# Pueblo County Food System Assessment
# Public Health & Food Access Report

September 2013

This Food System Assessment was conducted on behalf of the Pueblo City-County Health Department's Health Disparities Program. The Health Disparities Program strives to reduce the risk of developing chronic cardiovascular disease precursors such as obesity by providing education and opportunities for the disparate populations in Pueblo County through a grant from the Colorado Department of Public Health and Environment. Colorado State University and WPM Consulting, LLC conducted the research and analysis to inform this assessment.

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# I. Introduction

The Pueblo City-County Health Department (PCCHD) received a grant from the Colorado Department of Public Health and Environment Office of Health Disparities in 2013 to assess the food environment in Pueblo County. The overarching question to be addressed through the grant was, "How can the local and regional food system of Pueblo County provide more safe, fresh and healthy foods to improve food access, food security, and the health of all Pueblo residents?" A team from WPM consulting, Colorado State University Extension, and PCCHD was formed to complete a food assessment charged with the task of addressing that question.

A food system assessment can be a powerful way to tell the story of what is happening with food in a community, based on information already collected by community organizations (government data, maps, and organizational programs) as well as what community members share through a variety of conversations and surveys. Food system assessments examine a broad range of food-related problems and successes to improve a community's food system.

This report, its supporting materials, and Pueblo County food system maps are available to view and download at www.pueblohealthdept.org.

## A. Why Food Systems?

According the 2013 County Health Rankings (CHR), Pueblo County ranks 48th out of 59 counties in Colorado in health outcomes (morbidity and mortality) and 52nd in health factors that include health behaviors, clinical care, socioeconomic factors, and the built environment (CHR, 2013).

Diet is a significant contributor – or protective factor – related to many chronic diseases, including obesity and diabetes. Food environment factors--such as full-service grocery store or restaurant proximity, food prices, food and nutrition assistance programs, and community characteristics--interact to influence food choices and dietary quality (USDA ERS, 2012).

Because the food system touches many aspects of a community's quality of life, this assessment helps explain the health rankings and can inform targeted public health interventions. The report presents information on both national and local trends regarding the role of healthy food access in public health, and explores the ways in which Pueblo's food environment affects food security, healthy food access and, ultimately, overall health.

# II. Methods

In order to answer that over-arching question, "How can the local and regional food system of Pueblo County provide more safe, fresh and healthy foods to improve food access, food security, and health of all Pueblo residents?" The data presented in this report comes from both primary and secondary sources including: 1) the United States Department of Agriculture Economic Research Service (USDA ERS), particularly their Food Environment

Atlas; 2) the 2013 Pueblo County Food System Assessment resident survey; 3) a set of maps prepared by the Pueblo County GIS Center using available community data[1]; and, 4) themes from 2013 Pueblo County Food System Assessment primary focus groups and key informant interviews; 5) other secondary sources of health and food security data.

## A. USDA Food Environment Atlas

The Food Environment Atlas assembles national statistics on three broad categories of food environment factors: food choices, health and wellbeing, and community characteristics. The Atlas currently includes over 160 indicators of the food environment for all areas of the United States.

## B. Pueblo County Resident Survey

The resident survey was conducted between April and June 2013, and completed by 684 residents. The survey results demonstrate how a representative sample of residents made food choices and described the personal and community factors that affected their food choices. Survey questions were designed to understand where Puebloans purchase food, what food they commonly consume, what difficulties they have in accessing healthy food, and what community and personal factors would help them access and consume more fruits and vegetables. This information provides a nice complement to the existing data in the USDA Food Environment Atlas, as it provides more insight into perceptions, personal choices, and perceived barriers.

In order to recruit a sample of respondents that reflected the demographic profile of the community, a variety of outreach methods were used to reach county residents. These methods included social media, radio, newspaper, flyers in public areas, and city and county government website postings. Additionally, hardcopy surveys were disseminated widely in-person at many partner organizations including; emergency food pantries, Cooking Matters classes, the Care and Share Food Bank, the Department of Social Services, one local hospital, numerous faith-based organizations, and classes given in the Pueblo County Women, Infant, and Children program. These targeted spots were chosen because they represented demographics that were otherwise under-sampled in the initial surveys collected by the team.

## C. Pueblo County Maps

To view and download a series of Pueblo County FSA maps, visit www.pueblohealthdept.org, which provides a set of Pueblo County Geographic Information Systems (GIS) maps that help us better visualize how and where Pueblo residents are accessing food. The maps include:

- Where do we provide food away from home in Pueblo County?
- Where do we provide food for meals made at home?
- Where are there barriers to accessing full-service grocers?

[1] To view and download the Pueblo food system maps please visit www.pueblohealthdept.org

### D. 2013 Focus Groups

In order to learn more about these under-surveyed populations, PCCHD conducted three focus groups: one in Colorado City to reach a more rural mountain population; one with older adults at the Senior Resource Development Agency (SRDA); and, one with a group of students completing their GEDs through the area Board of Cooperative Educational Services Migrant Education Program.

Each focus group included four to five randomly-selected individuals, and was conducted during the month of June 2013. Though these focus groups provided some interesting insights regarding food access for these populations, due to the small number of participants, the focus groups do not allow for generalized conclusions that can be applied broadly to the general population. So, for this assessment, they are used to reinforce themes or inferences drawn from the other data and survey methods. See Appendix B and C for more information.

### E. Key Informant Interviews

In order to capture perspectives across the entire food system, a series of key informant interviews were conducted as well. The food assessment team (including its advisory committee) developed a list of potential interviewees that would represent organizations involved in hunger and poverty, school food, nutrition education, food distribution, agriculture, and rural development. The consultant team members conducted 14, one-hour interviews in all, the majority of which were conducted in-person at PCCHD on March 30th 2013 (See Appendix E for a list of all participants). Those who were not able be interviewed that day were interviewed over the phone in the following weeks. The interview tool is available in Appendix D.

The maps and results from the resident survey, focus groups, and key informant interviews will be incorporated with statistics from the Food Environment Atlas, and will be discussed in greater detail throughout the subsequent sections of the report. Although there were a number of different topics covered in the survey, this report focuses on food access, including where residents shop for fruits and vegetables, what perceived issues they face in securing the quantity and types of food they prefer, and how community and personal factors affect food consumption patterns.

## III. Food Insecurity in Pueblo County

### A. Understanding Food Insecurity

In 2006, the USDA introduced new descriptive terms to monitor household food security, based on an independent review of the survey methodology that was conducted by the National Academies of Science [NAS]. Hunger, NAS felt, described an individual experience, while "food insecurity" described the findings as they relate to the household experience (FRAC, 2013), providing a better marker for policy interventions.

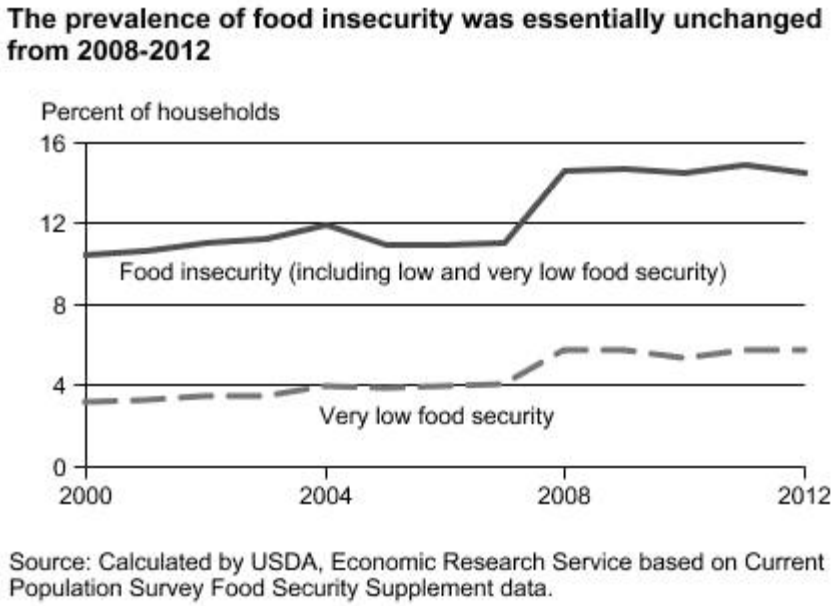
The food security status of each household lies somewhere along a continuum extending from high food security to very low food security. This continuum is divided into four ranges, characterized as follows:

1. **High food security**—Households had no problems, or anxiety about, consistently accessing adequate food.
2. **Marginal food security**—Households had problems at times, or anxiety about, accessing adequate food, but the quality, variety, and quantity of their food intake were not substantially reduced.
3. **Low food security**—Households reduced the quality, variety, and desirability of their diets, but the quantity of food intake and normal eating patterns were not substantially disrupted.
4. **Very low food security**—At times during the year, eating patterns of one or more household members were disrupted and food intake reduced because the household lacked money and other resources for food.

## B. Overall Food Insecurity Rates

Food insecure households are not necessarily food insecure all the time. Food insecurity may reflect a household's need to make trade-offs between purchasing nutritious food and other basic needs such as housing, childcare, or medical expenses. Figure 1 shows that the prevalence of food insecurity nationally increased in 2008, and remained at that level through 2012 (hitting 14.5%)—the highest recorded percentage since national monitoring of food security began in 1995. We see a similar trend in Pueblo County, as the average percent of household food insecurity grew 4.8% from 1999 to 2011 (the most current data), but overall is still slightly lower than national rates (see Figure 2) (Food Environment Atlas, 2013).

### Figure 1: Food Insecurity in the US from 2000-2012




Source: Calculated by USDA, Economic Research Service based on Current Population Survey Food Security Supplement data.

## Figure 2: Average Rate of Household Food Insecurity in Pueblo County, 1999-2011 (Food Environment Atlas, 2013)

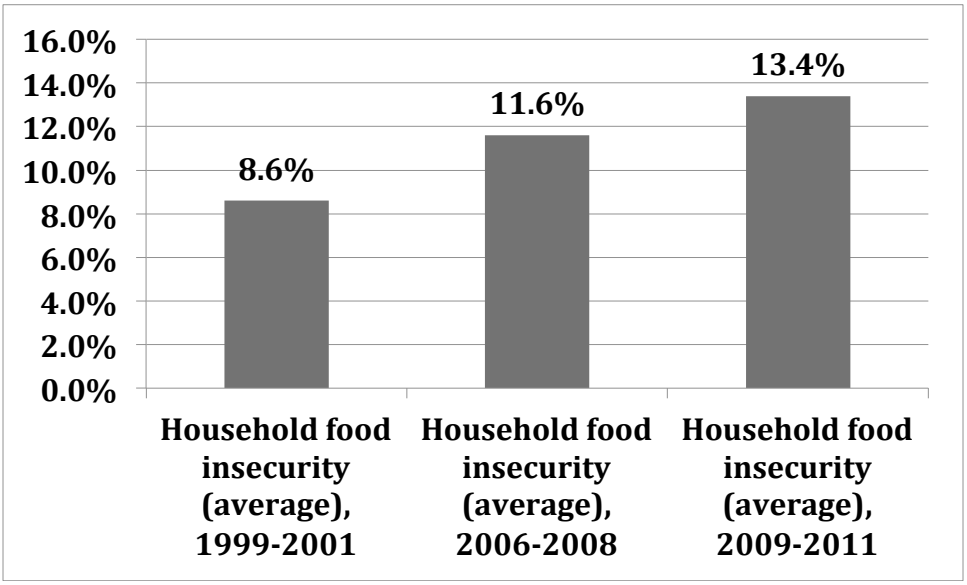
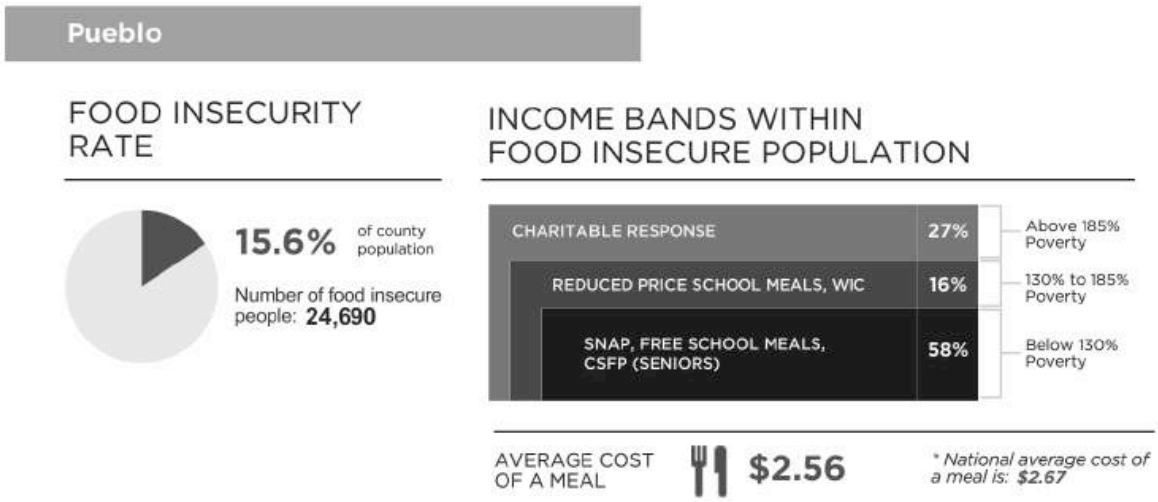


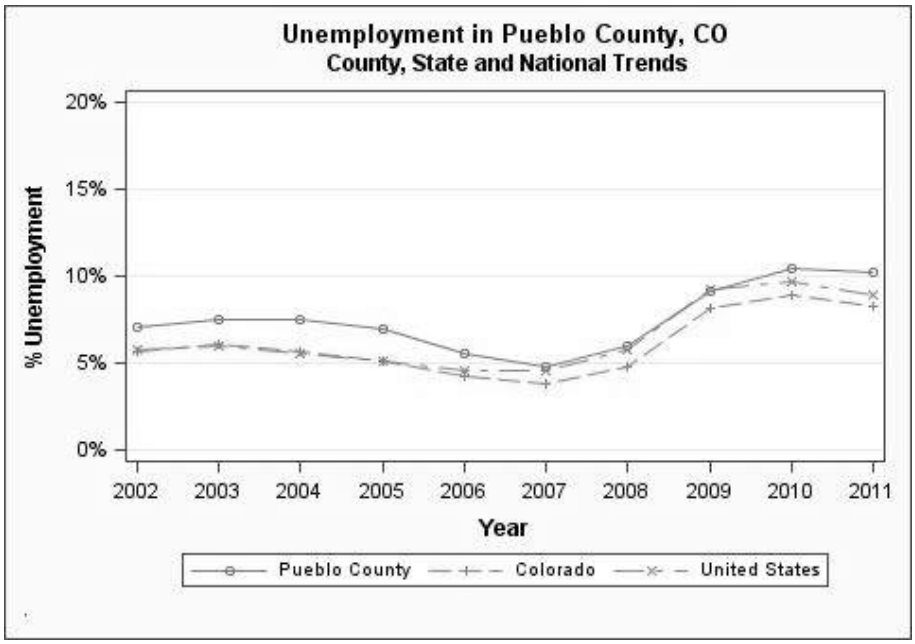

Figure 3 presents one other way of measuring food insecurity—one that puts Pueblo's rates of food insecurity at a slightly higher level. The figure below outlines available data from Feeding America's Map the Meal Gap. The Meal Gap represents a translation of food budget shortfalls through a conversion of the total annual food budget shortfall, in a specified area, divided by the weighted cost per meal in that area. The income bands reflect percentages of the federally-established poverty line, which varies based on household size. The percentages for the area are used to set eligibility thresholds for federal, state, and county nutrition programs.

## Figure 3: 2011 Map the Meal Gap, Pueblo County (Feeding America, 2013)



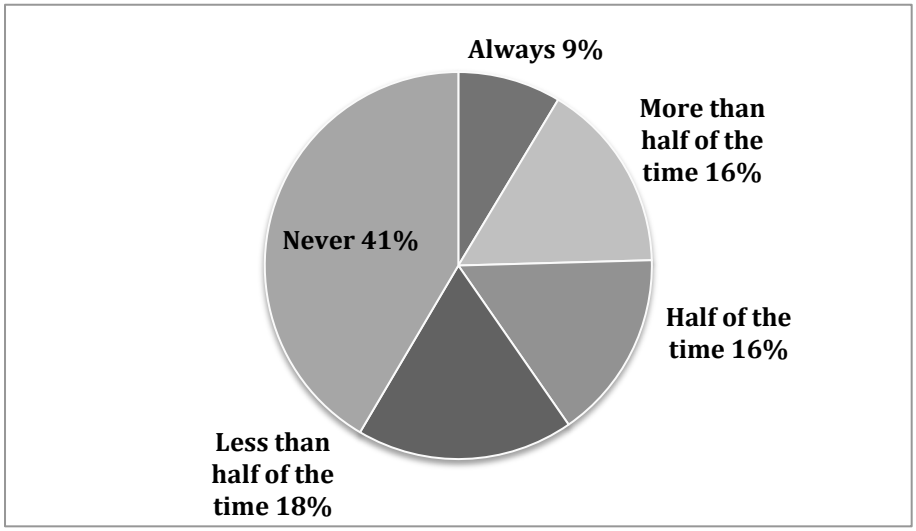
According to new research by the USDA Economic Research Service, the key drivers of food insecurity in the past decade were increased poverty rates, increased unemployment rates, and decreased home ownership (ERS, 2009). This likely explains the rise in U.S. food insecurity, given macroeconomic conditions that would affect those key drivers. Figure 4 below shows the trends in unemployment in Pueblo County from 2002 to 2011 according to The County Health Rankings. In 2013, Pueblo County's unemployment rate was 10.2%, higher than the state rate of 8.3%, so it is encouraging that the food insecurity of the region has remained lower than national averages, suggesting government and community food assistance programs are strong.

