

Comprehensive Planning for the Napa County Food System

A Preliminary Study of Problems and Possibilities

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Dear Napa Community Leader,

Napa County is world renowned for its beauty, agricultural products and culinary culture. Yet among its residents, the food situation is not so picturesque. Napa County ranks second to last of all California counties in food security – the ability to put food on the table at every meal. Diet-related chronic disease rates are increasing, with diabetes rising from 5.1% to 8.3% between 2003 and 2005, surpassing the California average (7%).

There are racial, economic and spatial inequities involved in these problems. While rates of overweight among white residents are at a disturbing 49%, African Americans and Latinos have even higher rates, at 69% and 77%, respectively. 38% of low income residents have reported food insecurity, and the food that appears practical for people with limited income (i.e. provides many calories at low cost) contributes to chronic illness. Some areas of the county have less access to fresh, healthy food than others, an indicator of health outcomes that correlates both with poverty and race. A recent study has shown that life expectancy in the Bay Area varies as much as 14 years depending on the neighborhood where you live.

With less than 2% of our local agriculture used for food production, Napa County relies on the global conventional food system (which is characterized by long-distance imports and unsustainable industrial farming and livestock practices). This reliance:

- Contributes to environmental damage (including climate change);
- Gives us less control over the safety of our food;
- Distances us from the important nutrition education aspect of food production;
- Minimizes the historic role of food as a catalyst for building social capital;
- Leaves the community with very little food security in case of a regional emergency; and
- Fails to support the local economy (if only 20% of food spending were shifted to local food system business, the financial impact of that spending could be eleven times that of spending on non-local business).

The good news is that there are many individuals and organizations in Napa County who are dedicated to improving many of these problems that touch Napa's food system – the interconnected system of all the policies, programs, mechanisms, infrastructure, capital and values that go into the production, distribution, consumption and disposal of food. Professionals and other advocates from the fields of health, agriculture, economic development, environmental sustainability, labor, city planning, social services, food security and transportation are all devoting resources and creativity to address many of these food system-related issues from within their fields.

From my conversations with many of these advocates, it appears that to take these solutions to the next level – to make them more widespread, more sustainable, and to more directly address root problems rather than taking care of symptoms – there needs to be collaboration across fields and the infrastructure to support this collaboration.

Other communities around the Bay Area have taken on the challenge of integrating these different fields to support and reinforce each other's work and to find solutions to common challenges. Whether it is in the form of advisory food policy councils (Berkeley, Contra Costa County, Marin County, Oakland, San

Francisco and Sonoma County) general plan policies (Marin), city food and nutrition policies (Berkeley), or community food assessments (Alameda County, Contra Costa County, Oakland, San Francisco), these strategies serve as infrastructure to facilitate and maintain ongoing relationships, policies and programs that improve a community's quality of life through its food system.

An organizing body in Napa County could provide the structure, staff and resources (among other creative partnerships and programs that the community could innovate) to:

- Connect at-risk youth to food production apprenticeships;
- Restructure policies that are barriers to farming and farm marketing;
- Provide incentives for fresh food and healthy low-cost restaurants in underserved areas;
- Connect nutrition and cooking educators to communities with high rates of diet-related disease;
- Facilitate pedestrian and bicycle access to sources of healthy food;
- Systematically support school and community garden programs;
- Connect local farmers to institutions such as schools, hospitals and businesses; or
- Build a certified community kitchen to incubate small food businesses, use local food, provide space for basic cooking classes, certification for shelter meal donations, and rentable space for affordable meal preparation programs and higher-end culinary classes.

The first step toward these creative partnerships is for community leaders and food system stakeholders like you to come together to discuss common concerns and share resources. The group could collectively identify priorities for learning more about the local food system (perhaps conducting a community food assessment), determining the best structure to make change (such as an advisory or active food policy council) and creating immediate interdisciplinary solutions.

There is an upcoming opportunity for such a collaborative process. The agricultural community, through the office of the Agricultural Commissioner, is considering a forum to discuss barriers to local food production in Napa County. They are open to broadening this discussion to larger food system issues. I invite you to learn more about this opportunity and to lend your support to creating a forum that will cross agricultural, business, health, planning and environmental lines.

In the attached report, I provide a more in-depth look at Napa's food system assets and challenges. I suggest models for strategies both for specific programs and policies and for a participatory process that would identify priorities based on the community's needs and interests. I hope you will read it and consider how you and/or your organization currently interact with the food system, and what role you could play in improving Napa County's quality of life through changes to the food system.

Sincerely,

Joanna Winter

Biographical Sketch

Joanna Winter received a Bachelor of Arts with a major in Sociology from Grinnell College and a Master of Regional Planning from Cornell University. She works toward shaping the physical and policy landscape of communities to help give residents the infrastructure to connect with one another and with the resources that enhance their quality of life. She has worked with the Seattle Department of Neighborhoods, the City of Grinnell City Manager, the Napa County Planning, Conservation and Development Department, and Planning for Healthy Places, a program of Public Health Law and Policy. She is fortunate to have grown up in the Napa Valley able to participate in its culture of growing, cooking and sharing fresh, delicious and healthy food.

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Context

There is a currently a movement of professionals, businesspeople, governments, academics and community activists toward an interdisciplinary perspective that views the different aspects of food production, consumption and disposal, and their effects on the environment, society and public health not as independent and unrelated branches, but as a *food system*. Different sources have defined a “food system” in different ways. The following definitions encapsulate the depth of the concepts embedded within the food system:

[The] foundations for food production, the social aspects of consumption, and relevant government and other policies, as well as the actual growing, processing, and distributing of substances. ^{1, 2}

[T]he interdependent and linked activities that result in the production and exchange of food. These include farming and community gardening; processing; storage; distribution and transportation; food access via grocery stores, restaurants, and street food, as well as nutrition programs such as school meals and food stamps; cooking and food preservation; and food recycling through gleaning, food banks, food pantries, and soup kitchens. ³

[T]he interdependent parts of the system that provides food to a community. This includes the growing, harvesting, storing, transporting, processing, packaging, marketing, retailing, and consuming of the product. Some or all of these steps in the food system may be within the community but they also may be part of the global or regional system instead. ⁴

Because they have moved toward this food system perspective, advocates realize that directly addressing the food system is an effective way to make progress in all the sectors that are part of the food system. An interest in food system planning has resulted, reaching from the federal level to individual municipalities.

A significant aspect of the food system movement has been a shift toward interest in alternative food systems, particularly *local food systems*. Although the larger global food system can be seen as part of any local food system, the term tends to refer to food systems in which the components are primarily contained within a particular geographic area. According to World Hunger Year, “A food system is local when it allows farmers, food producers and their customers to interact face-to-face at point of purchase.”⁵ *Regional food systems*, serving “larger geographical areas such as a metropolis, a state or even multiple states”⁶ also are organized within a particular area, and regional thinking and cooperation is a valuable tool for collaborating between local food systems.

¹ Gillespie, Ardyth H. and Gilbert W. Gillespie, Jr. “Community Food Systems: Toward a Common Language for Building Productive Partnerships.” Cornell Community Nutrition Program, Division of Nutritional Sciences, Cornell University, 2000. <http://www.foodroutes.org/doclib/28/foodsystemdefs.pdf>

² See Gillespie and Gillespie for their more detailed definition.

³ World Hunger Year. “Local and Regional Food Systems.” Food Security Learning Center. Accessed 5/20/09. <http://www.whyhunger.org/programs/fslc/topics/local-a-regional-food-systems.html>

⁴ Wilkins, Jennifer and Marcia Eames-Sheavley. “Glossary.” *Discovering the Food System*. Division of Nutritional Sciences and Department of Horticulture, Cornell University. Accessed 5/20/2009. <http://www.hort.cornell.edu/departments/faculty/eames/foodsys/index.html>

⁵ World Hunger Year

⁶ World Hunger Year

Debate Over Local Food Systems

One piece of the shift toward local food systems is local agriculture. While local food production is only one piece of the food system, it is an important one, because it creates benefits that include local business development and economic diversity, community/social capital development, food security (including affordability and the opportunity to grow food), nutrition and nature education, and lower environmental food production costs.

Although support of local food systems has spread, there is some controversy over the benefits of local food, particularly some of the economic and environmental benefits. Opponents of local food tend toward a free trade philosophy, and focus on the concept of “food miles.” While some local food proponents suggest that transporting food long distances is environmentally detrimental,^{7,8} Desrochers et al and Weber et al argue that because of the efficiency inherent in producing food in more appropriate specialized areas (due to comparative or relative advantage), the global free trade based food system is inherently not only more economically efficient, but more environmentally sustainable than any local system.^{9,10}

While theories of international markets and development are outside the scope of this document (see Halweil¹¹ on market failures of the global food system and a case for international food sovereignty), the data in these studies suggest that foods that have travelled more “food miles” are not necessarily more polluting – in fact, they may be less. (This does not address the “food swap” food miles effect, in which countries both import and export the same product, like the UK importing 126 million litres of milk while at the same time exporting 270 million litres of milk.¹²) However, the difference in sustainability between conventional global and local food systems may lie not in how far from the table an item is produced, but *how* it is produced. Food miles are a measurement too simplistic to support local food arguments,¹³ and may more effectively be a distraction from all the other benefits of a less global industrial food system. Born and Purcell warn against falling into the “local trap” of assuming that local food systems are inherently more environmentally and socially sustainable than larger scale food systems,¹⁴ However, examples show that it tends to be the smaller producers, like Polyface Farm, owned by celebrated farmer Joel Salatin, or Northland Sheep Dairy in upstate New York,¹⁵ who are more likely to use a more or less closed system, requiring little fuel and other external inputs of chemicals or natural resources.

⁷ Halweil, Brian. Home Grown: The Case for Local Food in a Global Market. *Worldwatch Paper*, 163. State of the World Library, 2002. <http://www.worldwatch.org/system/files/EWP163.pdf>

⁸ Pirog, Rich, Timothy Van Pelt, Kamyar Enshayan, Ellen Cook. “Food, Fuel and Freeways.” Leopold Center for Sustainable Agriculture. Iowa State University. June 2001.

⁹ Desrochers, Pierre and Hiroku Shimizu. “Policy Primer Number 8: Yes We Have No Bananas: A Critique of the “Food Miles” Perspective.” *Mercatus Policy Series*. Mercatus Center, George Washington University, October 2008.

¹⁰ Weber, Christopher L. and H. Scott Matthews. “Food-Miles and the Relative Climate Impacts of Food Choices in the United States.” *Environmental Science and Technology*, 42 (10), 2008.

¹¹ Halweil, 2002

¹² Lucas, Caroline. “Stopping the Great Food Swap - Relocalising Europe's food supply.” Green Party, 2001.

¹³ Smith, A., Watkiss, P., Tweddle, G. McKinnon, A., Browne, M., Hunt, A., Treleven, C., Nash, C. and Cross, S. *The validity of food miles as an indicator of sustainable development*. AEA Technology Report No. ED 50254. July 2005. <http://statistics.defra.gov.uk/esg/reports/foodmiles/final.pdf>

¹⁴ Born, Branden and Mark Purcell. “Avoiding the Local Trap: Scale and Food Systems in Planning Research.” *Journal of Planning Education and Research*, 26, 95, 2006.

¹⁵ Gillespie, Gilbert. “Tour of Northland Sheep Dairy,” Sociology of Food Systems Course, Development Sociology, Cornell University, Fall 2007.

One example of the significance of how food is produced vs. how far away it is produced is a study that found that red meat and dairy are the most environmentally unsustainable piece of the food system.¹⁶ The study concludes that rather than eat locally, Americans would have a much more significant impact on the environment by reducing the amount of meat in their diet. While the environmental degradation currently caused by animal production are evident, the findings not do address the production practices themselves. A strategy of moving to more sustainable livestock practices than those that currently predominate the industry would probably reduce environmental damage also. Similarly, a study has been pointed to as an example of food miles failing to represent environmental damage which showed that lamb imported to Britain from New Zealand is more sustainable than lamb produced and consumed in Britain.¹⁷ The study, however, compared apples to oranges – Britain’s conventional feedlot lamb industry with New Zealand’s pastured lamb industry.¹⁸

Another way that how – or more accurately, *when* – food is produced contributes to its sustainability is seasonality. Desrochers et al’s study does not appear to take seasonality into account, while at the same time inexplicably accusing the local food movement of not taking seasonality into account. Embedded in the concept of “eating local” is the assumption of eating foods that are indigenous¹⁹ to the area and the season rather than inefficiently trying to produce out-of-season fruits and vegetables locally. For this reason, studies that, for example, compare tomatoes grown in Denmark in winter with tomatoes grown in Spain²⁰ miss much of the purpose of the local food movement.

Additionally, developing a local food system, even encouraging local food production, does not require the extreme “locavore” strategy (a related diet choice that encourages only consuming locally produced food) that the authors of these studies appear to assume. Local food proponents tend to advocate that a certain amount of the food consumed in a region be grown locally, particularly focusing on producing the items that are most efficiently grown in the region (including those indigenous to the area), leaving luxury imports – coffee, chocolate, tropical fruits – to be produced in their own indigenous climates, where they are more efficiently produced.

Despite the pages spent discussing the issue here, food miles are only one way that the conventional global food system contributes to environmental degradation, and even then, the environment is only one piece of the reasoning behind putting local emphasis on the food system. Community food security, economic diversity, community building, food education and connection with nature, which I will discuss in this paper, are all benefits of a local food system that interact with each other to improve community residents’ quality of life.

Author’s Perspective

I believe that local food systems can provide alternatives to some of the more environmentally and socially detrimental aspects of the conventional food system. The low number of links in the supply chain between producer, consumer, and government allow oversight to improve the food system’s ability to meet needs

¹⁶ Weber and Matthews, 2008

¹⁷ McWilliams, James. “Op-Ed: Food That Travels Well.” *New York Times*, August 6, 2007.

¹⁸ Philpott, Tom. “The Eat Local Backlash: If buying locally isn’t the answer, then what is?” *Grist*, August 16, 2007. <http://www.grist.org/article/eatlocal/>

¹⁹ “Laurel.” “Food Miles and Inefficiency.” *Simple Spoonful*. December 16, 2008. Accessed 5/5/09.

<http://www.simplespoonful.com/2008/12/16/food-miles-and-efficiency-mortal-enemies-or-misunderstood-friends/>

²⁰ Pirog, et. al., 2001

for economic viability, food safety, environmental quality and social justice. The authors of the previously mentioned policy primer on food miles set up a number of false dichotomies that favor the global food trade over local food, including the “choices” between environmental degradation or starvation, and between the conventional industrial global free trade food system or medieval subsistence farming, famine and disease. These connections assume a whiggish inevitability that ignores the history of policies that created the current food system.

I reject the assumption that environmental degradation is acceptable or necessary in order to provide people with healthy food. While local food activists may sometimes be nostalgic about traditional family farming, it is just as unrealistic for the people who accuse them of this nostalgia²¹ to romanticize the modern food system. Neither of these historic systems has evidently been sustainable. The challenge now is to learn from the best practices of both and supplement them with new ideas to evolve a new system whose creators and participants are conscious of its social and environmental impacts. One of the ways to do this is to bring a significant amount of the food system to the local level, where people can interact with and understand it viscerally.

Local food production is not the most important piece of a sustainable food system, it’s just the most controversial, particularly in a place like Napa, a classic example of the specialization resulting from comparative advantage. Other elements of the food system like health, education, retail, food assistance, labor and waste management are equally important players in creating a more sustainable food system. The values that I envision for this new food system include equal rights to health and healthy food choices, environmental protection, humane treatment of animals, strong community networks, career opportunity, healthy jobs with livable wages, economic opportunity and diversity, food safety, resource conservation, access to nature and open space, education about healthy food, where food comes from, nutrition and cooking, and the opportunity and support to farm and grow food.

Purpose and Structure of Paper

The purpose of the following paper is to take this interest in creating a more sustainable and community-supporting food system and apply it in my home, Napa County. I am not suggesting that Napa has unusual or exceptionally large problems. I am suggesting Napa has the same problems shared by every other locale that participates in the conventional food systems. I am addressing Napa because these problems have to be addressed locally as well as at the state, federal and international level. I am addressing Napa because if its community leaders care about its citizens’ health, and their actions can and do contribute to the food system, they have a right and a responsibility to alter those actions to optimize residents’ quality of life through the food system.

Currently, community leaders in Napa appear largely unaware of the implication of their actions for the food system, and in turn, the role that the food system as a whole plays in factors such as climate change and their constituents’ health. Although many community leaders care deeply about issues including youth opportunity, hunger, business development, waste management, environmental preservation and obesity, the movement toward community food system planning is new enough that it has not yet significantly reached the community’s infrastructure.

²¹ Cowan, Tyler. “Can You Really Save the Planet at the Dinner Table?: An Economist’s Critique of *The Omnivore’s Dilemma*.” *Slate*. November 1, 2006. Reproduced by the Mercatus Center: <http://www.mercatus.org/MediaDetails.aspx?id=22228>

In order to educate these community leaders about the importance of the food system and the possibilities available for consciously planning for the food system, I use six primary strategies in the following paper:

- 1) Describe deficiencies in the overall food system, and to convey the relevance of these deficiencies to the local audience, immediately show how those deficiencies specifically hurt Napa's residents.
- 2) Identify the large number of people in the community who are already working individually on these issues. This shows that the community already has significant assets in dealing with food system concerns, and also expresses the level of potential support for food system planning.
- 3) Argue that food systems planning is a growing movement that is not only a trend in community advocacy, but is receiving increasing official resources and infrastructure.
- 4) Present examples of other communities that are engaged in food system planning, particularly highlighting fellow Bay Area municipalities, who people in Napa may look to as peer communities.
- 5) Show models of both process and policy or program strategies that have been suggested or used in other communities. These serve as a toolbox of resources both for strategies and for resources to call upon for support and advice.
- 6) Recommend concrete steps to starting a food planning process. I emphasize the importance of community participation, and so rather than telling the community what it should do, I try to provide the tools for the community to decide for itself what it thinks it should do, and limit my own input to a process recommendation.

