REGIONAL FOOD SYSTEMS PLANNING: CREATING A STRATEGY FOR A LOCAL AND REGIONAL FOOD SYSTEMS PLAN AND POLICY FOR THE CITY OF ANDERSON INDIANA’S METROPOLITAN PLANNING AREA.

A CREATIVE PROJECT
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BY
AMBER ECKERT-JONES
PROFESSOR SCOTT TRUEX – ADVISOR

BALL STATE UNIVERSITY
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Chapter 1 – Introduction to Food Systems
Introduction

This creative project investigates regional and local food systems planning and the roles that Planners play in creating those systems, in an effort to distinguish successful regional and local food systems, which can serve as models in areas such as the Anderson, Indiana Metropolitan Planning Area. In order to put the need for local food systems into perspective, one must understand the changing role that food has played throughout American history, the dramatic shifts that have occurred in food production and consumption over the course of the past century, and the shortcomings of the modern food system, which are driving the current local food movement.

Modernization, Choice, and a Changing Food System

Over the course of the past century, access to food and caloric intake has significantly increased for the vast majority of Americans and much of the developing world. Simultaneously, so have chronic diseases related to poor nutrition and obesity. Since 1980, obesity has more than doubled worldwide, and as of 2008 nearly 35% of adults were considered overweight another 11% were considered obese. To date, 65% of the world's population live in countries where chronic diseases such as diabetes, heart disease, hypertension, and some cancers (breast, endometrial, and colon) related to overweight and obesity kill more people than complications related to malnutrition (World Health Organization, 2014). While there has been increased access to food, increased access to affordable, nutritious foods may be questionable.

These shifts in food production and caloric intake, both negative and positive, are a result of dramatic changes in how food is grown, produced, and consumed. What was once an agrarian culture has become a highly industrialized society; technological advances such as transportation, refrigeration, and preservation have allowed exotic foods from distant places to be
transported to the major marketplaces, drastically altering consumer desires and demands. Historically, native foods were regulated by the demands of the community and constrained by the limitations of the land and the seasons of the region. Technological advances allowed for greater choice, permitting consumers to purchase foods both out of season and exotic that they may have never had access to before. Improved options created a consumer demand for convenience and variety, breaking the connection between the farmer and consumer. Food can now be grown wherever it is most economical and transported where needed; while the modern food system has allowed enhanced choice and has claimed to feed the masses, the process and journey that food goes through before arriving on the consumer plate has left many questioning modern food practices. Over production of high demand products such as fruit and beef in some regions coupled with increasing droughts in others have created serious environmental concerns as well as food security issues throughout the nation.

Food safety scares have bolstered an interest in local agriculture as well. In America, the majority food consumed is produced industrially, by a small number of very large food corporations. Thus, when one producer has a bacterial outbreak it rapidly becomes widespread, due to the mass production and processing of food. According to the Centers for Disease Control and Prevention (CDC), nearly 50 million Americans contract foodborne illnesses annually, of those 100,000 people were hospitalized and nearly 3,000 died (2011). With an increasing understanding of foodborne illnesses and their relationship with the industrial food system many Americans have begun searching for ways to connect with their food and their farmers on a local level.
Industrialization – the Shift from Family Farming to Commodity Farming

Local food has been a topic of considerable debate in the United States, since the 1970's, in large part as a reaction to a shift in the federal farm policy. At that time, President Nixon vowed to lower the price of food and did so by cutting federal support to all farmers and shifting that support toward supplementing commodity crops such as corn and soy with subsidies. Prices did drop; however, this led to a dramatic shift in farming in the United States. Farmers were encouraged to either "go big or get out" of the farm business. Subsidies were directed at supporting cash crops. Small farmers suffered immensely, many filed bankruptcy and others left farming entirely. Larger farming corporations with more capital rose to the top buying out small farmers and focusing their land use on commodity crops.

Food prices in the United States declined and there became an abundance of corn and soy in the agricultural marketplace. Producers found ways to use them in almost every processed food Americans eat, further reducing the cost of food. However, corn and soy alone did not sustain the nation's desire for other foods, fruits and vegetables, coffee, and nuts. High priced foods that grow best in warmer climates were still in high demand in the United States. While many farmers weren't growing them locally, they were looking to grow them and to import them into the country.

Globalization - a Global Food System

Parallel to the industrialized food system, a globalized food system began to take shape. Consumer demand and individual disposable income grew in the United States and, as a result, the country had more discretionary income to seek new ways to gain access to high demand products. Given that both the cost of labor and land are generally cheaper in foreign places, high-cost products are grown in these locations, resulting in a substantial increase in imported food,
and further pushing local foods out of the American diet. There are many concerns with globalized food systems, ranging from the poor quality of food produced, negative environmental effects such as soil degradation and over-consumption of water, minimal wages being paid to farmers and serious concerns of food equity among marginalized populations.

The globalized food system has had extreme benefits for the American people; it has increased choice, lowered the price of foods, and reduced hunger in America. One cannot easily imagine America if this system were not in place. This creative project is not an attempt to discount the achievements of the current food system but is an effort to recognize and to challenge its negative impacts at the local level today and to seek alternative and complimentary local food system strategies.

The Modern Conventional Food System

The changes that have occurred within the American food system over the course of the past century (modernization, industrialization and globalization) have led to, a conventional food system. The conventional food system, as defined by most scholars and for the purpose of this paper, produces and processes food at an industrial scale, relies on biotechnological advances, and distributes food across long distances, often over 1,400 miles from farm to consumer plate (Pothukuchi and Kaufman, 1999). It also creates a system where the consumer and the farmers are entirely removed from one another. In most cases, farmers have been almost entirely removed from the process. Today the major stakeholders in the conventional farming system are big agri-business and corporations.

An additional concern with the conventional food system is that it does not equally disperse healthy foods to all communities, creating food deserts. Lack of access compounded by limited transportation, disability, poverty, and age inhibits individuals' abilities to make healthy
food choices. Because of this, many proponents of the local food movement see community food justice, the desire for equal access to healthy, affordable and fresh foods, as a critical reason to support a local food system.

Local food systems, in contrast to conventional food systems, are place-based. A local food system incorporates all aspects of food from farm to fork; this includes producing, processing, distributing, consuming and disposing. An ideal local food system would be designed to create a closed loop system if at all possible.

Image 1. Local Food System (Jones, 2015)
Planners, activists, and communities working to strengthen local food system are reinforcing the bonds between each of the steps within a local food system. They frequently work to connect the key players in these systems and to help them reduce overhead costs, reduce waste, increase income and to create a more sustainable system, functioning at maximum efficiency. The motivations for entering this kind of work can be diverse; however, activists and planners are frequently motivated by a desire to increase food security and to build a more just food system for the community. Many food activists agree that when residents have access to healthy, affordable and culturally appropriate foods at all times the community is considered food secure. According to the USDA, food security is more broadly defined as when individuals and families have enough food to maintain a healthy and active lifestyle and food insecurity is defined as when a person’s access to food is limited by a lack of resources (Coleman-Jensen & Singh, 2014).
Chapter 2 – Identifying the Need
**Need for Change**

The food system is profoundly tied to the health, welfare, safety and wellbeing of a community. It has implications and effects on multiple facets of the community including water and air quality, waste, transportation, poverty, and education. Given foods' deep ties to communities' wellbeing, food and the local food system are increasingly recognized as planning issues. With this in mind, planners must consider how to facilitate the growth of local food systems to better strengthen communities.