**Figure 4: Unemployment Trends in Pueblo County, 2002-2011 (County Health Rankings, 2013)**



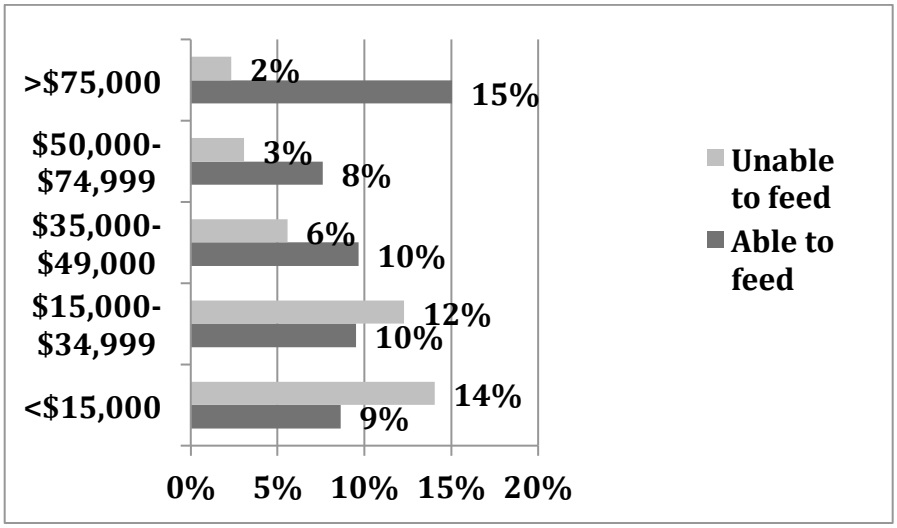

Regarding food insecurity, the information gathered from the resident survey may provide additional valuable insights. Using a question modeled after the USDA Household Food Security module questions (see Appendix I), Pueblo County residents were asked, "In the past 12 months, how often were you UNABLE to feed your household all that you wanted because of cost?" The question was used as a marker for food security status in the county. Forty-one percent of survey respondents reported that they never had difficulty feeding their families because of cost, while another 18% reported difficulties less than half the time. Throughout this report we will refer to these households as "*able to feed*". The remaining 41% of survey respondents reported having difficulty feeding their family because of cost, with the responses delineated by three frequencies; half the time (16%), more than half the time (16%), or always (9%). We refer to these households jointly as "*unable to feed*".

**Figure 5: In the past 12 months, how often were you UNABLE to feed your household all that you wanted because of cost?**




When we assessed the "*unable to feed*" and "*able to feed*" households against their self-reported annual household income, we reveal that income is positively correlated with the ability of households to feed their families, as one would expect (Figure 6). However, we also reveal that some respondents, regardless of annual household income, report an inability to feed their household. This indicates that other factors beyond income affect households' ability to feed their families. So, other personal or community factors are likely affecting residents' capacity.

**Figure 6: Reported annual household income crossed with household ability to feed**



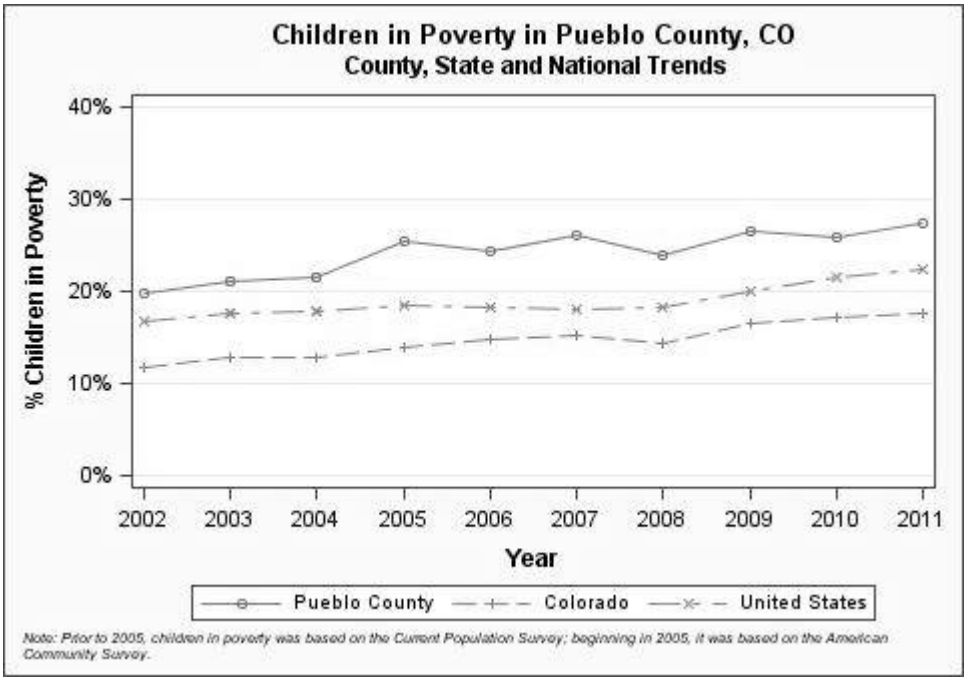

## C. Child Food Insecurity Rates

Children are particularly vulnerable to challenges facing families today. The child food insecurity rate is the approximate percentage of children (under 18 years old) living in households that experienced food insecurity at some point during the year. The measure is derived from the same set of questions used by the USDA to establish the extent of food insecurity in households with children at the national level (Feeding America, 2013). According to the latest data from Feeding America in 2011, 26.3% of the children (10,200 children) in Pueblo County are food insecure (see Figure 7), of which 69% are eligible for federal nutrition programs including SNAP, WIC, the Free and Reduced Lunch and Breakfast Program, and the Summer Feeding Programs.

**Figure 7: Pueblo County Child Food Insecurity Rates, 2011 (Feeding America, 2013)**

The high percentage of single-parent households in Pueblo County, 40% compared to 27% in Colorado, is likely contributing to the high child food insecurity rate in this community. Since one of the key drivers of food insecurity in the past decade has been increased poverty rates (ERS, 2009), the 2013 Pueblo County childhood poverty rate of 27% (or 10,425 children) is of concern when compared to Colorado's rate of 18% and the U.S. level of 14% (see Figure 8).

**Figure 8: Childhood Poverty Trends in Pueblo County, 2002-2011 (County Health Rankings, 2013)**




## D. The Role of Food Assistance Programs

A community's use of food assistance programs can also indicate whether or not a community is food secure. Federal and state sponsored food assistance programs available in Pueblo County include:

- The Child and Adult Care Food Program (CACFP)
- The Commodity Supplement Food Program (CSFP)
- The Emergency Food Assistance Program (TEFAP)
- The National School Lunch Program (NSLP)
- The Summer Food Service Program (SFSP)
- The Women, Infants and Children (WIC) program

Food assistance can also include community—or charitable—feeding programs. Such programs provide services to people in times of need, and include emergency food programs and food pantries, soup kitchens, and shelters. Current community food

assistance programs that provide meals, facilitate food drives, or help residents access food and other resources include:

- Care and Share Food Bank for Southern Colorado
- Catholic Charities
- Colorado State University Extension
- El Centro de Los Pobres
- Posada
- Pueblo Cooperative Care Center
- Pueblo Community Health Center
- Pueblo Community Soup Kitchen
- Sangre de Cristo Volunteers for Change
- Share our Strength-Cooking Matters
- School and Community Gardens
- Wayside Cross Mission

Table 1 shows what percentage of Pueblo County residents participate in various food assistance programs. Participation remained flat from 2009 to 2011 for both the Free and Reduced Lunch and Breakfast Program and Summer Feeding Programs, even though previous figures have shown that food insecurity rose over that same period. Similar to national averages, participation in SNAP has increased. According to Colorado Department of Human Services state case load data and American Community Survey income estimates, the participation rate (of eligible residents) in SNAP was 81% in Pueblo County in 2011. It was roughly 47%-48% state wide in 2011. Participation in the WIC Program and the Child and Adult Care Food Program (CACFP) saw modest declines in participation that reflect typical annual fluctuations.

**Table 1: Food Assistance Program Participation, by % of population in Pueblo County, 2009-2011 (Food Environment Atlas, 2013)**

| | 2009 | 2011 | % change |
|---|---|---|---|
| SNAP participants | 6.35 | 8.86 | 39.4 |
| School Lunch participants | 7.78 | 7.81 | 0.3 |
| School Breakfast participants | 2.13 | 2.48 | 16.2 |
| Summer Food participants | 0.25 | 0.30 | 19.4 |
| WIC participants | 2.15 | 2.04 | (5.3) |
| Child & Adult Care | 0.69 | 0.65 | (4.6) |

## E. The Obesity and Food Insecurity Paradigm

According to a recent national study by the Centers for Disease Control and Prevention, obesity and morbid obesity among U.S. low-income, preschool-aged children went down for the first time in recent years. However, Colorado was one of three states that experienced a statistically-significant increase in rates during this era of broader

improvement for this childhood obesity (CDC Vital Signs, 2013). It is therefore, critical to understand environmental and social factors, among others, that can contribute to rises in overweight and obesity.

Factors contributing to obesity in all Americans include increased consumption of sugar-sweetened beverages, increased snacking, larger portion sizes, higher calorie-dense foods, more meals consumed away from home, more exposure to advertising of unhealthy foods, and value-sizing of less nutritious foods (FRAC, 2013). Food insecure and low-income populations are especially vulnerable to chronic diseases, such as obesity and diabetes, due to difficulty adopting healthy behaviors, which are commonly related to the additional risk factors associated with poverty.

Newly emerging research in behavioral economics suggests that poverty itself reduces cognitive capacity because poverty-related concerns consume mental resources and use the "bandwidth" needed to make preventative health choices. Financial and emotional pressures of food insecurity, low-wage work, lack of access to primary health care, inadequate transportation, poor housing, and other factors commonly consume a low-income family's mental and emotional bandwidth (Mani et al., 2013).

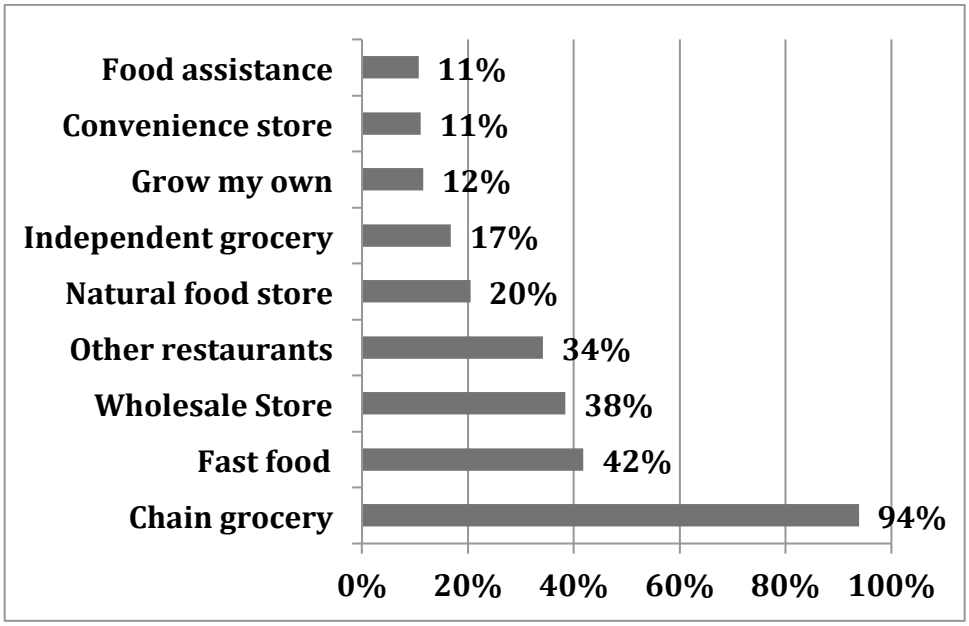
When coupled with a food environment that provides limited access to healthy, affordable food, poor quality or poor tasting produce, a greater availability of fast food restaurants, and a greater exposure to the marketing of obesity-promoting products, many people find that making healthy choices is not always easy (FRAC, 2013). Personal constraints together with an environment full of unhealthy choices lead to negative nutrition and health outcomes for the lower income populations. While all of these factors may not exist in Pueblo County, it is important to identify where they may co-exist and where risk factors may be particularly high for food insecurity and obesity.

# IV. Healthy Food Access in Pueblo County

## A. Where People Shop

When studying food availability, it is first important to understand where people are getting most of their food, and how these locations meet their needs. To capture this information, survey respondents were asked "where do you get most of the FOODS you and your family eats?", and were then asked to pick up to 3 locations, with #1 being where they went the most often. Participants overwhelmingly selected large chain grocery stores, such as Safeway, King Soopers, or Wal-Mart, followed by fast food restaurants, and wholesale stores, like Sam's Club (see Figure 9). Other choices selected by less than 10% of respondents were workplace, other, direct from producer, senior center, online, and meal delivery services. Since many respondents chose three options, the total responses add up to a percentage far greater than 100%.

### Figure 9: Where do you get most of the FOODS you and your family eats?




Note: Since respondents could choose up to three options, these responses total more than 100%

None of these results are surprising, given the high market shares both grocery chains and fast food establishments have in their industries, but these results do help frame some of our discussion on where the food environment may vary across sub-populations, and indicate opportunities for reaching these populations with education and improved food choices.

## B. Access to Healthy and Less Healthy Food Retailers

A community's built environment may play a role in how people are accessing or not accessing the foods they need. The USDA Food Atlas defines low access as living more than 1 mile from a supermarket or large grocery store if in an urban area, or more than 10 miles from a supermarket or large grocery store if in a rural area. Table 2 shows the percentage of the sub-populations in Pueblo County with low access to a store.

To see this same constraint visually, the map "Where are there barriers to accessing healthy retailers?" in Appendix A (available at www.pueblohealthdept.org) shows the areas of Pueblo County that have low access to a full service grocer or other retailer that sells produce (as defined by a 0.25 mile buffer colored differently according to the nature of the zone mapped). These include:

- Green: Healthy Food Zone: 0.25 Mile Buffer of Produce & Grocery Facilities
- Red: Less Healthy Food Zone: 0.25 Mile Buffer of Convenience Stores
- Purple: Public Transportation Zone: 0.25 Mile Buffer of Bus Routes

### Table 2: Low Access to Store Indicators, sub-populations in the Pueblo County area, 2010 (Food Atlas, 2013)

| | Population | Percent |
|---|---|---|
| Population, low access to store | 67049 | 42% |
| Low income, low access to store | 25452 | 16% |
| Children, low access to store | 16629 | 10% |
| Seniors, low access to store | 10439 | 7% |
| Households, no car & low access to store | 1780 | 3% |

Another way to examine the role of the food environment on health is to look at the density of food options in a community. Tables 3 and 4 below are food environment indicators provided by the USDA Food Atlas. They show the number of places available in Pueblo County that promote a "healthy food environment" or an "unhealthy food environment", as defined by the density of food facilities below. More importantly, it tracks the dynamics of the system, and shows where changes in availability may increase or decrease access to more healthy choices.

In Pueblo County, the healthy food environment indicator per 1000 residents has decreased from 2007 to 2009, with the loss of two grocery stores and three specialty grocery stores. The unhealthy food environment indicator has increased per 1,000 residents from 2007 to 2009, with an increase in 12 new fast-food restaurants and three full-service restaurants. As a complement to these data, the maps "Where do we provide food away from home in Pueblo County?" and "Where do we provide food for meals made at home?", found in Appendix A[2], help us visualize where the healthy and unhealthy food environments are located throughout the county.

- Healthy Food Facility = full-service grocer with available fresh produce, or a fresh produce market. Includes grocery, club, and specialty stores and supercenters.
- Unhealthy Healthy Food Facility = convenience stores (e.g., Loaf n Jug) or small variety stores that sell a limited groceries and stock little to no fresh produce, or a facility (e.g., fast food) that primarily sells foods with high levels of sugar, fat, and sodium.

