



The Colorado Health Foundation™



**REPORT**

# Food Access in Colorado

November 2009

# Introduction

In Colorado, there are seemingly few similarities between the lifestyles of those who live in the bustle of Denver's Colfax Avenue and those who make the broad expanses of San Luis Valley their home. Yet, one unfortunate factor they share in common is dramatically affecting the health of low-income people throughout the state: limited access to nutritious, healthy, unprocessed foods such as produce, whole grains and low-fat dairy.

In many urban neighborhoods, it is all too convenient to buy fast food and soda but nearly impossible to find fresh fruits and vegetables. Convenience markets with sweet and salty snacks are frequently the main dietary source for residents of low-income, inner-city neighborhoods. Likewise, rural residents often can only purchase packaged foods with poor nutritional value, even after traveling 35 miles to a general store.

"Food deserts," like these two disparate areas in Colorado, provide limited access to affordable, healthy food. Furthermore, they are predominantly composed of low-income communities. Across the United States, the health impacts and geographic extent of food deserts are gaining increased attention. Many chronic diseases have been associated with low consumption of fruits and vegetables, along with high consumption of sugary and high-fat foods. These factors, in tandem with the lack of education on healthy eating and a dearth of exercise opportunities common in food deserts, are taking a documented toll on the health of those who do not have convenient access to a grocery store.

Moreover, public health concerns associated with limited food access are significant. The disproportionately high rates of diabetes, obesity and chronic diseases among these populations are straining health services and reducing life expectancies. A high-calorie diet, combined with a lack of exercise, accounts for one-fifth of the annual deaths in the United States.<sup>1</sup>

While various economic and environmental factors have led to food deserts, the individual health outcomes of poor people with limited access to fresh foods are perilously consistent. Negative health consequences, like the risk for obesity and related conditions, are often in epidemic proportions. Chronic diseases are highly prevalent among individuals who do not have convenient food access; yet, these health problems are often preventable. Research has shown that the presence of grocery stores selling fresh fruits and vegetables in a community helps residents maintain a healthy lifestyle.

Increasing access to nutritious food that is lower in fat and calories is a crucial interim step in helping poorer communities reduce their rate of chronic disease and improve the overall health of Coloradans. Cooperative actions must be taken across the state to bring needed nutritional resources to food desert communities. Nonprofit groups, community organizations and government agencies are beginning to address this need in Colorado through various mechanisms such as improving access to food outlets, education outreach, policy advocacy and economic development. Community-driven change is critical to successfully building the capacity of people and organizations to help themselves and their communities increase healthy food access, related services and delivery approaches.

Intervention can not arrive too soon for those living with limited access to fresh food. This report summarizes the considerable health impacts of food deserts plus the many actions being taken in Colorado and nationally for increasing food access.

## Overview

Increasing access to nutritious food in low-income, food desert communities is a stepping stone toward reducing the rate of chronic disease found among their residents. Much of today's public health challenges and sky-rocketing health care costs are related to chronic diseases and conditions such as cardiovascular disease, hypertension, cancer, diabetes, low birth weight, obesity and anemia. Inadequate nutrition and poor food access can play a role in the manifestations of these conditions.

Poverty and associated food insecurity can take the form of skipped meals, limited portions, or poor quality foods. In Colorado, one in every six children goes to bed hungry or is at risk of hunger.<sup>2</sup> Budget constraints experienced by low-income households in food deserts can also lead to malnutrition and an array of developmental disorders in children. In fact, malnutrition and obesity can coexist in children due to high-calorie, fatty diets with poor nutritional value. Eating healthy foods at a reasonable cost is a significant contributor to dietary quality. The U.S. Department of Agriculture (USDA) estimates that healthier diets might prevent \$71 billion per year in medical costs, lost productivity, and the value of premature deaths caused by just four diet-related diseases—such as coronary heart disease, cancer, stroke and diabetes.<sup>3</sup>

Today, more than 25 percent of Americans are obese. According to a recent study, medical spending on conditions associated with obesity has doubled in the past decade and could reach \$147 billion a year. United States obesity rates grew 37 percent between 1998 and 2006; and, obesity now accounts for 9.1 percent of all medical spending. The medical costs attributable to obesity are almost entirely a result of costs generated from treating the diseases that obesity promotes. For example, excess weight is the single greatest predictor of developing diabetes, a disease that costs \$191 billion a year in the United States. The connection between rising rates of obesity and rising medical spending is undeniable. By focusing on ways to increase healthy eating, reduce obesity and its related risk factors, lawmakers can lower public and private medical costs.<sup>4</sup>

Limited financial resources are an obstacle for many households in purchasing healthy food. In addition, for most food desert residents, there is simply nowhere to buy affordable, nutritious food. According to the American Rural Sociological Society, in many of the poorest urban neighborhoods, as well as 800 rural counties in the United States, there are simply no decent food stores.<sup>5</sup> The need for food security is unwittingly creating health problems at epidemic proportions in neighborhoods surrounded by urban development and in rural homes enclosed by acres of farmable land. The World Hunger organization defines food security as access by all people at all times to enough food for an active, healthy life. Households experience food insecurity whenever that food access is limited or uncertain. Regionally across the United States, food insecurity has been found to be the greatest at 14.9 percent in the rural West.<sup>6</sup> Of Colorado's 64 counties, 24 are designated as rural, 23 are designated as frontier (fewer than six people per square mile), and 17 are designated as urban.<sup>7</sup> Many of these poorer, non-suburban areas are challenged in providing adequate food access for ensuring nutrition, health and quality of life among residents. Twelve percent of Colorado families are considered food insecure by the United States Department of Agriculture.<sup>2</sup>



## Challenges for Colorado

By some measures, Colorado is the most-fit state in the nation. In 2007, it was the only state that had a prevalence of obesity that was less than 20 percent.<sup>8</sup> Yet, many factors determine the health status of a state. According to the 2008 Colorado Health Report Card, the indicators for obesity show that more Coloradans are overweight and obese than ever before. In 2007, 19 percent of Coloradans 18 years and older were obese, an increase from 14 percent in 2000, according to the Centers for Disease Control and Prevention (CDC).<sup>9</sup> At the current rate of increase, two out of three Coloradans will be overweight or obese by 2017.<sup>10</sup> And, the problem is worse among the poor and less educated, who suffer from higher rates of obesity-related conditions such as diabetes, hypertension and asthma. Diabetes is currently the ninth leading cause of death in Colorado.<sup>11</sup>

Further tarnishing Colorado's healthy image is basic economics. The Colorado Health Foundation's 2008 study "Income, Education and Obesity" found that low-income Coloradans have higher rates of chronic disease than their middle- and upper-income counterparts. Children in households that make less than \$25,000 a year are three times more likely to be obese than children in households that make more than \$75,000 a year.<sup>9</sup> As more Colorado children are slipping into poverty this disparity is particularly worrisome, noted Foundation President and CEO Anne Warhover.<sup>12</sup> A report issued by the Colorado Children's Campaign found the state's child poverty rate jumped 73 percent between 2000 and 2006, the highest rate of increase in the nation.<sup>10</sup>

Therefore, providing low-cost, convenient fresh foods to poor communities across the state is necessary to reverse this negative health trend. Since fresh produce, whole grains and other nutritious foods are often more expensive, budget-strapped families may turn to cheaper foods that are high in fat and empty calories. And, when it comes to burning off those calories, lower-income families typically can not finance fitness or sports programs for their children. Additionally, in many cases, their neighborhoods do not have parks or recreation centers to encourage physical activity.

Also troubling is that researchers predict that the current generation of children, will on average, have a shorter life expectancy than their parents. "Children's health is a culmination of many physical, economic and environmental factors, many of which are tied to poverty. With the number of children in poverty growing so significantly, it is critical we take steps to ensure that our kids and families have what they need to live healthy and active lives," said Chris Watney, president of the Colorado Children's Campaign. To address these complex health issues, more community-driven, collaborative efforts are necessary to ensure that all Coloradans have sustainable access to healthy food, safe places to exercise and other fundamental health requirements.

Many dietary and lifestyle components are involved in the relationship between nutrition and health. Yet, foods recommended as part of a healthy diet are often not available in low-income, non-white neighborhoods. Certain ethnicities are frequently linked with poverty in food desert communities. Colorado's communities of color, those primarily in urban and rural areas with limited food access, are disproportionately affected by chronic disease and related risk factors versus white, suburban populations. These health disparities are most often evident among blacks and Hispanics who are medically underserved.

The overarching concern of limited food access in Colorado is that impacted community members are consuming too much sugar and saturated fat and too few vegetables, fruits, and grain products in order to maintain good health and reduced rates of chronic disease. It is important to note, however, that simply increasing food access is not the silver bullet for eliminating obesity and other chronic diseases. These complex health concerns require medical monitoring and physical activity, as well as diet modification and other individual actions.

## *Steps toward a Positive Outcome*

At a community level in Colorado and across the country, people have been joining forces to increase access to healthy food. They are planting community gardens, starting farmers markets, teaching nutrition, and adding salad bars to school cafeterias. Supermarkets are being recruited to locate in the low-income neighborhoods long left by chain stores; and, corner stores are being asked to stock more fresh fruits and vegetables. Such community-based economic and policy efforts are critical to addressing this issue. An array of food access initiatives in Colorado has significantly benefited the health of many communities, however, there is much more to do. Implementing programs and applying resources to eliminate food deserts is a critical part of improving overall health in the state.

