REAL FOOD ON THE COLORADO PLATEAU: THE PROFESSIONAL PLANNERS' ROLE IN PLANNING FOR COMMUNITY FOOD SYSTEMS IN FLAGSTAFF, ARIZONA

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ABSTRACT

Real Food on the Colorado Plateau: The Professional Planner's Role in Planning for Community Food Systems in Flagstaff, Arizona

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The predominant industrial food system, while providing an abundance of inexpensive food, compromises human and environmental health, jeopardizing many communities. In this system, food is a commodity, a product that requires extensive resources and delivers unmanaged waste. Adding to this, available agricultural land in the United States continues to decline as it competes with development. In an attempt to seek some solutions to address these issues, communities are developing and supporting alternative food systems.

Today, a small number of professional planners and planning scholars within the United States are participating in food planning with their communities. As a basic necessity, food, and planning for food, is important for health and general welfare of communities.

Applying a political economy framework, the research examined political and economic influences related to food systems in Flagstaff, Arizona. An investigation of the potential challenges to food planning was explored through a review of contemporary planning literature, in-depth interviews with public and private sector stakeholders, and through an analysis of Food Policy Councils across the United States. While alternative food system movements are gaining momentum, research discussed in this paper shows that in general, professional planners involvement in supporting alternative food systems is constrained.

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Introduction

Across the United States a community food systems movement is growing, marked by a rise in farmers' markets, co-operative farming, Community-Supported Agriculture (CSA), the slow food movement, and many others (de la Salle and Holland 2010, 13). Several reasons exist for the increased interest in buying and consuming food that is not part of the industrial food system. Topping most concerns are public health issues ranging from diet related diseases to matters of food safety (Hodgson 2009; Phemister 2009). Beyond public health, a diet fueled predominantly by an industrial food system causes concern for other issues as well. Threats to the environment include a heavy dependence on energy resources, air and water pollution primarily from excessive chemical use, and concentrated farming and animal production (Horrigan et al. 2002; Foer 2009). The political and economic structure of the current industrial food system may also create inequities in access (Wekerle 2004). Finally, research from Labao and Stofferahn (2007) show how whole communities are affected, socially and socioeconomically, by the imminent presence of industrialized farms in and near communities.

Research Purpose

Throughout history, food choices have been influenced and constrained by resources and location (Pretty 2007; Bildtgard 2009). Issues of accessibility, availability, and economic factors play significant roles, and in some cases may be the deciding factors of what to eat. Driven by industry and the global marketplace, the food we eat has become foremost a commodity, subject to political and economic influences. This too affects food choice. Both

beneficial and negative effects of a dominant industrial food system are evident on global and local scales, from public health and environmental consequences to influences in the local and global economy.

The public health, environmental, and social concerns, coupled with the rise in community food systems create compelling evidence to suggest that communities desire access to foods that are not part of the industrial food system. Initiatives at the local level are also indicative of this desire, and are illustrated through the presence of regional food system studies, manuals and guidebooks that provide instructions on developing a community food system, and the establishment of food policy councils (Feenstra 1997). While many communities are forging ahead independent of government support, studies show that community food systems supported by a government sanctioned policy have a greater likelihood of enduring (Pothukuchi and Kaufman 1999; Feenstra 2001). The combination of planning and policy strengthen opportunities for communities to make beneficial and lasting changes (de la Salle and Holland 2010). To this end, professional planners, equipped with the knowledge and expertise to help build relationships and plan for healthy communities, are in a unique position to encourage and support the growth and continuation of community food systems (Campbell 2004; Clancy 2004; Pothukuchi 2004; 2009).

Research Statement and Objectives

The purpose of this research was to investigate the potential role of professional planners in helping communities plan for food. Specifically, the research explored individual interest in developing a community food system and examined the benefits and challenges of planners' involvement through an analysis of stakeholder relationships within the community. According

to research conducted by Pothukuchi and Kaufman (1999), "no local government planning agency in the United States has ever undertaken a comprehensive study of its city's or county's food system" (220). Thus the exploration of individual interest in alternative food systems is helpful to gauge support for food planning.

The city of Flagstaff, Arizona, was utilized as the location of the study. Existing and potential community food systems in Flagstaff were identified in order to understand the history of community food systems initiatives and the feasibility of future initiatives. Furthermore, the American Planning Association's (APA) *Policy Guide on Community and Regional Food Planning* was examined to determine which of the seven policies, stated in the guide, were being addressed by the city. The intent was to make viable food planning recommendations for the city of Flagstaff's Regional Land Use and Transportation Plan.

The research addressed the following research questions:

1. What are the current food system alternatives in Flagstaff, Arizona, and how are they being supported?
2. What is the potential role of local governments in fostering policies that will encourage food planning?
3. What are the practical recommendations for food planning in Flagstaff, Arizona?

Research Framework

A political economy framework was applied to the research to understand the interplay between political and economic interests as they relate to industrial and community food systems, and the influence of these food systems on food planning for communities. The history of agriculture in the United States offers a useful example of the symbiotic relationship that exists between government policies and economic markets. The political economy theory was

derived from the research, helping to create a conceptual framework and providing, "an organized way of thinking about how and why a phenomenon takes place" (Lew 2010). Swinnen and van der Zee (1993) point out that a political economy model has been the "most perceptive" approach for understanding agricultural production and agricultural policies (270). Marsden et al. (1996) employed a political economy framework to explore the shift from a "focus on the unevenness of the capitalist transformation of food production as a biological conversion process," to focusing on social processes that address food safety, food access, and environmental concerns (367). In many cases, a political economy framework has been utilized to examine diverse topics, from agriculture to market research, exploring the interaction between economic and political influences and is therefore appropriate for the planning field (Arndt 1983; Marsden et al. 1996).

Political economy, as a research tool, has been used across disciplines throughout history and is often accompanied by a myriad of definitions. Clark (1998) suggests that while an understanding of the terms politics and economics is necessary for the study of political economy, both terms lack a clear definition. While some scholars view politics and economics as distinct, others see the terms as overlapping processes (Arndt 1983; Clark 1998; Adams 2003). Clark (1998) discussed the similarities of politics and economics stating that, "both are concerned with organizing and coordinating human activity, marshaling resources, managing conflict, allocating burdens and benefits, and providing for the satisfaction of human wants and needs" (6). On the other hand, there is distinction between the two according to goals, institutional arenas, and primary actors (Arndt 1983, 47; Clark 1998, 4). According to Arndt (1983), most applications of political economy utilize dimensions, such as polity and economy, external and internal, substructure and superstructure, or prosperity and justice, market and

government, and individual and community, to develop a typology in order to compare and analyze situations. In fact, in many cases, the dimensions are necessary for a comparative analysis (47). While many of these dimensions are appropriate for research about food systems, the research conducted for this study focused on two dimensions to analyze the data, polity and economy, and market and government. These particular dimensions were selected based upon their applicability to the research questions.

In addition to selecting appropriate typologies, the political economy framework espouses different perspectives, including the conservative, classical liberal, modern liberal, and radical perspective, which adds to its interdisciplinary appeal as a research paradigm (Arndt 1983; Clark 1998). The interdisciplinary nature of political economy, "offers great potential for analyzing and responding to the problems confronting modern society" (Clark 1998, 18). For the purpose of this research a modern liberal perspective was adopted, as such it was the perspective that was reflected prominently throughout the literature. At the heart of the modern liberal perspective is an emphasis on "universal values such as justice and human rights," greater equality, including promoting disadvantaged groups, and promoting the well being of society through economic efficiency (Clark 1998, 101-102). As a clear example, de la Salle and Holland (2010), purport the significance of food planning by suggesting that, "the way we grow, store, and eat our food creates cultural, ecological, and economic patterns that form how we as individuals and societies live and relate (21).

The heyday for the modern liberal perspective surfaced shortly after World War II, and is attributed to a long-awaited economic boom after many years of economic depression. The popularity of the modern liberal perspective continued for several decades into the early 1970s (Clark 1998, 97-102). By the mid-1970s modern liberalism slipped from the public's ideology,

as individuals were less interested in taking care of disadvantaged groups and more concerned with individual "attachments to particular values" (102). Coinciding with these changes in the general public's ideology, agriculture was facing its "worst financial crisis" since the 1930s (Barnett 2003, 160). Together these events helped to create an environment that favored the growth of an industrial food system.

At the same time, however, the increasing dominance of the industrial food system was not without its critics. Resistance to an industrialized food system, although unknown by this description at the time, began as early as the 1920s with an early land utilization movement, a reaction to unlimited growth particularly for agriculture production that exceeded subsistence farming (Guttenberg 1976). Additional criticisms arose in the late 1960s from "counter cuisine" advocates, and were voiced in bestselling books such as Lappe's *Diet for a Small Planet*, Carson's *Silent Spring*, and Lerza and Jacobson's *Food for People, Not for Profit* (Watson and Caldwell 2005; Pothukuchi and Kaufman 1999). Belasco (2005) notes that during this time, "consumers showed they understood that their eating behavior had roots and consequences - implications not just for their own health but also for the state of the economy, environment, and ultimately the planet" (233). And yet, the industrial food system, through a convergence of business, scientific, and political interests, superseded these concerns (Caton-Campbell 2004).

During the 1970s agriculture in the United States moved into the larger national and global economic arenas and paradoxically became both vulnerable and influential to outside economic and political influences. Demands for agricultural exports fueled production and wealth, ultimately leading to inflation, which caused "boom and bust" cycles and created instability in the market. Whereas, for a time, rising prices promised higher income and stimulated investments, then later failed causing financial crisis, resulting in recession and

unemployment (Clark 1998). As predicted by some economists the boom in agricultural exports and thus agricultural land investments came to an alarming halt in the mid-1980s. In 1981, agricultural exports peaked at $46 billion, and within five years had fallen by fifty percent (Barnett 2003). The loss of export revenues drove down the already low commodity prices. To make matters worse for farmers, several years of drought in the early 1980s exacerbated their financial circumstances (Barnett 2003). According to Barnett, the reason economists were not able to predict and thus react in time to the 1980s farm financial crisis was due to their inability to view the situation outside of "mathematical modeling" (2003, 170). The myopic perspective "ignored the political constraints under which decision makers operate" (171). Agriculture, as a significant market player, thus requires the duality of perspectives procured from economic and political lenses. As Caton-Campbell (2004) describes it, "the industrial food system driven by profit-maximization and market dominance; externalizing costs with federal and corporate economic and political support" (342-343).

Political Economy Analysis of the Industrial Food System

According to Clark (1998), both the market and the government share similar goals of efficiency, productivity, stability, and equity. However, the industrial food system that dominates the food market and thus determines product availability and price caused problems for society (Lobao and Stofferahn 2007; Vandermeer et al. 2009). Accordingly, as an economic institution, the industrial food system is not an efficient system. It relies heavily on nonrenewable resources, has concentrated wealth and power, and creates "barriers to entry" for competitors (Clark 1998; Wise and Trist 2010). According to a Frost & Sullivan market report, in 2008, "the top twenty-five processors in the United States earned twenty-five percent of the

total industry revenues - this has been the case for roughly the last decade" (2010). Additionally, Frost & Sullivan market analysts predict increased industry consolidation over the next several years. From a modern liberal political economy perspective the continued concentration within the food industry is far from ideal for society seeking alternative food systems.

Beneficial economic institutions provide growth, "increasing the availability and productivity of economic resources" (Clark 1998, 8). Although the industrial food system, through technological advances and mechanization has contributed to increased productivity, the productivity has created negative consequences for human and environmental health, from chemical consumption to food waste (Horrigan et al. 2002). The productivity in the industrial food system is easily seen in its ability to supply "3,900 calories per day per capita, roughly twice the average need, and 700 calories a day higher than in 1980" (Nestle 2006, 14). Yet from the modern liberal perspective, the growth, or overproduction, is not beneficial to society.

Not only is overproduction a concern, but; the industrial food system relies on relatively few crops. As Shiva (2006) describes, "Humanity has eaten more than 80,000 plant species through its evolution. More than 3,000 have been used consistently. However, we now rely on just eight crops to provide 75 percent of the world's food" (16). The reliance on so few crops is not a sustainable system (Shiva 2006). The industrial food system's ability for growth is largely dependent on technology, specifically genetically modified organisms (GMO), and chemicals in the form of fertilizers and pesticides, all of which are costly to communities (Reisner 2003). Again, from the modern liberal perspective, the reliance on an industrial food system, as the monopolizing food system, is not a beneficial economic institution for communities (Clark 1998).

The industrial food system as a political institution operates with benefits and deficiencies. Through food processing, it provides an abundance of food choices to consumers who have access to markets and the ability to pay for the selection (Shigley 2009). As a political institution the perceived ability to provide the freedom of choice is a noted benefit. However, the selection of products available to purchase is constrained, in many cases by "gatekeepers," thus limiting freedom (Goodman 2002). The available food choices, which for many are neither nutritious nor desired, also limits freedom (Hodgson 2009). Secondly, equity is compromised when there are concentrations of wealth and power. As noted earlier the industrial food system, in the hands of fewer farmers, has concentrated wealth and power. Gardner (2010) explains, at the end of the twentieth century, farmers represented less than 2 percent of the population and on average had higher incomes and wealth than individuals who were not involved in farming. In several cases, the industrial food system displays inequity due primarily to the fact that it operates with an economic priority, "the market may be inequitable because it responds only to those human needs and desires backed by money" (Gardner 2010, 11). Through an analysis of the industrial food system, it is evident that it is deficient as a productive and beneficial economic and political institution for society. Community food systems may offer an alternative to industrial food systems but need support from political and economic institution stakeholders.

Review of the Literature

History of Industrial Agriculture in the United States

The history of agriculture, and thus food, can be traced from the influences and actions of private enterprises and government regulations. During the twentieth century, agriculture in the United States entered an era of federal regulation and subsequent agricultural financing;

subsistence food became a commodity (Barnett 2003; Shulman 2003). Industrial agriculture has been a business endeavor for more than a century (Danhof 1969; Guttenberg 1976; Smith et al. 2011). Despite some resistance, commercial agriculture began to supersede subsistence and "semisubsistance" farming by the mid-1800s (Danhof 1969, 22). Technological inventions such as the refrigerated railroad car created a market opportunity to industrialize segments of food production, processing, and distribution (Guttenberg 1976). Coupled with technology innovations, eager entrepreneurs helped spur the transition of industrialized agriculture to the national scale, and soon after, the global market. The success of this transition was the result of two separate, yet related factors: the ability to control the most productive agricultural areas in the country and the achievement of economies of scale in food processing, which created greater efficiencies enabling lower prices for food items (Smith et al. 2011). By the end of the nineteenth century agriculture in the United States had become "market-focused" and "profit-driven" (Danhof 1969, 22).

Throughout the twentieth century agricultural policy was driven by economic agendas, and consequently, "governmental policies and private initiatives created enormous material abundance, signaled by the year-round availability of inexpensive fresh and processed foods in every North American supermarket" (Adams 2003, 2). Shulman points out that since the passage of the Federal Farm Loan Act of 1916, "key non-farm interests set an agenda for agricultural financing" shaping the future of agriculture, "to meet the credit needs of an affluent class of commercial farmers and prosperous agricultural landowners," which ultimately defined agriculture's political and economic development (2003, 113-114).

More recently, farms have increased in size, yet declined in numbers, and increasingly they are becoming vertically integrated throughout production, processing, and marketing (Labao

and Stofferahn 2007; Wise and Trist 2010). Research conducted by Wise and Trist (2010) illustrates the seemingly common market convergence of hog farms, "hog markets have undergone rapid concentration in the last 25 years, with the top four packers now controlling two-thirds of the market and Smithfield Foods, the industry leader, commanding 31 percent" (1). This trend is not limited to the pork industry. In 2002, less than ten years ago, small-scale farms comprised seventy-nine percent of the farms in the United States, producing six percent of all sales, while the top three percent of farms accounted for sixty-two percent of all sales (Labao and Stofferahn 2007). Undoubtedly, the industrial food system operates with a single objective, to maximize the economic bottom line (Frost & Sullivan 2010, 26).

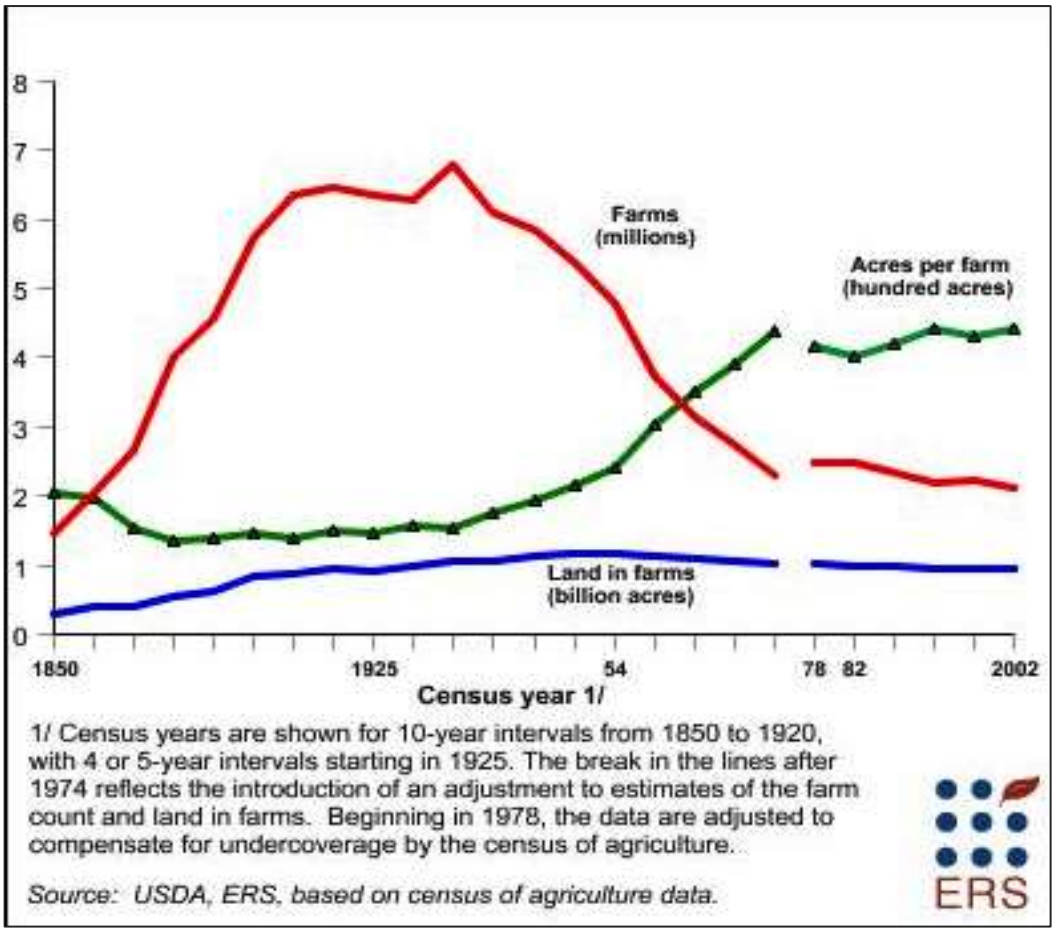


Figure 1. Decline in United States Farms from 1850 – 2002

Seemingly, despite some dissenting voices, the direction of the twentieth century food system has received virtually unquestioned support by consumers (Lappe 1985; Adams 2003). Through a combination of several factors, a system was created that was able to produce and sell food at low cost to the consumer. In turn, "budgets became based on the price of cheap food" and inexpensive and readily available food was expected (Lionette 2007, 115). Today the industrial food system is a multi-billion dollar industry relying inherently on the "unquestioned support" of consumers to continue to make profits (Manning 2004).