### Table 3: Healthy Food Environment Indicators in Pueblo County, 2007-2009 (Food Atlas, 2013)

| | 2007 | 2009 | % change 2007-09 |
|---|---|---|---|
| Grocery stores (number) | 18 | 16 | (11%) |
| Grocery stores/1,000 pop | 0.12 | 0.10 | (13%) |
| Supercenters & club stores (number) | 3 | 4 | 33% |
| Supercenters & club stores/1,000 pop | 0.02 | 0.03 | 31% |
| Specialized food stores (number) | 11 | 8 | (27%) |
| Specialized food stores/1,000 pop | 0.07 | 0.05 | (29%) |

[2] To view and download the Pueblo food systems maps please visit www.pueblohealthdept.org

### Table 4: Unhealthy Food Environment Indicators in Pueblo County, 2007-2009 (Food Atlas, 2013)

| | 2007 | 2009 | % change 2007-09 |
|---|---|---|---|
| Fast-food restaurants (number) | 99 | 111 | 12% |
| Fast-food restaurants/1,000 pop | 0.64 | 0.71 | 10% |
| Full-service restaurants (number) | 119 | 122 | 2.5% |
| Full-service restaurants/1,000 pop | 0.77 | 0.78 | 0.65% |
| Convenience stores (number) | 69 | 67 | (3%) |
| Convenience stores/1,000 pop | 0.45 | 0.43 | (5%) |

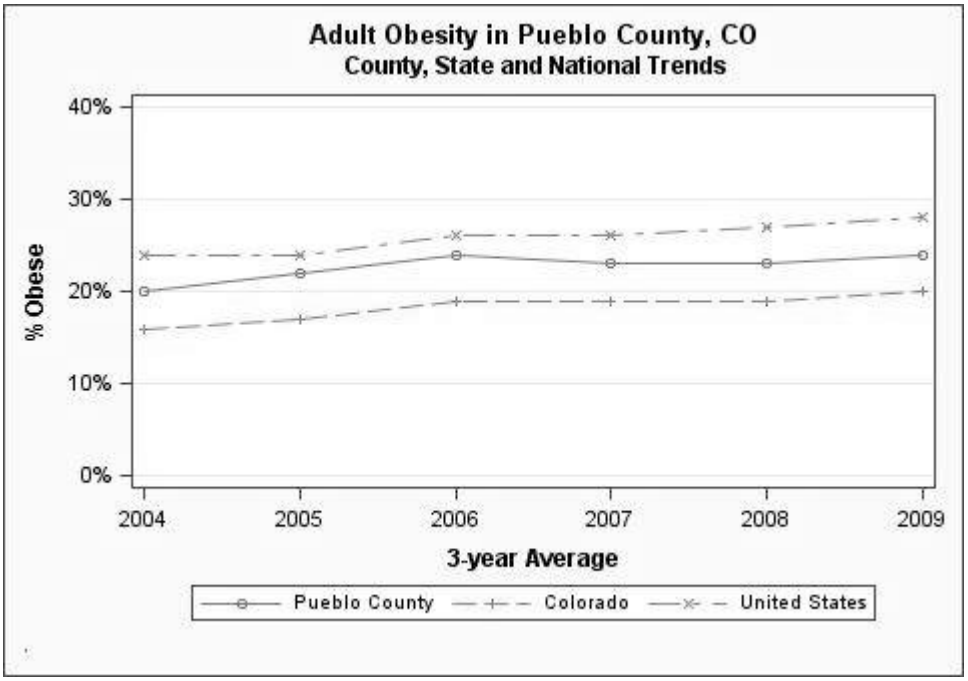
## C. Connections Between Healthy Food Availability and Obesity

The distinctions discussed above regarding access to healthy or less healthy facilities are critical in Pueblo. As the data above show, Puebloans are experiencing an *increase* in access to *less* healthy food facilities and, as shown in Figure 10 below, Puebloans are also experiencing significant rates of overweight and obesity, two closely-monitored public health indicators. To explain the paradox of situations where many food choices are available, but perhaps have offerings that may not encourage the consumption of the USDA-recommended levels of different dietary options, the term "food swamp" has been coined. A food swamp is a concept used to describe areas that are dense with fast-food restaurants and convenience stores that stock little to no fresh produce, and primarily sell foods that contain high levels of sugar, fat, and sodium.

Throughout this report, we stress healthy food access as a key issue to address in the food system, but there may be limitations to only addressing access and other factors should be considered in community strategies. For example, a report to Congress in 2009 revealed that there is limited evidence that increased access to healthy foods *alone* actually reduces body mass index (BMI), because consumers may not decrease consumption of less healthy food when they increase their consumption of healthy foods (ERS, 2009). Further, the report said that availability of all food, including junk food, could be a significant factor in increased BMI and obesity.

While the research is still developing regarding the role of "food swamps" and "food deserts", the availability of less healthy food facilities must be considered in any planned interventions, given Pueblo's overweight and obesity rates, as well as the ongoing importance of education on nutrition, exercise and preventive health care. In 2013, the adult obesity rate in Pueblo County is reported at 24%, 20% higher than the state average of 20% on a relative basis (CHR, 2013); see Appendix J for more information on obesity in Colorado).

**Figure 10: Adult Obesity Trends in Pueblo County (County Health Rankings, 2013)**




## D. Access to Fruits and Vegetables

While the abundance of less healthy food facilities may be affecting the overall health of Pueblo residents, previous discussion about other factors suggests that the promotion of more healthy options still must be considered. This assessment focused heavily on understanding residents' access to and consumption of fruits and vegetables, as a proxy of healthy food access in general.

Regardless of whether Pueblo residents reported wanting to prepare and eat more fruits and vegetables, often times the most significant barrier for residents is having access to or choosing fruits and vegetables in the first place. This section highlights some of the most significant issues of access—or perceived access—that were identified through the county-wide survey (as well as key informant interviews and focus groups), including physical access and the economic, time, and other personal factors that may influence choices.

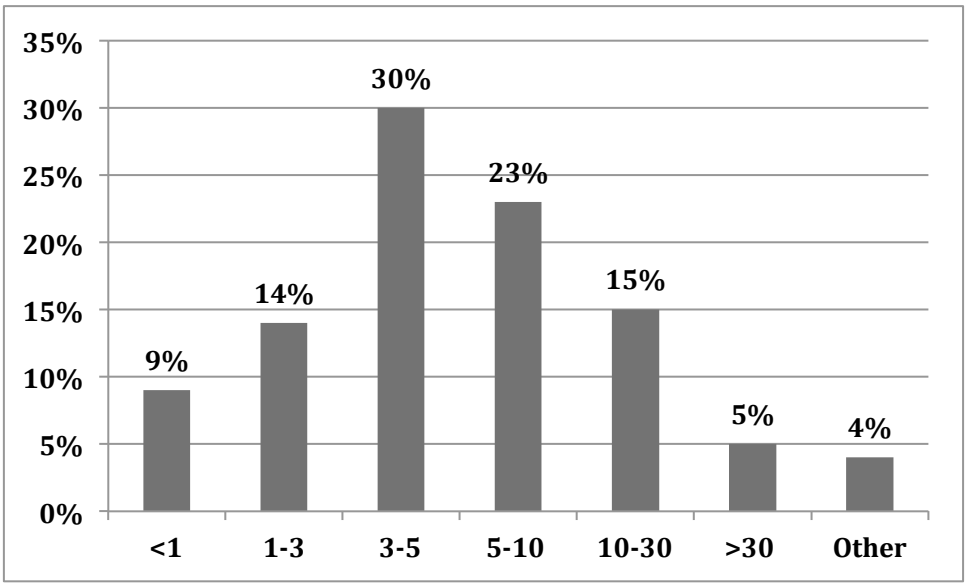
### Travel & Distance

Distance consumers must travel to access fruits and vegetables can be a significant barrier for certain individuals. To better understand this issue in Pueblo, survey respondents were asked how far they lived from where they obtained most of their fruits and vegetables.

Thirty percent of survey respondents report traveling 3-5 miles to purchase most of their fruits and vegetables, 23% report traveling 5-10 miles, and 20% report traveling 10 or more miles (see Figure 11). Overwhelmingly, respondents report using a personal vehicle (90%) to travel to purchase fruits and vegetables, but some report using someone else's car (29%), walking (19%), or taking the bus (7%). A smaller percent of respondents report

they grow his or her own (5%), have food delivered (5%), bike (3%) or take a shuttle or taxi (2%).

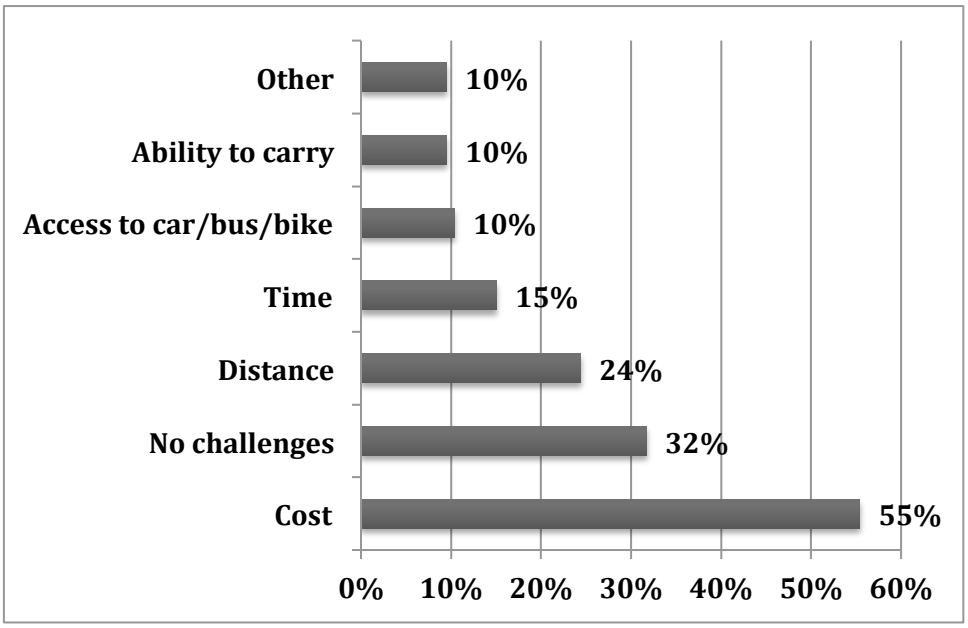
### Figure 11: About how far do you live from where you get most of your fruits and vegetables?




**The Effects of Cost**

Cost of fruits and vegetables was a significant barrier for a subset of the population. Respondents were asked what made it challenging for them to acquire fruits and vegetables. Although 32% cited no challenges in accessing fruits and vegetables, 55% reported cost, followed by distance (24%), and time (15%) as the primary barriers, regardless of personal preferences or dietary habits. Other findings included access to a car, bus, or bike (10%), ability to carry (10%) what residents purchase, and other factors, such as inability to find quality, fresh, seasonal fruits and vegetables year-round.

### Figure 12: What makes it challenging to GET fruits and vegetables?



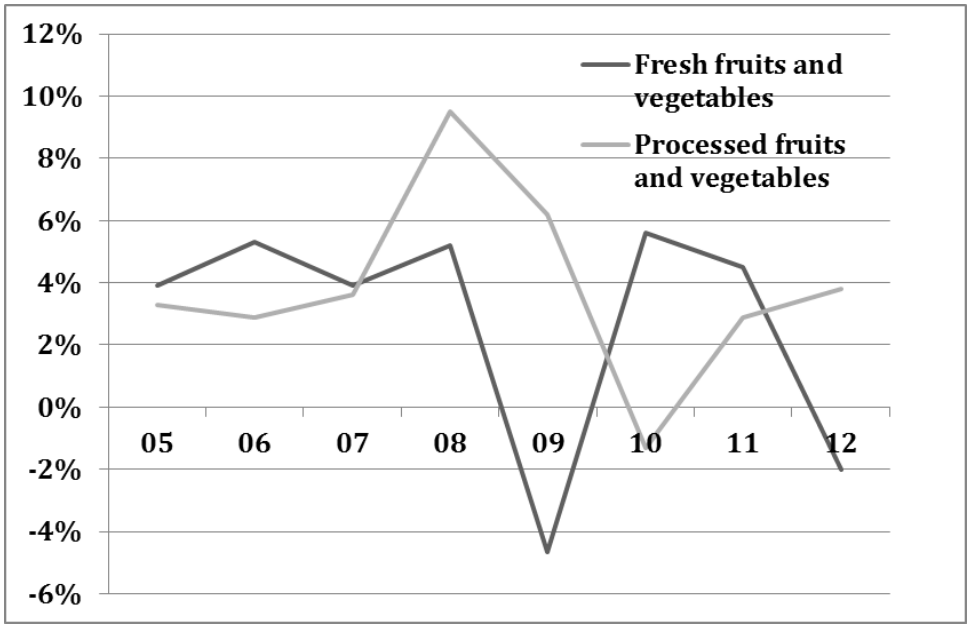

Note: Since respondents could choose up to three options, these responses total more than 100%

The survey summary data was confirmed by focus group results. There were a number of specific themes expressed by all three focus groups (see Appendix C), providing insight into challenges faced by different populations in Pueblo County. The top two factors limiting access to healthy food identified by all three focus groups included:

- Cost as the main barrier to *healthy* food
- Seasonality and cost as key barriers to healthy *local* food

It is important to note that often the "cost" barrier could be based more in perception than in reality. Produce has been decreasing in price recently and, at times, consumers simply need education on what to buy at what time of the year for the best "deals". The Consumer Price Index, which measures the changes in the retail prices of food items, shows that the prices for fresh and processed fruits and vegetables spiked in 2008 and fell again in 2009. Currently fresh fruits and vegetables prices are trending down, while prices of processed fruits and vegetables are trending up (see Figure 13), suggesting that some households could rethink where to get the best buys on produce where they shop if residents were provided with the tools to make better-educated and informed decisions regarding these changing market dynamics.

**Figure 13: Consumer Price Index for Fresh and Processed Fruits and Vegetables, 2005-2012 (Bureau of Labor Statistics, 2013)**




**Other Policy Factors**

Additionally, key informant interviews discussed several community and policy factors that affect Pueblo County residents' access to healthy foods on a larger scale. Many interview participants discussed how regulations, lack of funding, and lack of corporate support hinder their own organization's ability to provide families access to more fresh food. One participant discussed the importance of maintaining arable land and water for the production of local foods—resources now being channeled to uses other than agriculture. Additionally, participants mentioned the critical role of school nutrition and meal program choices in healthy food access, but discussed how often some of the new, healthier options (as defined by the USDA) are not being eaten yet by children in school.

## E. The Effects of Food Security on Food Access

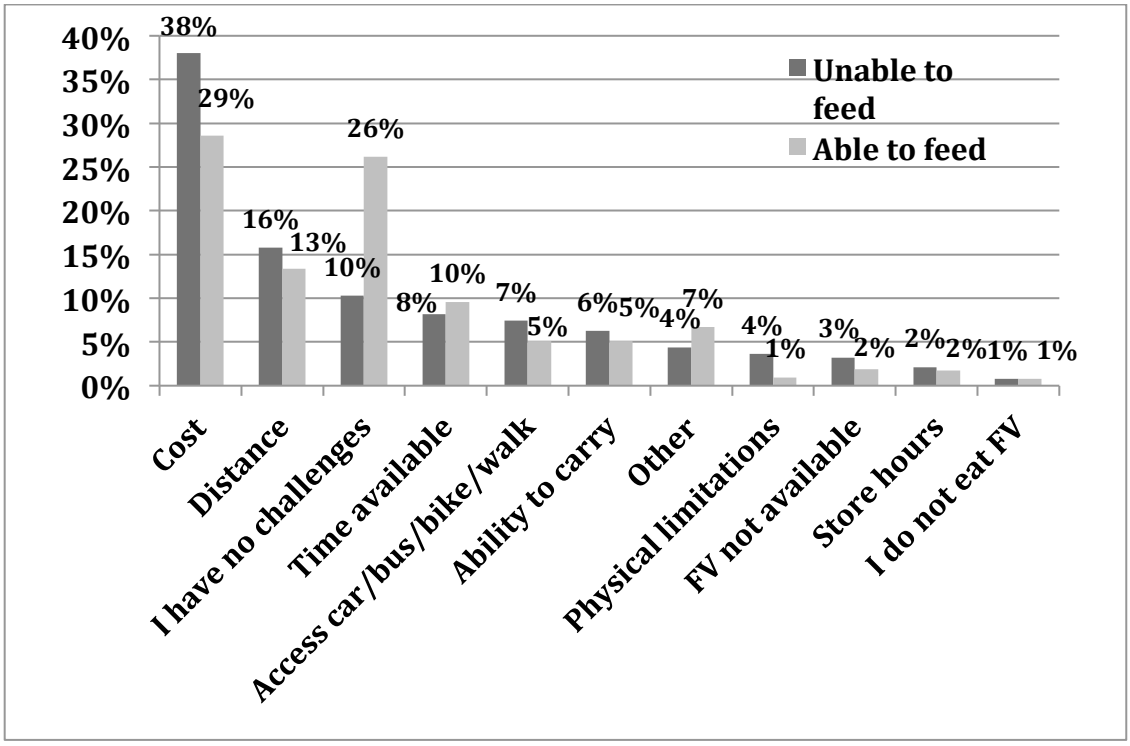
When we separate respondents' by their ability to feed their household, we clearly see that respondents who reported they were *unable to feed* their household all they wanted because of cost perceive their greatest barriers as:

- distance
- access to a car/bus/bike/walking
- ability to carry what they buy
- store hours
- physical limitations
- fruits and vegetables not available where they shop

In contrast, respondents who were *able to feed* their household report most often that they do not face any challenges getting fruits and vegetables, with lack of time listed as the

second most common barrier. Those who selected "other" challenges, regardless of ability to feed, specified their barriers as lack of available fresh, high-quality or organic foods, revealing that quality is a factor.

