administered and utilized to their fullest extent. By providing these estimates, we seek to help both public and private food providers and other relevant stakeholders understand what is being done and what remains to be implemented to meet the food needs of low-income residents of San Francisco and Marin Counties.

Using data from 2007-2009 from the American Community Survey and various administrative data sources, and accounting for a variety of local conditions, resources, and expenses, we find that:

- **Food need is rising in both San Francisco and Marin Counties:** From 2007 to 2009, the number of people in San Francisco falling under 185 percent of the poverty line has increased by 6 percent, and the number of people in Marin falling under this threshold increased by 18.5 percent. At the same time, the percentage of meals that these people can provide for themselves dropped slightly, from 45.7 percent of total meals to 44.4 percent of total meals.
- **Government Food Assistance, particularly Food Stamps, has increased substantially to help meet this need:** Government food programs, driven largely by CalFresh (California’s version of the Supplemental Nutrition Assistance Program, formerly known as food stamps), have increased substantially to help meet this increased need. Government programs together provided nearly 12.5

million more meals in 2009 than they did in 2007, and increased their total share of meals from 17 percent to nearly 21 percent over the same period. This is attributable both to the temporary increased value of food stamps due to the stimulus bill (which explains more of the increase in San Francisco) and the increased numbers of people enrolled in the programs (which explains more of the increase in Marin).

- **Non profit food providers have also helped to reduce unmet food need in San Francisco and Marin:** The San Francisco Food Bank and its partners provided over 7.5 million more meals to residents of San Francisco and Marin from 2007 to 2009, increasing their total share of meals provided from 12.1 percent to 14.1 percent over the same period.
- **The net result of these changes is that the number of “missing meals” in San Francisco and Marin declined by nearly 7 million meals from 2007 to 2009:** This decline is thanks in part to the efforts of the San Francisco Food Bank and the increased utilization and value of food assistance programs like CalFresh. This decline, however, is confined primarily to San Francisco, whereas the number of missing meals in Marin has increased by about 1 million meals from 2007 to 2009.
- **The number of missing meals remain at high levels and could be reduced considerably if government food programs were maximized:** Missing Meals in San Francisco and Marin remain at very high levels-- over 53 million meals in 2009 by our estimates. If the three major government food provision programs (CalFresh, School Nutrition Programs, and WIC) operated at full capacity, missing meals could be reduced by nearly 95 percent. Utilization rates vary widely in these programs, but particularly with CalFresh and school meal programs, sizable dents could be made in the number of missing meals for San Francisco and Marin County residents. As it stands, only 42 percent of those Californians eligible for CalFresh are enrolled in the program - one of the lowest participation rates of any state.

Introduction

The so-called “Great Recession,” which officially began in December of 2007 and ended in June of 2009, is arguably the greatest economic downturn our nation has suffered since the Great Depression. It stands to reason, therefore, that hunger and unmet food need may be on the rise. On the other hand, both the government and non-profits like food banks have stepped up efforts to combat this hunger and unmet food need, but it is unclear to date just how well these efforts have or have not succeeded at stemming increased need. In this report, we seek to fill this gap by providing rigorous estimates of the number of “missing meals” that remain after accounting for government and food bank meal provision, as well as the meals that low-income people can provide for themselves. We also seek to understand how many meals would remain missing if some of our major food assistance programs were administered and utilized more fully. By providing these estimates, we seek to help both public and private food providers and other relevant stakeholders understand both what is being done and what remains to be done to meet the food needs of low-income residents of San Francisco and Marin Counties.

Food insecurity rates, provided annually for the nation as a whole by the United States Department of Agriculture (USDA), are primarily a measure of the anxiety and struggle associated with providing enough food. Families respond to a series of questions about how often they worry about having enough food, enough money for food, whether they make changes to their diets or skip meals, etc. These are good measures of insecurity and anxiety related to affording food, but they do not account for the actual meals needed and provided through various sources. For example, let’s say a family enrolls in food stamps and is therefore able to successfully meet all their food needs. This family may still report high levels of worry and anxiety about meeting their food needs, but actual food need has gone down because the safety net provided by food stamps helped that family meet their actual food needs. To date, food insecurity measures have also only been available nationally. Although Feeding America is attempting to provide

county-level estimates of food insecurity based on imputation procedures, to understand hunger in San Francisco and Marin we need a more concrete picture of our food landscape and how that landscape is changing in response to the Great Recession. How many meals do low- and moderate-income residents need to get by? How much can they afford to provide for themselves? And how well are public and private sources, including the San Francisco Food Bank, keeping up with demand? Only by answering these questions, and taking specific account of the unique dynamics of making ends meet in the San Francisco area, can we understand the extent of unmet food need and how best to direct community resources to meet the need.

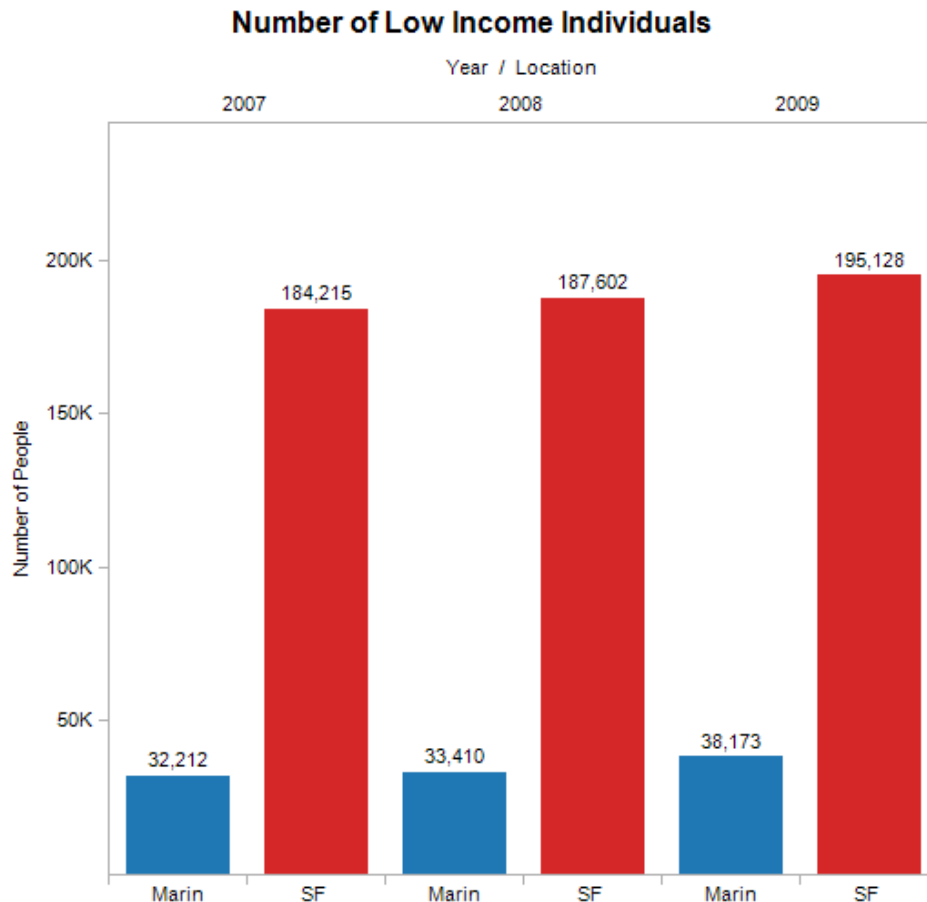
Using publicly available data from 2007, 2008, and 2009, as well as administrative data on publicly and privately provided meals from those same years, this report estimates: (a) the total number of meals needed by low and moderate-income San Franciscansⁱ; (b) the total number of meals that low and moderate-income San Franciscans can reasonably be expected to provide for themselves, given their income; (c) the number of meals provided by government sources; (d) the number of meals provided by the San Francisco and Marin Food Banks; and (e) the number of meals provided by other non-government sources.ⁱⁱ

From estimates of these five totals, we then derive the total number of “missing meals,” that, if provided, could achieve adequate food security for all residents of San Francisco and Marin.

How Many Meals are Needed in San Francisco and Marin Counties?