Belasco (2005) contends that by putting a greater value on convenience the "mainstream consumer culture put a premium on the end product," and was disassociated from food production (222). Pollan (2006) suggests that industrial food system relies on consumers "forgetting, or not knowing in the first place" about the production and process of food and food products (10). According to de la Salle and Holland, the experience of food has been reduced to a simple formula: "buy food, eat food" (2010, 22). The result is a food system that disconnects people from what they eat including how and where food is produced, which may contribute to an unhealthy environment and human population (Horrigan et al. 2002). Reiterated throughout the literature, similar messages are repeated, "the gatekeepers of the 20th century food system care little for health and people and more about how to sell you more food than you need or could possibly eat" (de la Salle and Holland 2010, 22). The repercussions of a society dependent on the products of an industrial food system are visible in some public health crises, environmental threats, and disparities in access related predominantly to financial means.

Despite the market domiance of the industrial food system, efforts to challenge the system exist. Support for family farms is growing through non-profit organizations, such as the Center for Rural Affairs (CFRA), and within individual states (CFRA n.d.). Iowa, which passed

the Family Farm and Sustainable Agriculture Act of 1995, offers one example of support for "small scale and sustainable" farms (Meadows 1995). Furthermore in states including, Pennsylvania, Kansas, Minnesota, South Dakota and Nebraska, community members have set limitations on corporate farming, and in some instances have "banned" corporate ownership (Corporate Ownership Limitations 2011).

Contemporary Food Issues in the United States

The main issues of concern, due to industrial food production in the United States, center on diet-related diseases and obesity, food safety, environmental concerns, economic concerns, and food security.

Public Health Concerns: Diet Related Diseases and Obesity

Public health concerns manifested by an industrialized food system include diet related diseases and obesity, as well as undernourishment and malnourishment. According to Withrow and Alter (2010), obesity increases the risk of several diseases including, but not limited to, Type 2 diabetes, stroke, coronary artery disease, gallbladder disease, and many types of cancers (131). Smith, Chouinard and Wandschneider (2011) suggest that rapid changes in diet over the past century have coincided with an increased prevalence of "diet-related" diseases. They contend, "it is becoming increasingly apparent that certain industrial-scale food processing technologies are, in part, responsible for the modern epidemic of diet-related chronic disease" (239). In fact, health consequences influenced by diet may contribute to at least four of the top ten leading causes of death, as identified by the Centers for Disease Control and Prevention's, including heart disease, cancer, diabetes and kidney diseases (CDC 2011). Furthermore many of these

health concerns unexpectedly overlap, such as incidences of malnourishment and obesity occurring simultaneously among individuals (Ruxton 2011).

To complicate matters, as mentioned previously, individuals who suffer from obesity may also have nutrition deficiencies due to the types of foods they are consuming (CDC 2010). Nutrition expert, Marion Nestle (2006) claims that, "obesity is the most serious nutrition problem among children as well as adults in the United States" (14). In 2010, the CDC estimated that more than 72 million Americans were obese, nearly a quarter of the population, and based on existing data those numbers were likely to rise. Many of the diet related diseases discussed previously are closely, and in some cases directly, related to obesity (Withrow and Alter 2010). However, other factors may also contribute to these public health concerns including the built environment (Booth, Pinkston and Poston 2005).

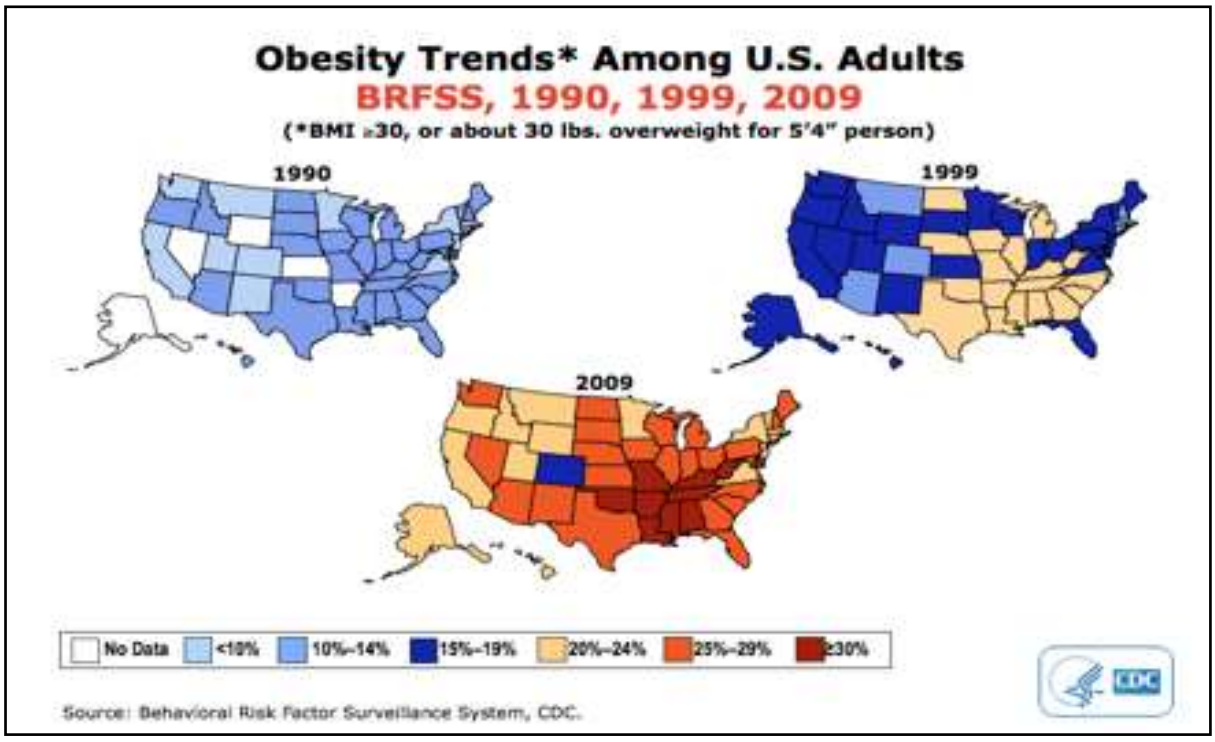


Figure 2. Obesity Trends Among U.S. Adults since 1990.

The prevalence of obesity is affecting people who have little money to spend on food; most processed foods, which are generated by an industrial food system, contain more calories and cost less than unprocessed foods (Pollan 2007). Higher consumption of nutritionally inadequate food is often a result of available income, access, and a lack of nutrition and meal preparation knowledge (Counihan and Van Esterik 1997). Each year the percent of food eaten away from home increases, and food purchases at restaurants are increasing (Tillotson 2004). The trend suggests that more processed food is being consumed each year, instead of preparing meals at home.

Pollan puts the blame on the current farm bill which, "helps commodity farmers by cutting them a check based on how many bushels they can grow," resulting in agricultural policies that operate contrary to some public health objectives (2007, 134-135). One such public health objective is *Healthy People 2020*, which promotes the consumption of "a variety of nutrient-dense foods across food groups, especially whole grains, fruits, vegetables, low-fat or fat-free milk or milk products, and lean meats and other protein sources" (HealthyPeople.gov 2011).

The market structure that currently exists rewards farmers through "the provision of large volumes of low-cost food, feed, fiber, and fuel," who sell those products to a "highly consolidated global agri-food industry" (Reganold et al 2011, 670). Although the United States' agricultural and economic policies correlate to the rise in obesity and diet related diseases, the role that "supply-side public policies play in the American food chain" is generally brushed aside (Tillotson 2004, 620). In turn, the policies that influence the food supply have affected the relationship that people have with food. As Tillotson asserts, "the modern food industry's role in the nations' diet, greatly aided by public policies favoring the industry's

economic growth, increasingly has become an influence on what, where, and how Americans eat" (2004, 637). Consequently, the aversion to acknowledge connections between some agricultural and public health policies has helped to create unorganized and confusing food safety regulations (Morrone 2008; Trexler 2011).

Public Health Concerns: Food Safety

In addition to diet related diseases and obesity, contaminated food from bacteria and pollutants increases the likelihood of food borne illnesses and in severe cases may lead to fatalities. According to Linscott (2011), seventy-six million cases of foodborne illnesses are reported annually in the United States. Although, the actual number of foodborne illnesses is unknown since, "many cases of food-borne illnesses are not diagnosed because the patient does not feel ill enough to seek medical attention" (Linscott 2011, 44). Mead et. al. reported that in addition to the seventy-six million illnesses, food-borne diseases cause approximately three hundred and twenty-five thousand hospitalizations and five thousands deaths each year (CDC 1999). In total more than a quarter of the United States' population suffers food-borne illness each year.

Consumer advocate, Morrone (2008) points out that the complexity of the regulatory agencies throughout food production processes further complicates and obfuscates concerns related to foodborne illnesses. Trexler (2011) notes that with continued foodborne illness outbreaks, the safety of food is inherently a part of the public health debate and yet, "the effort to modernize food safety regulation has always been an uphill, and contentious, political battle" (311). In the book, *Poisons on our plates: The real food safety problem in the United States*, the author traces the decision making processes of multiple regulatory agencies and questions, "Who is ensuring that our food is as safe as it can be? How much responsibility and authority does the

government have to protect consumers from unsafe food?" (Morrone 2008, 117). As such, the safety of food consumed by individuals in the United States is overseen by fifteen different agencies, presiding over thirty related laws (Trexler 2011, 318). While the administering agencies have become fractured since the first food safety law was enacted more than a century ago, the industrialized food system has become streamlined; standardizing practices, processing, and products (Trexler 2011). The result of this multi-varied regulatory network has contributed to an increase in foodborne illnesses, particularly evident with concentrated animal feeding operations (CAFO) (Morrone 2008; Foer 2009). The concentration of animals into small spaces creates even more threats to human health and the environment and dismisses animal welfare (Horrigan et al. 2002; Foer 2009). Paradoxically, the public health concerns related to the industrialized food system are being answered by that same system. Opportunities for food contamination appear throughout the food system and contribute to the complexity of keeping food safe and potentially contributing further to consumer confusion, as illustrated in Figure 2 (Biltekoff 2010; Smith et al. 2011).

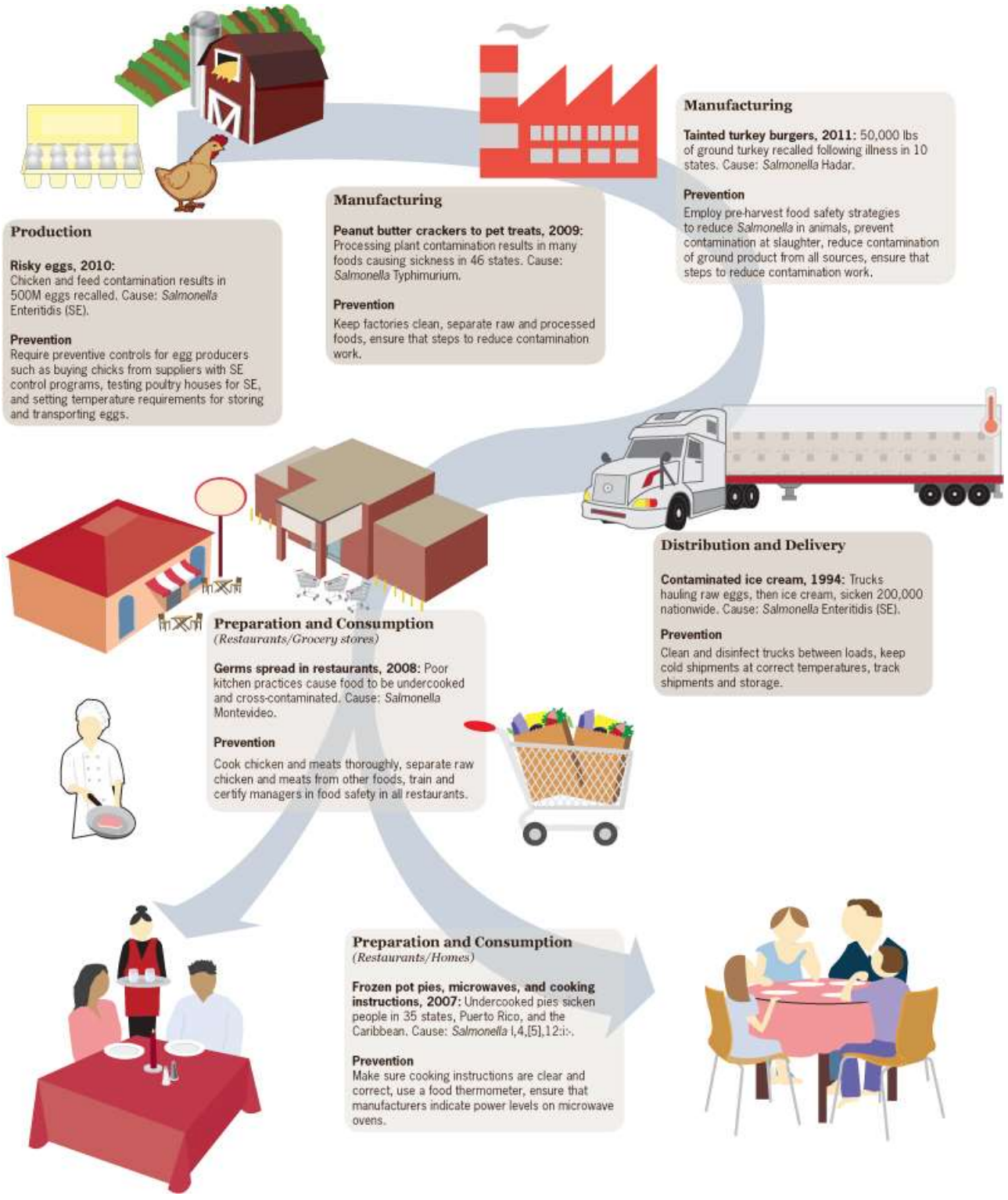


Figure 3. Food Safety: Prevention from the Farm to the Table. The figure illustrates food safety threats and how they can be avoided throughout the food production system (CDC 2010).

Environmental Concerns

Throughout the planning literature research related to public health concerns from the industrial food system is accessible. Less popular is research that demonstrates the effects of an industrialized food system on the environment. Overall the majority of research that discusses food system effects on the environment focus on the positive contributions of local and sustainable food systems towards the environment as opposed to the environmental detriments of the industrialized food system. Furthermore, the literature is not widespread. A search among two of the premier planning journals, *Planning* and *Journal of Planning Education and Research*, over the previous decade resulted in zero articles that specifically and singularly suggested negative environmental consequences from the industrial food system. Although the research exists in journals, such as the *American Journal of Public Health*, *Environmentalist,* and *Journal of Soil & Water Conservation*, whose scope is public health or environmental conservation, the research topic is not common in planning literature.

The impact of industrialized food production on the environment is multifold, including air, soil and water pollution from the excessive use of chemical fertilizers and pesticides, as well as biodiversity loss (Altieri 2001). Several reports indicate that nearly one third of greenhouse gases contributing to global warming are the result of agriculture through chemical use and transportation (Sealing 2007, 1031). Industrial agriculture, from production to processing and transporting, relies heavily on fossil fuels. In fact, industrial agriculture accounts for seventeen percent of all fossil fuel use in the United States (Horrigan et al. 2002, 448). Foer (2009) reported, "food choices contribute at least as much as our transportation choice to global warming" (58). On the other end of the food production chain, Cuellar and Webber (2010) researched the loss of energy from food waste. They note that in 2007, more than a quarter of all

edible food produced in the United States was wasted (6464-6468). According to Schweigert, the amount of energy represents about two percent of the total annual energy consumption in the U.S. (2010).

The industrial food system produces and relies upon five primary commodity crops including corn, soybeans, wheat, rice, and cotton (Pollan 2007). The reliance upon so few crops threatens soil fertility and biodiversity, which in turn creates a greater demand for the use of chemical fertilizers and pesticides in order to maintain production, resulting in an unsustainable cycle (Gomiero et al. 2011). The loss of biodiversity is creating unforeseen consequences. As an example, between 1985 and 1997, the number of honeybee colonies on farmlands in the United States dropped from 4.4 million to less than 1.9 million, due predominantly to pesticide exposure (Horrigan et al. 2002, 446). Additionally, soil fertility is compromised by the excessive use of chemicals and heavy machinery necessary for industrialized agriculture (Horrigan et al. 2002).

Economy

Up to this point, the focus of the discussion has revealed some of the negative consequences of the industrial food system. However, at the same time, it is important to mention that the industrial food system may also have beneficial attributes, foremost is the ability to produce massive amounts of food in an effort to feed the world's population (Phemister 2009). In addition to production, the food industry creates employment for many segments within the agricultural and the food and beverage industry, including farming, processing, retail, and marketing (Daniels 2009). According to the American Farmland Trust, an organization dedicated to saving farm and ranch land in America, the industrial food system contributes

nearly one trillion dollars to the national economy and employs approximately seventeen percent of the labor force (American Planning Association, hereinafter "APA" 2007).

Furthermore, Pothukuchi and Kaufman affirm that food sector establishments are vital components of a city's economy, offering employment in restaurants, supermarkets and food wholesaling businesses (1999). In their study, they discovered that, "a higher percentage of lower income residents in cities depend on lower paying jobs in food stores and eating places" (1999, 217). Ultimately this creates a conundrum for communities that desire to protect human and environmental welfare while simultaneously supporting the local economy and providing jobs.

Food Security

The industrial food system produces enough food to feed everyone in the world, yet despite the amount of food produced, many people are hungry and malnourished (Phemister 2009). The fact of this extends beyond the industrial food system to economic markets and the built environment (Clifton 2004; Dunkley, Helling, and Sawicki 2004). According to the American Community Survey, more than fourteen percent of the United States' population are living below poverty, therefore may not have the income and access to nutritious foods, and may also regularly experience hunger (Counihan and Van Esterik 1997; Bishaw and Macartney 2010). Unequal access to food creates "chronic food insecurity" and episodic hunger (Phemister 2009, 45). Research by Dixon et al. (2007) shows that "city inhabitants are at particular risk of both under- and overnutrition because of their reliance on a commercial food supply, access to which requires income from wages" (119). In many cases, transportation, specifically, the locations of food markets and convenience stores, and the products that are available within each store hamper access to nutritious foods. Research conducted by Dunkley, Helling and Sawicki

(2004) shows a strong correlation between household income and proximity to average store size. In their study they noted that the larger grocery stores located in affluent areas supplied a greater variety of foods. Similar research also showed a correlation between income and access to larger grocery stores, which provided more nutritionally adequate foods at more affordable prices, than convenience stores (Clifton 2004). Walker, Keane and Burke (2010) found in their research that factors in individual food choices are "based on the food outlets that are available in their immediate neighborhood," thus the built environment may also influence what people eat (877). Such is the case with the Ramona Gardens housing project in Los Angeles, which has limited, over-priced and often out-of-date food options. According to a recent news article, Ramona Gardens, which is located in a part of East L.A., claims that it has not been able to attract a big supermarket for a least two reasons, "People who live here don't have much money, and the area has a reputation for gang violence" (Del Barco 2011). Instead, the community in Ramona Gardens relies upon a single convenience store to purchase food. The disparity of access primarily from economic incomes creates "food deserts," the absence of a supermarket, and may further contribute to poorer health for those individuals who reside in these neighborhoods (Walker et al. 2010). In fact, numerous examples of "food deserts" exist across the country, exacerbating public health concerns and in some cases illustrating economic inequities that exist within communities (Short et al. 2007; Gordon et al. 2011).