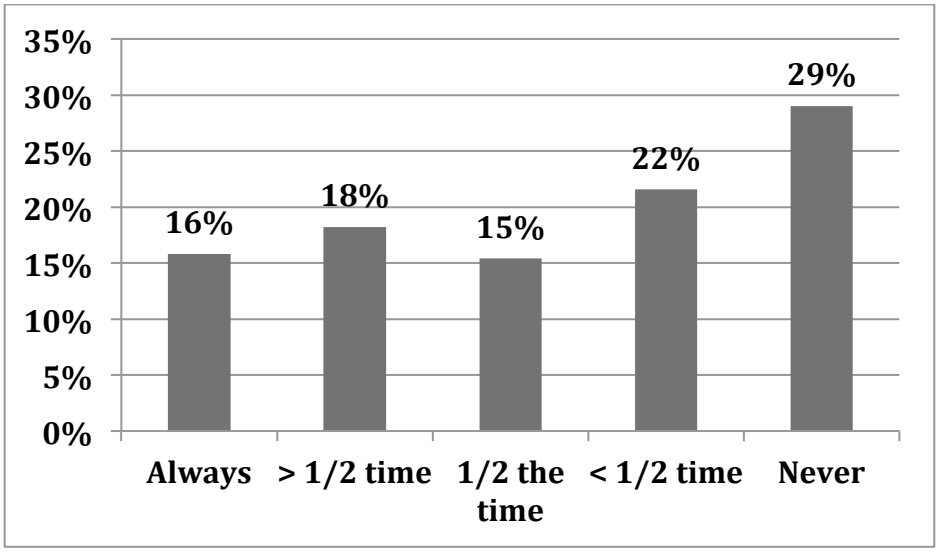
### Figure 14: What makes it challenging to GET fruits and vegetables (by ability to feed)?




Note: Since respondents could choose up to three options, these responses total more than 100%

Residents were also asked "How often do you have to compromise on healthy or balanced food items because of budget concerns?" The most common response, 29%, was "never", with another 22% responding "less than half the time". We label these households *non-compromised*. The remaining 49% of surveyed residents reported compromising on healthy or balanced food items because of budget concerns, half the time (15%), more than half the time (18%) or always (16%). We label these households *compromised*. (see Figure 15).

### Figure 15: How often do you have to compromise on healthy or balanced food items because of budget concerns?




When we assessed the residents' compromise of diet against their reported consumption of fruits and vegetables, we confirm that residents who are compromising their diet because of cost also have the lowest reported daily intakes of fruits and vegetables - 62% report consuming 2 or fewer a day (see Figure 16). Together with the perceptions about the cost of fruits and vegetables noted in the survey and discussed above, it appears budgetary constraints are strong factors influencing food choices. Additionally, there is significant correlation between education levels and "compromised" households, demonstrating, not surprisingly, how those with higher reported levels of education also report compromising on food less often (see Figure 17).

### Figure 16: Reported servings of fruits and vegetables for residents who compromised healthy food because of cost half the time or more

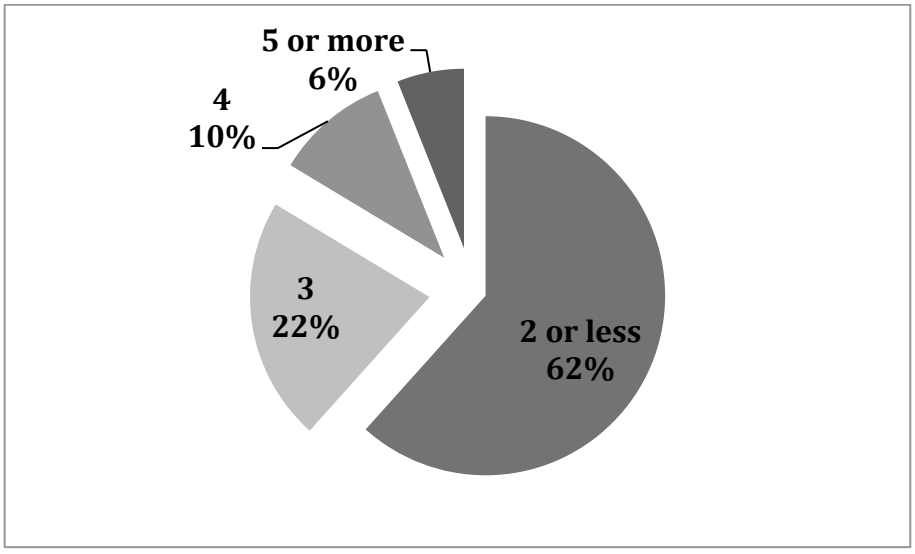
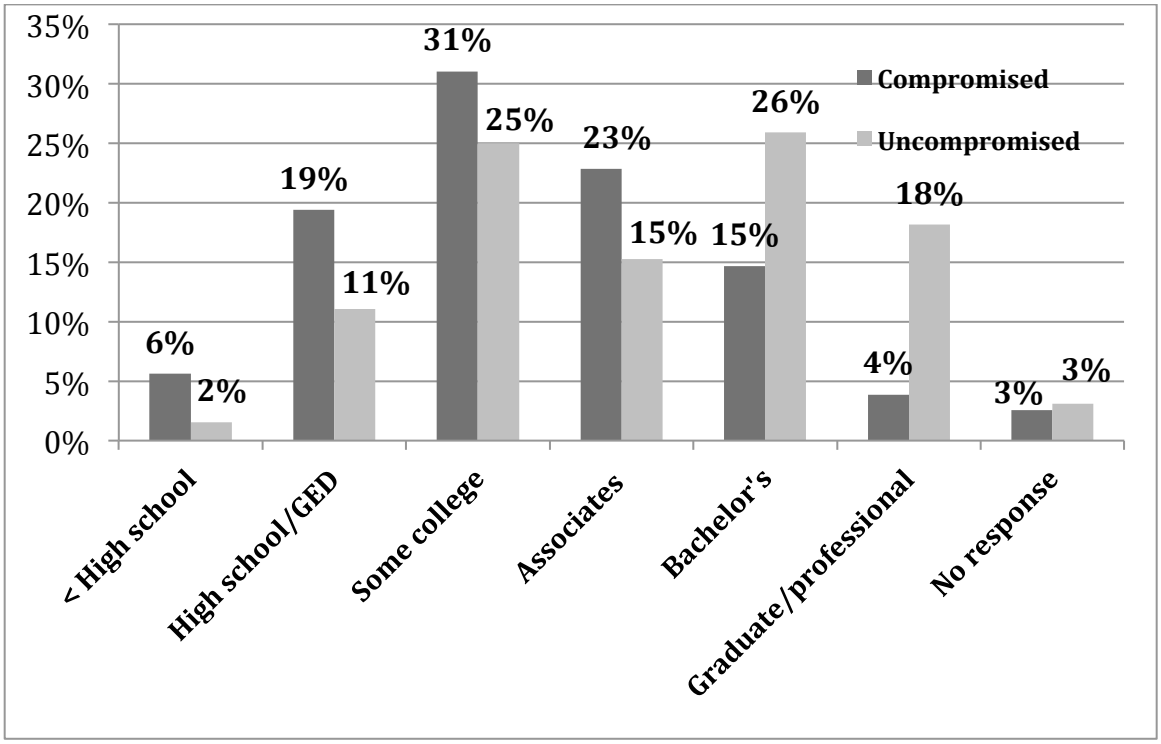


**Figure 17: Education level of respondents who report compromising healthy or balanced food items because of budget concerns**

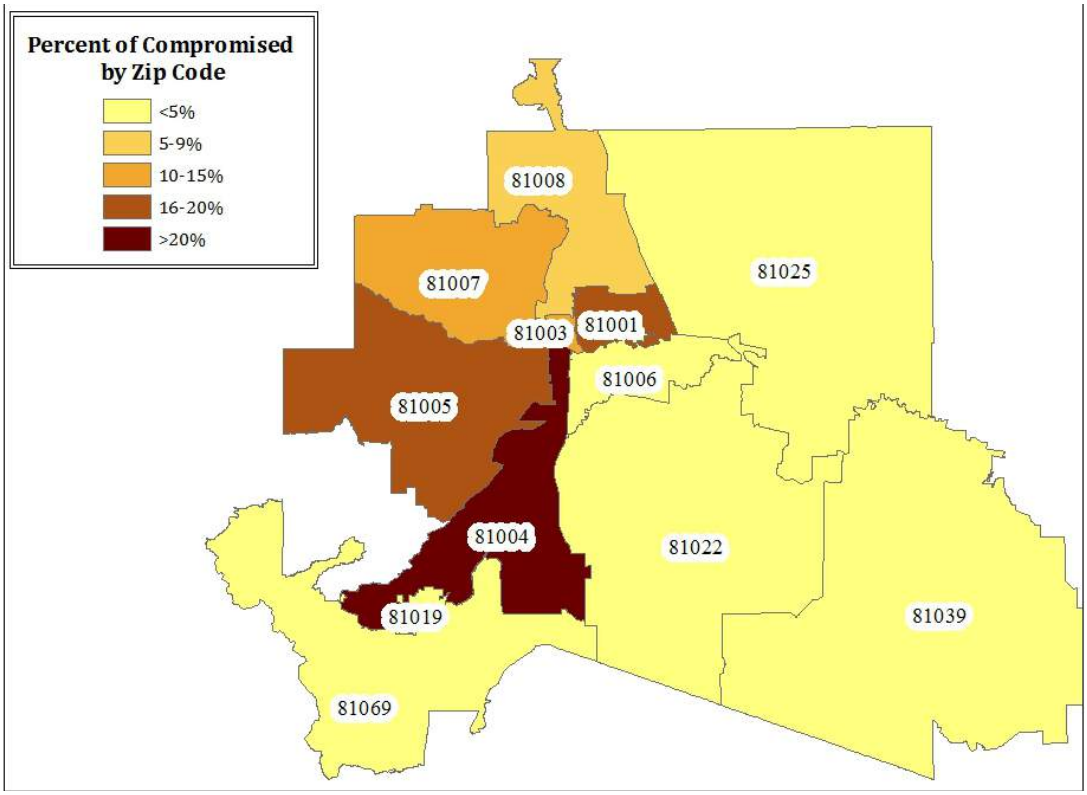



Note: Since respondents could choose up to three options, these responses total more than 100%

## F. Community & Neighborhood Factors that Affect Food Access

The countywide survey also aimed to understand if issues of access and consumption, varied by neighborhood, town, or region within the county. Of the 232 repondents who report compromising their diet for budget reasons, most live in St. Charles Mesa/Vineland, Bessemer/Lake Minnequa, Pueblo West/Western Pueblo County, Eastside Pueblo (East Side, Lower East Side, Dog Patch), Belmont, and Downtown Pueblo. Not surprisingly, these areas tend to harbor the highest pockets of poverty, the most unhealthy food environment indicators (See Table 4, above), and the highest rates among schools with respect to eligibility for free and reduced lunches. Key informant interviews supported these findings, with consistent comments on the differences of healthy food options across neighborhoods. Interview participants repeatedly highlighted the reliance of many low-income residents on a convenience store for their primary shopping, due to a lack of bus routes and full-service grocers nearby. Figure 18 shows the zip codes of *compromised* respondents.

**Figure 18: Reported zip codes of respondents who report compromising healthy or balanced food items because of budget concerns**




Additionally, in the rural mountain focus group, residents of Colorado City expressed concern about the lack of food stores nearby, and the ability of those with disabilities to both access and travel to food stores. They also expressed concern regarding the amount of personal information required to receive food from food pantries, and spoke about feelings of shame as a SNAP recipient. These are more subtle, but valid, barriers to food access as well.

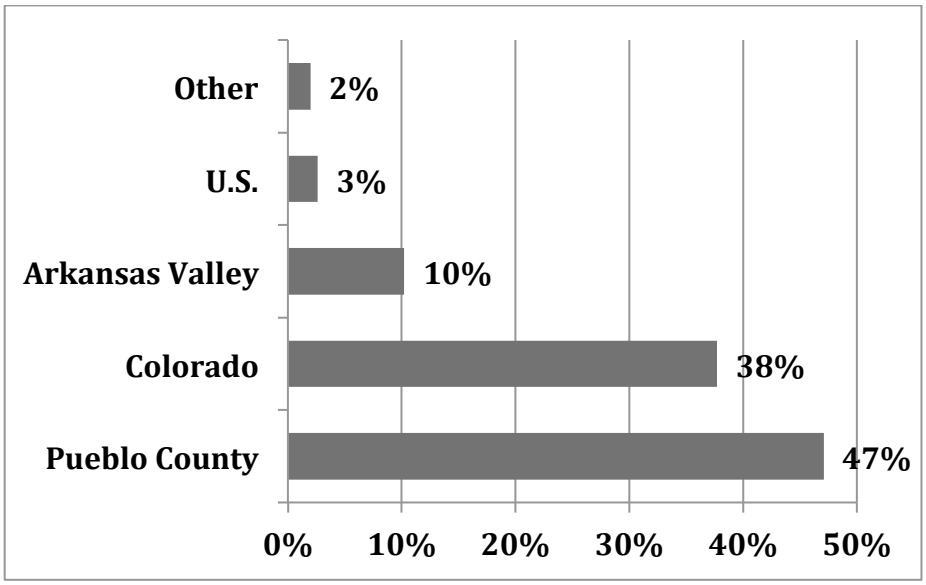
# V. Healthy Food Consumption in Pueblo County

## A. The Role of Food Values in Consumption Habits

New and different food offerings and venues allow consumers to more carefully search out attributes that are important to them. These attributes may include labels or information about more personally-valued factors like quality, safety, or health claims—or more public and community-oriented factors, such as supporting local farmers and environmental sustainability (Onozaka, et al., 2010). In Pueblo County, there is notable interest in accessing fresh, high-quality produce from local farms through farmer's markets, farm stands, and in the places consumers already shop. The countywide survey conducted for this food assessment shows that Puebloans define local differently, ranging from only

Pueblo County (47%), to all of Colorado (38%), or more regionally as the Arkansas Valley (10%) (see Figure 19).

### Figure 19: What do you define as "local"?




Survey respondents' willingness to pay more for local food did not significantly change when differentiating between Colorado and Pueblo County. Overall about 30% of respondents were willing to pay more for local (as defined by Pueblo OR Colorado), 30% were unwilling to pay more, and approximately 40% said maybe, depending on perceived quality differences.

Residents also have high interest in knowing how to grow food, accessing community gardens, and learning to cook with more fruits and vegetables, as long as the produce is fresh, easily-accessible, and affordable. These three responses represent key findings for those considering how to target education as one strategy to improve dietary intake and health.

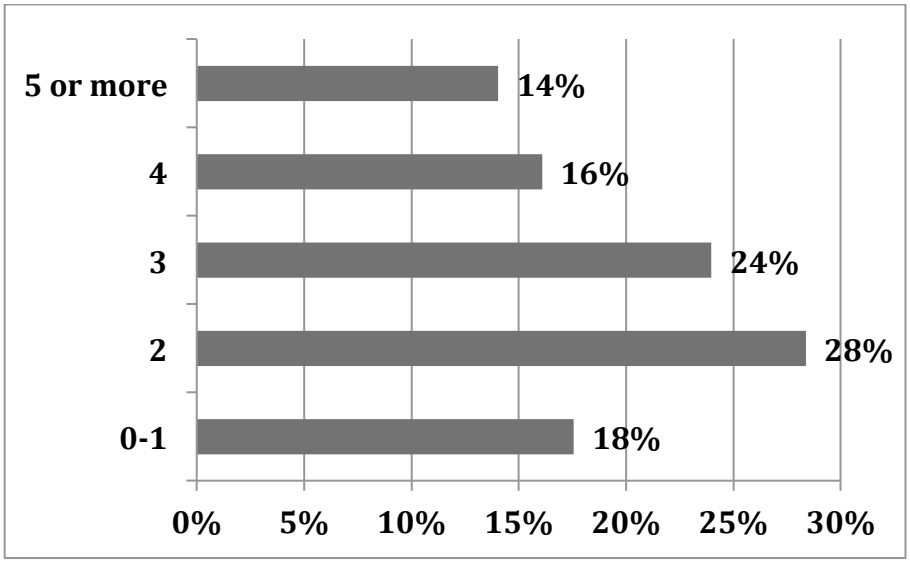
## B. Fruit & Vegetable Intake

Food choices influence the health and wellbeing of individuals. Because fruits and vegetables are nutrient dense, low-calorie, low-fat, and high in fiber, they play an important role in reducing the incidence of overweight and obesity rates and associated chronic disease risk factors and are, therefore, widely targeted by public health interventions.