The first step in estimating the number of missing meals is to identify the universe of people for whom meals might necessarily be needed. We therefore selected all people in the American Community Survey in San Francisco and Marin who fell under 185 percent of the federal poverty line. This percentage is a commonly used cutoff for eligibility in low-income assistance programs, such as the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). To be considered under 185% of the poverty line, a family of three must have made no more than \$33,873.50 in 2009. This is fairly low, especially in a high-cost city like San Francisco, meaning that our estimates of missing meals are likely to be conservative because they do not include missing meals for people above 185 percent of the poverty line.

Figure 1



Using this cutoff, the total number of people who could potentially use food assistance in San Francisco grew from 184,215 in 2007 to 187,602 in 2008 and to 195,128 in 2009. In Marin, these numbers were 32,212, 33,410, and 38,173, respectively (see Figure 1). To put these numbers into perspective, it is useful to compare their growth to overall population growth in the two counties. For each year, the overall population in both counties grew by about 1 percent. The population under 185 percent of the poverty line, however, grew by approximately 2 percent and 4 percent in 2008 and 2009, respectively, in San Francisco, and 4 percent and 14 percent, respectively, in Marin. Thus, the growth in the universe of people potentially needing meals outpaced overall population growth in both counties as the Great Recession deepened.

To convert the data into the number of meals necessary to feed everyone in this universe, we simply multiply the number of people by three (the number of meals per day) and multiply that number by 365 (days in the year). This results in the total number of meals necessary to feed everyone under 185 percent of the poverty line, which in San Francisco grows from approximately 201 million meals in 2007 to 205.5 million meals in 2008 and to 214 million meals in 2009. For Marin, the corresponding numbers are 35 million meals, 36.5 million meals, and 42 million meals, respectively. This growth reflects the expanding underlying population of those falling below 185 percent of the poverty line.

How Many Meals Can the Low-Income Population Provide for Themselves?

In order to calculate how many meals are necessary from public and private sources to meet the needs identified above, we must first arrive at an estimate of how many meals low-income people might reasonably be expected to provide for themselves. But how might we arrive at such an estimate? One approach might be to look at people's expenditure patterns. That is, if we knew that low-income people spent, on average, 20 percent of their incomes on food, then we could theoretically calculate the number of meals that could be purchased using 20 percent of that family's income.

At first glance, this seems a reasonable enough approach to take. Its main problem, however, is that if you look at actual consumer expenditure data, many low-income people, and especially very low-income people, spend an inordinate amount of their income on food, and this percentage increases the lower you go down the income ladder. For example, the 2008 Consumer Expenditure Survey (CEX) – our main data source on people’s expenditure patterns – shows that people making between \$5,000 and \$10,000 annually spent nearly 39 percent of their income on food. If we accepted this 39 percent as the amount of food people in this income bracket could provide for themselves, we would wind up concluding that low-income people can afford to cover almost all of their necessary meals themselves.

But a closer examination of the data reveals a less rosy picture. Take that same income bracket, those making between \$5,000 and \$10,000 dollars: while the CEX shows their total after-tax income for the year to be, on average, \$8,214, the data also shows that their total *expenditures* over the course of the year come in at much more.ⁱⁱⁱ To put it another way, it appears that low-income households spend more than they can really afford on food, likely because food is so necessary for basic survival. Imagine you are a single mother of two children living in extreme poverty in San Francisco. You are trying to meet a number of needs for your family in order to get by with your annual income of, say, \$10,000. You might spend a bigger percent of your budget on essential necessities like food and shelter, but forego other essentials that would be required to meet a minimally adequate living standard. You might select substandard housing that is tainted with lead paint, as the rent is cheaper. You might skip necessary medical care because the costs are too high. You might leave your children without adequate childcare when you’re at work because you have no room left in your budget, after providing food and shelter, to pay someone to watch the children. For all these reasons (and more) simply taking the percentage of expenditures at face value is an inadequate

method for calculating how many meals the low-income population can provide for themselves.

So what we really need is the percentage of income that low-income people *should reasonably be expected* to devote toward food. To arrive at such a figure, we first want to identify those families that are able to meet a minimally adequate living standard. Conceptually, these are families at or above the poverty line. That is, if the poverty line for a family of four is, say, \$25,000 a year, we can theoretically say that a family making \$25,001 is able to maintain a minimally adequate living standard in contemporary America. We can then ask what percentage of income do those people devote toward food? Let's say the answer to that question is 20 percent. We know that a family just barely getting by in America devotes 20 percent of their budget to food, or about \$5,000. For the family making half of that amount, or \$12,500, we can say that they should reasonably be expected to pay about 20 percent of *their* income to food, or \$2,500. This is because we know for the family just getting by, 80 percent of their income must be reserved for other necessities. Essentially, we are saying that it is not fair to expect families making *less* than what it takes to get by to devote relatively *more* of their budget to food than we expect of people just making it.^{iv}

So where do we derive estimates of this percentage for people just getting by? Here we turn to poverty thresholds recommended by the National Academy of Sciences (Citro, 1995) and produced by the United States Census Bureau (see Garner and Short, 2010).^v These thresholds find the amount of money it takes to cover five major categories of essential expenses: food, clothing, shelter, utilities, and medical care (plus a little extra to cover other essentials like toiletries, non-work related travel, etc.). These thresholds are produced each year, and can therefore be broken down into the percent going toward each category, including food. For 2007-2009, the percentage of this threshold accounted for by food was 25.8 percent, 26.7 percent, and 26.9 percent, respectively.

Thus, it makes sense to assume that low-income people in our universe can afford to spend roughly a quarter of their income on food. Before proceeding, however, we make a number of key adjustments to both the percentage available for food and the amount of income to which this percentage applies. These adjustments are as follows:

Taxes:

The ACS only reports pretax income. For many poor, working families, the tax system boosts available income through programs like the Earned Income Tax Credit, the Child Tax Credit, and San Francisco's Working Families Credit. For families on the higher end of the income distribution (toward 185 percent of the poverty line), the tax system reduces available income. Thus, it is important to transform our measure of pretax income into a measure of post-tax income. To accomplish this, we put each of our ACS families through the National Bureau of Economic Research's publicly available tax calculator software. This results in a new measure of each family's available income after taxes.^{vi}

Child Care:

In addition to food, clothing, shelter, utilities, and medical care, the NAS poverty measurement procedures subtract out-of-pocket child care costs from families' income.^{vii} We use the Census Bureau's estimates of childcare costs for different income groups to subtract out available income for families in the ACS where all parents in the household are working and there are children present under the age of 15.

Medical Care:

San Francisco is notable for its creation of the *Healthy San Francisco* program. This program, created in 2008, provides low-cost medical care to San Franciscans without health insurance whose incomes fall below 500 percent of the poverty line. Thus, we take the average enrollment in the Healthy San Francisco program for 2008 and 2009, and eliminate the medical component of the poverty threshold for the equivalent

number of families in the ACS.^{viii} No such program exists in Marin, so for these areas we retained the medical costs implied in the NAS-style poverty measures, which are approximately 7.7 percent of the poverty threshold in all three years.

Shelter:

San Francisco and Marin are notorious for their high housing costs. Since the proportion of the NAS poverty threshold going to shelter is based on national averages, it is important to adjust this proportion to account for the fact that shelter costs are much higher in San Francisco. We thus take data on Fair Market Rents published by the U.S. Department of Housing and Urban Development for San Francisco (including Marin) and create a ratio of these costs to Fair Market Rents in the nation as a whole. We then inflate the proportion of the poverty threshold necessary to meet shelter expenses by this ratio, reducing the amount left over to pay for food.^{ix}

Food:

It is not only shelter that costs more in San Francisco, but also food. For each family in the ACS, we derive an average cost-per-meal based on U.S. Department of Agriculture guidelines for its “Low Cost Food Plan,” which roughly corresponds to the costs of adequately nutritious meals for families in the second quartile of the American income distribution. These costs-per-meal average nearly \$2.^x We further adjust these costs-per-meal to reflect the higher than average costs of food in San Francisco. More specifically, we use the Consumer Price Index (CPI) for food prepared at home for the San Francisco bay area (which includes Marin), and create a ratio of this index to the same index for the nation as a whole. These adjustments raise the cost of a meal for San Franciscans by about 4-7 percent^{xi} per year.