History of Food Planning in the United States

In order to explore the potential role of professional planners in helping communities plan for alternative food systems, it is worth considering how planners have been involved in food planning in the past. Therefore, a brief summary of planning history in the United States is

included to provide context for contemporary food planning efforts and activities. Following is the investigation of planners' absence from food planning during the twentieth century. Finally, an examination of recent food planning initiatives by planners shows the various strategies that planners are taking to help communities plan for alternative food systems.

Although planning has existed worldwide for centuries, the focus of this discussion is on planning in the United States. Evidence of distinct "planning periods" in the United States began in the late eighteenth century and can be characterized by provincial, commercial and industrialized eras (Mumford 1945). In the nineteenth century, industrialization coupled with population growth set the stage for urban concentration (Levy 2009). Several factors led to the development of dense urban centers including "increased agricultural productivity, factory production, and low-cost transportation" (10). Technology innovations in agricultural machinery increased productivity and required fewer workers, "In 1800 perhaps 85 to 90 percent of the U.S. labor force was engaged in farming. By 1880 that figure was down to about 50 percent" (Levy 2009, 10). Two centuries later the percentage of employed labor force in agriculture is less than two percent (Dimitri et al. 2005).

As people fled to the city for jobs, planning efforts were concentrated in urban areas to address housing and public health issues, "the congestion of the city exacted a huge cost in death and illness," due primarily to a lack of sanitation and the spread of communicable diseases (14). Sanitation drove reform, and in the late nineteenth century integrated design and open space became popular planning ideals, followed by planning movements including housing reform, the Municipal Art movement and the City Beautiful movement. Each of these planning developments responded to community needs or ideals, and paved the way for contemporary

planning practices and ultimately contributed to the separation of food (i.e. public markets) from cities (Mumford 1945; Donofrio 2007; Levy 2009).

In 1909 at the first National Conference on City Planning, food ranked high among planning concerns as a way to improve the general welfare of the city (Donofrio 2007). Planners were aware of the relationship between food transportation and food cost, which, consequently caused much social unrest, and they offered solutions through planning designs such as the Garden City design and green belts (Donofrio 2007; Levy 2009). In the 1920s land use controls, specifically through zoning, further separated food from people by distinguishing certain activities most appropriate for specific land areas, including industrial, residential, and agricultural. Master planning also developed during this time, and continues to function in the form of a comprehensive plan, which essentially serves as a community development roadmap (Levy 2009). From its inception through today, master planning is primarily concerned with land use, street patterns, transit, rail (and where appropriate, water) transportation, public recreation and civic art (Levy 2009, 46).

Throughout this time, individual income and automobile ownership increased, and for many, food was accessible and affordable (Mumford 1945; Levy 2009; de la Salle and Holland 2010). According to Meyer, cities played a key role in economic development, "cities provided opportunities to achieve scale and scope economies through division and specialization of labor" (2000, 1). Planners' attention turned towards urban development and agriculture continued to thrive separate from urban centers, "American agriculture was moving away from diversified, locally supported farming toward monocrop cultivation" (Donofrio 2007, 38). Along with the rise in industrial agriculture, supermarkets proliferated becoming a central location for a "diversified and dependable year-round bounty" (38). By the 1950s business interests dominated

the decisions made regarding food production and processing, and planners' role in food planning again fell behind other community priorities (Donofrio 2007). Since that time food planning has shifted even further from the planning agenda, "From the urban patterns that encourage car-dependence for grocery shopping to the distinct lack of food in how we treat and use public spaces, food has indeed fallen off the table as a fundamental consideration in our policy, planning, and design practices" (de la Salle and Holland 2010, 22).

During the 1970s it was clear that agricultural land needed protection from development. During this decade several counties in California, Pennsylvania and Washington took action through zoning, and by 1981, two hundred and seventy counties had agricultural zoning (American Farmland Trust 1998). Less than ten years later, "an informal AFT survey found nearly 700 jurisdictions in 24 states with some form of agricultural protection zoning" (1998, 1). Beyond municipal codes to protect agricultural land, tools such as conservation easements and Purchase of Development Rights (PDR) also help protect agricultural land (Wright and Skaggs 2002).

Contemporary Food Planning in the United States

In 1999, planning scholars Kameshwari Pothukuchi and Jerome Kaufman, in their joint publication, "Placing the Food System on the Urban Agenda: The Role of Municipal Institutions in Food System Planning," argued that food planning is necessary for healthy communities and that urban planners can play a significant role in planning for food. Pothukuchi and Kaufman (1999) brought to light the absence of food planning in the planning curricula and throughout the professional literature, noting that the food system is primarily unknown to planners and

community residents alike. In their research they conclude that there are four main reasons why the food system has been overlooked:

1. The food system is taken for granted. The abundance of food available is accessible to most people in the United States.
2. Food issues, as opposed to housing issues and transportation concerns, are seen differently by planners.
3. Over time agriculture became efficient and convenient, the loss of farms and farmlands did not visibly correlate with food availability.
4. The dichotomy in public policy, specifically urban verses rural policy, unknowingly kept separate the federal agencies responsible for urban development and agriculture.

The following year, Pothukuchi and Kaufman teamed again to publish "The Food System: A Stranger to the Planning Field," which examined planners' involvement in food systems and whether they believed that their involvement was an essential part of their responsibilities (2000). In their study, twenty-two planning agencies across the United States were surveyed and asked to identify their role in food system issues. The responses indicated that the most prominent role for planners, related to food systems, was in the location of supermarkets, grocery stores, fast food outlets, and food wholesaling (Pothukuchi and Kaufman 2000). Overall, the results of the survey showed a lack of planners' involvement in planning for food systems.

From their research, only six respondents reported that food issues were part of the community's comprehensive plan, and of those six, two planners claimed to have "moderate involvement" while the remaining four were described as having "minimal involvement" (155). While the lack of involvement in food system issues was predictable given the absence of food issues in the planning literature, the reasons were concerning. Common themes were expressed which resulted in seven categories from comments such as, "Its not our turf," to "What's the problem? If it ain't broke, why fix it?" (116). The results of the study revealed that while some

planners participate in large scale agricultural planning, the majority of planners considered food planning a low priority.

TABLE 1: Planners' involvement in the food system, top 10 issues.

Issue	Agencies reporting involvement	Significant involvement	Moderate involvement	Minimal involvement
Location of supermarkets, grocery stores, fast food outlets, and food wholesaling	20	8	6	6
Design of food outlets	18	8	5	5
Community gardens	12	1	4	7
Studies of impact of food sector on local economy	11	1	4	6
Farmers' markets, food festivals, etc.	10	3	6	1
Food issues addressed in neighborhood plans	10	0	4	6
Food related economic development	10	4	2	4
Food issues addressed in comprehensive plans	6	0	2	4
Hunger prevention programs	5	0	2	3
Agricultural land preservation	3*	0	2	0

*One agency official did not rate the significance of the activity.

Table 1. Planners' list of the top ten food systems issues that they actively address. (Pothukuchi and Kaufman 2000).

Furthermore, very few planning agencies reported involvement in agricultural land preservation, and few were aware of the relationship between agricultural land and community food systems (Pothukuchi and Kaufmann 2000). According to the Farmland Information Center from 1982 to 2007 more than twenty-three million acres of agricultural land were converted to developed land (2007). In the same way that community food systems can add economic value to a community, preserving agricultural land also adds to economic value to a community (APA 1999; Pothukuchi 2009, 355). In 1999, the same year as Pothukuchi and Kaufman's study, the APA adopted the *Policy Guide on Agricultural Land Preservation,* which lists thirteen separate positions for practicing planners. Throughout each of the recommendations the connection between agricultural land and food systems, specifically community food systems, is overlooked.

The term “food” is only mentioned twice in the document, yet food systems influence current agricultural practices (APA 1999). The continued separation between agricultural preservation and food planning within the planning profession may perpetuate the lack of knowledge about food systems within the planning profession. Thus the connection between agricultural land and food systems, both industrial and community food systems, needs to be addressed in order for planners to have a comprehensive understanding about food system affects on communities.

In 2004 the *Journal of Planning Education and Research* published a special issue on planning for community food systems, which included such articles as “Building a Common Table: The Role for Planning in Community Food Systems” and “Potential Contributions of Planning to Community Food Systems” (Kaufman 2004). Subsequently, a proliferation of interest and additional publications emerged focusing on planners’ role in planning for food. The following year, at the APA National Planning Conference, a special track of sessions about food planning was held for the first time in APA’s history (APA 2007). An overwhelming response was received and in 2006, a second special track on food planning was held.

In 2007, as a result of this increased interest, the APA’s *Policy Guide on Community and Regional Food Planning* was adopted by APA’s Legislative and Policy Committee, Chapter Delegate Assembly, and the Board of Directors, establishing a vision for planning practitioners and scholars to become engaged in community and regional food planning. The policy guide discusses the effects of the food system on local and regional communities and outlines the connections between food systems and the economy, health, ecological systems, and social equity (Pothukuchi 2004; Vallianatos et al. 2004; Wekerle 2004; Short et al. 2007; Hodgson 2009).

Seven policies shape planners' direction in community and regional food planning:

1. Support comprehensive food planning process at the community and regional levels;
2. Support strengthening the local and regional economy by promoting local and regional food systems;
3. Support food systems that improve the health of the region's residents;
4. Support food systems that are ecologically sustainable;
5. Support food systems that are equitable and just;
6. Support food systems that preserve and sustain diverse traditional food cultures of Native American and other ethnic minority communities;
7. Support the development of state and federal legislation to facilitate community and regional food planning discussed in general policies #1 through #6. (2007)

Community Planning for Food

APA's policies emphasize the support that planners can provide to communities and establish benchmarks for food planning. However, while planners have the knowledge to address concerns that intersect with zoning and land use planning, they are limited by regulations and pre-existing codes, and bound by decisions that are made by city council. Additionally, planners work in a time frame that extends years into the future and therefore are accustomed to viewing issues with this long-range perspective (Bureau of Labor Statistics 2011). The parameters that exist for planners, dictate their role in food planning. Ultimately, the community decides whether or not to have and support community food systems. Nevertheless, there are several examples that illustrate the different ways in which communities, to support alternative food systems, have used a planner's expertise.

Professional planners have many planning tools that they can use to help communities plan for food. Planners can provide insight on community support for community food systems and help forge alliances between stakeholders (Pothukuchi 2004). According to Kaufmann (2004) planners can help "illuminate market gaps that the mainstream food system does not do a good job of addressing in the community," potentially helping to contribute to the local economy

(339). Additionally, through existing job skills and responsibilities, planners can compile data on community food systems, including market analysis, analyze connections between food and other planning concerns, assess the impact of current planning on local food systems, integrate food security into community goals, facilitate the development of local food policy councils, and educate future planners about food system issues (Pothukuchi and Kaufman 2000; Campbell 2004). These diverse skills provide a toolbox of resources to help communities successfully plan for, develop, and maintain community food systems (Raja et al. 2008).

Successful community food systems exist across the United States, from community gardens to the development of Food Policy Councils. As presented in *A Planners Guide to Community and Regional Food Planning* (2008), existing efforts are categorized as program, policy, or planning and zoning. Program level initiatives include community gardens and urban farms, farmers' markets, community supported agriculture, and farm-to-school programs. Policy efforts include food policy councils, food charters, and school food policy. Finally, planning and zoning strategies may include stand-alone plans focusing on community food systems or their components, inclusion of food system components in comprehensive plans, and zoning with food and health in mind (Raja et al. 2008).

According to the American Community Gardening Association (ACGA), more than eighteen thousand community gardens are active across the United States and Canada (Raja et al. 2008). The rough estimate accounts for known community gardens, several more are likely to exist in informal spaces, including neighborhood and backyard gardens. The benefits of community gardens are abundant, from providing healthy foods to creating green spaces and promoting community engagement (2008). In their role, planners can help forge partnerships with organizations and businesses. ACGA is an organization that serves as a resource for

communities, offering tips for best practices and guides for starting a community garden. Included on the ACGA web site are several sample forms, such as a Sample Land Use Agreement (n.d.). Planners can help communities interpret such forms and provide guidance throughout the process. The Public Health Law and Policy, a nonprofit organization, developed a user guide for understanding and implementing land use protections specifically for community gardens. The guide, "Establishing Land Use Protections for Community Gardens," (see Appendix A) recommends that communities work with local government leaders to ensure support and protection for community gardens (2010, 3). Furthermore, the guide recommends that communities model language from the comprehensive plan and suggest that communities consider zone protections, open space protections, land use policies, Americans with Disabilities Act compliance, financing, and public-private partnerships (3-7). In short, planners have knowledge about each of these areas and can help communities address concerns to plan for community gardens (Klingler 2009). Several notable achievements of community gardens exist, including the P-Patch program in Seattle, Washington, the Somerton Tanks Demonstration Farm in Philadelphia, Viet Village urban farm in New Orleans, and Detroit, Michigan's D-Farm (Raja et al. 2008).

Figure 4. Image of Viet Village Urban Farms, New Orleans, Louisiana (American Society of Landscape Architects 2008).

In addition to community gardens, farmers' markets offer another community food system opportunity. One of the more successful farmers' markets is the Fondy Farmers' Market, located in Milwaukee, Wisconsin. The establishment of the market was in response to the lack of supermarkets available in the economically depressed central city. Working together with the city, the Fondy Farmers' Market leases formerly abandoned city owned land for one dollar per year. The market provides retail space to thirty-five farmers, and supplies of healthy foods are available to the public. Additionally the market accepts food stamps and provides workshops on nutrition and cooking (Raja et al. 2008, 11-13). The Fondy Farmers' Market illustrates how a collaboratively built community food system can provide several benefits to a community.

At the program level planners can provide a community assessment to help make recommendations for community gardens, farm-to-school programs, farmers' markets, and community supported agriculture. A community assessment is an important first step to determine the viability of the program and to gauge the level of support that exists within the community (Raja et al. 2008). Undoubtedly programmatic efforts have several benefits. However, they remain vulnerable unless supported, particularly by policy and budget (Feenstra 1997).

Community food systems need governmental, legal, and institutional support through volunteer work and funding (Raja et al. 2008, 16). Establishing a food policy council is one way to help facilitate government, legal, and institutional support. According to the Drake University Agricultural Law Center, a food policy council is composed of local food system stakeholders, both citizens and government officials, whose primary goal is, "to examine the operation of a local food system and provide ideas and recommendations for improvement through public policy change" (2005). Minimally a food policy council enables a forum for discussion, and ideally fosters positive policy change to support community food systems. In Baltimore, Maryland, as part of the city's sustainability plan, a food policy task force was established, represented by stakeholders within food production, distribution and consumption segments. Appropriately, the food policy task force's strategic goals align with the city's goals. In this case integrating goals was a critical step toward influencing policy. Planners, skilled in negotiations, are in the position to help unify community goals through the use of a common language (Caton-Campbell 2004). Moreover, research suggests that planners act as liaisons between stakeholders helping to navigate the political system (Raja et al. 2008, 53).

While program and policy level initiatives are constructive toward developing community food systems, consideration of the built environment from a planning and zoning perspective is also critical (Klingler 2009; de la Salle and Holland 2010). Planners' land use and zoning knowledge can help communities plan for community food systems (Raja et al. 2008). For example, planners may recommend alternatives for growth management strategies in order to preserve farm and ranch land. They may also be in the position to recommend appropriate locations for food venues and distributors based on existing transit routes and community needs and desires (APA 2007).

According to Raja, Born, and Kozlowski, the use of zoning and city ordinances are used in a variety of ways to regulate food destinations and address public health concerns (2008; Raja et al. 2010). Diller and Graff (2011) describe that, "recognizing the enormous influence a community's food environment has on the quality and quantity of what people eat, cities and counties have sought to encourage food retail establishments to promote healthier options through regulations and incentives" (89). In Concord, Massachusetts, the town's zoning laws prohibit fast food restaurants. Similarly, in Arcata, California, in 2002, the city's zoning ordinance was modified to limit "formula restaurants," in an attempt to better protect public health from the types of food served in some chain restaurants (Raja et al. 2008, 24). A third example illustrates how a zoning ordinance allowed agricultural uses in residential zoned areas. In 2005, in Milwaukee, Wisconsin, an amendment to a zoning ordinance permitted agricultural uses, "such as greenhouses and the raising of crops, in all residential and zoning districts" (26). Overall, planners have the tools to help address key components of the food system including, production, processing and storage, distribution, access and recycling (Raja et al. 2008; Klingler 2009; de la Salle and Holland 2010).

Other skills that planners can offer communities include performing a market analysis and conducting site surveys to determine appropriate locations for providing food access, such as the location of a farmers' market. Planners can coordinate with public works officials to facilitate a market's access to public utilities, easing potential financial constraints, and ensuring the safety of nearby residents (94). Finally, planners can help to create connections among stakeholders to plan for viable community food systems.

Ultimately, however, it is the decision of the community to have and support a community food system. Planners are limited by the values and priorities set forth by the community as well as any veto power from supervisors or city council. The history of the industrial food system, and its ties to government policies, create challenges to alternative food system planning (Clancy 2004; Kaufman 2004). In addition, there are other challenges that exist for planners' participation in community food systems. Many of which stem from a lack of knowledge about community food systems (Pohukuchi and Kaufman 2000). As noted in *A Planners Guide to Community and Regional Food Planning*, the barriers for involvement in food issues include a lack of resources, interest, trained staff, and awareness regarding food issues (Raja et al. 2008, 30).

Research Justification

Food is a politically and economically complex and contentious topic. Around the globe, food issue concerns generated predominantly by the industrial food system have contributed to public health and environmental concerns, as well as economic uncertainty. The significance of this research is therefore threefold. First, this work is advocacy research, in that the primary goal of this research was to produce realistic and desired recommendations for food planning for the

city of Flagstaff, Arizona. Second, the research aimed to create an awareness of the existing community food systems in Flagstaff and how they are currently supported, which may provide some understanding into the city's food system. Third, this research helped illustrate the interrelationships between the private and public sectors in regard to community food systems. Knowledge of the relationships, in turn, offered insight into the advantages and potential challenges of creating partnerships to support food planning and thus community food systems.

Chapter Two

Research Methods

Study Site

Flagstaff, Arizona served as the study site for the research. Located at the base of the San Francisco Peaks, in northern Arizona, roughly eighty miles from the Grand Canyon, the city of Flagstaff is well known for its scenic beauty and convenient access to outdoor recreation activities. Historically, ranchers settled Flagstaff in the late 1800s, and were able to take advantage of the area's natural resources, notably water and timber (Hardy 2010). Soon after, the railroads followed, creating an opportunity to transport goods to markets and within six years Flagstaff was an established town with railroad access, livestock, lumber, and service industries (Hardy 2010). In 1928 Flagstaff was incorporated as a city, with industry and educational opportunities.