**The True Costs of "Cheap" Food – Hunger, Poor Nutrition, and Poverty**

Proponents of the conventional food system point to increased choice and reduced malnutrition as the pinnacle of success and many see no reason for change. However, research shows while there is an abundance of food in the United States millions of Americans suffer from a nutritional deficit. Rather than suffering from malnutrition due to lack of access to food, many Americans endure chronic diseases such as obesity from poor nutrition, poor diet and overeating, in part due to a lack of access to healthy and affordable food choices. According to Ogden, Carroll, Kit, & Flegal, more than one-third of American adults are obese. These rates are even higher for non-Hispanic Blacks at 47.8%, followed by Hispanics at 42.5% (2014). Youth in America have rising obesity rates as well, according to Ogden, et al. more than one-third of children and adolescents are either overweight or obese (2014). According to the National Center for Chronic Disease Prevention and Health Promotion (CDC), eating more fruits and vegetable can lead to a reduction in chronic disease and obesity. Yet, on average, adults living in the United States only eat an approximated 1.1 servings of fruit and 1.6 servings of vegetables per day, well under the recommended dietary guidelines (2013). With this in mind it is imperative that communities work to increase citizens’ access to fresh produce. Currently, grocery stores,
convenience stores and school lunch lines make it substantially easier to grab an unhealthy snack than one that is balanced and fresh. Policy and environment changes that support the additional of healthy food options and reduce pre-packaged and processed food choice is one strategy to increasing community access to healthy foods in a local food system.

**Poverty**

Even with what is considered an abundance of food, many Americans suffer from food insecurity. According to Coleman-Jensen & Singh (2014), nearly 14.3% of all Americans were considered food insecure in 2013. Thus, while there may be an abundance of food, healthy or not, it is not being adequately distributed to the people who need most, at all times. Food insecurity touches many low-income and even some moderate-income households. However, for many families the end of the month, when nutrition assistance runs out, is when the greatest risk of food insecurity arises. Not only do individuals go hungry, but according to Seligman, Bolger, Guzman, Lopez, & Bibbins-Domingo (2013), at the end of the month these individuals run a much higher risk of increased hypoglycemia and related health problems. It’s also important to note that individuals living in poverty run a much higher risk of diabetes, obesity, metabolic diseases, and premature death. According to Levine, a researcher at the Mayo Clinic, poverty is linked to obesity and negative health outcomes. He postulates that this is in large part due to living in food deserts and having limited access to fresh nutritious foods (2011).

Seeking ways to both increase access and affordability of healthy foods is imperative to improving the health outcomes of Americans living in poverty. While many people believe that access to food is a right, a thought that in many ways spurred the food security movement, it has not been enough to guarantee that all people have access to healthy foods at all times. Even with Federal/Public programs such as the Supplemental Nutrition Assistance Program (SNAP), access
is still limited for many individuals, as the working poor often are not eligible for nutrition assistance and must seek help from local food banks.

**Education**

Food insecurity and hunger effects have impacts on learning and concentration for children. Research shows that youth and adolescents experiencing food insecurity are more likely to be tardy and have increased rates of absenteeism (Murphy, Wehler, Pagano, Little, Kleinman & Jellinek, 1998). Additionally, research shows that children and youth experiencing food insecurity are more likely to have behavioral problems, which can be disruptive to learning such as hyperactivity, aggression and anxiety (Slack & Yoo, 2005; Slopen, Fitsmaurice, Williams, & Gilman, 2010). For children, food insecurity plays a huge role in the success of their learning career and future.

**Environment and Transportation**

The way food is produced and distributed has numerous effects on the surrounding community. An increased awareness of the effects of unsustainably produced foods has led to consumers seeking more environmentally and nutritionally sound options. Americans are increasingly demanding that the food system move into a more sustainable state, and governmental agencies such as the CDC are encouraging consumers and producers to begin employing sustainable practices as well. Consumers, through their purchasing power are encouraging farmers to use limited pesticides and chemicals, and to treat livestock humanely. Their choices to purchase consciously, choose foods that are grown locally, with respect to animals that are free of toxins and are grown locally (Environmental Impacts of Our Food System, 2012) are reshaping the food system.
The Effects on Rural and Urban Communities

On a local level, the exodus of family farming in favor of conventional farming has had multiple negative effects on rural communities. It has led to a decrease in open space, as farmers sell their farmland for development. Local economic vitality has decreased as growers and processors rarely live within the community where consumers purchase food, which leads to increased leakage. And these communities suffer from a decrease in access to healthy, nutritionally-dense foods, mostly producing commodity and feed crops.

Urban communities are suffering as well, in a different form. Low-income communities within urban areas often lack fresh and affordable foods, creating food deserts. While moderate- and high-income earners can afford fresh fruits that have been shipped into big box grocers, low-income individuals, many elderly, youth and especially minorities with limited incomes, are heavily affected as they often have limited access to transportation. Without a system strategically in place to meet the needs of residents, many are at the mercy of the system. The conventional food system is fractured and beckons planning to restructure it into a more robust, viable and equitable system, one that encourages communities to take personal responsibility for their food needs, health, and choices.
Chapter 3 – The Role of Planning and Food Systems
The Role of Planners and Food System Planning

This chapter examines the role of Planning in local food systems, the components that make up a local food system, and strategies for facilitating their growth to build a stronger local economy.

Until very recently, food systems planning wasn't on the local or national agenda. However, with a growing awareness of food deserts, food insecurity, poor nutrition, and a healthcare crisis characterized by obesity, diabetes, and a generation of children who are expected to live shorter lives than the generation before them, health, nutrition, wellness and the built environment have taken center stage. These issues are being recognized by federal agencies such as the United States Department of Agriculture (USDA), the Center for Disease Control (CDC), and the Department of Housing and Urban Development (HUD) as critical indicators of communities' wellbeing, worthy of national attention and funding. Federal and local governments have begun to recognize that healthy communities create viable and vital cities where businesses and people want to locate.

Unfortunately, the public and planners have struggled to realize the relevance of local food systems within their communities. In order for change to occur at a local level, there must be both a desire and leadership to drive the cause. Because of their expertise in creating livable, inviting, and thriving community spaces urban planners should take a proactive role in this process. Planners are skilled at working with both the built environment and planning for the needs and concerns of people and should be involved at multiple levels.

In order to move local food systems forward, one must understand the barriers that exist, stifling their progression. Pothukuchi and Kaufman (1999) suggest four reasons they believe food systems planning has taken a back seat to other urban systems, such as transportation and
environmental planning. First, urban residents take food for granted, which is according to Pothukuchi and Kaufman, driven by a false security about food. Second, food is not seen as an urban issue, as it is generally produced in rural communities. Third, for over a century food has been readily available. Fourth, federal funding hasn't been directed towards food planning issues (until recently). When the public and planning do not see the full breadth of the current food system, it is difficult to fully comprehend its bearing on the local planning issues.

Food systems are connected to nearly all aspects of planning. Pothukuchi and Kaufman (2000), draw connections between food, health, and wellness; the local economy – including jobs, spending, and leakage; transportation and trips produced; land use; food waste; water quality and degradation, from fertilizers and pesticide runoff; schools and student performance as related to nutrition; free and reduced lunch program; affordable housing vs. food; food security vs. food insecurity; and community resilience. Food is deeply intertwined into the fabric of the community.

Pothukuchi and Kaufman (2000), examine the critical role that planners can take in enhancing the local food systems movement, highlighting that planners' professional experience, community connections, and interdisciplinary perspectives provide crucial tools for enhancing the local food systems movement and toward building the stronger local economy. According to Pothukuchi and Kaufman, planners have a wide range of skills that range from an ability to research, analyze and interpret data, write, and speak to the general public. These skills make planners instrumental to this cause (2000).

In order to better support the creation of local food systems, it is paramount that planners understand the tools and funding streams that are available to their communities. Fry and Wooten (2012) examine the impacts of the Farm Bill on food systems planning, indicating that it
is a key tool for improved access, farmland preservation, and investing in local food system aggregation and distribution infrastructure. Historically, the Farm Bill was designed to meet the demands of farmers, hunger advocates, and agribusiness; however, today it offers support for both the health and planning fields. According to Fry and Wooten, there are four core food system issues in the farm bill: food access, farming viability, economic development, and support for local food systems plans and policy development (2012). Within the Farm Bill, there is support for local food systems, especially those that focus on urban-rural relationships and where rural communities produce food for urban consumers.