Ultimately, these adjustments reduce the percentage of income available for food from 25.8-26.9 percent to 18.1-20.2 percent. Perhaps not coincidentally, this is roughly in line with what the two income brackets around the federal poverty line report in the CEX

report that they spend on food, 19.9 percent and 16.6 percent for families making \$15,000-\$19,999 and \$20,000-\$29,999 per year, respectively.

How Many Meals are Provided by Government Sources?

The Federal, State, and Local governments administer a number of food assistance programs in San Francisco and Marin Counties. Thus, we compiled data on both the number of dollars flowing into San Francisco and Marin in 2007, 2008, and 2009 from these programs and the number of meals distributed by these programs in those same years. All data were compiled from the relevant administrative agencies. When administrative data were provided in dollars, we converted those figures into meals using the average meal-cost across our low-income population in the ACS data.^{xii} The major programs factored into our analysis are:

- *CalFresh*: The CalFresh program, commonly known as food stamps (or Supplemental Nutrition Assistance Program [SNAP] nationally), is the largest program providing food assistance to low-income households. Administrative data for each year were obtained from the California Department of Social Services.
- *Women, Infants, and Children (WIC)*: WIC provides targeted food assistance for specific types of foods (e.g., milk, peanut butter) to pregnant women and women with infants and young children. Administrative data for each year were obtained from WIC Program Coordinators in San Francisco and Marin Counties.
- *School Nutrition Programs (SNP)*: SNP is provided in the public schools, and provides free and reduced cost meals (breakfast and lunch) to low-income children. Administrative data for each year were obtained from the California Department of Education. The number of Summer Meal Service (SMS) meals, which are provided through the same program but during the summer months when school is not in session, were also obtained from the same administrative source.^{xiii}
- *Child and Adult Care Food Program (CACFP)*: CACFP provides meals typically through child care and adult care (typically elderly) providers. Administrative data for each year were obtained from the California Department of Education.

- *Senior Meals*: There are two primary programs providing meals to low-income seniors outside of the CACFP program. These are the Congregate Meals Program, which provides meals in community dining programs, and Home-Delivered Meals, which provides meals to home-bound seniors. Administrative data on these programs was provided by the Department of Aging and Adult Services in San Francisco and the Division of Aging & Adult Services in Marin County.
- *Fresh Fruit and Vegetable Program (FFVP)*: The FFVP is administered nationally by the USDA, and provides grants to states, primarily through state Departments of Education. San Francisco schools began receiving its first FFVP grants in 2008, and Marin schools in 2009. The program provides free fresh fruit and vegetables to children in their schools. Administrative data on FFVP was obtained from the California Department of Education.

How Many Meals are Provided by Non-Governmental Food Providers, including the San Francisco and Marin Food Banks?

The primary non-governmental providers of food assistance in San Francisco and Marin are the San Francisco Food Bank (SFFB) and the Marin Food Bank (MFB), which have recently merged into a single organization. Each food bank provided us with the total number of pounds of food that they sent out of their doors in 2007, 2008, and 2009. These pounds were converted to meals assuming that one meal equals 1.3 pounds, the conversion factor recommended by Feeding America based off of data compiled by the USDA.^{xiv}

SFFB also works with a network of approximately 500 food providers to which it distributes food. Some of these providers receive 100 percent of their food from SFFB, while some of the larger organizations (such as St. Anthony's, Glide, and St Vincent de Paul) receive some portion of the food they distribute from SFFB, and collect and distribute more food on their own. Unfortunately, there is no central database of all of these providers and exactly how much food they provide. But the SFFB has collected information from each provider in its network on what percentage of their food they receive from SFFB. Because of SFFB's centrality in the food provision network in San Francisco, we assume that only a negligible number of providers are not represented in SFFB's provider network. Using the percentages reported by network members, we are

able to calculate how many non-SFFB meals are provided by network members, which becomes our estimate of non-governmental food provision by nonprofit organizations other than the Food Bank.^{xv} While no such provider network data are available through the MFB, we assume the non-MFB non-profit food providers distribute a proportionately similar amount of food to the community, in this case approximately 20 percent of what the food bank provides.

How Much Unmet Food Need has Developed During the Great Recession in San Francisco and Marin?

Table 1: Meals Summary for San Francisco and Marin, 2007 to 2009

	<u>2007</u>	<u>2008</u>	<u>2009</u>
Meals Necessary	237,123,345	242,264,370	256,250,805
Meals Purchased	108,342,504 (45.7%)	108,992,691 (45.0%)	113,813,583 (44.4%)
Government Meals	40,605,110 (17.1%)	42,181,450 (17.4%)	53,092,302 (20.7%)
Nonprofit Meals	28,578,968 (12.1%)	30,964,351 (12.8%)	36,136,656 (14.1%)
Missing Meals	59,596,763 (25.1%)	60,125,878 (24.8%)	53,208,264 (20.8%)

Figure 2

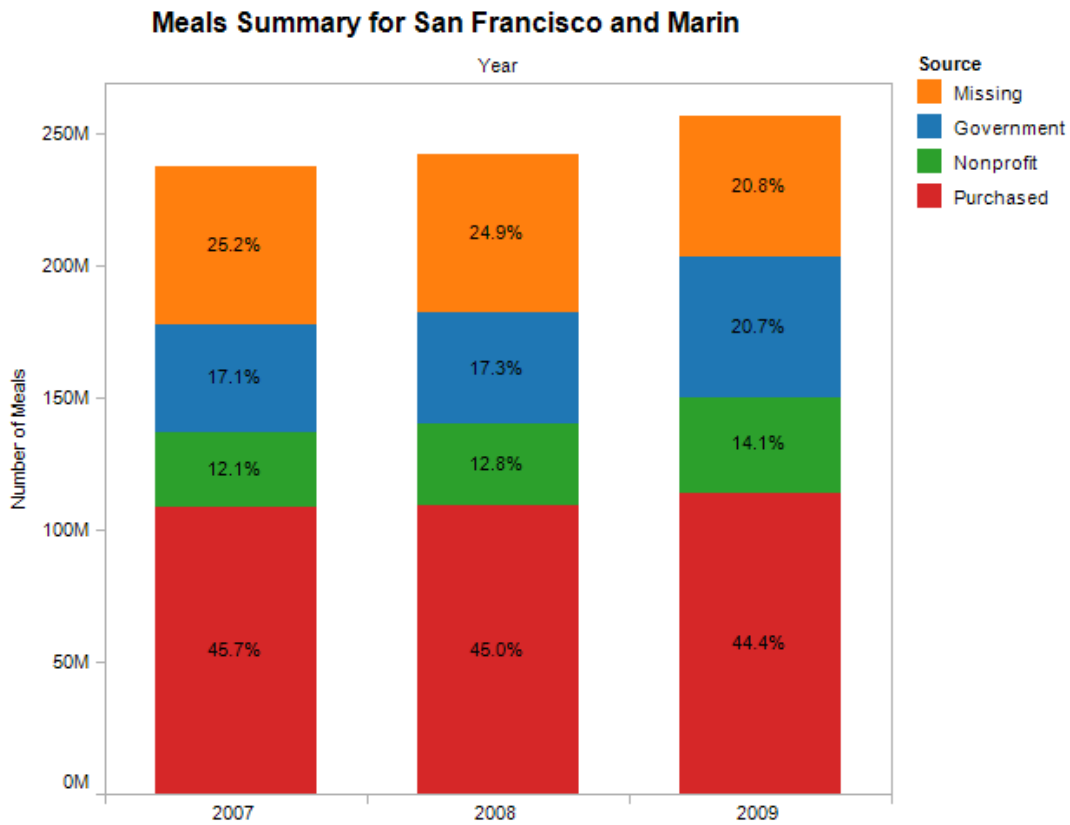


Table 1 (and Figure 2, above) shows the total summary picture of the food landscape in San Francisco and Marin Counties in 2007, 2008, and 2009. The first row shows that the number of meals necessary increased by about 19 million meals from 2007 to 2009, as more people found themselves falling under 185 percent of the poverty line as the recession unfolded.