Today, the city of Flagstaff is a growing community. According to the most recent census, the population of Flagstaff, currently at 65,870, has increased by 24.5 percent over the past ten years (Ferguson 2011). As stated on the City of Flagstaff's web site, Flagstaff averages 82 days of rain per year, with rainfall occurring primarily during July and August. At an elevation of nearly 7000 feet, snow accumulation in the winter months may be heavy. The average annual snowfall is 99.5 inches (2011). Together, the elevation and weather patterns make Flagstaff a unique environment, particularly for agriculture.

Many of Flagstaff's residents work at the major private and public employers in the area including private employers W.L. Gore & Associates and Nestle Purina, and public employers, Northern Arizona University and Coconino County. In addition, Flagstaff benefits economically

from tourism and thus seasonal jobs exist related to the tourism industry (City of Flagstaff 2011). Similar to many small cities, Flagstaff's government includes elected officials, a Mayor and City Council. Additionally, as part of Coconino County, Flagstaff's county governance includes Boards, Commissions, Committees and Councils (2011).

Flagstaff is located within Coconino County, which has a land size of 18, 617 square miles making it one of the largest counties in the United States. However, the city encompasses just over 64 square miles (City of Flagstaff, 2011). Noted in the Comprehensive Plan for Coconino County, "over three-fourths of the non-reservation land is managed by the U.S. Forest Service, the National Park Service, the Bureau of Land Management, and Arizona State Land Department" (Coconino 2003). Consequently the land use patterns are influenced by physical factors and landownership, as well as zoning and subdivision regulations. Additionally, the county utilizes a "conservation framework" to inform land use decisions. A map of Flagstaff's Regional Land Use Plan is provided in the appendix (see Appendix B) to illustrate the city's land use patterns.

Research Methods

The primary goal of the research was to investigate planners' potential role in food planning, and in doing so, identify opportunities and challenges to their participation. The research utilized qualitative research methods to explore individuals' feelings about community food systems, and more specifically, to discover if they thought planners should be involved in food planning, and to what extent. The qualitative methods selected for the research included semi-structured interviews and a content analysis of online web sites for communities that supported alternative food systems, at the local, county, regional, and state level. The

combination of these methods helped to develop a comprehensive perspective on the feasibility of planners' involvement in food planning.

Qualitative research methods help researchers to understand processes and identify "complexities that underlie decision-making" (Prokopy 2011). This was particularly important given the research framework. The modern liberal political economy framework employed for the research asserted that community food systems were beneficial to both the market and the government. In contrast, the framework applied to the industrial food systems illustrates the deficiencies in efficiency, productivity, stability, and equity, as noted previously. Furthermore, the framework proved valuable for investigating how individual community members and public representatives of the community make decisions about community priorities, and revealed whether or not food planning was a priortiy.

Semi-structured interviews

In order to most directly address the research questions, semi-structured interviews using specific questions (Appendix C) about food buying behaviors, knowledge of community food systems, and thoughts about the potential role of planners in food planning was designed to elicit feedback that would relate to those questions. The interview questions were devised into two parts. The initial set of questions set out to explore individual food shopping behaviors while the second set of questions hoped to examine individuals' awareness and beliefs about the role of planners in food planning. In total, eleven questions were asked during each interview. Each set of questions was preceded by an introductory paragraph, which was read aloud, and aimed to provide some context and define specific terms that were used in the questions. For example, the

term alternative food system was used in the interviews and described as, "food production and food processing that is not part of the predominant industrial food system."

Initial contact with participants was made in person and through email correspondence. In the email correspondence potential participants were informed that the interview was about food planning in Flagstaff, Arizona. At the time of the interview and explanation of the interview process and a brief overview of the research project was shared with each participant. During this time participants had an opportunity to ask questions before consenting to the interview. The interview process was modeled from Bill Gillham's *Research Interviewing: The Range of Techniques*. Explained by Gillham, the semi-structured interview implies that:

> The same questions are asked of all those involved; the kind and form of questions go through a process of development to ensure their topic focus; to ensure equivalent coverage interviewees are prompted by supplementary questions if they haven't dealt spontaneously with one of the sub-areas of interest; and approximately equivalent interview time is allowed in each case (2005, 70).

Accordingly the interview questions began with a personal inquiry that was intended to be easy for any respondent to answer, "How often do you shop for food?" The purpose of this question, as the first question, was twofold. First, the initial question served as an icebreaker to the interview process (Blaxter 2010). Secondly the question required the respondent to think about the number of times per week they shopped for food, helping to put them in the mindset for thinking about food. A prompt following the first question asked about the number of individuals in the household. The second question was useful to determine if the size of the household influenced the number of times a respondent shopped for food and where food was purchased (Bryman 2004). Additionally the second question anticipated a correlation between household size and food shopping behaviors.

As the interview questions developed they became more complex. In the event that respondents were unaware of food planning and the professional responsibilities of planners, a brief explanation of American Planning Association's (APA) *Policy Guide on Community and Regional Food Planning* was discussed (2007). Many of the questions that followed were "open" allowing for participants to explain what they thought. The questions were followed by "probes" used to further explore participant's beliefs and ideas (McKie 2002; Gillham 2005, 70). Each interview was timed, although not with an alarm, so as not to exceed the previously agreed upon time commitment of sixty minutes. The interview questions were asked in the same order for each interview (Gillham 2005). In addition to the recommendations made by Gillham, this process was necessary in order to easily compare responses from each of the interviews. Additionally, the pattern established by this process of asking the same questions, both open and closed, in identical order helped to maintain an objective stance, neither encouraging nor discouraging thoughts and responses during the interview process (Bryman 2004).

In total, fourteen interviews were conducted over the course of four months. Seven individuals were interviewed from the public sector and seven individuals were interviewed from the private sector. However, only twelve interviews were included in the analysis, resulting in six interviews from the private sector and six interviews from the public sector. The two interviews that were not included were excluded due to two different reasons. While one was a researcher error, the interview strayed too far from the questions; the other was due solely to a technical fault. Therefore, a total of twelve interviews were analyzed using a simple coding scheme illustrated in Bryman's Social Research Methods (2004, 408-411). The coding scheme required going through each transcript repeatedly to look for similar words and phrases. Along with this process, the transcripts were examined for themes.

While this type of qualitative research may be helpful to draw conclusions about individuals' worldviews, the nature of the research method creates an opportunity for researcher bias. To mitigate potential bias, three separate actions were taken. Foremost, as mentioned previously, data coding was applied to the interviews, which enabled an examination of specific terms and allowed broad themes to emerge (Bryman 2004, 409). Following a generalized synthesis of the data, a coding scheme suggested by Lofland and Lofland (1995) was implemented in order to make connections between themes in the literature and responses from the interviews. Going back through the data and asking reflexive questions about individual responses was an effective way to draw comparisons and contradictions among the data.

Finally, "member checking" was exercised to confirm the context of statements that were recorded during the interview and use of direct quotes was included in the results, "increasing the transparency of findings" (Prokopy 2011, 10A). Each of these methods proved to be valuable exercises, however, member checking was time consuming and in two instances resulted in a difference of opinion related to what was said. Although there are distinct benefits to member checking, future use of this process will require some training as to the appropriateness of its application (Buchbinder 2010).

Key Informant and Participant Selection

Public sector informants included Flagstaff council members, Flagstaff city employees and a member of the Coconino County Board of Supervisors. Private sector informants were selected based on their affiliation or interest with community food systems. A key informant was initially used to gain access to other informants in the private sector. The key informant used for this research had exceptional knowledge on community food systems and food planning

in general. According to Gillham, an informant that has extensive knowledge about the research subject is described as an "elite" interviewee, and is likely part of a network of other well-informed individuals (2005, 54). This was indeed the case with the elite informant. As the Executive Director for Flagstaff's Community Supported Agriculture program and market, the key informant maintains close connections with many area farmers and local initiatives to support community food systems. Thus, the key informant was useful in providing contacts who would also have knowledge of community food systems and who were willing to participate in the interview process. Due to the network of individuals interested and aware of the research subject, securing interviews from individuals in the private sector was less time consuming than originally anticipated. Not only were these interviews a rich source of information, but also helped give some direction to different components of the research, specifically regarding ongoing efforts in support of alternative food systems in Flagstaff.

While there are numerous benefits to interviewing elite informants, it should be noted that these interviewees represent a unique subset of the community, which in turn had the propensity to create a biased analysis of beliefs and behaviors for the community. While not all of the private sector informants were part of the same network, it was important to maintain an awareness of informants' affiliations when coding the data. Furthermore, Bryman (2004) warns against potential risks when relying upon a key informant, reminding researchers to consider the collective community perspective rather than the key informant's perspective (300). In this case, the sample of twelve interviews provided some differences in perspective but was ultimately not representative of the larger population.

Securing interviews from individuals who were part of the private sector was manageable, compared to procuring interviews from individuals from the public sector. The

City of Flagstaff's official web site, specifically the Contact Us page, served as the primary access point to informants in the public sector. Additional government web sites were also utilized to gain contact information, specifically the Coconino County Board of Supervisors web site. Although the contact information was easy to obtain, including business telephone numbers and email addresses, individuals within the public sector were overall less accessible than informants from the private sector. More than two-dozen requests for interviews were sent through email and several telephone calls were made. Overall, there were very few responses from the numerous attempts made to contact public sector individuals. However, some of the individuals who agreed to the interview responded promptly and were willing to participate. One reason that the public sector interviews may have been more difficult to schedule was due to the local government's email system, which may include filters for security and thus prevented direct email correspondence.

Informed Consent

Since human participants were part of the research it was necessary to receive approval from Northern Arizona University's Institutional Review Board (IRB) for the Protection of Human Subjects. In December 2010, an "initial application for approval of research" was submitted to the IRB. By the end of January the following year, the research proposal had been approved with an exempt status.

The task of collecting informed consent from the informants was required before the interviews. At the beginning of each interview, the research project and goals were briefly explained and informants were encouraged to ask questions about the project. The researcher and the informant signed two copies of the informed consent form so that each informant and the

researcher could maintain a copy. None of the interviews were confidential or anonymous. Each of the informants agreed to allow public use of their comments and signed the informed consent form.

Content Analysis

Within the past ten years, an awareness of food systems and how they affect communities has been evident throughout the planning literature. A content analysis was performed from several of these articles to construct a list of food system issues in which planning may positively contribute. Characteristics that were commonly cited throughout the literature included food access through transportation planning, food security through partnerships with local food banks, and local economic development (Wekerle 2004; Flisram 2009; Hodgson 2009). These pre-identified categories allowed for an efficient and systematic way to aggregate information (Bryman 2004). Furthermore, applying this method made it easy to observe trends and pinpoint anomalies. The advantages afforded by this methodology made it an obvious choice for identifying viable food system alternatives.

In addition to the list of food system issues, the APA's publication, *A Planner's Guide to Community and Regional Food Planning: Transforming Food Environments, Facilitating Healthy Eating* (2009) was consulted to derive attributes of successful strategies employed by planners. The publication touts the benefits of planning for community food systems and provides numerous examples of planners' involvement in community supported alternative food systems. The examples cited in the publication served as a convenient starting point, however, more data was necessary. Therefore, Internet searches were conducted to locate additional examples.

Using the Internet to conduct research can be a messy and time-consuming process. The methods and criteria necessary to evaluate information online are in flux, as it is rapidly trying to keep up with information and technology changes (Bryman 2004). For example, many of the web sites lacked authors and dates. Therefore, popular criteria such as currency, relevance, authority, accuracy, and purpose were attributed to the web sites (Barry 2011).

At first, examples of alternative food system initiatives from communities with similar demographic and geographical characteristics as the study site were sought. However, very few examples existed. In order to collect a larger sample size, the search deviated from demographic and geographical characteristics to community supported alternative food systems that existed in conjunction with Food Policy Councils (FPC). FPCs were intentionally sought due to the significance of their development and the noted benefits they offer (Haughton 1987; Raja, Born, and Russell 2008; Hodgson 2009; de la Salle and Holland 2010).

As stated on the web site of the Centers for Disease Control and Prevention (CDC), "Food Policy Councils are one way to achieve policy and environmental change at your state and/or community level" (2010). Although the first FPC was created more than thirty years ago, in recent years, with the support of organizations including the Food Policy Council Program and the Community Food Security Coalition, there has been an increase in FPCs throughout the United States (North American Food Policy Council n.d.). Helping to prompt this trend, in 2002, Drake University Agricultural Law Center (hereinafter Drake Law) launched a three-year project to investigate food and agricultural policy. As part of their investigation the center compiled information on food policy councils. Similar to the recommendation made by the CDC, results from their research suggest that food policy councils help "build a better food system," which, in turn, helps to create healthy communities (State Food Policy 2008). While the existence of a

FPC is not necessary for successful community food systems, according to Drake Law, a FPC offers many benefits. Foremost, FPCs convene multiple stakeholders from community members to government and non-profit agencies to examine food system issues comprehensively. The non-partisan council conducts research and makes policy recommendations. Thus representatives from both the private and the public sector may both contribute to policy change. An example of policy change may involve an "agricultural inventory," in which case city-owned land is identified and made available for community gardens or other agricultural use (Drake Law 2011).

The culmination of these resources, including the Food Policy Council, Community Food Security Coalition, and the Drake Law, were used to compile a list of FPCs in order to examine community food system activities and how those activities are supported. In total, one hundred and thirteen different communities accessed through a FPC were examined, including twenty-five state level councils, nine regional councils, thirty-six councils at the county level, and forty-three councils at the local level.

Several general inquiries were conducted for each FPC, including date founded, organizational structure, evidence of partnerships, date of inception, list of key members, funding, presence of programs such as community supported agriculture, origin and type of web site, communication options for the public, and the web site address. Many of these criteria are noted as significant factors in the success of a FPC (Dahlberg 1994). To investigate the goals and activities of each FPC and how planners might assist with these, a list of ten food system issues, derived from planning literature, was added to the analysis. As stated previously, food access related to transportation was included as an issue. Increasing food access through planning strategies and zoning regulations were key areas that would benefit from planners'

involvement (Clifton 2004; Dunkley, Helling and Sawicki 2004; Shenot and Salomon 2006). Food security was the second issue. Dahlberg (1994) cites that a commonality among successful FPCs is a focus on hunger. Food security represented the acknowledgement and goal of preventing "food deserts," as well as addressing issues of hunger (Short et al. 2004). A third issue focused on public health concerns. As described by Diller and Graff (2011), it is necessary to recognize the "influence that a community's food environment has on the quality and quantity of what people eat" (890). As such, health concerns specifically related to obesity and diet-related diseases were the focus of the third issue. Proposals for regulating retail food establishments, strategies for financial incentives and zoning regulations may offer assistance with these health issues (Raja et al. 2010; Diller and Graff 2011).

Economic development through local and regional food systems was the fourth issue. According to Feenstra (2002), "recirculating local financial capital is a key element in successful community food system projects" (104). Evidence of local economic development exists already (APA 2007). In fact, many FPCs have local economic development on their agenda (State Food Policy 2008). On the other hand, environmental stewardship was not as frequently cited throughout the literature but deserved attention in the analysis due to the integral connections between a healthy environment and a healthy community (Labao and Stofferahn 2007; Krisberg 2008).

Furthermore, community health was included in addition to, yet separate from, specific concerns of obesity and diet-related diseases. The overall health and well-being of a community is impacted not only by access to nutritious food but also through social development from community-building activities such as community gardens, farmers' markets, and community supported agriculture (McKellips 2010). The seventh issue was food safety. According to

Trexler (2011), “the new movement in local agriculture has created an environment whereby consumers can use their purchasing power to send a strong message to lawmakers about the state of American food production, and thus the safety of our food” (313). Thus, food safety was an issue that represented education and outreach initiatives about food contaminants and other similar issues that stem from industrial food system activities and products (Trexler 2011). Education was the eighth issue. Homegrown Minneapolis, a 2009 report prepared for the Health, Energy and Environment Committee of the Minneapolis City Council noted that community residents lack, “knowledge and skills related to gardening and healthy, local food production, preparation, and preservation” (6). Another project in Milwaukee also uses education as a tool and claims that, “the easiest way to get kids to eat their vegetables is to have them grow them” (Flisram 2009, 19).

Also related to teaching younger generations, the presence of farm-to-school programs was the ninth issue included in the analysis. Vallianatos, Gottlieb, and Haase (2004) define farm-to-school programs as, “the ability to connect schools with local and regional farmers to benefit both sets of participants” (415). Farm-to-school programs offer benefits beyond nutritious foods for school-aged children. An additional benefit is financial stability for local and regional farmers. Farm-to-school programs may also help prevent sprawl through the protection of agricultural land (Vallianatos et al. 2004). Finally, food justice was selected as the tenth issue. In this case, food justice is distinct from food security in that it “highlights the focus on systemic change and the necessity for engaging in political and policy processes” (Wekerle 2004). Food justice movements, spurred by citizens who oppose the industrial food system, are gaining momentum and may affect policy from a different perspective than food security (Schlosser 2006).

Each FPC was examined to determine which of the ten issues mentioned previously were addressed on their web site. Initial results were represented by either a "yes" or "not evident" for each issue. In order to obtain a "yes" response, the specific issue needed to be addressed in the mission, vision, or goals of the FPCs or through community projects, programs or policy related to that issue. Since each FPC differs in terms of what it includes on their web site, it was necessary to look beyond the mission, vision, and goals. The phrase "not evident" was used in place of "no" since it was not possible to confirm the absence of a project, program, or policy based on an evaluation of a web site during a specific time frame, which was several months.

In addition to the analysis of state, regional, county and local FPCs, a more comprehensive investigation of eight local level FPCs was conducted. The eight local FPCs were not selected randomly. Each of the FPCs was established through different venues such as City Council or community organizations. According to Dahlberg (1994) the historical and political context for which a FPC is established is a significant factor in the council's success. As noted by Dahlberg, "the most important aspect appears to be the degree of formal institutionalization of the council. The more institutionalized the council, the more likely it is to have budget and staff support as well as perhaps some review and/or planning powers" (1994). Thus, councils that have been mandated by the mayor are more likely to experience success than those councils that have been organized by community members and least successful are councils that begin with a charismatic leader (Feenstra 1997).

Above all, utilizing qualitative research methods was necessary in order to understand how individuals felt about food planning and to get a sense of the value that communities put on alternative food systems. Making use of more than one method was necessary to create a more comprehensive understanding and to increase the integrity of the research process. Through

twelve semi-structured interviews and a content analysis of more than one hundred different communities the research was able to culminate in viable recommendations for planners' involvement in food planning for Flagstaff, Arizona.

Chapter Three

Results and Discussion

Results from interviews and content analysis helped to illustrate the viability of planners' involvement in food planning, in Flagstaff, Arizona. The qualitative research methods was useful in formulating suggestions for community food systems, based on feedback from the interviews and the analysis of Food Policy Councils. Interviews conducted with individuals from the public and private sector provided some insight into the significance of supporting community food systems for the Flagstaff community. Content analysis of existing Food Policy Councils enabled an understanding of successful strategies for creating and maintaining community food systems. Overall, professional planners were rarely mentioned as important stakeholders for supporting community food systems.

The purpose of this research was to investigate the potential role of planners in helping communities plan for food. To this end, the research addressed the following research questions:

1. What are the current food system alternatives in Flagstaff, Arizona, and how are they being supported?
2. What is the potential role of local governments in fostering policies that will encourage food planning?
3. What are the practical recommendations for food planning in Flagstaff, Arizona?