Introduction

Diet-related chronic illness, the rising cost of food and fuel, environmental degradation contributing to climate change, and economic recession are top social concerns in Napa County, just as they are nationally. These issues have traditionally been treated as though they were independent of one another, but recently professionals in seemingly disparate fields like nutrition, economic development, agriculture and social services have realized that they reflect an interconnected system, and that their fields' problems would be more successfully addressed in an interconnected way. While there are myriad complex factors involved in each of these issues, one element they have in common is their connection with the food system.

A food system comprises all the policies, programs, mechanisms, infrastructure, capital and values that go into the production, distribution, consumption and disposal of food. The American food system reaches around the world and through every sector. Within this global system there are smaller regional and local systems, and in many places local food systems offer alternatives to the global system.

Because food is interrelated with other systems at every level of the food system, interventions at any level can have an impact. Federal policies ranging from economic development to international trade to military actions are intimately linked with the degree to which our food is grown sustainably, distributed equitably, regulated for safety and produced via monopolies or small businesses. Local governments also have strategies available to shape their local food systems to address their communities' particular needs. They can shape land use policies, one of the prime responsibilities of local government, to encourage the availability of healthy food retail in underserved areas, preserve land for agriculture (a strategy Napa County helped pioneer), and provide space for community gardens. These changes, while directed at supporting the community, will also help improve the sustainability of the larger food system.

Decision-makers and citizens in several communities across the nation have decided to approach their local food-related problems from a food systems point of view by bringing diverse community groups together to find places where their goals intersect. As a result they have been able to combine the expertise and assets from different disciplines and sectors to find creative solutions, at the same time strengthening the capacity of these organizations and their participants.

In this paper I identify ways that Napa County could benefit from similar attention to its food system. Napa County has a diverse set of stakeholders and advocacy groups who are dedicated to finding solutions to local problems that are affected by the food system, and who have the resources to do so. Many of these groups are already working together (such as medical professionals and educators in the Napa County Children and Weight Coalition), but some of them may not realize that their goals and another group's goals might be better met through collaborative action. Because food is a factor in issues ranging from economic development to social justice to public health, improving the food system could be a catalyst for collaboration to find solutions to many unmet needs.

In the first section of this paper I identify problems in Napa County that could be improved with strategic changes to the food system. I identify the advocates and stakeholders who have the interest and resources to create these changes, as well as the progress they have already made within their own field. In the second section, I present an analysis of the benefit of addressing the food system comprehensively rather than attempting to deal with each related issue on its own. I emphasize the importance of involving all members of the community in the process, and point to city and regional planners as having the unique position and

set of skills to facilitate such a participatory process. In the penultimate section I suggest structural strategies for creating the process and infrastructure for collaboration and change. I also offer examples of specific actions undertaken by communities around the country to improve their residents' quality of life through the food system. In the final section I offer recommendations for the next steps that the Napa County community could take toward understanding, creating goals for and improving its food system.

Food System Issues and Stakeholders

The conventional food system, currently the primary food system of the United States, is differentiated from local organic food systems by featuring centralized production, heavy use of oil (estimates of the food system's fuel use range from 10-19% of the nation's total energy consumption^{22, 23, 24}), focus on high-profit, low-nutrition processed foods, and massive government subsidies to manage its externalities and make it profitable. Although this system is functional in its delivery of adequate amounts of calories and macronutrients to most consumers and production of profits for many of its producers, it has been indicted as a major factor in the rise of diet-related chronic illness, air and water pollution, climate change, outbreaks of food-borne illness, food insecurity for communities and households, and the economic and civic breakdown of rural America^{25, 26, 27}).

Fortunately Napa County has significant assets, in the form of its citizens and civic organizations, who work to mitigate the problems that occur where the food system market fails the community. Many Napa County organizations and residents are concerned about issues that are tied to these detrimental effects of the conventional food system, and address them in ways that vary according to their expertise and interest. In this section, I describe problems with the food system as they relate to Napa County, but also identify these groups (in **bold**) who have a particularly strong stake in the local food system, and their successes.

Health

Chronic diet-related diseases are one of Napa's food-related problems that could be alleviated through collaboration among organizations. Diabetes and obesity, a risk factor for diabetes and other chronic illnesses, are rising problems in Napa County, particularly impacting low-income and minority residents. According to the Napa County Community Health Needs Assessment, the incidence of diabetes rose from 5.1% to 8.3% in between 2003 and 2005, surpassing the California average (7%).²⁸ Focus groups and questionnaire respondents in the community assessment identified chronic illness and wellness as top issues of concern. The following table shows both the high rates of overweight and the significant disparity between races.²⁹

²² Pollan, Michael. "Farmer in Chief." *The New York Times*, October 9, 2008.

²³ Pirog, et. al., 2001

²⁴ Heller, Martin C. and Gregory A. Keoleian. *Life Cycle-Based Sustainability Indicators for Assessment of the U.S. Food System*. The Center for Sustainable Systems, Report no. CSS00-04, Ann Arbor, Michigan, December 6, 2000.

²⁵ Lyson, Tom. *Civic Agriculture*. Tufts University. Lebanon, New Hampshire, 2004.

²⁶ Harper, Douglas. *Changing Works*. University Of Chicago Press. 2001.

²⁷ Hightower, Jim. *Hard Tomatoes, Hard Times*. Schenkman Publishing Co., Cambridge, Mass, 1973.

²⁸ Barbara Aved Associates. *Identifying Priority Health Needs: Community Health Needs Assessment*. Prepared for the Napa County Collaborative of Health Organizations and Community Funders. November 2007.

<http://www.co.napa.ca.us/GOV/Departments/40000/Forms/NapaHealthNeedsAssess%20Final%20in%20PDF%20Nov.pdf>

²⁹ Brown, Dr. E. Richard. "AskCHIS." *California Health Interview Survey*. UCLA Center for Health Policy Research. 2001. <http://www.chis.ucla.edu/>

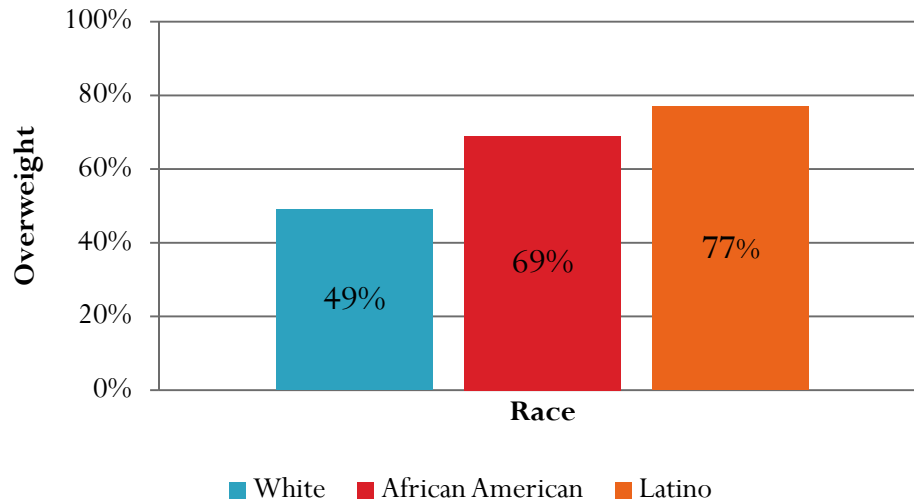


FIGURE 1. PERCENT OVERWEIGHT RESPONDENTS BY RACE, NAPA COUNTY, 2001.
SOURCE: CALIFORNIA HEALTH INTERVIEW SURVEY

One side of the calorie equation leading to the trend in overweight and its associated health costs is sedentary lifestyles, a factor that local governments in many places are taking action on by changing land use and transportation policies to facilitate more walkable and bikeable neighborhoods. The other side of the equation, however, is the decrease in consumption of fresh, unprocessed foods and the increase in consumption of unhealthful foods.

The conventional food system has resulted in more processed, less healthy foods; the kind of foods that are formulated more for their ability to be shipped long distances and return high profits on cheap, subsidized raw materials than for their nutritional value. At the same time as grocery stores have turned much of their stock from fresh foods to processed foods, the amount of meals prepared at home has decreased, with people turning to fast food for many of their meals.³⁰ Fast food meals also pack a high-calorie punch (although not a high health one) per dollar.³¹ Between 1998 and 2006, Napa County added 13 new fast food restaurants, increasing the number of fast food restaurants per person by 5%. During the same time span, the number of supermarkets and other grocery stores per person went down 7%.³² While processed “instant” and fast foods are expensive relative to the cost the processor pays for the raw materials, they are cheap relative to the amount of calories they provide, mostly in sugar and fat. People with limited incomes may stretch their food budget to the detriment of their health by consuming these products, contributing to health inequalities. As the current recession lowers people's capacity to buy food, this cost-saving strategy could lead to worsening health problems.

There are many groups in Napa County, both private and public, that focus on wellness and disease prevention. Napa County **Health and Human Services** oversees a range of programs, from administering federal food assistance services to providing services for older adults to promoting healthy lifestyles. They also are an organizing force for collecting county wellness information through processes like the Community Needs Assessment.

³⁰ Roberts, Paul. *The End of Food*. Houghton Mifflin Company, New York, New York, 2008. p. 43

³¹ Drewnowski, Adam and Pablo Monsivais, “The Rising Cost of Low Energy Density Foods. *Journal of the American Dietetic Association*, Volume 107, Issue 12, December 2007.

³² U.S. Census Bureau. *American Fact Finder. County Business Patterns. 1998 and 2006.*

Local medical caregivers like **Queen of the Valley Medical Center**, **St. Helena Hospital** and **Kaiser Permanente** focus on illness prevention through education, health screenings and community outreach. Kaiser has made headlines in nearby communities by organizing hospital-based farmers' markets. **Clinic Ole** and **Sister Ann Dental Clinic** provide medical services at reduced rates to low income residents and also have outreach programs.

Healthy Moms and Babies and the **Children and Weight Coalition** educate families about healthy diets and behaviors for children, while the **Napa-Solano Area Agency on Aging** and its affiliated organizations concern themselves with coordinating wellness for older adults. The **Calistoga Institute** connects integrative health with sustainable community development. All school districts were recently required to create wellness policies, and the **Napa Valley Unified School District Wellness Committee**, which has some crossover membership with the Napa Children and Weight Coalition, successfully worked with the school district's cafeteria supplier to improve the health of students' lunch choices.³³

Environment

Environmental problems are sometimes difficult to quantify, partially because Napa County has not yet established systems of measuring many of the factors of environmental damage. Additionally, while researchers can take measurements, such as of particles of a particular toxin in the air, it is harder to connect human actions to these resulting effects. For example, with non-point-source pollution (widespread polluting practices as opposed to few identifiable major polluters), it is difficult to break down what amounts of particular pollutants are caused by which sector or action. However, more attention to this kind of measurement is forthcoming. The **State of California** is now requiring that every county address the issue of climate change. The **Napa County Transportation and Planning Agency** and **Sustainable Napa Valley**, which recently completed a climate study of Napa County showing greenhouse gas emissions by sector,³⁴ have spoken about their intent to conduct a carbon footprint study.³⁵ If sources could be found to provide information by industry, this study could fill in missing data about the impact Napa's food system has on the local and larger environment.

Many of the environmental damages done by the conventional food system are not felt directly in the Napa Valley because by producing our food elsewhere and importing it we distance ourselves from the direct food production costs of polluted waterways and lost topsoil. At the same time, we exchange these distant consequences for those caused by our own specialization, the production of grapes and wine. Nor do our political boundaries stop pollution whose source is elsewhere, say the Central Valley, the Midwest, or other countries from which we import food.

³³ Neidhoefer, Chuck. Personal Communication, July 2008.

³⁴ Napa County Climate Action Plan Consultants. *DRAFT Greenhouse Gas Emissions Inventory for Unincorporated Napa County and Napa County*. Napa County Transportation Planning Agency/Napa Valley Transit Authority, January 2009.

³⁵ Seymour, Sally. Personal Correspondence. August 2008.

Fossil Fuel Use

The industrial model of food production and distribution is energy intensive and energy inefficient; in the U.S., only a fifth of the energy expended in the food system goes toward actually growing the food.³⁶ Considering that estimates suggest that the food system consumes ten to nineteen percent of the nation's total fuel,^{37, 38} a lot of remaining fuel use does not go directly toward growing food crops.

The concept of “food miles,” or the distance traveled by food products to reach the consumer, and the accompanying implications of fuel use and greenhouse gas emissions is controversial. A study comparing farm-to-institution food projects with conventionally sourced food brought to the same area found that the conventional food system used 4-17 times more fuel, which resulted in 5-17 times more CO² released.³⁹ According to the Natural Resources Defense Council, California's six top food imports produce up to 45 times more pollution than the same goods produced within the state.⁴⁰ Transporting food long distances burns tremendous amounts of fossil fuels, which is both expensive and contributes to pollution and climate change. Additionally, mode of transportation is significant. Trucking uses ten times the energy of shipping by train or barge,⁴¹ and it is the predominant method of delivery.⁴² (Napa currently does not track the impact of food sector transportation on its roads or environmental quality.)

However, some life cycle analyses of food products –studies that show all the fuel consumed or carbon emitted from production to consumption – suggest that transportation is a minor source of inefficiency in the food system compared with all the other places in the food system where environmental impacts are created.^{43, 44} The most significant amount of the carbon burned in the food system is in production (83% of total greenhouse gas emissions⁴⁵), and another contributor is private vehicle trips made by consumers driving to supermarkets to purchase their food.⁴⁶

In addition to burning petroleum as fuel in conventional agribusiness, the food system also uses it for farming inputs. The specialization of the industrial agriculture model separates uses, like livestock and crops, which would otherwise support each other in a sustainable closed cycle. Natural fertilizers are not returned to the land, so to keep land in production, the system uses fertilizers made from nonrenewable petroleum.⁴⁷ According to Heller, et al, “Many of the tasks that were formerly performed by plants (extracting nutrients, restraining disease and insects) or by animals (self-foraging of feed) have been taken over by the farmer through the input of external energy (fertilizers, pesticides, fossil fuels).” As the price of oil fluctuates and oil production becomes more expensive, a food system so heavily based on it is likely to become less financially sustainable.

³⁶ Murray, Danielle. “Oil and Food: A Rising Security Challenge” Earth Policy Institute. May 2005.

³⁷ Heller and Keoleian, 2000.

³⁸ Pollan, 2008

³⁹ Pirog, et. al., 2001

⁴⁰ National Resources Defense Council. “Health Facts: Food Miles.”

<http://www.nrdc.org/health/effects/camiles/foodmiles.pdf>

⁴¹ Heinberg, Richard. “Threats of Peak Oil to the Global Food Supply” *Foundation for the Economics of Sustainability Conference*. June 2005.

⁴² Weber and Matthews 2008

⁴³ Desrochers and Shimizu, 2008

⁴⁴ Weber and Matthews 2008

⁴⁵ Weber and Matthews 2008

⁴⁶ Smith, et. al., 2005

⁴⁷ Pollan, Michael. *The Omnivore's Dilemma*. Penguin Press HC, 2006.

Food Waste

Food is the number one specific material in Napa County waste disposal, making up 20% of household and 36.8% of business disposal.⁴⁸ In addition to taking up space in landfills, the breakdown of food creates methane, a potent greenhouse gas. One way of reducing the amount of food waste in landfills is to divert it into other uses, such as recycling, composting or energy generation. Another way is to reduce waste generation in the first place.

Jurisdiction	Diversion Rate	Programs Implemented
American Canyon	53%	35
Napa	51%	42
Napa - Unincorporated	80%	35
Upper Valley WMA	61%	36

TABLE 1. 2006 NAPA COUNTY WASTE DIVERSION RATES.
SOURCE: CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD⁴⁹

Napa is one of the Counties that has met California’s mandatory standard for waste diversion, through a variety of programs from recycling to education, and it is increasing the amount and scope of diversion programs specifically dealing with food. **Napa Recycling and Waste Services** has begun a food waste composting pilot program, which currently includes eight restaurants and businesses.⁵⁰ They are also working on a food waste-to-energy program in partnership with **RealEnergy**.⁵¹

Source reduction is another strategy for reducing the amount of waste disposed in landfills. Compared with whole foods purchased directly from a farmer, foods that are processed and shipped long distances tend to require a lot of packaging – both for preservation and for marketing purposes. Unused food itself contributes to waste; almost half of all food in the U.S. is thrown away, whether during production or by the individual households who have purchased it.⁵²

Environmental Preservation

Development, often in the form of urban or suburban sprawl, that converts previously undeveloped land is a major environmental concern in California. It can eliminate open space, destroy habitat, increase pollution and limit agricultural land. Although agriculture is a form of development, agricultural land provides many of the environmental and social benefits of undeveloped natural land, including open space and aesthetic views, quality of life (see Gillespie et al⁵³), and opportunity for interaction with nature (which

⁴⁸ California Integrated Waste Management Board “Napa County Waste Stream Profile.” Household: 2004, Business Estimates:1999. <http://www.ciwmb.ca.gov/Profiles/County/CoProfile1.asp>

⁴⁹ California Integrated Waste Management Board. “Jurisdiction Profiles.” *California Waste Stream Profiles Home Page*. <http://www1.ciwmb.ca.gov/profiles/default.asp>

⁵⁰ Treleven, Mike. “Program scraps together food for waste recycling,” *Napa Valley Register*, October 22, 2008

⁵¹ Seymour, 2008.