Row two, in red, shows the number of meals that we estimate low-income people can reasonably be expected to provide for themselves. In 2007, this figure is approximately 45.7 percent of needed meals, dropping to 45 percent of needed meals in 2008, and 44.4 percent of needed meals in 2009. The absolute number of meals stays fairly constant over time, but this is more a function of there being more people under 185 percent of the poverty line, and therefore more overall absolute income available to purchase meals. But as incomes dropped as the Great Recession unfolded, the low-income population is able to cover a smaller fraction of their needed meals by themselves. Note also that this percentage would have dropped even further had the relative costs of food and shelter in the bay area come down over the course of the recession.

Row three, in blue, shows the number of meals provided in total from government sources. We will discuss below the recession response of each individual program, but for now it is enough to note that there was a major uptick in the governmental response to food insecurity over this time period, especially from 2008 to 2009. Meals provided by government sources increased by 4 percent from 2007 to 2008, and then by a whopping 26 percent from 2008 to 2009.

Row four, in green, shows the number of meals provided by nonprofits, primarily the San Francisco and Marin Food Banks. Like with governmental meals, the food banks and their partners demonstrate major upticks in their food provision as the recession

unfolded. These increases in food provision were on the order of 8 percent from 2007 to 2008 and nearly 17 percent from 2008 to 2009.

Lastly, row five, in orange, shows the resulting number of meals that “remain missing” after provision from all sources. The total amount of unmet food need in San Francisco and Marin actually rises a bit from 2007 to 2008 (by about 1 percent), but then declines as the recession deepened in 2009 (by about 11.5 percent, or 6.9 million meals). Thus, it is fair to say that, in tandem, San Francisco and Marin’s public and private safety nets are making a real dent in the rising unmet food need during the Great Recession. In fact, if public and private meal provision had remained at 2007 levels during 2009, missing meals would have climbed by nearly 23 percent between 2007 and 2009, all the way up to over 73 million meals. This in contrast to the actual estimated number of missing meals found in 2009 of roughly 53 million meals.

It should be noted that when we say “missing meals” we do not make the claim that all of these meals actually go uneaten (though in many cases they indeed may). Not factored in here would be meals that people procure through friends or family members, snacks that get substituted for meals, or meals provided by income in lieu of other expenses that might be useful or necessary to get by in American society (such as better medical or child care, more adequate shelter, etc.). Our purpose here is not to claim how many actual pangs are felt in the bellies of low-income San Francisco and Marin residents, but simply to depict how the food landscape has changed throughout the Great Recession, and how our public and private safety nets are doing at easing levels of food insecurity and hunger as that recession deepened and unfolded. In addition to helping non-profit organizations plan for future service levels and capital needs, policy makers should use the findings of this report to consider how best to increase access to food assistance programs like CalFresh and school meals.

Unmet Food Need: San Francisco and Marin

Table 2: Missing Meals in San Francisco County, 2007-2009

	<u>2007</u>	<u>2008</u>	<u>2009</u>
Meals Necessary	201,824,925	205,670,565	214,221,420
Meals Afforded	92,153,266 (45.7%)	91,180,473 (44.3%)	94,947,475 (44.3%)
Government Meals	35,159,358 (17.4%)	36,181,946 (17.6%)	44,848,094 (20.9%)
Nonprofit Meals	27,123,414 (13.4%)	29,338,329 (14.3%)	34,388,436 (16.1%)
Missing Meals	46,995,585 (23.48%)	48,627,781 (23.81%)	39,875,018 (18.7%)

Table 3: Missing Meals in Marin County, 2007-2009

	<u>2007</u>	<u>2008</u>	<u>2009</u>
Meals Necessary	35,298,420	36,593,805	42,029,385
Meals Afforded	16,189,237 (45.9%)	17,812,218 (48.7%)	18,866,108 (44.9%)
Government Meals	5,445,752 (15.4%)	5,999,505 (16.4%)	8,244,209 (19.6%)
Nonprofit Meals	1,455,554 (4.12%)	1,626,022 (4.44%)	1,748,220 (4.16%)
Missing Meals	12,123,680 (34.6%)	11,082,718 (30.5%)	13,126,038 (31.3%)

Tables 2 and 3 break out meals needed and provided in San Francisco and Marin counties, respectively. It turns out that the story of food provision and fighting unmet food need looks quite different in the two counties. In San Francisco, the total number of missing meals grows by a relatively small amount from 2007 to 2008, as the combined weight of more people needing meals and their reduced ability to afford those meals outpaced the growth in government and nonprofits attempting to meet those needs. The result is a net increase in “missing meals” of approximately 1.6 million meals. In 2009, however, the tide in San Francisco meal provision dramatically changed. More people needed meals, meaning the total number of meals needed by low-income San Franciscans increased from 2008 to 2009 by approximately 8.5 million meals. At the

same time, these low-income residents were able to afford approximately 3.8 million more meals, government sources combined to provide roughly 8.7 million more meals, and the San Francisco Food Bank and its partners provided approximately 5 million more meals. The net result of these changes resulted in a net decrease in unmet food need of roughly 8.8 million meals from 2008 to 2009, primarily driven by a large uptick in food provision from government assistance and food bank efforts.

