



POLICY BRIEF



High Desert Farmers Market

Creating a Healthy Food and Beverage Environment in the High Desert

SUMMARY: The food and beverages we consume everyday affect our health, but our broader community environments shape the choices that are available. The High Desert has a preponderance of fast food and convenience foods available, but many do not have convenient access to full service grocery stores. Coupled with the cost of food, family income, and lifestyle choices, many people do not meet recommended dietary guidelines. This has contributed to high rates of preventable and chronic disease. This policy brief assesses the High Desert's food environment and then outlines ways that cities, residents, schools, and businesses can work together to improve it.

The High Desert region faces a growing health epidemic: 71% of adults and 31% of youth are overweight or obese.

*St. Mary Medical Center, 2012
Community Health Report*

WHY FOOD MATTERS

Hippocrates, the father of western medicine, wrote, "let food be thy medicine and medicine be thy food." More than two millennia later, the modern version of this phrase, "you are what you eat," is still relevant. A balanced diet and nutrition is essential for physical health and an essential feature of a healthy community.

Our nation is in the midst of a health crisis, and the High Desert region is no exception. About 71% of adults and 31% of youth in the High Desert are overweight or obese. Death from heart disease is 25% above the national average.¹ Many residents also suffer from diet-related diseases such as diabetes, hypertension, and heart disease.

Although we all know the importance of good nutrition, broader factors are at play. Recent decades have seen a significant increase in the availability, appeal, and affordability of foods and beverages that are low in nutrients and high in fat, added sugars, and calories. Consumption of calorie-dense unhealthy foods has soared.

In the High Desert, many rural or lower income neighborhoods have poor access to fresh, healthy foods. Residents must drive long distances to shop at a full-service grocery store. Even if residents can access a grocery store, purchasing good nutrition often costs more than some can afford, even with federal food assistance.

Poor access to grocers and limited income leads to predictable results. Few meet nutritional standards in the federal Dietary Guidelines for Americans. Moreover, less than half of all children and most adults do not get enough physical exercise. This makes it all the more important to focus on improving diet and nutrition.²

This policy brief provides an assessment of the High Desert's retail food environment. The brief evaluates the availability and type of food and beverages, describes programs for improving food and beverage choices, and makes specific recommendations for creating a healthier food environment.

MAJOR FINDINGS

The High Desert's food environment includes over 700 retail locations. Despite the many retail outlets, questions remain about the availability, affordability, and accessibility of food choices in our region.

ACCESSIBILITY OF HEALTHY FOOD

High Desert communities are dotted with numerous grocery stores, convenience stores, fast food, restaurants, and other food places. These stores comprise the "food environment" where people shop for food, dine, and otherwise access food.

About 700 businesses were surveyed to measure access to 38 full-service grocery stores. These include ethnic food stores and major chains. Shown in Table 1,

- Only two-thirds of residents are served by a full-service grocery store within a 2-mile drive of their residence
- 27% of all residents do not live within 2 miles of a full-service grocer but can access fast food or convenience stores
- 7% of all residents do not live within 2 miles of a full-service grocery store, fast food place, or convenience market

Poor access is most pronounced in Adelanto, which lacks a full-service grocery store. Apple Valley also has fewer grocery stores per capita than other communities.

AFFORDABILITY OF FOOD

Living near grocery stores is not the only factor that affects one's diet and nutrition. Between 2006 and 2013, national food prices rose 21%—faster than every household expense except medical care. About one in six households in San Bernardino County experiences food hardship—one of the highest rates in the nation.³

Fruits and vegetables are essential to nutrition and a healthy diet. In 2012, surveys show approximately 18% of High Desert residents reported difficulty affording fruit and vegetables. This issue is more prevalent for individuals living in poverty (38%), individuals with less than a high school diploma (31%), and Hispanics (26%).⁴

CalFresh is a state program that provides a food subsidy for lower income residents. From 2007 to 2014, CalFresh enrollment rose from 11 to 18% of County residents. During that same period, CalFresh enrollment soared from 11% to 29% of residents in the High Desert—the highest rate in a decade and nearly 3X the state average.⁵

Figure 1 shows the distribution of grocery stores, fast food, and convenience stores and 2-mile driving distance around the store. Most stores are near I-15 and along Bear Valley Road, Main Street, and Highway 18. Areas in orange are only served by fast food or convenience stores, and areas beyond that are essentially not served.