# Why Food Access is Important

## *Defining the Issue*

Access to fresh food is an elemental component of good nutrition, health and well-being. In general, individuals who have better access to supermarkets and limited access to fast food restaurants tend to have healthier diets, lower rates of chronic disease, and increased food security. Unfortunately, access is not a simple process or even possible for many Coloradans. High rates of disease, low income levels, and poor access to nutritious food are complex, inter-related problems common in food desert communities. Implementing effective, sustainable solutions to increase the availability of affordable, nutritious food will be a significant step toward improving the health of all residents in Colorado.

## *Supporting Evidence*

Certain demographics, such as ethnicity and income, can point to individuals with limited food access and other unhealthy environmental factors who may develop chronic diseases. Nationally, black and Hispanic adults are 1.3 to 1.9 times more likely to have diabetes than white adults,<sup>13</sup> and its prevalence is rapidly increasing, especially among Hispanics. The proportion of Colorado adults who were diagnosed with diabetes increased 44 percent between 1993 and 2005. Compounding this situation, the incidence of high blood pressure and obesity is extremely high among diabetics. The proportion of adults with diabetes is 4.5 percent for those without health insurance coverage, compared to 2.9 percent for those with coverage. And, the prevalence of diabetes notably increases as annual household income decreases.<sup>14</sup>

Whites were less likely to be overweight (35.2 percent) than Hispanics (41.9 percent) and blacks (43.8 percent) in Colorado.<sup>15</sup> Adult Coloradans most at risk for obesity include 35- to 64-year olds residing in households with an annual income of less than \$25,000.<sup>17</sup> Obesity prevalence is almost twice as high among adults from such households versus those from households with annual incomes of \$50,000 or more. Between 1990 and 1998, obesity-related deaths in the state increased 26 percent.<sup>17</sup> And, only 44.1 percent of Coloradans are currently at a normal weight (not obese or overweight).<sup>15</sup> This figure comes up short for the U.S. Surgeon General who has set a *Healthy People 2010* objective of at least 60 percent of adults being at a healthy weight.

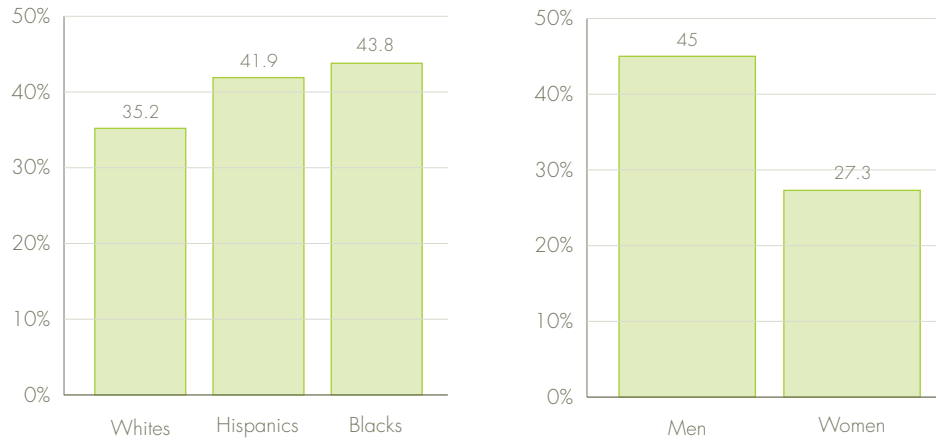


**Table 1.** *Nutrition Terminology*

<b>Community Food Security</b>	A situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice.
<b>Food Desert</b>	An area where food is non-existent, not healthy or too expensive. It is an issue of access and can be defined by distance and/or transportation being obstacles in obtaining adequate amounts of healthy foods. (University of Leeds/School of Geography)
<b>Food Insecurity</b>	Limited or uncertain access to nutritious, safe foods necessary to lead a healthy lifestyle; households that experience food insecurity have reduced quality or variety of meals and may have irregular food intake.
<b>Food Security</b>	Access by all people at all times to enough food for an active, healthy life. At a minimum, food security includes: (1) ready availability of nutritionally adequate and safe foods, and (2) an assured ability to acquire acceptable foods in socially acceptable ways (without resorting to charity, scavenging, or other coping strategies).
<b>Hunger</b>	The uneasy or painful sensation caused by a recurrent or involuntary lack of access to food. Many scientists consider hunger to be chronically inadequate nutritional intake due to low incomes (i.e., people do not have to experience pain to be hungry from a nutritional perspective).
<b>Malnutrition</b>	A failure to achieve proper nutrient requirements, which can impair physical and/or mental health. It may result from consuming too little food or a shortage or imbalance of key nutrients (e.g., micronutrient deficiencies or excess consumption of refined sugar and fat). (American Dietetic Association)
<b>Nutrition Security</b>	The provision of an environment that encourages and motivates society to make food choices consistent with short- and long-term good health.
<b>Nutritious</b>	Providing nourishment, especially to a high degree; healthful. <sup>16</sup>

Source: World Hunger Year, Food Security Learning Center, [www.worldhunteryear.org](http://www.worldhunteryear.org), 9/2005

**Figure 1.** *Overweight Disparities in Colorado*<sup>15</sup>



While limited access to nutritious foods is only one strand in a complex web of public health concerns, increasing food access may lead to significant progress in reducing these chronic disease rates and other conditions such as hypertension, high cholesterol, stroke and coronary heart disease. Although it is notable that Colorado’s chronic disease rates are generally better than national averages, the telling fact is that eight out of every ten deaths in Colorado can be attributed to chronic diseases,<sup>18</sup> which are largely preventable. Additionally, one in seven Colorado children is at risk for malnutrition.<sup>19</sup> These children are more likely to suffer poorer health, fatigue, hospitalizations, behavioral difficulties and impaired performance at school. Actions to reduce risk factors, such as increasing food access to low-income communities, can greatly reduce the burden of chronic disease and health care costs in the state.

## *Annual Estimated Direct Costs of Select Chronic Diseases in the United States*

**Cardiovascular Disease:** \$283.2 billion in 2007

**Diabetes:** \$91.8 billion in 2002

**Obesity:** \$75 billion in 2003<sup>14, 15</sup>

## Food Access in Rural and Urban Communities

### *Increasing Convenient Access*

Convenient, affordable fresh food in low-income communities is elemental to reducing chronic disease. The lack of access to healthful foods within needy neighborhoods is further complicated, however, by the lack of money and transportation to get to the nearest full-service grocery store—where fresh produce, meat, and low-fat dairy products are less expensive and more readily available. Therefore, in addition to the actual mileage to a store, transportation logistics and affordability define convenient food access. A variety of community-based initiatives across the United States and in Colorado are supporting convenient food access and working hand-in-hand to help residents improve their own health. Of particular note are community gardens and farmers markets, plus innovative economic and education programs.



## Transportation

While seldom experienced by suburbanites who wander through shiny, well-stocked supermarkets, profound barriers to obtaining healthy food often exist for both inner-city and rural residents. Beyond incomes and the lack of grocery outlets, transportation to shopping locations can be an expensive, logistical hardship for many disadvantaged households.

High food prices and transportation costs cut dramatically into a family's food budget and quality of life. Many low-income shoppers depend on taxi cabs to transport themselves and their groceries to and from the supermarket. Particularly at the beginning of each month after food stamps are distributed, cab drivers receive increased passenger requests to travel to grocery stores. In addition to taxi cabs, low-income residents rely on public transportation. However, buses often serve a limited function within communities, resulting in lengthy, disconnected trips. These additional transportation costs act like a shopping tax on immobile, low-income consumers, thereby reducing their already limited food dollars.

Nationally, the number of supermarkets in the lowest-income neighborhoods is almost 30 percent less than the number of stores in the highest-income neighborhoods.<sup>20</sup> Therefore, faced with a lengthy trek for nutritious food, many residents of food deserts instead rely on "fringe" retailers (convenience stores, liquor stores, gas stations and drug stores) to provide food items. The result is a serious nutrition gap between those who live in areas of plenty and those who lack access to the basics. This lack of access may cause malnourishment and lead to poor health, chronic disease and premature death among low-income residents.

Researchers have found a positive association between an increased number of supermarkets in neighborhoods, healthier diets, and fruit and vegetable intake. One investigation found that the likelihood that black people would meet guidelines for fruit and vegetable consumption rose by 32 percent with every additional supermarket located in their census tract.<sup>21</sup> Studies also found a reduced risk of obesity among people with more supermarkets in their neighborhood.

## Community Gardens

Community gardens directly increase food access by providing fresh produce for residents. They can involve and benefit low-income residents of various ages, races and ethnic backgrounds and help create a sense of community. Gardening has been found to reduce chronic diseases by improving the dietary habits of participants who have an increased connection with their food source. Evidence also demonstrates that gardening can reduce depression. People who garden typically have strong memories of gardening as a child. Therefore, engaging youths can create long-term health benefits. Community gardens also may provide opportunities for gardeners to market their produce for economic gain.