Figure 3

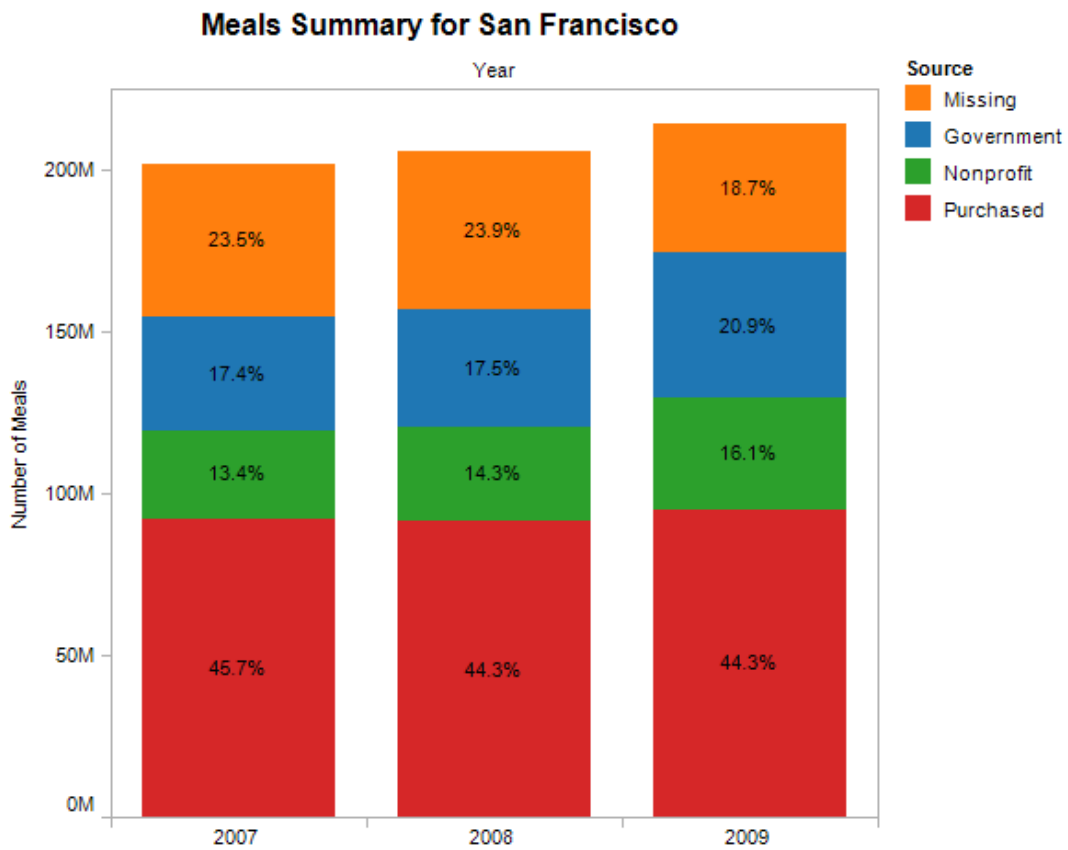
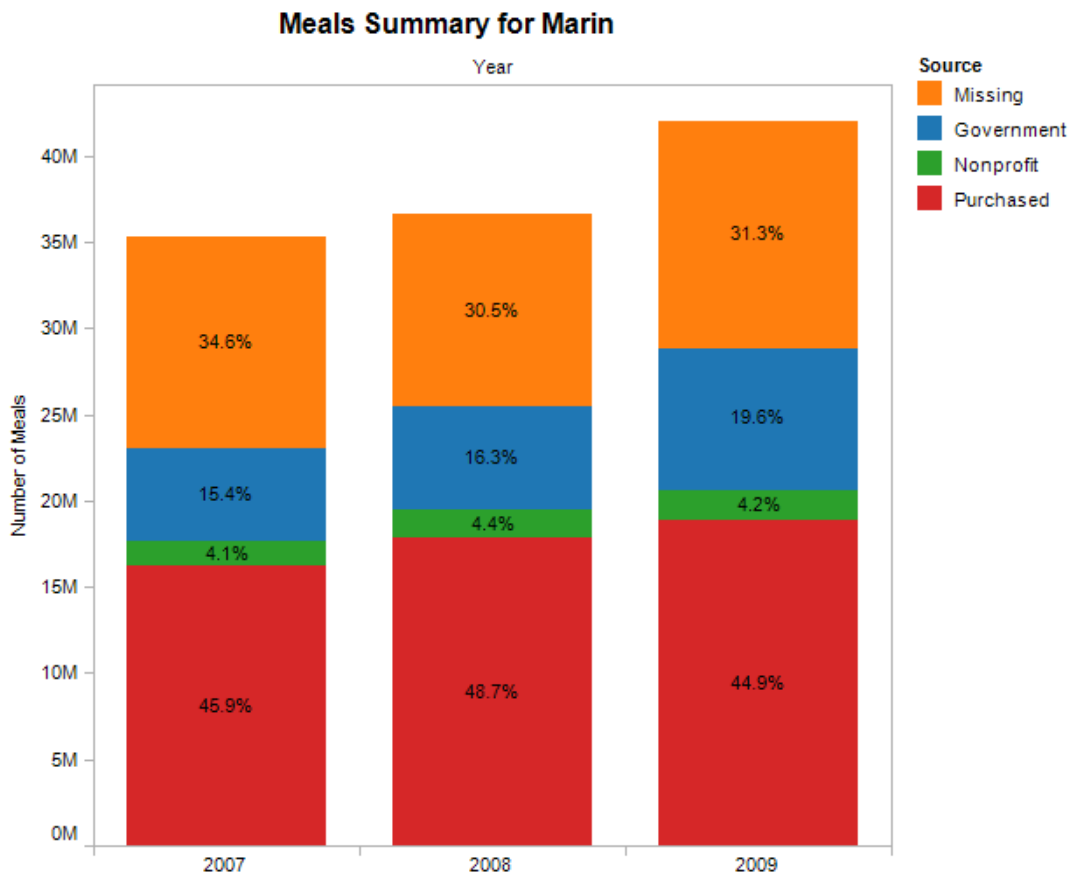


Figure 4



The picture looks quite different when we turn to Marin County. Here, from 2007 to 2008, the combination of increased afforded, government, and nonprofit meals outpaced the growth in the number of meals needed, resulting in a dip of approximately 1 million missing meals. In 2009, however, things took a rather substantial turn for the worse. As noted earlier, Marin experienced a substantial uptick (of 14 percent) in the number of people falling under 185 percent of the poverty line. In Marin, unlike in San Francisco, meal provision failed to keep pace with this expanding need. While government assistance expanded substantially, providing roughly 2.2 million more meals, the nonprofit sector and the Marin and San Francisco Food Banks^{xvi} provided only about 120,000 more meals. And the number of meals that Marin residents could afford for themselves only increased by about 1 million meals, despite a rapidly increasing absolute number of people whose incomes could be used to meet those food needs.

The net result, then, was an increase of about 2 million missing meals in Marin County from 2008 to 2009.

Are All Government Programs Meeting Increased Need Efficiently?

We know from the analysis above that government food programs were critical in helping prevent the expansion of unmet food need in San Francisco and Marin as the Great Recession unfolded. But which programs in particular were most responsible for this prevention? Table 4 breaks out the number of meals provided in each year in San Francisco and Marin (and overall) for each of the six major food provision programs aimed at helping low-income people in the Bay Area meet their food needs.

In San Francisco, CalFresh (commonly known as food stamps) is by far the largest contributor to the reduction in unmet food need that we saw above. Food stamps provided roughly 49 percent more meals in San Francisco in 2009 than it did in 2007. Supplemental analysis of food stamp data revealed that this increase resulted from both an increase in the numbers of people receiving food stamps *and* from an increase in the value of benefits, likely because of temporary increases in funds provided to the program through the American Recovery and Reinvestment Act (or the “stimulus bill”). This temporary funding increase is set to expire in November 2013. In San Francisco, the value of food stamp benefits was the bigger driver of increased meals, with growth in the number of enrollees a smaller factor (though still substantial). (In Marin, the story was reversed: the value of benefits did grow, but this was outpaced by a larger growth in enrollment.) WIC and the School Nutrition Programs, on the other hand, expanded only by about 7 and 4 percent, respectively, from 2007 to 2009 in San Francisco. Meals provided in child and adult care centers, through summer nutrition programs, and through senior programs barely budged over the period in San Francisco.

Table 4: Government Food Assistance Programs' Response, 2007-2009 (San Francisco and Marin Counties)

Government Programs	San Francisco			Marin			Total		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
CalFresh Meals	18,276,106	18,731,665	27,263,580	2,680,591	3,012,191	4,863,356	20,956,696	21,743,856	32,126,936
WIC Meals	7,498,844	7,848,742	8,033,509	1,444,011	1,453,229	1,772,788	8,942,854	9,301,971	9,806,297
School Nutrition Programs Meals	4,450,520	4,597,519	4,618,505	1,116,963	1,315,839	1,361,450	5,567,483	5,913,358	5,979,955
CACFP Meals	2,857,602	2,846,158	2,814,668	175,578	190,712	196,407	3,033,180	3,036,870	3,011,075
Senior Meals	1,774,492	1,838,438	1,785,899	10,282	10,775	17,015	1,784,774	1,849,213	1,802,914
Summer Meals	301,795	310,587	299,473	18,328	16,758	18,010	320,123	327,345	317,483
Fresh Fruit & Vegetable Meals	0	8,837	32,460	0	0	15,182	0	8,837	47,642
Total Gov't Meals	35,159,358	36,181,946	44,848,094	5,445,752	5,999,505	8,244,209	40,605,110	42,181,450	53,092,302