As Fry and Wooten point out, there is a wide range of funding streams. For example, the Healthy Urban Food Enterprise Development (HUFED), awards funds for entrepreneurial food initiatives that offer assistance to programs supporting food production and distribution. With the loss of prime agricultural lands, due in part to sprawl, farmers have struggled to make farming a viable business option. Because of this it is necessary that communities strategically work to enhance the farming market. This can be done according to Fry and Hoover, "through increasing the number of farmers, including supporting new and beginning farmers, improving access to markets for agricultural products or creating new markets, and adopting land use policies that preserve the value and availability of farmland" (2012, p. 4). Both the farm bill and the USDA offer funding streams to help cover the costs of land and operations.

Another strategy for supporting the local food system, improving urban health and combatting sprawl, may be through the implementation of Farm to School programs. According to Vallianatos, Gottlieb, & Haase (2004), the implementation of Farm to School programs improve the health and nutrition of school-age children, strengthen the capacity of local and
regional farmers, create strategies for increasing farmland and reduce sprawl. They also create a component of a food systems approach that is not dependent on a global food system.

The current agricultural economy doesn't create enough viable income to support the needs of many small-scale, local, and family farmers, which makes them increasingly vulnerable to sprawl. Vallianatos, et. al theorize that "unless the farming economy improves and development is channeled into denser, smaller patterns, sprawl will continue and family farms will continue to die" (2004). The farm to school program creates a support for both farmers and school children, providing fresh, wholesome and local foods to the school system while creating a market for small-scale farmers to sell their products. Farm to school and similar programs are critical components of a viable local food system and must be considered in the planning process.

Collaboration is perhaps the key component of any large-scale systemic change and food systems planning is no different. Communities must have a group of interested parties working together to further systematic change that goes beyond individual groups and programming. Campbell (2004) suggests that planners bridge the gap between interested foods system stakeholder groups and advocates, by seeking to understand their values, interests and positions; and then employing a food systems dialog to unify interested parties. Kania and Kramer (2011) suggest that complex problems, without clear solutions, benefit most from a systematic approach to social impact, which they term collective impact. Collective impact according to Kania and Kramer (2011), can be broken down into five parts:
1) A common agenda between stakeholders
2) Shared measurement systems, which helps to keep all parties aligned and interested
3) Mutually reinforcing activities, where stakeholders activities fit into the overarching goals of the group
4) Continual communication to develop trust between organizations
5) Backbone support staff, this may be in the form of a skilled staff or a director

Hanleybrown, Kania, & Kramer (n.d.) theorize that there are commonalities between organizations that were successful when employing collective impact. The determining commonality is a set of three prerequisites that should be in place at the start of the collaboration: leadership, funding, and a catalyst for change. This should then be followed by well-researched baseline data; engaged stakeholders; and have a set of goals and actions for stakeholders to tackle. This is all extremely relevant to local food systems planning, as there are so many moving parts and interested parties. Successful collaboration and planning requires that parties work in tandem to achieve a common goal.

**Components of a Local Food System**

There are many options to participate in the local food movement, but perhaps none can be seen more clearly at the local level, than at a community farmers' market. Hamilton (2002) postulates that the resurgence of farmers' markets came as a reaction to the loss of control that came with the commercial food system. The farmers' market gives control back to both the consumer and the producer. Markets provide the small farmer with a place to enter the local economy, allowing them to earn a better rate for their product by removing the middleman. The resurgence of local foods at farmers markets has had a social impact as well, providing consumers with a direct connection to both their food and to the local farmer. As suggested by Hamilton (2002) the modern market gives consumers an opportunity to reengage with their food.
Food hubs are frequently cited as a component of a local food system, however, their definition can be ambiguous. For the purpose of this project a food hub will be defined as: “A business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand” (Barham, Tropp, Enterline, Farbman, Fisk, & Kiraly, 2012, p.4). Most simplistically, food hubs create a connection between multiple growers (typically small and family farmers) and large-scale buyers. Food hubs provide benefits to both producers and retail/institutional buyers. According to Barham, et al, the hub allows local farmers, who may have experienced challenges in entering a broader market, to sell their products collectively, reducing individual risk. For retail customers, food hubs give them the freedom to purchase local foods at one location rather than having to seek out their products from multiple locations. Not only are food hubs more convenient for consumers, they are also often more affordable (2012). Food hubs open up an entirely new market within many communities, creating new jobs, enhanced connections, and an overall more robust local food system.

Seeking ways to reintroduce the local supermarket into communities is key as well. However, there have been substantial challenges in this area. According to Pothukuchi, even though many cities would like to attract small grocers back into their community, few have had success. This is largely because many planners have not felt that attracting this kind of business was the job of the public sector, believing instead that the private market would balance itself (2005). According to Gottlieb et al, even if communities work to attract grocers into inner city neighborhoods, there are substantial hurdles that must be overcome in this arena. These challenges include higher levels of crime, which can increase insurance premiums for stores.
Another less considered concern for storeowners is theft of grocery carts. According to Gottlieb et al, this can lead to substantial replacement costs, sometimes upwards of $67,000 (2005). While there are numerous challenges with bringing grocery stores back into urban communities, there are many case studies showing that it can be done. Many communities have brought grocers, both large and small, back into low-income neighborhoods.
Chapter 4 – Why Local Matters
Economic Benefits of Local

Research indicates that there are positive economic development impacts in the form of both employment and income within communities where local foods are grown and sold. The demand for local foods can be seen in the increasing number of farmers’ markets, CSA’s and city markets. Even “big box” grocery stores are now offering local food isles. Purchasing locally reduces the amount of food being imported from outside sources, which increases the economic gains for local businesses and in turn reduces leakage within the community (Swenson, 2009). As businesses and workers have additional income to spend within the community, a multiplier effect is created. Otto and Varner (2005), note the substantial positive economic impacts of local food systems, estimating that for every $1 spent on local items at the market an additional .58 cents are produced in indirect sales.

Ross, Anderson, Goldberg, & Rogers (2006), Marsden, Banks, & Bristow (2008), and Ikerd (2005) indicate that increasing local food systems may be a significant development strategy for the success of rural communities. The impacts of an increased rural food system range from a reduction in sprawl to an increase in jobs and production. Roininen, Arvola, & Lähteenmäki (2006) hypothesize that if there is growth in the local foods system, there will be growth in the local labor market as well. One area for increase and growth within the food market is processing. As local food economies grown and more small and family farmers are producing fruits, vegetables and meats there is in increased demand for a variety of processors this may include slaughtering and butchering meat as well as processing produce. These activities are seen as value added, they increase the value of a product and increase the labor market. They also shift a much larger portion of the profit into the community where the food is grown, rather than exporting that food for processing and then importing it back, once it has been
finished. This model can easily do one of two things: increase the retail price/economic gain for the farmer should they take on processing or create additional jobs within the community.

The added economic benefits created by supporting local business and local farmers are substantial. With this in mind, it is imperative that the community supports the needs of small and medium scale farmers, and that planners work to understand the challenges faced by farmers within the larger marketplace. According to Darby, Batte, Ernst, Roe (2006), Lawless, Stevenson, Hendrickson, Cropp (1999) and Zepida and Li (2006), when considering ways to increase prevalence of local food systems we must consider how to make farming an economically viable business option. One way to support this is to increase the incomes of local producers by eliminating middlemen. Creating low-risk entry points for small farmers and vendors can help to dispel fears and can act as a business incubator allowing entrepreneurs to build their companies and skill sets (Feenstra, Lewis, Hinrichs, Gillespie, & Hilchey, 2003).

Health Benefits of Local

According to the USDA, in order for local food system advocates to make the claim that local foods increase the availability of healthy foods and encourage consumers to make healthier food choices, two conditions must be met: local foods must increase the availability of healthy foods in a way that non-local food systems do not, and consumers must make healthier food choices when faced with local food choices than they would if faced with a conventional food system choice (2010). The research appears to be inconclusive in this area. Many policies and environmental strategies that could be employed to increase access supporting local food systems could also be used for increasing access of healthy foods in the conventional food system.