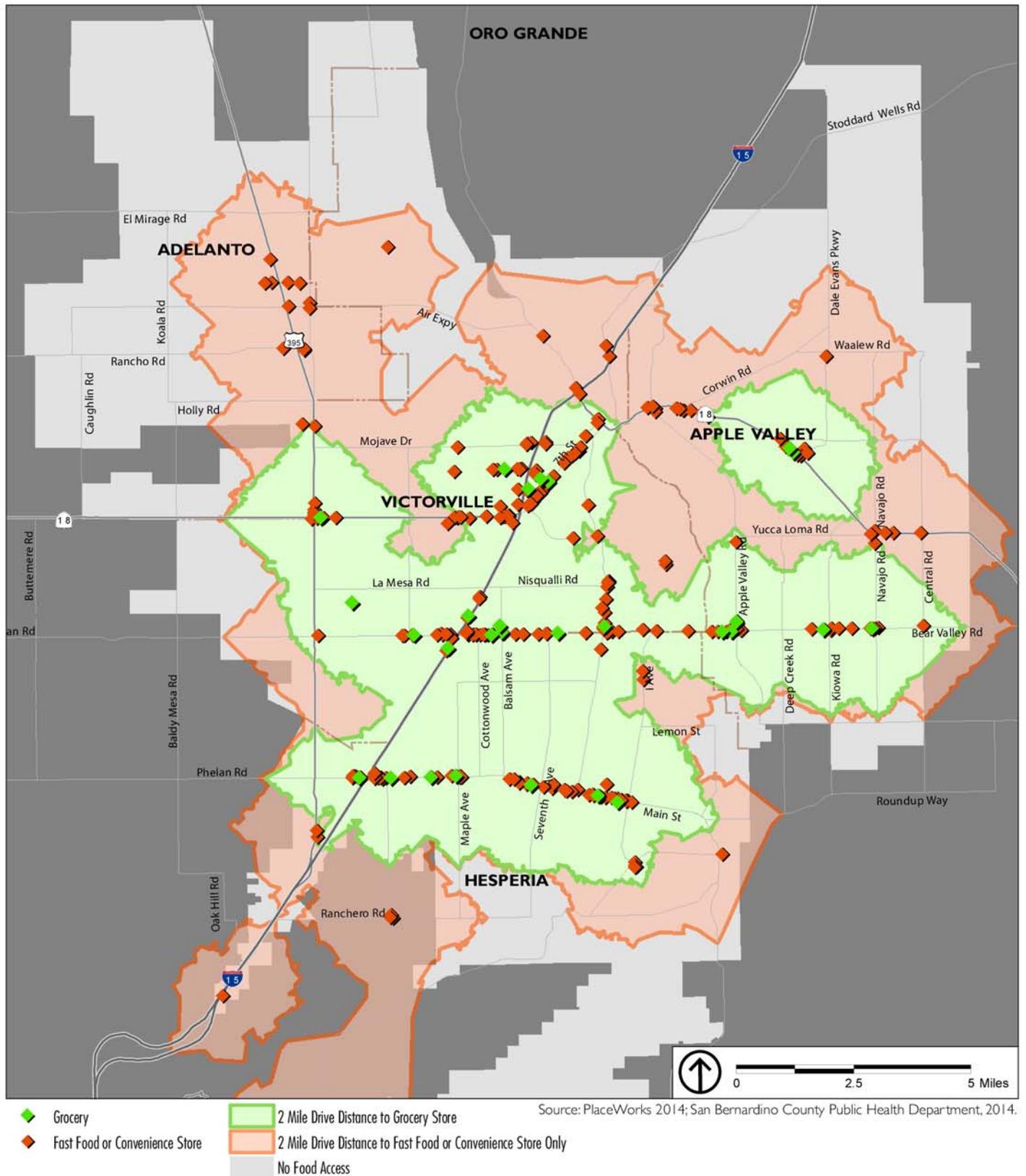
Only two-thirds of High Desert residents have access to a full-service grocery store within a 2-mile driving distance

Table 1: Grocery Store Access

Community	Population within 2 miles		
	Served by a full-service grocery store	Only served by fast food or convenience mrkt	Not served by grocer, fast food, or market
Adelanto	31%	50%	19%
Apple Valley	54%	38%	8%
Hesperia	70%	20%	10%
Victorville	78%	21%	2%
All	66%	27%	7%

Source: PlaceWorks, 2014.