In return, gardeners become the "eyes and ears of their neighborhoods," said Jill Litt, assistant professor with the Department of Preventive Medicine and the Environmental Studies Program at the University of Colorado. The University currently has a paper in review that discusses social processes which could potentially extend the impact of community gardens and encourage healthy lifestyles. Based on this study, Litt made two recommendations to improve the efficacy of community gardens. First, increase intentional recruitment of neighbors through outreach events; and second, survey nutritional needs of the local population.

*“It’s great to live in an urban environment and get connected to nature.”*

— Denver Urban Gardens gardener

A national model for community gardens that engages young people in sustainable agriculture has been built by The Food Project in Boston. The Food Project is recognized for its cross-cultural initiatives that support the food access of low-income and minority people. The organization’s methods may have direct application to Colorado since our fast growing immigrant populations often have agriculture-oriented backgrounds that support their involvement in community gardens.

The American Community Gardening Association, a national organization that promotes sustainability through all aspects of community gardening and greening of urban, rural, and suburban communities, provides guidance on starting and managing community gardens. The Association advocates steps which include: forming a planning committee to determine if there is a desire for a garden; what kind of garden—vegetable, flower, trees, a combination; and, if the project is meant to benefit a particular group or neighborhood.

Local government policies play a significant role in expanding community gardening across the country. There are multiple policy avenues for Colorado communities to follow suit. State law generally requires each county and city to adopt a comprehensive, long-term general plan for physical development and land use decisions. Such general plans can be updated or amended to include policy language supporting community gardens, healthy living, and local economic development. Public Health Law & Policy, an organization based in California, offers a toolkit on land use planning and policy to assist interested parties in establishing policy that promotes the development of community gardens as important neighborhood resources that build social connections; offer recreation, education and economic development opportunities; and provide open space and a local food source. A few of these facets include: identifying potential community garden sites on public property; adopting zoning regulations that establish community gardens as a permitted use in appropriate locations; encouraging affordable housing units to contain a designated garden space for residents; creating a community gardening program within the parks and recreation department; and encouraging local law enforcement agencies to recognize the risk of vandalism and theft from community gardens and provide appropriate surveillance.

One example of effective policy-making in action is the City of Cleveland’s zoning code for community gardens. In 2007, the Cleveland Planning Commission approved the adoption of a new section of the zoning code—Chapter 336, Urban Garden District—to protect and preserve Cleveland’s urban garden areas and farming. Cleveland’s planners are working with neighborhood groups to select additional sites that are appropriately located for an enlarged community garden program. They are also collaborating with the city and other funders to provide adequate resources to the Botanical Garden, Ohio State University Extension, Cuyahoga Community Land Trust and other collaborators interested in gardens and food production. In addition to these zoning and planning actions to promote more local household food production and healthier eating, the City is also looking for economic opportunities such as creating small businesses that may be assisted with city community development loans/grants or purchasing preferences for locally-produced food.

On a related note, it is difficult to obtain leases for community gardens from landowners without public liability insurance. Garden insurance is a new concept for many insurance carriers and their underwriters are reluctant to cover community gardens. To remedy this sticking point, the city of New York dropped liability insurance requirements for community gardeners in March 2006. The City extended municipal liability protection to community gardeners on city-owned land, thereby no longer requiring garden organizations to pay for private insurance policies.



## Community Gardens Supported by Denver Urban Gardens

DUG sponsors a variety of community garden projects. Here are just a few.

**Rosedale Community Garden**—As one of the largest gardens in the Denver Metro Area, Rosedale is located in the University Park neighborhood and has 70 to 80 plots averaging 10' by 15' each. The garden holds ongoing community events and publishes a periodic newsletter. Rosedale gardeners give to their local community in a variety of ways including coordinating a weekly pick-up of organic vegetables with Project Angel Heart, an organization that provides meals to community members suffering from terminal illnesses.

**Delaney Farm**—Delaney Farm is a DUG project in partnership with the City of Aurora. The farm is easily accessible to the residents of Metro Denver. Its broad goals include: providing healthy, locally-produced food for people of all economic levels, including helping challenged populations improve their nutrition and their access to healthy food; offering nutrition education, and involving participants in programs for growing, preparing, cooking and marketing the produce they grow.

**Casa Verde Community Garden**—Casa Verde Community Garden, located in the diverse Baker neighborhood of Denver, has 10 gardening plots averaging 10' by 12' each. The garden provides culturally-conscious agricultural education. In 2009, a "three sisters" community plot will use an ancient technique of inter-planting corn, beans, and squash, plants that mutually benefit each other's growing needs. The garden plans to donate produce from some plots to the new farmers market run by Fairview students in the Sun Valley neighborhood.

**Denver Urban Gardens**—As a growing force for fresh food in Colorado, Denver Urban Gardens (DUG) is a nonprofit organization that operates and assists with the creation and management of over 80 Denver metro-area community gardens and small parks throughout Denver, Lakewood, Aurora, Commerce City, Englewood, Westminster, Edgewater, Arvada, Golden and Sheridan. DUG assists neighborhoods with the planning, design, coordination and construction of gardens, yet the actual gardens are community maintained. Most are located in low-income urban neighborhoods.

DUG's community gardens provide opportunities for participants to supplement their diet with locally-grown produce. The DUG gardens are also a catalyst for broader community development objectives. The gardens not only focus on producing healthy food, they foster neighborhood activities and host education programs for over 29,000 individuals annually.

DUG is in the third year of a three-year grant from LiveWell Colorado to implement eighteen garden-based community health initiatives in the Baker, La Alma/ Lincoln Park and Sun Valley neighborhoods. The Colorado Health Foundation provided a \$783,511 grant to DUG in December 2008 to expand access to healthy foods and increase program activities. It is projected that the number of underserved Coloradans who benefit from convenient access to DUG's fruits and vegetables will increase from 6,000 individuals in 2008 to 7,800 in 2011.

### *Farmers Markets*

Farmers markets provide consumers with a local place to gather, meet farmers and purchase a variety of fresh produce and food products. Their popularity is wide-spread and currently there are more than 4,000 in the United States. Strategies for farmers markets to improve food access to low-income neighborhoods may include: locating in areas where access to fresh, affordable produce is limited; accepting Women, Infants and Children (WIC) program coupons and Food Stamps; ensuring that products at the market are locally produced; and offering educational activities on food preparation, nutrition and other topics.

The Farmers Market Nutrition Program (FMNP) is a significant federal effort to bring healthy, fresh foods to low-income WIC participants and eligible seniors. Unfortunately, the state of Colorado is one of just a few states that do not participate in the program. FMNP, WIC and Food Stamps are discussed in this report's section on federal efforts for healthy eating.

The Colorado Farmers Market Association (CFMA) is a nonprofit organization that promotes farmers markets across the state by providing an environment for farmers to work and market together. The CFMA educates farmers, the public and governmental bodies about Colorado fresh food products and markets. It also encourages the development and use of improved growing, harvesting and marketing techniques to benefit farmers and Colorado consumers. Numerous inner-city and less urban communities have or are establishing farmers markets. Listed to the right are Colorado communities with organized farmers markets that are members of CFMA; many have multiple market locations.

### Affordability

In low-income neighborhoods with few to no supermarkets, residents are less able to afford to travel to the areas where supermarkets are concentrated. Without convenient access, residents are forced to travel out of their neighborhoods to purchase food or shop at smaller corner and convenience stores that generally have lower quality and limited fresh, healthy food. These stores tend to charge substantially higher prices. Although low-income households spend less money on food, a greater percentage of their income is allocated to food.

In the United States, the daily Food Stamp allowance is typically just a few dollars per person, while the average American eats \$7 worth of food per day.<sup>22</sup> With these prices, even middle-income people struggle to put healthful food on the table. When food stamps and income checks run low toward the end of the month, low-income people often scrape by on a dollar-a-day or less similar to the equivalent in developing countries.

A study published in The Journal of the American Dietetic Association showed that "energy dense" junk foods, which

Colorado Community Farmers Markets that are Members of CFMA	
Alamosa	Grand Junction
Arvada	Greeley
Aspen	Gunnison
Aurora	Henderson
Berthoud	Highlands Ranch
Boulder	Lafayette
Brighton	La Jara
Canon City	Lakewood
Carbondale	Littleton
Castle Rock	Lonetree
Colorado Springs	Longmont
Cortez	Louisville
Crested Butte	Loveland
Denver	Minturn
Dillon	Montrose
Durango	Pagosa Springs
Eaton	Parker
Edwards	Pueblo
Estes Park	Ridgeway
Evergreen	Salida
Florence	South Fork
Fort Collins	Steamboat Springs
Fountain	Telluride
Frisco	Trinidad
Glenwood Springs	Wheat Ridge
Golden	Woodland Park

pack the most calories and fewest nutrients per gram, were far less expensive than nutrient-rich, lower-calorie foods like fruits and vegetables.<sup>22</sup> For low-income people, it's not the food pyramid, but rather household economics that take priority. Thus, an overarching food access mission is to increase healthy diets through affordable nutrition, healthy meal planning and cost-conscious shopping.