However, local food systems allow options for increased access points for consumers. Farmers markets, CSA’s, and community gardens all create additional places for community
members to access fresh and nutritious food. Additionally, planners have the ability to work with
policy makers to amend policies and zoning ordinances, as well as modify the built environment,
to allow residents to have access to community gardens, front yard gardens, backyard chickens,
bees and small livestock, and roadside stands, etc. creating more opportunities for citizens to
have control over and have increased access to healthy food choices. These options are
especially important for individuals with limited incomes who can supplement food purchases
with homegrown foods.

It should be noted, this creative project is not making the claim that local food systems
are a better option simply because they create an opportunity for increasing access to healthy
foods; but that improved access is one component of a well-planned local food system, which is
affected by and affects many other systems. Local food systems provide an economic stimulus
for local communities, reducing leakage, increasing local jobs and local sales. Transitioning from
a conventional food system to a more local food system increases consumer control, which
allows the consumer to know where there food is coming from and increasing community bonds.
Local food systems also create more access points for healthy food choices and support the work
of food advocates actively working to increase access and equity for all citizens. Finally, local
food systems employ sustainable practices, such as reducing the use of pesticides, chemicals and
water. Many small growers utilize organic practices and care for their animals with humanely.
Finally, local food systems reduce sprawl and support rural communities and farmers.
Problem Statement, Research Aims, & Research Questions

The goal of this creative project is to establish a basis for the implementation of a regional food systems plan in the MPA of Anderson, IN, by modeling after successful Food Systems Plans and strategies already in place throughout the country. The author believes that research has shown that local planners should be both invested in and leading these local food policy changes. For the purpose of this creative project, research was conducted on communities with established, successful, and growing local food systems in place in order to better understand these key questions:

- What spurred their interest in developing a local food system?
- What policies and actions best support the success and viability of the local food system?
- What challenges did they face?
- What were the significant outcomes?
Chapter 6 – Case Studies
Overview

The Chicago Metropolitan Agency for Planning is the regional planning organization for northeastern Illinois. Formed in 2005, CMAP was initially created to unify two of Chicago’s regional planning agencies, the Chicago Area Transportation Study (the area Metropolitan Planning Organization) and the Northeastern Illinois Planning Commission. A board of directors and county appointees governs CMAP. Their staff consists of a range of planners with skills in community development, comprehensive planning, research, and analysis. Today, CMAP is responsible for transportation planning and land use planning for the region, which consists of 284 Chicago area communities. In 2010, CMAP began creating the regional comprehensive plan: GO TO 2040, to create a strategic plan for transportation, housing, economic development, quality of life, and other areas including sustainable local foods. Beyond the regional comprehensive plan, CMAP provides guides and toolkits to assist communities within the region in achieving the goals and implementation of the plan.

Catalyst for Local Foods

Food was recognized as a priority when CMAP began creating the GO TO 2040 plan. Regional planners recognized the need and demand for local foods within the community and were moved to pursue change. They also understood the implications of importing over 90% of their foods from outside the state, which was serious economic leakage. The state of Illinois spent more than $14 billion dollars on imported foods, of which CMAP believes that a large portion of could be produced regionally (Chicago Metropolitan Agency for Planning, The Local Food System, 2012). With this in mind, CMAP began planning for a future that would include a sustainable local food system.
Challenges

According to CMAP, there are a significant number of challenges ahead of them as they begin implementing the GO TO 2040 plan. Commodity crop production may present the largest hurdles for the community and farmers who wish to bring local foods back to the community. Commodity crop production creates multiple barriers to entry for small-scale farmers as it demands large lots and requires expensive inputs and equipment, which makes it very difficult for new farmers to start a business. The other major challenge for the CMAP will be encouraging and successfully getting individual counties and cities to implement local food systems planning by:

- Addressing regulations that create barriers to local farming and farmers
- Assisting farmers and processors in accessing land
- Creating and or leasing facilities for farm uses
- Coordinating between stakeholder groups
- Supporting market conditions (Chicago Metropolitan Agency for Planning, The Local Food System, 2012).

Solutions

The majority of the challenges and barriers to implementing local food systems also hold the key to their solutions. According to CMAP, there are three main goals for creating sustainable local food systems, which include: “facilitating sustainable local food production, increase access to safe, fresh, affordable, and healthy foods, and increase data, research, training, and information sharing (GO TO 2040, 2012, p. 142).” CMAP encourages local communities within the region to seek ways to create supports for local food production, which includes: providing access to lands, facilities, and infrastructure. CMAP recommends that municipalities seek ways to utilize and share their resources. This may include leasing out public land for farming, developing facilities for storing, processing and packaging local foods or seeking
creative opportunities for financing these kinds of projects (Chicago Metropolitan Agency for Planning, Local Food System, 2012).

**Action Items**

The following is a comprehensive list of the action items for building a sustainable local food system found within the CMAP Local Food System guide. The plan lists out who the lead implementers should be as well as a description of each goal.

- “Increase community access to fresh food through demonstration programs,
- Implement fresh food financing initiatives,
- Link hunger assistance programs to local foods,
- Build regional nonprofit capacity for local food systems,
- Improve data collection and research on local food production, distribution, and other needs,
- Provide training and information sharing, and
- Provide technical assistance to incorporate local food systems in comprehensive plans and ordinances (2012, p. 4).”
Madison, WI

Overview

Today, Madison, WI is home to the largest producer-only farmers’ market in the nation. Founded in 1972, the Dane County Farmers Market was supports more than 300 local venders. Supported by local policy, programming, and funding, the city has a robust network of neighborhood and community gardens. Over the course of the past ten years, the community has worked integrate food policy into their comprehensive plan and to build strong bonds between the public and private sectors. They have created a coalition of food activists, policy makers, farmers, and citizens who are working together to strengthen and build a vibrant local food network. Admittedly, this was a long and ongoing process, one that continues today. Community gardens and the farmer’s market have been a part of Madison’s local food system for decades and have grown organically. However, many of the major changes to policy and strategic planning began in 2006, when the city of Madison got on board and began working to create change and reduce barriers to food planning.

Catalyst for change

In 2006, the city officials and residents realized that there were serious concerns regarding access to – and production of – food. According to Raja, Born, Kozlowshi-Russell (2008), the loss of large grocery stores, five total between 2003 and 2004, spurred concern regarding citizens’ ability to access healthy and affordable foods. While transit was available, and residents could travel to get groceries, making the trip regularly was difficult for many. The other major concern was the rapid reduction in farmland and young farmers. “At that time Dane County was losing farmland at the 2nd highest rate of all counties in the nation (Raja, et al., 2008, p. 42).” These concerns coupled with shifting community perceptions and governmental
paradigms regarding health, nutrition, and wellness supported a platform for change and improvement to the local food system.

**Challenges**

There was a notable amount of challenges to improving the state of the food system in Madison. First, Wisconsin was primarily a diary producing state. Thus, it was quite difficult for small and local farmers to compete with the existing conventional food system and large-scale producers. The cost of entering the dominated market was high. Another challenge was that there weren’t any local processing or distribution centers in place to assist in connecting locally grown products to the market. Other challenges included zoning and regulation. In many areas where a farmers market or road side stand would be appropriate, the zoning wouldn’t allow for it.

**Solutions**

Collaboration was key to the success of Madison’s local food system. The City of Madison, Dane County, and the University of Wisconsin, formed a food policy council to study and support food related issues. The Madison Food Policy Council is comprised of a group of 12 community members, which includes farmers, food advocates, parents, educators, etc. as well as representatives from the City of Madison, Dane County, and the University of WI. This group has worked to tackle a variety of food issues. They have increased access to food, by creating more spaces for farmers’ markets and city-sponsored community gardens. They have also increased access to local foods by connecting large-scale institutional buyers to farmers and food-hubs, some of the institutional consumers include Madison’s schools, juveniles, jails, and senior citizen centers.

Madison has implemented numerous policy, regulation, and environmental changes to support local foods, having modified zoning ordinances to allow for agricultural related
businesses as well as having created physical and institutional supports for farmers markets, CSA’s, and the like. Local food systems have also been incorporated into the Comprehensive Plan and have been embraced by their mayor’s healthy city initiative, used funds to create a local food production facility. The city has also supported the implementation of local foods by providing Community Development Block Grant (CDBG) funding to support community gardens and to help pay the salary for a garden manager.