According to the 2010 Dietary Guidelines for Americans, USDA Food Patterns recommend consuming 2.5 servings of vegetables and 2 servings of fruit per day. In 2009, the Centers for Disease Control and Prevention (CDC), estimated that only 33% of adults consumed fruit two or more times per day, and 26% consumed vegetables three or more times per day, far short of recommendations (CDC, 2010). While there are limitations to self-reporting of dietary food intakes (Ferrari et al., 2002), they are the best data available. According to the Pueblo resident survey, 70% of residents self-report consuming 3 or less

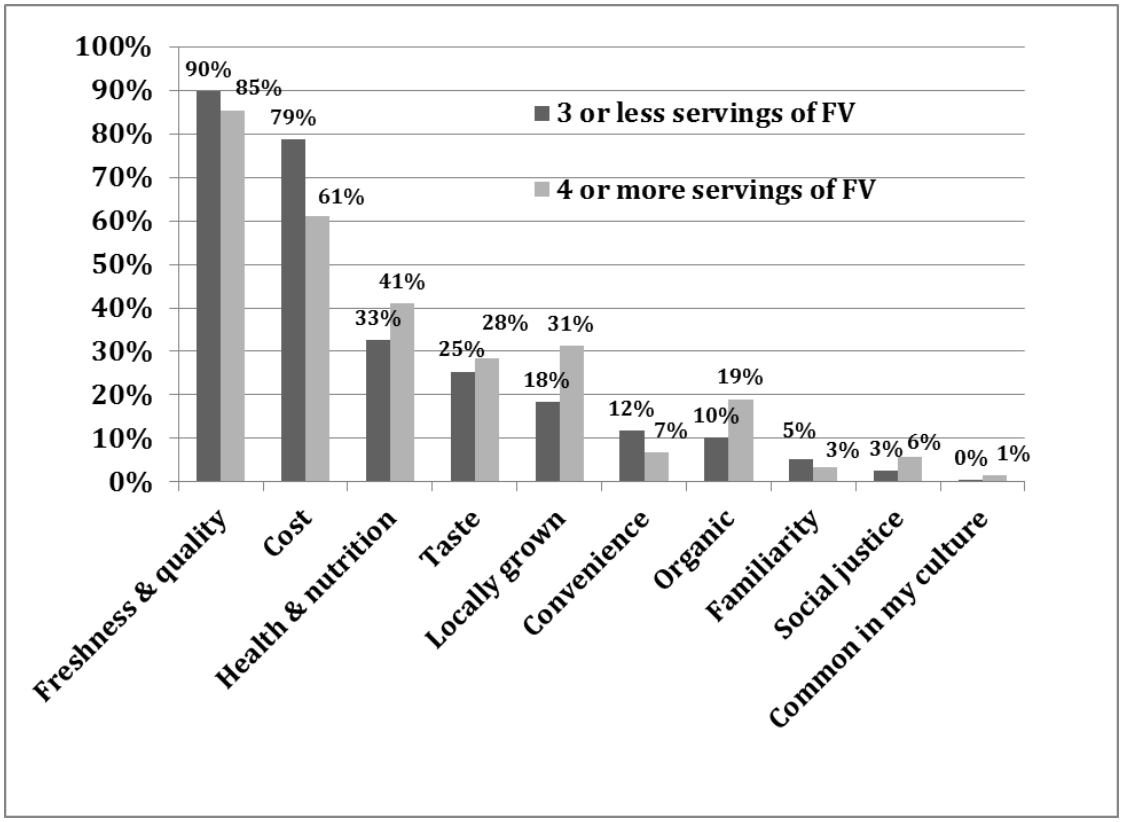
servings of fruits and vegetables per day (see Figure 20). The scientific findings on benefits of fruits and vegetables, together with evidence that they are under-consumed, motivated our further exploration into consumption choices by residents of this community.

**Figure 20: Self reported servings of fruits and vegetables per day, as a percentage of survey respondents**




According to the Pueblo County survey results, freshness and quality are the primary considerations for residents when they select fruits and vegetables (89%) whether they consumed two or less compared to three or more servings of fruits and vegetables. However, cost and convenience were more important to consumers who reported eating fewer servings, while residents eating more servings of fruits and vegetables reported being slightly more concerned with a different set of issues including the following: health and nutrition, social justice (e.g. good workers' pay and working conditions, fair returns to farmers) organic production, and locally-grown food (see Figure 21).

### Figure 21: What is important to you when you pick out fruits and vegetables?



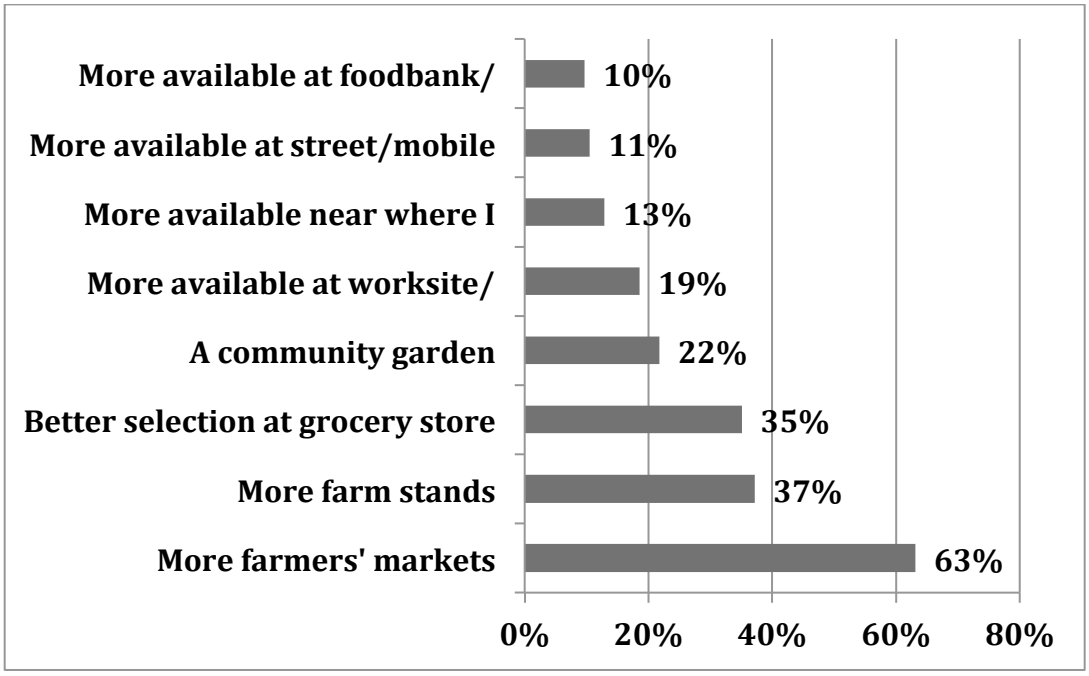

Note: Since respondents could choose up to three options, these responses total more than 100%

## C. Community Factors that Affect Healthy Food Consumption

While price and income are prominent factors in determining food and dietary choices, other community factors, like food availability and Federal food and nutrition assistance programs (which may address some of the cost concerns), also play a role.

Survey respondents were asked to select the community factors that would make it easier for them to eat more fruits and vegetables. As shown in Figure 22, respondents' desire for more farmer's markets (e.g. more locations or market days, or year-round markets) topped the list (63%), followed by more produce or farm stands (37%), better selection of fruits and vegetables at grocery stores (35%), a community garden in their neighborhood (22%), more availability at their worksite or school (19%), more grocery stores near where they live/work (13%), more street or mobile vendors (11%) and more provided at their food bank/pantry/meal delivery program (10%). Many of these factors can be addressed by effectively-targeted food system initiatives.

### Figure 22: What COMMUNITY factors might make it easier to eat more fruits and vegetables?




Note: Since respondents could choose up to three options, these responses total more than 100%

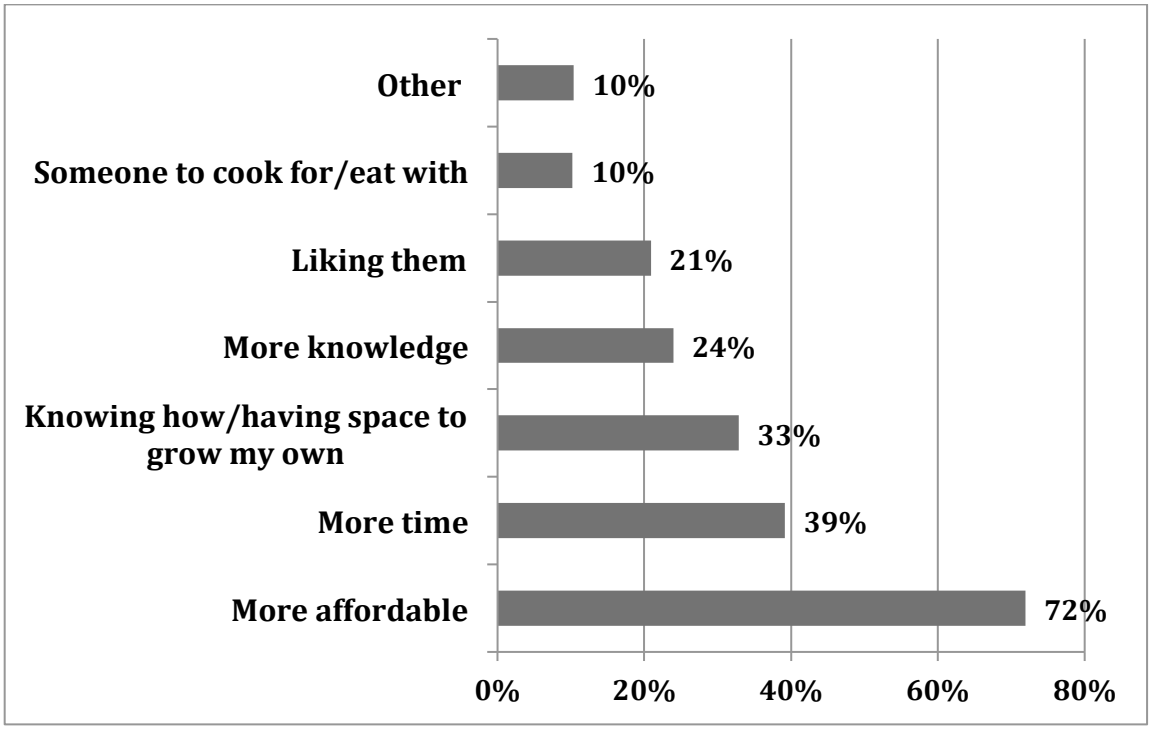
Similar to our consumer survey findings, two out of three focus groups identified the following community factors as affecting food access:

- Interest in, and a need for, convenient community gardens and farmer's markets
- Lack of public transportation to food stores as a significant challenge
- Coupons and price matching as a major resource for purchasing the foods they want

## D. Personal Factors That Affect Healthy Food Consumption

Respondents were also asked to select the personal factors that would make it easier for them to eat more fruits and vegetables. As shown in Figure 23, respondents' desire for greater affordability of fruits and vegetables (72%) topped the list, followed by more time to prepare/cook them (39%), knowing how to grow their own food/having the space to grow food (33%), knowing how to prepare them (24%), if they or their family liked eating them (21%), and having someone to cook for/eat with (10%). Ten percent of respondents selected "other", specifying a desire for educational opportunities for food processing and storing, garden planting and production, and more access to better quality, variety, and organic produce. Many of these could be addressed with food system initiatives.

### Figure 23: What PERSONAL factors might make it easier to eat more fruits and vegetables?




Note: Since respondents could choose up to three options, these responses total more than 100%

Focus group participants also discussed personal factors that affect consumption. It is important to note that, in all three focus groups, participants expressed an interest in, and a wish for, consuming more healthy foods. All three focus groups also expressed interest in, and a need for, education around nutrition and food preparation. Additionally, two out of three focus groups (see Appendix C) highlighted time as the main barrier to food preparation, and discussed that eating organic is important, but often inaccessible due to price and availability.

Older adults at the SRDA focus group expressed concerns around compulsive eating habits (such as eating when lonely or bored). The students in the BOCES focus group expressed some specific concerns around levels of fat, sugar, and sodium found in many foods, as well as fears that nutrition labels do not provide information that is necessary and truthful. They shared the view that local foods are healthier, and showed interest in shopping at health food stores more often.

Interview respondents also discussed personal factors that affect healthy food consumption. Even though significant numbers of survey respondents reported that more time and knowledge to grow and cook foods would help them consume more fruits and vegetables, overwhelmingly, the 14 key informant interviewees discussed the lack of community participation in the classes, programs, and activities offered for the purpose of changing the decline in health trends. Interview participants discussed the "junk food culture" as contributing to the need for more education on health and wellness. Several

people discussed poor eating habits, encouraged by the media, as difficult to break. Unhealthy habits mentioned by participants included time in front of the television and less activity than is recommended.

As reported in the stakeholder interviews, a variety of classes are offered by PCCHD, Cooking Matters, and the CSU Pueblo County Extension, but employees find it difficult to get people to commit to classes. This may be due to the time constraints resident's reported in the survey. Many organizations also commented on the difficulty in recruiting and maintaining a group of volunteers to support these programming efforts. There is an apparent disconnect between the resources and education offered by local organizations, the needs of the community, and what services the community is using. This is not uncommon in public health. Understanding the needs and constraints of a population and effectively communicating solutions is one of the goals of this report.

# VI. Community Public Health Challenges and Opportunities

It is well established that food access and healthy food consumption are closely linked to food security, which is a growing concern both nationally and locally. Increased consumption of fruits and vegetables can lead to decreased morbidity and mortality for the general population. As outlined in this report, there are many reasons that people go without eating more fruits and vegetables. Some of these reasons include cost, time, preferences, and inability to obtain fruits and vegetables on a consistent basis. Despite these barriers, there are individuals and organizations in Pueblo County working towards solutions to address food insecurity and establishing healthier eating habits among community members. Highlighting current community efforts of such groups is a critical aspect of this assessment.

## A. Pueblo Snapshot: Who is Promoting Healthy Food Access?

Programs and services currently available in Pueblo County are viewed as vital to food security, and Pueblo has a significant foundation on which to build in order to address some of the challenges raised in this report. Some of the programs most frequently discussed during key informant interviews, focus groups, and forums included: breakfast in the classroom, Bountiful Baskets, WIC, Pueblo Triple Aim, Farmers' Markets, EBT at Farmers' Markets, One Community Pueblo, Family Nurse Partnerships, mobile pantries/truck farmers, natural resource conservation incentives, and SNAP.

Interviewees also mentioned several critical local partners who are addressing the county's food security challenges, including Care and Share Food Bank of Southern Colorado, Pueblo's Early Childhood Council, Colorado's Department of Public Health and Environment, and Share our Strength's Cooking Matters. The number of community gardens and other local efforts focused on gardening, food processing and cooking are recognized as having improved over the last several years. Stakeholders mentioned the Chile and Frijole Festival, the Sangre de Cristo Volunteers for Change community garden, and home-based food production such as raising back-yard chickens as just a few examples of local events and efforts having a key role in improving overall food security.

## B. Challenges & Support Factors Across Subgroups

The sections above discuss how survey respondents, overall, have identified primary challenges and support factors to consuming more fruits and vegetables, as a proxy for overall healthy food access and consumption. A primary focus of this assessment is to inform community strategies that can improve access to healthy foods, food security, and ultimately, healthy food consumption. It is therefore critical to understand how challenges and support factors vary amongst the very groups of people this assessment aims to help – those reporting levels of food insecurity and those reporting minimal levels of fruit and vegetable consumption.

Table 5, below, compares how survey respondents overall and those "unable to feed" and those consuming 3 or fewer fruits and vegetables a day responded to various survey questions. What stands out is how similar responses are across groups. For example, even the "unable to feed" and low-consuming groups selected "no challenges" to eating fruits and vegetables most often, and selected "more farmers' markets" as their top factor to support eating more fruits and vegetables, even though farmers' markets are often viewed as cost-prohibitive for many.

The slight differences in response *rates* reveal more information about these populations. For example, the table shows how those "unable to feed" more often selected "distance" as a primary barrier to accessing fruits and vegetables, and more often than the other groups they selected "knowing how to grow them" as a support factor. The low-consuming subgroup selected "more time to prepare them" more often than the others as well. Examining these variations can help inform community-level strategies.