⁵² Jones, Timothy. University of Arizona Bureau of Applied Archaeology Study. 2004.

⁵³ Hilchey, Duncan L., Gilbert W. Gillespie, Jr., David L. Kay and R. David Smith. “Impact of Agriculture: It’s More than Economic.” *CaRDI Rural New York Minute*. Issue 16/April 2008. <http://devsoc.cals.cornell.edu/cals/devsoc/outreach/cardi/publications/upload/04-2008-RNYM.pdf>

leads to increased cognitive functioning and favorable attitudes toward environmentalism, see Wilensky⁵⁴). When managed sustainably, agriculture may be a sustainable use of natural resources. While many other counties in California are losing agricultural land and open space at alarming rates, Napa has a citizenry and advocates who have made Napa a model community for open space preservation, not least of which are the **Sierra Club**, the **Farm Bureau**, and the **Napa Land Trust**. The **Parks and Open Space District** now assists in maintaining, increasing and improving access to preserved open space from the governmental side.

Although the Sierra Club and winegrowers in Napa County are sometimes at odds about environmental issues, many grape growers have joined participating in good land stewardship practices and forming the **Napa Sustainable Winegrowing Group**. The Sierra Club also recognizes the importance of agriculture to the community, both through wine and because they recommend eating more local and organically grown foods. However, local agriculture is not yet a campaign of the local chapter.

Economic Development/Employment

Napa County's economy revolves around wine and tourism. While northern Napa has not been as hard hit as many other communities in the recent economic downturn, transient occupancy tax in St. Helena, an indicator of out of town tourism rates, went down fifteen percent in the last year.⁵⁵ Many of downtown Napa's storefronts are empty, despite new hotels and condominiums with as yet unleased first floor retail space nearing completion. Unemployment was up to 7.4% as of December 2008.⁵⁶ Dey Labs, one of Napa's largest non-wine employers, recently relocated, taking with it 500 jobs. Home values, as they have around the country, have plunged.

Because the need for food is constant and inelastic, the food system will remain an important piece of the economy regardless of the current economic climate. Fifteen to twenty percent of the nation's workers are employed in food system activities.⁵⁷ The APA suggests that addressing the needs of people – producers and consumers, business owners and employees – and the environment through the local food system may be a strategy to create economic stimulus.

Research on the economic effects of local spending supports this suggestion. Dollars directed locally have a multiplier effect in the local economy, increasing the amount of community income and reducing the amount of leakage outside the community. A study of the Seattle food system found that if twenty percent of food system spending were shifted to local businesses, the financial impact of that spending would increase to more than eleven times the impact of spending at non-local businesses.⁵⁸ Shifting Napa County's food system toward a more local food economy could help dollars recirculate around Napa, boosting business and employment.

⁵⁴ Wilensky, Joe. Back to Nature: A Relationship with Nature over the Life Course Can Affect Our Well-Being, Ability to Manage Stress, Cognitive Development, and Social Integration. *Human Ecology*, 30, 3, 2002.

⁵⁵ Stoneberg, David. "St. Helena Revenues Tumble." *Napa Valley Register*, March 02, 2009.

⁵⁶ Employment Development Department, "Labor Market Information." January 23, 2009.

[http://www.calmis.ca.gov/file/lfmonth/napa\\$pds.pdf](http://www.calmis.ca.gov/file/lfmonth/napa$pds.pdf)

⁵⁷ American Planning Association. "Policy Guide on Community and Regional Food Planning" 2007.

<http://www.planning.org/policy/guides/adopted/food.htm>

⁵⁸ Sonntag, Viki. *Why Local Linkages Matter: Findings from the Local Food Economy Study*. Sustainable Seattle. April 2008.

<http://sustainableseattle.org/Programs/LFE%20Files/LFE%20REPORT%20FINAL.pdf>

Fortunately there are a number of advocates for improving economic, business and employment conditions in Napa who have the ability to contribute to such a shift. The **Chambers of Commerce** and the currently inactive **Napa Valley Economic Development Corporation** are dedicated to developing businesses and jobs, and the members of the **Business Alliance for Local Living Economies** are particularly interested in supporting locally-owned businesses. The Department of Education's **Regional Occupational Program** provides occupational training in agricultural, animal science, viticultural and veterinary fields in St. Helena and through the **Vintage High School Farm**. For adults beyond high school, **Napa Valley College** has a range of career training programs.

Redevelopment in the City of Napa is administered through the **Economic Development Department**, and the **Napa Redevelopment Agency** oversees two specific areas, Napa's downtown "Parkway Plaza" and "Soscol Gateway." Here they have the opportunity to achieve community benefits through physical and economic redevelopment. Redevelopment efforts can include grocery stores and community gardens, amenities that would boost property values⁵⁹ and support healthy food access for the required affordable housing units that comprise twenty percent of tax increment financing funds. Planning for Healthy Places has published a toolkit on economic development and redevelopment to support healthy land use and business.⁶⁰ New development, such as the proposed Napa Pipe site, also has a role to play in supporting the local food economy and the food needs of its residents.

Transportation

Transportation plays a significant role in the food system, bringing inputs to producers, food to markets and helping consumers access those foods. Food traveling long distance can have a detrimental environmental impact, including damage to roads. Short car trips, like those to grocery stores, also account for a disproportionate amount of greenhouse gas emissions, as a car burns more fuel in the first few miles after a cold start. They also contribute to Napa's increasing traffic congestion. Nationally, thirty-seven percent of automobile trips are five miles or less, with forty-five percent of all trips taken for shopping and other errands⁶¹ - trips that could be made by transit, foot or bicycle, if land use policies supported such a modal split. The food system generates a considerable amount of damage through transportation alone.

In addition to the problem of negative impacts from private automobile trips, some residents do not even have the option of driving. As of 1996, there were .86 cars for every registered driver in Napa County, which is fewer cars per licensed driver than many other counties in the Bay Area.⁶² As the economy recedes and more residents lose assets, the number of carless adults will likely increase. While Napa County has the lowest number of zero vehicle households in the Bay Area,⁶³ this means that this population segment is more marginalized than in other counties, with less transit services feasible as a result of their

⁵⁹ Voicu, Ioan and Been, Vicki. *The Effect of Community Gardens on Neighboring Property Values*. Real Estate Economics, Vol. 36, Issue 2, pp. 241-283, Summer 2008.

⁶⁰ Feldstein, Lisa M., Rick Jacobus and Hannah Burton Laurison. *Economic Development and Redevelopment: A Toolkit for Building Healthy, Vibrant Communities*. California Department of Health Services, 2007.

⁶¹ Bureau of Transportation Statistics. "Daily Travel Quick Facts." *2001-2002 National Household travel Survey*. http://www.bts.gov/programs/national_household_travel_survey/daily_travel.html

⁶² Metropolitan Transportation Commission. "Auto Ownership in the San Francisco Bay Area: 1930 – 2010." http://www.mtc.ca.gov/maps_and_data/datamart/forecast/ao/aopaper.htm#sec33

⁶³ Metropolitan Transportation Commission. "Households by Vehicles in Household Forecast." *Vehicle Ownership Forecasts for the San Francisco Bay Area 1990-2030*. Planning Section, Metropolitan Transportation Commission, November 2005. http://www.mtc.ca.gov/maps_and_data/datamart/forecast/Vehicle_Ownership_Forecasts_Report_Nov2005.pdf

low numbers. Additionally, children and many elderly and disabled residents are unable to drive. Not owning a car is the primary reason VINE riders give for using the bus.⁶⁴ This is unsurprising, as this has historically been the target audience in Napa. Unlike an increasing number of communities which make increasing transit use for all residents a priority to reduce traffic congestion and environmental damage, the decade-old Transportation Element of the City of Napa General Plan (currently in the update process) assumes that transit, pedestrian and bicycle facilities are for the carless only.⁶⁵ Fortunately the new Napa County Transportation and Planning Agency (NCTPA) Transit Plan seeks to expand multiple modes of transportation for all, partially as a means to reduce Napa's carbon footprint.⁶⁶

A Connecticut study found a significant association between transportation accessibility and community food security.⁶⁷ According to the NCTPA, transit access to food is good; there are bus routes that go by every shopping location. Anecdotally, the NCTPA has not heard of any issue with accessing grocery shopping.⁶⁸ But analysis of how well grocery-free neighborhoods are served by these routes has not been done and might be useful. The NCTPA's *Short Term Transit Plan*⁶⁹ showed that one transit challenge is frequency of service for Upvalley residents to reach Santa Rosa (which is closer for them than Napa) for medical visits and shopping. This study shows that shopping is a top reason for using transit, particularly on weekends. A new paratransit service is in development to shuttle elderly residents to supermarkets, and this will fill a food access need that has existed for several years.

The NCTPA does not currently have the resources or mandate to analyze the impacts of food distribution traffic on local roads and the environment. Improving the ability of the local transportation planning agency to understand the ramifications of local transportation patterns is an important step in addressing climate change and community needs.

Traffic congestion is an increasing complaint in Napa County, in the South Napa area serving commuters and commercial trucks en route between Solano and Sonoma counties, along Highway 29, and in the City of Napa. Increasing transit options to grocery stores, making streets safer for pedestrians and bicyclists, siting new housing near public transportation routes and shopping and encouraging grocery stores in residential areas are all transportation demand management strategies that also improve access to healthy food. They also have the added benefit of contributing to more active living environments, which also encourage healthy behaviors. **Environmentalists**, the **NCTPA**, **CalTrans** (which has its own climate action program), **Public Works**, **Napa County Bicycle Coalition** and **Safe Routes to Schools**, **children** and their **parents**, **teachers** and **schools**, **disabled residents** and **older adults** all have an interest in making Napa County's transportation environment more accessible and healthier.

⁶⁴ Nelson Nygaard. "Short Term Transit Study: FY2008-2017 Draft Report." Napa County Transportation and Planning Agency. April 2003. <http://www.nctpa.net/docs/NCTPA%20SRTP%20-%20FINAL%20for%20Bd%20mtg.pdf>

⁶⁵ City of Napa. "Chapter 3: Transportation." *Envision Napa 2020*. Adopted December 1, 1998, reprinted with amendments to January 1, 2007. <http://74.205.120.199/images/CDD/planningdivisiondocs/generalplan/chapter3transportation.pdf>

⁶⁶ Hurwitz, Eliot. Personal Communication, June 2009.

⁶⁷ Tchumtchoua, Sylvie and Rigoberto Lopez. "A Town-Level Assessment of Community Food Security in Connecticut." *Food Marketing Policy Center Research Monographs*. University of Connecticut, 2005.

⁶⁸ Schwartzbach, Debbie. Personal communication, March 2009.

⁶⁹ Nelson Nygaard, 2008.

Household Food Security

Economic Access

Even as a majority of the County's population is suffering the effects of overnutrition, many residents are suffering from *food insecurity*, defined by the California Health Interview Survey as the inability to consistently put enough food on the table. Despite Napa County's international status as a culinary capital, it ranks second worst in California for food insecurity, with 38% of adults in low-income households reporting food insecurity.⁷⁰ This means that five percent of Napa's residents sometimes skip meals because they cannot afford to eat, sometimes forgoing food for themselves so that their children will not go hungry. This five percent is only those people who meet the baseline definition for food security, which takes into account only how much and how often people are able to eat meals.⁷¹ It does not take into account those whose diets fail to meet the criteria of food security found in more in-depth definitions of food security, which include nutritional value and relevance to their cultural diet, as well as, to expand to community food security, the economic, social and environmental sustainability of the system in which the food was produced.^{72, 73}

The number of food insecure people has been increasing,⁷⁴ and will likely continue to increase as the recession deepens, as the production of oil (used throughout the industrial food system for fertilizers, transportation and packaging) levels off,⁷⁵ and as food producing regions around the world (including California) feel the impacts of drought. As of December 2008, Northern California food bank lines had increased 36%.⁷⁶ Food prices in the last year have fluctuated dramatically, with soaring prices sparking riots around the world (and dropping prices leaving farmers themselves food insecure). One example in Napa is the impact of rising global flour prices, which have limited the availability of bread for food bank clients.⁷⁷ Innovative structural solutions are needed to ensure that all Napa's residents are and will be food secure.

Spatial Access

The large-scale distribution required by the economics of the industrial food system and modern grocery stores means that most food is sold in supermarkets rather than in smaller neighborhood grocery stores, farm stands, etc. As a result of the move toward fewer and larger supermarkets, liquor or "convenience" stores – which are named appropriately, as consolidated supermarkets are *not* convenient for the marginalized segment of the population who cannot drive or cannot afford a car – are the remaining source of food in many neighborhoods. This is evident in the sections of the City of Napa where grocery stores have closed. These convenience stores tend to have few fresh foods, poor quality produce (when they have

⁷⁰ California Food Policy Advocates "Napa County Nutrition Profile" 2005.

<http://www.cfpa.net/2008%20County%20Profiles/napa.pdf>

⁷¹ King, Shirley. Personal Communication, May 2009.

⁷² World Hunger Year. Food Security Learning Center. Accessed May 11, 2009.

<http://www.whyhunger.org/programs/fslc.html>

⁷³ Hamm, Mike and Ann Bellows. "Definition of Community Food Security." What is Community Food Security? Community Food Security Coalition. Accessed May 11, 2009. http://www.foodsecurity.org/views_cfs_fa.html

⁷⁴ UCLA. "Food Security (ability to afford enough food) in Napa County." *AskCHIS, California Health Interview Survey*. 2005 and 2007. (up from 30 to 37%) Accessed May 11, 2009. <http://www.chis.ucla.edu/main/DQ3/geographic.asp>

⁷⁵ Jeffries, Elizabeth. "Supply-Driven Oil Production Will Mean Continued High Prices." *Financial Director*, January 26, 2009.

⁷⁶ KQED. "Hungry in California." *Forum with Michael Krazny*. December 19, 2007.

[<http://www.kqed.org/epArchive/R712190900>]

⁷⁷ King, 2009

any at all) and a high percentage of shelf-stable junk foods. Fast food outlets tend to be the other source of food in many of these neighborhoods. According to a recent California study, people living in areas with a high ratio of fast food and convenience stores to grocery and produce outlets have 20% higher rates of obesity and diabetes.⁷⁸

An exception to the unhealthy corner-store phenomenon in Napa may be small ethnic food markets. Small stores in neighborhoods that are not serviced by supermarkets sometimes offer healthy, culturally-acceptable foods at prices below those at supermarkets.⁷⁹ Many of the smaller, locally owned grocery stores in Napa County are Latino-owned and stock Mexican and Central American foods. When Vallerga's in the River Park shopping center closed several years ago, it left the southwestern part of the City of Napa without a supermarket. A Mexican ethnic foods store, Carmelita's, opened recently in a smaller space in the same shopping center, perhaps filling some of the need for easily accessible fresh produce and meats. Carmelita's is an example of the role ethnic markets play in a more conventional commercial setting, but little tiendas like La Mariposa in the residential section of downtown Napa may fill the need in some neighborhoods for walkable fresh food destinations. Land use policies may need to change to allow small neighborhood services like this into more residential areas.

Health and food access problems are not distributed evenly throughout the population. People of color, with lower incomes, or living in low-income neighborhoods tend to be disproportionately affected by the health effects of access to healthy foods, and thus the consolidation of grocery stores.⁸⁰ In the following maps you'll notice that in the City of Napa, grocery stores cluster in the north end of the city, while block groups with the highest percentage of households in poverty cluster toward the south.⁸¹ Yet residential density, which you might expect would support more retail and other services, also tends toward the south end of the city.

⁷⁸ PolicyLink, UCLA Center for Health Policy Research and California Center for Public Health Advocacy. *Designed for Disease: The Link Between Local Food Environments and Obesity and Diabetes*. April 2008.

⁷⁹ Short, Anne, Julie Guthman and Samuel Raskin. "Food Deserts, Oases, or Mirages? Small Markets and Community Food Security in the San Francisco Bay Area." *Journal of Planning Education and Research* 26:352-364, 2007.

⁸⁰ Wrigley, N., Warm, D. & Margetts, B. (2003). "Deprivation, diet, and food-retail access: findings from the Leeds 'food deserts' study." *Environment and Planning*. Volume 35, p. 151-188.

⁸¹ The initial list of grocery and convenience stores was obtained from Google Earth, and I conducted ground-truthing on foot to correctly categorize the stores.