The University of Wisconsin has played a substantial role in the success of food system planning in the city. The have offered programming for the community including a food business, innovation network, local food systems planning programs, and resources for the community.

**Policy Support**

The Comprehensive Plan includes goals and action items that support the creation of local food systems, agriculture, and the preservation of resources. Volume 2, Section 6-5 of the plan states that Madison is an “urban place but that it has an important role in protecting and supporting local agricultural activities” recognizing that growth is expected “high-density, mixed-use new neighborhoods” are now required to be built at the city’s edge. However, the plan expresses that “while most of the 597 acres of agricultural land…will be developed, some agricultural uses are permanent features of the urban fabric” (City of Madison Comprehensive Plan, Volume 2, 6-5, 2006). These include:

- Troy Gardens, a CSA farm
- 13 acres of community gardens (1,600 individual plots)
- Farmers markets throughout the city

Perhaps most importantly the City of Madison Comprehensive Plan outlines two primary goals of agriculture within the plan:
1) Maintain the region’s status as one of the nation’s most productive and economically viable food production areas.

2) Maintain existing agricultural operations in the City and encourage new, smaller farming operations such as Community Supported Agriculture Farms (Volume 2, 6-16, 2006).

The goals and actions in Madison’s comprehensive plan highlight the importance and weight put on local food systems in Madison. Their collaborative work with the public and private sectors shows their commitment to creating a holistic local food system that meets embraces the entire community and meets the needs of the citizens.
Delaware Regional Valley Planning Commission: “Eating Here”

Overview

The Delaware Regional Valley Planning Commission is the Metropolitan Planning Organization for the Greater Philadelphia Region, and serves a total of 9 counties. What is especially unique about DRVPC, is they plan for the transportation needs and future growth of counties in two states: Pennsylvania and New Jersey. DRVPC worked on was a two-year collaborative project: “Eating Here: Greater Philadelphia’s Food System Plan”, this plan has become widely known and recognized among food planning enthusiasts in part because of its extensive and functional approach. The plan is very broad, considering the social, health, environmental, and economic impacts of the food system. However it gives in depth recommendations and steps for intensifying and strengthening Philadelphia’s regional food system.

Philadelphia thrives where local food is concerned. They have some of the best agricultural soils in the nation and have a rich agricultural history. Philadelphia has more than 45,000 farms in their 100-mile foodshed, over 500 farmers’ markets, and more than 100 CSA’s in the region (Visit Philadelphia, 2010). Before the DVRPC began the Greater Philadelphia Food Study, this information was scattered and no one was able to quantify how much food Philadelphia was producing or what it would require for them to be able to be self-sustaining. The information that was gained in the Study is what led to the plan, “Eating Here”.

Catalyst for Change

Uncertainty about global climate change, energy prices, and sustainability is what led the DVRPC to undertake the challenge of creating a local food system study. In their words, “DVRPC undertook the Greater Philadelphia Food System Study to better understand the
complicated regional food system that feeds Greater Philadelphia (p.1)”, simple. The study looked at land use, health effects, access, transportation, energy, and economic development in a 100-mile foodshed. The foodshed is admittedly shared with other regions, many which are wealthier including New York.

The first thing that DRVPC did was an assessment of the agricultural lands and the value of the agricultural products being produced. They considered the costs for farms and the expenses and they worked to understand the “fabric” of their farming community. They then studied the regions food distribution, assessing amount of food produced within the region as well as the distance that food travels to and from the region. The survey then assessed the amount of food needed to feed the region and health and diet factors. Finally, to better understand the linkages and gaps within the system, the survey analyzed food system stakeholders within the region. The food system study then led to the publication of the food system plan: “Eating Here”.

**Challenges and Solutions**

DVRPC recognized that there were numerous challenges to building a vibrant local food system. However, they did not plan from a needs-based perspective. Rather, they considered the strengths of the region, the ability to collaborate, and set out to measure the outcomes of the goals that they set annually. The goals were written in the form of six core values. These values were the areas DRVCP believed had the potential to make the most measurable impact on sustainable and resilient food systems, they include:

1. “Farming and Sustainable Agriculture,
2. Ecological Stewardship and Conservation,
3. Economic Development,
4. Health,
5. Fairness, and
The goal areas were then broken into ten measurable items, indicators designed to provide stakeholders and individuals with the tools and concepts to work towards changing policy and practice, to bring about a more sustainable food system. These include:

1. “Land in Production
2. Profitability of Farming
3. Surface Water Quality
4. Farmland Preservation
5. Employment in the Food System
6. Increase in Food and Farmworker Wages
7. The Region’s Healthy Food Purchases
8. Health of the Region’s Residents
9. Affordability of Healthy Food

Policy Supports

The plan then lists out 52 policy recommendations, reforms, and ideas for expanding existing efforts, and new approaches and innovations to meet the expressed goals of the indicators. The following are a list of the top recommendations as listed by the DVRPC food system plan:

1. “Affordable farmland
2. Natural resource protection
3. Business development
4. Public awareness and healthy food
5. School system solutions

See Appendix B for attached Summary of Recommendations.

The information found in the DVRPC, Greater Philadelphia’s Food System Plan: “Eating Here” is perhaps the most comprehensive list of information on food systems planning that the author of this creative project has come across. While its scale is quite large, the tools and policy suggestions are transferable to smaller communities as well.
## Case Study Matrix

<table>
<thead>
<tr>
<th>Local Food System Indicators</th>
<th>Planning Agencies</th>
<th>CMAP</th>
<th>Madison, WI</th>
<th>DRVPC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase Accessibility of Local Foods</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Increase Awareness of Local Foods</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Implement Nutrition Education</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Engage Youth</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Foster Consumer-Producer Relations</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Environmental</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mitigate Climate Change</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Implement Sustainable Farming Practices</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Reduce Food Travel Miles</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Recycle Waste</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Increase Biodiversity</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Reuse Vacant Property</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Economic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustain Farmland</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Build Local Farm Infrastructure</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Create Local Jobs</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Improve Land Value</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ease of Implementation of Program and Policy</td>
<td>Good</td>
<td>Excellent</td>
<td>Excellent</td>
<td></td>
</tr>
<tr>
<td>Sustainability Program and Policy</td>
<td>Good</td>
<td>Excellent</td>
<td>Excellent</td>
<td></td>
</tr>
<tr>
<td>Measurability of Program and Policy</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. Case Study Matrix (Jones, 2015)
Chapter 7–

Food Systems Planning, Applications for Anderson, IN
**Bringing Food Home**

The primary geographic area of focus for this creative project is the City of Anderson, Indiana and the Metropolitan Statistical Area (MSA) of Anderson. The Anderson MSA has a total land area of 453 square miles with a population of 138,629 in 2010 (US Census, 2010). The City of Anderson has an estimated population of 56,129, an area of 41.5 miles, and is the county seat of Madison County. Anderson is the principal city within the Metropolitan Statistical Area (MSA), which is comprised of 14 townships, 3 incorporated cities, and 8 incorporated towns.

**Townships include:**
- Adams
- Anderson
- Boone
- Duck Creek
- Fall Creek
- Green
- Jackson
- Lafayette
- Monroe
- Pipe Creek
- Richland
- Stony Creek
- Union
- Van Buren

**Cities include:**
- Alexandria
- Anderson
- Elwood

**Towns include:**
- Chesterfield
- Frankton
- Ingalls
- Lapel
- Markleville
- Orestes
- Pendleton
- Summitville
Community Background

Anderson became the county seat of Madison County in 1828. However, it wasn’t until the 1850’s that commercial and economic expansion truly began to grow, spurred by the addition of railroads. Then, in 1887, natural gas was discovered and the gas boom began, and businesses began locating within the city with the promise of cheap energy. By 1912, natural gas had begun to decline, and many industries were leaving the city. However, the Remy Brothers were persuaded to remain, and their presence commenced the automotive explosion within Madison County (City of Anderson Consolidated Plan 2010-2014, 2009). General Motors (former Remy Brothers) had reached its peak in the 1970’s, when the city was at its highest population at 70,787 people and the community had the most wealth it had ever seen. However, by the 1980’s, General Motors began relocating many of their automotive plants to foreign locations to reduce their bottom line, taking with them valuable jobs. This led to a steep decline in employment and residency in the city, leaving Anderson with a high level of foreclosed homes and a population decline of 8.6% (US Census Bureau, 2015). The population decline nearly stabilized in the 1990’s and 2000’s. However, following the economic downturn of 2009, Anderson again experienced a severe population decline and high foreclosure rate sparked by the national economic recession.