### Table 5: Challenges and support factors across subgroups considered "at risk"

| **What makes it challenging to GET fruits and vegetables?** | | | | | |
|---|---|---|---|---|---|
| **All respondents (n=684)** | | ***"unable to feed"* (n=276)** | | **3 or less servings of fruits and vegetables (n=478)** | |
| Cost | 55% | Cost | 72% | Cost | 59% |
| No challenges | 32% | Distance | 30% | No challenges | 28% |
| Distance | 24% | No challenges | 20% | Distance | 26% |
| **What makes it challenging to EAT fruits and vegetables?** | | | | | |
| No challenges | 47% | No challenges | 39% | No challenges | 42% |
| Taste and preferences | 30% | Taste and preferences | 33% | Taste and preferences | 33% |
| Time to prepare | 29% | Time to prepare | 33% | Time to prepare | 32% |
| **What COMMUNITY FACTORS might make it easier to eat more fruits and vegetables?** | | | | | |
| More Farmers' Markets (e.g. more locations or market days, year round markets) | 63% | More Farmers' Markets (e.g. more locations or market days, year round markets) | 62% | More Farmers' Markets (e.g. more locations or market days, year round markets) | 59% |
| More produce or farm stands | 37% | More produce or farm stands | 36% | More produce or farm stands | 37% |
| Better selection of fruits and vegetables | 35% | Better selection of fruits and | 32% | Better selection of fruits and vegetables | 33% |

| | | | | | |
|---|---|---|---|---|---|
| at grocery stores | | vegetables at grocery stores | | at grocery stores | |
| **What PERSONAL FACTORS might make it easier to eat more fruits and vegetables?** | | | | | |
| More affordable for me | 72% | More affordable for me | 85% | More affordable for me | 77% |
| More time to prepare/cook them | 39% | More time to prepare/cook them | 37% | More time to prepare/cook them | 40% |
| Knowing how to grow them | 33% | Knowing how to grow them | 36% | Knowing how to grow them | 29% |

## C. Summary of Challenges to Increasing Healthy Food Access & Consumption

Pueblo County faces similar public health challenges when compared to other communities of its size, demographics, and unemployment rates. While Colorado boasts the lowest adult obesity rates in the country as of 2010 (20%), Pueblo County's obesity rate was higher at 26.5% (up from 23.8% in 2009); and food insecurity rates are between 13.4% and 15.6% (depending on the tools utilized for measurement). Moreover, child food insecurity is much higher—26.3%, compared to Colorado's rate of approximately 20%, likely exacerbated by Pueblo County's childhood poverty rate of 27% (compared to a state-wide rate of 18%).

### *Food Insecurity*

The survey also uncovered significant rates of food insecurity in the county, with 41% reporting that they were unable to feed their families all they want due to cost half the time or more in the prior 12-month period, and 49% reporting that they compromised on healthy food items due to budget half the time or more. Most Puebloans (70%) are eating 3 or fewer servings of fruits and vegetables a day, but low-income families are disproportionately forced to compromise on healthy food consumption to make ends meet. Sixty-two percent of those who reported compromising on healthy foods for their families due to budget constraints eat two or less fruits and vegetables a day.

### *Low or Poor Healthy Food Access*

While access to healthy food is largely an economic barrier, 42% of Pueblo residents also have what the USDA defines as "low access" to food sources, based on distance to a full-service grocer, with 43% of residents having to travel five or more miles to where they buy their fruits and vegetables. Thus, it is clear that the food environment also plays a prominent role in Puebloans' food consumption choices. For example, 42% of survey respondents identified fast food restaurants as one of the places they get most of their food (the 2nd most common selection after grocery stores). According to the USDA Food Environment Atlas Indicators, Pueblo's "unhealthy" food environment is increasing, while its measurement of the "healthy" food environment is decreasing. This is particularly true in rural and low-income areas of the county.

### *Personal Capacity & Skills*

Aside from the economic and environmental constraints, personal barriers also affect consumer choices. The biggest personal barriers to consuming more fruits and vegetables reported by Puebloans who are unable to feed their families all the food they want were: affordability, time to prepare/cook them, knowing how to grow them, knowing how to

prepare them, family taste/preferences, and someone to cook with. Thankfully, many of these barriers can be addressed by existing community programs, better organizational outreach, and some targeted investments in market access points. However, there seems to be some disconnect between the resources and education that organizations offer and what the community members are absorbing. Enhanced outreach, awareness building, and networking amongst existing organizations may be needed.

### *Overall Challenges*

- Pueblo County faces higher obesity, food insecurity, child food insecurity and childhood poverty rates than the state.
- Regardless of the perceived challenges or suboptimal consumption of healthy foods cost and distance are the primary challenges to accessing more fruits and vegetables.
- While most Puebloans are not eating enough fruits and vegetables, low-income families are disproportionately forced to compromise on healthy food consumption to make ends meet.
- Many Puebloans live in an "unhealthy" food environment and have "low access" to a healthy food environment, which is affecting their food consumption choices. This is particularly true in rural and low-income areas of the county.
- Personal barriers affecting consumer choices to consume fruits and vegetables include:
  - being able to afford them,
  - time to prepare/cook them,
  - knowing how to grow them,
  - knowing how to prepare them,
  - family taste/preferences, and
  - someone to cook with.

## D. Summary of Opportunities for Increasing Healthy Food Access & Consumption

Macro-economically, the key drivers of food insecurity are poverty, unemployment rates, and decreased home ownership (ERS, 2009). These root causes are difficult for county agencies and local organizations to tackle. Locally-based strategies focused on changing the food environment through policy and targeting personal barriers through programs may lead to more successful outcomes in Pueblo County.

### *Access to Fresh and Local Markets*

Interestingly, even though distance to grocers is significant, survey respondents reported a strong desire for access to more fresh and local foods – not necessarily more grocers. It may be possible that consumers are not eating fruits and vegetables because the quality and taste are not acceptable. When asked what community factors would support an increase in fruit and vegetable consumption, more farmers' markets (e.g. more locations or market days, or year-round markets) topped the list (63%), followed by more produce or farm stands (37%), better selection of fruits and vegetables at grocery stores (35%), or a community garden in their neighborhood (22%). These factors were very similar across subgroups that felt compromised in their food choices, as well as those consuming too few

fruits and vegetables (See Table 5). This reveals residents' real desire for fresh and local produce that is higher quality and better tasting than current offerings.

### *Personal Capacity & Skills*

When asked what personal factors would help increase fruit and vegetable consumption, greater affordability of fruits and vegetables (72%) topped the list, however, programs that held educate residents about farming, gardening, nutrition, and cooking could be targeted as well. Other common responses included time to prepare/cook (39%), knowing how to grow/having the space to grow (33%), knowing how to prepare (24%), and family tastes/preferences (21%).

Education and outreach programs appear to be needed, but perhaps need to be better targeted, given the low participation rates noted by key stakeholders in the community. The most effective interventions provide clear messages about increasing fruit and vegetable consumption; incorporate multiple strategies to reinforced messages; involve the family; are more intensive; are provided over a longer period of time, rather than one or two contacts; and are based on a theoretical framework (Ciliska et al., 1999).

### *Local Food System Infrastructure*

Results from the key informant interviews also support the survey findings. There was significant discussion of opportunities to increase local processing and distribution of healthy foods. Ten out of 14 interviewees discussed direct farm-to-market sales. This could include sales to restaurants, grocery stores, and schools. Several participants also discussed opportunities to glean more produce from local farms after the harvest to share with Pueblo residents in need. They also mentioned more farm stands and mobile markets to increase healthy food access for people who live in food deserts. Commercial kitchens and central food distribution centers were also discussed as solutions to move healthy foods to residents.

*For overall Pueblo City-County Health Department Food System Assessment next steps and project recommendations please read the Key Findings & Promising Opportunities report, as well as other issue area reports, available at www.pueblohealthdept.org.*

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# VIII. Appendices

## Appendix A. Pueblo County GIS maps

All Pueblo County FSA maps are available to view and download at www.pueblohealthdept.org.

## Appendix B: Focus Group Protocols

Welcome! (3 minutes)
Please welcome the participants, invite them to grab some food, pick up a participant consent sheet, and fill out a name tag!

Briefly inform them of the purpose of the evening: this focus group conversation is being held to inform the Food System Assessment of the Pueblo City-County Health Department's Health Disparities Program. We are all here to talk more about the food we eat, where we get it, and how we make decisions about the food we get and eat. Your feedback is very important to us!!

Disclosure Forms and Confidentiality (10 minutes)
Before you start, you need to make sure everyone understands how this process works and to make sure they all agree to participate and to be tape-recorded.

Everyone get out the consent forms and briefly walk through them. Make sure everyone signs one and fills out the participant information section and collect the sheets.
***Facilitator signs too.

Inform participants that you will be audiotape recording (unless there is an objection) and taking notes to make an accurate record of what is said including your own comments. Stress that participants are asked to only share their first names.

Most critical to discuss is the importance of keeping information discussed in the focus group confidential. Ask each participant to verbally agree to keep everything discussed in the room confidential, and remind them at the end of the group not to discuss the material outside.

**Inform the group of our confidentiality by saying something like this:**
"Our notes and the information you provide us in this project will be kept confidential. Only the staff involved in this project will have access to the information we collect. No one else will see your responses. We will only report summarized results, so your identity will be unknown. We will not disclose any information that can be identified with you, nor connect your name to any information we present. Your decision whether or not to participate will not affect any services you now receive or will receive at Pueblo City-County Health Department."

Who is PCCHD? (3 minutes)
The Health Department is committed to promoting the health and protecting the environment of Pueblo County. The Health Disparities Program strives to reduce the risk of developing chronic cardiovascular disease precursors such as obesity by providing education and opportunities for the disparate populations in Pueblo County through a grant with the Colorado Department of Public Health and Environment.

Food Assessment (5 minutes)
Talk to the group more about the food assessment, why we are doing it, etc. Some things you might want to say include:
•In order to inform PCCHD 2013's strategies related to reducing the rates of chronic disease risk factors such as cardiovascular disease, diabetes, and obesity, and to improving the health of all Pueblo County residents, as well as to provide all our partners with more information to guide their work, we are conducting a community food assessment.

•The primary question to be addressed by the Food System Assessment is: "How can the local and regional food system of Pueblo County provide more safe, fresh and healthy foods to improve food access, food security, and health of all Pueblo residents?"

•A food assessment is a powerful way to tell the story of what's happening with food in a community. It is a participatory and collaborative process that examines a broad range of food-related issues and assets in order to improve the community's food system. Through such assessments, a diverse group of stakeholders work together to research their local food system, to strategically communicate their findings, and to implement changes based on their findings.

•The Pueblo City-County Health Department will work closely with contractors from Colorado State University and WPM Consulting, LLC to develop, implement, and document the food system assessment.

•The assessment will draw from existing reports on demographics, poverty, food security, health disparities, and nutrition in Pueblo County. CSU staff will also analyze local, state, and national data sets related to agricultural inputs, production, processing, distribution and marketing; and, consumer behaviors, nutrition and public health. In addition to rigorous secondary data collection and analysis, the assessment team will create meaningful opportunities to listen to and evaluate issues of local interest through surveys, interviews, focus groups, public meetings, and other engagement strategies.

•We hope to learn more about consumer needs and desires and what affects decisions they make about where they get their food and what food they choose. We would be happy to share the results of our findings with you.

•Your confidential feedback will be used in a variety of ways. It will directly inform the work of PCCHD related to healthy eating.

•NOTE to interviewer: See attached timeline, glossary, & food assessment goals if they have any further questions.

Introductions (5 minutes)
*Please lead a round of introductions. Remind people there is no need to use their last names!

Introduce yourself, your title, and your role in the project. Let people know that your role as facilitator is to: a) keep the group focused, b) maintain momentum and c) get closure on questions.

Encourage them to ask you any questions. If they have any questions about PCCHD they can contact the coordinator Christina Hopewell at 719-583-4481.

Ground Rules (2 minutes)

- ✓ First of all, there are no right or wrong answers to the questions that will be raised in the group; the important thing is for everyone to share their experience and opinions.

- ✓ The goal is not to agree -- it is about hearing and exploring divergent perspectives.

- ✓ We all agree to listen actively -- respect others when they are talking. Please refrain from adding comments until someone is done speaking, to avoid talking over one another.

- ✓ We all agree to participate actively – to share our ideas and thoughts with the group.

- ✓ We all agree to confidentiality – nothing will be documented that links statements to individuals.

Glossary
Develop a glossary up front with the group, including access, healthy, affordable, accessible, culturally relevant, and local.

(Focus Group Questions-See attached sheets)

Thank you very much for your participation!! Your ideas and thoughts will help shape PCCHD's work in 2013!

**Focus Group #1:** Youth group
**Host:**
**Facilitator:**
**Translator:**
*Goals: to learn about youth's ideas and participation in either the food their parents buy or they purchase on their own. Also, to understand what is important to them when purchasing or consuming food.*

- Where do you get most of your food from?
- How much food do you purchase on your own?
- When purchasing food on your own, where do you get most of your food?
- How do you decide where to get the food you purchase on your own?
    - (possible probe: how do you get to where you purchase your food? )
- Where else would you like to get food?
- What are the reasons you do not currently purchase foods at these places?
- Where do you consume most of your food? (e.g., in the car, at home, in a restaurant?)
- What foods would you like to eat more of?
- What would make it easier or more appealing for you to eat those foods?
- How do you decide what foods to buy?
- What concerns do you have about the food you purchase (e.g., safety of the food, ability to prepare and cook the food, etc)?
- What concerns do you have about foods that you would like to purchase?
- What might take away those concerns?
- What is your understanding of local foods?
- What might help you to shop more from local producers
    - (possible prompt: such as shopping at local restaurants or the farmer's market?)
- Are you interested in learning more about health and nutrition?
- What do you know about foods systems?
- How important are things such as local food, nutrition and healthy food systems to you when considering the food you eat?
- There are so many things to think about when we talk about food – is it healthy, is it safe, where did it come from, how do I cook it, etc, that it can be overwhelming. What ways would you prefer to learn about food?
- How should we talk with other people your age about these issues? How do you like to be communicated with?

(Optional Questions for Youth Living at Home)

- How much food do you eat that was purchased by your parents?
- Where do your parents currently get most of your food?
- How do your parents decide where to get your food?
- Where else would you like your parents to get their food?
- What might make it easier for you or your parents to get food in these places?

- (possible probe: what other transportation options would make it easier for you?)
- How do your parents decide what foods to buy?
- What concerns do your parents have about the food they purchase (e.g., safety of the food, ability to prepare and cook the food, etc)?

**Focus Group #2:** Older Adults
**Host:** Senior Center
**Facilitator:**
**Translator:**
*Goals: to learn what goes into older consumers' decision making about the food they procure and where; where they would like to be obtaining more food and why they aren't; and, what foods they would like to consume more of and why they aren't now.*

- Where do you currently obtain most of your food?
- How do you decide where to get your food?
    - (possible probe: how do you get to where you purchase your food? )
- Where else would you like to get food?
- What are the reasons you do not currently purchase foods at these places?
- What might make it easier for you?
    - (possible probe: what other transportation options would make it easier for you?)
- Where do you consume most of your food? (e.g., in the car, at home, in a restaurant?)
- What might enable or encourage you to shop more from local producer (possible prompt: such as shopping at the Pueblo Farmers' Market?)
- What foods would you like to eat more of?
- What would make it easier or more appealing for you to eat those foods?
- How do you decide what foods to buy?
- What concerns do you have about the food your purchase, or would want to purchase? (e.g., safety of the food, ability to prepare and cook the food, etc)
- What might alleviate those concerns?
- There are so many things to think about when we talk about food – is it healthy, is it safe, where did it come from, how do I cook it, etc, that it can be overwhelming. What ways would you prefer to learn about food? How can we better provide information to you on Food Safety? What are the biggest concerns you have regarding food safety?

- How should we approach others? How do you like to be communicated with?

**Focus Group #3:** Rural Consumers
**Host:**
**Facilitator:**
**Translator:**

*Goals: to learn what goes into rural residents' decision making about the food they procure and where; where they would like to be obtaining more food and why they aren't; and, what foods they would like to consume more of and why they aren't now.*

- Where do you currently obtain most of your food?
- How do you decide where to get your food?
    - (possible probe: how do you get to where you purchase your food? )
- Where else would you like to get food?
- What are the reasons you do not currently purchase foods at these places?
- What might make it easier for you?
    - (possible probe: what other transportation options would make it easier for you?)
- Where do you consume most of your food? (e.g., in the car, at home, in a restaurant?)
- What might enable or encourage you to buy more from local producer (possible prompt: such as shopping at the Pueblo Farmers' Market?)
- What foods would you like to eat more of?
- What would make it easier or more appetizing for you to eat those foods?
- How do you decide what foods to buy?
- What concerns do you have about the food you purchase?(e.g., safety of the food, ability to prepare and cook the food, etc)
- What concerns do you have about foods you want to purchase?
- What might alleviate those concerns?
- Are there educational opportunities in the community, such as cooking or nutrition classes, that you know about and would like to attend? What are they?
- If so, what are the barriers to attending?
- There are so many things to think about when we talk about food – is it healthy, is it safe, where did it come from, how do I cook it, etc, that it can be overwhelming. What ways would you prefer to learn about food?

- How should we approach others? How do you like to be communicated with?

## Appendix C. Focus Group Results

Though implementation of the Pueblo County Resident Survey, the Health Disparities Food System Assessment staff members were able to capture extensive information on over 680 residents, some populations – including rural populations, older adults, youth, and residents with less than a college education were underrepresented in the survey. In order to learn more about these under-surveyed populations, PCCHD conducted three focus groups: one in Colorado City to reach a more rural population; one with older adults at the Senior Resource Development Agency (SRDA); and, one with a group of students completing their GED through the area Board of Cooperative Educational Services Migrant Education Program.

Each focus group included four to five randomly-selected individuals, and was conducted during the month of June 2013. Though these focus groups provided some interesting insights regarding food access for these populations, due to the small number of participants, the focus groups do not allow for generalized conclusions that can be applied broadly to these population subsets.

There were a number of specific themes expressed by **all three focus groups**, providing insight into challenges faced by different populations in Pueblo County.

The factors limiting access to healthy food identified by all three focus groups included:

- Cost as the main barrier to healthy food
- Seasonality and cost as key barriers to local food
- Interest in, and a need for, education around nutrition and food preparation

It is necessary to note that in all three focus groups, participants expressed an interest in, and a wish for, consuming more healthy foods.