In an attempt to seek answers to the research questions qualitative research methods were used and explored through a political economy research framework. The research explored individual interest in developing community food systems and examined the benefits and challenges of planners' involvement through an analysis of stakeholder relationships within the community. Caton-Campbell (2004) discussed the tensions that exist at political and institutional,

socioeconomic, community and organizational levels within the United States food system. She argues that "some tensions are based on differences in scale, power, fundamental values, or conflicting stakeholder frames," other tensions may exist due to the lack of a common language (Caton-Campbell 2004, 341). Additionally, public and private sector stakeholders were asked to identify existing alternative food systems in Flagstaff, Arizona. The intent was to understand the history of community food system initiatives in the community, in order to ascertain interest in and the feasibility of planning for future initiatives, and gain some insight on how alternative food systems are valued. Finally, the American Planning Association's (APA) *Policy Guide on Community and Regional Food Planning* was examined to determine if planners in the city of Flagstaff could address any of the seven policies.

The Flagstaff community offers a variety of places to purchase and consume foods. While there is not a central listing for all supermarkets and grocery store locations, local directories list nine supermarkets, and three retail stores that have food centers. There are also several niche markets including Flagstaff Farmers Market (on 4th Street), O'Leary Street Market, and Los Altos Mexican Mini Mart. In addition to markets, food stores, and restaurants, there are two established food banks in Flagstaff, St. Mary's Food Bank Alliance and the Northern Arizona Food Bank. All of these institutions are part of or benefit from an industrial food system. Likewise, the city and many residents benefit from an industrial food system in other ways, either through direct employment or from access to affordable food. In addition, through transportation routes, the city enables several alternatives to food system venues.

One of the primary goals of the research was to examine the existing community food systems within the local and regional community, and determine how they are supported. Although the study site was the city of Flagstaff, Arizona, an examination of local and regional

alternative food systems was included due to the physical and geographical location of the city. To achieve this, the research utilized semi-structured interviews to explore individuals' perceptions of community food systems and how they are supported in Flagstaff. Feenstra (1997) argues that initiatives including regional food system studies, outreach and educational strategies, food policy councils, and community food system projects are not out of the ordinary. In actuality, "people throughout the United States are designing and implementing sustainable, local food systems tailored to their community's needs" (Feenstra 1997, 28). Throughout the interview process, it was assumed that interview respondents had a minimal familiarity with food systems. While this may have been the case for informants from this study, it would be short-sided to assume that a familiarity with food systems is common knowledge.

Results from Interviews

The semi-structured interview was purposefully designed to begin with specific "introducing" questions: "How often do you shop for food?" and "Where do you buy your food?" (Bryman 2004, 326). The intention of both questions was to set the stage for respondents to consider the frequency and number of different locations where they shop for food. This enabled some of the data to be tallied in order to analyze food-purchasing patterns among the respondents. Blake, Mellor, and Crane (2010) report that, "recent research by those concerned with consumer practices, and with shopping practices in particular, argued that shopping is more than an individual act but is rather a practice whereby meanings and values are made" (412). Typically, food shopping trips occurred twice weekly for an average household size of three people. A companion question, which sought information about food purchasing locations, tracked the stores where respondents commonly purchased foods. All of the respondents

purchased food at a supermarket. Ten of the respondents listed a minimum of three different locations where they purchased food. Only one person maintained a single store loyalty, in this case, New Frontiers Natural Marketplace. Out of all of the responses, nine of the respondents stated that they purchased food at New Frontiers Natural Marketplace; five of those respondents only purchased food at New Frontiers Natural Marketplace on special occasions due to the high cost of food. It is apparent that the respondents took advantage of having a number of different places to purchase food. Overall the responses coincide with the research conducted by Dinkley, Helling, and Sawicki (2004) who reported that individuals shop at multiple locations based primarily on convenience. Ten of the respondents stated that convenience and cost were major factor in deciding where to shop. Finally, seven respondents shopped at specific locations based on the products that were available at those locations.

Questions	Food Shopping Behaviors											
How often do you shop for food per week?	2 or 3	5	1	<1	2 or 3	2 or 3	2	1	<1	1	1	1
How many people are you shopping for?	2.5	2	2	2	3	3	4	4	4	2	2	2
Where do you buy food?	CSA, FM, B, NF	n/a	CSA, FM, NF	NF	CSA, NF, S	CSA, NF, S, SC	CSA, FM, NF, S	S, B, NF	S, B, Frys, FM	FM, S, A	CSA, NF	CSA, FM, NF, S

Table 2. Food shopping behaviors. United States. (Key: CSA = Community Supported Agriculture shares and/or store, FM = Farmer's Market, B = Bashas, NF = New Frontiers, S=Safeway, A=Albertsons, SC = Sam's Club)

Respondents were asked to consider and name food places that they thought of as part of an alternative food system. Feenstra (1994) states that learning about the local food system "helps to identify the potential for creating more agricultural diversity" (32). Pothukuchi (2004) concurs that a community food assessment is a necessary first step and identifying alternative food systems is part of the process. The term alternative food system was used throughout the interviews to represent food production and food processing that is not part of the industrial food system. Three examples of alternative food systems were provided including farmer's markets, urban gardening, and community supported agriculture. The intentional use of the term alternative food system, rather than community food system, was selected to elicit suggestions that were not bound to the Flagstaff community, thereby representing the potential for local and regional options. However, it should be noted that the term "community food system" was more commonly cited in the planning literature. According to the literature there are numerous, yet similar, definitions for the term, community food system. Perhaps one of the more comprehensive definitions recognizes a community food system as "strengthening and making visible the relationships between producers, processors, distributors, and consumers of food" (Raja, Born, and Kozlowski 2008, 3).

Interview Responses Related to Existing Alternative Food Systems

In general, the respondents revealed similar knowledge about alternative food systems in Flagstaff. All of the respondents mentioned the Flagstaff Community Market and eight of the twelve respondents mentioned purchasing shares from the community supported agriculture program that operates separately from the Flagstaff Community Market. In fact, all of the respondents stated that they shopped for food at the Flagstaff Community Market during the

summer months when the market was in operation, which suggests that, the interview informants support and value access to the market. Due to the composition of the interview participants, the results are not representative of the community of Flagstaff. Eight of the respondents received shares from the community supported agriculture. Respondents mentioned several challenges to purchasing food from these alternative food systems. Convenience and cost were overriding themes, and two respondents claimed that product availability and selection of different products was a deterrent.

Furthermore, all of the respondents were aware of an alternative food movement in Flagstaff and were cognizant of city and non-profit initiatives to support initiatives, specifically for local and regional foods. Three of the respondents were aware of local restaurants that used local foods, including Brix and Criollo, Cottage Place, New Jersey Pizza and Diablo Burger. Many mentioned New Frontiers Natural Marketplace as part of an alternative food system. However, the natural marketplace is one in a chain of five stores located across Arizona and California, which offers a variety of "high-quality nutritional foods," yet not necessarily local or foods that are part of an alternative food system (New Frontiers Market n.d.). According to Caton-Campbell's definitions of industrial and alternative food systems, New Frontiers Natural Marketplace embodies elements of both from selling processed and niche foods to supplying organic and local food specialties (2004, 347). A few unique responses for alternative food systems included harvesting from the wild and wild game hunting. In total, the twelve respondents collectively noted twenty-seven separate examples of what they believed to be elements of an alternative food system that exist locally and regionally (see Appendix D). Based on the responses, it is logical to conclude that both private and the public sector respondents support the alternative food systems, which currently exist in the Flagstaff community. As noted

by many respondents, alternative food systems appeal to the qualities of life that many people in Flagstaff appreciate.

A common element noted in several definitions of a community food system was the notion of being place-based to promote and take advantage of local and regional networks (Kaufman 2004; Raja, Born, and Kozlowski 2008). However, across several studies, definitions of local and regional are not specified, "illustrating the diversity in the understanding of local within food production" (Blake, Mellor, and Crane 2010, 441). This same sentiment was voiced during some of the interviews, "[The word] Local should be replaced with Flagstaff. The language gets corrupted. We need to produce far more food within thirty miles" (Patrick Pynes, February 17, 2011). Although not asked specifically about local food systems, many respondents discussed alternative food systems in terms of local and regional food systems, and offered definitions of both, "regional can mean southern California and northern Mexico, local is Flagstaff and Camp Verde" (Kimberly Sharp, March 1, 2011). And a third respondent defined the terms differently again:

> "Local is 200 miles and regional is 400 miles, simply because we live in a desert and the growing season is not as long and the climate is not supportive of a lot of farming. Regional ideally is northern Arizona but I think that is limited" (Regan Emmons, interview by author, March 3, 2011).

The discussions about local and regional food systems emerged through "probing questions" in order to draw-out additional information about individual's awareness and perceptions of different alternative food systems and how they are defined based on place (Bryman 2004, 326). Overall, commonalities predominated in the responses to the first set of questions suggesting that the individuals who were interviewed had a level of awareness and knowledge about the alternative food systems that existed in the Flagstaff community.

However, through deeper probing it was apparent that although a cursory awareness of alternative food systems existed, individual perceptions of the value of alternative food systems were quite different. While some respondents believed that having alternative food systems was significant, contributing to their quality of life, others discussed the need to prioritize government activities according to individual needs or the needs of the community. Two respondents rated the importance of supporting alternative food systems using a scale analogy. As recorded, "on a scale from one to ten, this is about a seven" (John Tingerthal, February 11, 2011). Similarly, after listing a number of concerns from water and transportation to train noise, another respondent stated, "this doesn't even make the top ten, it ranks fairly low" (Scott Overton, March 29, 2011). Several respondents discussed issues that took precedence over food planning and even commented on the need to set priorities:

> "I would say that much of the general public does not consider food planning a priority. Most people do consider roads, pedestrians, road infrastructure, recreation, housing, crime, and public art before food production. Especially since this is not a historically agrarian society" (Kimberly Sharp, March 1, 2011).

Likewise, another respondent commented on the difficulty of prioritizing because, "priorities are set by the city council" and accordingly those priorities take precedence on the job (Nicole Woodman, February 14, 2011). Throughout all of the interviews, four individuals from the public sector indicated that food planning was not a high priority, albeit for different reasons both personal and policy-driven, while only one respondent from the private sector specifically stated that food planning was not a high priority. Based on the responses from the initial questions it was clear that the comprehensive benefits of food planning had not been explored due to other concerns that were considered a higher priority for the community.

Interview Responses Related to the Potential Role of Planners

In addition to learning about existing alternative food systems in Flagstaff, and how they might be supported, the research sought to understand the potential role of local governments' interest in fostering policies to support food planning. The interviews transitioned from discussing personal food purchasing behaviors and knowledge about alternative food systems in Flagstaff to discussing the potential role of city planners in supporting opportunities for alternative food systems. To explore this, each of the interviews were interrupted by a "structuring statement" that allowed the author to move into a different direction (Bryman 2004, 326). The structuring statement introduced respondents to the APA's *Policy Guide on Community and Regional Food Planning*. None of the respondents were aware of this document at the time of the interviews. Two questions directed the discussions with additional probing questions. Several general themes emerged, including most prominently the notion of education and importance of creating partnerships.

Education

Education was the prominent theme throughout all of the interviews. In total, ten out of the twelve interviews mentioned the lack of and need for community awareness and education, including public education on food issues, and education or professional development for planners specifically related to food issues. Karna Otten, Executive Director of the Flagstaff Community Supported Agriculture (FCSA) store, discussed education comprehensively. She suggested that educating the public about the zoning plan was a good place to start primarily due to its complexity:

> "The zoning plan might as well be in Latin. How do you make something like that accessible, especially to someone who can't speak English?" (January 28, 2011)

Furthermore, she suggested initiatives such as community gardens, cooking classes, and teaching about nutrition and its relationship to the economy. Several respondents mentioned that the local school gardens are helping to teach children how to grow food. One respondent noted that it had to be part of the curriculum for it to be a viable learning experience for students. The same respondent indicated that she teaches by example whenever she shops at the Flagstaff Community Supported Agriculture (FCSA) store.

In accordance with the literature the need for education was prominent. Hopkins (2000) asserts that "involving children in food production is very important" for environmental education and to promote life skills such as healthy eating (209). A similar strategy, the "farm-to-school" movement is presented by Vallianatos, Gottlieb, and Haase (2004), who discuss the positive impacts of the farm-to-school movement as improving the health and nutrition of school-aged children. Furthermore, outreach as it relates to educating the public was a recurring theme, as explained by one respondent who discussed an experience with a community garden initiative:

> "We go into a community, into peoples lives and we think that we are helping, but we are not including them in the process. We need to create forums to make education and inclusion more accessible." (Karna Otten, January 28, 2011).

Overall, nine of the respondents recommended greater public awareness and suggested public awareness campaigns, to include information on nutrition and cooking. Other comments related to education included educating and providing professional development opportunities for planners to learn about food issues and food planning.

Four of the twelve respondents recommended education for planners:

> "I often wonder about the environmental education opportunities for those in leadership positions. For example, if you are making water policy, what is your knowledge of water harvesting? I would love to see environmental education opportunities as a component of policy jobs." (Sapna Sopori, February 18, 2011)

> "I'm not sure that contemporary issues such as food planning are covered in the planning curricula. There are a lot of people in the community that know about growing food here and that dialogue needs to open up." (Regan Emmons, March 3, 2011)

> "Planners need practical knowledge of farming and gardening, social knowledge of how communities create food systems, and political knowledge; and they need to be able to weave these knowledges together." (Patrick Pynes, February 17, 2011)

> "I need to learn more and I am learning more. Planners would support it, but don't fully understand it. We need to understand the difference it would make to the community." (Kimberly Sharp, March 1, 2011)

Comments from the interviews aligned with previous studies conducted by Pothukuchi and Kaufman (1999, 2000) who exposed a lack of knowledge among community members and planners about food systems. Hammer (2004) explored planning curricula across the United States to investigate which programs included courses in food system planning. Of the sixty-eight Association of Collegiate Schools of Planning (ACSP) accredited programs that responded to Hammer's survey, only nine programs included, or had included in the past, a course on food system planning (425). In addition to the absence of food planning in professional planning programs, other challenges exist including funding and knowledge of potential partnerships that might support alternative food system initiatives (Clancy 2004).

Partnerships

An awareness of the benefits of creating partnerships between public and private domains was a strong theme among interview responses. Levy (2009) suggests that "being able to understand the political environment around oneself" is a useful ability for planners who want to

positively affect change (7). Correspondingly, Caton-Campbell (2004) recommends that planners conduct a stakeholder analysis to determine how community stakeholders are part of the community food system, emphasizing that planners have specific skills, which could contribute to the development of a food systems discourse. She suggests the need to, "apply the standard tools of planning practice to food systems issues, making them more transparent to decision makers; agency officials; local, state, and federal funders; the broader planning community; and the general public." (2004: 349). Recommendations from both public and private sector informants suggested that creating partnerships and developing a common language were necessary foundations for supporting alternative food systems:

> "We can use people in the community to obtain the language, maps and details. And to get an understanding of all the stakeholders." (Kimberly Sharp, March 1, 2011).

Many respondents believed that planners could help develop relationships among stakeholders, acting as a "representative voice." In a similar vein, it was suggested that, "Planners can be conduits between the city and the community, and help create relationships." (Karna Otten, January 28, 2011). Indeed, Pothukuchi (2004) lists identical descriptions as "rationales" for planners' involvement in community food assessments (360).

Beyond partnerships, there were a number of recommendations made for the role of city planners in helping to provide opportunities for alternative food systems in the Flagstaff community. Informants from the private sector made suggestions including removing obstacles, lifting restrictions, "to make sure that people can grow food within the municipality," and taking advantage of opportunities through zoning (Jonathan Netzky, January 20, 2011). A related suggestion was to help organize relevant studies, such as "a study of microclimates in Flagstaff to find the best places to grow food" (Patrick Pynes, February 17, 2011). Other suggestions

included: promote gardening, promote local businesses that use local foods, serve in a leadership role, and set examples particularly through landscape practice on city property. While not all of these suggestions are realistic for planners, the responses illustrate individual perceptions of a planner's responsibilities.

Similar suggestions were made by informants from the public sector and included removing barriers and restrictions, taxes (specifically gas tax), land use and zoning, addressing food security issues, giving better direction to city council, and adopting the appropriate language in the regional plan, such as "including urban agriculture as a component of open space" (McKenzie Jones, interview by author, February 14, 2011). Throughout the literature it is evident that planners have impact through land use development and zoning. de la Salle and Holland (2010) illustrate how planners can participate in supporting alternative food systems through land use and growth management, transportation, park and open spaces, and waste management (46-47). Many of the informants mentioned zoning, which may have been influenced by the recent zoning draft put forward by the city.

Accessibility, noted as a suggestion for planners was another prominent theme throughout the interviews. Informants discussed accessibility through multiple perspectives including making alternative food systems accessible through community gardens, helping to provide subsidies, ensuring that food stamps are accepted at the farmers' market, and as mentioned by one informant, working with the Arizona Game and Fish Department to manage permits. The last suggestion was discussed in relation to valuing the local food supply and providing an advantage, through access, to local hunters over hunters from other states. Many of the suggestions made are outside of a planner's purview but are nonetheless important to include in the research. The term accessibility was also used to describe transportation issues. In fact,

in many cases transportation planning is directly related to food security (Clifton 2004, 410). However, informants discussed transportation into the city as opposed to around the city. The issue of transportation was discussed in relation to local and regional food systems and specifically the need to transport food into the community. As noted by one informant, the transportation issue has to be discussed, "it is a challenge, and it directs issues for us. There are a limited number of routes into Flagstaff" (Scott Overton, March 29, 2011).

Public Health

Although public health concerns dominated the literature in purporting the significance of food planning, only two respondents mentioned public health as a reason why planners should be involved in food planning. Caton-Campbell (2004) explains that many consumers enjoy the convenience, low cost, and taste of food produced by the industrial food system despite the negative health and environmental consequences. Ultimately this relates to education and awareness of the public health benefits. Sapna Sopori, Director of the Willow Bend Environmental Education Center, discussed the potential health benefits of people being able to use food stamps at the Flagstaff Community Market, noting that, "small changes lead to better lifestyles" (interview by author, February 18, 2011). Karna Otten also mentioned the ability for people to use food stamps at the Flagstaff Community Market and at New Frontiers Natural Marketplace. Both informants discussed the value of food stamps as a way for individuals with low incomes to have access to healthy food options.

In addition to the perceived costs associated with alternative food systems, both informants spoke of challenges to changing lifestyle behaviors:

> "It is hard for us to look at our lives and think about how we are doing something that we've done all of our lives and accept that it is wrong." (Karna Otten, January 28, 2011).

Moreover, while the literature discussed food safety as a public health concern, this relationship was not evident in the interview data, and in fact the opposite was mentioned. Two informants commented on food safety issues related to farmers' markets.

Food Safety

Food safety generally conjures up thoughts of food recalls by the federal government and images of Eshcherichia coli (E-coli) and Salmonella, two of the most common microorganisms that cause illness and food borne diseases (Food Safety 2011). This was the case for one respondent who would not purchase eggs from a farmers' market because of the lack of safety standards. A second respondent discussed the risks associated with any type of food system from industrial to alternative, but distinguished that smaller scale production has less risk because farmers have a deep commitment to what they are doing, there is minimal or no use of pesticides, and the food is less processed.