**Operation Frontline Colorado**—Being able to afford nutritious food on a tight budget requires knowledge and determination. One organization directly addressing the affordability of healthy foods for low-income households is Operation Frontline Colorado. This organization promotes sustainable, long-term solutions to hunger and food insecurity by teaching the cooking, nutrition and food budgeting skills necessary to make healthy, economic choices. The national organization, Operation Frontline, is a Share Our Strength program.

Operation Frontline Colorado collaborates with numerous partners including the Denver Health Department, Food Bank of the Rockies, Denver Urban Gardens and over 100 other agencies. The organization currently serves a 10-county area in the metro Denver region, and recently added a Spanish coordinator to support its programs. It also serves a four-county area around Durango funded through a three-year grant from the Colorado Health Foundation.

Ruth Stemler, director of Operation Frontline Colorado, sums up their mission as “teaching self-sufficiency skills.” Their groundbreaking nutrition education courses show low-income participants how to stretch food dollars and make healthy, tasty meals that people will eat.

*“I feel very fortunate for having this amazing opportunity to learn. With this nutrition education, I can teach my children in hopes that these lesson be carried on to their families.”*

—Operation Frontline Colorado participant

The professional chefs, registered dietitians and nutritionists who volunteer to lead hands-on courses teach adults, teens and kids the skills to purchase and prepare nutritious, cost-conscious foods. Instructors use a variety of foods that are commonly available in stores and from food pantries. To further support long-term goals of reducing obesity and other chronic conditions common among the poor, courses emphasize fruits, vegetables, whole grains and practical nutrition information. Participants take home a bag of groceries each week to reinforce and practice what they have learned. Applying this practical knowledge of affordable, nutritious food thus helps reduce chronic diseases among this target population and improve their household financial situations.

Operation Frontline's courses cover topics such as how to prepare and shop for healthy meals on a limited budget and basic household budgeting. In 2009, they will teach more than 100 six-week courses benefiting 1,100 families. An additional 4,000 to 5,000 families will learn from their free demonstrations at low-income neighborhood farmers markets. Their innovative courses have proven outcomes and received recognition from the U.S. Department of Agriculture for excellence in nutrition education. In addition, they make participants aware of local offices that provide Food Stamp benefits; and, they encourage parents to enroll eligible children in food assistance programs such as school lunch and breakfast. Operation Frontline also works with WIC to educate participating mothers and families on how to prepare healthy meals with ingredients typically provided by the program.

## Food Access Programs Outside Colorado

There are many food access programs across the country that provide valuable lessons learned, models and innovative approaches for meeting the nutritional needs of low-income households and reducing their characteristic chronic health conditions. From lobbying for policy incentives to facilitating cooperation between grocery chains and community organizations, numerous successful initiatives implemented in other states can be considered in whole or in part as community-driven options to help ensure healthy food access in Colorado.

**Pennsylvania**—The Food Trust is a Philadelphia-based nonprofit that strives to make healthy food available to everyone. It works with neighborhoods, schools, grocers, farmers and policymakers to improve food access in Pennsylvania and nationally. They have developed a model comprehensive approach that combines greater availability of affordable, healthy food and nutrition education. John Weidman, deputy director of the Trust, describes it as a hybrid organization that bridges multiple components of the food system, from farmers markets to major grocery stores, in order to increase food access in both urban and rural areas.

An effective multi-pronged effort has led to the Trust's success including building communication among stakeholders, supporting research and evaluation of their projects, and incorporating think tank strategies with hands-on community experience. As people increasingly see the intersection of hunger and public health, they are also realizing the need for integrated, sustainable solutions like those fostered by the Trust.

The Food Trust is increasing the availability of fresh food by partnering with community leaders, government officials and industry representatives to bring supermarkets to underserved neighborhoods with increased risk of diet-related diseases. Through the identification of economic development resources, active public/private partnerships, rigorous research, policy advocacy and economic incentives, the Trust has successfully addressed the lack of supermarket access in numerous underserved Pennsylvania communities through their Fresh Food Financing Initiative. The Trust is building upon this model and addressing the similar lack of supermarket access in numerous other underserved communities including New York, New Orleans and Chicago. The Trust has found that mapping food desert GIS layers such as locations of grocery stores and corner markets, population demographics, cases of chronic disease, and other health indicators has been vital in designing targeted successful approaches.

*The Food Trust is transforming the food landscape one community at a time, by helping families make healthy choices and providing the access to the affordable and nutritious food we all deserve."*

—The Robert Wood Johnson Foundation<sup>21</sup>

Through another program, The Food Trust is increasing access to healthy food in corner stores by working collaboratively with Philadelphia corner store owners to stock and promote fresh foods and teach children to choose healthier snacks. In Philadelphia, elementary school students report that they visit corner stores daily, spending up to \$2 per visit on foods high in fat and sugar.<sup>22</sup> The Food Trust is working through their Healthy Corner Store Initiative to promote healthier snack choices.

The Healthy Corner Store Initiative is an innovative approach that encompasses environmental change, social marketing, nutrition education in local schools, technical assistance with corner stores, and research in order to reduce the incidence of diet-related disease and obesity. A goal of the initiative is to promote the financial viability of selling fresh fruit for store owners. In order to ease the introduction of these new products, The Food Trust provides stores with refrigerated barrels to stock and display fruit. The Trust also supplies fresh-cut, single-serving packages of fruit to corner stores. Additionally, store owners are provided with marketing



materials to advertise the new products. One food vendor has adopted the preparation and retail of fresh produce into its own business model and shown this to be a sustainable component of its operation. With an estimated profit margin goal of 40 cents per package, corner stores will be able to earn much more through fruit sales than their typical 6 cent profit from chips and other packaged snacks.

In addition to supermarkets and corner stores, The Food Trust coordinates a network of farmers markets that serves more than 125,000 customers in the Philadelphia region. These markets accept food stamps to ensure that fresh, local foods are available to urban residents. Their rigorous research and evaluation efforts show that their programs are effective in increasing the availability of fresh foods and preventing childhood overweight. This evidence-based approach has helped them successfully advocate for public policy initiatives promoting access to fruits and vegetables.

**New Orleans**—Nutritious, affordable food access in New Orleans has been at an all-time low. Yet, Louisiana's rates of obesity, obesity-related diabetes and heart disease are some of the highest in the nation. In 2004, the state spent \$1.3 billion on medical costs related to obesity.<sup>23</sup> Even before Hurricanes Katrina and Rita, access to nutritious food was inadequate; and since then it has only gotten worse. Pre-hurricane New Orleans had approximately 12,000 residents per supermarket. Two years later, in 2007, there were nearly 18,000 residents per supermarket. Comparatively, the national average is 8,800 per supermarket.<sup>23</sup>

As part of a citywide recovery plan to remedy economic, infrastructure and health concerns, supermarkets and green grocers have been featured in the redevelopment efforts of nearly every targeted recovery zone. To support these food access efforts, the New Orleans Food Policy Advisory Committee is helping restore fresh food availability in the greater New Orleans region to improve public health, bring back residents and bolster sustainable economic investment.

In 2008, The Food Trust, as a member of the New Orleans Food Policy Advisory Committee, co-authored "Building Healthy Communities: Expanding Access to Fresh Food Retail in New Orleans," which proposed 10 recommendations for bringing more supermarkets to the city. Some of the recommendations were:

- Adopt fresh food retailing as a priority for comprehensive neighborhood development, provide grants and loans to food retail projects located in target areas.
- Provide tax incentives to encourage the sale of fresh food.
- Address the need for transportation to supermarkets, grocery stores and farmers markets.
- Expand participation in federal nutrition programs that enable more residents—especially seniors and families with children—to purchase locally grown fresh fruits and vegetables at farmers markets.
- Partner with fresh food retailers to create vocational training opportunities in the fresh food retail sector.
- Establish a multi-stakeholder advisory body to develop a comprehensive strategy toward the above objectives.
- Develop a financing program that will provide grants and loans to supermarkets, smaller grocery stores, and other fresh food retailers that enhance healthy food access in underserved areas.<sup>23</sup>

To support such a grocery store financing program, The Food Trust is currently providing guidance to New Orleans' efforts to create the Fresh Food Retail Incentives program, a public/private partnership modeled on the Pennsylvania Fresh Food Financing Initiative.

**New York**—There were one-third fewer supermarkets in New York City's five boroughs in 2008 than six years previous.<sup>24</sup> This regional food desert forces residents to travel long distances for food, often on public transportation—or to purchase unhealthy products at convenience stores. As a corollary issue, diabetes rates

in New York City doubled between 1997 and 2007.<sup>25</sup> East Harlem's population, which is 50 percent Hispanic and 40 percent black, faces both limited financial resources and a disproportionate burden of chronic diseases. In fact, in East Harlem nearly one-third of adults and half of children live in poverty, and residents have the highest prevalence of obesity in New York City.<sup>13</sup> As in other food deserts across the country, nutritious foods recommended as part of a healthy diet are in short supply in this low-income, non-white neighborhood.

To reduce the region's deficit of supermarkets and increase access to nutritionally adequate food, The Food Trust's Food for Every Child initiative is helping stimulate the construction of supermarkets in lower-income New York City neighborhoods. To further this food access strategy and reduce childhood obesity, the governor of New York announced the Healthy Foods/Healthy Communities initiative in January 2009.<sup>24</sup> This supermarket development fund is modeled after The Food Trust's successful Fresh Food Financing Initiative.