There were also a number of specific themes expressed by **two out of three focus groups**.

**Community** factors affecting food access identified by two out of three focus groups included:

- Interest in, and a need for, convenient community gardens and farmer's markets
- Lack of public transportation to food stores as a significant challenge
- Coupons and price matching as a major resource for purchasing the foods they want

There were also key **personal** factors effecting food access expressed by two out of three focus groups. These factors were:

- A need for education around reading and understanding nutritional labels
- Time as the main barrier to food preparation
- Feeling that eating organic is important, but often inaccessible due to price and availability

A number of food access challenges were identified during **one focus group**, but were not mentioned in other groups.

The residents of Colorado City were concerned about the lack of food stores nearby, and the ability for those with disabilities to both access and travel to food stores. They also expressed concern regarding the amount of personal information required to receive food from food pantries, and spoke about feelings of shame as a SNAP recipient.

Older adults at the SRDA expressed concerns around compulsive eating habits (such as eating when lonely or bored), and felt passionate about supporting locally-owned grocery stores, portraying negativity towards larger chain grocery stores and their impact on the community.

Finally, the students in the BOCES focus group expressed some specific concerns around levels of fat, sugar, and sodium found in many foods, as well as fears that nutrition labels do not provide information that is necessary and truthful. They shared the view that local foods are healthier, and showed interest in shopping at health food stores more often. Participants also expressed some safety concerns around expiration dates, making sure that products do not go bad too quickly, and that consumables are not eaten after they expire.

**Quotes:**
**BOCES:**
"I would like to shop at other stores with better quality or that have more organic items, but many stores don't price match like Walmart does."

"I would like to eat more fruits and vegetables."

"I want to eat more foods that are low-fat and healthier."

"I cook a lot of fruits and vegetables already, but I would like to know different and healthier ways to cook them."

"I have to pay attention to the nutritional labels to check for sodium, or salt, content. I worry because I don't think nutritional labels truly provide the exact number of milligrams or grams of salt in something…."

"A lot of people like to buy their food from the farmer's markets or the farms directly because it's fresher and cheaper, but it's really far to get there."

**SRDA**
"They are thinking about cutting bus service on Saturday. That eliminates one of our grocery shopping days. There's no service at all on Sunday. Period."

"There are a lot of community gardens, but I don't really know where that food goes."

"My wife coupons, so sometimes we go to four different stores to get the best deals..."

"Organic is important to me, but it is hard to find."

"I like to walk out into the garden and just pick beet tops or peas and know how I have raised them. They taste so much better."

"I am worried that we will become more and more dependent upon other countries for food, and transportation will become an issue, or they will put sanctions against us. It just gets kind of scary."

**Colorado City**

"You are ashamed because the system makes you feel ashamed."

"We need to address those people who cannot go to get the food. Meals on Wheels is a great idea, but is non-existent in the rural areas."

"Affordability would be the top of the list for most people." (when asked about the barriers to local food)

"We have a community garden, but it needs acreage. We need the support from the government, without the paperwork."

"More education." (in response to question: what would make it easier or more appealing for you to eat the kinds of foods you want?)

## Appendix D. Key Informant Interview Tool

### *Proposed Pueblo Food System Assessment Interview Questions March 2013*

Interviewer:
Date:
Location:

### *Background*

*--See attached project overview—*

### *Consent*

*--See handout at interview--*

### *Organizational Information*

*(Answer or direct to website if information is publically available)*
Name of Interviewee
Title
Name of Organization
Email
Phone
*--The majority of organizational information will be captured in the on-line pre-interview survey--*

### *A. Food System Efforts*

### *Food System Role*

As an employee in your organization, please rate your knowledge about the following:

| | Excellent | Very good | Average | Not very good | No knowledge on this subject |
|---|---|---|---|---|---|
| How people in Pueblo County meet their food needs | | | | | |
| The numbers/locations of people who don't regularly get enough food to eat | | | | | |
| Where people in Pueblo County get information about preventive health care | | | | | |
| The location of different populations in need of healthcare services in Pueblo County | | | | | |
| Other organizations that provide similar services to your organization | | | | | |

Food access and thus food security has been defined as all people having access to safe, healthy, affordable, and culturally appropriate food. Considering the population your organization serves, and the issues they may face, please indicate the importance of food access and food security as:

1. An extremely important issue that deserves to be addressed immediately
2. Moderately important that should be addressed soon
3. Important but ranks behind more pressing issues
4. Not really an issue that needs much consideration or action
5. Don't really know, but would like to learn more

Describe the role of your organization in addressing food access.
Does your organization support or offer any food related programs, programs that relate to food, nutrition, farming, gardening, and/or cooking? If yes, please list which programs.
**IF** your organization distributes or provides food through its programs, where does the food come from?
_____Food Bank _____ Distributor _____ Grocery store _____Farm _____ Garden _____ other

### *B. Barriers & Challenges*

What are some of the most significant challenges to your organization in implementing its mission, or reaching your target population?
Do you see barriers for Pueblo residents in ***accessing*** healthy foods? If so, what are some barriers you see in the community? And for whom?
Do you see other barriers to actually ***preparing and consuming*** healthy foods? If so, for whom?

### *C. Opportunities*

What seems to be working well to ensure food access in the county, and/or to address food insecurity?
What community agriculture, food and nutrition projects do you know of?
Who is bringing what resources to this issue?
Do you see a role for the local food system here that is currently not being leveraged?

### *D. Solutions & Strategies*

*We are giving you a magic wand!*
For your organization, is there anything you would like to be doing but are not? What are some specific projects you would like to undertake to promote stronger healthy food access?
What would you like to see others take the lead on? E.g., projects that others could implement, or policy or funding leadership from elected leaders, or physical infrastructure such as kitchens and warehouses.

## Appendix E. Key Informant Interview Participants

| | |
|---|---|
| Arkansas Valley Organic Growers | *Dan Hobbs* (interviewed by phone) |
| Arkansas Valley Research Center | *Mike Bartolo* (interviewed by phone) |
| Andrews Food Service | *George Andrew* (interviewed in person) |
| Catholic Charities | *Ida Rhodes* (interviewed by phone) |
| Cooking Matters | *Elsa Jiminez* (interviewed in person) |
| Colorado State University Extension | *Louis Illick* (interviewed by phone) |
| El Centro | *Sister Nancy* (interviewed by phone) |
| Farm Fresh Market | *Jo Schrubble* (interviewed by phone) |
| Pueblo City-County Health Department | *Julie Kuhn* (interviewed in person) |
| Pueblo School District 60 | *Jill Kidd* (interviewed by phone) |
| Pueblo School District 70 | *Dan Witt* (interviewed in person) |
| Sangre de Cristo Volunteers For Change | *Susan Ingraham* (interviewed by phone) |
| USDA Rural Development | *Joe Kost* (interviewed in person) |
| Wayside | *Greg Coolige* (interviewed by phone) |

# Appendix F. Resident Survey Tool

Dear Pueblo County Resident:

Pueblo City-County Health Department is conducting a survey of Pueblo County residents and we need your help! We want to know where you purchase your food, what foods you like to eat and why, and whether or not you want to eat more locally grown food.

This survey will take about 8-10 minutes. Please respond to every question in the survey. Note that you will have the option to answer questions by selecting the "choose not to respond" answer choice.

Anyone completing the survey prior to May 17th can be entered into a drawing for a $25 gift card to a local grocer or market (we have several of them!).

All survey information is confidential and your name will not be associated with your responses. To enter the drawings for the gift card you must provide your name and phone number or email address at the end of the survey. This will be kept separate from the survey information.

If you have any questions about this survey please contact:
Christina Hopewell
Public Health Educator
Pueblo City-County Health Department
719-583-4481
hopewellc@co.pueblo.co.us

***1. Was this survey completed by hardcopy (on paper) instead of online?**

- ◯ Yes
- ◯ No
- ◯ Not applicable

**2. If you answered yes to the previous question, please select the correct method of completion below.**

- ◯ Hardcopy English version-Perla entered this data
- ◯ Hardcopy Spanish version-Perla entered this data
- ◯ Perla translated in-person and entered this data

***3. What is your home zip code? (check only one)**

| | | |
|---|---|---|
| ◯ 81001 | ◯ 81006 | ◯ 81022 |
| ◯ 81003 | ◯ 81007 | ◯ 81025 |
| ◯ 81004 | ◯ 81008 | ◯ 81039 |
| ◯ 81005 | ◯ 81019 | ◯ 81069 |

***4. What city, town, or region do you live in? (check only one)**

- ◯ Avondale
- ◯ Belmont
- ◯ Bessemer/Lake Minnequa
- ◯ Boone
- ◯ Colorado City
- ◯ Downtown Pueblo
- ◯ Eagleridge
- ◯ Eastside Pueblo (East Side, Lower East Side, Dog Patch)
- ◯ Northern Pueblo County (Eden, Beacon Hill, Pinon, Overton, Young Hollow)
- ◯ Pueblo Memorial Airport (Airport, Bacculite Mesa, Baxter, Devine)
- ◯ Pueblo West/Western Pueblo County
- ◯ Rural Eastern Pueblo County
- ◯ Rural Southern Area
- ◯ Rural Southwestern Area
- ◯ Rye
- ◯ Salt Creek
- ◯ Southside
- ◯ St. Charles Mesa/Vineland
- ◯ West Park/Goodnight
- ◯ Westside Pueblo (Hyde Park, Pueblo Blvd.)

***5. Where do you get most of the FOODS you or your family eats?**
**Please pick up to 3, with #1 being where you go the most often.**

| | #1 | #2 | #3 |
|---|---|---|---|
| Fast food restaurants | ◯ | ◯ | ◯ |
| Other restaurants | ◯ | ◯ | ◯ |
| Work place and public cafeterias | ◯ | ◯ | ◯ |
| Senior center | ◯ | ◯ | ◯ |
| Food assistance (food bank, pantry, churches, donations from other sources) | ◯ | ◯ | ◯ |
| Meal delivery program (Meals on Wheels, etc.) | ◯ | ◯ | ◯ |
| Large chain grocery stores (Walmart, Safeway, King Soopers, etc.) | ◯ | ◯ | ◯ |
| Independent local grocery stores (Valley Market, Beulah General Store, T.R.'s Country Store) | ◯ | ◯ | ◯ |
| Wholesale store (Costco, Sam's Club, etc.) | ◯ | ◯ | ◯ |
| Convenience stores/gas stations (Loaf N'Jug, 7-Eleven, Shell, etc.) | ◯ | ◯ | ◯ |
| Natural food store | ◯ | ◯ | ◯ |
| Direct from meat processor/ranch | ◯ | ◯ | ◯ |
| Online purchases | ◯ | ◯ | ◯ |
| I grow/make/hunt my food | ◯ | ◯ | ◯ |
| Other | ◯ | ◯ | ◯ |

Other (please specify)

***6. Where do you usually get most of your FRUITS AND VEGETABLES (fresh, canned, or frozen)?**

**Please pick up to 3, with #1 being where you get most of them.**

| | #1 | #2 | #3 |
|---|---|---|---|
| Work place and public cafeterias | ◯ | ◯ | ◯ |
| I grow/make/hunt my food | ◯ | ◯ | ◯ |
| Convenience stores/gas stations (Loaf N'Jug, 7-Eleven, Shell, etc.) | ◯ | ◯ | ◯ |
| Senior center | ◯ | ◯ | ◯ |
| Meal delivery program (Meals on Wheels, etc.) | ◯ | ◯ | ◯ |
| Direct from meat processor/ranch | ◯ | ◯ | ◯ |
| Large chain grocery stores (Walmart, Safeway, King Soopers, etc.) | ◯ | ◯ | ◯ |
| Independent local grocery stores (Valley Market, Beulah General Store, T.R.'s Country Store) | ◯ | ◯ | ◯ |
| Online purchases | ◯ | ◯ | ◯ |
| Fast food restaurants | ◯ | ◯ | ◯ |
| Other restaurants | ◯ | ◯ | ◯ |
| Wholesale store (Costco, Sam's Club, etc.) | ◯ | ◯ | ◯ |
| Natural food store | ◯ | ◯ | ◯ |
| Food assistance (food bank, pantry, churches, donations from other sources) | ◯ | ◯ | ◯ |
| Other | ◯ | ◯ | ◯ |

Other (please specify)

***7. Where would you like to get MORE of your fruits and vegetables? Please pick up to 3 with #1 being your top pick.**

| | #1 | #2 | #3 |
|---|---|---|---|
| Grow/make/hunt more food | ◯ | ◯ | ◯ |
| Convenience stores/gas stations (Loaf N'Jug, 7-Eleven, Shell, etc.) | ◯ | ◯ | ◯ |
| Food assistance (food bank, pantry, churches, donations from other sources) | ◯ | ◯ | ◯ |
| Fast food restaurants | ◯ | ◯ | ◯ |
| Other restaurants | ◯ | ◯ | ◯ |
| Meal delivery program (Meals on Wheels, etc.) | ◯ | ◯ | ◯ |
| Direct from meat processor/ranch | ◯ | ◯ | ◯ |
| Large chain grocery stores (Walmart, Safeway, King Soopers, etc.) | ◯ | ◯ | ◯ |
| Work place and public cafeterias | ◯ | ◯ | ◯ |
| Online purchases | ◯ | ◯ | ◯ |
| Independent local grocery stores (Valley Market, Beulah General Store, T.R.'s Country Store) | ◯ | ◯ | ◯ |
| Natural food store | ◯ | ◯ | ◯ |
| Wholesale store (Costco, Sam's Club, etc.) | ◯ | ◯ | ◯ |
| Senior center | ◯ | ◯ | ◯ |
| Other | ◯ | ◯ | ◯ |

Other (please specify)

***8. How many servings of fruits and vegetables do you eat every day, usually? Examples of a serving size is a small apple; two big handfuls of lettuce/greens; a small handful of dried fruit. (check only one)**

◯ None
◯ 1
◯ 2
◯ 3
◯ 4
◯ 5
◯ 6 or more

***9. How do you usually get to the places where you buy/receive fruit and vegetables? Please pick up to 3, with #1 being the most common.**

| | #1 | #2 | #3 |
|---|---|---|---|
| It is delivered to me | ◯ | ◯ | ◯ |
| Shuttle/taxi | ◯ | ◯ | ◯ |
| Walk | ◯ | ◯ | ◯ |
| Not applicable I grow most of my own fruits and vegetables. | ◯ | ◯ | ◯ |
| In someone else's car | ◯ | ◯ | ◯ |
| Bike | ◯ | ◯ | ◯ |
| Personal car | ◯ | ◯ | ◯ |
| Bus | ◯ | ◯ | ◯ |
| Other | ◯ | ◯ | ◯ |

Other (please specify)

***10. About how far do you live from where you get MOST of your fruits and vegetables? (check only one)**

- ◯ One to 5 blocks (less than a half mile)
- ◯ Between half mile and a mile
- ◯ Between 1.1 mile and 3 miles
- ◯ Between 3.1 miles and 5 miles
- ◯ Between 5.1 miles and 10 miles
- ◯ Between 10.1 miles and 30 miles
- ◯ Over 30 miles
- ◯ Not applicable I do not eat fruits and vegetables
- ◯ Not applicable I grow most of my fruits and vegetables at home
- ◯ Other (please specify)

***11. What makes it challenging to GET fruits and vegetables?**
**Please pick up to 3, with #1 being the biggest challenge.**

| | #1 | #2 | #3 |
|---|---|---|---|
| Distance to store | ◯ | ◯ | ◯ |
| Ease of access (car, bus, bike, walk) | ◯ | ◯ | ◯ |
| Ability to carry what I buy | ◯ | ◯ | ◯ |
| Store hours | ◯ | ◯ | ◯ |
| Cost | ◯ | ◯ | ◯ |
| Physical limitations | ◯ | ◯ | ◯ |
| Amount of time available | ◯ | ◯ | ◯ |
| Fruits & vegetables are not available where I get food | ◯ | ◯ | ◯ |
| Not applicable, I do not eat fruits and vegetables | ◯ | ◯ | ◯ |
| Not applicable, I have no challenges | ◯ | ◯ | ◯ |
| Other | ◯ | ◯ | ◯ |

Other (please specify)

***12. What makes it challenging to EAT fruits and vegetables?**
**Please pick up to 3, with #1 being the biggest challenge.**

| | #1 | #2 | #3 |
|---|---|---|---|
| Physical limitations | ◯ | ◯ | ◯ |
| Amount of time available to prepare them | ◯ | ◯ | ◯ |
| Knowledge of how to prepare and cook meals with fruits and vegetables | ◯ | ◯ | ◯ |
| Tastes and preferences of household members | ◯ | ◯ | ◯ |
| Availability of kitchen or equipment | ◯ | ◯ | ◯ |
| Allergies or food restrictions | ◯ | ◯ | ◯ |
| Not applicable, I do not eat fruits and vegetables | ◯ | ◯ | ◯ |
| Not applicable, I have no challenges | ◯ | ◯ | ◯ |
| Other | ◯ | ◯ | ◯ |

Other (please specify)