Food contamination can be either biological or from a chemical agent. Chemical agents from pollution, toxic substances, pesticides, animal drugs or other agrochemicals have opportunities to enter food during several food processing stages and contributes to illnesses and disease (Frost and Sullivan 2006). Illnesses resulting from the latter are often not listed on the safety page of the United States Food and Drug Administration's web site, which lists recalls, market withdrawals, and safety alerts.

Economy

Throughout the literature, several examples of economic gains exist, for both individuals and local governments, who support alternative food systems (Flisram 2009). Less than half of the respondents discussed the potential benefits that alternative food systems could create for the local and regional economy. One informant discussed the need for a regional meat processing facility or mobile butchering unit, thereby creating jobs. She explained further that state and federal regulations require on-site inspectors making this opportunity expensive and challenging. A few respondents mentioned supporting local businesses that utilized alternative food systems and two respondents mentioned shopping at farmers' markets to support local farmers.

Instead, comments related to economy stemmed primarily from food costs. Cost was foremost discussed as a potential deterrent for purchasing foods from alternative food systems. In short if alternative food systems were presumed to be less lucrative than industrial food systems. While this may be a common assumption, in a report prepared for the United States Department of Agriculture's Sustainable Agriculture Research and Education Center, Wilkinson and Van Seters were able to show that sustainable community food systems can be competitive with the industrial food system and serve as a viable component of a community economic development strategy (1997). A noted opportunity is homestead chicken production, which is one of the fastest growing small-scale agricultural ventures. According to the report, "many farmers have found that they can earn good supplemental income" from a small homestead chicken production (Wilkinson and Van Seters 1997). It should be noted that, small-scale chicken production facilities are not allowed within the city of Flagstaff. Three informants discussed the City of Flagstaff's recent vote to allow a limited number of backyard chickens in some areas of the city. Another economic opportunity is evident in outdoor food facilities,

including cart vendors, which are "making economically productive use of public spaces, and making them more active, colorful and fun" (Iams 2010, 8). According to two public sector informants, the city of Flagstaff already supports several outdoor food facilities that are mostly seasonal. Overall suggestions by informants related to the economy were related more to lifting restrictions for growing and producing food than developing new infrastructure.

Certainly several themes mentioned throughout the literature were only briefly discussed in the interviews, including most notably access to healthy foods and food security. Although the City of Flagstaff, in coordination with the Northern Intergovernmental Public Transportation Authority, operates a public transit system, it would be inappropriate to surmise that transportation is not an issue for some people in Flagstaff. In fact, access to food due to poverty was not mentioned in any of the interviews even though some people may lack access to healthy foods because of inadequate transportation, the "grocery gap," and reliance upon "cheap eats" (Shenot and Salomon 2006). The grocery gap refers to scenarios where larger grocery stores, able to provide more options at lower prices, are predominantly located in more affluent areas. The presence of more than a dozen supermarkets within the city of Flagstaff may have influenced perceptions of accessibility. Furthermore, food security was specifically mentioned in four of the interviews, and in one case an informant indicated that food security was issue being addressed through the Northern Arizona Sustainable Economic Development Initiative (SEDI).

Food security may be an issue for the city. In Flagstaff, the two area food banks have both seen an increase in assistance over the past several years. Less than two years ago, an article from the Arizona Daily Sun reported on several families who rely upon the food banks to get through a month and "help stretch their budget a bit farther" (Hendricks 2009). As cited in

the article, Northern Arizona Food Bank's first time customers receive a free box of food, but "subsequent visits require an agency referral and proof of income that the customer meets the 200 percent federal poverty guideline" (Hendricks 2009). According to United States Department of Health and Human Services, the 2011 poverty guidelines indicate that the 200 percent limit of poverty for a family of four is $44,700. Clearly these restrictions leave some families struggling to secure enough food to avoid hunger even if the hunger is temporary. In all of the interviews only two respondents mentioned hunger and specifically food security as an important reason why planners should be involved in food planning. One suggestion that was made to help families was to provide tools for creating a front yard garden.

In summary, an analysis of the interviews revealed that both private sector respondents and public sector respondents believed that the community members, in this case individuals representing the private sector, influenced the city's priorities. The majority of private sector respondents, in fact all but one indicated that food planning was important and had numerous benefits. Oppositely, informants from the public sector all believed that food planning was not a priority for the community at this time. Overwhelmingly respondents felt that planners could play a role in food planning and that support for food planning was not unrealistic for the Flagstaff community. As mentioned previously, many of the informants agreed that community members in Flagstaff supported the existing alternative food system in Flagstaff because it satisfied a lifestyle. Two respondents from the private sector specifically used the word "fear" to describe reluctance in supporting alternative food systems. Both discussions alluded to a fear of supporting an idea that was counter to the mainstream culture.

In addition to learning about the existing alternative food systems in Flagstaff and the potential role of local governments fostering policies that will encourage food planning, the

research sought practical recommendations for food planning for the Flagstaff community. In order to develop these recommendations, several local, regional, and state food policy councils and food planning initiatives across the United States were examined through a content analysis approach.

Results from Content Analysis

Content analysis can be used to examine information and to derive meaning from texts. The latter is often referred to as qualitative content analysis, in which, "there is an emphasis on allowing categories to emerge out of data" (Bryman 2004, 183). Throughout the planning literature food system issues that could be addressed by planners were repeated. These issues, mentioned in the previous chapter, served as categories for the analysis. Identifying communities with alternative food systems movements began with *APA's A Planner's Guide to Community and Regional Food Planning: Transforming Food Environments, Facilitating Healthy Eating*. The text cited many examples of alternative food systems in which communities collaborated with planners.

In addition to the text noted above, two additional online sources were utilized in order to pull together a list of Food Policy Councils (FPC) at the state, regional, county and local levels. Both sources are non-profit organizations, the Community Food Security Coalition and the State Food Policy Council, which is an archive of the state and local food policy project operated by the Agricultural Law Center at Drake University. The organizations are proponents of food policy councils and provided access to a list of communities with established FPCs. Pothukuchi and Kaufman (1999) emphasize the point that government sanctioned food policy councils are often better supported and thus more effective in influencing change.

Roughly thirty years ago the first FPC was established in Knoxville, Tennessee, in response to a study conducted by graduate students and faculty at the University of Tennessee, Knoxville, as part of a city planning course (Haughton 1987). The study revealed severe inequities with the food system from nutritional deficiencies among the young and elderly due to the lack of access to food. By 1999, there were fifteen FPCs in the United States and Canada (Pothukuchi and Kaufman 1999). Less than ten years later thirty-five to fifty FPCs were either in the process of forming or were already established. At present, there are more than one hundred FPCs across the United States. The following section addresses the analysis of examining state, regional, county, and local FPCs and the communities that they represent.

According to the three sources that were consulted, there are twenty-five state level FPCS, twenty-one are currently established and four of those are currently forming. The majority of the state level FPCs were established after 2006. Eight were established between 2000 and 2005. Thirteen of the state level FPCs originated through government, either by a governor mandate or through a Department of Agriculture of a Department of Health. The majority had an organizational structure with key members listed. Also listed was evidence of public and private partnerships and sources of funding. Many of these FPCs were funded through government funds. Oppositely, the remaining twelve state level FPCs started through non-profit organization or community grassroots efforts. Fewer of these councils had partnerships.

The categories established for examining FPCs were extracted from the literature and included food security, public health, economy, environment, community health, food safety, education, farm-to-school, and food justice. Among the state level FPCs, efforts towards supporting the local and regional economy ranked highest over all other issues. Nineteen FPCs

listed economic benefits as part of their mission or one of the goals. Public health concerns, community health, and food security also ranked high as issues addressed by the state level FPCs. Food safety and food justice were mentioned the least. Three states listed food justice as an issue and each of those states showed evidence of addressing nine out of the ten different issues from the predetermined categories. Thus the most comprehensive state level FPCs were the councils that discussed food security and food justice.

The regional FPCs differed slightly from the state FPCs. The biggest distinction is the total number of councils at the regional level. Only nine regional level councils exist and one of the nine is currently forming. The majority of councils were formed within the past three years. All of the regional councils began independently, through non-profit organizations or community activists. According to the information provided the most common concerns among regional FPCs is community health, followed by public health concerns, the regional economy, and education and outreach. None of the regional councils mentioned food safety nor had a farm-to-school program.

There were several more county and local FPCs than councils at the state and regional level. Thirty-six FPCs exist at the county level and forty-three exist at the local level. Of the thirty-six county level FPCs, six lacked enough information or were not accessible to conduct an analysis. The majority of the county level councils started within the past ten years. In fact, only two began prior to 2002. Two of the county level councils included re-start dates, and had re-started in 2008. Nineteen of the FPCs started through community organizations or non-profits. All but two of the county level councils that were analyzed showed evidence of an organizational structure, and twelve showed evidence of public and private partnerships. The county level FPCs focused on the economy, community health, and education above other issues. More than

half of the county level FPCs listed environmental concerns as an issue for the council to address. While food safety and farm-to-school programs were seldom mentioned, more than a quarter of the county level FPCs listed food justice as either part of their mission or as a goal.

Finally, at the local level, sixteen FPCs were either currently being formed or did not have enough information available to conduct an analysis. Food justice was also significant at the local level, of the local level FPCs, two-thirds mentioned food justice. Also similar to county level FPCs, the local level FPCs more often cited community health, education, and economy. The local FPCs more frequently discussed food access and food security. The local level FPCs more often begin through a mandate by the mayor or direction from city council. Four of the local level FPCs began prior to 2002. While the majority of the local level councils are young, they exist with an organizational structure and show evidence of public and private partnerships.

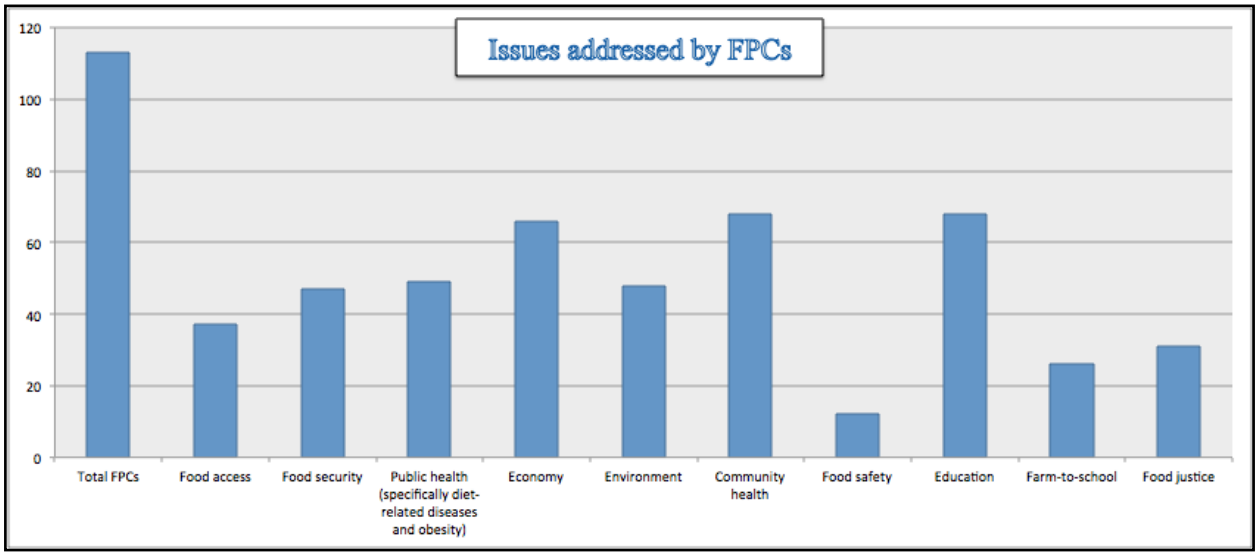


Table 3. Common issues addressed by 113 Food Policy Councils in the United States.

Overall, the majority of the FPCs benefit from donations, grants, and volunteers. Other sources of funding come from government budgets. The issue that was addressed the least among all of the FPCs regardless of the level, was food safety. The issues that were cited most often included community health, public health, education, and the economy. Among the list of FPCs, only one, the Baltimore City Food Policy Task Force, operates within a planning department. Furthermore, only nine of the FPCs showed evidence of working with planners.

In-depth Analysis of Eight Food Policy Councils

In addition to an overview of FPCs across the United States, a more critical examination of eight different local FPCs was conducted to discover what projects, programs, and policies existed within each community. The purpose of the investigation was to determine if the councils were working with planners and to what extent. Additionally, the examination sought information on successful strategies and an awareness of potential challenges. The communities that were examined included Flagstaff, Arizona; Santa Fe, New Mexico; Missoula, Montana; Burlington, Vermont; Baltimore, Maryland; Milwaukee, Wisconsin; Berkeley, California; and Hartford, Connecticut. Among these communities, Hartford's program is the oldest, beginning in 1991. All of the FPCs from the eight communities have been operating for at least two years. Each of the FPCs maintains a web site presence. Screenshots from each FPC web site are included in the appendix (see Appendix E).

Flagstaff, Arizona

The mission of Flagstaff Foodlink is to "offer strong educational, organizational, and fundraising tools" to support a local food movement in the Flagstaff community (Flagstaff Foodlink 2011). According to the city's web site, the city of Flagstaff partnered with Flagstaff Foodlink in 2009 to establish the community agriculture project. The community agriculture project is part of the city's sustainable communities initiative. Through this project the partnership created two community gardens, the Bonito Street Garden and the Izabel Street Garden. In addition to the community gardens, Flagstaff Foodlink, within the past seven years, partnered with other local organizations and initiatives including the Flagstaff Youth Gardens, Flagstaff Garden Starts Community Supported Agriculture (CSA), and the Urban Farm Project. Less than two years ago, Flagstaff Foodlink teamed with students and faculty at Northern Arizona University to establish the Greater Flagstaff Food Policy Council. This council, while not currently officially tied to the city, is emerging, with an identified organizational structure and specific goals for the group. All of the members volunteer to be part of the council. Funding sources for the FPC were not noted on the web site.

The goal of the council is described as a "SOLE food system in Greater Flagstaff: a system of Sustainable, Organic, Local and Equitable food" (Flagstaff Foodlink 2011). Unique to Flagstaff Foodlink is their organizational structure, which includes six "sites of energy," including: health and nutrition, business and cooperatives, animal proteins, poverty and accessibility, growing and water. According to the web site an intention of this structure is to encourage participation from community members.

Santa Fe, New Mexico

The city of Santa Fe, New Mexico, began forming a FPC in 2008 under the direction of the City of Santa Fe and Santa Fe County and is an official part of the city government. Evidence of funding sources for the council was not apparent. The goal of the FPC is to create a regional food system that provides safe, nutritious, and affordable food. However, the council operates in an advisory position only. The council is comprised of thirteen members including appointed and volunteer positions. While the mission, vision, and goals are clearly identified on the web site, there is not any evidence of current projects or programs (Santa Fe Food Policy n.d.). Information contained on the web site indicates that the council is in a development stage. The most recent activity was from 2009.

Missoula, Montana

Missoula sits at a lower elevation than both Flagstaff and Santa Fe, and has a larger population than both cities. The Community Food Agriculture Coalition (CFAC) of Missoula County was established in 2004 in response to a community food assessment project, which led to a resolution that was passed, in support of a sustainable food system, by the Missoula City Council and the Board of Missoula County Commissioners. The CFAC operates as a food policy council and is funded through membership fees, donations, and volunteers. The mission of the CFAC's is to develop and strengthen Missoula County's food system:

> Promoting sustainable agriculture, building regional self-reliance; and assuring all citizens equal access to healthy, affordable, and culturally-appropriate food. CFAC facilitates dialogue, education, and collaboration within the community, encouraging creative problem-solving and proactive policy advocacy. (Missoula CFAC 2011)

Information from Missoula's CFAC web site shows evidence of various successful projects, programs, and advocacy efforts. In fact the organization addressed all ten of the food system issues that were noted throughout the literature. As noted throughout the web site, the Missoula CFAC has worked with planners since its inception. County planning officials were part of the steering committee for the community food assessment. Furthermore, as an organization they participate in comprehensive planning processes.

Burlington, Vermont

The Burlington Food Council was officially established in 2003 from an organized group of citizens. Similar to the Missoula CFAC, the first task was to conduct a community food assessment. Although the local government does not officially sanction the food council, its members are comprised of individuals from the community, businesses, and government. The council operates with a strategic planning committee of six to eight members, who, "work on grant applications, organize events and shape the Council's direction" (Burlington Food Council n.d.). The council's primary focus is on urban agriculture. From 2003 to 2006 the council initiated and developed a farm-to-school project and is nationally recognized as a model program. Additional projects include a mobile vegetable farm stand to address food access issues, and mapping and planting appropriate fruit and nut trees through the city. According to information on the web site, the fruit and nut trees, "can act as carbon sinks, help recycle water, improve diet and bring neighbors together" (Burlington Food Council n.d.).

Until recently there was not any evidence of planners' involvement in the council. In 2011, the Burlington City Council designated that the Burlington Food Council provide policy

recommendations for urban agriculture, specifically as it relates to issues such as composting and keeping livestock.

Baltimore, Maryland

The city of Baltimore is the single FPC that operates within a city's Department of Planning. The Baltimore Food Policy Initiative is a collaborative project between the Baltimore Office of Sustainability, Department of Planning, and the Health Department. The initiative was approved, and is currently supported by the Baltimore City Council. As part of the initiative, the Baltimore City Food Policy Task Force was created and brings together different stakeholders to achieve seven specific goals including food access and food security. Although the task force has been active for less than three years it has already addressed food system issues in the city's sustainability plan. As part of the sustainability plan, one of the goals aims to establish Baltimore as a leader in sustainable, local food systems (Baltimore City 2010).

Milwaukee, Wisconsin

The Milwaukee Food Council began in 2007 with a group of community members who were concerned about nutrition, food security, and food justice. The food council operates in conjunction with the Center for Resilient Cities, a non-profit organization that provides professional support and consultation. The Milwaukee Food Council addresses three goals through organized working groups. The goals include healthy food access, urban agriculture and land use, and school food issues. In 2008, the group made the decision not to become part of the city government and to instead remain as an independent advisory group. Although as a group, they make recommendations to the city's Comprehensive Plan.

Through the partnership they share with the Center for Resilient Cities, the food council has access to urban planners who provide such services as, "expert assistance in building coalitions with communities, businesses, and government; developing, designing, and managing projects; and collecting and presenting research" (Resilient Cities n.d.). Due to the unique relationship that the food council shares with the non-profit organization, the information contained on their web site was limited. However, the web site shows that many of their projects, especially community gardens, have experienced success.

Berkeley, California

The Berkeley Food Policy Council partners with Food Matters, a non-profit organization within Sonoma County. Through the organization the FPC shares a similar mission and goals. According to the web site, the city of Berkeley has created a Food and Nutrition policy to help develop the local economy as well as provide access to "healthy, affordable, and culturally appropriate food" (Food Matters 2004). The food council operates in coordination with the city council to achieve nine goals, including a goal to ensure that the food served in city programs such as youth centers, senior centers, and city jails:

> Be nutritious, fresh, and reflective of Berkeley's cultural diversity; Be from regionally grown or processed sources to the maximum extent possible; be organic to the maximum extent possible; and not come from sources that utilize excessive antibiotics, bovine growth hormones, irradiation, or transgenic modification of organisms. (Food Matters 2204)

Hartford, Connecticut

The Advisory Commission on Food Policy is Hartford's FPC. Established in 1991 by the Hartford City Council, the commission united government and organization efforts to address

food issues. The commission conducts research and makes policy recommendations, reporting to city council and the mayor. The commission addresses food issues related foremost to food security and has participated in food access initiatives related to transportation. The commission is comprised of members from ten different segments within the city including a representative from the Health and Human Services Department, the Hispanic Health Council, and the Public Schools Nutrition Education. The Department of Planning is not part of the commission. Furthermore, the representatives for each of these areas change over time. Since the commission's responsibility is to conduct research and suggest policy, it is not directly involved in projects and programs, such as urban agriculture. However, the commission does recognize achievements within the community and presents awards.