FIGURE 1: GROCERY STORE ACCESS



The High Desert has an average of 9 fast food and convenience stores for every full-service grocery store

BALANCE OF RETAIL FOODS

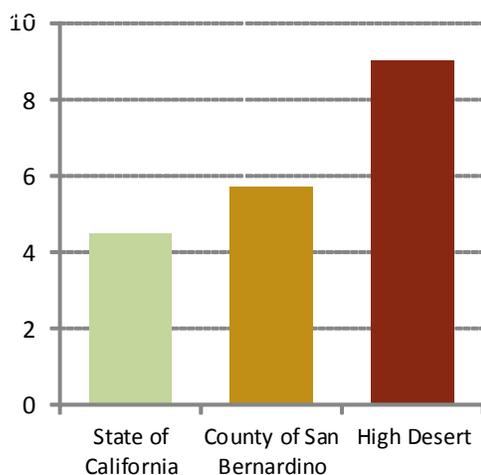
Not only does limited access to grocers affect food choices, having greater access to convenience foods and fast food has been linked to poorer health. Research has shown that people living in neighborhoods with a preponderance of fast food and convenience stores have significantly higher rates of diabetes and obesity.⁶

Although academics often disagree, the logic behind food access is straightforward. For residents with limited transit options, those who work long hours with long commutes, or even cost-conscious seniors, the easy choice is not the healthiest choice. Many families with limited food budgets can often only afford cheaper, calorie-dense foods, not more-expensive produce.

The Retail Food Environment Index (RFEI) is frequently used to evaluate the balance or health of a community's food environment. The RFEI is the ratio of fast-food and convenience stores to full-service grocery stores in a community. The higher the ratio, the greater the imbalance or preponderance of convenience and fast foods relative to healthier food options. In California, the RFEI is estimated to be around 4.5.

As shown in Chart 2, the High Desert's RFEI is 9 for most communities, except Adelanto and Apple Valley, which have higher RFEIs.

Chart 2: Retail Food Environment for the High Desert Region



BEVERAGE CONSUMPTION

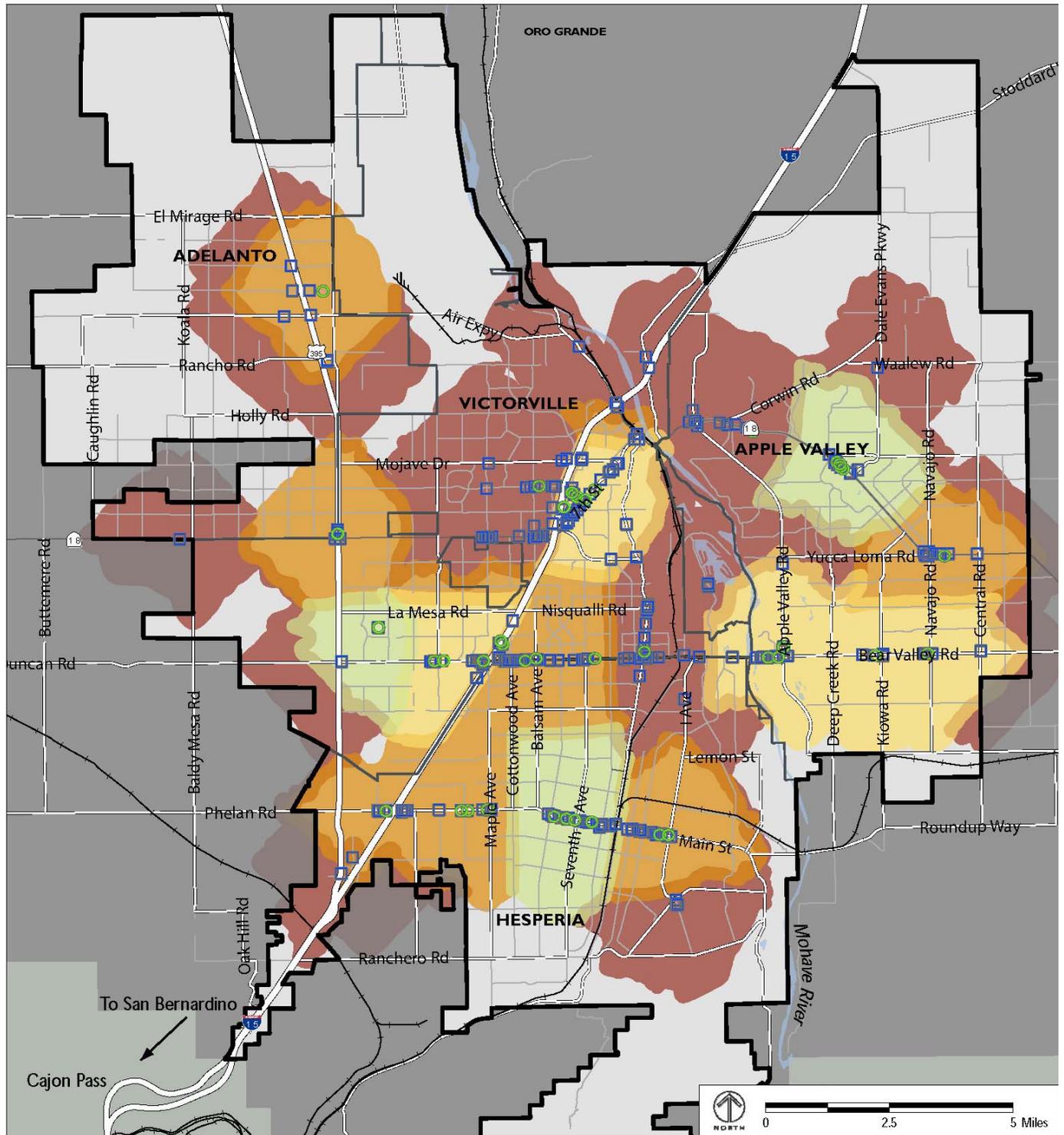
Beverages—particularly sugar-sweetened beverages (SSBs)—are the main source of added sugar in the American diet. SSBs include soda, fruit drinks, and the variety of sport drinks that contain added sugar. The health risks of SSBs are well known: children who drink at least one SSB daily have a 55% higher chance of being overweight.⁷