Community Poverty and Need

Today the city is still struggling. The median household income for Anderson residents was $33,574 compared to the national median household income of $53,046. Nearly 26% of Anderson residents live at or below the poverty level and almost 39% of children 18 years old and younger live in poverty (American Community Survey, 2009-2013). As can be seen in Table 2, for minority groups the numbers are startlingly higher, individuals identifying as black have a poverty rate of 35.9% and those who identify as Hispanic have a poverty rate of 52.5%.
Families with children have much higher poverty rates than families without children, and single-female-headed households have the highest rate of poverty at 53.1%.

**Table 1. Poverty Status for Individuals in Anderson, IN**

<table>
<thead>
<tr>
<th></th>
<th>Anderson Total</th>
<th>Total Below Poverty Level</th>
<th>% Below Poverty Level</th>
<th>Indiana Total</th>
<th>Total Below Poverty Level</th>
<th>% Below Poverty Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals (all)</td>
<td>53,509</td>
<td>13,804</td>
<td>25.8%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 18</td>
<td>12,264</td>
<td>4,777</td>
<td>39.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-64</td>
<td>32,813</td>
<td>8,185</td>
<td>24.9%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65 +</td>
<td>8,432</td>
<td>842</td>
<td>10.0%</td>
<td></td>
<td></td>
<td>7.3%</td>
</tr>
</tbody>
</table>

(American Community Survey, 2009 – 2013)

**Table 2. Poverty Rate and Racial Distribution in Anderson, IN**

<table>
<thead>
<tr>
<th>Population Poverty Status</th>
<th>Anderson Total</th>
<th>Anderson &lt;50%</th>
<th>Anderson &lt;100%</th>
<th>Indiana &lt;100%</th>
<th>Anderson &lt;125%</th>
</tr>
</thead>
<tbody>
<tr>
<td>One race</td>
<td>51,409</td>
<td>11.9%</td>
<td>25.4%</td>
<td>15.1%</td>
<td>31.8%</td>
</tr>
<tr>
<td>White</td>
<td>43,480</td>
<td>11.0%</td>
<td>23.1%</td>
<td>12.7%</td>
<td>29.9%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>6,736</td>
<td>18.4%</td>
<td>35.9%</td>
<td>32.0%</td>
<td>40.8%</td>
</tr>
<tr>
<td>American Indian and Alaska Native</td>
<td>91</td>
<td>27.5%</td>
<td>41.8%</td>
<td>21.9%</td>
<td>72.5%</td>
</tr>
<tr>
<td>Asian</td>
<td>315</td>
<td>0.0%</td>
<td>10.5%</td>
<td>21.1%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Native Hawaiian and Other Pacific Islander</td>
<td>5</td>
<td>0.0%</td>
<td>0.0%</td>
<td>31.3%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Some other race</td>
<td>782</td>
<td>7.3%</td>
<td>65.9%</td>
<td>32.7%</td>
<td>65.9%</td>
</tr>
<tr>
<td>Two or more races</td>
<td>2,100</td>
<td>28.9%</td>
<td>36.6%</td>
<td>26.8%</td>
<td>45.5%</td>
</tr>
<tr>
<td>Hispanic or Latino origin (of any race)</td>
<td>2,607</td>
<td>17.8%</td>
<td>52.5%</td>
<td>29.7%</td>
<td>57.0%</td>
</tr>
<tr>
<td>White alone, not Hispanic or Latino</td>
<td>41,680</td>
<td>10.5%</td>
<td>22.1%</td>
<td>12.1%</td>
<td>29.0%</td>
</tr>
</tbody>
</table>

(American Community Survey, 2009-2013)

**Table 3. Families Below Poverty Level in Anderson, IN**

<table>
<thead>
<tr>
<th></th>
<th>All Families</th>
<th>Married-couple Families</th>
<th>Female householder, no husband present</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Anderson %</td>
<td>IN %</td>
</tr>
<tr>
<td>Families</td>
<td>13,104</td>
<td>20.1%</td>
<td>11.2%</td>
</tr>
<tr>
<td>With related children 18 years &lt;</td>
<td>6,468</td>
<td>34.3%</td>
<td>18.4%</td>
</tr>
</tbody>
</table>

(American Community Survey, 2009-2013)
Youth and children in Anderson may be the hardest hit when it comes to the effects of poverty. As can be seen Table 3, almost 34% of children live in homes where the household income is below the poverty level; additionally 41.1% of children live in homes where public assistance has been utilized. The effects of poverty and access to food should be considered when planning for the City of Anderson and the MSA.

**Table 4. Public Assistance & Poverty Status for Children under 18 in Anderson, IN**

<table>
<thead>
<tr>
<th></th>
<th>Anderson Total</th>
<th>Indiana Total</th>
<th>Anderson Married-Couple</th>
<th>Anderson in Male householder</th>
<th>Anderson in female householder</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PUBLIC ASSISTANCE IN THE PAST 12 MONTHS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children living in households with Supplemental Security Income (SSI), cash public assistance income, or Food Stamp/SNAP benefits</td>
<td>41.1%</td>
<td>26.5%</td>
<td>26.0%</td>
<td>28.3%</td>
<td>58.2%</td>
</tr>
<tr>
<td><strong>POVERTY STATUS IN THE PAST 12 MONTHS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income in the past 12 months below poverty level</td>
<td>39.0%</td>
<td>21.8%</td>
<td>21.4%</td>
<td>41.8%</td>
<td>56.8%</td>
</tr>
<tr>
<td>Income in the past 12 months at or above poverty level</td>
<td>61.0%</td>
<td>78.2%</td>
<td>78.6%</td>
<td>58.2%</td>
<td>43.2%</td>
</tr>
</tbody>
</table>

(American Community Survey, 2009-2013)

While the vast majority of residents seeking employment have work, the wages are low in Anderson, leaving the community with an extremely high level of working poor. The per capita income for residents in Anderson is $17,970 compared to the national per capita income of $28,184 (American Community Survey, 2013). Nearly 41% of all households receive public assistance (American Community Survey, 2009-2013), even though there is a low unemployment rate 4.1% (Bureau of Labor Statistics, 2014). Some would argue that while there are a high number of individuals receiving assistance, that in reality it is not truly representative of the communities need. According to the Asset Limited, Income Constrained, and Employed (ALICE) study, many households’ earned income does not pay enough to meet the basic costs of housing, daycare, food, insurance, health care, and transportation. The study showed that in
Indiana alone there are more than 350,000 households living at or below the federal poverty level and an additional 570,300 households living below the ALICE threshold. More than 920,000 households, double that which is recognized by the federal and state governments as in poverty are considered at risk and struggling to support themselves (2014). For these Indiana households, the problem is further compounded by the steady increase in low paying jobs and rising cost of living. According to the ALICE study, for residents living in Madison County there is a much higher level of struggling families than what the federal poverty line would account for, as can be seen in Table 5 below.