In an innovative twist to help underserved city areas, 1,000 new fruit cart vendors are roaming poorer neighborhoods to the glowing praise from health advocates and bitter criticism from supermarket owners and grocers. The carts have permits for a two-year period to operate in police precincts that the city deems as having insufficient access to fresh fruits and vegetables. Business' early fears of being undercut by fruit carts is unfounded, since the vendors are targeting areas where supermarkets are virtually nonexistent and the stores that do exist are not selling produce.<sup>26</sup>

## Colorado Programs

Numerous public, private and nonprofit initiatives across the state illustrate positive steps being taken to increase access to healthy foods in Colorado's low-income food desert communities. Building the capacity of people and organizations to help themselves and address their community needs happens in tandem with increasing healthy food services and product delivery. In addition to Denver Urban Gardens and Operation Frontline Colorado, a selection of other programs is summarized below.

### *LiveWell Colorado*

LiveWell Colorado, a statewide entity dedicated to reducing obesity in Colorado, was started by the Colorado Health Foundation, Kaiser and Colorado Department of Public Health and Environment. LiveWell Colorado encourages healthy living through policies, programs and environmental changes that focus on school, work place, health care and other community settings. The organization aims to provide every Coloradan with access to healthy foods and opportunities for physical activity.

LiveWell Colorado is working strategically with a diverse cross-section of stakeholders to: reduce health disparities related to nutrition, physical activity and obesity; build leadership, capacity and synergy among stakeholders; and maximize investments in Colorado communities. LiveWell Colorado funds community projects throughout the state. Each LiveWell Colorado community project has local objectives and strategies for advancing access to healthy foods and reducing obesity; following are representative highlights from just a few.

**West Denver LiveWell**—As a community leader in West Denver, Denver Public Health (DPH) has strategic involvement in many community development activities. DPH facilitates a LiveWell Colorado partnership within six West Denver neighborhoods (Barnum, Barnum West, Sun Valley, Valverde, Villa Park and West Colfax) to promote physical activity and healthy eating among the residents of these low-income neighborhoods.



Just a few of the many community collaborators include: Denver Urban Gardens, Food Bank of the Rockies, Operation Frontline Colorado and Hermanas de Color. West Denver LiveWell goals and planned actions include: organizing and participating in the Healthy Eating and Active Living (HEAL) partnerships and organizing members to develop and implement healthy food environments in West Denver by promoting nutritious food access and educated purchases.

A major project of the organization in West Denver is increasing the availability of fresh, healthy foods in corner stores located in low-income neighborhoods. To encourage participation and sustainability, the corner store initiative's progress has been designed on a business development model. A Spanish-speaking spokesperson has increased credibility among target business stakeholders and consumers. Currently, three stores are expanding shelf space for fresh produce. The fresh food supply is increasing sales and turning around within three to four days. The addition of healthy products is based on existing refrigeration capacity in the corner stores. This LiveWell Colorado project is also working to increase the visibility of nutritious items for children to purchase.

**Park Hill Thriving Communities**—Denver Healthy People 2010 is a community-wide network of partners dedicated to making the metro area a healthy place for everyone. Led by the Denver Department of Environmental Health, the project is based on the national *Healthy People 2010* agenda sponsored by the U.S. Surgeon General. Denver Healthy People 2010 has partnered with multiple stakeholders, including government leaders, community and school organizations, and residents from the diverse Park Hill neighborhood to create Park Hill Thriving Communities—a LiveWell Colorado community.

Goals of the Park Hill LiveWell project include: eliminating health disparities by increasing healthy eating and active living among those at greater risk for obesity and associated diseases; increasing beneficial programs, environment and policies within Park Hill schools; and, improving access to healthy eating via programs. Park Hill Thriving Communities is also trying to revitalize small business districts within the area which will provide greater opportunities for food access. In particular, they are seeking a grocery store to locate in the neighborhood.

**LiveWell Alamosa**—The San Luis Valley is a rural six-county area in south central Colorado, fifty miles north of the New Mexico border. The Valley covers 8,000 square miles and has a population of 47,408 that is mostly Hispanic. There are more than 50 small communities with Alamosa as the Valley's hub.

The vision of LiveWell Alamosa, also known as Salud y Vida! To Life! Coalition, is to create a community where: people have a positive attitude about physical activity and nutrition; workplaces, schools and communities support physical activity and healthy eating; and, there are plentiful opportunities that are affordable and accessible for all people and cultures. Goals of LiveWell Alamosa include: implementing policies and programs that ensure healthy foods and beverages and integration of nutrition and physical education into school curricula; and, expanding the clinic's Continuous Quality Improvement Initiative to improve adherence to the Adult Obesity Guidelines and Chronic Care Model. Two collaborators of the LiveWell Colorado community are Alamosa Breastfeeding Coalition and Alamosa Community Greenhouse.

## *The Metro Denver Health and Wellness Commission*

The Metro Denver Health and Wellness Commission issued a report that highlights both the health and economic costs of adult obesity. Through the commission, a broad coalition of 80 employers and community leaders has come together to promote policies and programs that support a culture of healthy eating and active living. Chaired by Lt. Gov. Barbara O'Brien, the Commission aims to reverse the region's

negative trend in adult obesity by 2012 and increase the percentage of healthy-weight residents by 2017. To monitor progress, the Commission has selected eight indicators, by which it compares the Metro Denver area to 25 similarly-sized metropolitan areas.

## Federal Efforts to Encourage Healthy Eating

The federal government provides healthy food assistance through a number of agencies and programs. A federal plan to effectively increase food access must address food education. Although some food education programs exist at various organizations and government agencies, they can be improved by being integrated into an overall food access plan. Coordinated communication and collaborative educational goals among farmers markets, government programs and school curriculums will leverage resources and offer a stronger impact on healthy lifestyles.

Poverty and poor access to healthy food are the two crucial reasons low-income families go hungry. But other problems, most importantly a lack of knowledge about food and nutrition, exacerbate the problem. As Operation Frontline Colorado will confirm, food education must be fun and informal. Recipes must be quick and use foods people are used to eating. Special attention should be paid to making cooking classes safe for kids, who often cook their own dinners because their parents are working.

Federal efforts take multiple angles in improving food access and food security including financial support, actual food and meals, nutrition education and other healthy living benefits. The recent American Recovery and Reinvestment Act of 2009 is providing significant funding targeted for food access and healthy living in order to reduce chronic disease and related social concerns associated with the limited availability of nutritious foods in poor communities.<sup>27</sup> Existing programs are some of the main recipients of funds to improve food access.

**Women, Infants and Children**—The Women, Infants and Children (WIC) program provides federal grants to states for supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk. The Food and Nutrition Service (FNS) is the federal agency of The U.S. Department of Agriculture (USDA) that is responsible for administering WIC at the national and regional levels. The program provides: nutrition education including breastfeeding support; nutritious foods to supplement a person's regular diet; and medical screening and referral. WIC participants must meet certain financial requirements and be "nutritionally at risk" to qualify for the program.

The USDA provides funding and policy guidance to the Colorado Department of Public Health and Environment to operate WIC in the state of Colorado. CDPHE in turn provides funding and policy guidance to county health departments, nursing services, and community health centers to provide WIC services for people in individual Colorado counties. The Colorado WIC Program currently serves approximately 89,461 women, infants and children in the state of Colorado. Of those WIC participants, approximately 23,439 are women, 24,250 are infants and 41,772 are children between the ages of one and five years.<sup>28</sup> Colorado WIC operates approximately 116 clinics throughout the state.

WIC has been successful in improving the health of pregnant women, infants and children and in reducing health care costs. Various studies indicate that WIC has improved dietary intake of WIC participants, reduced rates of iron deficiency anemia, and improved cognitive development in WIC children. In October of 2009, the USDA



implemented a ground-breaking policy that added a cash value voucher for fruits and vegetables to the food packages provided by WIC.

**Farmers Market Nutrition Program**—The Farmers' Market Nutrition Program (FMNP) is associated with the USDA's Special Supplemental Nutrition Program known as WIC. There is also an FMNP specific for seniors (SFMNP). The FMNP was established by Congress to provide fresh, unprepared, locally grown fruits and vegetables to eligible WIC participants and seniors, and to expand the awareness of and sales at farmers markets. A variety of nutritious, fresh foods may be purchased with FMNP coupons. FMNP has proven to be a highly cost-effective means to stimulate production of locally grown fruits and vegetables. The farmers markets participating in FMNP enhance communities and provide consumers a wider variety of choices and greater access to local farm production. In addition to increasing healthy food access and consumption, FMNP aids in the expansion of farmers markets and local economic development.

Unfortunately, the state of Colorado does not participate in either the WIC FMNP or SFMNP which are designed specifically to increase healthy food access to the needy.

SFMNP is important to providing seniors—who are increasingly faced with fixed incomes—with nutritious foods. Low-income seniors, generally defined as individuals who are at least 60 years old and have incomes of not more than 185 percent of the federal poverty income guidelines, are the targeted eligible recipients of SFMNP benefits. In 2006, 963,685 low-income seniors participated.