The eight communities that were examined illustrate the differences that exist among food policy councils. Different organizational approaches are influenced by how each FPC was established. All of the FPCs have an organizational structure, and the majority of the communities include community, business, and government partnerships. Similar to other state, regional, county, and other local FPCs, funding is less evident although most FPCs indicate that benefit from membership dues, grants, donations, and volunteers. The majorities of FPCs are relatively young organizations and have yet to partner with planners, although most represent different stakeholders from the community. The same observation was true from the eight local level FPCs with the exception of the city of Baltimore. Overall, the majority of the food system issues that were prevalent throughout the planning literature, are the same food issues that are being addressed by state, regional, county, and local level food policy councils.

The analysis of web sites was helpful in showing that food planning is important to some members of each of these communities but the commitment varies considerably from one FPC to the next. The analysis suggests that FPCs and establishing community food systems is for many, a relatively new idea. The research supports Pothukuchi and Kaufman's claim that food planning is "a stranger" to the planning field (2000). Overall, planners were not part of food planning and were seldom members of FPCs.

Chapter Four

Conclusion

Within the past ten years interest in community food systems has emerged within the planning literature. Planners are beginning to recognize that food systems permeate several sectors of the built environment, which influence the health and well being of a community (APA 2007). Additionally, communities are developing alternative food systems in the form of community gardens and Community Supported Agriculture (CSA), which influence and are affected by the built environment.

Food systems affect communities in numerous ways. Public health issues rank high among concerns about the industrial food system. Other concerns include affects to the environment and inequities in access due to income and transportation. The environmental toll is seen in unproductive soils, polluted waterways, and biodiversity loss (Horrigan et al. 2002). Inequities in access create hunger and food insecurity, which is a growing issue, and will become more severe as the population continues to grow (Brown 2011). Access to food, especially for lower income and inner city populations, is also a concern (Haughton 1987). In their professional roles, planners have the expertise to recommend the best use of a community's land and resources (BLS 2001). Food as a basic necessity, and therefore planning for food is a logical component of a planner's responsibility, which is to help communities provide for their basic needs (APA 2007). However, a recent exploration of alternative food systems does not show a strong connection between planners and food planning. Instead, the research suggests that food planning, while often discussed, is a low priority for planners.

The purpose of this research was to investigate the potential role of planners in helping communities plan for food, and in doing so identify the benefits and challenges associated with

their participation. In order to understand the potential role for planners within a specific community, it was necessary to examine individual interests towards developing and supporting food planning for alternative food systems. Adding to that research was an examination of existing community food systems across the United States.

The research addressed three questions:

1. What are the current food system alternatives in Flagstaff, Arizona, and how are they being supported?
2. What is the potential role of local governments in fostering policies that will encourage food planning?
3. What are the practical recommendations for food planning in Flagstaff, Arizona?

The first question sought information about alternative food systems that currently exist, and how they are supported, in Flagstaff, Arizona. The second question sought information about individuals' thoughts and ideas about the potential role of local governments in fostering policies to encourage food planning. And the third question explored practical recommendations for the food planning in Flagstaff, Arizona. Furthermore, the research applied a political economy perspective and utilized qualitative research methods, including semi-structured interviews and content analysis, in an attempt to find solutions to the research questions.

The Industrial Food System's Effects on Society

Public health concerns about diet-related diseases and obesity have fostered a growth in alternatives to a predominantly industrial food diet. Dixon et al. (2007) describes that "city inhabitants are at particular risk of both under- and over-nutrition because of their reliance on a commercial food supply" (119). Several factors contribute to contemporary food habits:

> Food is higher in fat content, sugar, and salt; there are higher volumes of meat, dairy, and alcohol; the prices of processed foods are often lower than foods that are not processed; mass media advertising of food products; and, the displacement of small farms by corporate farming industries. (Dixon et al. 2007: 120-121)

Adding to these factors is governmental, including agricultural, and economic policies that support an industrialized food system. Tillotson (2004) argues that these policies are perilous to human health:

> The historical occurrence of highly effective public policies for the food supply side - with objectives quite different from promoting public health - as well as the lack of effective policies on the demand side may be among the significant contributing environmental factors in the obesity dilemma in the United States today. (620)

Pollan (2007) agrees, "The nation's agricultural policies operate at cross-purposes with its public-health objectives" (135). Agricultural policy in the United States, namely the farm bill, subsidizes commodity farmers, encouraging overproduction of commodity crops (Pollan 2007). According to Pollan the farm bill's influence is far-reaching, negatively impacting the environment and contributing to global poverty:

> "The fact that the bill is deeply encrusted with incomprehensible jargon and prehensile programs dating back to the 1930s makes it almost impossible for the average legislator to understand the bill should he or she try to, much less the average citizen" (Pollan 2007: 137-138).

Thus, the connection between health and the industrial food system is convoluted not only by policies but also by the disassociation that exists between food production and consumers.

In addition to public health concerns the industrial food system poses many environmental threats from excessive energy consumption and chemical use to concentrated animal feeding operations (CAFOs), and food system waste. Every component of the food system, from production and processing to transporting, requires energy. As part of a global food network, that relies on importing and exporting, the "average food item travels at least fifteen hundred miles" (APA 2007). CAFOs are especially harmful to animals and the

environment. The concentration of animal production creates unmanageable amounts of manure, which leach chemicals into the soil. Pollution from CAFOs affects air and water quality, contaminates the soil, and for communities living near the industrial farms, threatens human health (Foer 2009). The Pew Commission on Industrial Farm Animal Production reported "livestock operations are responsible for considerable greenhouse gas emissions, releasing more than seven percent of the U.S. greenhouse gases. On a global scale, they exceed greenhouse gas emissions from the transportation sector" (Krisberg 2008). Furthermore, quoted from the American Public Health Association's newspaper, *The Nation's Health*, the United States' Assistant Surgeon General stated that public and environmental health depends on the "nation's ability to transform from an industrial economy that depends on quickly diminishing resources to one that is more sustainable, employing renewable resources and understanding of how all food production affects public health and the environment" (Krisberg 2008). Undoubtedly, moving away from a dependence on the industrial food system will require necessary lifestyle changes beyond diet such as gardening, cooking, and more frequent trips to a food market.

The industrial food system contributes substantially to the global and national economy. However, local and regional economies pay the price for an industrialized food system. Caton-Campbell (2004) argues that corporate food production, "drives diversified farming operations out of business, and forces farmers into contract farming that leaves them vulnerable to layoffs" (345). Additionally, the costs of food production and distribution are externalized, enabling food prices to remain low, yet creating negative environmental and human health consequences (Pollan 2007). Environmental pollution is one externalized cost prevalent in communities where CAFOs are present (Labao and Stofferahn 2007; Foer 2009). Labao and Stofferahn's research showed that close to sixty percent of communities that were part of the study, located near an

industrial farm suffered "large detrimental impacts" (2008, 226). Among these impacts were detrimental consequences to the environment, socioeconomic well-being, and the community's social fabric. A study of the effects of industrial farming in North Carolina showed, "children within three miles of an industrial farm operation had higher rates of asthma diagnosis and experienced more asthma-related emergency room visits than children living farther away" (Krisberg 2008). According to the National Agricultural Law Center, nine states have laws that "prohibit or limit" corporate food production (Corporate Farming Laws 2010).

Food access is also a concern. Walker, Keane, and Burke (2010) show that the ability for consumers to purchase affordable, nutritious food is directly related to the local food environment, including the presence or void of local food stores and transportation options. Many small local stores are losing ground to large supermarkets that "tend to have longer business hours and better parking options," appealing to customers who can travel by personal vehicles (Walker et al. 2010). In general mergers among food retail outlets create inequities in food access, closing the doors on smaller inner-city stores in favor of supermarkets on the outskirts of cities (APA 2007; Breitbach 2007). Consequently, food access often corresponds to food security.

Food security, as defined by the United States Department of Agriculture (USDA), means having access at any time to enough food for an active, healthy life. More than fourteen percent of households in the United States are identified as experiencing food insecurity. To assist food insecure households, the USDA spends sixty billion annually on domestic food and nutrition assistance programs (Congressional Digest 2010). The National School Lunch Program is the second largest nutrition assistance program, providing free and reduced price lunches to children from food insecure households. Ironically, the National School Lunch Program is influenced by

the nation's farm bill. According to Pollan (2007) the farm bill "determines what sort of food your children will have for lunch" (135). The interdependence of these economic and government policies disregards effects on human and environmental health.

Through modernization and economies of scale, industrial agriculture is a profit-driven business influenced by corporate and political ideologies with little concern for communities (Breitbach 2007). Many communities are realizing that alternatives to the industrial food system exist, evidenced in the growing "tensions and conflicts" about the food system (Caton-Campbell 2004). Support for community food systems are increasing in popularity due to these tensions. According to Feenstra (1997) community food systems contribute to a community's overall health, "not only does an adequate, varied diet contribute to individual health, but the way food is grown, distributed and eaten also profoundly affects the environmental, social, spiritual and economic well-being of the community" (28). In light of the growing interest in alternative food systems, the research explored the feasibility of planners' involvement in helping communities plan for community food systems.

Industrial Food Systems: A Political Economy Perspective

Due to the political and economic connections associated with the industrial agriculture system the research questions were explored through a political economy framework. The framework utilized two dimensions: market and government, and polity and economy. The industrial food system was analyzed using four goals shared by the market and government. Both the government and the market strive for efficiency, productivity, stability, and equity (Clark 1998). An examination of the industrial food system's ability to meet these goals revealed deficiencies. The system lacks efficiency, requiring considerable amounts of energy

throughout each phase of food production (Hopkins 2000). In general the system is inefficient, "at roughly eight calories of energy to produce one typical food calorie" (APA 2007). As an economic institution, the industrial food system may be viewed as efficient through economies of scale, but this only benefits a few individuals and not the community as a whole (Clark 1998). Furthermore, the industrial food system's productivity is counter to the well being of society. Increased productivity through the globalization of the food industry has created transnational corporations that control the majority of the food market. Rising grain prices over the past five years are attributed to "accelerating growth in demand and the increasing difficulty of rapidly expanding production" (Brown 2011). Intensive productivity has led to monoculture crops that "are eroding biodiversity among both plants and animals" (Horrigan et al. 2002).

As a political institution the industrial food system fails to achieve stability and equity. There is little stability in an institution that depletes natural resources and relies heavily on technology solutions. Industrial agricultural practices contaminate water, "sedimentation and chemical pollutants resulting from agricultural practices continue to pose serious problems for fisheries, other wildlife, water-based recreation, and household water use" (APA 2007). The environmental instability created by the industrial food system poses serious threats to the ecosystem and public health. Additionally, the industrial food system produces inequities, evident in hunger and food insecurity. Pothukuchi and Kaufman (1999) explain, "the impact of the urban food system on poorer households is especially critical, for they may pay a higher proportion of their incomes for food, and have fewer choices due to lower ownership rates of automobiles and the paucity of supermarkets in inner-city areas" (214).

In summation, the industrial food system acting as either an economic institution or a political institution fails to meet the shared goals that exist between the market and the

government (Hendrickson and Heffernan 2002). The result is a system that creates large-scale negative consequences for society, in public health, environmental damages and waste. Yet society accepts the perceived negative consequences in exchange for convenience and the cheap food that is produced.

A critique of the industrial food system reveals many deficiencies and creates a strong need for planners to be involved in food planning. After all, planning is concerned with the basic essentials in life and therefore food planning is important for communities.

Community Food Systems: A Political Economy Perspective

Community food systems also interplay with the market and government and therefore can be viewed through the same framework utilizing two dimensions: market and government, and polity and economy. An examination of community food systems' ability to address the goals of the market and government in the Flagstaff community also revealed shortcomings. Food from local, organic community food systems may cost more. Responses from the interviews noted that cost and convenience were top concerns among consumers. Additionally, community food systems may have limited food choices resulting in people having fewer choices. Plus, different foods are available at different times and in different quantities, adding further to limitations in choice. Again, results from the interviews show that consumers like choice, evidenced from the multiple locations where people shopped for food.

Based on the same criteria, efficiency, productivity, stability, and equity, and despite the shortcomings mentioned above related to selection and cost, alternative food systems are far better for communities as a whole than the industrial food systems (de la Salle and Holland 2010).

Planning and Food Systems

More than a decade ago, two papers appeared, published in 1999 and 2000 that marked a turning point in the significance of planners' participation in food planning. In their joint publications, Pothukuchi and Kaufman presented several reasons to include food issues in city planning, noting that the professional identity of a planner is to ensure the delivery of the community's basic needs through land use planning (1999; 2000). Their research revealed four areas related to food issues that would benefit from planning, namely agricultural land preservation, land use and zoning, integrating food issues into economic development activities, and documenting the environmental impacts of the industrial food system (Pothukuchi and Kaufman 2000). Prior to these publications food systems were rarely included in planning literature. According to Pothukuchi and Kaufman (2000) a few articles published during the 1980s and early 1990s discussed urban public markets, street vendors, community gardens, and local food issues related to access and affordability, but overall, food planning has been mostly ignored throughout planning literature.

Responding to the call put forth by Pothukuchi and Kaufman, the *Journal of Planning and Education Research*, in 2004, dedicated a special issue to planning for food. The benchmark issue helped launch food planning as a major issue among planners and as a necessary matter to explore in coursework for future planners (Hammer 2004). Several years later, in 2007, the adoption of the *Policy Guide on Community and Regional Food Planning*, by the American Planning Association (APA), further asserted the significance of food planning, and in the policy guide advocates for the inclusion of food planning with other major planning functions. Stated in the policy guide are eight factors that describe the rationale for planners' involvement in food

planning:

- Recognition that food system activities take up a significant amount of urban and regional land
- Awareness that planners can play a role to help reduce the rising incidence of hunger on the one hand, and obesity on the other
- Understanding that the food system represents an important part of community and regional economies
- Awareness that the food Americans eat takes a considerable amount of fossil fuel energy to produce, process, transport, and dispose of
- Understanding that farmland in metropolitan areas, and therefore the capacity to produce food for local and regional markets, is being lost at a strong pace
- Understanding that pollution of ground and surface water, caused by the overuse of chemical fertilizers and pesticides in agriculture adversely affects drinking water supplies
- Awareness that access to healthy foods in low-income areas is an increasing problem for which urban agriculture can offer an important solution
- Recognition that many benefits emerge from stronger community and regional food systems.

These factors set in motion the need for guidelines, which are outlined in seven broad policy statements. In turn the policy statements are viewed as planning goals:

1. Support comprehensive food planning process at the community and regional levels;
2. Support strengthening the local and regional economy by promoting local and regional food systems;
3. Support food systems that improve the health of the region's residents;
4. Support food systems that are ecologically sustainable;
5. Support food systems that are equitable and just;
6. Support food systems that preserve and sustain diverse traditional food cultures of Native American and other ethnic minority communities;
7. Support the development of state and federal legislation to facilitate community and regional food planning discussed in general policies #1 through #6**.**

Within each of the seven policies, the guide identifies several roles that planners can take to support food planning, such as conducting community assessments and stakeholder analyses.

The overarching goals of the policy guide are two-fold:

1. Help build stronger, sustainable, and more self-reliant community and regional food systems, and,

2. Suggest ways the industrial food system may interact with communities and regions to enhance benefits such as economic vitality, public health, ecological sustainability, social equity, and cultural diversity.

Additionally, Pothukuchi (2004) affirms that, "planners are trained to lead, facilitate and manage community-based group processes," using consensus development, negotiation, and conflict resolution (361). Furthermore, the ability to listen and learn not only about the facts, but also about community values and concerns, to inform spatial and land-use policies is a skill that planners bring to the table (Forester 1999).

Planners are in a unique position, "linked to decision makers and decision arenas in public, private, and nonprofit sectors" to mediate processes and recommend policies based on knowledge gained from the community (Pothukuchi 2004, 361). In this role, planners can encourage a "food systems discourse" and ultimately help facilitate this process for communities (Caton-Campbell 2004, 341). The culmination of skills, knowledge, and their position within the community, is advantageous for groups desiring alternative food systems (Caton-Campbell 2004; Clancy 2004). And yet, while the benefits of having planners participate in food planning are numerous, very few planners work with communities on this issue.

Critique of Research Methods

There were several limitations with the research methods. The overall sample size of twelve was small and not truly representative of the Flagstaff community. Interviews from the private and public sector were not randomly selected which created bias in the results. Public sector contacts were made using public email addresses and returned very few responses. Furthermore, many of the private sector informants were from Flagstaff Foodlink, and use of an "elite" informant from this group exacerbated the likelihood of bias. In addition to bias it

became clear that there was a general lack of knowledge about the responsibilities of planners among some of the informants. None of the informants were aware of the APA's *Policy Guide and Community and Regional Food Planning*. Although the policy guide was mentioned briefly, informants would have been better served if a copy of the policy guide had been provided to them in advance of the interview. Although this would not guarantee that the informants would read the document. Additionally, a pre-interview with informants would have enabled a better understanding of the informants' knowledge about planners and the decision structure within government. Finally, interviews with more planners may have been more beneficial to the research, specifically planners who work with codes on a daily basis.

The analysis of food policy councils was also limited. Across all of the web sites the content is inconsistent and may not provide the complete story or may embellish reality. Researching content available through web sites merely provides a snapshot of ongoing activities. Some food policy councils may be more active but lack a web presence. This was not obvious from the analysis. On the other hand, some food policy councils may be defunct with an abandoned web site. When possible, effort was taken to search corresponding government pages. In many cases this confirmed the suggestion of the lack of involvement by city planners. However, planners' participation may not always be evident; therefore a survey of planners from the communities where food policy councils are present may benefit the research.

Review of the Research: Interviews with Stakeholders

Interviews with community members representing the public and private sectors provided insight in helping to understand the potential role of food planning in Flagstaff. Already several alternative food system projects and programs exist in the Flagstaff area, and all of the

respondents were aware of most of the alternatives. In this way, the informants helped answer the first research question, "What are current food system alternatives in Flagstaff, Arizona, and how are they being supported?" From the responses, twenty-seven separate venues were mentioned as being an alternative food system or part of an alternative food system. Predominantly, the venues were supported by community members. Some examples, such as the Flagstaff Community Market and community gardens were also supported by the city. Reasons for seeking alternative food systems included environmental concerns, supporting farmers, health, and social well-being.

An analysis of the interviews indicated that both public and private community representatives were amenable to food planning and planners' involvement in food planning. However responses from the interviews showed that there was a disconnection between the perspectives of alternative food advocates and planners, and a lack of knowledge about planning power, and decision structure within the city. The responses revealed very different views about what planners can and should do. Overall, respondents felt that providing alternative food systems to the Flagstaff community was important, but was not a high priority for planners, especially compared to other concerns facing the community such as water and traffic.