In recent years, California laws have been enacted to regulate SSBs in public schools. These laws have been effective in reducing consumption on campus. Still, more than half of adolescents in High Desert schools drink at least one soda daily, and many drink several. This does not include the many other SSBs and flavored milk products consumed by High Desert youth.

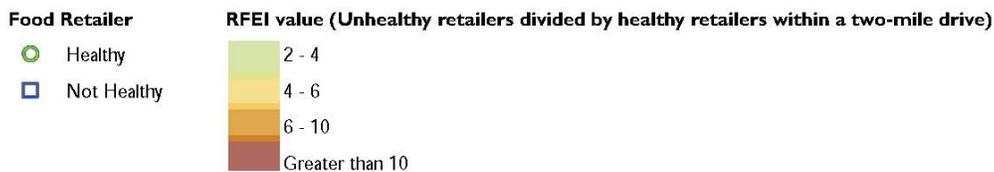
Alcohol consumption also is a concern for many communities. Alcohol adds more calories to the American diet and is a particularly serious health threat for chronic drinkers. Alcohol misuse is also a concern for youth. Among high school students, more than one in three consumed alcohol and one in five engaged in binge drinking every month.⁸ This underscores the severity of alcohol misuse and its effect on health.

Exhibit 2 on the following page shows where concentrations of convenience food and fast food are located in the High Desert. Within the central business areas around the I-15, the RFEI tends to be lower. Outside the core where grocery stores are more sparse, the RFEI worsens, and residents have more access to less healthy options.

FIGURE 2: RETAIL FOOD ENVIRONMENT INDEX



Source: The Planning Center [DC&E, 2012; San Bernardino County Public Health Department, EHS data, 2010.



MAKING A DIFFERENCE

Improving health in our region is a core value of the Healthy High Desert Coalition. Following are ways that communities, residents, schools, and the business community can help achieve these priorities.

EDUCATING OUR COMMUNITY

Research shows the importance of consuming a variety of nutrient-dense foods, especially whole grains, fruits, vegetables, milk or milk products, and lean meats and other protein sources. Yet recent surveys show that only 40% of residents in the High Desert consume five or more servings of fruits and vegetables per day. This is below the national average of 49%.⁹ This underscores the importance of improving nutrition.