WIC participants are issued FMNP coupons in addition to their regular WIC benefits. These coupons can be used to buy eligible foods from farmers markets or roadside stands that have been approved by state agencies to accept FMNP coupons. The farmers markets or roadside stands then submit the coupons to the bank or state agency for reimbursement. One hundred percent of the food funds budgeted for the FMNP go into farmers pockets. Moreover, two-thirds of the WIC participants said they continue to shop with the farmers after their FMNP benefits are expended.

Nutrition education is provided to FMNP recipients by state agencies, often through an arrangement with the local WIC agency. Cooperative extension programs, local chefs, farmers or farmers markets associations, and various other nonprofit or for-profit organizations may also provide nutrition education to FMNP recipients. These educational arrangements encourage recipients to improve and expand their diets by adding fresh fruits and vegetables, as well as educate them on how to select, store and prepare the fresh fruits and vegetables.

In 2007, 2.3 million WIC participants received farmers market benefits. During 2008, 16,016 farmers, 3,367 farmers markets and 2,398 roadside stands across the United States were authorized to accept FMNP coupons; and, coupons redeemed resulted in over \$20 million in revenue to farmers. For fiscal year 2009, \$19.8 million was appropriated by Congress for the FMNP. Congress has authorized \$20.6 million for the SFMNP through 2012. For Fiscal Year 2008, grants have been awarded to 49 state agencies (not including Colorado) and federally recognized Indian tribal governments to operate the SFMNP.

**School Nutrition Programs**—The School Breakfast Program and the National School Lunch Program (NSLP) provide nutritionally balanced, low-cost or free breakfasts and lunches to 30.5 million children in more than 101,000 schools each school day. Thousands of children in Colorado receive food assistance each day through the programs. USDA's School Meals Initiative for Healthy Children underscores the national responsibility to provide healthy school meals that are consistent with the Recommended Dietary Allowances (RDA) and the Dietary Guidelines for Americans. The guidelines are currently under review in recognition of the need to provide healthier food to students.

**Food Stamps**—A record 32.2 million people, one in every 10 Americans, received food stamps at the latest federal government count.<sup>29</sup> This January 2009 figure marks the third time in five months that enrollment set a record. As the major federal government anti-hunger program, Food Stamps (recently renamed the Supplemental Nutrition Assistance Program (SNAP)) help low-income people buy groceries. The program is increasing emphasis on nutrition education to improve the likelihood that participants will make healthy choices within a limited budget.

Food stamp benefits are received by 16.1 million American children.<sup>19</sup> The average monthly benefit was \$112.82 per person in January 2009. The federal government is hoping to make things easier. Under the economic stimulus law signed by President Obama, there was a temporary 13 percent increase in Food Stamp benefits beginning in April 2009. This increase equals \$80 a month for a household of four.<sup>29</sup>

## Colorado Community Initiatives Enabling Access to Federal Food Assistance

Colorado is one of a small number of states that do not participate in the FMNP. This means that WIC participants cannot redeem their government issued benefits at most Colorado farmers markets in order to obtain fresh, locally-produced fruits and vegetables. And, these residents who often live in food deserts are forced to continue struggling with food access issues such as transportation, affordability and convenience. This situation reduces the effectiveness of federal programs which are specifically designed to assist at-risk, nutritionally needy, low-income people. Although there is current political backing at the state level in Colorado to support a Colorado FMNP, there is a problem. Before new programs can be instituted and funded, existing programs that have had their funding removed due to state budget constraints must be refunded at their previous levels. Thus, it may be a long time before Colorado is able to begin funding an FMNP regardless of its political backing.

### *Colorado Farmers Market Association Receives USDA Grant*

To help fill this missing link, the Colorado Farmers' Market Association (CFMA) has received a USDA grant to provide expensive wireless point-of-sale terminals which will enable Colorado farmers markets to accept food stamp transactions. Currently, 21 Colorado farmers markets offer electronic benefits transfer (EBT) capability at their markets. Using funds from this grant, the CFMA purchases the wireless machines and provides them to participating markets, along with support to implement the program. Being able to accept food stamp transactions, as well as debit card transactions at the markets directly benefits vendor revenues and low-income community access. Adoption of EBTs is limited, in part, because the farmers markets and/or farmers are still responsible for local administrative cost of participating in the program.

### *Crested Butte Farmers Market Funds WIC Participants*

On an additional note, the Crested Butte Farmers Market (CBFM) has taken the initiative within the Gunnison Valley to finance \$80 in WIC vouchers per locally registered program participant. CBMF printed out vouchers at their own expense and delivered them to the Gunnison County Health and Human Services offices. These coupons may be redeemed at CBMF and represent additional funding to the registered WIC participants in the valley that can be spent on fresh produce at the Crested Butte Farmers Market. As an educational tool, CBMF is also running a food preservation workshop class each week. Three farmers markets in Colorado fund their own version of the FMNP.

In 2007, nearly 250,000 Coloradans received food stamps and spent more than \$325 million using the benefits, according to the USDA. Food stamps are one of the quickest, most effective forms of economic stimulus since the benefits are spent quickly and completely. There is almost a \$2 economic return for every \$1 in benefits issued.<sup>30</sup> Yet, less than 52 percent of eligible state residents are enrolled in the program.<sup>2</sup> Colorado's Food Stamp participation rate is among the lowest in the nation. In part due to technical problems with the Colorado Benefit Management System, some new applicants wait more than a month for benefits to begin, delays that violate federal law. And, at least one county is late in processing 25 percent of its applications. According to the Colorado Center for Law and Policy, which advocates for the poor, this slow processing results in fewer people receiving the benefits because they drop out of the application process. Furthermore, the situation places extra strain on food pantries as people seek to fill their nutrition gap until the benefits are approved.<sup>31</sup>

Despite the opportunity to receive funds, a spokesperson for the Colorado Department of Human Services said people are reluctant to apply for three reasons: they don't think they are eligible; they worry they don't have the right identification; and, senior citizens are reluctant to go through all the paperwork.

**Centers for Disease Control and Prevention**—According to the Centers for Disease Control and Prevention (CDC) research, without access to healthy food choices, individuals cannot make positive changes to their diets. If certain eating behaviors are required to reduce chronic disease and promote health, then some communities will continue to have disparities in critical health outcomes unless access to healthy food is increased.

CDC's Steps Program funds states, cities and tribal groups to implement community-based chronic disease prevention programs in order to reduce the burden of obesity, diabetes and asthma by addressing three related risk factors: physical inactivity, poor nutrition and tobacco use. Steps-funded programs are showing what can be done locally in schools, work sites, communities and health care settings to promote healthier lifestyles and help people make long-lasting and sustainable changes, such as nutritious diets, that can reduce their risk for chronic diseases. There are four Steps programs in Colorado which are also currently being supported with LiveWell Colorado funding.

Using small-group educational conversations (pláticas in Spanish), the Weld County Steps Program implemented a diabetes education program culturally and linguistically tailored to the Hispanic population. The pláticas are based on the *Small Changes Make a Big Difference* curriculum developed by the Colorado State University Cooperative Extension service and CDPHE. With Steps funding as leverage, the program was able to obtain in-kind donations of Spanish-language media messages. With a mobile medical van, the program also provided diabetes education to about 1,200 people in their residences and work sites, even to farm workers in fields. Participants reported an increase in knowledge about prevention and control of diabetes. They also reported eating more nutritious foods and increasing their physical activity.

## American Recovery and Reinvestment Act

The American Recovery and Reinvestment Act of 2009 includes at least \$144 billion for state and local governments. By using these funds to increase access to healthy foods and safe places to walk, bike and play, policymakers can help reverse the childhood obesity epidemic.<sup>27</sup> A proportion of the funds have been designated for disease prevention, community development, education and direct food assistance to those in need. Table 2 provides an overview of the specific ways state and local policy-makers can use much of the funding to increase food access in their communities and create healthier environments.

**Table 2.** Summary of Select Designated Funds from the 2009 Recovery and Reinvestment Act

<b>To Make Neighborhoods Healthier</b>	
\$130 million	Use rural community facilities program grants and loans to construct or maintain community centers, recreation centers, food banks, farmers markets and mixed-use development in rural areas.
\$1 billion	Use community development block grants to construct or maintain mixed-use developments, public recreation centers, parks and playgrounds; to clean up and beautify neighborhoods; and to incent or subsidize new supermarkets, farmers markets, community gardens and food banks.
<b>To Increase Food Access</b>	
\$20 billion	Support increased benefits for the Supplemental Nutrition Assistance Program (SNAP), which provides nutrition education and financial assistance to purchase food.
\$295 million	Use SNAP program administrative funds to expand the number of farmers markets and other healthy food sources accepting electronic benefit transfer cards and to promote these healthy food sources to program participants.
\$100 million	Purchase, renovate or replace equipment necessary to prepare healthy meals through the National School Lunch Program's equipment assistance grants.
\$500 million	Increase the number of eligible children and families enrolled in the Special Supplemental Nutrition Program for WIC and establish, improve and administer WIC management information systems.
<b>To Prevent Disease</b>	
\$650 million	Implement evidence-based community prevention and wellness strategies that reduce chronic diseases. <sup>31</sup>



## Private Foundations

Across the country, private foundations are addressing the need for nutritional food access, reduced chronic disease, and environments that support healthy lifestyles. In addition to the ConAgra Food Foundation's national support of Operation Frontline and the Colorado Health Foundation's grants for **Healthy Living**, numerous other foundations are also taking action by spearheading initiatives, providing grants, conducting research, recommending policies and promoting collaboration.