<table>
<thead>
<tr>
<th></th>
<th>Single Adult</th>
<th>Family of four</th>
<th>Percent of total HH Struggling</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Poverty Rate</td>
<td>$11,170</td>
<td>$23,050</td>
<td>6,658 (14%)</td>
</tr>
<tr>
<td>ALICE Household Survival Budget for Madison County</td>
<td>18,044</td>
<td>$48.769</td>
<td>13,527 (28%)</td>
</tr>
</tbody>
</table>

(ALICE Study, 2014)

According to the ALICE study of financial hardship, Madison County ranks fair on affordable housing, poor for job opportunities, and good for community support. In many ways Anderson and Madison County are typical rustbelt communities, suffering from disinvestment and lack of job opportunities. These community wide problems are further intensified in many low-income neighborhoods throughout the community that suffer from higher levels of disinvestment and decline. Residents in many Anderson neighborhoods have limited incomes, restricted mobility, and inadequate access to a grocery store or to a healthy and affordable food outlet. According to the USDA, there are 4 census tracts within Anderson that are considered food deserts, having both limited access to a grocery store and having a poverty rate of 20% or more within that census tract. While poverty and limited access are crucial reasons to support increasing access to healthy and affordable foods, they are not the only motivating factor.
**Health Factors**

According to the United Health Foundation’s Health Report (2014), Indiana is one of the unhealthiest states in the nation, ranking 41st out of 50 states in poor-health indicators. With especially high rates of obesity, air pollution, physical inactivity, diabetes, cardiovascular deaths, and cancer deaths, Indiana is in need of a health overhaul. As can be seen in Image 1, Indiana is one of 18 states with an obesity rate that falls between 30% - 35%, with two states MI and WV having obesity rates above 35%. Of those states with obesity rates above 30% only nine rank higher than Indiana (CDC, 2013) as can be seen in Table 6. Health outcomes for Anderson residents are even more disturbing when the state’s health indicators are broken down by county. According to the Robert Wood Johnson Foundation, Madison County ranks among the least healthy counties in Indiana, ranking 79th out of 92. Residents who live in Madison County have shorter life expectancies, increased negative health outcomes, increased preventable hospital stays, higher rates of inactivity, and obesity (Robert Wood Johnson Foundation, 2014). According to the CDC, there is a 37% obesity rate for adults living in Madison County.

<table>
<thead>
<tr>
<th>State</th>
<th>MS</th>
<th>WV</th>
<th>AR</th>
<th>TN</th>
<th>KY</th>
<th>LA</th>
<th>OK</th>
<th>AL</th>
<th>IN</th>
<th>SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence %</td>
<td>35.1</td>
<td>35.1</td>
<td>34.6</td>
<td>33.7</td>
<td>33.2</td>
<td>33.1</td>
<td>32.5</td>
<td>32.4</td>
<td>31.8</td>
<td>31.7</td>
</tr>
</tbody>
</table>

(CDC, 2013)
Increasing access to fresh fruits and vegetables is critical to raising levels of consumption (Centers for Disease Control, 2013) and may lead to positive health outcomes. There are multiple policy and environmental supports and changes that can be implemented at a state and local level to increase consumption. According to the CDC, States with the highest levels of fruit and vegetable consumption are those with the most environmental supports, such as: increased density of farmers’ markets per 100,000 people, food hubs, higher levels of Supplemental Nutritional Assistance Program (SNAP) acceptance at farmers’ markets, and healthier food retailer programs, to name a few. Rankings for the State of Indiana in comparison to the surrounding states can be seen in Table 7. Indiana ranks significantly below neighboring states and below the U.S. National rankings in most categories, including the percentage of farmers
markets that accept SNAP. However, Indiana ranks substantially higher in the category of Farmers markets that accept WIC Farmers Market Nutrition Program Coupons.

Table 7. A Comparison of Indiana, Illinois, Michigan and Ohio, pulled from the CDC’s State Indicator Report on Fruits and Vegetables, 2013: Policy and Environmental Factors

<table>
<thead>
<tr>
<th></th>
<th>Indiana</th>
<th>National</th>
<th>Ohio</th>
<th>Illinois</th>
<th>Michigan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Census tracts with at least one healthier food retailer within ½ mile of tract boundary</td>
<td>62.3</td>
<td>69.5</td>
<td>63.7</td>
<td>71.4</td>
<td>63.9</td>
</tr>
<tr>
<td>State-Level healthier food retail policy</td>
<td>No</td>
<td>10</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of farmers markets per 100,000 residents</td>
<td>2.5</td>
<td>2.5</td>
<td>2.3</td>
<td>2.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Percentage of farmers markets that accept SNAP benefits</td>
<td>11.7</td>
<td>21.5</td>
<td>21.5</td>
<td>10.6</td>
<td>29.5</td>
</tr>
<tr>
<td>Percentage of farmers markets that accept WIC Farmers market Nutrition Program coupons</td>
<td>35</td>
<td>28.8</td>
<td>22.6</td>
<td>10.6</td>
<td>32.1</td>
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<tr>
<td>States that authorize farmers to accept WIC Cash Value Vouchers</td>
<td>No</td>
<td>19</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Percentage of middle/high schools that offer fruits or vegetables at celebrations</td>
<td>23.5</td>
<td>33.6</td>
<td>27.6</td>
<td>-</td>
<td>28.3</td>
</tr>
<tr>
<td>State child care regulations align with national standards for serving fruits/vegetables</td>
<td>No/No</td>
<td>10/4</td>
<td>No/No</td>
<td>Yes/No</td>
<td>No/No</td>
</tr>
<tr>
<td>State-level farm to school/preschool policy</td>
<td>No</td>
<td>28</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Number of Food Hubs</td>
<td>1</td>
<td>213</td>
<td>7</td>
<td>8</td>
<td>5</td>
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<tr>
<td>Percentage of cropland acreage harvested for fruits and vegetables</td>
<td>.3</td>
<td>2.5</td>
<td>.6</td>
<td>.3</td>
<td>4.5</td>
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<tr>
<td>State-level food policy council</td>
<td>No</td>
<td>17</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of local food policy councils</td>
<td>1</td>
<td>150</td>
<td>9</td>
<td>7</td>
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(State Indicator Report on Fruits and Vegetables, 2013)
**Recommendations**

Anderson is struggling in many areas where food systems are concerned, with startlingly high rates of poverty, poor health outcomes, food deserts, and multiple barriers to entering the local food system. Anderson and Madison County are in need of change, and planners are in a prime position to connect the local food system to the planning issues in the community these include: land use, transportation, education, housing, economic development and poverty.

The need for healthy food options, policy supports and environmental changes are clear with regards to the City of Anderson and Madison County. Leaving the question of how should Anderson’s planners go about introducing and implementing a local food systems plan? There are many challenges to be considered when contemplating the implementation of a community food system plan. First, the City and neighboring communities have never done anything like this before. Food systems planning is still foreign to most policy makers, community leaders, and residents within the community, especially in small rustbelt communities. When seeking out case studies and example communities where local food systems are in place in communities under 250,000 people is rare, and finding examples in communities under 100,000 people is even harder. The second challenge is the limited budget for new programming while there is a growing awareness on a state and federal level, funding is still limited and highly competitive. When and if the community seeks out funds for food system planning it will require that local planners diligently search out grants and programs that support and fund local food systems planning, to create a catalyst for change. Another challenge that the community may face is finding a champion for their cause. While a local planner may have the knowledge, they may have limited time, funding, and connections to local food system stakeholders. Local planners
will more than likely need the support of passionate community members and should seek out the support of key leadership to champion the cause.

However, this is not to say that local planners and food advocates should be discouraged, quite the opposite, with their community connections, knowledge of grants, and relationship to so many systems, including transportation, energy, community and economic development, and even schools, they are in a powerful position to make change. These connections will help planners build a strong foundation for local food systems planning.

From the research and case studies, the author of this creative project believes that the first step towards building a local food system is to form a local food policy council, and begin building connections between advocates, farmers, producers, processors, and distributors. This will allow the group to begin having discussions about the state of food in the community. The group will have inside knowledge and understanding of the challenges facing food systems. Their knowledge and collaboration will give them the tools to ask the tough questions and to begin problem solving, and to form a cohesive plan and direction for the future. Also, by having a group of committed individuals in place this creates a support system and structure, which may be needed when seeking out and applying for grants.