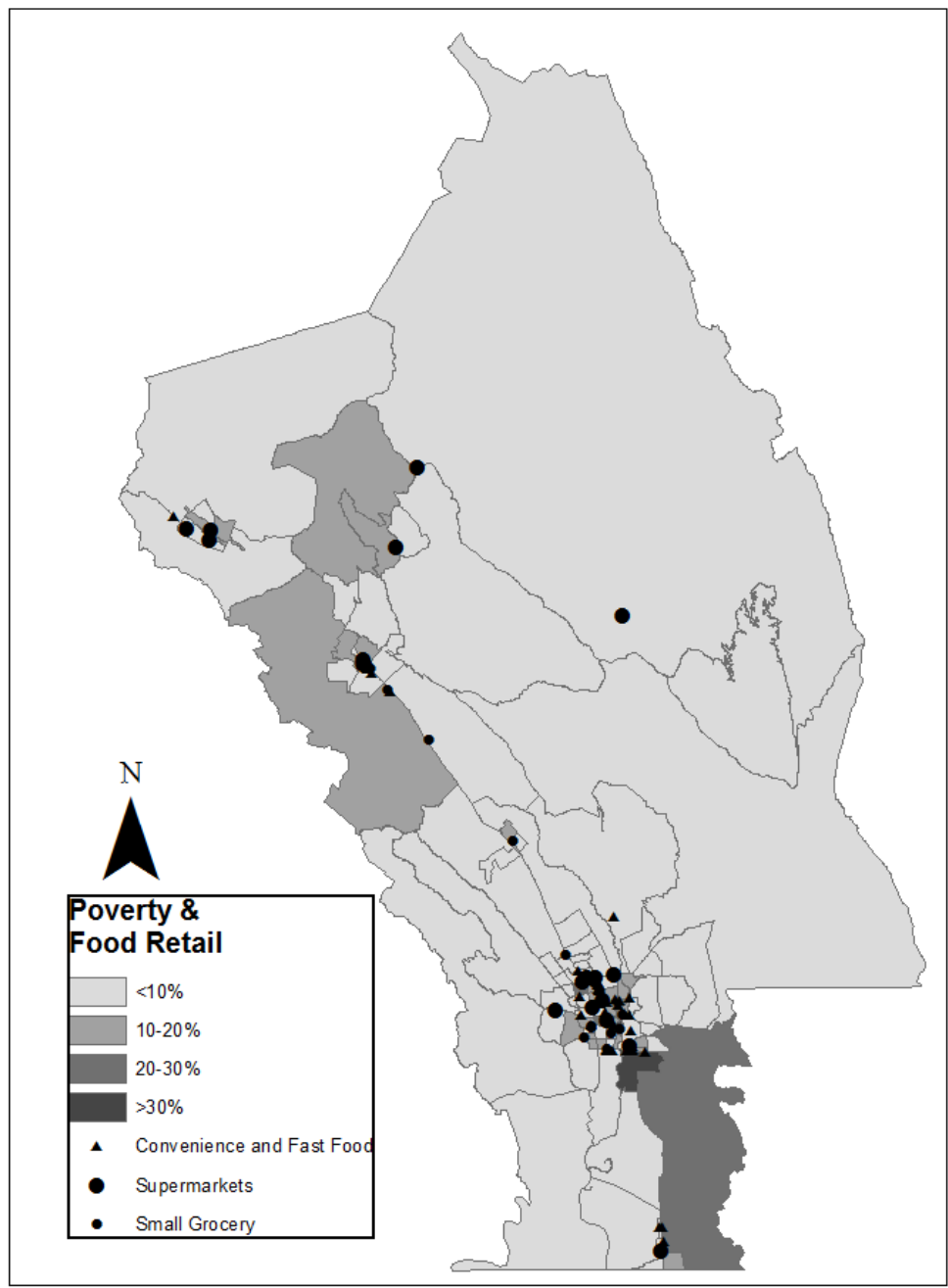


FIGURE 2. PERCENT OF HOUSEHOLDS IN POVERTY (BY BLOCKGROUP) AND CONVENIENCE VS. FRESH FOOD RETAIL LOCATIONS, NAPA COUNTY.
 SOURCE: U.S. CENSUS BUREAU, CENSUS 2000; GOOGLE EARTH 2008.

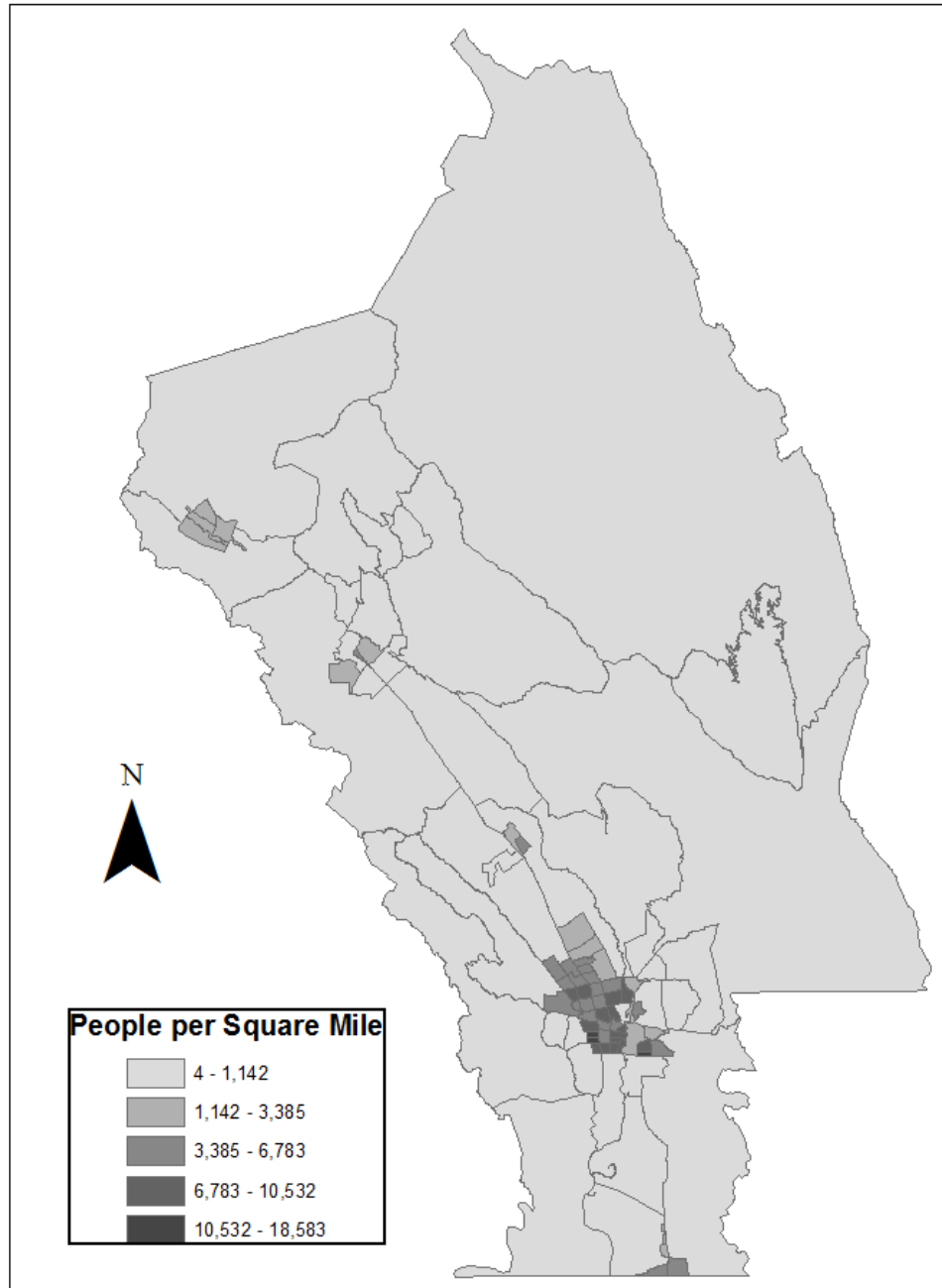


FIGURE 3. RESIDENTIAL DENSITY, NAPA COUNTY.
SOURCE: U.S. CENSUS BUREAU, CENSUS 2000.

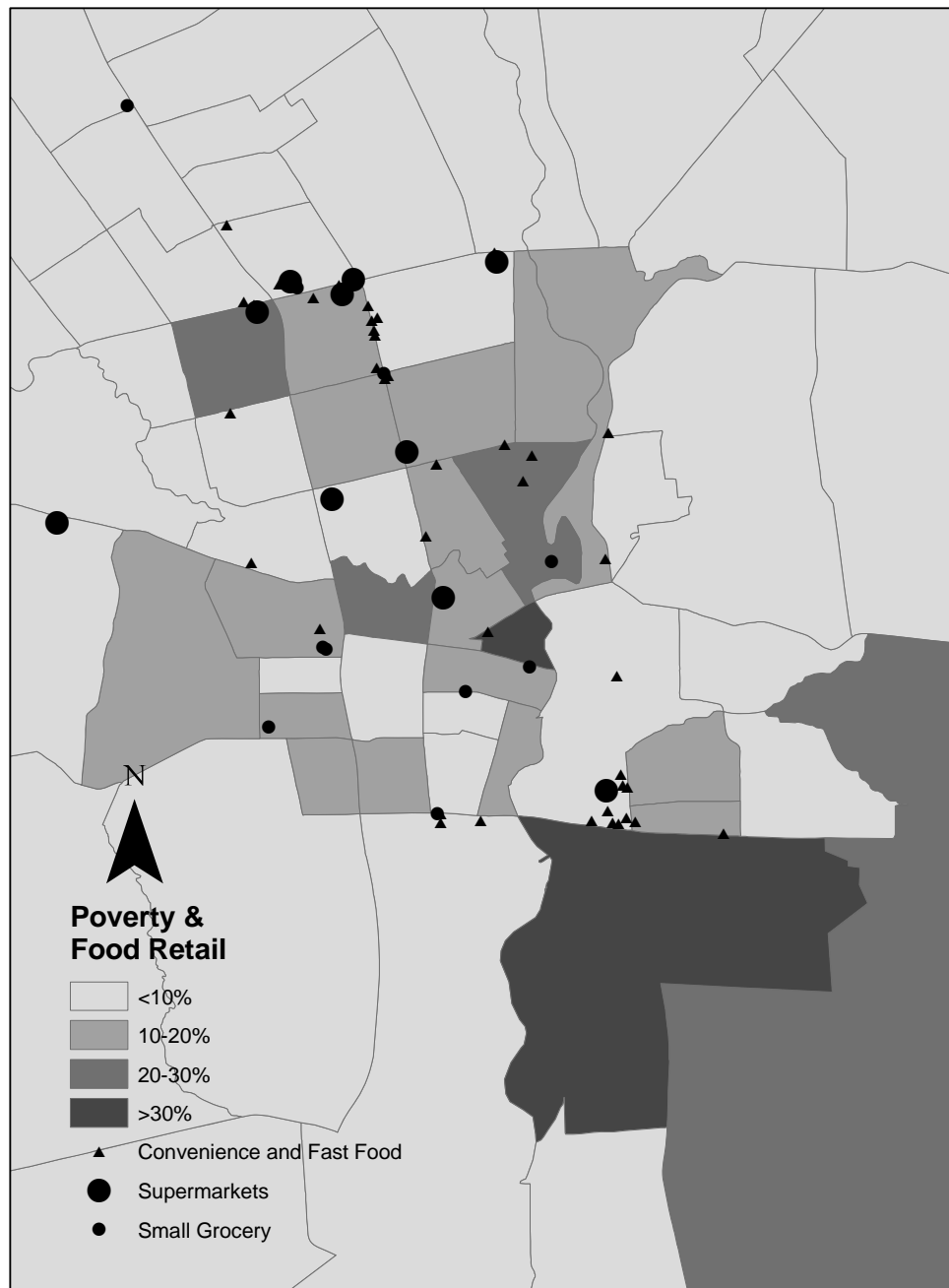


FIGURE 4. PERCENT OF HOUSEHOLDS IN POVERTY (BY BLOCKGROUP) AND CONVENIENCE VS. FRESH FOOD RETAIL OPTIONS, CITY OF NAPA.
 SOURCE: U.S. CENSUS BUREAU, CENSUS 2000; GOOGLE EARTH 2008.

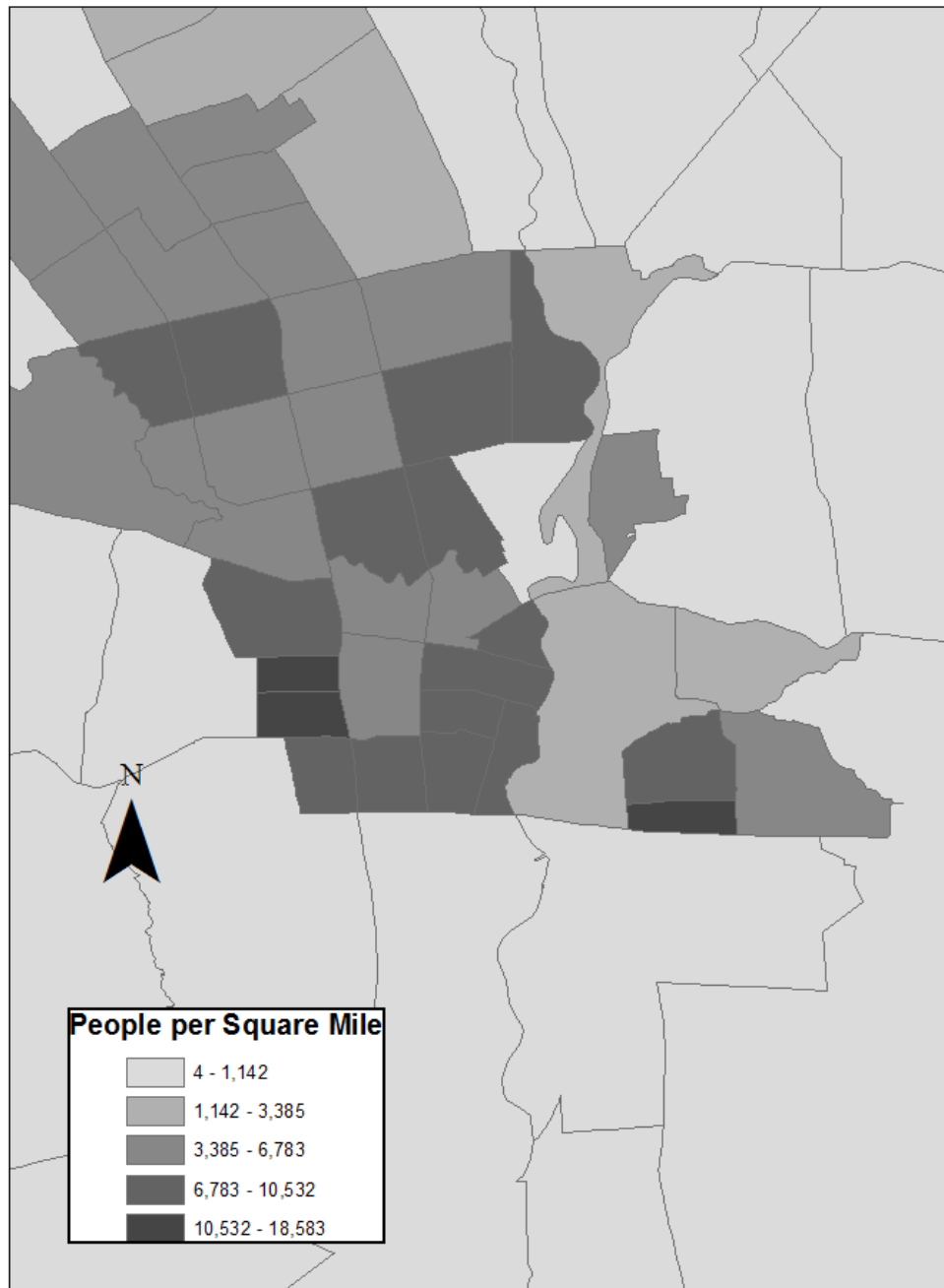


FIGURE 5. RESIDENTIAL DENSITY, CITY OF NAPA.
SOURCE: U.S. CENSUS BUREAU, CENSUS 2000.

Little research on suburban or mid-sized town food access problems appears to be available. It is unclear whether this lack of information is because sub-urban areas tend not to have the same concentrations of poverty as urban areas and thus less significant food access problems, or if attention is simply more focused on cities.

Although the worst spatial access problems may be seen in urban areas with high poverty and economic segregation, rural and suburban counties, even relatively wealthy counties like Napa, are not free from spatial inequality. In fact, poor households in overall wealthier areas are less likely to participate in food assistance programs.⁸²

A study of Bay Area inequity shows that mortality varies by location, including in Napa County.⁸³ It is evident from our obesity data that Napa County shares racially based health disparities with other communities.⁸⁴ It would behoove policy makers in Napa to study whether it also shares the spatial inequalities that contribute to these health disparities. Currently very little health data appear to be available for Napa County, particularly spatial health data. The California Health Interview Survey is the main source of information, yet some of the samples in Napa are too small to be statistically valuable.⁸⁵ Health advocates could collect and use more comprehensive local spatial health data to better identify environmental health inequalities in Napa County.