***13. What COMMUNITY FACTORS might make it easier to eat more fruits and vegetables? Please pick up to 3, with #1 being your top pick.**

| | #1 | #2 | #3 |
|---|---|---|---|
| More farmers' markets (e.g., more locations or market days, yearround markets) | ◯ | ◯ | ◯ |
| Bus routes or shuttle service to places that sell them | ◯ | ◯ | ◯ |
| More convenience stores that sell fruits and vegetables | ◯ | ◯ | ◯ |
| More stores that carry the produce that we eat in my culture | ◯ | ◯ | ◯ |
| More produce or farm stands | ◯ | ◯ | ◯ |
| More provided at my food bank/food pantry/meal delivery program | ◯ | ◯ | ◯ |
| More restaurants that offer them near where I live/work | ◯ | ◯ | ◯ |
| More fruits and vegetables available at my worksite or school | ◯ | ◯ | ◯ |
| Better selection of fruits and vegetables at grocery stores | ◯ | ◯ | ◯ |
| A community garden in my neighborhood | ◯ | ◯ | ◯ |
| More street or mobile vendors | ◯ | ◯ | ◯ |
| More grocery stores near where I live/work | ◯ | ◯ | ◯ |
| Other | ◯ | ◯ | ◯ |

Other (please specify)

***14. What PERSONAL FACTORS might make it easier to eat more fruits and vegetables? Please pick up to 3, with #1 being your top pick.**

| | #1 | #2 | #3 |
|---|---|---|---|
| More affordable for me | ◯ | ◯ | ◯ |
| More time to prepare/cook them | ◯ | ◯ | ◯ |
| Knowing how to prepare them | ◯ | ◯ | ◯ |
| Having someone to cook for/eat with | ◯ | ◯ | ◯ |
| If I/my family liked eating them | ◯ | ◯ | ◯ |
| Knowing how to grow my own food/having the space to grow food | ◯ | ◯ | ◯ |
| Other | ◯ | ◯ | ◯ |

Other (please specify)

***15. What is important to you when you pick out fruit and vegetables? Please pick up to 3 options, with #1 being the most important.**

| | #1 | #2 | #3 |
|---|---|---|---|
| Freshness/quality | ◯ | ◯ | ◯ |
| Cost | ◯ | ◯ | ◯ |
| Health/nutrition | ◯ | ◯ | ◯ |
| Convenience/ease of preparation | ◯ | ◯ | ◯ |
| Taste | ◯ | ◯ | ◯ |
| Familiarity | ◯ | ◯ | ◯ |
| Organic | ◯ | ◯ | ◯ |
| Locally grown | ◯ | ◯ | ◯ |
| Common in my culture | ◯ | ◯ | ◯ |
| Social justice (e.g., good workers' pay and working conditions, fair returns to farmers) | ◯ | ◯ | ◯ |
| Other | ◯ | ◯ | ◯ |

Other (please specify)

***16. What do you define as "local"? (check only one)**

- ◯ Grown/raised in Pueblo County
- ◯ Grown/raised in the Arkansas Valley
- ◯ Grown/raised in Colorado
- ◯ Other (please specify)
- ◯ Grown/raised in the United States
- ◯ I Don't Know

***17. Are you willing to pay more for fruits and vegetables grown in Colorado versus outside of Colorado? (check only one)**

◯ Yes ◯ No ◯ Maybe

***18. Are you willing to pay more for fruits and vegetables grown in Pueblo County or the Arkansas Valley? (check only one)**

◯ Yes ◯ No ◯ Maybe

***19. If getting more locally grown or made foods is important to you, what COMMUNITY FACTORS might make it easier? Please pick up to 3 ideas, with #1 being your top pick.**

| | #1 | #2 | #3 |
|---|---|---|---|
| Not applicable, It's not important to me | ◯ | ◯ | ◯ |
| More clearly labeled | ◯ | ◯ | ◯ |
| Served at my worksite or school | ◯ | ◯ | ◯ |
| More farmers' markets or farm stands (e.g., more locations or market days, yearround markets) | ◯ | ◯ | ◯ |
| More provided at my food bank/food pantry/meal delivery program | ◯ | ◯ | ◯ |
| Sold at grocery stores I shop at | ◯ | ◯ | ◯ |
| Greater variety of food grown and/or grown year - round | ◯ | ◯ | ◯ |
| Prepared or packaged meals that include locally grown/made foods | ◯ | ◯ | ◯ |
| More restaurants that serve locally grown/made foods | ◯ | ◯ | ◯ |
| Other | ◯ | ◯ | ◯ |

Other (please specify)

***20. If getting more locally grown or made foods is important to you, what PERSONAL FACTORS might make it easier? Please pick up to 3 ideas, with #1 being your top pick.**

| | #1 | #2 | #3 |
|---|---|---|---|
| Not applicable, it's not important to me | ◯ | ◯ | ◯ |
| More affordable for me | ◯ | ◯ | ◯ |
| Knowing more about how to grow it myself | ◯ | ◯ | ◯ |
| Knowing how/where to find it | ◯ | ◯ | ◯ |
| Having space to grow it myself | ◯ | ◯ | ◯ |
| Other | ◯ | ◯ | ◯ |

Other (please specify)

***21. In the past 12 months, how often were you unable to feed your household all that you wanted because of cost? (check only one)**

- ◯ Always
- ◯ More than half of the time
- ◯ Half of the time
- ◯ Less than half of the time
- ◯ Never

***22. How often do you have to compromise on healthy or balanced food items because of budget concerns? (check only one)**

- ◯ Always
- ◯ More than half of the time
- ◯ Half of the time
- ◯ Less than half of the time
- ◯ Never

***23. How many people currently live in your household (yourself included)? (check only one)**

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5 or more
- ◯ Choose not to respond

***24. How many members of your household are under the age of 18? (check only one)**

- ◯ 0
- ◯ 1
- ◯ 2
- ◯ 3 or more
- ◯ Choose not to respond

***25. What is your gender? (check only one)**

- ◯ Male
- ◯ Female
- ◯ Other
- ◯ Choose not to respond

**26. What is your age?**

**Please enter a whole number only**

***27. What is your ethnicity? (check all that apply)**

- ☐ White
- ☐ Black, African American
- ☐ Hispanic/Latino
- ☐ American Indian or Alaska Native
- ☐ Asian Indian
- ☐ Asian
- ☐ Native Hawaiian or Pacific Islander
- ☐ Other
- ☐ Choose not to respond

***28. What is the highest level of education you have obtained? (check only one)**

- ◯ Less than high school graduate
- ◯ High school graduate/GED
- ◯ Some college, no degree
- ◯ Associate's degree
- ◯ Bachelor's degree
- ◯ Graduate or professional degree
- ◯ Choose not to respond

***29. What is your annual household income? (check only one)**

- ◯ Less than $10,000
- ◯ $10,000-$14,999
- ◯ $15,000-$24,999
- ◯ $25,000-$34,999
- ◯ $35,000-$49,999
- ◯ $50,000-$74,999
- ◯ $75,000-$99,999
- ◯ $100,000-$149,999
- ◯ $150,000 and above
- ◯ Choose not to respond

**30. Is there anything else you would like to share with us regarding food?**

**31. Please enter your first name only and the best way to contact you (phone number or email address) in order to be entered into the drawing. Your personal information will be separated from your survey answers and be used ONLY for selecting gift card winners. (Optional)**

First Name

Phone Number or Email Address

**Gift certificates generously donated by**

Save a lot food stores

Walmart Save money. Live better.

SAFEWAY Ingredients for life.

LaGree's Food Stores

King Soopers

## Appendix G. Resident Survey Results

| What is your home zip code? | Percent | Count |
|---|---|---|
| 1. 81001 | 17% | 114 |
| 2. 81003 | 10% | 65 |
| 3. 81004 | 21% | 142 |
| 4. 81005 | 20% | 140 |
| 5. 81006 | 6% | 41 |
| 6. 81007 | 16% | 112 |
| 7. 81008 | 5% | 37 |
| 8. 81019 | 1% | 10 |
| 9. 81022 | 1% | 4 |
| 10. 81025 | 0% | 3 |
| 11. 81039 | 0% | 1 |
| 12. 81069 | 2% | 15 |
| **What city, town or region do you live in?** | | |
| 1. Avondale | 0% | 2 |
| 2. Belmont | 8% | 58 |
| 3. Bessemer/Lake Minnequa | 11% | 74 |
| 4. Boone | 0% | 2 |
| 5. Colorado City | 1% | 10 |
| 6. Downtown Pueblo | 7% | 47 |
| 7. Eagleridge | 5% | 31 |
| 8. Eastside Pueblo | 8% | 52 |
| 9. Northern Pueblo County | 3% | 18 |
| 10. Pueblo Memorial Airport | 1% | 5 |
| 11. Pueblo West | 17% | 119 |
| 12. Rural Eastern | 1% | 7 |
| 13. Rural Southern | 2% | 11 |
| 14. Rural Southwestern | 0% | 3 |
| 15. Rye | 2% | 13 |
| 16. Salt Creek | 1% | 5 |
| 17. Southside | 23% | 158 |
| 18. St. Charles Mesa/Vineland | 5% | 31 |
| 19. West Park/Goodnight | 2% | 17 |
| 20. Westside Pueblo | 3% | 21 |
| **Where do you get most of the FOODS you or your family eats?** | | |
| 1. Chain grocery store (Walmart, Safeway, King Soopers) | | |
| 2. Wholesale store (Costco, Sam's Club) | | |
| 3. Fast food restaurants | | |
| **Where do you usually get most of your FRUITS AND VEGETABLES (fresh, canned, or frozen)?** | | |

| | |
|---|---|
| 1. Chain grocery store (Walmart, Safeway, King Soopers) | |
| 2. Wholesale store (Costco, Sam's Club) | |
| 3. I grow/make/hunt my food | |
| **Where would you like to get MORE of your fruits and vegetables?** | |
| 1. Chain grocery store (Walmart, Safeway, King Soopers) | |
| 2. Grow/make/hunt more food | |
| 3. Natural Food Store | |
| **How many servings of fruits and vegetables do you eat every day, usually?** | |
| 1. None | 3% |
| 2. 1 serving/day | 14% |
| 3. 2 servings/day | 28% |
| 4. 3 servings/day | 24% |
| 5. 4 servings/day | 16% |
| 6. 5 servings/day | 8% |
| 7. 6 or more servings/day | 6% |
| **How do you usually get to the places where you buy/receive fruit and vegetables?** | |
| 1. Personal car | |
| 2. Someone else's car | |
| 3. Walk | |
| **About how far do you live from where you get MOST of your fruits and vegetables?** | |
| 1. One to 5 blocks (less than ½ mile) | 8% |
| 2. Between ½ mile and 1 mile | 14% |
| 3. Between 1.1 and 3 miles | 30% |
| 4. Between 3.1 and 5 miles | 22% |
| 5. Between 5.1 and 10 miles | 15% |
| 6. Between 10.1 and 30 miles | 5% |
| 7. Over 30 miles | 3% |
| 8. N/A- I do not eat | 0% |
| 9. N/A- I grow my own | 0% |
| **What makes it challenging to GET fruits and vegetables?** | |
| 1. Cost | |
| 2. No Challenges | |
| 3. Distance | |
| **What makes it challenging to EAT fruits and vegetables?** | |
| 1. No Challenges | |
| 2. Taste and preferences | |

| | |
|---|---|
| 3. Time to prepare | |
| **What COMMUNITY FACTORS might make it easier to eat more fruits and vegetables?** | |
| 1. More Farmers' Markets (e.g. more locations or market days, year round markets) | |
| 2. More produce or farm stands | |
| 3. Better selection of fruits and vegetables at grocery stores | |
| **What PERSONAL FACTIORS might make it easier to eat more fruits and vegetables?** | |
| 1. More affordable for me | |
| 2. More time to prepare/cook them | |
| 3. Knowing how to prepare them | |
| **What is important to you when you pick out fruits and vegetables?** | |
| 1. Freshness and quality | |
| 2. Cost | |
| 3. Health and nutrition | |
| **What do you define as "local"?** | |
| 1. Grown/raised in Pueblo County | 47% |
| 2. Grown/raised in the Arkansas Valley | 10% |
| 3. Grown/raised in Colorado | 38% |
| 4. Grown/raised in the United States | 3% |
| 5. I Don't Know | 1% |
| **Are you willing to pay more for fruits and vegetables grown in Colorado versus outside of Colorado?** | |
| 1. Yes | 30% |
| 2. No | 30% |
| 3. Maybe | 39% |
| **Are you willing to pay more for fruits or vegetables grown in Pueblo County or the Arkansas Valley?** | |
| 1. Yes | 34% |
| 2. No | 30% |
| 3. Maybe | 36% |
| **If getting more locally grown or made food is important to you, what COMMUNITY FACTORS might make it easier?** | |
| 1. More farmers' markets or farm stands (e.g. more locations or market days year-round markets | |
| 2. More sold at grocery stores I shop at | |
| 3. Greater variety of food grown and/or grown year round | |

| | | |
|---|---|---|
| **If getting more locally grown or made food is important to you, what PERSONAL FACTORS might make it easier?** | | |
| 1. More affordable for me | | |
| 2. Knowing how/where to find it | | |
| 3. Knowing more about how to grow it myself | | |
| **In the past 12 months, how often were you unable to feed your household all that you wanted because of cost?** | | |
| 1. Always | 9% | |
| 2. More than ½ the time | 16% | |
| 3. ½ the time | 16% | |
| 4. Less than ½ the time | 18% | |
| 5. Never | 41% | |
| **How often do you have to compromise on healthy or balanced food items because of budget concerns?** | | |
| 1. Always | 16% | |
| 2. More than ½ the time | 18% | |
| 3. ½ the time | 15% | |
| 4. Less than ½ the time | 22% | |
| 5. Never | 29% | |
| **How many people currently live in your household (including yourself)?** | | |
| 1. 1 member | 12% | 82 |
| 2. 2 members | 27% | 184 |
| 3. 3 members | 23% | 158 |
| 4. 4 members | 19% | 130 |
| 5. 5 or more members | 17% | 114 |
| 6. No response | 2% | 16 |
| **How many members of your household are under the age of 18?** | | |
| 1. 0 members | 45% | 309 |
| 2. 1 member | 21% | 145 |
| 3. 2 members | 17% | 115 |
| 4. 3 or more members | 14% | 94 |
| 5. No response | 3% | 21 |
| **What is your gender?** | | |
| 1. Male | 19% | 131 |
| 2. Female | 78% | 536 |
| 3. Other | 0% | 0 |
| 4. No response | 2% | 17 |
| **What is your age?** | | |
| 0. No response (not included) | 0% | 56 |
| 1. 17-25 | 11% | 68 |
| 2. 26-30 | 11% | 68 |

| | | |
|---|---|---|
| 3. 31-40 | 25% | 154 |
| 4. 41-50 | 20% | 123 |
| 5. 51-60 | 20% | 124 |
| 6. 61-70 | 11% | 68 |
| 7. 71 and above | 4% | 23 |
| **What is your ethnicity?** | | |
| 1. White | 54% | 368 |
| 2. Black, African American | 4% | 26 |
| 3. Hispanic/Latino | 34% | 233 |
| 4. American Indian | 2% | 17 |
| 5. Asian Indian | 0% | 3 |
| 5. Asian | 1% | 6 |
| 6. Native American or Pacific Islander | 0% | 2 |
| 7. Other | 3% | 19 |
| 8. No response | 8% | 52 |
| **What is the highest level of education you have obtained?** | | |
| 1. Less than high school graduate | 3% | 20 |
| 2. High school/GED | 14% | 95 |
| 3. Some college/no degree | 27% | 185 |
| 4. Associate's degree | 18% | 122 |
| 5. Bachelor's degree | 22% | 151 |
| 6. Graduate/professional degree | 13% | 91 |
| 7. No response | 3% | 20 |
| **What is your annual household income?** | | |
| 1. > $10,000 | 14% | 98 |
| 2. $10,000- $14,999 | 8% | 57 |
| 3. $15,000-$24,999 | 9% | 62 |
| 4. $25,000-$34,000 | 13% | 87 |
| 5. $35,000-$49,999 | 15% | 104 |
| 6. $50,000-$74,999 | 11% | 73 |
| 7. $75,000-$99,999 | 9% | 61 |
| 8. $100,000-$149,999 | 5% | 37 |
| 9. $150,000 and above | 3% | 21 |
| 10. No response | 12% | 84 |

## Appendix H. Food Security in the U.S.: Definitions of Food Security

The webpage "Definitions of Food Security", published by the USDA Economic Research Service, provides definitions of a number of terms referring to food security and insecurity. For more information, visit this webpage:
http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx#.UijTQ9I3v_M

## Appendix I. USDA US Household Food Security Module

The US Household Food Security Module, published by the USDA Economic Research Service, is a short questionnaire used to determine the level of food security of surveyed households. For more information, visit this webpage
http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools.aspx#household

## Appendix J. Colorado Health Report Card 2012

The Colorado Health Report Card 2012, published by the Colorado Health Foundation, provides a comprehensive picture of the health of Colorado's residents through detailed information about 38 health indicators and which could pose significant risks to the health and well-being of Coloradans. For more information, visit this webpage:
http://www.coloradohealth.org/ReportCard/2012/subdefault.aspx?id=6006