Healthy Eating Classes

Helping people recognize healthy food and beverages will improve health. St. Mary's Medical Center offers healthy eating and active living classes taught by registered dietitians. The Community Health Action Network offers classes in Victorville and Adelanto. Classes include disease prevention and healthy weight loss, healthy eating, label reading, grocery shopping, etc. These classes help to educate residents and make it easier to eat healthier.



Squash for Friends is the largest garden of its type, and donates produce to needy residents.

Health education and community-based programs should extend outside health care settings to reach more people. During the past year, only 12% of residents participated in a health promotion activity—well below the average 22% of residents nationwide.¹⁰ This underscores the importance of health education at schools, worksites, health facilities, and community events.

Health Fairs

Every year, the High Desert communities convene various health fairs. These types of events typically feature cooking demonstrations, diabetes education, blood pressure testing, fitness training, raffle prizes, dental care, health insurance vendors, nutritional supplement information, music, and more. Recent events have been held by Apple Valley, Community Health Action Network, Inland Regional Developmental Center, and St. Mary Medical Center.

Although health education is most effective for individuals, it is the least cost-effective way to effect change at a community level. The decisions people make about food and beverages are shaped by broader physical and socioeconomic issues. This is why public health professionals are increasingly focusing on advancing policies at the institutional, community, and city level to prevent unhealthy choices in the first place.

NATIONAL PREVENTION STRATEGY¹¹

The National Prevention Strategy recognizes that eating healthy can help reduce people's risk for heart disease, high blood pressure, diabetes, osteoporosis, and cancer and help maintain healthy body weight. Preventing excessive alcohol use also increases people's chances of living long, healthy, and productive lives, while reducing many undesirable health outcomes.

Improving health in these areas requires addressing at least four key strategies:

1. Educating, engaging, and empowering people to make good choices.
2. Improving access to affordable, culturally appropriate, and healthy food choices.
3. Considering the use of local government regulatory authority where appropriate.
4. Providing prevention and treatment services for communities.



Yucca Loma Elementary School
Community Garden

IMPROVING HEALTHY FOOD ACCESS

Increasing access to healthy and affordable food improves options for healthy choices. This includes providing healthy foods in existing stores, increasing the number of full-service grocery stores, and supporting farmers markets and community gardens.

Farmers Market

Farmers markets are widely touted as an excellent opportunity for residents to purchase fresh and healthy food. Local farmers markets include the Hesperia Civic Market and Street Faire and the Apple Valley Farmers Market. The High Desert Farmers Market also has a certified farmers market where farmers sell their produce directly to the public. This venue is held weekly at the lower campus of Victor Valley College.

Community Gardens

Community gardens offer an option of growing food locally in the High Desert. The High Desert Outreach tends a garden in Adelanto and gives fresh produce to folks attending their weekly food meal program. Yucca Loma Elementary School, with its community garden at the Paul Swick Family Center, aims to introduce fresh produce and good nutritional choices as key goals. Kaiser Permanente also funds “Squash for Friends,” a two acre site that donates food to seniors, low income families, and pantries.

Store Conversions

The High Desert region is dotted with corner stores, convenience marts, and gasoline station markets that sell primarily convenience packaged food. These stores are located along major transportation routes in the High Desert. Corner store conversions refers to expanding the selection of food to healthier items that complement existing product lines.¹²

Corner store conversions can be done in many ways—working with vendors to place fruit baskets at the cash register, tagging healthier food with special labeling, or moving items within a store (such as placing healthy food at eye level). Although the concept seems new, Walmart and Target are aggressively retrofitting stores to offer customers more healthy choices.

Farm-to-School Programs

Schools play an important role in providing meals to thousands of children. An increasingly popular way to improve food choices is with farm-to-school programs that bring healthy foods from farms directly into school meal plans, improve student nutrition and education, and support local farmers. Although the region has not had much success in this area, many communities have benefitted from programs.

YUCCA LOMA ELEMENTARY: COMMUNITY GARDENS

The Paul Swick Family Center, located at the Yucca Loma Elementary School in the Town of Apple Valley, is a unique service for its families. The Center offers basic resources (clothing, food, and health care), language learning programs, job readiness classes, literacy programs, community organizing, parenting classes, mentoring, Healthy Families insurance enrollment, and other services. In 2009, the Center opened up an onsite community garden. Food harvested from the garden is donated to families in the community who are in need. The site is also used for the Harvest of the Month events that teach children about healthy food and nutrition.