Figure 5

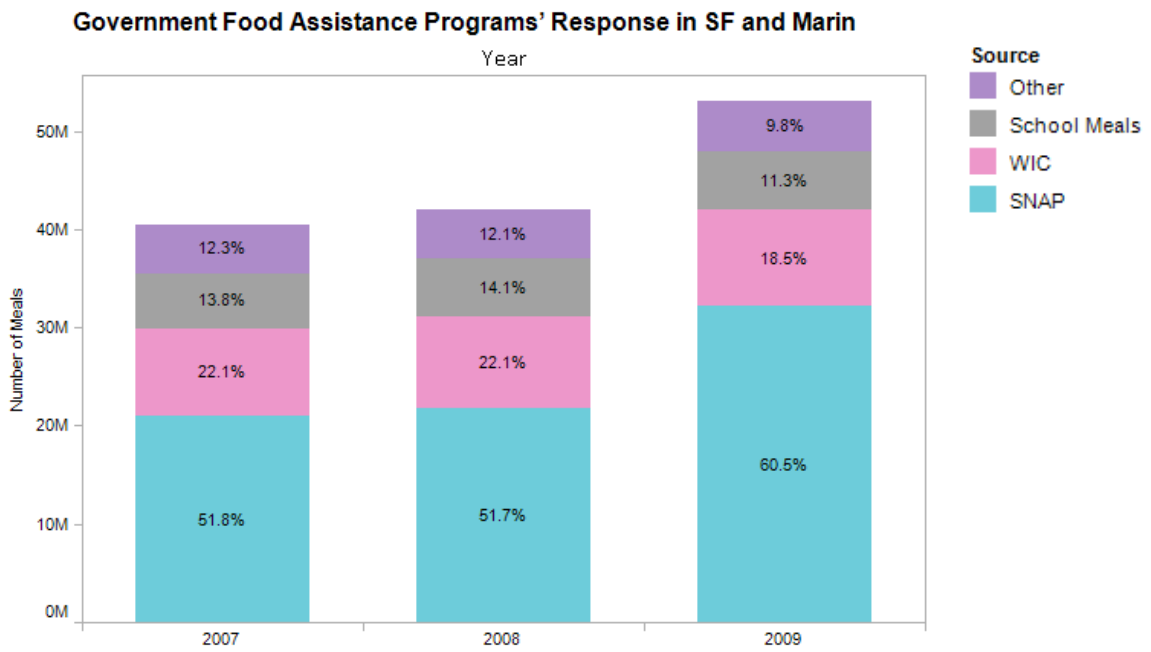


Figure 6

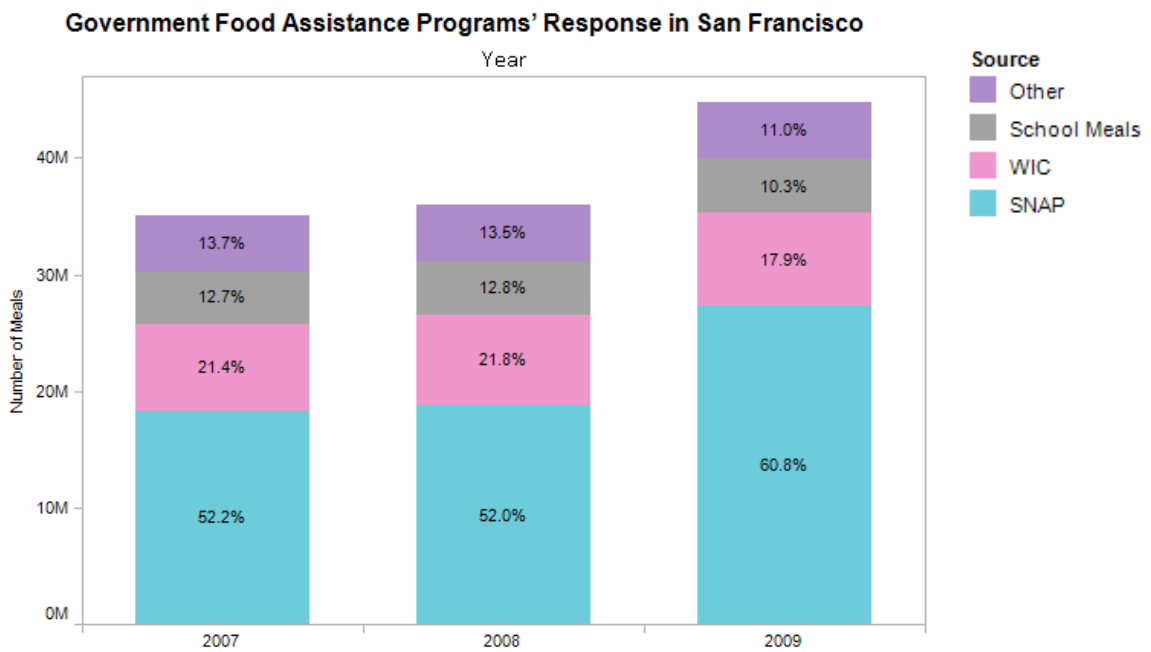
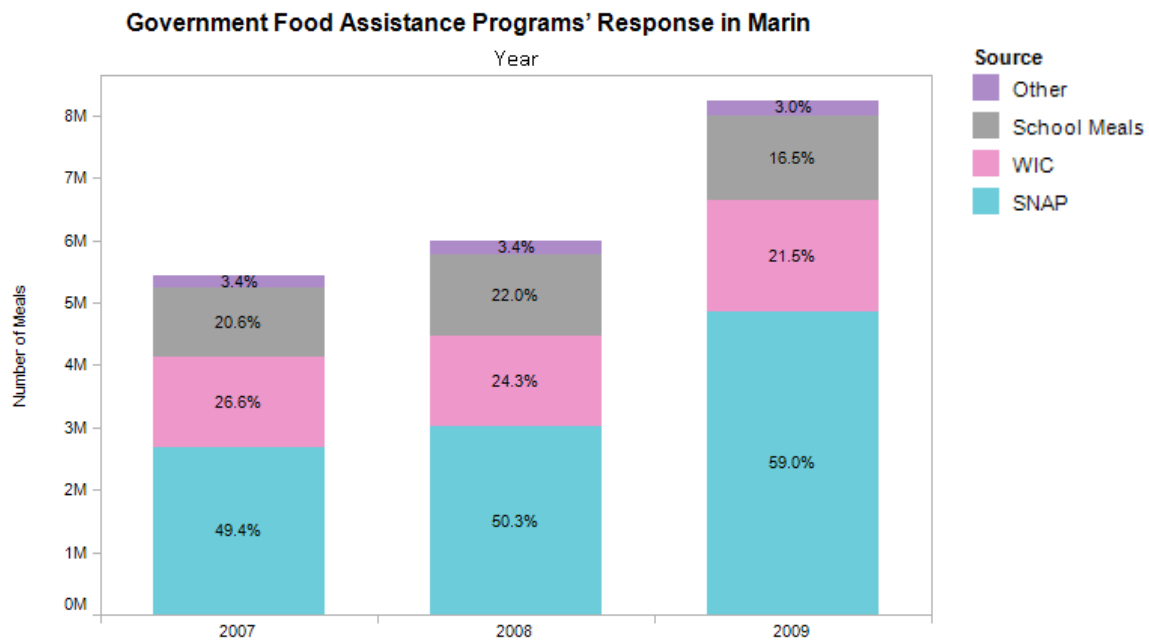


Figure 7



In Marin, the story played out a bit differently. Like in San Francisco, food stamps expanded most rapidly, fully 81 percent in 2009 over 2007 levels. Unlike in San Francisco, however, the other meal programs did expand at fairly substantial rates to contribute to meeting the expanded food need in Marin County. WIC and the School Nutrition Programs both increased by over 20 percent from 2007 to 2009, meals at child and adult care centers increased by about 12 percent, and senior meals expanded by about 65 percent (though the absolute number of meals provided by senior meals programs is rather small). The larger increases that we see across the board in Marin is likely driven by the much larger (relative) increase in Marin in the number of people falling under 185 percent of poverty over the course of the Great Recession.

Thus, overall, CalFresh is both the largest program meeting the food needs of low-income people in both counties, and also responsible for the lions' share of government safety net programs' response to the growing unmet food need.

What If Government Food Assistance was Fully Utilized?

While the government food safety net, especially food stamps, was essential in stemming the growth of unmet food need in the Bay Area over the course of the Great Recession, it remains true that not everyone who is eligible for these programs actually receives them- in the case of CalFresh, only 42.8 percent of eligible Californians receive the benefit (as of 2009), meaning California has the third lowest participation rate in the nation.^{xvii} The average participation rate among other states is closer to 60 percent. Participation is low for a number of reasons, such as lack of information, social stigma attached to receipt of food assistance, public policies that suppress enrollment, and a variety of other reasons. We therefore also looked at how the number of missing meals would be reduced if the three major food assistance programs (SNAP, WIC, and School Nutrition Programs) were fully utilized.^{xviii}