The second recommendation for building a local food system would be for the food policy council to conduct a local food system assessment. The assessment will provide a tool for measuring the community’s food assets, needs, linkages and gaps. The food assessment will provide a baseline for the size and scope of the plan and will assist in forming goals for the future. It is also important to note that the food assessment will help in establishing proof of a community need, which can provide invaluable information to share with policy makers, community stakeholders, as well as grant makers and funders. The following section includes a
scope of work to assist in planning for a local food system in the City of Anderson, IN. The information should help to guide the community in beginning the process of planning for and creating a local food system.

**The Scope of Work**

1. Form a local/regional food policy council
   a. Identify key players, don't forget the "wet blanket."
      i. Food producers
      ii. Processors
      iii. Distributors
      iv. Schools
      v. Local governments
      vi. Non-for-profits interested in food advocacy
      vii. Hunger advocates
      viii. Health professionals
   b. Conduct a community-based assessment of current organizations working on local food issues, invite those individuals/groups to join the Council

2. Conduct a Local-Food Assessment
   a. Producers
   b. Aggregators
   c. Processors
   d. Distributors
   e. Consumers (institutions)
   f. Waste Processors
The assessment will provide a tool for determining the local food assets & food needs, to show linkages, and develop a plan to increase their size, scope, and connectivity, as well as provide valuable tools and data to inform policy makers and business leaders of the value of local food to both the community and the economy.

3. Create a Local Food Plan
   a. Vision
   b. Statement of purpose
   c. Recommendations
   d. Goals
   e. Objectives

4. Build (and identify sites for) infrastructure to support local-food (make sure utilize existing infrastructure and networks first, to build on existing economic base)
   a. Coordinate institutional buying to build the local food infrastructure
      i. Anderson Community School Corporation (farm to school)
      ii. Anderson University (farm to college)
      iii. St. Vincent Hospital (farm to hospital)
      iv. Community Hospital (farm to hospital)
      v. Pendleton Correctional Facility
      vi. Pendleton Juvenile Correctional Facility
      vii. Jails
         1. Utilize flexible payment options, billing in smaller more frequent intervals
   b. Co-ops, CSA’s
c. Local distributors

d. Adopt extended growing season practices, e.g. hoop houses, high tunnels, etc.

e. Meat and poultry processing facilities

f. Mobile processing

g. Flash-freezing facility

h. Community kitchen incubators for processing

i. Aggregation points and kitchens for community gardens

   i. Look at Flint, MI's land banking model – national attention in regards to community gardens

5. Identify Policy Barriers

   a. Work with county, city, towns, and townships to adopt ordinances and policies that support local food systems

   b. Establish best practices and zoning criteria

      i. Encourage local food production in urban and suburban area

         1. Remove barriers to food production in city limits (keeping chickens, bees, etc.)

      ii. Increase "Shop Local" programs

         1. Showcase local foods in restaurants and stores

      iii. Preserve farmland

         1. Educate local officials about the economic viability of food production

         2. Land-subdivision regulations for preserving farmland

            a. Discourage cluster type developments
3. MCCOG should work with the Indiana Department of Agriculture, and the agriculture community building on common goals
c. Work with local food processors, farmers, and community to increase understanding of food safety regulations

6. Identify Funding Issues
   a. Understand the sources of capital (grants and loans) available to expand and create infrastructure
      i. Micro-lending
      ii. Federal, State and local governments
         1. USDA Rural Development loans and grants
         2. Cost sharing and matching assistance grants
            a. USDA Environmental Quality Improvement Program (EQIP) grants for high tunnels
         3. Farm Services Agency programs
         4. Sustainable Agriculture Research and Education (SARE) grants
         5. Small Business Programs
         6. Land bank
         7. Property tax abatements
      iii. Nonprofits
         1. Create a list of non-governmental community resources and models that can be shared to help increase access to local, healthy, fresh foods.
         2. Corner store initiatives
3. Community Supported Agriculture

4. Systems which support EBT cards, SNAP, WIC, and Senior vouchers (look at the Colorado Food Policy Council – how they created links between food programs and local food production)

5. Direct market farming, CSA’s, and community gardens
   iv. Private lenders
   v. Farm Credit Services

b. Educate producers of existing funding opportunities
   i. County Planning
   ii. Economic Development
   iii. County Extension office, etc.

c. Train a workforce for food-infrastructure

d. Employ current residents

e. Adapt existing programs to serve local food needs
   a. Land banks & Community Gardens
   b. Agriculture & Food banks

7. Build Social Capital
   a. Work with farmers to form cooperatives and jointly distribute their products
   b. Increase neighborhood and community gardens
   c. Establish a farm link program to link prospective farmers with older farmers who are retiring to have no heirs interested in operating the farm
   d. Increase public awareness
      i. Dispel the perception that local food costs more
ii. Create a marketing campaign to promote local foods

iii. Inform the public about what local is and is not, it is not necessarily organic or natural

iv. Food preparation programs, link into existing programs and expand them first
Appendix A.

References


Levine, J. (2011). Poverty and Obesity in the US. Diabetes, 60(11), 2267-2268. doi: 10.2337/db11-1118


Seligman, H., Bolger, A., Guzman, D., Lopez, A., & Bibbens-Domingo, K. (2014). Exhaustion Of Food Budgets At Month’s End And Hospital Admissions For Hypoglycemia. *Health Affairs, 33*(1), 116-123. Retrieved February 1, 2015, from [http://content.healthaffairs.org/content/33/1/116.abstract?sid=be4ca11b-be9c-4854-874d-1bd3d8ea5041#aff-1S](http://content.healthaffairs.org/content/33/1/116.abstract?sid=be4ca11b-be9c-4854-874d-1bd3d8ea5041#aff-1S)


### Appendix B. DVRPC, Eating Here, Summary of Recommendations

<table>
<thead>
<tr>
<th>New Approaches and Innovations</th>
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<tbody>
<tr>
<td><strong>401(k)s for Farmers</strong></td>
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<td><strong>Partners in Urban Agriculture</strong></td>
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<th>Expand Existing Efforts</th>
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<tr>
<td><strong>Community Planning</strong></td>
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<td><strong>County Cooperative Extensions</strong></td>
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<th>Policy Reforms</th>
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<tr>
<td><strong>Property Tax</strong></td>
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<tr>
<td><strong>Urban Agriculture Block Grant</strong></td>
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<td><strong>State Farm Link Programs</strong></td>
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<tr>
<th>Top Recommendation</th>
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<tbody>
<tr>
<td><strong>Farming and Sustainable Agriculture</strong></td>
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<tr>
<td><strong>Affordable Farmland</strong></td>
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<tr>
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<td>Ecological Compensation</td>
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<td>Foundation</td>
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<tr>
<td><strong>Food Procurement</strong></td>
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<tr>
<td>Recommendation</td>
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<tr>
<td><strong>Addressing the Toxic Food Environment</strong>&lt;br&gt;The federal government, and specifically the Federal Trade Commission and the U.S. Food and Drug Administration should address the toxic food environment that has led to unhealthy eating.</td>
</tr>
<tr>
<td><strong>Leveraging Public Assistance to Incentivize Healthy Eating</strong>&lt;br&gt;Maximize food assistance programs and create more incentives for participants to obtain healthy foods.</td>
</tr>
<tr>
<td><strong>Nutrition Standards for Food in Government Facilities</strong>&lt;br&gt;Municipal, county, and state governments and the federal government should develop nutrition standards and labeling requirements for food that is served at cafeterias and in vending machines in publicly owned or managed facilities.</td>
</tr>
<tr>
<td>Recommendation</td>
</tr>
<tr>
<td>--------------------------------</td>
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<tr>
<td>Debating Food Safety</td>
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<tr>
<td>Level the Playing Field</td>
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<td>Enforcing Anti-Trust</td>
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<td>Guest Workers</td>
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<tr>
<td><strong>Health and Food Safety Regulations</strong>&lt;br&gt;Local governments—municipal, county, and state—should work with local health departments to review and overhaul regulations that inhibit local food businesses or make the costs of operating a legitimate business too high.</td>
</tr>
</tbody>
</table>