### *Robert Wood Johnson Foundation*

The Robert Wood Johnson Foundation's mission is to improve the health and health care of all Americans by helping those in need lead healthier lives and receive necessary care. The foundation's goal is to reverse the childhood obesity epidemic by 2015 by improving access to affordable, healthy foods and increasing opportunities for physical activity in schools and communities across the nation. Some food access related projects funded by the Robert Wood Johnson Foundation in 2008 include:

**Communities Creating Healthy Environments**—To improve access to healthy foods and safe places to play in communities of color, this organization is building state and national momentum to reverse the epidemic of childhood obesity through strategic investment in those communities most affected.

**Healthy Eating Research**—This research project is building evidence to prevent childhood obesity. It supports investigator-initiated research to identify and assess environmental and policy influences with the greatest potential to improve healthy eating and weight patterns among the nation's children.

**Healthy Kids, Healthy Communities**—In support of community action to prevent childhood obesity, this initiative's strategy is to catalyze and support policy and environmental change to promote children's physical activity and healthy eating, especially in low-income and ethnic communities at greatest risk.

**Robert Wood Johnson Foundation Center to Prevent Childhood Obesity**—As one of the nation's leading resources for best policies and practices to reverse the epidemic, the Center's objectives are to: synthesize evidence; provide expertise and resources to organizations, policymakers and communities to prevent childhood obesity; and provide leadership to fuel a national movement to reverse the epidemic by 2015.

**Salud America!**—The RWJF Research Network to Prevent Obesity Among Latino Children stimulates and supports investigator-initiated research focused on preventing obesity among Latino children.

## *W.K. Kellogg Foundation*

The W.K. Kellogg Foundation's mission is to support children, families and communities in strengthening and creating conditions that propel vulnerable children to achieve success as contributors to society. Grants in the United States are focused on helping strengthen five dimensions of community life: family income; community assets; education and learning; food, health and well-being; and, civic and philanthropic engagement. The W.K. Kellogg Foundation's 2008 grants supporting food access issues include:

**City Harvest**—This New York City organization is creating a community environment that supports healthy children, youth, and families by making available and sustaining local healthy foods and space for physical activity. Their work is performed on behalf of the Partnership for Increasing Access to Healthy Food and Physical Activity for Children and Families in New York City.

**Bridging The Gap**—Based in Kansas City, Missouri, this food access organization's objective is to create a model for small- and mid-size family farms to sell healthy, green, fair, and affordable food to the mainstream public via regional and independent retail grocery outlets.

**Montezuma County Partners**—Serving the Cortez, Colorado region, this program is a participating organization in the W.K. Kellogg Foundation's Rural People, Rural Policy Initiative. The initiative is designed to improve the lives of those living in small communities across the nation, particularly in the Central Appalachia, Great Plains, Mid-South, and Southwest regions by building and strengthening rural policy networks.

**National Conference of State Legislatures**—Based in Denver, Colorado, the Conference is informing state legislators about policies that will help to support healthy lifestyles nationwide through increased opportunities for physical activity; availability of healthy, nutritious food in schools, workplaces and communities; and improvements in food systems.

**Community Involved In Sustaining Agriculture**—This Massachusetts program is developing a credible strategy to increase awareness and consumption of healthy and affordable food among vulnerable populations, plus researching, planning, and building alliances between community stakeholders, nonprofit and business sectors.

## Economic Development to Increase Food Access

To improve the access of low-income communities to fresh nutritious food and decrease their rates of chronic disease, multiple economic development avenues are being pursued by both the public and private sectors in Colorado and around the United States. Economically sustainable, targeted food access initiatives will pave the road toward healthy communities. And, grassroots efforts will provide many of the most effective solutions.

### *Community Supported Agriculture*

Community Supported Agriculture (CSA) builds relationships of mutual support between local farmers and communities, in which participants invest in an annual membership for each season to cover the farm's production costs. In turn, members receive a weekly share of the local harvest. In CSAs, consumers share in the risks and bounties of farming. They benefit by receiving fresh, high-quality food, and learning about sustainable agriculture practices. Farmers benefit from the secure market for their crops; and, both parties benefit from having a personal connection with each other. As a local source supporting food access, farms grow and



# Community Supported Agriculture in Colorado

## **Abbondanza Organic Seeds & Produce**—

The Abbondanza farm near Longmont offers a 21-week CSA subscription program. Their food boxes are filled with greens, roots and a variety of fresh produce like broccoli, cauliflower, tomatoes, peppers, chilies, kohlrabi and melons. Their pickup locations are in North and South Boulder, Lafayette and Abbondanza's home farm East of Niwot. A full season's share, May into October, is \$650.

**Miller Farms**—Located in Platteville, Miller Farms provides season half shares of produce that feed two to three people per week, and full shares that feed four to six people per week. Memberships offer unlimited visits to the farm; and, during their Fall festival, members can harvest fresh produce in addition to their weekly allotment. The CSA allows members to decide what food they get each week instead of pre-packaging the vegetables. A full share is \$600 for 20 weeks from June through October.

**Colorado State University**—Students in the Specialty Crops Program at Colorado State University run a CSA that offers community members a wide variety of local organic produce. Their consumers receive the fresh produce from a local farm; the opportunity to contribute to a sustainable, local economy; and a direct relationship with the people who grow their food. The program offers consumers a weekly subscription during the growing season.

distribute vegetables in an economically viable manner. While not specifically focused on helping low-income neighborhoods, CSAs create communities where farmers and members support the local food system through the production, distribution and consumption of fresh food.

In a step toward better nutrition, it has been found that children typically favor food from "their" farm—even vegetables they've never been known to eat. Tens of thousands of families have joined CSAs in order to access locally-grown fresh produce. LocalHarvest, a national CSA organization, has the most comprehensive directory of CSA farms, with over 2,500 in their database; Colorado has 66 CSAs listed. A CSA that wishes to strengthen their community's health and food security may make the CSA more accessible to low-income shareholders by offering sliding-scale fees, a donation process, working shares and/or payment plans.

## *Community Economic Development*

Food desert residents pay more for eating a healthy diet than their wealthier, suburban counterparts because large, efficient, well-stocked supermarkets rarely locate in low-income neighborhoods. Unfortunately, the very people who need to make every dollar count do not have the essential piece of neighborhood infrastructure to do so. Supermarkets are less likely to be located in low-income areas for several reasons: spending power of residents in these areas is perceived to be low; actual or perceived rates of crime are higher—so insurance, security and other operating costs are elevated; land parcels of appropriate lot size are limited and costs of acquiring and redeveloping urban sites are high; and, access to financing for businesses in these areas remains difficult.

Beyond these basic income and population density criteria, supermarket executives assess the profitability of the inventory the store will carry and weigh it against the cost of doing business in a particular area. Costs can be high in inner cities. Because low-income families are poor, they buy basic foods. This is a negative for the supermarket industry because profit comes from meat, seafood, prepared foods and non-food items such as flowers. In addition, some executives claim that

shoplifting and theft of shopping carts are real obstacles to locating in certain areas. Therefore, even if real estate may be affordable, other costs of doing business can be high in low-income neighborhoods.

Supermarkets represent a major investment in land, buildings, equipment and inventory. According to the Community Food Resource Center, the average supermarket in an urban area represents \$10 million in start up costs. Furthermore, although a lot of money can be made in supermarkets, the industry is competitive. Even the largest stores operate on just a 1 or 2 percent profit margin. Therefore, supermarket owners think carefully before opening new stores.

To curb their reticence toward locating stores in inner-city economic development zones, grocers need to be informed of the buying potential in urban areas. Stores base much of their market analysis and decision making for a new store location on the community's average income rather than the density of population which can carry significant financial clout, even when dominated by low-income households. For example, prior to The Food Trust's financing initiative, an estimated \$1 million was leaving inner city Philadelphia for the suburbs on an annual basis.

Community economic development initiatives are innovatively addressing chronic disease rates, the lack of grocery stores, and other environmental issues found in food desert areas. A few strategies include fostering food-related small businesses and bringing supermarkets to underserved neighborhoods. Economic development projects that are working to strengthen food access include: encouraging community businesses to market locally grown foods; emphasizing the need for fresh food in corner stores and supporting their infrastructure needs to do so (like The Food Trust's grocery store and corner store initiatives); encouraging the sale of ethnic and specialty markets products as appropriate to communities; and, developing initiatives that target job creation for people in low-income communities.