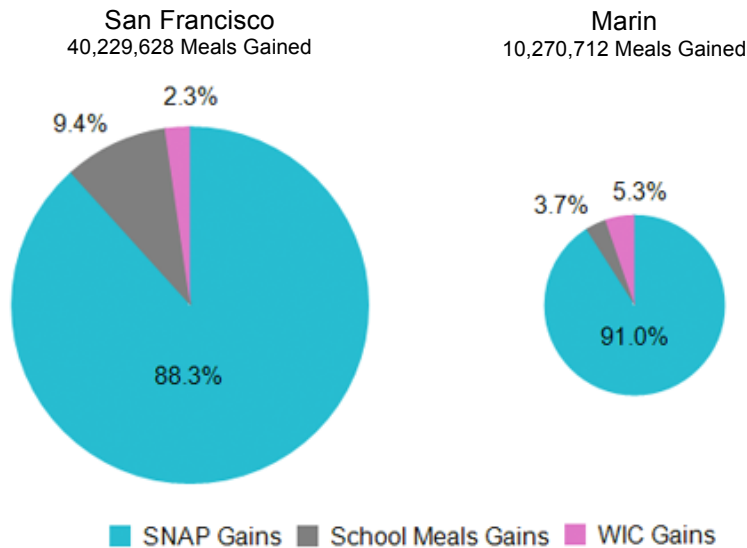
The results are presented in Table 5. The first row of Table 5 shows the actual number of missing meals estimated in each county in 2009 from the main analysis presented above. Rows 2-4 show the number of additional meals that would be covered by each of the three main programs if they were fully utilized. Row 5 provides the summary of these additional meals, while Row 6 shows the number of missing meals that would remain if these three programs were fully utilized. The result would be a substantial reduction in the number of missing meals. In San Francisco, the number of missing meals would be entirely eliminated. In Marin, the number of missing meals would be reduced by about 78 percent, to about 2.9 million meals.

Table 5: Missing Meals in 2009 under Full Utilization of Primary Food Assistance Programs

	<u>San Francisco</u>	<u>Marin</u>	<u>Total</u>
Actual Missing Meals	40,037,416	13,170,848	53,208,264
CalFresh Meals Gained - Full Utilization	35,529,323	9,342,362	44,871,686
WIC Meals Gained - Full Utilization	921,528	544,350	1,465,879
School Meals Gained - Full Utilization	3,788,777	383,999	4,162,775
Total Meals Gained - Full Utilization	40,239,628	10,270,711	50,500,340
Missing Meals if Full Utilization	0	2,900,137	2,707,924
% Reduction	100%	78%	95%

Figure 8

Meals Gained under Full Utilization of Government Food Programs on Missing Meals, 2009



As illustrated in Figure 8, most of this reduction would come from food stamps, though school meals programs are also quite underutilized in San Francisco. In total, only about 2.7 million meals would be necessary to meet people’s food needs across the two counties if public programs were fully utilized.

Summary and Conclusions

Figure 9

Sources of Meals in San Francisco and Marin from 2007 to 2009

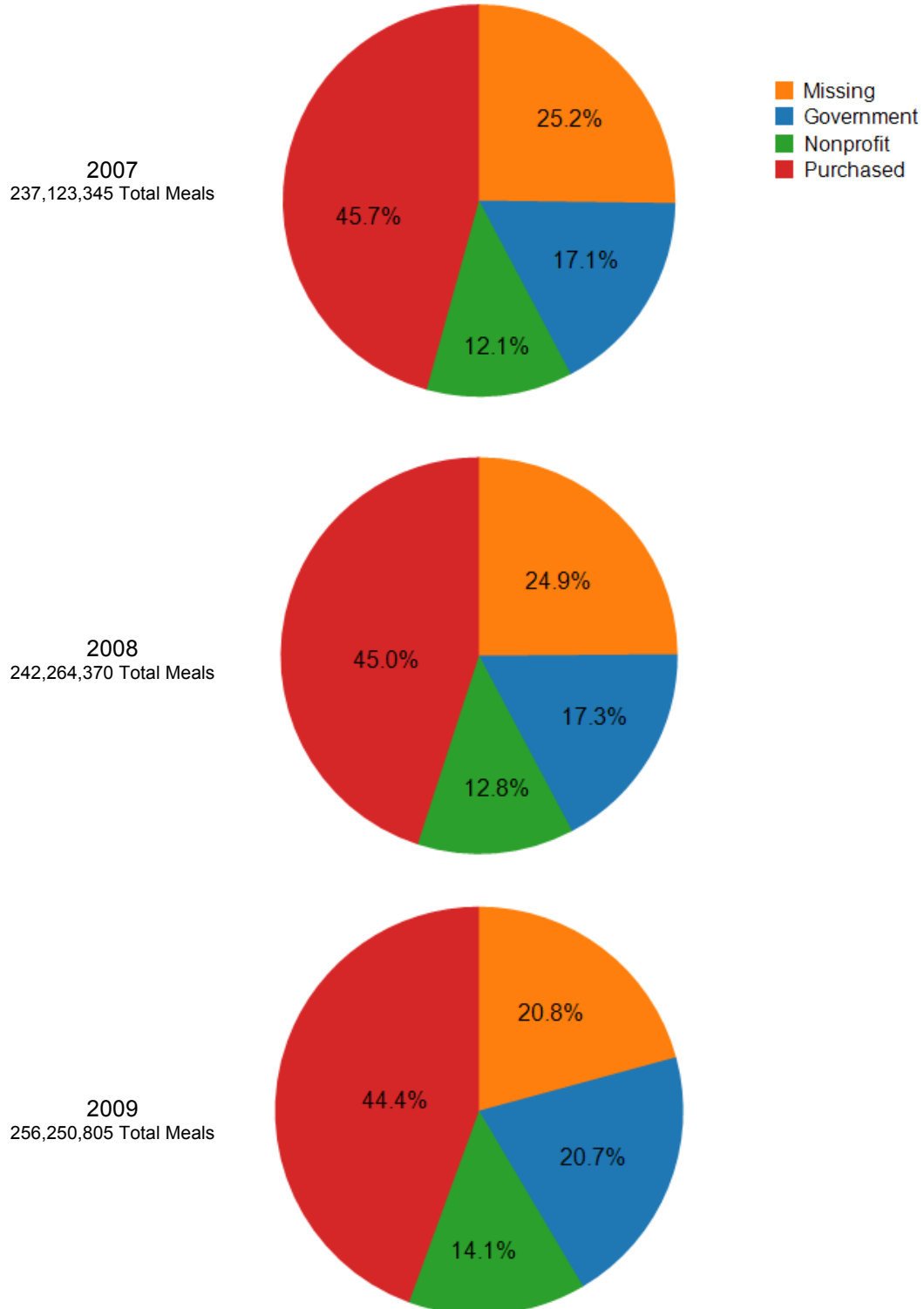


Figure 9 above shows the changing food landscape in San Francisco and Marin from 2007 to 2009, as the Great Recession unfolded. The total number of meals needed by the low-income communities expanded as the recession progressed. Missing meals (shown here in orange), however, declined in 2009 by four percentage points. The two big drivers of this decline were (1) increased government assistance, particularly food stamps, which jumped by 3.6 percentage points between 2007 and 2009; and (2) increased meal provision by non-profits, which jumped by two percentage points between 2007 and 2009.

The combination of increased food assistance from government and non-profit sources is substantially helping to reduce food insecurity and hunger in San Francisco and Marin despite the growing numbers of people in need. If public programs were fully utilized, these missing meals could be reduced by an additional XX percent. The findings highlight the effectiveness of government programs in fighting hunger as well as their untapped potential. The results of these analyses should help inform efforts by both public and private food providers to continue their efforts in seeking meet unmet food need in San Francisco and Marin.

References:

Citro, Constance F. and Robert T. Michael (eds.), 1995. *Measuring Poverty: A New Approach*. Washington, DC: National Academy Press.

Garner, Thesia I. and Kathleen S. Short, 2010. "Identifying the Poor: Poverty Measurement for the U.S. from 1996 to 2005." *Review of Income and Wealth*, 56, 237-258.

Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2010.

Endnotes:

ⁱ All analyses are conducted for both San Francisco and Marin Counties. For simplicity's sake, we use the terms "San Francisco" and "San Franciscans" throughout this report to encompass residents of both of these counties, except for when we make comparisons between the two.

ⁱⁱ We used administrative data provided by the SFFB to estimate the total number of meals provided by nonprofit organizations other than the Food Bank. The SFFB records not only which organizations it distribute food to, but also the proportion of meals distributed by these other organizations that are provided by other sources than the Food Bank.