Food Assistance

There are several existing organizations in Napa who concern themselves with household and individual food security, such as the **Food Bank** for non-prepared foods, the **Salvation Army** and **The Table** for prepared meals, and on the government side, **Health and Human Services** and the **Women, Infants and Children (WIC)** program, which administers federal funds to provide low income and at-risk families with nutritious food. Programs through the **school districts** use **USDA** funding and commodities to provide students with free and low cost breakfasts and lunches during the school year. Unfortunately, many residents, particularly children, are not receiving the food assistance for which they are eligible. Napa ranks in the bottom ten in the state for participation in the school free and reduced price lunch programs, with 38.9% of eligible students not participating.⁸⁶ (Note: The figure in the cited document showing virtually nonexistent participation in summer feeding programs is misleading – Napa Valley Unified School District participates in the Migrant Feeding program as a substitute for the summer program, for which the California Food Policy Advocates profile does not account.⁸⁷) One of the challenges is the difficulty of getting parents to correctly and on time fill out the necessary forms for their children's participation in the program.⁸⁸

At Vintage High School, **teachers** concerned about their students ability to learn on empty stomachs created a program to provide breakfast, health education and tutoring assistance.⁸⁹ Older adults are

⁸² Tchumtchoua and Lopez, 2005

⁸³ BARHII. *Health Inequities in the Bay Area*. Bay Area Regional Health Inequities Initiative. 2008. http://www.barhii.org/press/download/barhii_report08.pdf

⁸⁴ Barbara Aved Associates. 2007.

⁸⁵ LoDuca, PJ. Personal communication. 2008.

⁸⁶ California Food Policy Advocates, 2005

⁸⁷ Ruiz, Robert. Personal Communication, April 2009.

⁸⁸ Ruiz, 2009

⁸⁹ Title, Travis. Personal Communication, 2008.

particularly vulnerable to food insecurity, and the **Senior Assistance Program** and **Food and Nutrition Services** are all interested in ensuring that seniors get the help they need to stay healthy. The Food Bank offers a **Brown Bag** program that delivers fresh and nonperishable food to homebound elders twice a month. The **Napa Shelter Project** provides nutritious food for their clients in both their South Napa and Family shelter; and in the latter, partners with Napa Valley College to bring nursing students in to teach nutrition and food hygiene. There are also agencies that do not make food security their mission, but have a potential role in creating alternative affordable, local sources for food through urban agriculture and community gardens.

Agriculture

Agricultural Industry

Napa County is primarily agricultural and maintains exceptional policies to preserve this character, which supports not only the economy, but provides other positive benefits to residents, like recreational access, green open space in the countryside, and quality of life.⁹⁰ However, food crops are a marginal segment of this agricultural production. As of 2008, 98% of Napa County's agricultural production consists of wine grapes, with almost 43,000 acres planted in wine grapes, and only a handful of farmers growing the remaining food crops.⁹¹

Despite the significance of the wine industry to the county's economy and character, there are many residents with a strong interest in ensuring that food production – not just viticulture – remains part of Napa County's heritage. The **Napa County Livestock Council** is a group of concerned citizens formed in response to a proposed county limit on the number of livestock allowed on a parcel, as well as the existing difficulty of finding land appropriately zoned for animals.⁹² **4-H, Future Farmers of America, Connolly Ranch, the Napa and St. Helena ROP Agriculture programs, and the Vintage High Seed-to-Table Program** all focus on giving children and youth the opportunity to learn about producing livestock and crops. This provides access to nature, an understanding of where food comes from, practice with responsibility, and/or prepares them for a career in agriculture. Even though more and more students completing the Napa County Office of Education's Regional Occupational Program (ROP) in agriculture are interested in teaching agriculture, agricultural jobs outside viticulture are a challenge to find in Napa County. Students in animal science end up working for veterinary services if they want to remain in Napa County.⁹³ **Agricultural students** might be interested in increasing opportunities for jobs in their field so that they do not have to leave their hometown to practice their chosen profession. **Food security advocates** also have an interest in promoting agriculture, because food production resources in an area lead to higher food security.⁹⁴

The **Family Farm League** exists to provide a community of support for local producers, whether they are creating food for their own use or for commercial sale. The office of the **Agricultural Commissioner** is

⁹⁰ Hilchey, et. al., 2008

⁹¹ Agricultural Commissioner. *2008 Agricultural Crop Report*. Napa County Department of Agriculture and Weights and Measures. April 2009.

⁹² Vietor, Heidi. Personal communication, April 2009.

⁹³ Vietor, 2009

⁹⁴ Tchumtchoua and Lopez, 2005

considering a forum with local farmers to identify and remove government impediments to growing and selling local food.⁹⁵ The **Farm Bureau** is an advocate for the needs of agricultural producers, and the **UC Cooperative Extension** also provides resources to assist growers. **Slow Food**, an international organization emphasizing a return to healthier and more intentional ways of growing and eating food, has a local chapter, or “convivium,” that supports **local farmers** growing heirloom foods. The county's network of **farmers' markets** provides a forum to get foods from these producers, as well as those from nearby counties, directly to local consumers. Despite the pervasive attitude in the community that food production in Napa County is impractical (and accompanying tax assessment policies that support that assumption by assessing agricultural land as if it were growing higher-value wine grapes⁹⁶), local farmers themselves and many of these farm-supporting organizations seem to disagree.⁹⁷

Sonoma County Agriculture

The American Farmland Trust recently released a report called *Sustaining Agriculture in Urbanizing Counties* that analyzes the promise of agricultural production and policy in peri-urban areas. Nearby Sonoma County was one of the cases studied for the report. Sonoma shares many characteristics and agricultural preservation strategies (which were lauded in this study) with Napa County but retains a wider range of agricultural diversity. Sources in Sonoma reported “that vegetable farmers could not afford to buy any land, so dominant in the market were farmers and investors for wine grapes” – a state of affairs shared with Napa. Nonetheless, survey respondents felt that the outlook for producing food for local customers was “bright. A lot of consumers are in the area for farmers to sell goods to.” The County itself is supportive; Sonoma County’s Agricultural Preservation and Open Space District maintains a “Small Farms Program” that supports vegetable production by leasing agricultural land.[†]

[†] Esseks, Dick, Lydia Oberholtzer, Kate Clancy, Mark Lapping and Anita Zurbrugg. *Sustaining Agriculture in Urbanizing Counties*. American Farmland Trust January 16, 2009.

Community Gardens

Community gardens help people help themselves, providing the infrastructure and support for gardeners to supplement their food budget with low-cost, nutritious foods. According to one seed producer, one “Victory Garden” plot can provide up to \$650 of fresh vegetables from \$10 of seeds (presumably not taking gardening materials and labor into account).⁹⁸ Some gardens, like in West Seattle’s low-income High Point neighborhood, allow members to sell the fruits (or vegetables) of their labor, supplementing their incomes and providing another source of fresh produce to those in the neighborhood who are unable to work their own plots. In many places, community gardens have raised property values by developing vacant lots and greening the neighborhood, as well as providing an amenity that can grow a sense of community. An

⁹⁵ Gitelman, Hillary. Personal Communication, June 2009.

⁹⁶ Napa County Assessor. Personal Communication, November 2007.

⁹⁷ Hauberger, Mark. Personal Communication, August 2008.

⁹⁸ Burpee. <http://www.burpee.com/product/id/112011.do>

Extension study of community gardens across the country observes that “Gardening cut across social, economic, and racial barriers and brought together people of all ages and backgrounds.”⁹⁹ Another study notes improved social networks and organizational capacity of neighborhoods with community gardens, which may be of interest to the newly formed **Association of Napa Neighborhoods**.¹⁰⁰ Recognizing the value of community gardens both to garden users and the community as a whole, many local governments provide financial and technical support through community garden programs.

Support for community gardens is increasing. As the economy continues to plummet, many people are turning to gardens for some of their food. In the spring of 2009, First Lady Michelle Obama symbolically led a group in breaking ground for a White House garden to communicate the importance of fresh, healthy food for all Americans. The first public meeting of Napa’s new (and only, in the City of Napa) public community garden, which is receiving a water hook-up from the City of Napa (but is still required to submit fees for a public use permit), drew representatives of several groups already interested in starting their own community gardens. Likewise, many community members at a community forum for the Napa parks master plan expressed interest in community gardens, particularly connected with other agricultural educational facilities like Connolly Ranch or the now defunct Copia Garden.¹⁰¹

Low-income residents who most need the opportunity to access cheap sources of healthy food are those who are least likely to have available land of their own to garden. Including community gardens in new developments with an affordable housing component would be one way to increase affordability, which encompasses not only the cost of housing, but the cost of food and transportation accessible from that location. There are existing models for this in Napa, with garden plots available in places like the Calistoga and River Ranch Farmworker Housing Centers (**Napa Valley Housing Authority**), Charter Oak Apartments and Whistlestop Townhomes (**Napa Valley Community Housing**). Several wineries also provide plots for their workers.

American Canyon and **Calistoga** each have a community garden funded and maintained partly by city staff. Other Napa County cities could establish similar programs to facilitate public gardens, with **planning departments** easing the permitting process and **utilities** providing subsidized water. **Parks and recreation departments** and the **Napa County Parks and Open Space District** could identify land from their own holdings that could support community gardens, as well as providing materials. The **County Assessor** could make available information about what land parcels are vacant and appropriate candidates for development as small farms or gardens. Agencies like the **Housing Authority** and **Redevelopment Agency** and developers of land like the proposed **Napa Pipe** project can incorporate these concepts into their affordable housing work. The **Cooperative Extension** and **Master Gardener** programs could provide gardening education. **Schools**, many of whom already have some form of teaching gardens, could participate in joint use programs to expand biological science education and connect with their neighbors of all generations.

⁹⁹ Ishwarbhai, C. Patel. “Gardening’s Socioeconomic Impacts.” *Journal of Extension*. 29:4:1991. <http://www.joe.org/joe/1991winter/a1.php>

¹⁰⁰ Armstrong, Donna. “A Survey of Community Gardens in Upstate New York: Implications for Health Promotion and Community Development” *Health and Place* 2000;6(4):319-327 <http://www.cityfarmer.org/CGNewYork.html#donna>

¹⁰¹ Napa Parks Master Plan Community Workshop. City of Napa and MIG. January 24, 2009.

Food distribution

Commercial food distribution points include retail, wholesale, direct, restaurant and institutional businesses. They have the power to connect local farmers with consumers, increasing demand for their products, and providing access to healthy food to people throughout the community.

Retail

The most prominent retail form is **supermarkets**, but Napa food retail also includes **small markets** (often specializing in Mexican and Central American foods), **specialty foods stores**, and to some extent, **convenience stores**. Small markets, like La Luna in Rutherford or Tapatia Market in downtown Napa, can provide healthy food in places where supermarkets may be an inappropriate land use or not have enough demand to be profitable. Sometimes prices are lower at these types of markets than at chain supermarkets.¹⁰² Local grocery stores like Vallerga's and Sunshine Foods and specialty stores like Dean & DeLuca are typically more easily able to buy and sell local foods than are larger chains, who only buy in quantities that are impractical for small farmers.¹⁰³ However, supermarkets increasingly have policies that allow them to buy local foods, as does Napa newcomer Whole Foods. Even convenience stores are sometimes open to replacing some of their less healthy options with fresh or whole foods. In fact, there is a network of programs devoted to encouraging this practice.¹⁰⁴

Direct

Farmer's markets and community supported agriculture (CSA) programs are common strategies for getting food directly from producers to consumers. This ideally results in cheaper produce for customers and higher returns for the farmers by cutting out a middleman. Community supported agriculture, where customers purchase regular shares of a farm or farming cooperative in return for regular allotments of seasonal produce, additionally can have the benefit of providing farmers with seed money up front, when they most need it. Some CSAs offer subsidized shares for low-income households. Until recently, locally available CSA schemes have been based in neighboring counties. **Comida Carneros** will be starting Napa's first CSA in the 2009 season. Farmer's markets are available in most cities in the county once a week during the growing season. No studies are publicly available comparing prices in Napa County between farmer's markets or with grocery stores, although anecdotally, farmer's market prices in Napa are lower than in St. Helena, and prices at the Napa Farmer's Market are comparable with the non-sale prices at grocery stores.¹⁰⁵ Food assistance programs are available to farmer's markets, including the WIC Farmer's Market Nutrition Program and the Senior Farmers Market Nutrition Program.

Restaurants

Due to California's leadership in the seasonal, local food trend, many Napa **restaurants and chefs** are already enthusiastic buyers for local foods. Some, like Ubuntu and Brix, even have their own gardens. Silverado Country Club been noted for its chef's work with the **Chef's Collaborative**, an organization whose goal is "to celebrate local foods and foster a more sustainable food system," to encourage links

¹⁰² Short, et. al., 2007

¹⁰³ Olsen, Brett. Personal Communication, June 2008.

¹⁰⁴ Healthy Corner Store Network. <http://www.healthycornerstores.org/>

¹⁰⁵ Wagenknecht, Brad. Personal Communication, April 2009.

between local food producers and restaurants in the Valley.¹⁰⁶ Many restaurants participate in community benefits in some way, and might be interested in other ways to connect through the community, through expansion of the composting program, youth apprenticeships, food bank donations, nutrition and cooking education or other links. Outreach and programs to make fresh, local food financially available to less upscale restaurants is a fairly untapped strategy in Napa.

Institutions

Institutions are major purchasers of food, including public, private and secondary **schools** who provide breakfast and lunch programs to **jails**, **hospital** inpatient meal programs, **business campuses** that provide cafeterias for their employees, and **homeless shelters** that provide food to residents. Napa additionally has two culinary schools that consume a significant amount of food. Many communities have instituted farm-to-school or farm-to-hospital programs that both improve the quality and nutritional value of institutional food and support the viability of local farmers.¹⁰⁷ Food service directors report benefits of these farm-to-institution programs that include aiding the local economy, community pride, fresher products, public relations/consumer demand, ability to purchase small quantities, less expensive product (including transportation costs), and less use of pesticides and preservatives.

The **Culinary Institute of America** has a joint program with the Harvard School of Public Health that introduces foodservice professionals to healthful culinary strategies, which could very well include purchasing from local producers. This program could be a resource for Napa County institutions.¹⁰⁸

Youth

Although there is crossover between most youth issues and the issues of the community at large, youth tend to be at a higher risk for many of the problems that affect the general population. They also have less control over their lives and their environment than adults.¹⁰⁹ Because of these differences, some concerns and potential interventions may be youth-specific.

Healthy Food Access

Nutrition and food access are a significant problem for Napa County's children. 32% of seventh graders in 2008 were at unhealthy weights.¹¹⁰ Because children have a higher rate of poverty (11% for children as opposed to 8% for the general population), they are at a higher risk for food insecurity. Yet 38% of Napa County students who were eligible for free or reduced breakfast/lunch did not receive them. In addition, the demand for more financially accessible meals is increasing: Napa County saw a 15% increase in free or reduced price meals between the '06-'07 and '07-'08 school years.¹¹¹ Some of this increase may be due to

¹⁰⁶ Chefs Collaborative. <http://chefscollaborative.org/>

¹⁰⁷ Vallianatos, Mark, Richard Gottlieb and Margaret Ann Haase. "Farm to School : Strategies for Urban Health, Combating Sprawl, and Establishing a Community Food Systems Approach." *Journal of Planning Education and Research*. Association of Collegiate Schools of Planning, 2004, 23, 4.

¹⁰⁸ Worlds of Healthy Flavors. "Worlds of Healthy Flavors Online." Culinary Institute of America and Harvard School of Public Health. <http://www.ciaprochef.com/wohf/index.html>

¹⁰⁹ Passon, Camille, Daniel Levi and Vicente del Rio. "Implications of Adolescents Perceptions and Values for Planning and Design." *Journal of Planning Education and Research* 2008; 28; 73.

¹¹⁰ California Food Policy Advocates, 2008

¹¹¹ California Food Policy Advocates. *California School Meals Served*. <http://www.cfpa.net/CASchoolMealChange2.pdf>

improvements in the Napa Valley Unified School District (NVUSD) foodservice program that make cafeteria lunches more desirable.¹¹² Thanks to the NVUSD Wellness Committee, formed to create a wellness policy federally mandated of all school districts, the quality of these meals in the NVUSD has improved dramatically. The committee was able to work with the cafeteria distributor, Sodexo, to improve the wholesomeness of the food in school cafeterias, reducing sales of high-calorie, high-sugar items to children and adding salad bars with fresh vegetables.¹¹³ Although some school districts purchase regional foods when they can (like Clover-Stornetta milk), no school districts in Napa County have yet attempted a farm-to-school program; one of the barriers is a required five million dollar insurance liability policy, which is prohibitive for individual small farmers.¹¹⁴

Nutrition Education

Children who have been involved with the creation of the food they eat are much more likely to try healthy new foods and make healthy food choices than those who only learn about the importance of vegetables in a traditional classroom setting.¹¹⁵ Other than the more in-depth agricultural programs like ROP and 4-H, a few general programs to provide youth with hands-on education about food have been established in an individual basis, primarily through schools. These include school gardens, a cooking cart education program at Calistoga Elementary, and Vintage High School's innovative farm to table program that has combined student gardening with culinary classes and healthy, fresh foods sold on campus as an alternative to other lunch carts. However, these have been the result of individual groups working through the challenges on their own rather than of support from an ongoing community effort. Without this structure to sustain the programs, many startup school gardens have fallen into disuse. Public cooking classes currently available through **Community Education** tend to focus on gourmet food and wine rather than basic cooking skills, and subsequently prices are not geared toward youth or low-income residents.

For parent-directed nutrition education, the **Children and Weight Commission**, with **First Five Napa County**, has produced brochures and offered classes on healthy eating and physical activity to parents and child care providers. Napa County **Health & Human Services** does not have a nutrition program, but has brochures on healthy diets available. The office also plays an educational video with suggestions for healthy snacks and tips for reading nutritional information that clients view while waiting to receive benefits services. Health & Human Services is currently working with the Food Bank on a nutrition education program,¹¹⁶ a partnership that has the potential to connect with other nutrition professionals and advocates around the county.