In 2010, the Yucca Loma Elementary School was awarded a Golden Bell Award in the Partnerships and Collaborative category from the California School Boards Association for the unique community partnership supported by the Family Center.

INCENTIVIZING CHANGE

Communities have a number of tools available to incentivize changes to the food and beverage environment. The following are examples of programs in the High Desert.



Healthy Eating and Living Class

Collaboration

New programs are difficult to start and maintain over the long term. Collaboration is essential for institutionalizing change because no single city, health provider, school, or other entity has the authority, expertise, or resources to go it alone. This requires new models of collaboration among business, government, health care, residents, and community organizations.

One example is recent collaborative work. St. Mary's Medical Center, Apple Valley School District, Community Health Action Network, and San Bernardino County developed a CX3 High Desert Action Team. The project examined low-income neighborhoods in the High Desert. The study identified neighborhoods where an abundance of low-nutrition, high-fat, and sugar-laden foods far outweighed healthy options.

To address this need, St. Mary Medical provided a donation to help purchase refrigeration equipment that allows surplus food to be trucked in and stored for some period of time. This would then allow nonprofits to distribute fresher, healthier food. This is only one of many different ways that nonprofits can work together to build local capacity to serve their community.

Business Incentives

The food industry locates stores where zoning codes permit such uses. The food industry sells products that are desired by customers or to develop a new market. In areas with an overconcentration of certain uses, however, some cities adopt specific land use regulations. This may include a temporary moratorium or spacing requirement for the same types of business.

Conversely, local governments have the ability to incentivize the sale of healthy foods through local land use and zoning. For example, Target stores are experimenting with adding fresh produce and meats sections in their stores to compete more effectively. Cities can work with stores to expedite permitting, encourage stores in underserved neighborhoods to add a fresh food section, or offer financial incentives.

NonProfit Sector

Although the High Desert has more than 40 nonprofit organizations that provide food, there are no 24/7 food pantries. In the absence of refrigeration equipment, nonprofits could only donate beans and dry food.



Providing grants to build local capacity for food pantries

VICTORVILLE: LEADING BY EXAMPLE

Cities are well suited to leading by example. In 2011, the Victorville City Council passed a resolution and ordinance to improve the nutritional content of items sold in city-owned and city-contracted vending machines. Each vending machine must follow standards for nutritional content, beverage standards, and pricing. This type of ordinance or policy could have a significant impact if it was also adopted by school districts, local colleges, hospitals, and the business community.¹³

Victorville is also the only community in the High Desert region to have a social host ordinance in the municipal code. A social host ordinance allows law enforcement to cite party hosts if underage drinking is allowed and hold them liable for damages resulting from permitting underage drinking. The ordinance is intended to discourage the prevalence of teenage drinking and reduce its harmful effects.

The health of High Desert residents is at stake due to an epidemic of unhealthy diets. In all sectors, we must work to change our food and beverage environment if we are to reverse this trajectory.

*Maxwell Ohikhuare, MD,
Health Officer, San Bernardino County
Public Health Department*

MOVING TO ACTION

This policy brief found that the High Desert has a disproportionately higher percentage of unhealthy food and beverage choices compared to the region and the state. Moreover, two-thirds of all adults are overweight or obese, and mortality rates exceed state and national averages.

Creating a healthier High Desert will require global changes in local policies, systems, and the physical environment. Multi-sector partnerships are needed to develop and implement policies that are feasible, cost effective, and make it easier to choose healthier food options. The following recommendations serve as a starting point for improving food choices.