ⁱⁱⁱ In 2008, the average expenditures for people making between \$5,000 and \$10,000 was \$19,125. The size of this discrepancy in consumer expenditure data is partially the result of some people likely underreporting their income from various sources. But another portion, according to the Bureau of Labor Statistics, is that: "Consumer units whose members experience a spell of unemployment may draw on their savings to maintain their expenditures. Self-employed consumers may experience business losses that result in low or even negative incomes, but are able to maintain their expenditures by borrowing or relying on savings. Students may get by on loans while they are in school, and retirees may rely on savings and investments." Nevertheless, the point remains that applying a percentage of expenditures to people's incomes is likely to provide an inaccurate reflection of the number of meals afforded by low-income families.

^{iv} In actuality, it may be even less fair to expect people earning less income to devote the same percentage of their incomes to food as those who are successfully getting by, given that they have less absolute income with which to make ends meet. This point, however, is debatable and ultimately normative. The percentage chosen here is conservative in the sense that it assumes a high end to the number of meals low-income people can afford for themselves. Assuming people are able to spend less than this percentage would serve to decrease the number of meals we estimate people can afford on their own and thus increase the total number of missing meals needed in the city after accounting for all meal sources.

^v The current Federal Poverty Level was originally developed in 1963 by multiplying a family's food costs on the USDA thrifty food plan by three. It is inflated every year using CPI data. In 1995, the National Academy of Sciences released a report detailing an alternative method for measuring poverty that relied on a far more thorough methodology. In this report, we use the methodology proposed by the NAS to better understand the expected food costs for low-income families. For updated 2007 to 2009 numbers, these results were produced by Thesia I. Garner, Research Economist, Division of Price and Index Number Research, Bureau of Labor Statistics for research purposes only using the Consumer Expenditures Interview Survey. These results are released to inform interested parties of ongoing research and to encourage discussion of work in progress. Decisions related to statistical, methodological, technical, and operational issues were made by the author and do not necessarily reflect official positions or policies of the U.S. Bureau of Labor Statistics.

^{vi} TAXSIM is the NBER's program for calculating tax liabilities under US Federal and State income tax laws from individual data. To calculate total tax liability for each family, we assume each family files a single tax return. Using the data from the ACS and our estimation of child care expenses from the SIPP, we were able to input the following variables obtained for each family into the the program: filing type, primary and secondary earner wages, number of dependents, welfare transfers, social security income, child care costs, and number of elderly filers. We used the latest version available at the time of writing, Version 9, which incorporates federal income tax law up to 2013, and state income tax law for each state up to 2008. Due to this limitation, we approximated 2009 California state tax liability using 2008 tax law. More information about the program can be found online at <http://www.nber.org/~taxsim/taxsim-calc9/>.

^{vii} We used the Survey of Income and Program Participation (SIPP) to obtain estimates of each family's childcare expenses. We determine that a family is in need of childcare if it contains a child under 15 and there are no nonworking adults. The Census Bureau released data tables in 2005 that provided both the percentage of working mothers who spent money on childcare and the average amount those families spent. This data is broken down into four income brackets. Within each income bracket, we select the

proportion of families to make child care payments based on the percentages supplied by the data tables. These families are then assigned average child care costs for their bracket. Families are not allowed to spend more on childcare than the income of the lowest earning parent. The data tables can be found at <http://www.census.gov/population/www/socdemo/child/ppl-2005.html>.

^{viii} Administrative data provided by the city of San Francisco details the number of Healthy SF recipients for several income brackets. We randomly assign the benefits of the Healthy SF program to the appropriate number of San Franciscans in each income bracket. Mainly, since membership costs in the program are insignificant compared to the expected medical costs included in the NAS recommendations, we remove medical costs from the NAS poverty threshold and recalculate accordingly the percent of income that people at the poverty threshold are able to spend on food. This new percentage is used when calculating the total number of afforded meals for those families we randomly assigned the Healthy SF benefits.

^{ix} These ratios are 1.91, 1.85, and 1.86 in 2007, 2008, and 2009, respectively. Note that our estimate of the number of meals needed after accounting for what low-income people can afford for themselves would be higher in 2008 and 2009 if shelter costs in San Francisco hadn't become relatively lower than they were in 2007. Some low-income people do receive subsidized housing that caps the amount of income they have to spend on shelter (typically at around 30 percent of income). Theoretically, if we knew the number of individuals in each county receiving such assistance we could select a corresponding number of families in the ACS to cap the shelter percentage at 30 percent. However, this data was unavailable to us as of this writing, and the amount of income (and therefore meals) this would cover after making this adjustment would likely be fairly negligible.

^x The weighted average meal costs per family in SF and Marin were \$2.13, \$2.33, and \$2.32 in 2007, 2008, and 2009. Note, however, that each individual family in the ACS is assigned its own average meal cost based on the age and gender of its members and the size of the family unit.

^{xi} This adjustment was 1.07, 1.06, and 1.04 in 2007, 2008, and 2009, respectively. Like with shelter, our estimate of the number of meals needed after accounting for what low-income people can afford for themselves would be higher in 2008 and 2009 if food costs in San Francisco hadn't become relatively lower than they were in 2007. Technically, the Bureau of Labor Statistics does not recommend the CPI to be used for inter-area price comparisons, but rather intra-area price comparisons over time. This is because there may be differences in the underlying items in the market baskets on which the CPI is estimated between areas. Given that we were only comparing only one large metro area to the nation as a whole, we believe the degree to which this is problematic is likely to be minimal. If anything, our adjustment is conservative. The primary publicly available source of cost-of-living differences across cities, the ACCRA, would put the cost of food in San Francisco much higher (44%), though for a number of methodological reasons we do not believe ACCRA to be a reliable source of price differences in food. A better source that will become available eventually will be the Bureau of Economic Analysis' "Regional Price Parities," which are being developed by BEA's Bettina Aten and colleagues. Preliminary estimates from the RPP work suggest that "food goods" in the San Francisco metro area are approximately 13-14% higher than the national average, though much testing remains before exact RPP figures are released. Our future missing meals analyses will move toward using RPP price indices as they become available.

^{xii} For WIC, which is geared toward women with infants and young children, we used the average meal costs for families matching this demographic profile.

^{xiii} For summer meal programs, we only had actual meal data for 2009. For each year, however, we had average daily participation data for each county, so for 2008 and 2007 we adjusted the 2009 meal counts by the participation ratios for 2008/2009 and 2007/2009, respectively.

^{xiv} According to Feeding America: "The USDA has made updates to the methodology used to estimate pounds per meal. The most recent assessment comes from the "What We Eat in America" study and is dated 2005-2006. The new estimate of 1.3 pounds per meal is based on more recent data and a more rigorous methodology. It reflects total U.S. food and beverage consumption across age groups, excluding water, and will be updated by the USDA every two years."

^{xv} These percentages were only collected once, in 2010, so we assume the numbers pertain to the previous calendar year, 2009. For 2008 and 2007, we assume the ratio of total non-profit non-SFFB meals to SFFB meals is constant, so simply calculate the total percentage of SFFB 2008 (and 2007) meals provided by non-profit non-SFFB providers using this 2009 ratio. If SFFB and its associated non-profits grew at differential rates, this assumption does not hold. But without consistent data over time on network members' food provision or SFFB food shares, this assumption is essentially untestable.

^{xvi} The San Francisco Food Bank has been providing meals in Marin during the time frame under study here in addition to the Marin Food Bank, before the two organizations merged.

^{xvii} <http://www.fns.usda.gov/ora/MENU/Published/snap/FILES/Other/pai2009.pdf>

^{xviii} For SNAP and School Nutrition Programs, we take estimates of the percent of eligible individuals who are enrolled in these programs from 2008 data compiled by the California Food Policy Advocates' county profiles. We then apply these percentages to the number of meals provided by SNAP and School Nutrition Programs to calculate the number of meals that would be provided under full eligibility. For WIC, we estimate the number of people eligible in 2009 using ACS data, tabulating the number of single parents and children in single parent households with children under the age of five. We then calculate an eligibility ratio for 2009 using data provided on the number of WIC recipients in the aforementioned CFP county profiles. We apply that percentage to the number of 2009 meals provided by WIC to derive the number of meals that WIC would provide under full eligibility.