Alternatives to Violence

Children have higher rates of poverty than the general public, with 8.9% of children in Napa County living in poverty.¹¹⁷ Because poverty is correlated with so many risk factors, youth who are at risk for unhealthy diets are often the same youth who are at risk for gang violence. A perceived upswing in gang and other youth violence in the community has created attention for youth issues. The Board of Supervisors has sponsored a community-wide **Gang Task Force** in addition to the **Police Department's** already existing

¹¹² Ruiz, 2009

¹¹³ Neidhoefer, 2008.

¹¹⁴ Ruiz, 2009

¹¹⁵ Koch, Pam. Columba Teacher's College. http://www.ecoliteracy.org/publications/rsl/pam_koch.html

¹¹⁶ King, 2009

¹¹⁷ California Food Policy Advocates. 2008

Gang Task Force. Organizations who work with at-risk youth, like Clinic Ole's **Your Alternatives to Risk**, or **Juvenile Hall** staff, advocate for alternative activities to keep them from violence and gang involvement.

The issue of youth not having many opportunities for unstructured entertainment, career exploration or learning responsibility has been raised numerous times in the community. Recently, many Napa residents expressed concern that the Napa Valley Unified School District's decision to increase academic graduation requirements will further reduce students' opportunities for arts, cultural and career training.¹¹⁸ There are a few extracurricular options, including the **city recreation departments** and Napa Valley College's **Community Education** program. However, many youth activity programs, including those through **Connolly Ranch**, **4-H**, **Community Resources** and the **Boys & Girls Club**, tend to reach younger children rather than teenagers and young adults. Most Community Education courses are taught at the Upvalley Campus, which, although an important resource for the Upvalley community, is not easily accessible to those living at south end of the county, where the majority of Napa's low-income households are found. The newly formed **Wandering Rose**, a youth-oriented performing arts support organization, is working in the community to promote more creative opportunities. Many **church-based youth groups** provide space for youth to have fun and discuss important issues with their peers and role models. **Private recreation businesses** like dance studios, music schools and Napa's rock climbing facility play a part in providing youth activities.

Many communities have positively influenced at-risk youths' lives when they connect youth concerns and activities with the food system. Youth programs in Napa have already discovered experientially that regular and nutritious meals make a significant difference in the ability of youth to focus on school. Vintage High School's nutrition program supports at-risk students with free meals, nutrition education and tutoring to help them succeed. The Family Shelter has found that providing healthy breakfasts and enforcing a kitchen curfew to ensure regular meals and bedtimes significantly reduces tardiness and truancy.¹¹⁹ Other communities, like the Red Hook neighborhood in Brooklyn, New York, have found that involving at-risk youth in community agriculture can provide structure, skills and life lessons that show participants that they have alternatives to the option of gang involvement and crime.^{120, 121}

Emergency Preparedness

Household food security is a daily concern of families and agencies throughout Napa County. However, *community* food security is also an important function of the food system. This means ensuring that the community's food supply is constantly available, not vulnerable to contamination or disruption. Napa County's **Department of Environmental Management** regulates local restaurants and food retail, but due to the international nature of our food system, product safety is largely left to Federal government. However, recent food safety breakdowns, such as e. coli in spinach and salmonella in peanut butter, have shown that outbreaks in food produced and distributed on a national scale are difficult to track and inherently more likely to have widespread impacts than foods produced under local control. The increasing

¹¹⁸ Hoffman, Natalie. "Education Initiative Draws Community Ire." *Napa Valley Register*. January 17, 2009

¹¹⁹ Horton, Charlene. Personal communication, March 2009.

¹²⁰ Marvy, Ian. "Urban Agriculture." Presentation. American Planning Association National Planning Conference 2007.

¹²¹ Slater, Jill. "A Farm in the Asphalt Heart of Brooklyn." *Seasonal Chef*. Rocky Hill, NJ, October 2005.
<http://www.seasonalchef.com/farmredhook.htm>

complexity of supply chains that lead to also increasing amounts of processed foods mean that producers are becoming less able to guarantee the safety of these products.¹²²

Local efforts can support food security in the event of an emergency such as a natural or political disaster. The **Napa Food Bank** is designated in emergency plans, both as a very short-term source of food and as a distribution mechanism for **FEMA** supplies.¹²³ Hurricane Katrina showed that federal response to disaster can be slow and inadequate, both in immediate response and in long-term recovery efforts. A large earthquake in the Bay Area could disrupt the warehouses and supply hubs that are an integral part of the national food system. The **Napa County Office of Emergency Services** coordinates response and mitigation efforts in preparation for disaster. They may want to consider that local food production is one strategy for ensuring that, after a disaster, the community can comfortably ride out disruptions to the larger food system.

¹²² Moss, Michael. "With Frozen Foods, Burden of Safety is on You: Processed Food Firms Increasingly Unable to Ensure Items are Pathogen-Free." *New York Times*, May 14, 2009.

¹²³ King, 2009

Local Food System Planning: Connecting Community Interests and Resources

Benefits of Comprehensive Food Planning

The American Planning Association recently observed that food is as important in our lives as air, water and shelter, which have each been a major focus of planning and community regulation. Yet despite food suffering similar market failures that require public intervention, until recently food has largely been ignored at the local level. As we have seen from the previous list of stakeholders with an interest in the food system, very aspect of a community's quality of life touches the food system at some point, from health and social justice to economic development and transportation systems. Just as food is critical to a person's existence, a healthy and sustainable food system is a critical part of a healthy and sustainable community.

Many of the previously mentioned organizations and agencies, despite their different missions, have common interests when it comes to the food system, or at least interests that could be met by working on the same projects together. They stand to gain by all working together to improve the community food system. Sustainable community food systems (food systems in which elements of production, distribution, consumption and disposal are within the community region) have the potential to enrich residents' lives and improve their health. They can create connections within the community, provide healthy alternatives to industrially processed foods (and knowledge about how to prepare them), reduce the amount of fossil fuels contributing to climate change from food production and transportation, increase diversity of jobs and economic development strategies, increase access to fresh food for people who have limited resources, and maintain community food security in case of a shortage caused by fluctuating oil prices or emergency.

Currently, however, each of the aforementioned issues is left entirely up to each department and agency that has an explicit mandate to address them. Napa mirrors the national trend, in which responses to deficiencies in the food system have been piecemeal, with each agency taking responsibility only for the solutions that meet their particular mission.^{124, 125} Stakeholders in the food systems movement have in the past failed to unify their goals into a master frame that would have more organizing power.¹²⁶ For example, land use decisions are entirely under the purview of planning departments, and wellness responses are left to health departments. This "silo" approach ignores connections; how land use contributes to the ability of residents to obtain healthy food and have a safe environment in which to integrate exercise into their day. These sorts of connections exist not only between government departments, but between government and nongovernmental organizations, school districts, nonprofits, philanthropic and advocacy organizations, local

¹²⁴ Fisher, Andrew and Robert Gottlieb. 1995. "Community food security: Policies for a more sustainable food system in the context of the 1995 Fam Bill and beyond." Ralph and Goldy Lewis Center for Regional Policy Studies School of Public Policy and Social Research, University of California. Los Angeles, 1995.

¹²⁵ Winne, Mark. *Closing the Food Gap: Resetting the Table in the Land of Plenty*. Beacon Press, Boston, Massachusetts, 2008.

¹²⁶ Stevenson, G.W., Kathryn Rohf, Sharon Lezberg, and Kate Clancy. "Warrior, Builder and Weaver Work: Strategies for Changing the Food System." *Remaking the North American Food System*, editors C. Clare Hinrichs and Thomas A. Lyson. Board of Regents of the University of Nebraska. Lincoln and London, 2007.

business, and citizens at large. The expertise from each field can help inform the work of the other, the collaboration building more integrated and effective solutions.

Several of the aforementioned stakeholders already are working together on individual projects. Napa is a remarkably collaborative community, particularly among its community based organizations. However, Napa's traditional approach to food issues has the same limitations as the nationwide approach. Advocates provide excellent programs that do mitigate local food problems, but they don't necessarily provide long-term solutions or strategically target the multifaceted underlying causes of the problems. For example, Health and Human Services' Community Needs Assessment resulted in recommendations for actions that are necessary, but understandably focused on the type of solutions the health field is most familiar with: education and wellness centers. These are two of the three strategies at which the health fields excel: information generation and education, coordination and facilitation, and programmatic efforts.¹²⁷ The remaining two successful strategies for health planning are design and plan-making and zoning and other regulatory reform, the traditional purview of city and regional planners.¹²⁸ However, planners in Napa have not yet used their expertise to directly address public health. All these strategies are necessary to create comprehensive change. An interdisciplinary response that links health and planning advocates to integrate all these strategies would be more effective in addressing the systemic causes of Napa County's rising health concerns.

Napa's next step is to go beyond the more traditional partnerships to link less typically collaborative sectors and create new and sustainable ways of addressing the community's concerns. An organized planning effort could bring all these groups together to do a more thorough investigation of the problems that touch Napa's residents, look more comprehensively at solutions, and share resources to create more innovative initiatives and strengthen existing programs. According to World Hunger Year's land use planning education program, "If done in a coordinated way, food systems planning can help to keep family farmers on the land, ensure that all community members have equal access to quality food, create jobs, and support the local economy."¹²⁹

Local government and key food system advocates could lead a comprehensive food planning process taking one of several forms. Community Food Assessments and Food Policy Councils are common organizing forms for community food planning, but other formats and variations on these are possible. Particularly in California, the General Plan update comprehensive planning process can also be used as a catalyst to bring together a range of food issues and stakeholders.

¹²⁷ Raja, Samina. Presentation, Food System Planning Session. American Planning Association Conference 2008.

¹²⁸ Raja, 2008.

¹²⁹ World Hunger Year. "Land Use Planning for Food System Advocates." *Food Security Learning Center*. Accessed May 11, 2009. <http://www.whyhunger.org/programs/fslc.html>

Benefits of Participatory Community Planning

Community-based planning has a successful history of empowering citizens and their organizations and finding solutions that are relevant to the lives of the people in the community. Community, participatory and consensus¹³⁰ planning are all variations on equity planning that incorporate all possible relevant stakeholders in a meaningful way.¹³¹ This kind of planning is more successful than more conventional top-down planning at meeting the process' immediate goals it is more complete, accurate in determining community priorities, thorough in assessing resources, and equitable. Bringing together stakeholders who have different, even seemingly conflicting, purposes can result in mutually beneficial solutions when a trained facilitator is able to help them discover shared values and goals and create value rather than competing for it.^{132, 133} Plans are also more successful in gaining community support; participants are more likely to approve of and support the plan's adoption and implementation when they have played an active role in creating it^{134, 135, 136} Participatory processes also have effects that reach further into the future; they build alliances, educate and empower participants to be more civically engaged.

Napa County has precedents for successful community planning; the Flood Control Project brought together a range of stakeholders and resulted in an award-winning plan. The recent General Plan update made an effort to reach out to some nonparticipating populations for their input. However, a food planning process would require a much more broad-based and mobilizing community process to reach all the stakeholders who affect and are affected by the food system.

Comprehensive community food planning provides a structure for systematic and widespread changes to the food system. Fisher & Gottlieb describe how a comprehensive approach will improve outcomes from a food security perspective:

The promotion of an integrated approach to food security will result in numerous benefits. Existing program dollars will be of greater benefit to households as access and transportation improve through local planning initiatives. On a community level, local food security planning efforts will result in healthier, more empowered communities with expanded economic development opportunities in food related activities. On an individual level, food security planning, through improving access and affordability of fresh produce as well as coordinating local nutrition education programs, provides a health and nutrition dimension to food security activities. (1995)

¹³⁰ Innes, Judith E. "Planning Through Consensus Building." *Journal of the American Planning Association*. American Planning Association, Autumn 1996; 62, 4, 460

¹³¹ Arnstein, Sherry R. "A Ladder of Citizen Participation." *Journal of the American Institute of Planners*. 8, 3, July 1969.

¹³² Forester, John. "Introduction to Community and Environmental Dispute Resolution" Course lectures. Cornell University, 2007.

¹³³ Lax, David and James Sebenius. "The Manager as Negotiator: The Negotiator's Dilemma: Creating and Claiming Value," in Goldberg, Stephen, Frank Sander and Nancy Rogers, eds. *Dispute Resolution*. 2nd ed. Boston, MA: Little, Brown and Co., 1992. 49-62.

¹³⁴ Forester, John. "Planning Theory and Practice." Course lectures. Cornell University, 2006.

¹³⁵ Forester, John. "Mediation and Collaboration in Community Planning and Architecture: A Profile of Larry Sherman."

¹³⁶ Passon, 2008

Addressing each issue touching the food system, from food security to youth development to local economic growth, could benefit in the same way from an integrated approach.

A community planning process should be comprehensive not just by touching on a number of elements, but by involving participation from all impacted segments of the community. For example, the Community Food Security Coalition’s definition of food insecurity includes access not only to nutritionally healthy foods, but to foods that are ethnically appropriate. Napa has a significant Latino community, with twenty-nine percent of residents identifying as Hispanic or Latino, and twenty-two percent of residents born outside the U.S., primarily in Mexico.¹³⁷ Like racial minorities around the country, Latinos in Napa are overrepresented in the food insecure population. A Community Food Assessment should make a significant effort to involve them in the planning process. This inclusion has been neglected by some food assessments in the unfortunate tradition of planning being done primarily by those in power; the result being that the food insecure themselves have been left out of the process (Jacobson 2007). Other potentially overlooked stakeholders in the food system include youth, food assistance recipients, farmworkers and older adults. These groups are historically underrepresented in planning, despite often being the subject of planning efforts. Each provides a unique set of viewpoints, concerns and solutions, and the active participation of all these groups is critical to progress on food system issues.

Comprehensive community food planning not only provides better solutions, but it gives an opportunity to better understand the problems and take stock of resources. In searching for food system data for this paper, I found only basic and disconnected information on Napa County’s food system. My assumption is that this lack of interdisciplinary data results from having no interested party who has responsibility for gathering, connecting and analyzing the different pieces of the food system puzzle. A thorough, community-based investigation could assess the details, factors and root causes of community concerns, as well as potentially discovering issues that may have so far been overlooked by this paper and by the professional and advocacy community. A better understanding of the foodscape and how local residents interact with it would be a more effective base on which to build community and local government based solutions.

Planners as Food System Facilitators

Despite planners’ marked interest in improving the public good through interdisciplinary connections, until recently planners have for the most part been uninvolved in food planning. The American Planning Association (APA) observes this disconnect; “As a discipline, planning marks its distinctiveness by a strong claim to be comprehensive in scope and attentive to the spatial interconnections among important facets of community life. Yet among the basic necessities of life – air, food, shelter, and water – only food has not been prioritized by most planners.”¹³⁸ This deficiency in the planning field has been changing, the change illustrated by the existence of the above quoted, recently published APA policy guide that provides suggestions for how planners can better analyze and alter the role of food in their policies and plans.

¹³⁷ U.S. Census Bureau. “American Communities Survey, 2005-2007 3-Year Estimates.”

¹³⁸ American Planning Association, 2007

Local planning agencies are well positioned to lead communities in a food system planning process. Planners make interdisciplinary decisions that touch on most aspects of the food system, from land use to transportation to economic and community development. They can ensure multi-modal transportation to food distribution sources like farmer’s markets, grocery stores and community gardens, alter waste disposal processes so that the food waste in our landfills is recycled back into the soil as nutrients, promote social programs that turn unused land into community gardens or urban agriculture, and develop land use plans that preserve land for sustainable agriculture. Involving planning professionals or academics in a community food assessment strengthens the results by better incorporating spatial factors, recommending solutions from multiple sources, and linking food with other community concerns.¹³⁹

In addition to their technical role in food systems planning, planners are used to the role of facilitator, mediator and organizer of community process.¹⁴⁰ Planners in many cities have discovered that they have an important role to play in bringing their communities together to address the local food system. They also are able to work regionally and facilitate processes between multiple municipalities.

¹³⁹ Pothukuchi, Kameshwari. “Community Food Assessment: A First Step in Planning for Community Food Security.” *Journal of Planning Education and Research*. 23:356-377. Association of Collegiate Schools of Planning, 2004.

¹⁴⁰ Forester, 2007

Food System Planning for Napa: Recommended Strategies

As I will show in this chapter, food planning researchers have proposed several methods that a community could use to address their part of the food system, and many cities, counties and community groups around the country provide examples of creative and successful programs that have resulted from their shared interest in playing a more active role in shaping their food system. Napa could draw on some of these examples, as well as forge new kinds of links to find solutions to problems that are endemic to its own food environment.

Process Strategies

I have suggested community-based comprehensive planning as a strategy for connecting Napa's stakeholders over the organizing principle of food planning. However, there are a number of different formats in which this can be done, including but not limited to community food assessments, food policy councils, general plan updates, and search conferences. They may all be used together in support of a larger movement. There are formats that can be used for the initial planning process, and formats that are more effective for maintaining food systems work over the long run. There are already food systems processes and policy bodies in place in counties neighboring Napa; Marin Food Policy Council and Marin Food Systems Project, and Sonoma Food Matters Food Systems Working Group.