POLICY RECOMMENDATIONS

1. **Land Use Policy.** Local government should adopt general plan policies, zoning regulations, and ordinances to encourage farmers markets, mobile vendors, community gardens, and healthy food retailers where appropriate.
 2. **Economic Incentives.** Local governments should consider opportunities to attract and expand the food choices through targeted financial and regulatory incentives as part of local economic development effort.
 3. **Vending Policy.** Businesses, schools, and organizations should adopt a vending policy that allows for more healthy foods as competitively priced alternatives to standard vending machine food and beverages.
 4. **School Policy.** School boards should support the increased availability of fresh food through school or community gardens, farm-to-school programs, school-site salad bars or fresh food alternatives, and other innovative programs.
 5. **Community Education.** Community partners should develop innovative programs that educate residents about healthy eating lifestyles—including nutrition, cooking, and shopping—whether at work, at home, or school.
 6. **Food Donation.** Healthy community coalitions should support the provision of surplus and donated foods at community pantries, civic centers, faith-based organizations, and other locations for residents in need.
 7. **Food Marketing.** Encourage businesses, local schools, and food retailers to proactively promote the availability of healthier food options and limit marketing of unhealthy food to children and youth.
 8. **Retail Alcohol Stores.** Public Convenience and Necessity ordinances should be developed in each community that address the concentration of retail alcohol outlets and impact on schools, homes, and other sensitive uses.
 9. **Social Host Policy.** Social Host ordinances should be developed in each community to help reduce the health and safety risks from underage drinking, traffic accidents, crime, and delinquency.
 10. **Health Advocacy.** Local healthy community coalitions should continue to lead by example and advocate for policies and programs that improve the food environment and make it easier to make healthier food choices.
-
-

REFERENCES

1. Professional Research Consultants, "Community Health Assessment and Community Health Report," St. Mary Medical Center, 2012.
2. Ibid.
3. Food Research and Action Center (FRAC), "Food Hardship in America 2012: Data for the Nation, States, 100 MSAs, and Congressional Districts," prepared by Michael Burke, Heather Hartline-Grafton, and Jim Weill, 2013.
4. Professional Research Consultants, "Community Health Assessment."
5. Legislation and Research Unit, "2013 Report, County Residents Receiving Aid: Distribution by Cities," San Bernardino County Human Services.
6. California Center for Public Health Advocacy, PolicyLink, and the UCLA Center for Health Policy Research, "Designed for Disease: The Link between Local Food Environments and Obesity and Diabetes," 2008.
7. Malik, V. S., et al., "Sugar-Sweetened Beverages and Risk of Metabolic Syndrome and Type 2 Diabetes: A Meta-analysis." *Diabetes Care* 33, No. 11 (Nov 2010): 2477-2483.; Babey S. H., et al., "Bubbling Over: Soda Consumption and Its Link to Obesity," UCLA Center for Health Policy Research and California Center for Public Health Advocacy, 2009.
8. Victor Valley Joint Union High School District, "California Healthy Kids Survey, 2009-10: Main Report," San Francisco: WestEd Health and Human Development Program for the California Department of Education.
9. Professional Research Consultants, "Community Health Assessment."
10. Ibid.
11. National Prevention Council, "National Prevention Strategy," U.S. Department of Health and Human Services, Office of the Surgeon General, Washington, DC, 2011.
12. PolicyLink, "Grocery Store Attraction Strategies: A Resource Guide for Community Activists and Local Governments," 2008; The Food Trust for the Healthy Corner Stores Network, "Healthy Corner Stores Issue Brief," Spring 2011.
13. California Center for Public Health Advocacy, "Local Beverage Policies Adopted by California Cities and Counties," October 15, 2012, Accessed at <http://www.publichealthadvocacy.org/>.

A COLLABORATIVE EFFORT



Contact: Chuck Leming
Healthy Communities Program
(909) 387-6607
County of San Bernardino
Cleming@dph.sbcounty.gov



Contact: Mark Hoffman
Inland Empire (909) 989-4449
MHoffman@PlaceWorks.com

Healthy High Desert Mission and Values

The Healthy High Desert is a group of organizations in the High Desert region of San Bernardino County, organized to improve the health of High Desert residents and provide a platform for:

- Creating a safe, healthy community for all residents
- Supporting local Healthy City initiatives
- Exploring key health-related issues
- Developing peer support and learning relationships
- Developing opportunities for collaboration
- Creating joint funding appeals
- Advocacy and public education

Members

City of Adelanto
Town of Apple Valley
City of Barstow
City of Hesperia
City of Victorville
Barstow Community Hospital
Desert Valley Hospital
Kaiser Permanente
St. Mary Medical Center
Victor Valley Community Hospital
Hesperia Recreation & Park District
High Desert Community Foundation
High Desert Resource Network
County of San Bernardino, First District Supervisor's Office
County of San Bernardino, Department of Public Health
County of San Bernardino, Superintendent of Schools
Mojave Desert Air Quality Management District
Victor Valley Dental Service Program