The predominant issues related to food planning throughout the planning literature were mentioned by the informants, including education about food systems and health, benefits to the local and regional economy, environmental impacts, and overall community health and well-being. Although the relationship between poverty and food security was not mentioned specifically in any interviews, several informants mentioned food security as it related to available food in the event of a natural disaster. One respondent explained that food security was important because Arizona currently has a four-day food supply (This comment could not be

verified in Arizona's government publications.). An interesting observation was that informants from the private sector believed that city council determined the city's priorities, while informants from the public sector noted that community stakeholders establish city priorities. Based on the responses from the interviews there appeared to be a gap between the two groups, especially regarding the influence of different stakeholders. Consequently this provided some insight into the second research question, "What is the potential role of local governments in fostering policies that will encourage food planning?"

Discussions about the potential role of local governments in fostering policies to encourage food planning elicited different responses, which illustrated different levels of knowledge about planners and their job functions, specifically among individuals from the private sector. Above all respondents believed that community education about food and nutrition were necessary as well as creating partnerships between the public and private sectors. Many respondents believed that food planning could be incorporated into land use and zoning, by lifting restrictions and removing barriers that impede food planning activities. Recommendations related to lifting restrictions and removing barriers may not be feasible due to the existing land use plan and zoning codes. There are legal issues involved in many matters related to planning and some recommendations made by respondents may not have considered those limitations.

Furthermore, some of the recommendations made by informants for the city of Flagstaff, fell outside of the job responsibilities of city planners. The majority of respondents believed that it was important to take advantage of existing knowledge about food systems within the community in order to learn from each other and develop useful language for the city's regional plan. Other practical recommendations included promoting community gardens and promoting

local businesses that utilize local foods. The latter suggestion may also involve legal issues. In this case, the suggestion is better suited for the Chamber of Commerce rather than for a planner.

Review of the Research: Food Policy Councils

One phenomenon that is contributing to the rise in food system awareness is the establishment of food policy councils. Today over one hundred communities have established or are currently forming food policy councils to support community food systems and provide access to nutritious food to community members. Many of these community food systems are initiated by concerned citizens and non-profit organizations, as well as a few that have been launched through local, county, regional, and state governments (Dahlberg 1994).

According to the resources utilized, there are one hundred and thirteen communities in the United States with established or currently forming food policy councils. An investigation of community web sites with direct links to food policy councils suggested that twenty-seven were either currently forming or lacked an online presence. Pre-determined categories based on community food system projects, programs and policies were extracted from the literature. These categories represented ongoing or past projects and goals of the food policy council. The categories included food access, food security, public health concerns, benefits to the local economy, environmental concerns, community health, food safety, community education and food systems and nutrition, farm-to-school programs, and food justice. From the eighty-six web sites that were examined, twenty-one were state level councils, eight were regional, thirty existed at the county level, and twenty-seven at the local level. Overall the local level food policy councils addressed more issues and were actively engaged in a greater number of projects. In fact, more than half of all the local level councils addressed issues related to food security, the

environment, the local economy, community health, education, food justice, and were involved in farm-to-school initiatives.

The issue that concerned the majority of councils was overall community health, followed closely by impacts to the economy. More than seventy percent of the regional and county level councils mentioned community health, while more than eighty percent of the state and local level councils specifically mentioned community health. Similarly, ninety percent of the state level councils had goals to improve the economy. More than seventy percent of county and local level councils discussed economy and sixty percent of the regional councils addressed the economy.

The issues least addressed were food safety and food justice. Less than twenty percent of all FPCs addressed food safety. This was similar to the responses from the interviews. Food justice was a goal in less than thirty percent of county and regional level councils, and less than fifteen percent in state level councils. The exception was found in local level councils, in which case more than half of the councils addressed food justice. An interesting observation related to the local level councils was the dedication to education, which was generally associated with farm-to school programs. In total more than ninety-five percent of all local food policy councils were engaged in or had a mission to encourage and support education and farm-to-school programs.

Based on the analysis, very few planners were actively involved in food planning with communities. While the benefits have been explored, challenges also exist which may suggest reasons why planners are not more active. For the most part, the priorities set forth by the city government dictate the job responsibilities of the planner. Secondly the awareness of benefits that planners offer in food planning is still growing, and tensions related to food systems may

restrict planners from becoming involved in food planning. A third suggestion stems from the analysis of food policy councils. Evidence located on web sites indicates that several of the food policy councils are staffed by individuals who volunteer to serve on the council. Noted in meeting minutes, three councils specifically desired to remain independent from government, which may suggest that food planning is less related to community planners and better suited for a social services venue.

Overall, many challenges exist, with additional challenges that are specific to individual communities. If communities are interested in having the support of a city planner, many of the challenges should be addressed. A first step in overcoming some of the challenges is to become aware of the relationship that food systems have with the community, through health, the natural environment, and the built environment.

Recommendations

A goal of the research, in response to the third research question, was to produce a document with recommendations for food planning in the city of Flagstaff, Arizona, based on APA's *Policy Guide on Community and Regional Food Planning*. According to the interview research, food planning in Flagstaff, Arizona, is not a top priority among other priorities of the city; and while many efforts towards supporting community food systems exist, planners are not actively involved in those efforts. Based on the research, a formal document with recommendations for food planning was no longer pertinent. Nevertheless, recommendations for food planning are included in this document. The city currently addresses issues related to food planning, including animal keeping, water harvesting, and community gardens, in sections of the City of Flagstaff's 2012 Regional Land Use and Transportation Plan draft and in the draft

Zoning Codes. While these additions are commendable, additional recommendations are included, based on the seven policies outlined in APA's *Policy Guide on Community and Regional Food Planning*.

Evidence from the interviews and the analysis of food policy councils suggests that the majority of planners are not planning for food, at least not in a direct way. The planning literature may have portrayed more fanfare than what is actually happening. As a result, the actions of several planners, illustrated in the literature may not be the result of systematic changes but rather supportive items that help the food system work. Land use planning can either help or hinder future food planning. With this in mind, planners in Flagstaff should consider a regional food policy in support of a comprehensive food planning process.

Future Actions

Further support for food planning in Flagstaff will require consumer education and acceptance. One area of future research, mentioned in two interviews, is to use mapping tools to create visual representations of food availability and food access. An overlay of census tracts on such a map would enable an assessment of equity. Mapping the location of food stores and food banks and transportation routes to those locations may address food access concerns. Again while these actions are not systematic, they may lend support towards food planning. Another research agenda is to make food part of the school curriculum so that students learn about food and where it comes from. School gardens and an awareness and support of farm-to-school programs can be a venue for educating the community about food and nutrition.

Many of the recommendations provided by the interview informants and evidence from food policy councils across the United States can occur with or without the support of planners,

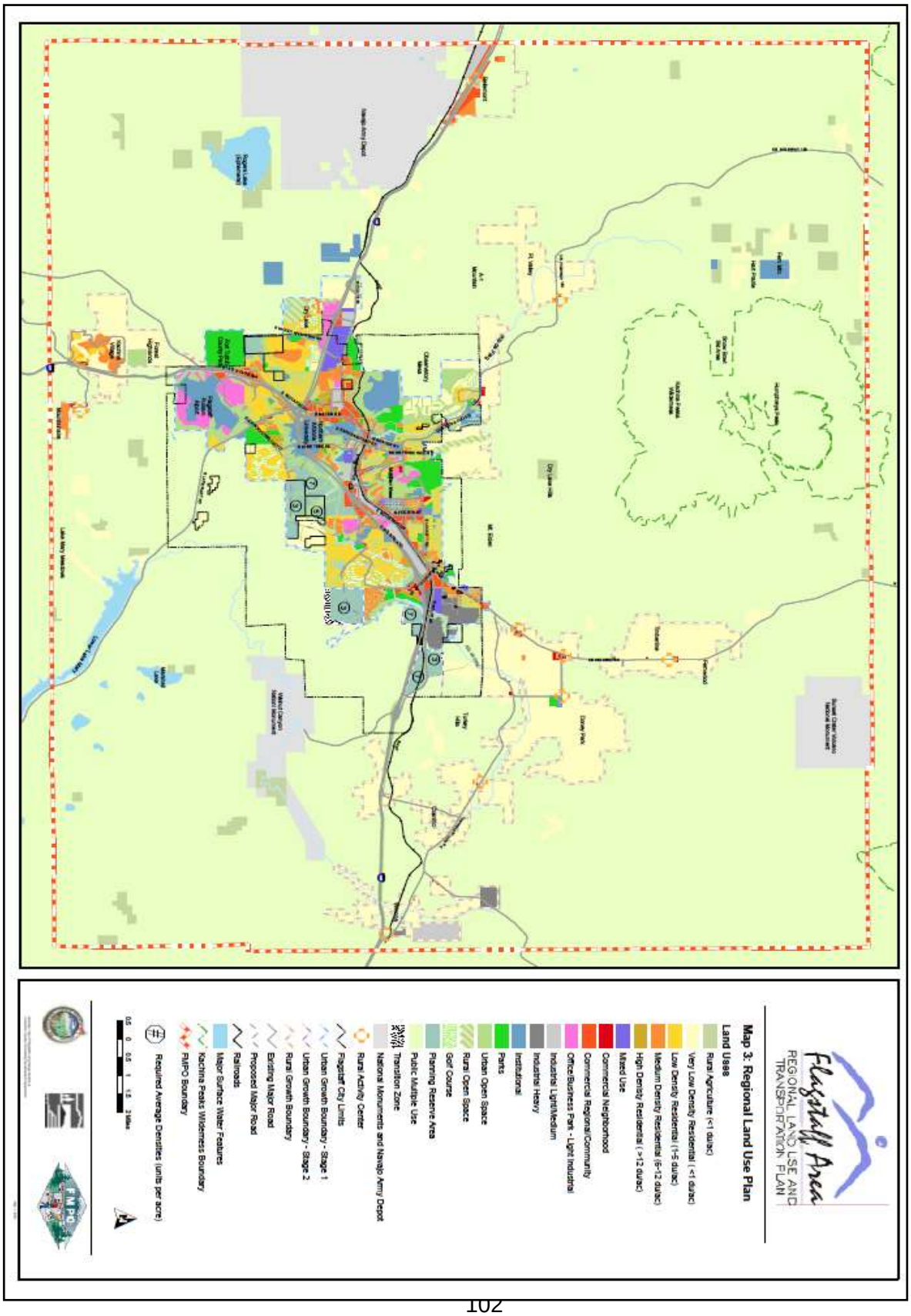
including outreach, cooking demonstrations, and educating stakeholders through social activities. In fact, food planning within a community may be better suited for non-profit organizations such as food policy councils. However, the role that planners can play should not be ignored. Above all, planners have knowledge of how land use decisions are made and can support efforts in food planning with their knowledge.

One specific policy from APA's *Policy Guide on Community and Regional Food Planning* is especially relevant for Flagstaff, Arizona: "Support food systems that preserve and sustain diverse traditional food cultures of Native American and other ethnic minority communities" (2007). Efforts to preserve traditional food cultures of Native Americans have shown evidence of improved health among native communities.

If the goal of planning is to provide for the basic essential in life, food planning should be part of the role of planners. However, the research conducted for this study suggests that food planning does not require the professional expertise of a planner. What is required is shared knowledge and public involvement with city council for the health, safety, and welfare of the community.

Appendix A – Establishing Land Use Protections for Community Gardens

Appendix B - Flagstaff Area Regional Land Use and Transportation Plan



Appendix C - Interview Questions

The purpose of this research is to examine the existing alternative food systems and how they are supported within the local and regional community. Alternative food system is a concept that I am using to refer to food production and food processing that is not part of the predominant industrial food system. Some examples of an alternative food system would include a farmer's market, urban gardens, and community supported agriculture.

1. How often do you shop for food?
    a. On average how many people are you shopping for?
2. Where do you buy your food?
    a. Can you think of any other places locally and within this region that are part of an alternative food system?

Provide a list of alternative food systems in Flagstaff.

    b. Have you ever purchased food from any of these places?
        i. Why or why not?

In 2007, the American Planning Association adopted the Policy Guide on Community and Regional Food Planning to promote and support food planning for local and regional communities by city planners.

3. In your opinion, what do you think the role of city planners should be in providing opportunities for alternative food systems within a community?
4. Can you think of any challenges that would prevent city planners from being involved in food planning for their community?
    a. Having thought about the challenges what would you suggest as viable options for food system alternatives in Flagstaff?
    b. What actions are needed to make these options a reality?

Appendix D - List of alternative food systems and businesses that participate in alternative food systems

1. Backyard gardens
2. Front yard gardens
3. Community gardens
4. School gardens
5. Community Supported Agriculture (CSA) - shares and garden starts
6. CSA store
7. Flagstaff Community Farmers' Market
8. Cottonwood Community Farmers' Market
9. Sedona Community Farmers' Market
10. Karma Farm (Prescott) Farmer's Market on 4th Street
11. Camp Verde farms
12. SLUGG (Students for Sustainable Living and Urban Gardening, student organization at Northern Arizona University)
13. Trout Farm (Page Springs)
14. Dairy Farms (Glendale)
15. Neighborhood Coop delivery for organic bulk items
16. Diablo Trust
17. Bountiful Baskets Cooperative
18. Harvesting from the wild (mushrooms)
19. Pick your own farms (Sedona and Cottonwood)
20. Food vendors - weekend farm stands
21. Local honey producers
22. Local restaurants that use local foods (Brix, Cottage Place, Criollo Latin Kitchen, Diablo Burger, Morning Glory Cafe, New Jersey's Pizza)
23. Local Alternative Catering
24. Flying M Ranch
25. Trading and purchasing local eggs, chickens, and raw goat milk
26. Hunting wild game
27. Purchasing online

Appendix E - Screenshots of Food Policy Council web sites

Figure 5. Screen shot of Flagstaff Foodlink web site, Flagstaff, Arizona

Figure 6. Screen shot of Santa Fe Food Policy Council web site, Santa Fe, New Mexico

Figure 7. Screen shot of Community Food and Agriculture Coalition web site, Missoula, Montana

Figure 8. Screen shot of Burlington Food Council web site, Burlington, Vermont

Figure 9. Screen shot of Food Policy Task Force web site, Baltimore, Maryland

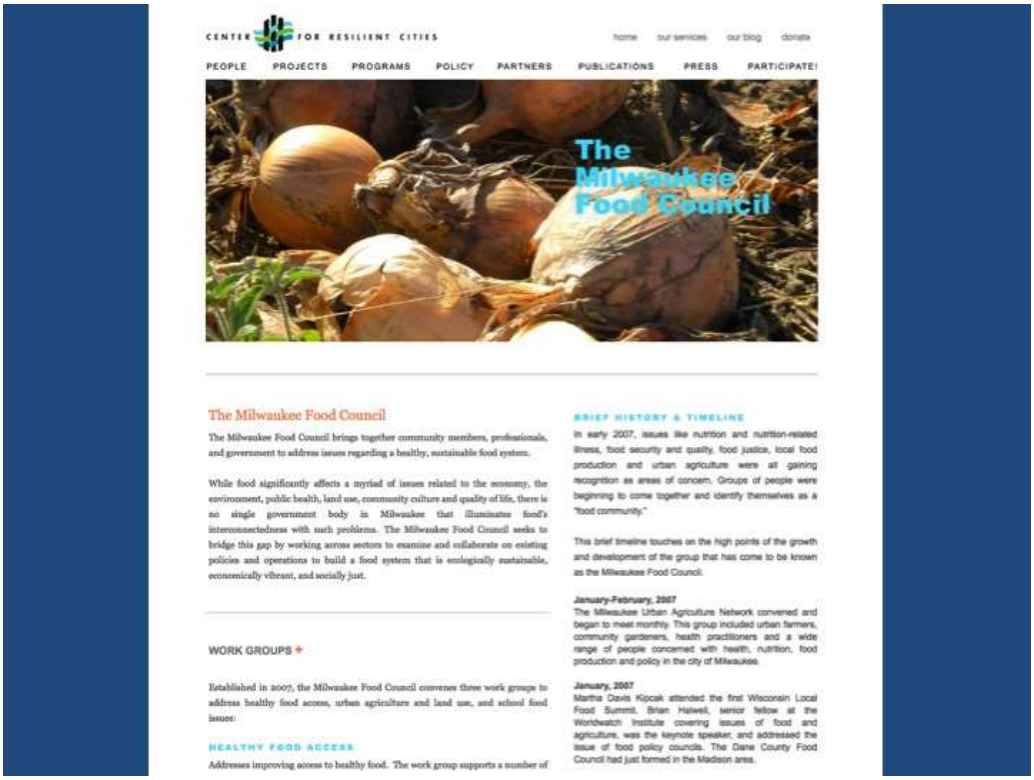


Figure 10. Screen shot of Milwaukee Food Council web site, Milwaukee, Wisconsin

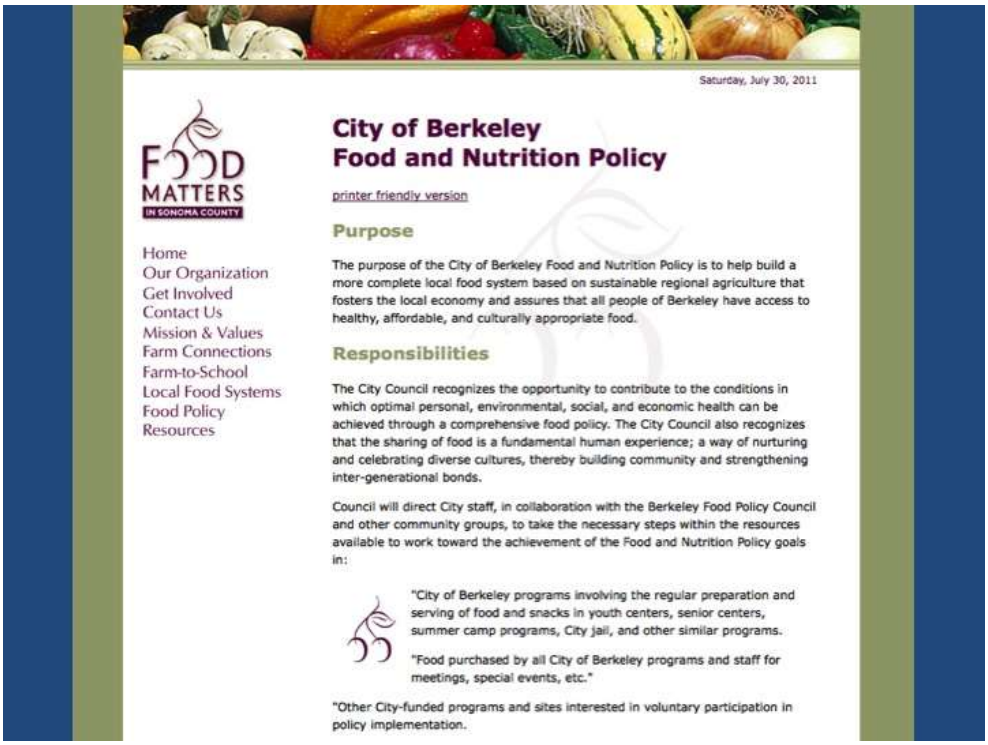


Figure 11. Screen shot of Food and Nutrition Policy web site, Berkeley, California

Figure 12. Screen shot of Advisory Commission on Food Policy, Hartford, Connecticut

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