Community Food Assessments

Community Food Assessments (CFAs) bring key people in the community together to create a set of data that informs future food policies and strategies. The assessment places the food system in the context of local demographics, policies, economics, environment and health concerns. Through a process that can range from technical to fully participatory, participants determine the strengths and weaknesses of their community's food system and then make policy and programmatic recommendations. CFAs educate, mobilize, and help participants both learn from one another and learn that they have something to teach one another (Jacobson).¹⁴¹ In CFAs, participants sometimes focus on food security, sometimes on agriculture, and sometimes on successfully integrating different facets of the food system. A CFA can be a first step for determining what warrants further action.

Studies of previous CFAs show the value to communities of conducting food assessments, as well as some of the lessons learned. Pothukuchi (2004) suggests that involving planners in a CFA will lead to a more spatial perspective, address the role of government programs and policies in the local food system, link issues more broadly to other community concerns, and use a wider range of research methods. Her study of nine CFAs around the country shows numerous outcomes, including:

- Legislation – allowing public lands to be used for community gardens
- Collaboration between organizations
- Facilities – community kitchens, farmer's markets
- Programs – cooking classes, grocery shuttles
- Empowerment of youth and neighborhood residents

¹⁴¹ Jacobson, Maxine. "Food Matters: Community Food Assessments as a Tool for Change." *Journal of Community Practice*, Vol. 15 (3) 2007.

- Links between producers and consumers
- Institutionalization of food issues – Food Policy Councils, task forces, dedicated staff
- Nutrition guides and educational programs

Jacobson, whose study reflects on a CFA conducted by students in social work and environmental studies, posits that using social justice as an organizing principle for a CFA will help move the focus from personal food security to understanding that the problem is a systematic, community-wide concern. She also observes the value of addressing the role of power directly during the CFA process – particularly the way that the structure of the process or failure to include certain participants can reinforce social inequalities.

Understanding the food system involves collecting information, both quantitative and qualitative, which may be a complex task. In smaller communities, or communities that have not prioritized food system issues, some of the necessary data may not yet have been compiled clearly, or even tracked at all. Some of it may not be in a format that is easily available to the public. Other data may already be available but not yet analyzed spatially or combined with other data to paint a compelling picture about the community food system. The main categories of data usually collected in a CFA include:

- Health: obesity, asthma, food insecurity, food behaviors
- Demographics: poverty, race, age, gender, income, consumer behaviors
- Food assistance and charitable food providers: locations, participation, federal programs, food in schools
- Food retail: prices and affordability, spatial access, transit, land use policies, economic development programs
- Spatial: how the other data varies by neighborhood, city, etc.
- Local agriculture: sustainability of farmers and industry, methods (farmer’s markets, CSAs, community gardens), land use policies, job training/creation
- Education: nutrition, cooking, gardening, school programs
- Distribution: sources, percent of food purchased locally that is produced locally, vulnerability of supply to environment/economy/disaster
- Environment: greenhouse gasses emitted, waste reduction and reuse, resources consumed, air and water contamination
(USDA,¹⁴² Pothukuchi and Kaufman,¹⁴³ Pothukuchi,¹⁴⁴ San Francisco Food Assessment,¹⁴⁵ Feenstra,¹⁴⁶ Pelletier¹⁴⁷)

¹⁴² Cohen, Barbara. *USDA Community Food Security Assessment Toolkit*. E-FAN-02-013. IQ Solutions, Inc. July 2002.

¹⁴³ Pothukuchi, Kameshwari and Jerome L. Kaufman. “Placing food systems on the urban agenda: The role of municipal institutions in food systems planning.” *Agriculture and Human Values*, 16, 1999.

¹⁴⁴ Pothukuchi, 2004.

¹⁴⁵ San Francisco Food Alliance. *2005 San Francisco Collaborative Food System Assessment*. San Francisco Food Systems, The San Francisco Foundation Community Initiative, 2005.

¹⁴⁶ Cozad, Shauna, Shawn King, Henry Krusekopf, Sarah Prout and Gail Feenstra. *Alameda County Foodshed Report*. UC Sustainable Agriculture Research and Education Program, University of California at Davis. October 2002.

¹⁴⁷ Pelletier, David L., Vivica Kraak, Christine McCullum, Ulla Uusitalo and Robert Rich. “Community food security: Salience and participation at community level.” *Agriculture and Human Values* 16: 401-419, 1999.

Community Food Process in Upstate New York

The North Country of New York State provides a well-documented example of community-based comprehensive food system planning.[†] Six adjacent counties conducted search conferences, a specific format for eliciting community participation and action around an issue. The effort was funded by a grant from the Center for Disease Control and the United States Department of Agriculture and supported by Cornell University and its Cooperative Extension. The leaders of community action organizations took the lead in organizing the conference, which included participants drawn from the fields of education, nutrition, agriculture, and environment, social welfare staff, planners, farmers, processors, consumers, retailers, clergy and legislators.

The goals that emerged from the six conferences included education, strengthening markets, diversifying production, developing food processing, strengthening the economic viability of agriculture, improving food access, supporting family and community gardens, strengthening anti-hunger efforts, strengthening family and community values, transitioning welfare to employment, ensuring a clean, safe water supply, and establishing a legislative/government liaison.

Over the next year, the working groups that formed during the search conferences achieved accomplishments toward many of these goals.

Information-gathering and analytical tools for CFAs include surveys, focus groups, interviews, GIS mapping and statistical analysis to determine the spatial and equity implications of the food system (for example, Raja et al. used Gini coefficients and Poisson regression to analyze grocery store access in high minority areas¹⁴⁸). The United States Department of Agriculture¹⁴⁹ and the Community Food Security Coalition¹⁵⁰ have both produced guides for conducting a CFA. PolicyLink, following the work of Gallagher,¹⁵¹ has proposed a “Retail Food Environment Index” to determine whether a neighborhood has more access to healthy than unhealthy foods.¹⁵² Raja et al. have used a “Neighborhood Healthful Foods Vulnerability Index” to determine whether some neighborhoods have less access to healthful foods than others, and whether there is a racial disparity in this access. Any of these analytical tools would provide Napa with more information about the spatial and environmental dimensions of its food and health equity than currently exists.

Goal-Setting and Action Planning Process

In the Participatory Community Planning section above, I described the importance of collaborative, inclusive planning. To implement this kind of planning, leaders of a community food systems planning process must create a facilitation structure

¹⁴⁸ Raja, Samina, Changxing Ma and Pavan Yadav. “Beyond Food Deserts: Measuring and Mapping Racial Disparities in Neighborhood Food Environments.” *Journal of Planning Education and Research*, 27. Association of Collegiate Schools of Planning, 2008.

¹⁴⁹ Cohen, 2002

¹⁵⁰ Pothukuchi, Kami, Hugh Joseph, Andy Fisher, and Hannah Burton. *What’s Cooking in Your Food System? A Guide to Community Food Assessment.* Community Food Security Coalition. Venice, CA 2002.

<http://www.foodsecurity.org/whatscooking.zip>

¹⁵¹ Gallagher, Mari. *Examining the Impacts of Food Deserts on Public Health in Chicago.* Mari Gallagher Research & Consulting Group, 2006.

http://marigallagher.com/site_media/dynamic/project_files/1_ChicagoFoodDesertReport-Full_.pdf

¹⁵² PolicyLink, UCLA, 2008

that encourages inclusivity, collaboration and action. The case study of a community food planning process in New York's North Country (sidebar) illustrates a community food system planning process that was structured to meet similar goals.

A search conference, the strategy used by New York State's North Country, is one particular convention format for addressing a complex community topic in a way that achieves broad community support, entertains all ideas regardless of who they come from, and focuses on the issues and solutions that are most salient to the participants. A search conference could be used to structure and apportion responsibility for a Community Food Assessment according to community interest. Or it could be a first step to raise awareness of food issues and determine if there is community support for going forward with a more in-depth process.

A search conference revolves around a question that participants need to answer. Participants are selected intentionally to be diverse and to include the people who have relevant knowledge and/or are most affected. The format is highly structured, but managed by the participants, rather than by an authority. Participants are expected to leave their positions at the door. The group creates a shared history of the issue, asking, "How did we get to this point?" followed by a collective (and unrestrained) vision of an ideal future. Then the group discusses the current trajectory of the issue: what will happen if nothing is done? The groups brainstorm ideas that will contribute to their ideal future, areas for change, and set up targets for the first steps they will take, as well as the first meeting time. The institutional sponsor is in charge of staffing the process to keep it going.¹⁵³

The implementation aspect of the search conference format for choosing issues is successful because only issues that individuals have stepped up

¹⁵³ Rich, Robert. "The Search Conference: Nature and Uses." Presentation, October 16, 2007.

Samples of these accomplishments include:

- Located community garden sites on a bus route
- Increased the recovery of food in the county by coordinating resources
- Explored establishing a local food processing business
- Coordinated with a bulk food purchasing program for low-income families
- Established a program for hunters to donate local "nuisance wildlife" meat to food pantries through licensed food processors
- Explored creating new farmer's market sites in partnership with Stewart's convenience stores
- Linked community gardens with high schools
- Assessed issues further, including nutrition education offerings, problems with accessing surplus food, connecting producers and processors to create value-added products,
- Created a community kitchen

Despite these successes, working group participants struggled with the limitations of local, state and federal regulations.

The North Country's concerns and solutions are apropos of a rural region in economic decline. However, the issues of poverty, poor nutrition, and economic development are universal. The process itself is applicable to any community hoping to raise awareness of, prioritize and address the food system problems salient to their unique community.

¹ Pelletier et al., 1999

to work on are carried forward. The downside to this is that if there is any failure of representation by certain groups, due, for example, to time constraints (particularly work or child rearing) or selection error (resulting from a “snowball” invitation that misses stakeholders who are unconnected to the initial referrers), their issues may not be addressed. This, as well as the benefit of more people to create more ideas, is one of the reasons to have extensive participation in the conference.

Many forms of community planning facilitation other than the search conference have been developed to be effective tools for collaboration and negotiation. My purpose in highlighting the search conference is to demonstrate that the structure of any group process format has benefits and drawbacks. The organizers of any food system goal setting and planning process should be deliberate in their choice of format. Goals of the process should include ensuring participation from a wide range of food system stakeholders at many levels of influence, selecting goals that the community has the interest and capacity to meet, and creating actions that the community will take to meet those goals. Also, the spatial focus of this particular study is geographically directed toward the City of Napa, both because it is the population center of the county and because I am personally more familiar with the city. An official, comprehensive assessment would involve participants from all areas of the County.

Food Policy Councils

Food policy councils are a way to address the food system from an institutionalized organizational standpoint. A food policy council can be a starting point to address the food system by overseeing a community food assessment or search conference. It can also emerge as a result of a community food system assessment, establishing to implement the strategies recommended by the assessment and continue to monitor community food issues. Any of the stakeholders identified in the Food System Issues and Stakeholders section of this paper, in addition to community leaders and elected officials, would be appropriate members of a food policy council. Diversity in the representation of the food system in the council membership will increase the pool of perspectives and solutions from which the council can draw. In the Bay Area there are existing food policy councils in Berkeley, Contra Costa County, Marin County, Oakland, San Francisco and Sonoma County.

There are many models for food policy councils. They may be established by governing bodies seeking community opinion and expert knowledge on policy issues, or they may result from grassroots movements by community advocates seeking to increase their local government’s awareness of their existing and potential contributions to the food system.¹⁵⁴ They may be housed by a local government, or they may be independent nonprofits. Either way they are officially sanctioned bodies that have at the least advisory power, and may have budgets and staff to seek community input, conduct research, recommend policy changes and implement programs. Potential funding sources include the USDA, local government line-item budgets, and staff services provided in-kind by governments.¹⁵⁵ The USDA has a competitive grants program intended to support food security for low income communities through changes to the whole food system.

¹⁵⁴ Community Food Security Coalition. “North American Food Policy Council Webpage.”
<http://www.foodsecurity.org/FPC/>

¹⁵⁵ Zodrow, David. “How Food Policy Councils are Organized and Operate.” *Food Security Begins at Home: Creating Community Food Coalitions in the South*. Southern Sustainable Agriculture Working Group. June 2005.
<http://www.foodsecurity.org/FPC/HowFoodPolicyCouncilsAreOrganizedandOperate.pdf>

General Plan Updates/Comprehensive Planning

The American Planning Association Food Policy Guide recommends local and regional comprehensive planning as food policy strategy.¹⁵⁶ Because the General Plan in California is the guiding document for a county's land use decisions, changing General Plan policies to reflect support for local food systems can have a significant effect on the county's future ability to make healthy, sustainable food accessible to its residents. Just as the State of California has required that climate change be addressed in General Plan updates (one potential area where food policies might be appropriate), as oil and food prices and environmental damage rise and their connection to land use becomes clearer, it makes sense to address food and agriculture in the same way.

One of the best resources for integrating food and other health issues into comprehensive planning and policymaking is the Public Health Institute's Planning for Healthy Places Project.¹⁵⁷ In addition to advising and keeping track of innovative health planning taking place in California and around the country, they have published a toolkit for municipalities interested in health planning.¹⁵⁸ It provides tools for integrating health policy into the General Plan as well as implementing the policies.

The Food System in the General Plan: Sustainable Marin

Napa County has a nearby example of comprehensive planning that addresses the local food system; Marin County. Marin, which although more populous shares with Napa County a similar mix of urban, suburban and rural agricultural areas as well as a dedication to open space preservation. It is also one of several counties that has integrated food deliberately into their general plan, winning awards for the plan and its implementation.

In California, the general plan is the blueprint for all land use and development in a municipality. The state requires every city and county to have one, and any action taken by local government must be consistent with its policies and objectives. This means that if a municipality adopts policies to support the food system, any decisions they make must uphold the goals stated in those policies. Although there are seven required "elements" in a general plan, communities may combine them in any way they choose, or add their own, as Napa County has with its Community Character Element. Some communities have created health elements in which they address physical activity and food access.

Marin County has included food policies in both their Natural Systems and Environment Element and their Socioeconomic Element and combined food and agriculture into a single topic. The award-winning Sustainability Plan involved collaboration between their Planning Department, Agricultural Extension, Food Policy Council, and Health and Human Services Department. The Marin Food Policy Council submitted the recommendations that became the basis for the Food and Agriculture Element. The food policy council, the advocacy of the planning director and a member of the planning commission drove the inclusion of these issues in their General Plan.¹ The plan provides goals and indicators that include minimizing their ecological footprint, supporting local food in schools and county services, and targeting an increase in the amount of fruits and vegetables residents consume.²

¹⁵⁶ American Planning Association, 2007

¹⁵⁷ <http://www.healthyplanning.org/>

¹⁵⁸ Stair, Peter, Heather Wooten and Matt Raimi. "How to Create and Implement Healthy General Plans." Public Health Law & Policy and Raimi + Associates. 2008.

One of the most clear food goals in the Marin Countywide Plan, AG-3, addresses community food security. The components of this goal and its indicators are outlined here:

- Goal:** Community Food Security. Increase the diversity of locally produced foods to give residents greater access to a healthy, nutritionally adequate diet.
- Policies:** Support Local Food Production.
Promote Local and Organic Food
Enhance Food Security Education
- Implementing Programs:** Encourage Community Gardens
Provide Community Education
Promote Edible Landscaping
Use Locally Grown and/or Organic Foods in County Services
Promote Organic Food in Schools
Support Local Groups

Indicators	Benchmarks	Targets
Acres preserved with agricultural easements.	28,377 acres preserved in 2000.	Increase by 25,000 acres by 2010 and by 12,500 additional acres by 2015.
Acres of land farmed organically.	357 acres in 2000.	Increase by 1,500% by 2010 and 1,700% by 2015.
Annual sales of identified Marin farmers' markets	\$9,860,000 in 2005.	Increase annual sales 10% by 2010 and 15% by 2015.
Servings of fruits and vegetables consumed daily by children	53% of children ate five or more servings in the day prior	Percentage increases 10% by 2020.
Percent of population overweight and obese	See H&HS dataset.	Obesity decreases 10% by 2020.

Marin Community Food Security Implementation Measures
Source: Marin Countywide Plan

The county has supported these policies through many initiatives. Its Agricultural Commissioner has become an organic certifier, which saves money, provides better service than using private certifiers, and has led to every vegetable farm in the county becoming organic. Among other food projects, they have funded Marin Organic (a nonprofit organization promoting organic agriculture and community health), the Pt. Reyes farmer's market, studies and deer fencing for the new Indian Valley Community College organic farming program, and the Marin Agricultural Institute, which is creating a permanent home for the farmer's market and successfully acting as a distributor for local farmers selling to campus food services and restaurants. They also have a close relationship with the UC Cooperative Extension office, helping fund positions like the Organic and Sustainable Agriculture Coordinator, the Agricultural Ombudsman, and a new school and community garden expert.³

¹ Hinds, Alex. Personal Communication, March 2009.

² Hinds, Alex. "Marin Countywide Plan." *Food System Planning*. APA Conference 2008.

³ Quirt, Steve. Personal Communication, March 2009.