**Elyria-Swansea Project**—The City and County of Denver are in the process of developing a small area in the Elyria-Swansea neighborhood that will help address community changes from an altering transportation infrastructure. During a public outreach process, community residents expressed a strong desire for fresh fruits and vegetables and grocery items to be available in the neighborhood. A market analysis was prepared to research and evaluate the options for potentially bringing a grocery store into the neighborhood. While the geographic area is large, developing a grocery store complex is logistically challenging in Elyria-Swansea due to physical barriers and potential infrastructure changes. Additionally, obtaining accurate household population counts for potential customers is difficult. Estimates, however, calculate a demand of almost \$30 million in grocery spending from the area.<sup>33</sup>

**Rural Areas**—In rural areas, limited food access has many separate factors leading to the same undernourished outcomes as urban deserts. Small towns across the United States have been dealt many hardships such as the loss of once-thriving downtown economies, including family-owned grocery stores, and community-impacts from the arrival of Walmart. The Food Trust is maintaining healthy food access and revitalizing rural areas by supporting the placement of new food markets in the same locations as former grocery stores and renovating the infrastructure of existing rural stores to upgrade their energy efficiency and expand capacity for fresh products. Today, the majority of the Trust's grocery store projects in Pennsylvania statewide are in rural areas. This model can be applied to Colorado's rural markets as well.

## Rural Grocery Store Rejuvenated

When the local grocery store in Walsh, Colorado closed for the first time since 1928, the rural community pooled its cash and brought it back to life in order to secure local access to fresh, healthy foods. As the town suffered from the store's closure, elders formed a board and issued 6,000 shares at \$50 each. With help from residents, Walsh's rejuvenated store is turning a profit now, even after payments on a \$160,000 interest-free loan used to remodel and stock the shelves. A no-interest development loan from the Southeast Colorado Power Association plus support from a Texas food distributor that works with rural groceries also helped enable the store to reopen. The town's success is becoming a model for other Midwest towns trying to save their grocery stores. Walsh's populace wanted fresh meat, not shelf-stable packaged meat. Fresh produce was another key for a small towns fighting obesity. Everyone who shops at the Walsh store, 280 miles southeast of Denver, takes groceries personally, since most of them own a share. The grocery store is a prime source of local sales-tax revenues, and the money goes straight out the door to pave the main street and repair water pipes. It is a for-profit company with shareholders who happen to all be neighbors. The store had \$1 million in sales the first year; and, board members hope to eventually pay out dividends.<sup>34</sup>

## *Ways to Affect Policy*

In addition to implementing city zoning conditions that promote community gardening, there are numerous other community-based methods for supporting policies and actions that will increase food access. Food assessments and policy councils are two methods that have been successful both in Colorado and nationally.

**Community Food Assessments**—Food access issues are part of a broader concept known as a food system. A food system includes all participants and steps in the growing, harvesting, storing, transporting, processing, packaging, marketing, sale, preparation and intake of food. A community food assessment is a collaborative process that examines a wide range of food-related issues and resources in order to develop informed actions for improving a community's food system. Community food assessments can support food access through the following methods: a participatory process that involves diverse stakeholders; education and empowerment strategies; a focus on meeting the needs of low-income and other marginalized populations; and, a broad, food systems perspective that examines a variety of issues and the connections between them.

The first formal food assessment in Colorado funded by the USDA Community Food Projects Competitive Grants (CFPCG) program was recently performed in the Four Corners region by the Southwest Marketing Network based in Durango. The Network's purpose is to help Southwestern United States food producers and communities develop new and improved markets for rebuilding local food systems. A goal of the assessment was to encourage communication among disparate organizations in order to collaboratively benefit the local food system.

**Food Policy Councils**—A food policy council is composed of stakeholders who advise a city, county or state government on policies related to agriculture, food distribution, hunger, nutrition and other food system issues. They perform a variety of tasks, from researching food production and access issues, to designing and implementing projects and policies to address those issues. Such councils provide an effective forum for

diverse stakeholders to work together to create positive changes in their food system. Food policy councils can bolster food access across neighborhoods with: diverse representation from the community; collaborative decision making; integrated approaches to local issues; and, addressing the needs of low-income and marginalized communities.

The Building Health & Wealth in Metro Denver project was a food policy council initiative of the Access to Healthy Foods subcommittee, part of the Healthiest Communities Team of the Metro Denver Health and Wellness Commission (MDHWC). A few of MDHWC members include the Colorado Coalition to End Hunger, Tri-County Health Department, Kaiser Permanente, CDPHE, Denver Urban Gardens and Operation Frontline Colorado. The food access stakeholders aim is to become a collective, well-informed, advocacy-oriented voice to develop policy that increases the availability of local, healthy, affordable, culturally-relevant foods throughout metro Denver.

## Fast Food

An evaluation of nutritious, affordable food access in urban areas necessitates considering the impact of fast food on the health of inner-city communities. On any given day in the United States, about one-quarter of the adult population visits a fast food restaurant. Over the last three decades, fast food has completely infiltrated American society. In 1970, Americans spent about \$6 billion on fast food; in 2000, they spent more than \$110 billion. Americans now spend more money on fast food than on higher education, personal computers, computer software or new cars. A generation ago, three-quarters of the money used to buy food in the United States was spent to prepare meals at home. Today, about half of the money used to buy food is spent at restaurants—mainly fast food restaurants.<sup>35</sup>

*"25 percent of fast food hamburger sales are in stores that service low-income neighborhoods."*  
—Wall Street Journal

The city of Colorado Springs was a focus of the investigative book "Fast Food Nation: The Dark Side of the All-American Meal," by Eric Schlosser, which examines the local and global influence of the United States fast food industry. Growth of the fast food industry in Colorado Springs is viewed as a model for similar expansion around the country. "The 24-hour food franchises are especially going after young men ages 18 to 25, the ones working swing shifts or staying out late," said Cindy Weindling of the Colorado Restaurant Association.

In addition to poor nutritional quality and empty calories, fast food franchises often provided limited local economic development since business revenues leave town. And, the industrialized restaurant kitchen has enabled fast food chains to rely upon a low-paid, unskilled workforce who typically lack full-time employment and receive no benefits to enhance their personal financial future, improve their health or reinvest in their local community.

While healthy food options are generally absent from fast food menus, CDPHE's Smart Meal™ Seal initiative was created to establish nutrition requirements specifically designed for restaurant meals. Restaurants can showcase their entrees that are lower in fat and include components such as beans, whole grains, fruits and vegetables by highlighting them with the Smart Meal™ Seal. Additional benefits of being a participating restaurant include statewide publicity through Smart Meal™ Seal media outreach and the ability to promote program participation. All metro Denver McDonald's operations are members of Smart Meal™ Seal.



# The Colorado Health Foundation's Vision for Food Access

Food Access is closely tied to the Colorado Health Foundation's primary mission; and, supporting access to nutritious foods and healthy lifestyles is particularly needed in low-income, urban and rural communities. Providing the opportunity to eat fresh food is elemental in reducing chronic disease and maintaining good health. Increasing the access of food desert communities to fresh food by cultivating farmers markets and food businesses, recommending policy, educating target communities, building collaborative efforts and fostering healthy lifestyles, will help reduce chronic disease, create new jobs and reduce health care costs throughout the Colorado.

All Coloradans should have access to the components of the Foundation's **Healthy Living** goal—nutritious food, physical activity and disease management tools—because these are key to staying healthy. The Foundation's investments in statewide, regional and local programs that promote nutrition, exercise and food access help to stem the tide of obesity and other chronic diseases. While federal and state government programs are major players in this process, community-driven approaches to food access may provide some of the most sustainable solutions.

Improving food access in Colorado will:

- Decrease the state's obesity rate
- Increase number of children and adults who eat adequate amounts of fruits and vegetables daily
- Increase number of children who receive healthy meals at school and have access to healthy vending choices
- Increase number of underserved Coloradans who have convenient access to fruits and vegetables

By improving access to nutritious food through more food outlets, the prevalence of chronic disease will be reduced, thereby enabling a stronger youth population and work force and, in turn, greater household income, health insurance coverage, sustainable community development and healthy lifestyles. To help achieve this vision, the Foundation is exploring ways to improve access to healthy foods by supporting innovative food access initiatives, fostering stakeholder communication, advocating policy, and promoting education through the expansion of existing programs across the state in combination with the development and implementation of projects based on models that have been successfully demonstrated in other locations around the country.

In 2007, the Foundation provided 18 grants totaling more than \$8,598,000 to projects supporting **Healthy Living**. Recent Foundation grants that fund food access objectives are listed in Table 3.

**Table 3.** Food Access Related Grants by the Colorado Health Foundation

Organization	Project	Grant Amount	Approval Date	Description
Children's Health Foundation	Healthy Nutrition in Schools	\$134,769	05/12/2008	To improve the school food program for Garfield School District's 4,277 students by increasing nutritional quality
The Colorado Health Foundation	Food Access Pilot	\$74,700	12/05/2008	To support a community-based effort to expand healthy food access using statewide food gap analysis, training and technical assistance; and to support LiveWell Park Hill's healthy food efforts in the neighborhood
Growing Home	Wellness Project	\$60,000	08/08/2008	To provide families who are homeless or on the brink of homelessness with urgent physical and mental health services, care coordination, health education and access to healthy foods
Denver Urban Gardens	Program Expansion	\$783,511	12/02/2008	To expand access to healthy foods and increase physical activity of area residents by increasing number of gardens and associated programs
Operation Frontline Colorado	Program Expansion	\$832,612	05/06/2008	To provide nutrition education courses and services to low-income populations in the four-county Durango area

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