Policy and Government Infrastructure

We have seen that local governments have the tools to conduct community food systems planning processes and implementation programs. However, government can play a role in food policy and planning at any level. Pothukuchi and Kaufman suggest creating a department of food, with functions that include central intelligence, pulse-taking, policy clarification, community food security strategic planning, and feedback review.¹⁵⁹ These functions could be at the local, regional, state or federal level. Fisher and Gottlieb recommend that the United States Department of Agriculture take on community food security planning as a core mission, link governmental and non governmental agencies, and create an infrastructure much like that of other resource planning sectors like environmental quality or housing; e.g. a statewide mechanism for food system planning¹⁶⁰

Given the current political environment, such mechanisms may someday be a reality. There is a growing concern about food systems in the country, evidenced by increasing numbers of food planning processes around the country and interest in food systems at the state and federal levels. This is most evident nationally in the advocacy and adoption of changes to the U.S. Farm Bill, which now supports local food systems through programs such as farmer's markets, community food projects and school food purchasing options¹⁶¹. The APA Food Policy Guide recommends supporting the "development of state and federal legislation to facilitate community and regional food planning" [to]... support food systems that improve the health of the region's residents, are ecologically sustainable, equitable and just, and preserve and sustain diverse traditional food cultures of Native American and other ethnic minority communities."¹⁶² This increase in interest in community food planning and recognition in the role the food system plays in environmental and public health may in the future lead to states mandating some form of local or regional food planning process, in the same way as addressing climate change has recently become mandatory for California counties.

Regionalism

A comprehensive approach to food planning would incorporate a regional perspective, addressing the reality that Napa County's food system extends beyond its political borders. Like its ecosystem, watersheds and airshed, its food system is connected with the surrounding counties, the San Francisco Bay Area, and the national breadbasket of the Central Valley, with these regions forming its "foodshed."¹⁶³ Napa's food system is reliant on regional transportation, water, health and labor policies and systems. Regional bodies such as the **Association of Bay Area Governments** can help member governments monitor and collectively create solutions to land use related food problems.

A note on "local" food: Napa County's residents and policymakers might want the county to produce a healthy percentage of its own food for community, food security, educational and health reasons. But Napa is part of a larger regional infrastructure in which it provides luxury items, primarily wine and agritourism, and imports foods that are currently more efficiently produced in other climates and intangible benefits,

¹⁵⁹ Pothukuchi and Kaufman, 1999

¹⁶⁰ Fisher and Gottlieb, 1995

¹⁶¹ American Farmland Trust. "2008 Farm Bill Overview."

http://www.farmland.org/programs/campaign/documents/AFT_2008FarmBillOverview_May2008.pdf

¹⁶² American Planning Association, 2007

¹⁶³ Kloppenburg, Jr., Jack, John Hendrickson, and G. W. Stevenson. 1996. "Coming in to the Foodshed." *Agriculture and Human Values* 13:33-42.

like reduced State-designated housing allotments, that might otherwise challenge Napa County’s ability to maintain its agricultural character. This specialization and interconnection with surrounding communities makes sense. Yet there are potential external costs of a long-distance food system. When considering its regional role, Napa County should consider what it can do to be a responsible part of the regional food system, both in production and consumption.

The **American Farmland Trust** recently completed a San Francisco Foodshed Report, which determined that food produced in the San Francisco foodshed (which the study defined as counties partially within 100 miles of San Francisco) could potentially feed the population of the Bay Area.¹⁶⁴ It did not study the Bay Area’s ability to feed itself, but did find that only fourteen percent of food production in the foodshed comes from the immediate Bay Area, thirty percent of which is wine grapes. Other areas within the foodshed also specialize, with grains coming from the Sacramento Valley, vegetables from the Salinas Valley, and dairy from the San Joaquin Valley. The study demonstrates the important role a regional food system plays in feeding the areas within it, and suggests other ways the Bay Area could increase local food production to become more environmentally sustainable.

Support is available for regional food movements. Gayle Peterson of The Headwaters Group Philanthropic Services, consultants for foundations ranging from Kellogg, Mott, and Weyerhouser to community foundations, suggests: “There is a huge movement among foundations supporting regional food systems uniting networks of cities and towns in a large agricultural food basket . . . but there are as yet no group initiatives that cut across the issues.”¹⁶⁵ Napa County has the potential to work with neighboring counties not only to increase local food production, but to collaborate on solutions to broader food issues.

Content Strategies

The strategies communities can use to comprehensively address their food concerns are limited only by the ability of stakeholders to collaborate, both with local governments and with each other. Food system advocates recommend strategies using government policy and programs as well as strategies based in community organizations. Efforts in many communities combine the assistance of local governments with the resources of nonprofits and private enterprises. Several tactics for addressing food system issues have previously been mentioned as the outcomes of comprehensive food planning processes around the country. Here are several more that have been recommended or piloted in communities.

Government Strategies

Land Use strategies to support a healthy food system include requiring “food-system impact statements”¹⁶⁶ and health impact assessments¹⁶⁷ that would accompany Environmental Impact Reports in approvals for new developments and review the impacts on the neighborhood food environment, policies limiting fast food¹⁶⁸ and defining healthy food vendors as an allowed use, particularly through mixed-use zoning that incorporates grocery stores into neighborhoods and residences in commercial areas. Orienting new

¹⁶⁴ American Farmland Trust. *San Francisco Foodshed Report*. 2008.

<http://www.farmland.org/programs/states/ca/Feature%20Stories/San-Francisco-Foodshed-Report.asp>

¹⁶⁵ Tumber, Catherine. “Small, Green and Good: The role of neglected cities in a sustainable future.” *Boston Review*, March/April 2009. <http://bostonreview.net/BR34.2/tumber.php>

¹⁶⁶ Pollan, 2008

¹⁶⁷ American Planning Association, 2007

¹⁶⁸ PolicyLink and UCLA, 2008

development around transit hubs would ensure that both housing and shopping are accessible to people without access to private vehicles. Tax and zoning incentives as well as community benefits agreements could also encourage new development to include farmland (including urban gardens) as part of their project, just as they already include open space.¹⁶⁹

In Sonoma County, the County Agricultural Preservation and Open Space District has recently initiated a program which allows open space lands to be leased for small scale farming, including food production.¹⁷⁰ The City of Berkeley adopted a Food & Nutrition Policy, which includes the categories Local and Regional Food Systems, Equitable Access to Nutritious Food, Public Policy, Public Outreach and Education, and Berkeley Food Policy Council, and acts as a model for food in all their programs.¹⁷¹ Berkeley also recently pioneered using food planning to assist in the goals of their Climate Action Plan, incorporating food systems policies into the Land Use section of the plan.¹⁷²

Transportation strategies include rerouting buses to link neighborhoods with few fresh food options to supermarkets and siting transit hubs close to supermarkets and housing. Several general plans around California have included policies to encourage transit-oriented and mixed use development, sometimes directly addressing their role in improving food access and health. Economic development strategies include providing incentives for retail development and improvement and for nontraditional retail like mobile vendors, farmer's markets and community supported agriculture. The American Planning Association suggests that promoting local and regional food systems is in and of itself a strategy to strengthen the local and regional economy.¹⁷³ World Hunger Year offers some additional government-supported food system strategies: promoting water conservation through water recycling, using urban agriculture to absorb noise pollution, and improving safety by creating community bonds through community gardens and public markets.¹⁷⁴

Community Based Organization Strategies

This sampling of strategies are particularly unique to the communities they serve, as they involve collaboration between organizations that already exist in the community.

- The Philadelphia Healthy Corner Stores program provides loans and grants to help convenience stores get the refrigeration to hold fresh vegetables, and agreements to replace a certain amount of junk food with healthy snacks. Small neighborhood stores can be a more reasonable place to make improvements in a neighborhood food environment than trying to develop new supermarkets (Short et al).¹⁷⁵ This program is being replicated in some form around the nation, often funded and administrated by local health departments.

¹⁶⁹ Pollan, 2008

¹⁷⁰ Carr, Greg. "Memo on Local Food Supply Networks to the General Plan 2020 Citizen's Advisory Committee." Sonoma County Permit and Resource Management Department. April 18, 2002. <http://www.sonoma-county.org/prmd/gp2020/pdf/gpfood.pdf>

¹⁷¹ City of Berkeley. "Food and Nutrition Policy." <http://www.ci.berkeley.ca.us/PUBLICHEALTH/chronicdisease/food-policy-exhibit-a925.pdf>

¹⁷² Bell, Jessica. "Berkeley Sees Local, Sustainable Food as a Solution to Climate Change." *Berkeley Daily Planet*, May 14, 2009.

¹⁷³ American Planning Association, 2007

¹⁷⁴ World Hunger Year, "Land Use"

¹⁷⁵ Short, et. al., 2007

- In Burlington, Vermont, the farmer’s market locates on Tuesdays in a low-income neighborhood, where through a state subsidized “farm to family” program, low-income families and refugees are able to purchase fresh vegetables with coupons.¹⁷⁶
- Maine has linked seniors and farmers by buying low-income seniors membership in a community-supported farm (Pollan 2008).
- Central Brooklyn connected lack of youth programming with lack of healthy food options. Brooklyn has “created a youth farming training program, an extremely popular farmers market, two urban farm sites, a synergistic network of gardens, and a food co-op, and . . . conducted a formal youth-driven community food assessment.”¹⁷⁷
- Restaurants, farmers and waste management can potentially connect through compost. Composting programs, like the program piloted in Napa, link restaurant food waste with waste reduction. The resulting compost can potentially be used by local farmers as fertilizers
- Dufferin Grove Park in Toronto constructed public ovens that the public can use to bake their own bread and which are used to cook food that is sold from a cart in the park (teens may help out in return for free food). On pizza night, participants can pick toppings from the park garden. The accompanying kitchen was partially funded by a Toronto Food and Hunger Action Project Grant.¹⁷⁸
- A food pantry in Honolulu, Hawaii links with homeless and transitional shelters to provide nutrition education. Participants were shown food handling skills and how to cook foods available from the food pantry, and fifty percent of them reported later using these recipes on their own.¹⁷⁹

Napa has its own creative partnerships. For example, the Napa Valley Food Bank has a relationship with Vintage High School whereby extra produce from the student garden is donated to the Food Bank. Similarly, the Food Bank’s gleaning program works with regular homeowners to harvest fruits and vegetables from trees and home gardens that would otherwise go to waste.¹⁸⁰ Members of the Napa Valley Unified School District Wellness Committee worked with Sodexo, their cafeteria supplier, to create healthier options for school lunches.¹⁸¹ Napa Valley College nursing students teach nutrition to shelter residents.¹⁸²

¹⁷⁶ Macias, Thomas. “Working Toward a Just, Equitable, and Local Food System: The Social Impact of Community-Based Agriculture.” *Social Science Quarterly*. Volume 89, issue 5, 2008 pp. 1086-1101

¹⁷⁷ World Hunger Year. “Community Food Assessment.” Food Security Learning Center.

[http://www.worldhungeryear.org/fslc/faqs/ria_080.asp?section=7&click=1]. Also: <http://www.added-value.org/>

¹⁷⁸ Friends of Dufferin Grove Park. “The Bake Ovens” and “The Kitchen Project.” <http://dufferinpark.ca/oven/wiki/wiki.php>

¹⁷⁹ Miyamoto, Angela, Lindi Chun, Naomi Kanehiro and Claire Nakatsuka. Food Pantries: Food and Nutrition in a Non-Traditional Setting. *Journal of Extension*. February 2006:441:1. <http://www.joe.org/joe/2006february/iw2.shtml>

¹⁸⁰ King, 2009

¹⁸¹ Neidhoefer, 2008

¹⁸² King, 2009

The limitation to these programs, as with many other programs around the country, is that they are isolated efforts. Community programs that are not part of a larger strategy for change *may* end up better serving their own missions than working toward comprehensive solutions to the root problems.^{183,184} While such programs serve educational and community-building purposes and often temporarily improve the lives of participants, a more systematic approach to these programs could create the support network for them to expand and become a more integral part of the community that meets a number of different needs in a more permanent way.

For example, the Vintage garden supplies the Napa Valley Food Bank with food. Because there is no formal support for this program, it ebbs and flows year to year depending on what faculty members are available to devote their time, and has a minimal impact food wise for the Food Bank. If it were provided with more support through community connections and a full-time staff person either from the school districts, the County, or some combination, the program could be a more comprehensive solution. It could expand to more schools, make further connections with job training, entrepreneurship, science and culinary programs. These connections could lead to apprenticeships with both local restaurants, including affordable restaurants, and nutrition programs (i.e., trained students could do healthy cooking demonstrations or classes in their communities), and the garden and culinary programs could connect with farmers' markets and food assistance programs.

These kinds of connections would require action on the part of a number of different community groups working together to change policy, find funding sources and determine the most appropriate structure. Napa County has opportunities like this throughout the food system, waiting for further collaboration. New programs and partnerships are emerging as community groups realize the importance of food system issues, but they each face the challenges on their own. A community and policy infrastructure could support, facilitate, incubate and expand these opportunities.

¹⁸³ Winne, 2008.

¹⁸⁴ Hilchey, Duncan. Personal communication. June 2008.

Napa's Next Steps

This paper is intended as a preliminary assessment to educate community leaders about Napa County's food system by:

- showing that the Napa food system does have environmental, nutritional and equity deficiencies;
- identifying the community's capacity to solve these problems; and
- providing options for strategies to create solutions.

A comprehensive food planning process that goes beyond this preliminary assessment to include all identified stakeholders could lead to interventions that improve health, build community, reduce environmental costs, support youth, prepare the county for an emergency and encourage entrepreneurship and education.

Napa County's residents and policymakers first need to better understand where the county's food system is working and where it is failing its residents. In researching this paper, I was challenged to find sources of information about many different aspects of the food system in Napa County. Partially because the community has not yet officially recognized the value of measuring the food system, many possible food system indicators are not tracked. Although many community members were happy to share with me what they could, some of the information is just not available, or would have required too much effort outside of their responsibilities.

Given that measuring the food system is not currently a community priority, it is understandable that many busy professionals would not have the resources to assist a researcher without a community mandate. This experience shows that the status and resources of an official community process will be critical to conducting a full community food assessment. These resources include staff time: one idea that became clear to me as I spoke with community members is that dedicated staff time will be necessary to moving forward with collaboration on the food system. The organizations and stakeholder groups I identified are typically too busy with their own individual programs to devote the necessary time to organizing a community process. Because of the previously mentioned "silo" effect among disciplines, there is no funding or mandate that currently supports otherwise interested community organizations in working together to make the local food system more sustainable, equitable, efficient and vibrant. As far as I can tell, lack of organizational resources is the main stumbling block to making progress on food system collaboration.

A community process could use policy and local government infrastructure to support, expand or replicate innovative efforts already underway. Napa County can learn from the methods that researchers and other communities have innovated as well as from creative projects that already exist in the community in order to facilitate its own food planning process and create strategies for improving social, economic and environmental food sustainability. A community food assessment would be an ideal starting point to identify stakeholders, community concerns, resources and targets for improving residents' quality of life through improvements to the local food system.

At this point, there is sufficient background information available on the Napa food system to help a community process convene and create its initial priorities for a food assessment. A lead agency could most effectively bring other community leaders together organize this process. The Napa County Transportation and Planning Agency (NCTPA) is a good candidate for a lead agency. It is the home of the Napa County

League of Governments, and is funded by all municipalities across the County. At the direction of elected officials, in partnership with city and county planners and leaders of the food system sectors identified in the Stakeholders section of this paper, the NCTPA would be appropriate conveners and facilitators of a countywide community food system planning process, including an initial convention or search conference. While local government, with its authority, resources and responsibility to serve its constituents, is an appropriate organizational body, advocates and stakeholders from all sectors of the food system have an important role in advocating for and supporting a collaborative process.

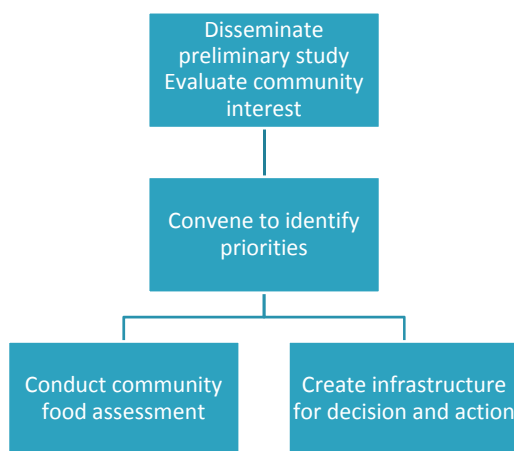


FIGURE 6. NEXT STEPS. ALTHOUGH A COMMUNITY FOOD SYSTEM PLANNING PROCESS WILL BE MORE ITERATIVE THAN DEPICTED HERE, THIS CHART OUTLINES THE BASIC STRUCTURE OF THE INITIAL STEPS.

If there is enough support for such a process, a facilitated community process such as a search conference would be an appropriate format for an initial meeting. During the course of the community process, participants can use the information in this paper as a starting point for determining priorities, both for creating a formal infrastructure (whether it is a food policy council, an ad hoc committee, or some other structure) to direct further work and for conducting a community food assessment.

Once community process participants have created the infrastructure with community support and advisory power for policy change and through a detailed assessment have a specific idea of what about the food system they want to change, they can take action. The community, through this infrastructure, can use the models and strategies presented in this paper as a starting point for researching and creating actions that are most appropriate to meet the county’s specific food system needs.

Napa County is renowned for its agricultural character, premier wine, healthy and local cuisine and quality of life. Yet there are significant economic, health and nutritional inequities in the community, and it is difficult to produce healthy, affordable food here to sustain our residents and reduce our dependency on the conventional unsustainable food system. Addressing these difficulties holistically with policy and partnership is likely to improve education, support local economic development and economic diversity, reduce chronic illness and medical costs, deepen neighborhood and community connections, and return food to a source of nutrition, enjoyment and community pride. Napa County has the potential to become a national leader in quality of life and quality of food not only for its visitors and its wealthy, but for all of its residents.

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